

Southampton City Council Thornhill District Energy Scheme

Project Development

Strategic Drivers

- Fuel poverty for residents
- Building performance and long term maintenance and replacement costs
- Potential revenue streams
- Reducing CO2
- Attracting external funding
- The Council's energy ambitions (SEAP)

Why Would the Council Invest?

- Controlling affordable heating costs for tenants
- HRA investment funding
- Lower public sector interest rates
- Potential revenue streams
- Longer term aspirations as an energy provider

Business Modelling & Risk

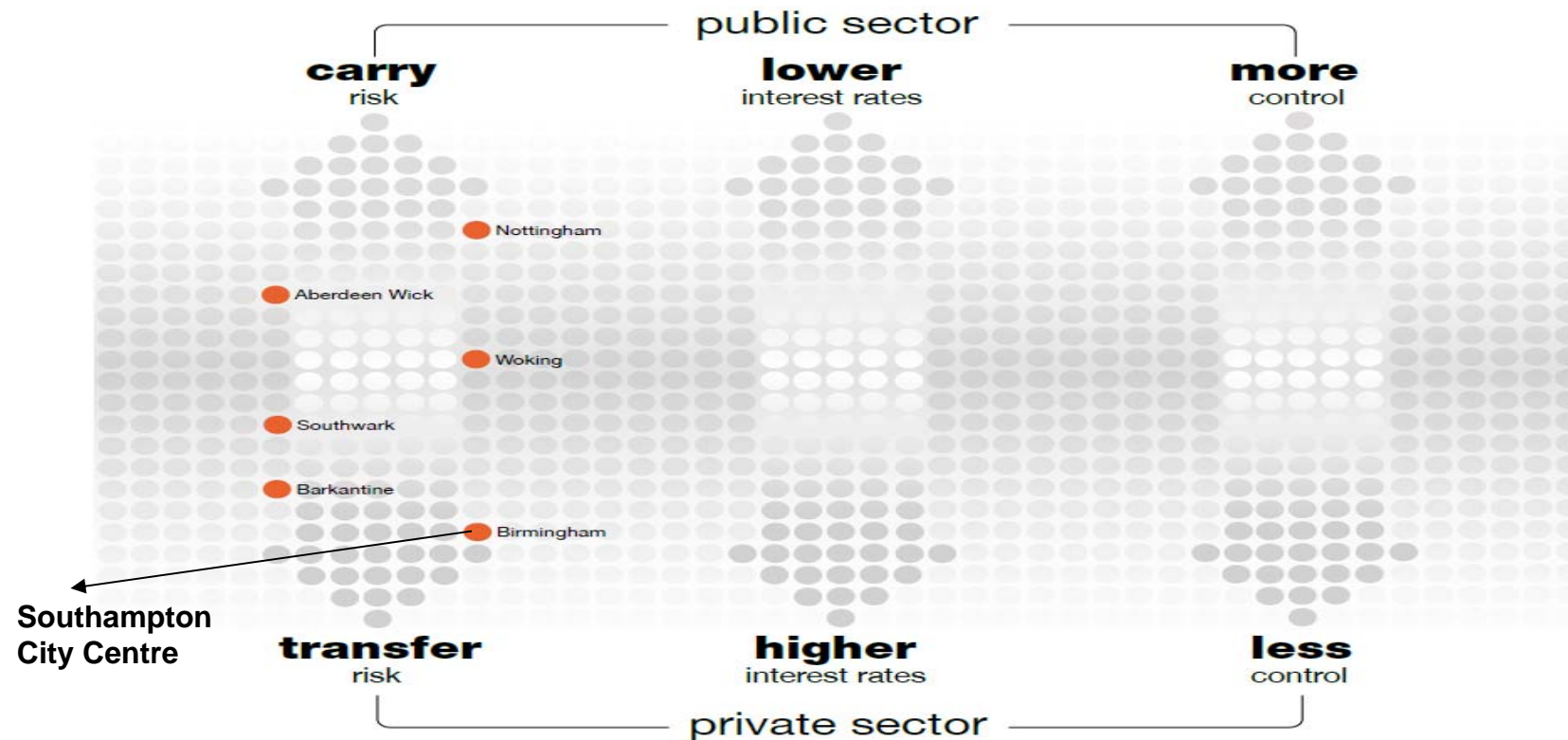
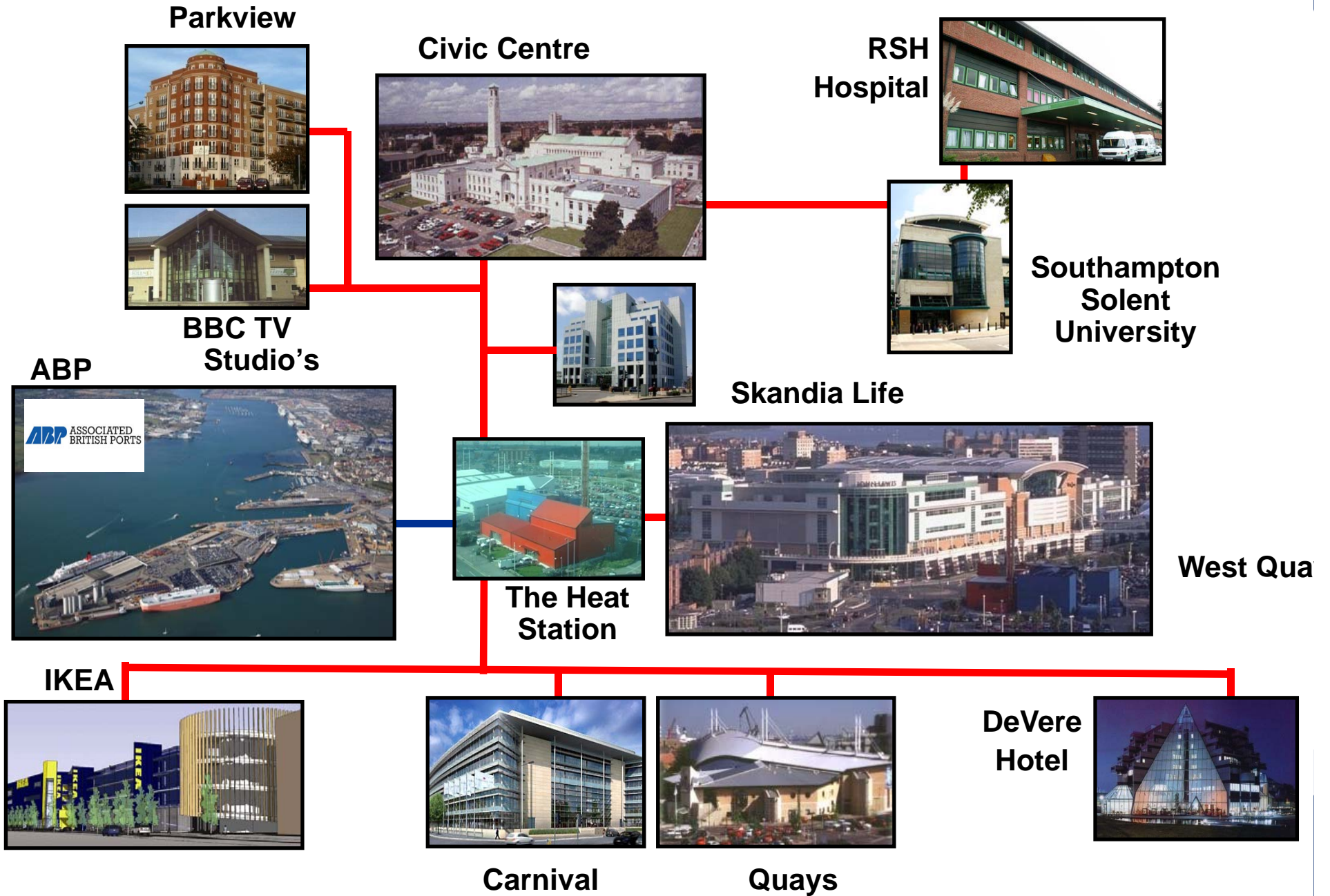


Figure 15: This diagram shows relationship between risk, control and the cost of capital for public and private sector projects



International Way CESP Scheme

- £16 million scheme
- Insulation and district heating
- 25% Council funded
- Controllable heat
- Heating cost reductions of over 30%
- Noise reductions

July 14

SCC climate change



The November Opportunity

- A new heating, hot water and insulation system for 1,050 residents
- Initial energy cost savings of up to 25% and future protection from price rises
- Reduced capital and maintenance charges
- Min £30 million investment to 2015 across Thornhill (Insulation and Heating) with external funding of over £22 million (ECO)
- Council income from generated electricity
- Potential phase 2 post 2015 (min 550 flats and 3 schools)

Opportunity qualification

- Existing Heat mapping and Energy master planning completed
- Thornhill identified as priority location
- Initial concept development/feasibility completed
- OJEU Framework Contract completed

DE Capital Funding (Nov 13)

- c£14 million – phase 1 (1,050 homes)
- HRA (lifetime avoided costs)
- ECO (£145/tonne CO₂)
- No General Fund contribution to capital build costs
- c£10 million Insulation
-
- Potential for a phase 2 (550 homes from 2015)

DE Revised Capital Funding Estimate

- Potential funding gap of £1.5m - £2m
- Tower blocks Insulation requires a far greater HRA capital contribution

However

- Market testing has identified options for significant ECO grant investment for the scheme
- District Heating now considered a Primary Measure by DECC
- Possible JV utility partnership could reduce long term operational and investment risk
- DECC funding support is available to support further project development costs
- New delivery model could be a sustainable model for use elsewhere in the City.

Principle Priorities

- Establish a utility partnership
- Implementation of a disciplined evaluation and business case close-out programme
- Produce staged decision gateways to minimise SCC cost and risk

Stage 1 – Project Viability Activity 1 – 3.

- Secure Project Development grant funding
- Production of project business case – Update members.
- Completion Mid July

Stage 2 – Target Financial Close Activity 4- 6

- Some works within these disciplines can be initiated during Stage 1 to accelerate programme
- Completion Nov 14

Stage 3 – Post Financial Close support Activity 7-8

- Specific initiatives to be agreed
- Project live Feb 16

- SCC has undertaken considerable project qualification work to determine project viability for a scheme at Thornhill.
- Members have approved funding to support the further development of this scheme
- SCC has identified specific work packages to progress the project to Financial Close
- The completion timescale for the project is critical to enable the maximum ECO funding from Npower and to contribute to the scheme viability.
- SCC is applying for funding from HNDU and has the mandate to match this (@33%)
- SCC will in parallel continue to support the project development via its own management resources and the cost associated with this are outside of the HNDU application

- **Creation of Two stage Feasibility and Detailed Project Development plan**
- **Parallel close out activities – multiple work packages underway**
- **Members approval for further investment to progress project**
- **Specific work packages identified to progress to financial close**
- **HNDU funding sought to contribute towards these final work packages**
- **Targeting Nov 14 for financial close**

Detailed Project Development Activity



May 14 June 14 July 14 Aug 14 Sept 14 Oct 14 Nov 14

6 Month Programme

Delivery Phase

Activity

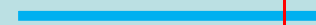
1 Programme Development and structure

- UTX Presentation to SCC
- Produce Master Programme plan for all project relates activities and contributors/stakeholders
- Agree principle responsibilities definition and commitment
- Activity hand-over from Capita
- Agreement of appointment of the delivery partnership (Developer Agreement – Npower/EON)



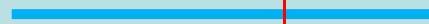
2 Technical

- Creation of the primary evaluation model
- Determine most favourable Energy Centre scheme and Operating model
- Determine EC output performance
- Thornhill Load survey/ heat mapping and CO2 assessment
- Develop Build schedule
- Confirm project Cost plan



3 Commercial

- Creation of the primary commercial evaluation model
- HNDU grant funding application
- Grant/Incentives verification and contribution and conditions (ECO via Npower)
- Secure project life verification with DECC
- Feed-stock evaluation/contract
- Commercial risk identification and management
- Risk transfer and guarantees
- Verify PPA/Private wire options and contract structure/contributions
- SCC business case assembly
- Determine project financial viability and Seek delegated approval to progress to Stage 2



◆ Stage 1 completion

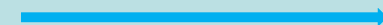
4 Design and Build plan

- Design development and peer review
- Verify equipment selection
- Lay-out and interface schedule
- Build programme and phasing
- Key delivery interfacing
- Stake holder and resident communications plan
- Detailed cost plan



5 Planning and Permits

- Document Creation (assume Capita documentation complete)
- Development of submission programme
- Surveys (Dispersion, ground, environment)
- Pre-app consultation submission refinement
- Pre-approval risk management
- Planning approval



6 Commercial Close

- Project structuring and counter party contract suite (Legal process management)
- Off-take agreement and sleeves/PPA
- External funding due diligence (IM creation and market testing)
- External funding Tern sheet completion
- Construction finance schedule and construction funding arrangements
- Performance and guarantees/warrantees
- EP&L Creation
- Target Financial Close
- Contract execution



Stage 2 completion ◆

Next Steps (2014)

- Produce an outline technical and financial business case;
- Financial model to enable Carbon price sensitivity;
- Partnership with a 'Big 6' utility to fund the project;
- Decision on the lowest Carbon price for scheme viability;
- Review delivery model options;
- Planning application to proceed to de-risk and generate confidence amongst ECO funders;
- Tenant and wider resident communications.