Suffolk Holistic Water Management Project

Felixstowe Peninsula Water Management Scheme
Felixstowe Peninsula Water Management Scheme
Landowners’ Meeting 8 Feb 2016

• Welcome and Introductions – Tim Derby
• Setting the Scene – Jane Burch
• The Story so Far – Paul Bradford
• Questions & Discussion – All (Tim Derby to facilitate)
• Next Steps – All (Jane Burch to facilitate)
Summary

Preferred Units
ML (Mega litre) 1 ML = 1,000m³ = 1tcm = 0.2 M gal
l/s (litres/second) 1 l/s = 13 gal/m
Headline Cost Benefits

Capital Costs £/m³ useable water.
- Lined £3.28
- Unlined £1.68
- Pipeline £20/m

Annual Costs £/m³ average usage
- Lined £0.61
- Unlined £0.35
# Headline Cost Benefits

## Economic Feasibility

<table>
<thead>
<tr>
<th>Average added value £/m³ (after irrigation costs)</th>
<th>With Liner</th>
<th>Unlined</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pre-packed and fresh</td>
<td>£0.51</td>
<td>£0.79</td>
</tr>
<tr>
<td>Process potatoes</td>
<td>£0.20</td>
<td>£0.48</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Internal Rate of Return</th>
<th>With Liner</th>
<th>Unlined</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pre-packed and fresh</td>
<td>15%</td>
<td>25%</td>
</tr>
<tr>
<td>Process potatoes</td>
<td>10%</td>
<td>19%</td>
</tr>
</tbody>
</table>

## Insurance against drought restrictions

## Ecosystem Service Provision
Design Considerations

• Scheme Size (overall storage capacity)
  – Demand (20-25 years)
    • Annual Crop Water Requirement. Include: climate change, world food prices.
    • Drought Security (Cover for 2 years restrictions?)
  – Water Availability/Quality
    • IDB monitoring.
  – Available Capital
    • Management /ownership structure, Grant availability, Likely economic return.
Sizing: Holding Rsr VS Farm Rsr

Possible distribution pump scenarios

<table>
<thead>
<tr>
<th>Delivery Rate (l/s)</th>
<th>Balancing Rsr (ML)</th>
<th>Balancing Rsr (ha)</th>
<th>Farm Rsr (ML)</th>
</tr>
</thead>
<tbody>
<tr>
<td>22</td>
<td>240</td>
<td>2.0</td>
<td>441</td>
</tr>
<tr>
<td>31</td>
<td>100</td>
<td>0.8</td>
<td>580</td>
</tr>
<tr>
<td>41</td>
<td>0</td>
<td>0</td>
<td>630</td>
</tr>
</tbody>
</table>

Reservoir fill profile. 700 ML/a
Minimum distribution pump 22.5 l/s
Proximity to Source of Supply and Demand
Ownership, Easements and Leasing
Natural and Manmade Barriers and Opportunities
Figure 1: Showing site location and nearby sites of archaeological interest

©Crown Copyright. All rights reserved. Suffolk County Council Licence No. 100023395 2006
## Opportunity/Risk Assessment

<table>
<thead>
<tr>
<th>Factor</th>
<th>Abstraction Point</th>
<th>Balancing Reservoir</th>
<th>Distribution Main</th>
<th>Farm Reservoir</th>
</tr>
</thead>
<tbody>
<tr>
<td>Proximity to Source of Supply</td>
<td>***</td>
<td>***</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Proximity to Irrigation command area</td>
<td>*</td>
<td>**</td>
<td>*</td>
<td>***</td>
</tr>
<tr>
<td>Access/ownership (easements)</td>
<td>*</td>
<td>****</td>
<td>****</td>
<td>*</td>
</tr>
<tr>
<td>Natural Barriers (rivers etc.)</td>
<td>*</td>
<td>*</td>
<td>***</td>
<td>*</td>
</tr>
<tr>
<td>Artificial Barriers (roads infrastructure)</td>
<td></td>
<td>**</td>
<td>****</td>
<td>*</td>
</tr>
<tr>
<td>Geology (presence of clay)</td>
<td></td>
<td>****</td>
<td></td>
<td>****</td>
</tr>
<tr>
<td>Archaeology</td>
<td>*</td>
<td>****</td>
<td>**</td>
<td>***</td>
</tr>
<tr>
<td>Designated sites</td>
<td>****</td>
<td>**</td>
<td>*</td>
<td>*</td>
</tr>
</tbody>
</table>
Financing Operation and Management
Water Management Association

• Capital and operating costs to be covered by revenue over scheme lifetime
• Public and private sector partnership
  – East Suffolk IDB
• Comprising of
  – Members
  – Board,
  – Operational Staff.
• Member’s Rights and Obligations:
  – Right to share of water
  – Voting
  – Payment for water/maintenance
  – Allow access for repair maintenance
Questions and Discussion

• Irrigation Demand
  – crop rotations and drought security

• Pipeline Options
  – new or existing mains?

• Water Management Association
  – Is East Suffolk IDB the appropriate public body

• Questions Arising
  –
Suffolk Holistic Water Management Project

Felixstowe Peninsula Water Management Scheme

Next Steps