

Economic Impact Assessment Study: HMS Edinburgh

City of Edinburgh Council

June 2014

Final Report



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“The process of assessing additionality is relevant to all stages of an intervention’s lifecycle, from appraisal to evaluation. Without an assessment of additionality we do not know if the intervention is delivering real results, over and above what would have happened anyway, addressing market failures, nor can we tell if the intervention offers good value for money.”

Additionality and Economic Impact Assessment Guidance Note, Scottish Enterprise, 2008.

Contents

<i>Executive Summary</i>	6
Executive Summary	6
<i>1. Introduction</i>	7
Background	7
Key Issues	7
Approach	8
Outputs	9
<i>2. Potential Options</i>	10
Introduction	10
Cost Ranges	11
Revenue Ranges	13
Conclusions	15
<i>3. Economic Impacts</i>	17
Introduction	17
Gross Impacts	19
Net impacts	21
<i>Appendices</i>	25
<i>Appendix A: Organisations Consulted</i>	26
<i>Appendix B: Comparator Attractions</i>	27
<i>Appendix C: Cost and Revenue Breakdowns</i>	30
<i>Appendix D: Gross employment impacts</i>	32

Executive Summary

Executive Summary

The current proposals, to acquire and operate H.M.S Edinburgh as a visitor attraction, are preliminary in nature. As such considerable uncertainty remains as to both the costs, revenues and potential economic benefits that might pertain to the project.

Analysis based on desk research of comparable attractions and consultations with various stakeholders (including, amongst others, representatives from the MOD and HMY Britannia) suggest that the:

- Costs of acquisition and restoration of the vessel could be in the region of £10 million;
- Subsequent annual operating costs could, on average, be around £4.14million to £4.87 million (the latter if acquisition and restoration costs require to be funded from borrowing);
- Total average revenue per annum might be £1.3 million; and,
- Average net economic benefits to the City of Edinburgh could be around £543,000 gross value added annually.

On the basis of the above there does not appear to be any reasonable basis by which the public sector could support the project on value for money terms as the economic benefits that might be generated (i.e. £543,000) are significantly less than the deficit that might be generated from operations (i.e. £2.84 million to £3.57 million per annum).

Finally, consideration by both those consulted and review of existing UK maritime attractions suggests that other development options could be considered. Preliminary analysis of either a joint (visitor) arrangement with HMY Britannia or a wider maritime attraction suggests that the former could be marginally sustainable financially but the latter is likely to be commercially unsustainable.

Both options would generate net benefits to the local economy but significant further development of either option would be required prior to the Council or any other public sector funder being in a position to determine the practicality of such approaches or the level of support (if any) that might be justified under value for money criteria.

1. Introduction

Background

PricewaterhouseCoopers LLP (“PwC” or “we”) were commissioned by the City of Edinburgh Council (“the Council”) to conduct an economic impact assessment of proposals to acquire and operate HMS Edinburgh as a visitor attraction at the Port of Leith.

The current proposals are preliminary in nature – no detailed plans have been made in relation to the future operation of the vessel as an attraction nor, therefore, the associated costs and potential revenues that might be generated.

While there is no presumption that the Council will require to fund the purchase, fit out or future operation of HMS Edinburgh an important consideration in any such decision to do so is whether such funding is potentially justifiable on economic impact grounds.

In short if public sector funding is required would it be justifiable on value for money terms – would the benefits (in terms of jobs and income to the local economy) outweigh the public sector costs of securing such impacts?

Consequently we were commissioned to help the Council address this question by examining and, where possible, quantifying the potential range of benefits that might be generated as well as the related costs of mooring, refitting and operating HMS Edinburgh as an attraction.

Key Issues

In the context of the above the key issues we have been asked to address in undertaking our work are:

- Assessing, in terms of the current project proposals, the ranges of potential costs and admission levels that may be associated with operating HMS Edinburgh as a visitor attraction based on data from the Ministry of Defence (“MOD”) and other comparable facilities across the UK;
- Reviewing the direct, indirect and induced benefits that might arise from such operation in income and employment terms; and,
- Comparing the above benefit flows to the “status quo” position at the Port of Leith to ascertain whether the proposals might generate any net benefits and/or wider social and cultural impacts to the Edinburgh economy.

Finally while there is no specific expectation nor, therefore, a level of funding that the Council might consider to support this project the identification of potential benefits allows for a comparison with the potential costs of acquisition and operation. Such comparison provides one basis against which to address the question of what level of public sector support might be justified in ‘value for money’ terms¹.

Approach

Given the broad and conceptual nature of these proposals our approach to this work has involved several elements, including:

- An initial review, with Council representatives, of available data and (their) prior analysis of the current project proposals;
- Subsequent consultations with a range of stakeholders (identified by the Council) to ascertain their views on potential delivery models and likely success factors and constraints to long term sustainability of the project (a list of consultee organisations is provided at Appendix A);
- Review of extant data – in relation to visitor levels and related operating costs and revenues – at comparable attractions across the UK (detailed breakdowns of the data collected are outlined at Appendix B and C);
- Development of three ‘generic operating options’ (based on the above) to consider the range of net impacts that might be generated compared to the ‘status quo’. These options are:
 - **Sole facility** – whereby the vessel is (assumed to be) a stand-alone attraction moored at a (currently) unused or underdeveloped part of the harbour;
 - **Joint facility** – involving joint operation (and potentially) adjacent berthing with HMY Britannia; and,
 - **Component of a wider maritime attraction** – incorporating other vessels and facilities across the Port.

¹ As indicated in the next section other considerations include, for example, the ‘fit with’ the Edinburgh Tourism Strategy, other costs relating to ‘supporting infrastructure’, planning permissions, the use of the Port for other activities and ownership and management structure of the attraction.

Outputs

The findings from our work are summarised in this final report for discussion in terms of:

- **Potential Outcomes (Section Two)**; summarising the range of costs and admission levels that might be associated with the three development options identified;
- **Economic Impacts (Section Three)**; considering the range of gross and net benefits to the Edinburgh economy that might be associated with the project options considered;
- **Organisations Consulted (Appendix A)**; indicating, by organisation, the representatives we have contacted (on a confidential basis) in relation to the project;
- **Comparator Attractions (Appendix B)**; detailing the data sets – from other UK facilities – we have utilised in our analysis;
- **Cost and Revenue Breakdowns (Appendix C)**; providing, based on comparator information and MOD sources, the range of potential costs and revenues that might be associated with the purchase and operation of the vessel; and,
- **Gross Employment Impacts (Appendix D)**; outlining the potential range of gross employment effects from each option.

2. *Potential Options*

Introduction

As outlined, in the introductory section of this final report, we were commissioned to help the Council consider whether the potential benefits which might arise from the project proposals might outweigh the costs of securing such impacts. In this context the information we have received from the Council concerning these proposals suggests that to date:

- Little or no consideration has been given to either the costs associated with the proposals or the likely revenues and related admissions were HMS Edinburgh be refitted as some form of visitor attraction; and,
- No commitment, or analysis of the rationale for such commitment in strategic or market failure terms, has been made by the Council to provide future funding support for the project.

Various issues will need to be given consideration by the Council – and other public sector partners – prior to such a commitment. For example, does the project align with the objectives set out in the Edinburgh 2020 Edinburgh Tourism strategy? Is there a clear rationale as to why the public sector can (and should) support this project in funding terms if the refit and operation could be provided (in the same time scale, type, quality or scale) by the private and/or third sectors?

In order to provide the Council, and other stakeholders, with one basis to begin to draw such judgements – and frame any further debate or discussion concerning the current project proposals – we have outlined below various sources of information in relation to the potential range of project costs and revenues.

In addition this information is presented across three ‘generic’ operating models, namely:

- **Sole facility** – which, we understand from the Council is the original concept suggested by the project sponsors whereby the vessel is a stand-alone, all weather attraction moored at a separate and distinct berth in Leith Harbour with separate admission and ancillary catering and retail units, parking and so forth;
- **Joint facility** – which, based on our subsequent discussions with local stakeholders, envisages that HMS Edinburgh could be operated by the current management team of HMY Britannia, with joint ticketing/single admission and utilising existing ancillary facilities; and,

-
- **Component of a (longer term) maritime attraction** – which, given our analysis of UK attractions, might incorporate other vessels and overall utilisation of the Port as a visitor experience themed on maritime history (and potentially current Port operations).

The remainder of this section considers, based on our consultations and data analysis, the potential gross cost and revenue ranges that might be associated with these options.

Cost Ranges

Our consultations and desk based research have identified a number of costs associated with acquiring HMS Edinburgh and converting it for use as a visitor attraction. These include the cost of purchasing the vessel from the MOD as a *dead ship*², towing it to Leith, restoring it and converting it into a visitor attraction, as well as ongoing operating and maintenance costs, including dry docking³ every 10 to 15 years.

As illustrated, in Table 2.1 overleaf (and detailed at Appendix C), we have indicated - based on the information provided to us - ‘average’ costs in relation to each of the three options in terms of:

- **Purchase costs;** of around £625,000 based on our discussions with MOD;
- **Transport;** to the Port of Leith of around £440,000 based on initial discussions by the Council with MOD and our subsequent consultations;
- **Conversion/Restoration Costs;** of around £9.15m based on our consultations with MOD contractors and previous conversions (of SS Great Britain and Nomadic respectively) – i.e. given that the vessel is a ‘dead ship’ it will require comprehensive fitting out prior to being suitable for visitors;
- **Infrastructure Costs;** which, while unknown, are likely to be **significant** given that under the:
 - **Sole Facility** the current proposals to moor the vessel in the Western Harbour would require investment in relation to access roads, car parking and ancillary facilities;

² The state of the vessel upon purchase will be very similar to its current state, the cosmetic condition of which was highlighted to the City of Edinburgh Council by the Disposal Services Authority (DSA) recently. It will be in a *dead* condition with nil power or systems functioning and many of these degraded or de-equipped such that they will not work without extensive survey, restoration and repair. This is particularly true of the electrical systems which are anyway generated at 440v being reduced to various other voltages as required. The ship will be ballasted with fresh or non-estuarine sea water such that it is stable for ocean tow with its chain cable and anchor available – though there will be no power to recover the latter if deployed.

³ Dry docking is when the whole ship is brought to dry land so that the submerged Portions of the hull can be cleaned or inspected.

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- **Joint Facility** it is our understanding, from Forth Ports, that any joint berthing⁴ of HMY Britannia and HMS Edinburgh will require a different berth in the Port for the two vessels (rather than just mooring the latter next to the former's current berth) and, consequently, associated infrastructure costs⁵; and,
 - **Maritime Attraction** which, by definition, will necessarily involve further enhancement of the Port, access and visitor facilities.

Consequently, while the identified average set up costs range from around £10.215 million to £20.43 million⁶, these latter infrastructure improvements could add significantly more costs to ensuring the subsequent viability of HMS Edinburgh as a visitor attraction.

We have also provided information – from various sources – in relation to average on-going operating costs. As in the case of set up costs there are necessarily indicative but they suggest in the case of a sole facility a total cost of around £4 million, around £9.0 million for a joint facility and £13 million for a ‘full’ maritime attraction.

Finally it is important to stress that such costs **exclude** any funding costs⁷ associated with acquisition and conversion or operating costs associated with the maintenance and operation of supporting infrastructure that may be required for access to HMS Edinburgh.

⁴ Which is a necessary condition – based on our consultations – for any future management arrangement with HMY Britannia.

⁵ As HMS Edinburgh, if berthed next or adjacent to the current mooring of HMY Britannia, would prevent visiting Cruise ships from being able to turn around within their current arrival point in the harbour.

⁶ i.e. under the Maritime Attraction it is assumed that there will be further acquisition and restoration costs equivalent to £10m.

⁷ Funding costs are, however, considered at the end of this section.

Table 2.1: Average Cost Ranges			
Type of Cost	Sole Facility	Joint Facility	Maritime Attraction
Purchase	£625,000	£625,000	£625,000
Transport	£440,000	£440,000	£440,000
Conversion	£9.15m	£9.15m	£18.3m
Enabling Infrastructure	nk	nk	nk
Average set up cost excluding infrastructure costs	£10.215m	£10.215m	£20.43m
Operating Cost ⁱ HMS Edinburgh	£3.6m	£3.24m	£3.24
Other Operating Costs	-	£4.68m	£7.92m ⁱⁱ
Maintenance Costs HMS Edinburgh	£272,000	£272,000	£272,000
Other Maintenance Costs	-	£444,000	£1.07m ⁱⁱⁱ
HMS Edinburgh Annual Dry HM Dock Costs	£27,000	£27,000	£27,000
Other Dry Dock Costs	-	£50,000	£115,000 ^{iv}
Total Running Costs	£4.14m	£8.71m	£12.64m

ⁱ We have assumed, under the joint facility and maritime attraction options, 20% economies of scale 'discount' compared to sole facility operation.

ⁱⁱ Assumes the additional costs associated with a Maritime Attraction also secure a similar efficiency in terms of economies of scale of 20% compared to the sole facility operation. Consequently total costs are assumed to represent £3.6m + £3.6m + £5.2m divided by 80% (i.e. the assumed costs of two similar attractions and current costs of HMY Britannia discounted by 80%).

ⁱⁱⁱ The additional maintenance costs represents the 'average' of HMS Edinburgh (assumed costs of £272,000) and HMY Britannia (of £444,000) – i.e. £272,000 + £444,000 divided by 2 equals £358,000.

^{iv} The additional annualised dry dock cost is derived in the same manner as maintenance costs (i.e. 27,000 + 50,000 divided by 2 equals £28,500).

Revenue Ranges

We have summarised, in Table 2.2 below, (and detailed at Appendix C) information in relation to the average ticket prices and admission levels that might be relevant to the three project development options considered.

As illustrated ticket revenue for a sole facility could be in the region of £800,000 and £5.8 million to £7.7 million for the other two options. The significant uplift in the latter two levels is primarily based on the assumption that the current levels of utilisation to HMY Britannia – of around 300,000 per annum – will be retained (i.e. HMS Edinburgh will be complementary to HMY Britannia and as importantly **enhance** the visitors experience hence leading to more visitors, higher admission prices and consequent revenue uplifts).

Table 2.2: Ticket Sales			
Development Option	Sole facility	Joint facility	Maritime attraction
Ticket Price ⁱ	£8.50	£16.75	£19.50
Visitor Numbers ⁱⁱ	95,000	345,000	396,000
Ticket Sales	£807,000	£5.7m	£7.7m

ⁱ Based on consultation with HMY Britannia and desk research of ticket prices at other similar UK attractions.

ⁱⁱ Based on throughput at other attractions, market research conducted by City of Edinburgh Council and estimated uplifts identified by Professor Joe Goldblatt of Queen Margret University, Edinburgh.

It is important to recognise that, subject to the profile of the attraction, other sources of revenue may be available from onsite retail, catering and events.

In the absence of any detailed project proposals we have utilised information provided by HMY Britannia⁸ to estimate total revenue ranges. Accordingly we have assumed that:

- These facilities will be available as part of the fit out of HMS Edinburgh; and,
- The breakdown of revenue will be similar to HMY Britannia.

If these assumptions hold, total revenue levels could – as outlined in Table 2.3 below and detailed at Appendix C – range from £13 million for the sole facility to £12.8 million for the maritime attraction.

Table 2.3: Ticket Sales			
Development Option	Sole facility	Joint facility	Maritime attraction
Ticket Sales (60%)	£807,000	£5.8m	£7.7m
Other Revenue (40%)	£493,000	£3.8m	£5.1m
Estimated Total Revenue	£1.3m	£9.6m	£12.8m

⁸ 60% of HMY Britannia's total revenue is admission income, around 10% is from the tea room or after dinner events, 15% is derived from retailing and the remaining 15% is from corporate events.

Conclusions

From our analysis it is apparent that there are likely to be significant up front set up costs to converting HMS Edinburgh from a ‘dead ship’ to a visitor attraction irrespective of either the development option or location considered. Estimates based on previous conversions suggest such costs could be in the region of £10 million per vessel.

Once the specific location – in the Port of Leith – is considered there are likely to be further ‘enabling infrastructure’ costs which, while currently not considered, could be the same as if not a multiple of these conversion costs.

In comparing subsequent average operating costs with potential revenue levels it is apparent, as indicated in Table 2.4 below, that under the:

- **Sole Facility** it is likely that there will be a significant operating deficit potentially in the region of £3.00 million per annum;
- **Joint Facility** there might be a surplus if ticket prices and admission levels can be increased relative to current levels at HMY Britannia – our average projection suggest around a £900,000 surplus; and,
- **Maritime Attraction** there might also be a marginal surplus – our estimates suggest a level of £160,000 – again given an uplift in both ticket prices and admission levels compared to the previous option.

None of the estimates above **include** purchase and redevelopment costs. Assuming, for example, these costs – of between £10.25 million to £20.4 million – were financed through 25 year borrowing at a rate of 5% interest then operating costs would increase for the first two options by £725,000 per annum and £1.7 million for the latter option bringing into question the operational viability of both joint operation and a wider maritime attraction.

Development Option	Sole facility	Joint facility	Maritime attraction
Average operating costs	£4.14m	£8.71m	£12.64m
Average revenues	£1.3m	£9.6m	£12.8m
Outcome	(£2.84m)	£0.89m	£0.16m
Potential Funding Costs	£725,000	£725,000	£1.7m
Outcome	(£3.6m)	£165,000	(£1.54m)

Finally we suggest that considerable caution needs to be exercised in drawing any substantive conclusions about such set up costs and related operational viability without more detailed project specific analysis.

3. *Economic Impacts*

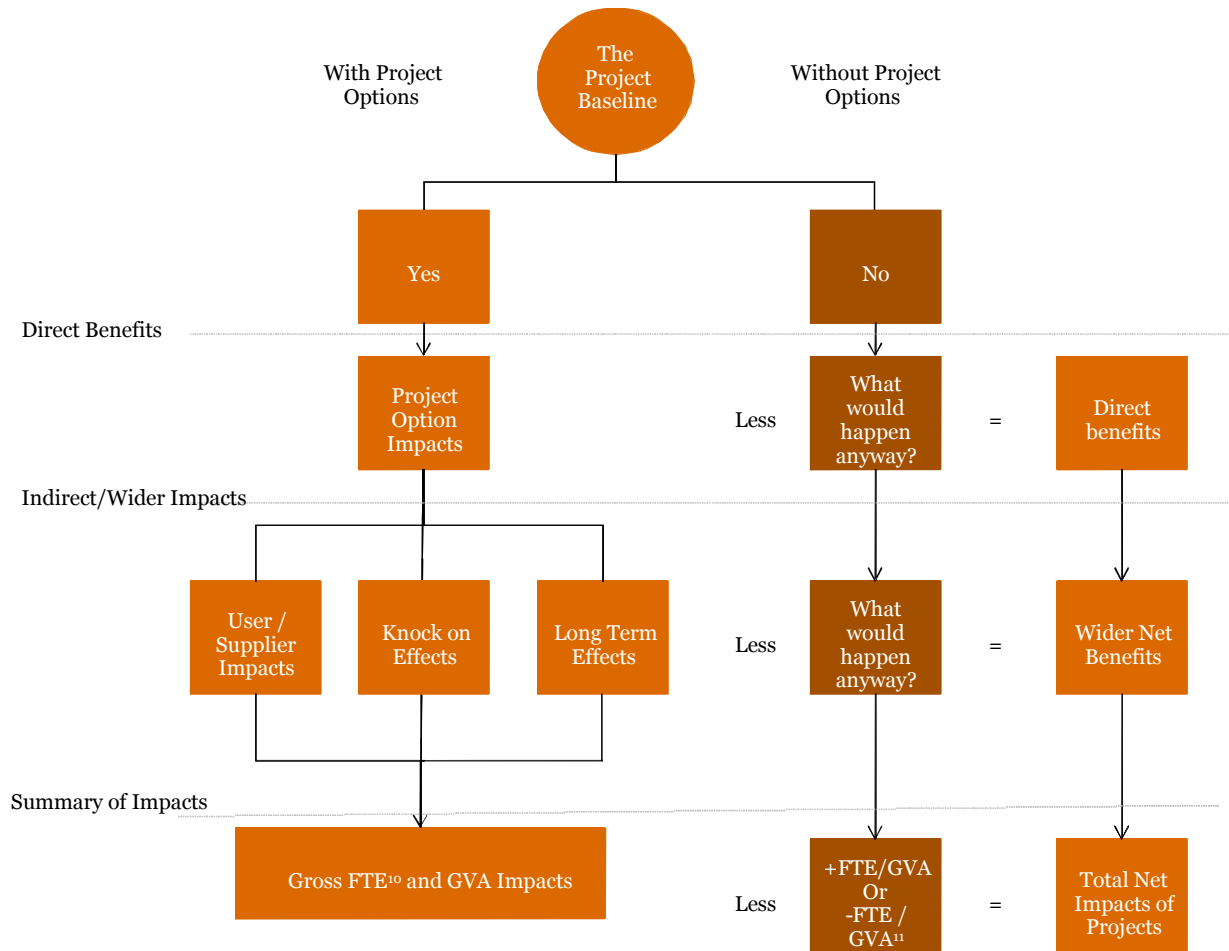
Introduction

The purpose of any economic impact assessment is to establish the benefits (and dis-benefits) of undertaking a given form of investment or activity compared to ‘doing nothing’. As illustrated, in Figure 3.1 overleaf⁹, there are several key elements to such an assessment, namely:

- Comparing and contrasting outcomes with and without a project. Consequently, in relation to the current proposals, what are the likely outcomes of investment in HMS Edinburgh compared to not taking the project forward?;
- Identifying the ‘direct benefits’ of a project. This involves establishing the levels of on-site employment and revenue or gross-value-added (‘gva’) generated to support this employment (compared to the levels of employment that might otherwise be generated anyway). In the case of the current proposals there are likely to be some short term construction impacts and some longer term sustainable operational impacts once the vessel is open to the public; and,
- Reviewing the indirect and wider impacts of a project. These are likely to be the most significant in terms of the HMS Edinburgh as the vessel may have the potential to attract (and retain) visitors and tourists to Edinburgh that might not otherwise have visited or stayed as long – and, as such, all their ‘off site’ spend (on accommodation and other expenditure in the local economy) might be attributed as a net benefit of HMS Edinburgh.

⁹ The principles outlined in this diagram are drawn primarily from the guidance outlined in the H.M. Treasury ‘Green Book’ (the latest version being published in 2011) which has been adopted since the early 1980s in the United Kingdom to inform decision making in the public sector in relation to all (major) capital and revenue programmes. In simple terms the steps involved provide the basis against which to identify whether a proposed project or programme is worth taking forward compared to the status quo – do benefits outweigh costs? If they do then which of the options considered offers the greatest potential benefits over costs?

Figure 3.1: Process of Economic Impact Assessment



¹⁰ FTE is defined as a 'full time equivalent employee' (recognising that, in relation to HMS Edinburgh, some staff may be volunteers, temporary or employed on a part time basis so, for example, 2 part time workers who are employed for 2.5 days each per week per annum would be recorded as a 1 full time equivalent post).

¹¹ Under the 'what would happen anyway' scenario employment and gva levels can be positive (i.e. existing employment levels may be maintained or increase going forward in the absence of HMS Edinburgh) or negative (i.e. without the vessel employment levels may be lower in the future).

In assessing the economic impacts of each of the development options considered in the previous section it is necessary, therefore, to estimate the:

- **Gross impacts** of visitor spend in terms of the direct and indirect employment effects and associated annual gva; and,
- **Net impacts** after accounting for displacement (i.e. any negative effects on existing attractions), deadweight (i.e. visitorship that would have occurred anyway) leakage (i.e. of operating expenditure spent outwith the Edinburgh) economy and multiplier effects (within the local economy).

Gross Impacts

Gross impacts may be split between employment and gva that is supported directly ‘on-site’ - as a result of the operation of HMS Edinburgh as a visitor attraction - and ‘off-site’ as a result of tourism spend elsewhere in the Edinburgh economy. The latter effects, in turn, depend on whether visitors to HMS Edinburgh are day trippers or residents of Edinburgh or domestic and/or foreign tourists to the area – the latter groups being defined as those who spend one or more nights in Scotland.

Given the dearth of information available from other attractions reviewed in relation to the split of visitation between day trips and UK and foreign tourists we have posed a ‘worst’ and ‘best’ case scenario in terms of such splits at HMS Edinburgh. Consequently, as illustrated in Table 3.1 below, we have assumed a:

- Worse case whereby HMS Edinburgh attracts 80% day trips and 10% domestic and foreign visitors respectively; and,
- Best case which assumes the reverse outcome, namely 80% tourists and 20% day trips.

Scenario	Worst Case	Best Case
% Day Trips	80%	20%
% Domestic Visitors	10%	40%
% Foreign Tourists	10%	40%

The significance of such breakdowns – in terms of gross impacts – is related to the total expenditure of each group ‘on and off site’.

As illustrated, in Table 3.2 below, expenditure levels for day trips are in the region of £32.00 while those of domestic and foreign visitors are around £110.70 and £80.00 per day respectively.

Visitor Type	Expenditure Levels
Day Trips	£32.00 ⁱ
Domestic Tourists	£110.70 ⁱⁱ
Foreign Tourists	£80.00 ⁱⁱⁱ

- i Average day trip spend in Scotland, Visit Scotland (2014).
- ii Average daily GB tourism expenditure per trip to Edinburgh, Tourism in Scotland's Regions, 2012, Visit Scotland (September 2013).
- iii Average daily Overseas tourism spend per trip to Edinburgh, Tourism in Scotland's Regions, 2012, Visit Scotland (September 2013).

Consequently the greater proportion of domestic and foreign tourists to an attraction the greater the level of offsite spend likely on any given trip basis.

As illustrated, by Table 3.3 overleaf, such effects are apparent when considering the gross direct and indirect employment effects of each development option.

In relation to the **direct** gross employment levels for each option we have assumed an average expenditure to employment level of £45,000 as per Visit Scotland data¹² in relation to Edinburgh (i.e. every £45,000 spent will support one full FTE).

Applying this ratio to off-site expenditure – and assuming different variations in visitor profiles – indicates significant potential differences in gross **indirect** impacts. For example - as detailed in Appendix D - if the majority of visitors under the 'minimum' sole facility option are day trippers then:

- They will spend £11.70 in admission and other ancillary services on site leaving £20.30 of their average daily spend of £32.00 on other 'off-site' activities;
- Given a presumed total level of 32,000 such trips, total 'off-site' spend might be in the region of £649,000; and,

¹² See – Sustainable Tourism Employment and Gross Value Added by Local Authority Area (2010), Tourism in Scotland's Regions, 2012, Visit Scotland 2013.

- At a ratio of £45,000 spend per job in the tourism sector this suggests a gross impact ‘off-site’ from this group of 14 jobs.

In contrast of the remaining (assumed) domestic tourists of 4,000, their ‘off-site’ expenditure per day is £424,000. This will, in turn, support 10 jobs (assuming that their visit can be attributed to HMS Edinburgh).

The same effects apply to the remaining 4,000 foreign tourists who will ‘add’ a further £312,000 ‘off – site’ expenditure and consequent gross employment level of 7 gross jobs.

In total, therefore, under this scenario a further 31 ‘off-site’ (gross) jobs are likely to be supported together with the 47 on-site employees.

	Sole facility ⁱ		Joint facility ⁱ		Maritime attraction ⁱ	
	Min	Max	Min	Max	Min	Max
Estimated Direct Employment	47	122	126	165	162	208
Estimated Indirect Employment	31	64	157	560	153	648
Total Gross Employment ⁱⁱ	78	186	283	725	315	856

ⁱ Under the minimum scenario – for each development option – the visitor split is assumed to be 80% day trips and 10% domestic and 10% foreign tourists whereas, under the maximum scenarios, the split is assumed to be 20% day trip and 40% domestic and 40% foreign tourists respectively.

ⁱⁱ Detailed calculations supporting these estimates are provided at Appendix C.

Net impacts

In assessing, of these gross impacts, what may be ‘net additional’ to the local economy it is necessary to consider various effects including displacement, deadweight, leakage and multipliers.

(a) Displacement

This effect accounts for any negative impacts on existing businesses of a new project. In this regard we have assumed under the:

- **Sole facility** a high level of displacement as by definition the attraction will be in competition with HMY Britannia. Scottish Enterprise ‘ready reckoners¹³’ suggest therefore a (high) level of 75% displacement;
- **Joint facility**, no displacement as the two attractions will be jointly marketed and managed; and,
- **Maritime attraction** a similar effect – i.e. no displacement – again given the intent of providing a complimentary visitor experience.

(b) Deadweight

This effect describes ‘what will happen anyway’ in the absence of the project going forward. Accordingly we have assumed under the:

- **Sole facility** no such effect as visitation is assumed to remain stable to the Port in the foreseeable future;
- **Joint facility** a level of 80% to 90% deadweight in line with the analysis conducted by Professor Goldblatt; and,
- **Maritime attraction** a level of 79% to 57% to reflect the uplifts in visitors (of between 63,000 and 130,000 compared to the steady state levels of 300,000 to HMY Britannia).

¹³ Additionality & Economic Impact Assessment guidance Note, Scottish Enterprise.

(c) Leakage / Multiplier

Based on our previous analysis of tourism benefits in Leith – in relation to the initial Tax Incremental Finance proposals in the Port¹⁴ – we have assumed an average leakage level of 22.5% and a multiplier value of 1.30 for all scenarios.

Applying (all) these assumptions to the estimated gross employment effects – at Table 3.3 – suggests, as illustrated in Table 3.4 overleaf, that the **annual** net impacts associated with each development option are likely to be around:

- £319,000 to £767,000 in gva terms per annum under the sole facility option;
- £447,000 to £2.4 million gva in respect of the joint facility; and,
- £1.09 million to £6.0 million gva for a maritime attraction.

	Sole facility		Joint facility		Maritime facility	
	Min	Max	Min	Max	Min	Max
Gross Employment	78	186	283	725	315	856
Displacement	75%	75%	0%	0%	0%	0%
Net of Displacement	19.5	46.5	283	725	315	856
Deadweight	0%	0%	90%	80%	79%	57%
Net of Deadweight	19.5	46.5	28.3	145	66	368
Leakage	22.5%	22.5%	22.5%	22.5%	22.5%	22.5%
Net of Leakage	15	36	21	112	51	285
Multiplier	1.3	1.3	1.3	1.3	1.3	1.3
Total Net Employment	19.5	46.8	27.3	145.6	66.3	370.5
GVA per employee	£16,400	£16,400	£16,400	£16,400	£16,400	£16,400
Total annual GVA	£319,000	£767,000	£447,720	£2.38m	£1.09m	£6.08m

¹⁴ See Edinburgh Waterfront Tax Incremental Financing (TIF) Project, Business Case, January 2010.

In relation to the sole facility it is apparent that – based on the analysis conducted – operationally the attraction would operate at a significant deficit (of around £3.6 million) and generate relatively low net economic benefits (at around £543,000 gva per annum). On this basis the level of subsidy that could be considered under ‘value for money terms’ would not support the on-going operation of the vessel (i.e. £3.6 million > £0.543 million).

Finally while the other two options have the potential to generate greater net impacts (at around an average of £1.41 million to £3.5 million respectively) the case for any intervention would require more detailed analysis by the project sponsors to reduce the significant uncertainties associated with the commercial viability and practical feasibility of either of these options.

Appendices

Appendix A: Organisations Consulted

Table A1: Consultees

CDS Consultants (as the main consultants for the SS Nomadic and HMS Caroline projects)

Continuum Group
City of Edinburgh Council
ETAG
Forth Ports
HMS Belfast
MOD
Portsmouth Historic Dockyard
Resolution Properties
Scottish Enterprise
Sir Tom Farmer
The Royal Yacht Britannia
Visit Scotland

Appendix B: Comparator Attractions

Name	Region	City	Launched	Class	Type
HMS Edinburgh	Scotland	Edinburgh		Type 42 destroyer	Destroyer
Cutty Sark	England	Greenwich	1869		Clipper
HMS Alliance	England	Gosport	1945	Amphion class	Submarine
HMS Belfast	England	London	1983	Town Class	Light Cruiser
HMY Britannia	Scotland	Edinburgh	1953		Royal Yacht
RRS Discovery	Scotland	Dundee	1901	Wooden	Barque
SS Great Britain	England	Bristol	1843	Iron hull	Ship
SS Nomadic	Northern Ireland	Belfast	1911	Steamship	
Portsmouth Historic Dock Yard	United Kingdom	England			

Name	Price – Adult	Price – Child	Price – Family	Price – Concession	Ticket Comments	Opening Hours
Cutty Sark	£12.00					
HMY Britannia	£12.75	£7.75	£36.50	£11.50	Annual pass	Jan-Mar 10.00 - 15.30 Apr-June 09.30 - 16.00 Jul-Sep 09.30 - 16.30 Oct 09.30 - 16.00 Nov-Dec 10.00 - 15.30
RRS Discovery	£8.75	£6.75	£25.00	£6.75	Annual pass	Summer opening April – October Mon – Sat - 10am-6pm (Sun 11am) Winter Opening November – March Mon – Sat - 10am – 5pm (Sun 11am) Closed 25th & 6th December and 1st & 2nd January
SS Great Britain	£13.75	£7.00	£36.50	10.95-12.50	Annual pass	10.00 - 17.30 all year
SS Nomadic	£8.50	£5.00	22-27	£6.50	Timed Entry	

Name	Special Events	Additional Facilities – Rest / Café / Conf2	Additional Facilities – Rest / Café / Conf3
Cutty Sark	Estimated to host 85 functions (inc. 18 weddings) pa catering for 10,000 guests in total	Functions	Filming
HMY Britannia	Private and corporate events for up market meals etc.	Gift Shop	
RRS Discovery	Multiple	Gift Shop	
SS Great Britain	Multiple	Café	
SS Nomadic			

Name	2008 Visitors	2009 Visitors	2010 Visitors	2011 Visitors	2012 Visitors	Average Visitor No's.
Cutty Sark					352,000	
HMY Britannia	255,806	258,388	Awaiting Scottish data	Awaiting Scottish data	295,090	255,806
RRS Discovery	142,865	151,365	Awaiting Scottish data	Awaiting Scottish data		142,865
SS Great Britain	-	-	-	168,012	170,741	169,350
SS Nomadic					New for 2013	

Name	Staff Numbers	Staff Cost
Cutty Sark	60 (41FT)	
HMY Britannia		
RRS Discovery		
SS Great Britain	58 employees, 120 volunteers	£ 307,341.00
SS Nomadic	13	

Name	Expenditure	Income	Restoration Cost
Cutty Sark	£1.2m	£4,500,000 profit (including trading partners at £750k), PwC Report: c£1.3m- c.£1.8m projected operating revenue	£11.75m (Heritage Lottery Fund Grant Awarded in 2006)
HMY Britannia	£5.27m	£5.45m	
RRS Discovery			
SS Great Britain			£11.3m
SS Nomadic / RMS Titanic	£500,000	£300,000	£10m

Name	Shortfall Funding	Purchase of Vessel	Maintenance Costs	Additional Costs
Cutty Sark		£500,000 to £750,000		£33m to repair fire damage
HMY Britannia				
RRS Discovery				
SS Great Britain			£444,650	
SS Nomadic	£171,000 plus £800,000 transport to Belfast	£171,000 plus £800,000 transportation costs	£220,000 spent on dry docking	

Appendix C: Cost and Revenue Breakdowns

Type of cost	Sole facility		Joint facility		Maritime attraction	
	Min	Max	Min	Max	Min	Max
Purchase ⁱ	£500,000	£750,000	£500,000	£750,000	£500,000	£750,000
Transport ⁱⁱ	£80,000	£800,000	£80,000	£800,000	£80,000	£800,000
Conversion/ restoration ⁱⁱⁱ	£7 m	£8 m	£7 m	£8 m	£7 m	£8 m
Infrastructure development	nk	nk	nk	nk	nk	nk
Initial set up cost - excluding infrastructure costs	£7.6 m	£9.6 m	£7.6 m	£9.6 m	£7.6 m	£9.6 m
Operating cost (inc. staff) ^{iv}	£2 m	£5 m	£5.6 m	£7 m	£7.2 m	£9 m
Maintenance ^v	£100,000	£444,650	£90,000	£400,185	£85,000	£377,953
Annual cost of dry dock (every 10 years) ^{vi}	£4,000	£50,000	£4,000	£50,000	£4,000	£50,000
Annual running cost	£2.1 m	£5.5 m	£5.7 m	£7.45 m	£7.3 m	£9.4 m

Sources:

- ⁱ Consultation with MOD.
- ⁱⁱ The lower limit of this range is based on the results of previous market research conducted by the City of Edinburgh Council, the upper limit is based on our consultation with CDS Consultants (the main consultants for SS Nomadic and HMS Caroline projects).
- ⁱⁱⁱ Consultation with MOD contractor with links to Portsmouth Historic Dockyard.
- ^{iv} The lower level of £2m for the sole facility is based on the average annual expenditure of similar attractions in the UK and the upper limit, of £5m, is based on the average annual expenditure of HMY Britannia. In relation to the joint facility we have assumed that the maximum cost will be these two levels combined (i.e. £2m and £5m = £7m) and, under the minimum cost, 20% economies of scale may be derived (i.e. £7m x 0.80% = £5.6m). Likewise under the maritime attraction we have assumed a 'third' significant attraction (at a cost of £2m added to £7m) and again a 20% economies of scale effect under the minimum cost level (i.e. £9m x 0.80% = £9m).
- ^v The lower limit of this range for a sole facility is based on the average annual expenditure of similar attractions in UK the upper limit is based on the average annual expenditure of HMY Britannia. We have assumed that operating the attraction as part of a joint facility or maritime attraction will result in economies of scale in terms of operating costs resulting in reductions of 10% and 15% respectively relative to the costs of running HMS Edinburgh as a sole facility. This cost excludes, therefore, any maintenance or dry dock costs associated with other vessels.
- ^{vi} The lower limit of this range is based on the results of market research conducted by the City of Edinburgh Council the upper limit is based on our consultation with HMY Britannia.

Table c2 : Ticket Sales						
	Sole facility		Joint facility		Maritime attraction	
	Min	Max	Min	Max	Min	Max
Ticket price ⁱ	£7.00	£10.00	£16.25	£17.25	£18.00	£21.00
Visitor no's.	40,000 ⁱⁱ	150,000 ⁱⁱⁱ	330,000 ^{iv}	360,000 ^{iv}	363,000 ^v	430,000 ^v
Ticket sales	£280,000	£1.5 m	£5.4 m	£6.2 m	£6.5 m	£9.0 m

Sources:

- ⁱ PwC analysis based on consultation with HMY Britannia and desk research of ticket prices of similar UK attractions.
- ⁱⁱ Desk research of visitor numbers to similar attractions in UK.
- ⁱⁱⁱ Results of market research conducted by the City of Edinburgh Council.
- ^{iv} Professor Joe Goldblatt, Queen Margaret University, Edinburgh estimated that a joint facility could attract an additional 10-20% more visitors to the c.300, 000 who visit HMY Britannia each year.
- ^v We have assumed under the minimum option that a maritime attraction would have the same impact on visitor numbers as adding a new attraction, i.e. increasing visitor numbers by 10% compared to the joint facility minimum and, under the maximum option a similar level of visitors as the Portsmouth Historic Dockyard.

Table C3: Revenue Ranges						
Revenue source	Sole facility		Joint facility		Maritime attraction	
	Min	Max	Min	Max	Min	Max
Ticket sales (60%)	£280,000	£1.5m	£5.4m	£6.2m	£6.5m	£9.0m
Other revenue (40%)	£187,000	£1.0	£3.6m	£4.1m	£4.3m	£6.0m
Estimated total revenue per annum	£467,000	£2.5m	£9.0m	£10.3m	£10.8m	£15.0m

Appendix D: Gross employment impacts

Table D1: off-site spend estimates						
	Sole facility		Joint facility		Maritime attraction	
	Min	Max	Min	Max	Min	Max
Total spend per head	£11.70	£16.70	£27.00	£28.60	£29.80	£35.00
Day trip spend	£32.00	£32.00	£32.00	£32.00	£32.00	£32.00
Difference	£20.30	£15.30	£5.00	£3.40	£2.20	-
Total day trips	32,000	8,000	264,000	72,000	290,000	-
Total off site expenditure	£649,000	£122,400	£1.320m	£244,800	£638,000	-
Spend per domestic tourist	£288.00	£288.00	£288.00	£288.00	£288.00	£288.00
Difference	£276.00	£271.00	£261.00	£259.00	£258.00	£253.00
Trip duration	2.6	2.6	2.6	2.6	2.6	2.6
Off-site per day	£106.00	£104.00	£100.00	£99.00	£99.00	£97.00
Total trips	4,000	16,000	33,000	144,000	36,300	172,000
Total off site spend	£424,000	£1.67m	£3.3m	£14.25m	£3.59m	£16.68m
Spend per foreign tourist	£440.00	£440.00	£440.00	£440.00	£440.00	£440.00
Difference	£428.30	£423.30	£413.00	£411.40	£410.70	£405.00
Trip duration	5.5	5.5	5.5	5.5	5.5	5.5
Off-site per day	£78.00	£77.00	£75.00	£74.80	£74.70	£73.70
Total trips	4,000	16,000	33,000	144,000	36,300	172,000
Total off site spend	£312,000	£1.2m	£2.4m	£10.7m	£2.7m	£12.6m
Overall total spend	£1.4m	£2.9m	£7.09m	£25.2m	£6.9m	£29.2m
Ratio of spend to employment	£45,000	£45,000	£45,000	£45,000	£45,000	£45,000
Total gross off-site employment	31	64	157	560	153	648

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