

**Longbridge Weir Hydroelectric power station budget increase****SUMMARY**

- 1.1 The project gained approval to proceed at the 18 December 2007 meeting of the Cabinet. £1.5M of prudential borrowing was approved and subsequent to this a further £160k was approved by the Public Realm Board, plus £25k from the Environment Agency/Trent Rivers Trust taking the total project budget to £1.685M.
- 1.2 The original expectation was for the project to have been completed by mid 2010. However, significant and unexpected delays, with associated consequent costs, were incurred in gaining both Environment Agency Transfer licence and planning approval. Both are now in place but a number of costly concessions had to be made to gain the necessary approvals. These together with the abortive costs caused by the delays and negotiations have driven up the project cost. The revised total cost for the project has risen to £2.119M.
- 1.3 In addition, the comprehensive spending review increased the public works load board interest rate by 0.9%. This directly affects the project since it relies upon prudential borrowing as its principal funding source. As a result of this it has been necessary to rework the project cost model to demonstrate that it remains affordable.
- 1.4 The introduction of the feed-in-tariff scheme has greatly increased the income expected to be generated by the hydro over original expectations which were based upon the renewables obligation. Income is now forecast as starting at £208k in place of £132k per year.
- 1.5 The revised income will support up to £2.4M of borrowing over the 20 year term. The borrowing amount forecast as necessary to complete the project is £1.934M. However, including a prudent contingency takes the total borrowing amount sought to £2.1M, which if used, still results in a cash surplus exceeding £750k at year 20 and positive cash flow during year 16.

**RECOMMENDATION**

- 2.1 That Cabinet recommends to Council to approve an additional £600k unsupported borrowing taking the total approved sum to £2.1M.
- 2.2 That Cabinet recommends to Council to approve the associated changes to the Council's prudential indicators to reflect the necessary revisions to the capital programme and unsupported borrowing, subject to further detailed confirmation when these indicators are next updated.

- 2.3 Cabinet notes the dramatically improved revenue stream forecast to be provided by the feed-in-tariff scheme, in place of the previously used renewables obligation, which results in a £750k surplus by year 20 (2030). By the time the feed-in-tariff scheme ends (in 2035) the finance model shows a surplus exceeding £2M and an ongoing net revenue income exceeding £90k per year. In addition to this it will become possible to count the emission savings towards CRC needs from 2035 onwards.

## **REASONS FOR RECOMMENDATION**

- 3.1 The carbon free generation from hydro project will play a critical part in the refurbished Council House achieving both BREEAM 'Excellent' and EPC A ratings.
- 3.2 The project is now committed to over £500k of costs which will have no funding source if the electricity generation does not occur so generating the income to cover the costs.
- 3.3 As the additional unsupported borrowing is not in the capital programme, the constitution requires that the decision be made by full Council.

## **SUPPORTING INFORMATION**

- 4.1 At its meeting on 18 December 2007 Cabinet approved a £1.5M capital budget for the project. The source is unsupported prudential borrowing funded by the project scheme income. The requested budget and income forecast was derived from the feasibility study carried out earlier in 2007.
- 4.2 Subsequent to Cabinet approving the £1.5M budget, the Public Realm Board contributed £160k and the Environment Agency/Trent Rivers Trust a further £25k taking the total budget to £1.685M.
- 4.3 Faithful and Gould, the appointed project managers and cost consultants for the project, produced a cost plan in September 2010 which showed the project was within budget at that point.
- 4.4 A revised cost plan was produced on 15 December 2010. This took account of many more changes than the September plan with the result that the expected total project cost has risen to £2,119,034.
- 4.5 The projected income from the hydro has risen from £132k per year to £208k per year. The increase is largely due to the introduction of the feed-in-tariff which pays 11p per kWh of renewable generation (index linked to RPI) in place of the originally allowed 4.0p from the renewables obligation. This increased amount will cover the necessary additional borrowing over the original 20 year term.
- 4.6 By the time of the Cabinet meeting the project will be out at tender. The aim is to start on site late April or early May with completion late September to early October 2011.
- 4.7 The turbine was tendered last year and ordered in August 2010 – a necessary action because of its extremely long lead time.

4.8 Reasons for the costs increasing are:

- Commodity price rises since 2007
- Increases in construction cost since 2007
- Additional features added to satisfy the Environment Agency
- Fishpass cost is greater than EA contribution
- Abortive time spent by the design team working on design iterations whilst seeking a solution that would satisfy the EA.

4.9 A value engineering exercise will be carried out with the successful or lowest 2 tendering contractors to identify any practicable efficiencies and savings.

4.10 To ensure sufficient approved budget to enable the order to be placed after tender the contingency has been increased to £322k so taking the additional borrowing amount for which approval is being sought to £600k. This is considered to be a prudent measure to mitigate the risk of being unable to place the construction order due to an insufficient approved sum.

## OTHER OPTIONS CONSIDERED

5.1 Stop the project. This option is not considered appropriate given that doing this would immediately cause a £500k budget pressure. The project remains viable, even at the increased cost, as a result of the increased income resulting from the feed-in-tariff.

**This report has been approved by the following officers:**

<b>Legal officer</b> <b>Financial officer</b> <b>Human Resources officer</b> <b>Service Director(s)</b> <b>Other(s)</b>	Stuart Leslie Ciaran Guilfoyle, Chloe Kenny, Nicola Goodacre Rod Wood Steve Meynell
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<b>For more information contact:</b> <b>Background papers:</b> <b>List of appendices:</b>	Name 01332 255082 e-mail tim.findlay@derby.gov.uk None Appendix 1 – Implications
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**IMPLICATIONS****Financial**

- 1.1 The cost model has necessarily made a number of assumptions about generation output, the future Council House electricity demand profile and future electricity price fluctuations as well as RPI changes. The assumptions used are considered to be prudent and reasonable under the circumstances and have led to the view that the expected revenue stream will easily cover the costs of £2.1M unsupported borrowing.

**Legal**

- 2.1 The successful completion of the project is dependent upon an access agreement negotiated with the Riverlights developer. This expires at the end of October 2011 or the date on which building work substantially commences on Block B or C so it is important that the project is completed by this time and not subject to further delays.

**Personnel**

- 3.1 None directly arising.

**Equalities Impact**

- 4.1 None directly arising.

**Health and Safety**

- 5.1 None directly arising.

**Carbon commitment**

- 6.1 Building this project will save some 700t CO<sub>2</sub> from being emitted by fossil fuelled power stations every year.
- 6.2 The presently assessed embodied CO<sub>2</sub> caused by building the project is 1720t. Thus the carbon payback for the construction is under 2.5 years. The life expectancy of the plant exceeds 75 years over which time it will have saved a total emission of some 52,500tCO<sub>2</sub>.
- 6.3 The assessed energy consumed in building the project will be 6.02 million kWh. So across its anticipated 75 year life the total generated energy payback is over 30x what will have taken to build the project.

**Value for money**

- 7.1 The unsupported borrowing cost of the project is fully funded from the income/power value it generates and hence has no direct cost to Council budgets. In addition at

the end of the borrowing period a large cash surplus exceeding £750k is forecast.

- 7.2 The project pays for itself over 20 years. After this time, after deducting maintenance and operating costs, all revenues will be available for other purposes.

### **Corporate objectives and priorities for change**

- 8.1 This project links directly to the existing Corporate Plan and Vision: City growth 5 creating a city for all – reducing Co2 emissions and contributing to reducing the effects of climate change.  
In addition the proposals link directly and closely to the proposed new Council Plan outcome: Good quality sustainable Council services that meet local needs.