




# **Leicestershire County Council**

## **Property Energy Master Report 2014**

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Prepared by: Lis Carter  
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# Contents

<b>Executive Summary</b> .....	<b>3</b>
<b>1. Introduction</b> .....	<b>5</b>
1.1 Background .....	5
1.2 Drivers for LCC's Property Energy Strategy .....	5
1.2.1 National and International Policy and Regulation .....	7
1.2.2 Leicestershire County Council Strategy and Policy .....	9
1.3 Purpose, Objectives and Scope of Review .....	10
1.3.1 Purpose .....	10
1.3.2 Objectives .....	10
1.3.3 Scope .....	11
1.4 Methodology .....	11
1.5 Layout of the Report .....	11
<b>2. Existing Position</b> .....	<b>13</b>
2.1 Energy Performance of LCC Estate .....	13
2.2 Energy Policy .....	17
2.3 Energy Procurement .....	19
2.4 Practices .....	20
2.4.1 Roles and Responsibilities .....	20
2.4.2 Acquisition and ownership of buildings .....	24
2.4.3 Design and construction of buildings and building systems .....	24
2.4.4 Use, operation, maintenance and management of building and building services .....	24
2.4.5 Energy sourcing and procurement .....	25
2.4.6 Performance measurement, monitoring and reporting of energy consumption and costs .....	25
2.4.7 Traded Services .....	27
<b>3. Opportunities</b> .....	<b>28</b>
3.1 Energy Performance .....	29
3.2 Energy Policy .....	30
3.3 Energy Procurement and Sourcing .....	30
3.4 Energy Practices .....	31
3.4.1 Roles and Responsibilities .....	31
3.4.2 Acquisition and ownership of buildings .....	31
3.4.3 Design and construction of buildings and building systems .....	31
3.4.4 Use, operation, maintenance and management of buildings and building services .....	32
3.4.5 Performance measurement, monitoring and reporting of CRC, energy consumption and costs .....	32
3.4.6 Traded Services .....	33
3.4.7 Partnerships .....	33
<b>4. Recommendations</b> .....	<b>36</b>
4.1 Building Block 1: Structure .....	36
4.2 Building Block 2: Culture .....	36
4.3 Building Block 3: Resources .....	37
4.4 Building Block 4: Doing The Right Things .....	37
<b>5. Risk Register</b> .....	<b>38</b>
<b>6. Implementation Plan</b> .....	<b>42</b>
6.1 Timetable and Structure for Implementation .....	42
6.2 Performance Targets .....	46
6.2.1 Core performance targets: .....	46
6.2.2 Extended performance targets: .....	47
<b>Appendix 1</b> .....	<b>48</b>

## Executive Summary

As owner of a sizeable property portfolio, Leicestershire County Council's gas and electricity costs amounted to £1.64m in 2012/13 with an additional Carbon Reduction Commitment (CRC) cost, a form of taxation, of £0.64m. These costs are set to rise at an increasing rate unless active steps are taken now to significantly reduce the organisation's related energy consumption and dependency on grid supplied gas and electricity. During 2012 – 2013 national electricity prices increased by between 5% - 10% and gas prices by between 11% - 24%. These price increases are predicted to continue for the foreseeable future.

Both the financial and environmental costs of the County Council's current levels of energy consumption are strong drivers for change. As the Council re-doubles its efforts to meet with the government's continuing austerity measures, the current Medium Term Financial Strategy (MTFS) requires annual savings of at least £395,000 on property energy expenditure by 2016/17. This equates to a reduction in current energy use of around 23%. Furthermore, through its Environment Strategy the County Council has committed to reducing its CO2 emissions by 34% by 2020 (from a 2008/09 baseline year). Unless active and radical interventions are taken now neither of these objectives will be met.

In common with most organisations and Local Authorities the County Council has not seen the need for a Property Energy Strategy previously. However, as this review reveals, this is no longer acceptable and the Council must develop and apply a planned strategic approach if it is to be able to manage the future levels of energy consumption and costs of its property resources.

The strategy recommended in this document has been developed following a detailed review of the current energy and carbon emission performance of the County Council's property portfolio as well as a review of the Council's existing energy policies, procurement and management practices. The results of these reviews, together with the findings from wider research into good practice and extensive stakeholder consultation, have helped identify the opportunities for improvement.

It is very evident that the County Council is currently in a weak and largely ineffective position in terms of either planning or managing the energy performance and energy consumption of its properties. The Council is virtually devoid of policy in the vast majority of areas where energy consumption or costs may be influenced. This absence of policy is inevitably reflected across all areas of property related energy management, planning and design practices. There are no energy lead roles or responsibilities in either Strategic or Operational Property Services. Energy quality criteria have a minor impact on the design and construction of buildings and building systems and energy efficiency is overlooked in many decision-making processes affecting the use, operation, maintenance and management of buildings. There is some good quality data collected about energy consumption in County Council buildings but this information is not being used to support performance management or to support routine performance monitoring and reports about energy consumption and costs.

The County Council's energy supplies are currently procured through contracts with ESPO. These appear to be cost effective but the Council is almost exclusively

dependent upon grid supplied gas and electricity and makes no use of the renewable energy supplies that are financially and environmentally more attractive.

When reviewing the energy performance of the Council's estate, it is revealing to learn that 75% of the total energy costs of the 142 corporately managed properties that fell within the scope of the review are attributable to just 25 properties. More specifically, there are 3 sites that account for more than 50% of this total energy cost: County Hall, Snibston Discovery Park and Beaumanor Hall and Park. The County Hall site alone accounts for 39% of the total energy cost and represents the greatest opportunity for focussing effort to reduce and change current energy consumption levels.

The report goes on to identify the many opportunities for improvement that exist under the key headings of energy performance; policy; procurement; and management practices. These suggested improvements are gathered together into the four key Building Blocks that form the implementation plan for delivering the County Council's recommended Property Energy Strategy.

Building Block 1: Structure – deals with creating the right organisational structure to deliver an effective property energy management function.

Building Block 2: Culture – cultivates an energy conscious and responsible management culture within the organisation.

Building Block 3: Resources – provides the resources that are required to deliver the required energy management function and necessary improvements.

Building Block 4: Doing the right things – details the practices and procedures that need to be developed to make sure that the right actions are taken.

Together, these Building Blocks will move the County Council from its current position of ineffectiveness and vulnerability with regards to the energy management of its property resources to one of considerable strength and control. Through adopting these recommended measures the Council will be able to meet its financial and environmental energy efficiency targets.

It is recommended that the implementation of the new Property Energy Strategy is delivered in 2 stages.

Stage 1: Transformation extends from February 2014 through to October 2014 and deals with establishing the structure, culture and resources recommended in Building Blocks 1 to 3.

Stage 2: Deliver also commences in February 2014 but continues the work of implementing the practices and procedures recommended in Building Block 4 through to August 2017.

# 1. Introduction

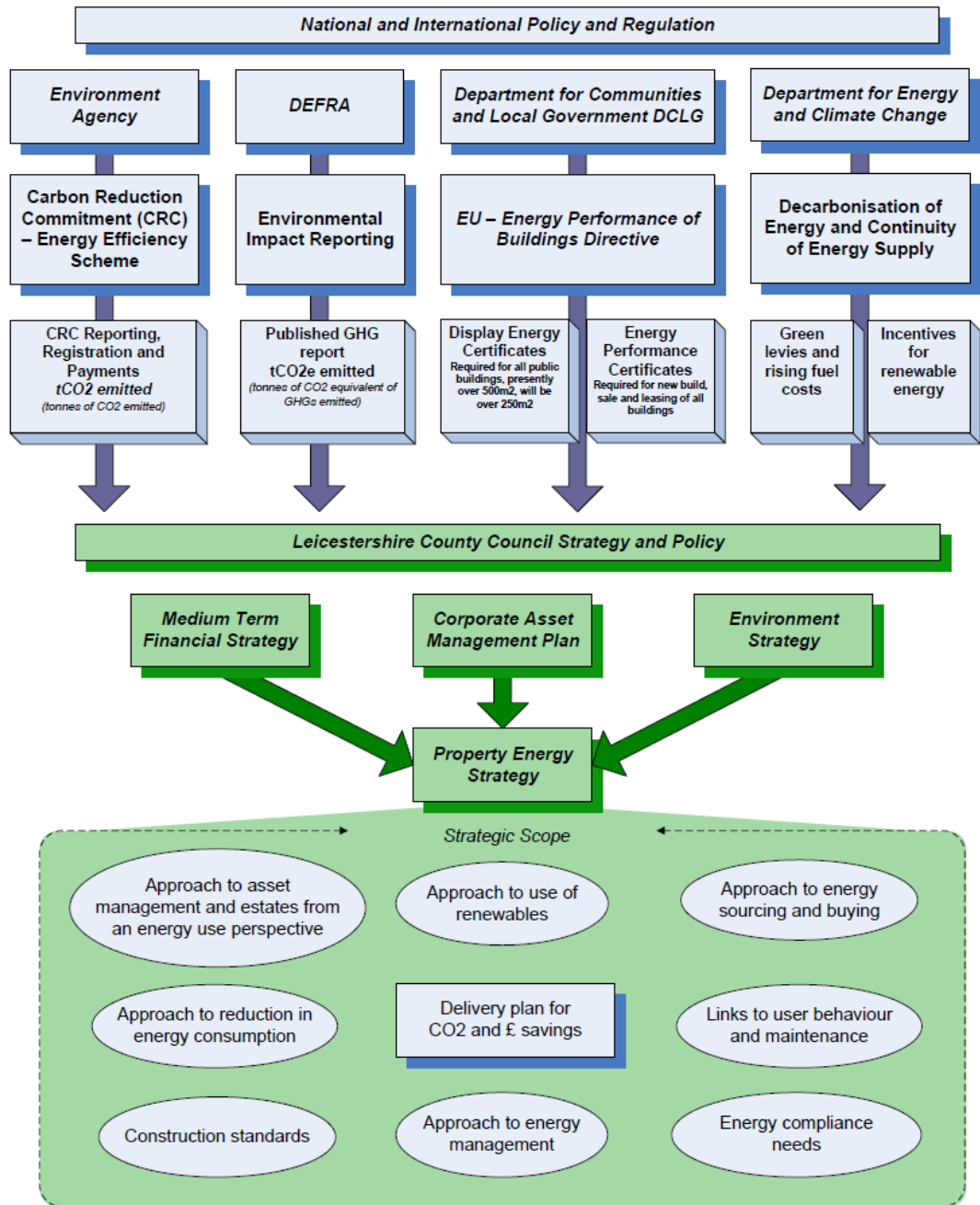
## 1.1 Background

The future energy supply and the rising financial and environmental costs of energy are major causes for concern at a personal as well as global level. As landlord of a sizeable property portfolio (918 assets as at April 2012), Leicestershire County Council has a responsibility as well as a financial interest to be as energy efficient as possible in the way its properties are built, managed, used and occupied. To put this into a more immediate context, the Council's property energy bill currently accounts for around 20% of the total property costs. Gas and electricity costs (for the 142 properties where LCC is directly responsible for the energy costs) amounted to £1.64m in 2012/13 with an additional Carbon Reduction Commitment (CRC) cost of £0.64m. Energy price inflation means that these costs are set to rise at an increasing rate unless active steps are taken to significantly reduce the organisation's property related energy consumption.

## 1.2 Drivers for LCC's Property Energy Strategy

Figure 1.1 presents the key national and local policy drivers impacting upon the development of LCC's Property Energy Strategy. These drivers are largely designed around reducing energy consumption; improving energy performance; ensuring the UK's future energy supply; and reducing carbon emissions and adverse environmental impacts. The diagram also illustrates those aspects of property construction, management and use that need to be considered and addressed by the Property Energy Strategy.

**Figure 1.1: National and Local Policy Drivers)**



These key drivers are considered in a little more detail below.

### 1.2.1 National and International Policy and Regulation

The UK's electricity is supplied from a diverse range of generating sources, from large to micro-scale operations. The UK national government, evidenced in recent statute within the Energy Act 2013, continues to pursue the decarbonisation of the UK energy supply marketplace. However, around 64% of UK electricity supplies continue to be produced from fossil fuelled coal, oil and gas power stations with 19% being produced from nuclear power. (UK Government; Energy Trends, September 2013).

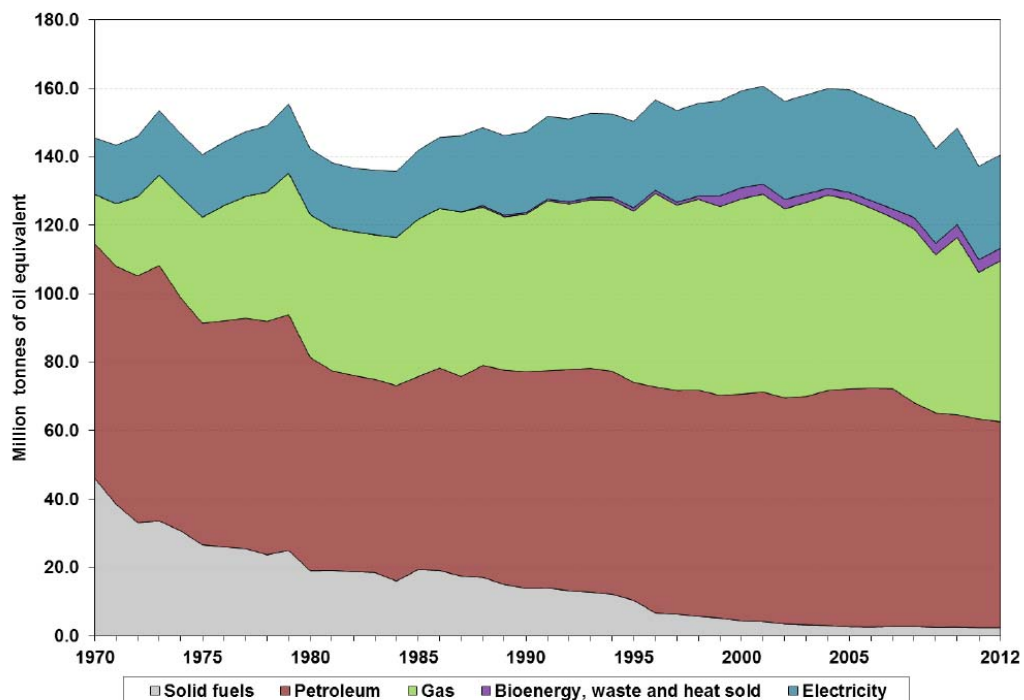
The UK's gas supply continues to be largely dependent upon increasing imports with a lesser and reducing supply from UK off-shore sources.

This puts the UK into a risky position in terms of its energy supply due to its traditional dependency upon non-renewable fossil fuelled energy sources and its high exposure to the international market (and political) volatilities of imported gas and oil suppliers.

On the demand side, the UK's overall energy consumption levels (weather adjusted) have fallen since 2005, as shown in Figure 1.2. This trend is mainly as a result of (i) economic recession and (ii) implementation of energy efficiency measures impacting on overall electricity demand. Gas consumption (adjusted for weather conditions) has remained broadly consistent since the mid-1980s.

(Department of Energy and Climate Change, Energy Consumption in the UK, July 2013)

**Figure 1.2 Energy Consumption by Fuel, UK (1970 to 2012)**



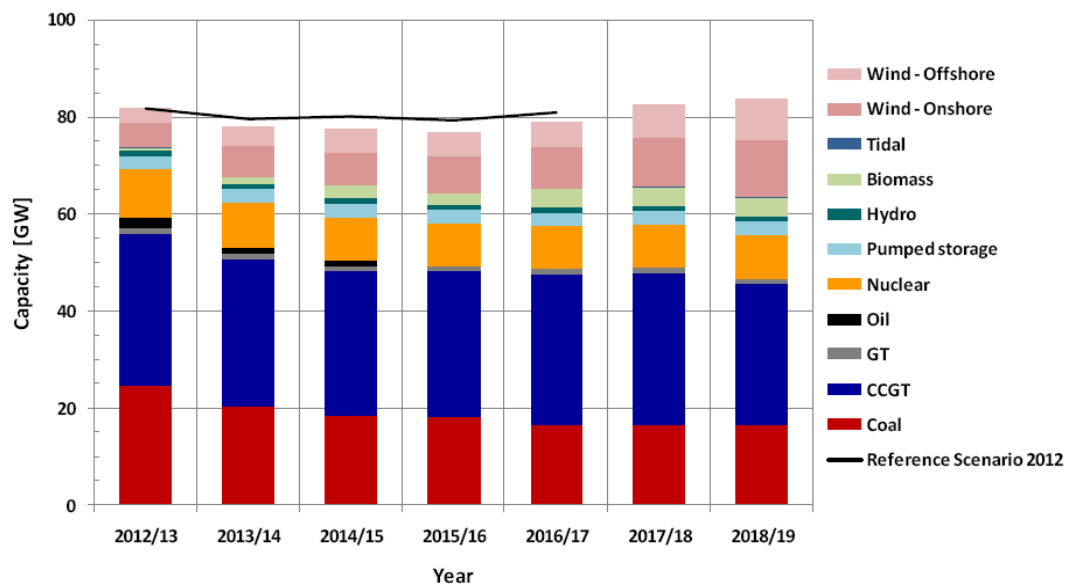
Source: DECC, ECUK Table 1.06

These demand and supply profiles mean that the continuity of the UK's energy supply is becoming a further matter for concern. Sudden peaks in demand, as experienced during the cold winters of 2011/12 and 2012/13, saw a large scale depletion in UK gas reserves which in turn saw wholesale gas price rises during the

summer/autumn of 2013. Given the UK's over-dependency on gas-fired power stations, an increase in gas prices also drives up the generation costs and the wholesale price of electricity.

The precarious balance between supply pressures, increasing demand and rising prices is likely to continue for some years whilst the benefits of current policies and measures take time to have an effect. Figure 1.3 below, produced by OFGEM, shows the likely dip in the UK's peak electricity generating capacity towards 2016, as production gradually move from fossil fuel to renewable and nuclear energy. Although not illustrated on this diagram, the reduction in electricity supply will inevitably have an inflationary impact on wholesale prices, as well as making short periods of managed electrical supply cut outs a strong likelihood.

**Figure 1.3 UK Electricity Generating Capacity**

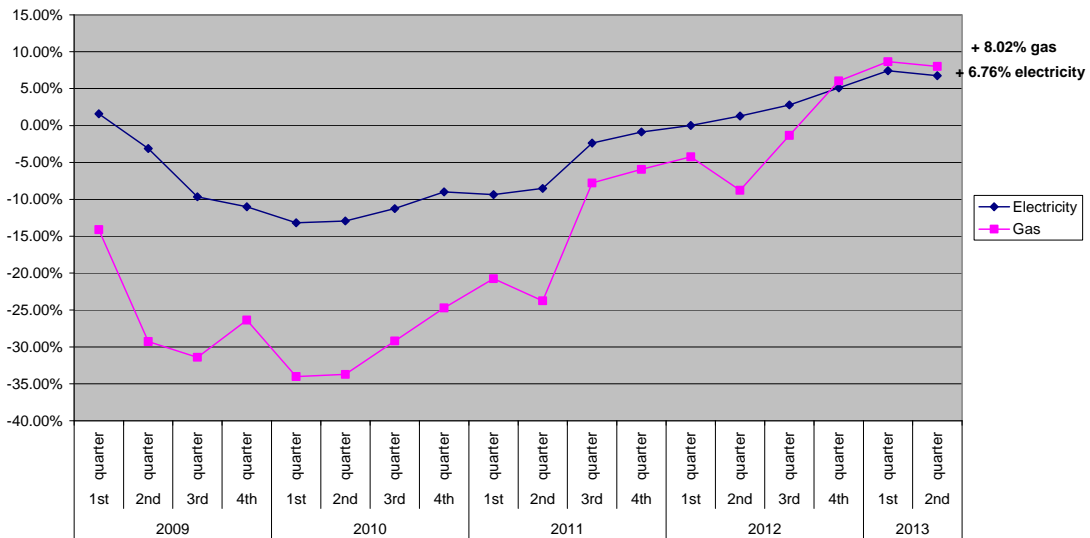


Source: OFGEM – Electricity Capacity Assessment Report 2013

The lag in electricity generating capacity together with the increasing dependency on gas imports are both illustrative of the supply pressures which, together with green levies applied to consumer energy bills, are combining to drive up energy prices. Figure 1.4 illustrates the increasing cost of gas and electricity over the last 5 years. Recently, between Q3 2012 and Q3 2013, average electricity prices have risen by between 5 and 10 per cent for all consumers; the price LCC pays has risen by 7%. In the same period, gas prices have risen by between 11 and 24 per cent nationally. (LCC rises are yet to be announced).



**Figure 1.4 Percentage Change in UK Non-Domestic Fuel Prices; % change from baseline of Q1 2009.**



Source – Dept. for Environment and Climate Change Quarterly Energy Data, January 2013

Forecast prices for the coming 3 financial years, provided by LCC’s energy commodity buyer, ESPO, indicates the upward trend in prices is expected to continue.

**Figure 1.5 – Forecast Energy Price Rises**

Energy Cost Forecasts					
	2013/14	2014/15	2015/16	2016/17	2017/18
Electricity (Price/Cost)	~+7%	+8-10%	+6-8%	+6-10%	+6-10%
Gas (Price/Cost)	N/A	+6-8%	+5-7%	+4-9%	+4-9%

Source – ESPO Energy Governance Panel Presentation, September 2013

### 1.2.2 Leicestershire County Council Strategy and Policy

The UK government’s continuing austerity measures are requiring a further reduction in LCC’s Medium Term Financial Savings (MTFS) budget of £110m by 2017/18. This represents a reduction of around 30% reduction on the 2012/13 annual revenue expenditure levels. LCC’s current Medium Term Financial Strategy (MTFS) requires annual savings of at least £395,000pa on annual energy expenditure by 2016/17. As will be explained in section 2, this equates to a reduction in current energy use of just over 23%.

The implementation over recent years of the Council’s Corporate Asset Management Plans (CAMP) has seen a considerable reduction and rationalisation of the Council’s asset base. For example, the Office Strategy alone has led to a reduction of 8,652 sq m (NIA) of office space, thereby producing a 1% reduction in LCC’s total carbon emissions and £175,000pa reduction in energy costs. However, the corporate energy bill has not fallen in proportion to the decreasing size of the corporate estate mainly because the unit price of energy is rising faster.

Leicestershire County Council has committed to reducing its CO2 emissions by 34% by 2020 (taking 2008/09 as the baseline year) as a key performance objective of its Environment Strategy. The level of CO2 emissions is also a determinant of the amount of the annual CRC tax that is paid from the Council's revenue budget. Asset rationalisation has contributed towards this overall carbon reduction objective but more radical actions will be required for the remaining estate if the 2020 target is to be achieved.

## **1.3 Purpose, Objectives and Scope of Review**

### **1.3.1 Purpose**

To review existing arrangements for procuring, planning and managing energy consumption and associated carbon emissions across the County Council's asset base. The results will be used to produce recommendations in the form of the Council's future Property Energy Strategy, including a detailed Implementation Plan and Programme of Works.

### **1.3.2 Objectives**

- Review Leicestershire County Council's (LCC's) policy requirements and other drivers relevant to the energy and carbon emissions aspects of LCC's property resources; develop and produce recommendations about the appropriate energy and carbon emissions policies for LCC's property resources.
- Review current LCC practices in energy procurement and in planning, managing, monitoring and reporting energy consumption and carbon emissions in LCC properties. This review to include the use and occupation of buildings; the procurement and delivery of facilities management services; and the procurement of building contracts. Investigate, identify and appraise opportunities for improving upon current practices and produce recommendations.
- Review and align the proposed carbon emissions and energy management planning of LCC's properties with the Council's Environment Strategy and describe the linkages with the work of the Climate Action Team.
- Consider and recommend the preferred way forward for dealing with services procured through the contract with TEAM which is due to terminate in November 2014.
- Review and appraise existing arrangements for collecting, measuring on-site, managing, using and reporting information about energy and carbon emissions from LCC's properties and produce recommendations for dealing with identified shortcomings and for delivering efficient and effective services in the future.
- Include recommendations for the proposed development of a centralised database for energy management and carbon emissions within the future property management information system.
- Set out a phased programme for delivering specific energy efficiency and carbon emissions targets from the Council's estate during the period 2014/15 to 2019/20, taking into account ongoing works to develop an energy performance contract.
- Recommend management, governance and reporting arrangements for establishing an energy planning and management function with Strategic and Operational Property Services.

### 1.3.3 Scope

- This strategy is concerned with the consumption and management of energy across the County Council's portfolio of corporately used buildings, together with the associated financial and environmental impacts.
- The property assets falling within the scope of this review comprise 142 corporately managed buildings and sites as listed in Appendix 1. This covers a wide range of building types encompassing assets used for service delivery, back-office functions/services and the commercial, industrial and County Farms portfolio of let properties.
- Proposals for future energy management arrangements are based upon the relevant organisational and staffing structures in Strategic and Operational Property Services (Corporate Resources) and the Carbon Action Team (Environment & Transport).
- The review and strategy development covers the period 2014 – 2020.
- The review excludes:
  - Assets which do not consume energy and/or emit carbon (e.g. land holdings)
  - Assets that are not managed by LCC (e.g. shared office accommodation in properties owned by partners e.g. District Councils)
  - Schools energy use and management – although the proposed strategy does consider the potential opportunities available for extending energy related services as part of the Council's traded services offer to schools, as well as LCC's obligations for key performance reporting for school buildings under the Department for Communities and Local Government's transparency agenda.

## 1.4 Methodology

The review has been managed and delivered by a project working group comprising officer representatives from the relevant service areas and led by a dedicated Project Manager reporting to joint Project Sponsors from Strategic Property Services and Environment and Transport.

The final report and recommended strategy will be reported to both the Corporate Property Steering Group and the Environment Strategy Board prior to consideration by CMT and members.

## 1.5 Layout of the Report

The report is set out in line with the key areas and stages of investigations undertaken during the review:

### Section 1: Introduction

Explanation of the background context and the key drivers for the review and development of the proposed Energy Strategy; clarification about the aims, objectives and scope of the review and the general approach adopted.

## **Section 2: Existing situation**

Overview of the current energy and carbon emissions performance of the County Council's property portfolio and a summary of existing energy policies, procurement and management practices.

## **Section 3: Opportunities for improvement**

Identification of opportunities to improve upon current arrangements in keeping with the aims and objectives of the review.

## **Section 4: Conclusions and recommendations**

Key conclusions and recommendations arising from the findings and outcomes of the review.

## **Section 5: Risks**

Production of a risk register highlighting the key risks associated with the delivery of the proposed strategy and recommendations together with suggested actions for mitigating/managing these risks.

## **Section 6: Implementation Plan**

Recommended implementation plan and programme of works for delivering the proposed strategy.

## 2. Existing Position

This section examines the 'as is' position for the LCC corporate estate that falls within the scope of this review.

### 2.1 Energy Performance of LCC Estate

Energy consumption is measured in kilowatt hours (kWh). This quantitative measure is an industry standard for measuring and monitoring the energy consumption from buildings and also provides the basis for calculating the financial costs of the energy being used.

In addition to energy consumption costs, the County Council also pays a government levy; the emissions trading Carbon Reduction Commitment (CRC) scheme, for the CO<sub>2</sub> emissions it produces. Under UK regulation, any individual electrical supply to a site or building which has a peak load of over 100kWh requires a mandatory half-hourly electric meter. Any organisation that consumes more than 6,000,000kWh annually from these half-hourly metered buildings qualifies to pay CRC charges. At present, LCC consumes just over 7,617,000kWh from its half-hourly metered electricity and so is liable for CRC payments.

CRC payments are then assessed on ALL CO<sub>2</sub> emissions from electricity and gas use from all occupied/owned buildings and not merely from those buildings fitted with half-hourly electrical meters.

**Figure 2.1 LCC Energy Consumption and Costs (Corporate Buildings Only)**

Energy Type	Energy Consumption (kWh)	Energy Consumption Costs £ (year ending 30 Sept 2013)	CRC costs (2012/13) £ (in scope corporate buildings only and excluding schools)	Total Energy Costs
Electricity	12,971,064	£1,106,388	£80,460	<b>£1,186,848</b>
Gas	19,250,310	£ 539,847	£44,928	<b>£584,775</b>
<b>Totals:</b>	<b>32,221,374</b>	<b>£1,646,235</b>	<b>£125,388</b>	<b>£1,771,623</b>

A more detailed analysis of these headline costs reveals that there is a high proportion of the total costs amongst a relatively small number of properties.

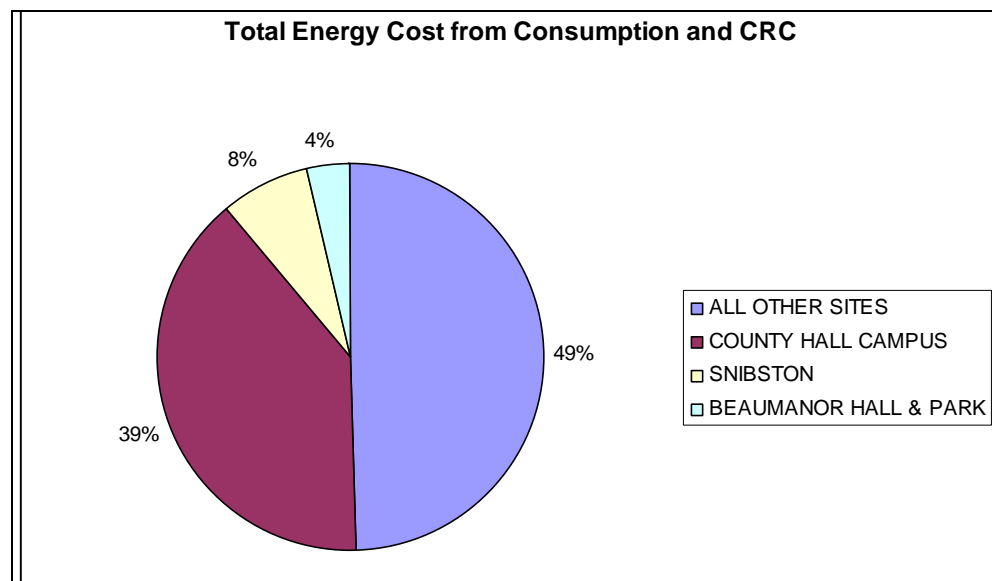
From the 142 corporately managed properties falling within the scope of this review 75 assets present total annual costs in excess of £3,750 pa. The following Figures 2.2 and 2.3 illustrate that **75% of the total energy costs are attributable to just 25 properties**. The Pen Lloyd building at County Hall accounts for the highest individual building energy cost of £347,243pa with the Rutland building being the next highest at circa £160,000pa.

**Further analysis of these figures highlights that there are three sites that account for more than 50% of the total energy cost: County Hall, Snibston Discovery Park and Beaumanor Hall & Park.** Of these, the County Hall campus is

by far the most significant contributor to the County Council's total property energy bill and accounts for 39% of the total energy costs from the corporately managed properties falling within the scope of this review. The campus comprises five main buildings (Pen Lloyd; Rutland; Eastern Annexe; ICT building; Western Annexe) and has been increased with the purchase of the former Fire & Rescue Services building in January 2014.

**Figure 2.2 Energy Cost Distribution for top 75 properties**  
See following page.

**Figure 2.3 Distribution of Energy Costs across sites**



The quantitative measures of energy consumption kWh, financial costs and CO<sub>2</sub> emissions are useful, but do not convey any detail about the qualitative energy-efficiency of buildings. These aspects are dealt with to some limited extent by Energy Performance Certificates (EPC's) and Display Energy Certificates (DEC's).

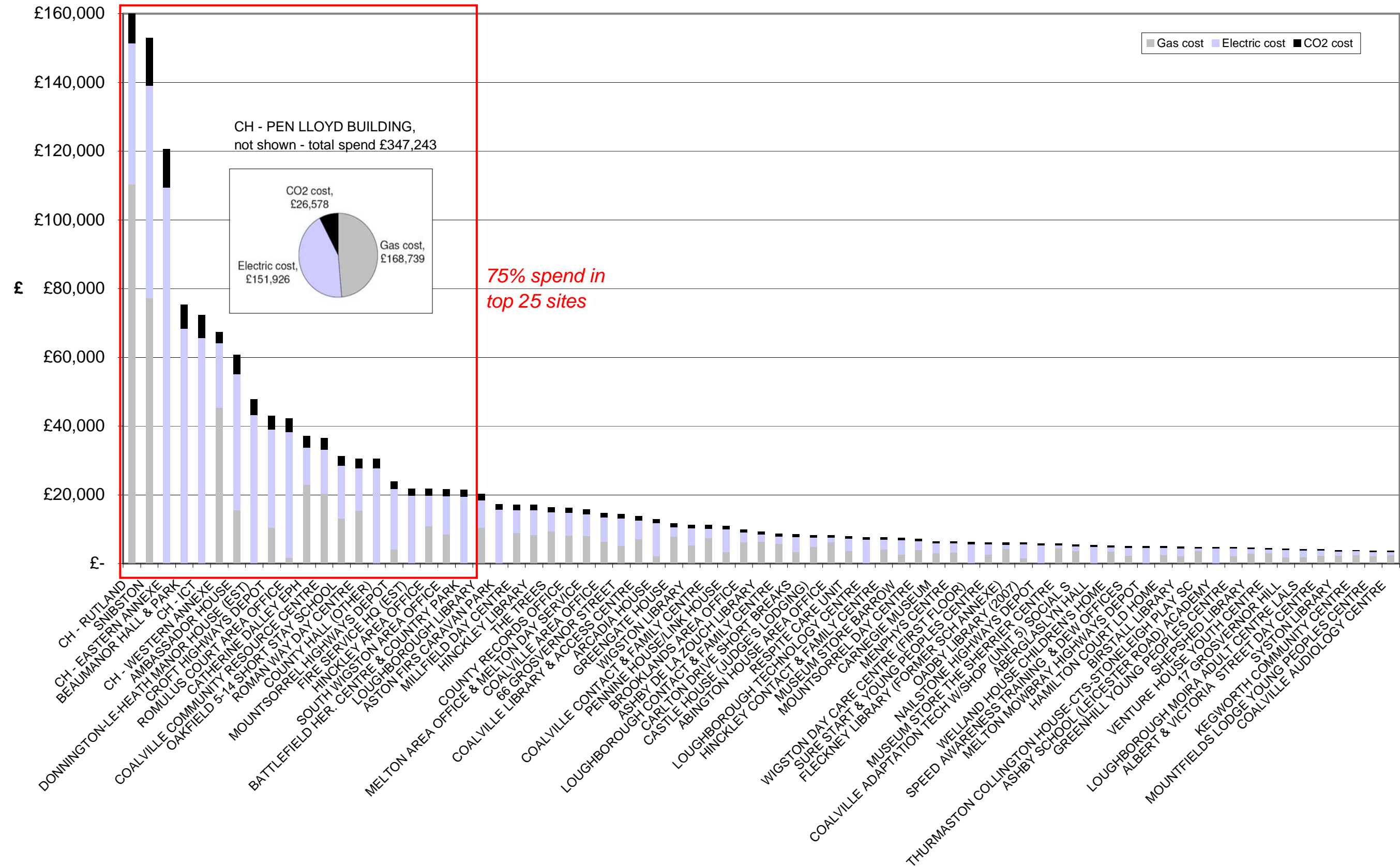
EPC's are based on an energy survey and examine key items such as insulation, heating and cooling systems, glazing and lighting, providing a relative energy use rating from A (most efficient) to G (least efficient). They are theoretical energy performance assessments and do not take into account the actual energy consumption within the building. Since October 2008 an EPC is required at the point of construction/refurbishment, sale or rental of non-residential property exceeding 50 sq m. LCC produces EPC's in compliance with these statutory requirements but the information is not currently used for routine building management purposes.

Since January 2013 annual DEC's are statutorily required and must be prominently displayed for all public buildings in excess of 500 sq m. The DEC compares actual energy consumption for the building with the theoretical consumption for a building of the same type and provides a relative energy use rating as for EPCs from A to G. The process for completing statutory DEC's on LCC's estate is almost complete. Data for those buildings in excess of 500 sq m is available and is re-produced in the following Figure 2.4. Based on the total floor area of these buildings, 45% of total floor area falls within the E rating and nothing exceeds a C rating. It is also noticeable that there are strong links between those buildings with D and E ratings and those identified above as the highest energy costing buildings.

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Figure 2, 2

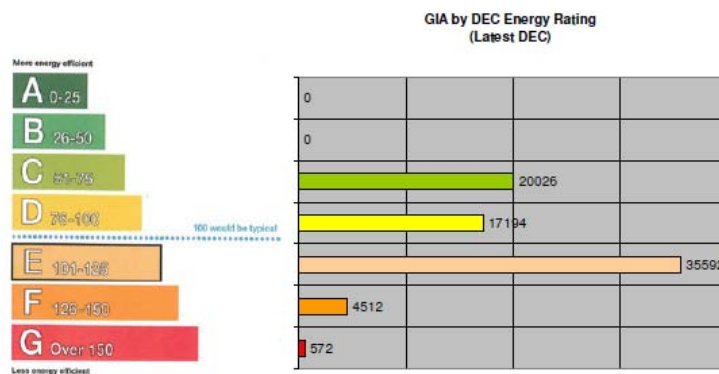
### Cost from consumption and CRC Top 75 sites for cost and consumption





**Figure 2.4 DEC's for largest LCC Buildings**

UPRN	Property	GIA	DEC RATING	DEC NO.
114	The Trees Respite Home.	839	D	91
115	Millfield Day Centre	2091	D	83
116	Hinckley Contact and Family Centre	649	F	127
177	Roman Way Day Centre	1666	F	148
181	Catherine Dalley House EPH	1334	E	108
194	Greengate House	754	C	69
577	County Hall - Pen Lloyd building	21320	E	113
577	County Hall - Rutland building	7938	E	113
578	Snibston Discovery Park Block A	6043	D	87
578	Snibston Discovery Park Block B	1316	D	87
606	Coalville Library	1169	D	87
617	Hinckley Library	1463	D	75
645	Loughborough Library	1622	C	68
670	Wigston Magna Library	1102	C	53
675	Hinckley Area Office	2556	C	62
912	Pennine House	1339	C	65
1003	Beaumanor Hall	7771	C	55
1173	Croft Highways Depot	750	E	104
1181	Mountsorrel Highways Depot	353	D	84
1214	Loughborough Molra Adult Centre	535	D	76
1253	Thringstone House Community Centre	720	C	68
1324	Brooklands Area Office	743	D	100
1355	Coalville Community Resource Centre	2386	E	125
1390	Coalville Area Office	1069	E	102
1393	Danemill Primary School Annex	500	F	176
1424	South Wigston Area Office	1856	D	87
1425	County Records Office Wigston	1940	C	59
1466	Oakfield 5-14 Short Stay School	1697	F	169
1487	Ashby De La Zouch Library	881	C	74
1516	Loughborough Contact and Family Centre	795	E	117
2017	Museum Store at Barrow	1341	C	59
2093	Romulus Court Area Office	572	G	160
2162	Oadby Library	786	D	82

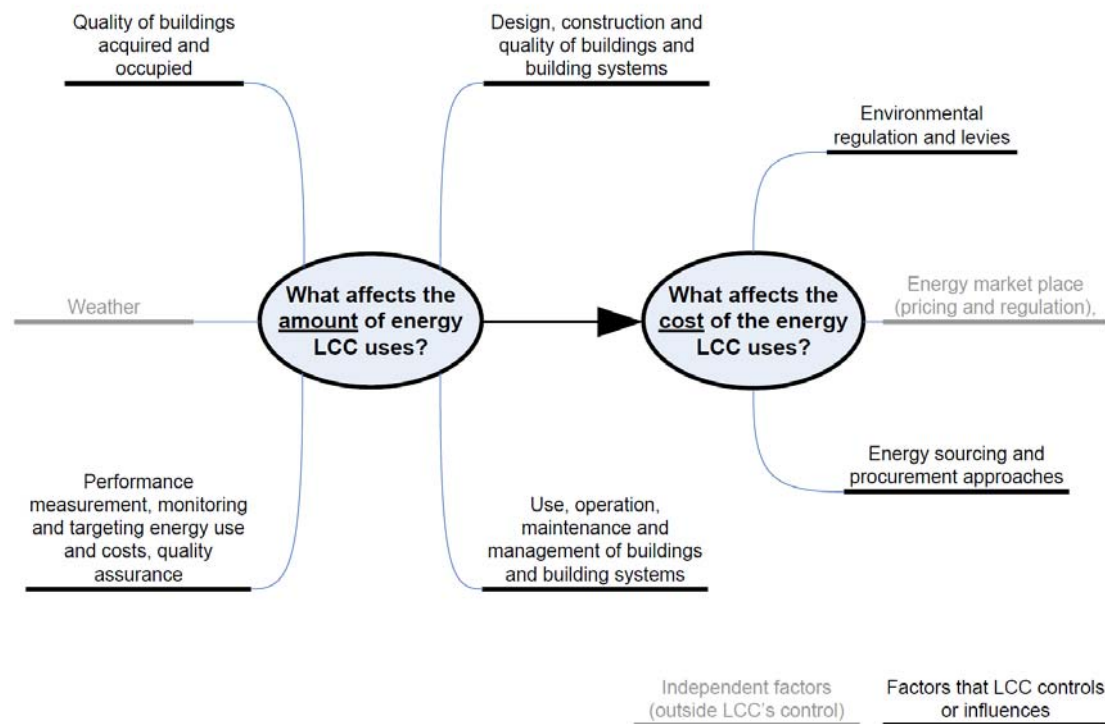


## 2.2 Energy Policy

Research into LCC's existing property related energy policies, investigation into best practice, peer evaluation and workshop development exercises revealed that the **County Council is presently almost completely devoid of property related energy management or procurement policy in the vast majority of areas where energy consumption or costs may be influenced.**

Figure 2.5 presents a high level summary of the broad areas of influence affecting LCC's property related energy consumption and costs.

**Figure 2.5 Factors Affecting LCC Energy Consumption and Costs**



The table in Figure 2.6 below provides some illustrative examples of the policy areas that could be developed and applied to guide and influence the factors identified in Figure 2.5 above affecting property energy consumption and costs.

**Figure 2.6 Opportunities for Property Energy Policies**

Policy Area	Illustrative Examples of Energy Policy
Quality of buildings acquired, owned and occupied	Minimum acquisition criteria for energy performance
Design, construction and quality of buildings and building services	Energy performance outcome requirements for contracts, e.g. BREAM excellence
Use, operation, maintenance and management of building and building services	HVAC (Heating, Ventilation and Air Conditioning) Policy, e.g. temperature controls.
	Operation/run time limitations for use of buildings. (e.g. holiday closures, weekend working limits)
Energy sourcing and procurement	Frequency of supplier review (opportunity for “switching”)
	Target setting for energy procurement (e.g. proportion of energy from renewable sources)
Performance measurement, monitoring and reporting of energy consumption and costs	Target setting for energy use reduction
	Energy Performance Management plan

## 2.3 Energy Procurement

A present the energy needs of the LCC corporate estate are almost exclusively met through grid supplied gas and electricity. Less than 1% of total supply is from other solid fuels or oil and there are no renewable energy supplies excepting very small-scale applications on one Country Park.

LCC's energy supplies are procured via Eastern Shires Procurement Organisation (ESPO). ESPO acts as LCC's outsourced wholesale energy commodity buyer under contracts that extend until March 2016 for gas and September 2016 for electricity.

ESPO purchases energy through its own single-source wholesale contracts with Scottish and Southern Electricity (SSE) for electricity and Total Gas and Power for gas. These supplier contracts were procured via a competitive tender process principally developed to secure lowest commodity prices for ESPO's customers.

LCC is one of ESPO's many customers - ESPO's mass purchasing capacity strengthens its negotiating position as an energy purchaser. The price paid by customers for units of energy is largely dependent upon the effectiveness of ESPO's purchasing team in purchasing energy at the best time and price. Customers also pay ESPO an annual RTPI index linked fee for their services. Key performance cost statistics for 2013/14 indicate:

- ESPO price paid for non-half hourly electricity supply was 0.81% above UK wholesale market average for the last 18 months
- ESPO price paid for half hourly electricity supply was 0.14% above UK wholesale market average for the last 18 months
- ESPO price paid for gas supply was 0.5% below the UK wholesale market average for the last 18 months

LCC is represented by Strategic Finance on ESPO's Energy Governance Panel but in reality there is very little scope for influencing the current purchasing arrangements. **There is no active dialogue between Finance and Property about the meetings or reports from ESPO.**

The unit cost of energy, rather than the environmental sustainability of its generation are the most influential factor in the strategy of the ESPO Energy Governance Panel, and consequently in LCC's current energy purchasing arrangements. However, a brief review of the sustainability practices of the major natural gas suppliers undertaken for the purposes of this review indicates that there is little to differentiate one from the other. The situation with regards to ESPO's purchasing electricity from SSE is a little more favourable:

- SSE generate a substantially higher proportion of their electricity from thermal sources (84%) than the national average (64%) – however, this is also true of all the 'big 6' suppliers except EDF who specialise in nuclear energy.
- SSE have a greater proportion of their supply from renewable sources (14%) compared with the other 'big 6' suppliers, most of this being supplied from off-shore wind.

## 2.4 Practices

### 2.4.1 Roles and Responsibilities

Property related energy services are currently delivered across the key service areas of Property Services (sub-divided into Strategic and Operational Property Services), Strategic Finance and the Carbon Action Team (situated within the Environment & Transport Department).

As explained previously, Strategic Finance presently deals with the procurement of energy. The Carbon Action Team primarily focuses on developing behaviour and culture-change plans to support the delivery of the Council's Environment Strategy and, most notably, the Carbon Management Plan. All remaining property related energy services fall into the combined remits of Strategic and Operational Property Services.

The organisational structure chart contained in Figure 2.7 overleaf portrays these current arrangements. The diagram identifies those areas of functional activity that have an energy related responsibility: it can be seen that these are widely spread across all the key service areas. The diagram also indicates those posts that currently have a partial or a full-time responsibility for energy. This reveals a number of key weaknesses in the current arrangements:

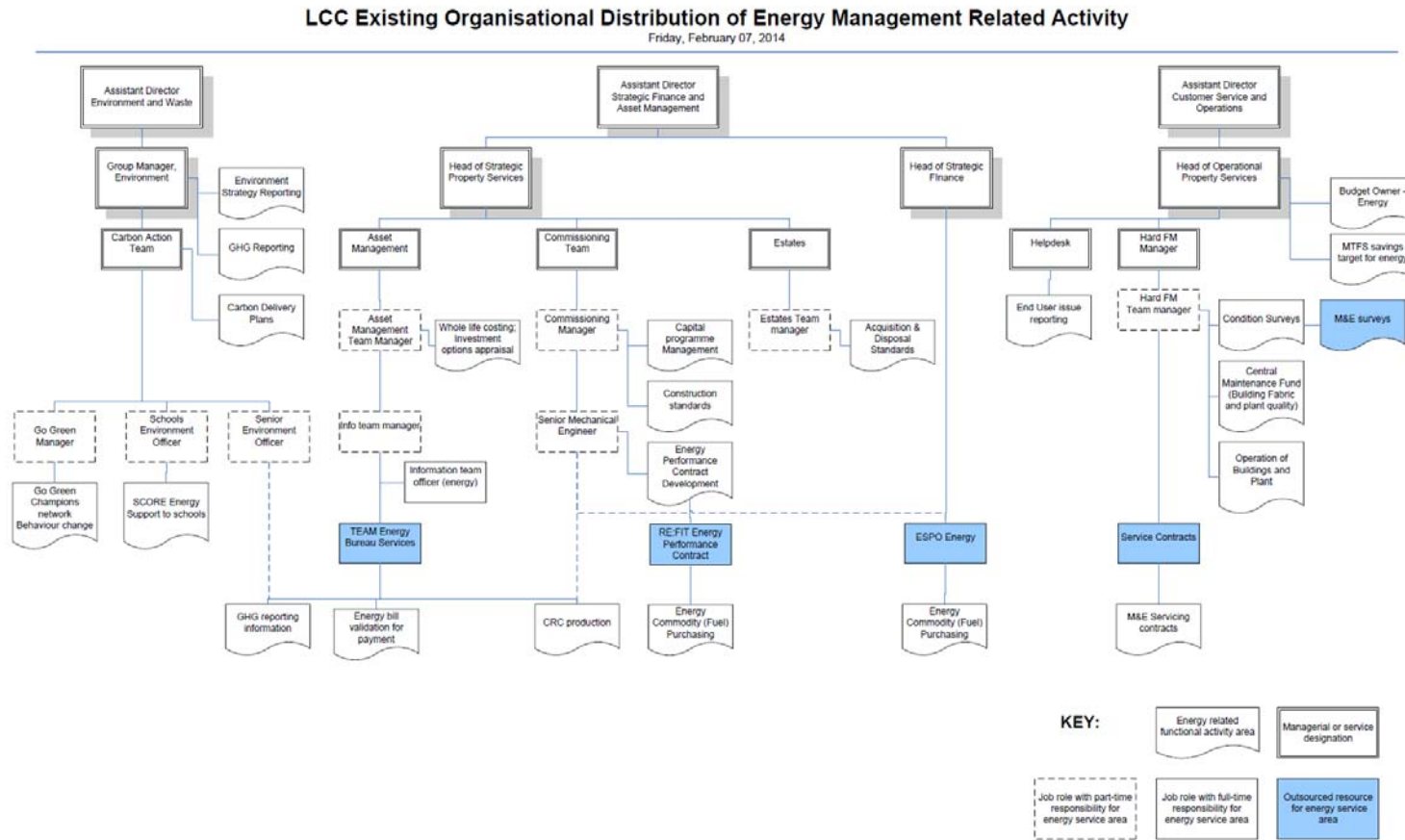
- **There is currently no over-arching energy lead role or responsibility in either Strategic or Operational Property Services.** Within Strategic Property Services, there is no strategic responsibility for developing and overseeing the delivery of an Energy Strategy. Neither is there any responsibility or system in place for planning and managing energy related revenue or capital budgets and programmes for property. Within Operational Property Services, energy is dealt with in a fragmented and service-based way. For example, energy related inspections are undertaken by the separate service teams (mechanical & engineering; maintenance; facilities management), the information is generally retained within these service stream areas and there is currently no holistic view or record for a building's maintenance and utility systems including change/work and service logs.
- **There are no full time permanent posts responsible for any aspect of energy management, planning or procurement**
- **The links between the various areas currently dealing with energy issues are very weak**, notably the clarity of roles in supporting and advising end users of buildings lacking.

Figure 2.7 also identifies areas where energy services are currently procured from external suppliers. Briefly, these comprise:

- TEAM Energy Services – an energy bill validation and bureau service contracted until November 2014. Annual payment £120,000 pa (2012/13). Core service is the receipt and checking of LCC energy billing data and incorporation of energy use data onto an online database, SIGNET. TEAM also prepares LCC's calculations and statutory returns for the CRC as well as the preparation of some Display Energy Certificates.
- RE-FIT Energy Performance Contract - Bouygues Energy Services, an energy performance contractor procured through the Greater London Authority's RE-FIT framework contract, currently identifying opportunities for improving energy performance and CRC emissions in targeted LCC properties. Proposals (subject to final approval) to be on an invest to save basis with guaranteed energy savings.
- BETTER-OFF – a climate action team led project, with consultant support, identifying low-cost and behavioural change opportunities across 6 trial sites to deliver energy savings.

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Figure 2.7 – As-IS Energy Management Resources and Activity



The remaining description of existing energy practices is presented under the same headings used to describe energy policy in section 2.2.

#### 2.4.2 Acquisition and ownership of buildings

Property acquisitions are subject to an initial business case appraisal by the Asset Management team in Strategic Property Services and, subject to approval, are then commissioned for implementation from the Estates team. The business case includes considerations about the suitability and whole life costs of a potential property acquisition. In this way, the future energy costs are estimated and considered in decision making although **there are no policies or criteria recommending specific energy quality criteria for new acquisitions.**

#### 2.4.3 Design and construction of buildings and building systems

Capital investment for the construction of new buildings or the redevelopment/improvement of existing buildings is subject to an initial business case appraisal by the Asset Management team in Strategic Property Services.

Delivery of approved projects is overseen and performance managed by the Commissioning Construction team within Strategic Property Services. Actual project implementation is undertaken by either the Strategic Commissioning Construction team or Operational Property Services depending on project value.

LCC applies a number of construction standards in design and build projects, both regulatory standards (such as the application of Building Regulations) but also local workmanship clauses in specific areas (mechanical and electrical installations are notable examples).

Engineering design and the selection of building heating, cooling, ventilation and lighting systems may be completed by engineering staff within SPS, OPS or outsourced suppliers. Systems are generally selected in terms of suitability of outcomes (e.g. delivery of well managed comfortable temperatures, lighting to meet design criteria) and their affordability rather than whole life cost specifics and energy efficiency.

**In conclusion, no local energy-specific criteria or standards are used in either options appraisal or the commissioned design and build process.** As a general rule, satisfying the client's primary project needs (e.g. delivery of specific room sizes/functions for use) and ensuring best value solutions are the primary criteria for design and specification of projects.

#### 2.4.4 Use, operation, maintenance and management of building and building services

The use, occupation, maintenance and management of buildings and building services falls within the remit of centralised Property Services. In essence, strategic responsibilities and decisions rest with Strategic Property Services. These include planning the estate and its use and occupation; approving and commissioning the delivery of projects; setting and performance managing capital and revenue budgets and programmes; providing a quality assurance function in relation to the performance and quality of property and property services.

The operational responsibilities and activities fall to Operational Property Services.



The property helpdesk is the customer facing service for receiving and dealing with daily queries such as reactive repairs, water leaks, heating/ventilation problems; energy performance. However, **energy related queries do not have a defined action workflow or nominated responder in property services.**

Day to day on-site support is provided to building users in the form of Facilities Management services (building cleaning, security/locking/unlocking, waste collection etc), which is largely procured from external suppliers. Only a very limited number of larger sites benefit from on-site LCC Premises Officer support, although peripatetic maintenance and caretaking staff may be available to respond to immediate issues. **Premises officers (and other on-site support staff) are not specifically trained or briefed on energy management activity.**

Routine, periodic activity, such as legionella, asbestos and fire detection equipment inspections and the inspection and servicing of individual heating, cooling and other electrical systems is delivered by Operational Property Services.

Planned and reactive building maintenance is delivered by Operational Property Service and funded from a centralised maintenance fund. Prioritisation of this funding is based on condition surveys, presently completed on three-yearly inspections of building fabric condition, mechanical systems condition and electrical systems condition. Investment decisions are driven by building condition and expected life of building fabric and systems, with priority given to equipment and buildings with deteriorating condition. **Energy efficiency does not feature in this decision making process.**

Building services tend to be delivered in service “streams”: one manager deals with escalated complaints about cleaning and security services, one for ground maintenance queries, one for building maintenance and so on. It is unusual for staff to have a “whole system” view of the operation of each building, particularly as information records tend to be retained within the service teams.

#### **2.4.5 Energy sourcing and procurement**

Current practices have been previously described in sub-section 2.3 Energy Procurement.

#### **2.4.6 Performance measurement, monitoring and reporting of energy consumption and costs**

### **Energy Use Measurement**

The Asset Management Information Team service within Strategic Property Services is responsible for the collation and provision of energy consumption data in buildings occupied by LCC. Data is collated from automatic meters and electronic data files from utility suppliers.

This information is currently supplied to an outsourced energy bureau service, TEAM Energy, who input this data into an online database (SIGNET). TEAM Energy provides reporting and calculation services for the production of CRC and GHG reporting requirements. Users of the data report it is of a high quality, accurate and in a useful format. The TEAM “SIGNET” system offers a wide range of reporting format and presentations of energy use data, accessible from any web enabled

computer with the correct web browser and access rights. The current contract with TEAM Energy is due to expire in November 2014.

### **Energy Use Monitoring and Targeting**

**There is no routine or established practice for monitoring and targeting energy use in LCC buildings, despite the availability of accessible and high quality data.** Some limited interrogation is performed on occasion by Property Services staff when anomalies are brought to light but there are no dedicated resources attached to this activity.

Challenge and enquiry on energy use is more frequently initiated by the Carbon Action Team, CAT, as part of their wider environmental performance management role, with a particular focus on reducing carbon emissions. This activity is not core business for CAT staff. The CAT team has forged some highly effective communication relationships with a network of environmental champions drawn from end user representatives and building managers across the LCC estate. (The "Go Green" initiative). These relationships have been developed through initiatives aimed at reducing waste, increasing recycling and provide staff behavioural leadership on a number of environmental issues, including energy consumption. The CAT team is able to access SIGNET information but is not qualified to provide holistic energy performance solutions or responses due to the absence of dedicated resource support from Property Services.

Energy issues reported through the property helpdesk are usually investigated and resolved by the Mechanical Engineer in Strategic Property Services but there are no routine services or practices attached to this function.

### **Performance Management and Reporting**

**There are neither plans in place nor systems in use for the routine performance management or reporting of property related energy consumption or costs.** There are various energy performance and reporting activities as indicated in the following table, but they are not linked or co-ordinated in any way.

**Figure 2.8 – Current Energy Performance Management and Reporting**

Performance area	Performance reporting requirement/target	Owner	Manager	Other resources
Energy Consumption	None set	Not defined	Mechanical Engineer (SPS)	Team Energy
CO2 emissions	CRC production	Head of SPS	Mechanical Engineer (SPS)	Team Energy (calculation)
	Greenhouse gas (GREEN HOUSE GAS) emission reporting	AD for Environment	Team Manager, Climate Action Team	Team Energy (calculation)
	Environment Strategy (CO2 delivery plans)	AD for Environment	Team Manager, Climate Action Team	Team Energy (calculation)
Energy Cost	Budget management and MTFS savings delivery	Head of OPS	None identified	Team Energy (calculation)
	CIPFA benchmark reporting and transparency requirements – overall property estate costs	Head of SPS	Information Team Manager (SPS)	Team Energy (calculation), Info team
Quality of buildings	Production and display of Display energy Certificates (and Energy Performance Certificates when required) in accordance with EU and UK regulation.	Head of SPS	Information Team Manager/ Mechanical Engineer (SPS)	Outsourced suppliers

### 2.4.7 Traded Services

Trading activity by LCC Property Services is very prevalent, mainly by Operational Property Services in support of schools and academies but also across the local public sector with income effectively supporting the LCC operating model and cost effectiveness. However, Energy Management and other energy services are not currently offered to external customers primarily because this is neither a strength nor a marketable competency that is currently available.

One specific area where energy related support is provided to outside organisations is through the SCoRE (Schools Collaboration on Reducing Energy) service to schools. This is a behaviour change programme delivered by the CAT team and is linked to curriculum development in Leicestershire schools to improve environmental performance and energy efficiency. The service has well developed and self contained energy monitoring tools for schools use, but does rely on some limited input from Operational Property Services in relation to low cost building system interventions and heating control management in schools.

### 3. Opportunities

This section considers the opportunities available to LCC to improve upon existing arrangements for procuring, planning and managing energy and for dealing with carbon emissions across the County Council's asset base. Additionally, consideration is given to the opportunities available for addressing the specific project objectives set out in 1.3.2.

The opportunities for improvement are structured under the same headings used in section 2 to describe existing arrangements:

- 2.1 Energy Performance – focusing on the physical building fabric and installed systems
- 2.2 Energy Policy – focusing on areas for establishing policy and setting standards
- 2.3 Energy Procurement and Sourcing – focusing on the buying approach and opportunities to mitigate energy and CO2 costs
- 2.4 Energy Practices – focusing on roles and responsibilities; practices in the areas of acquisition of buildings; design and construction; management and maintenance; use and operation of buildings; performance measurement, management and monitoring

In practice, an opportunity attached to one of the above areas (for example, Energy Practices) will amount to an opportunity for improvement in another area (Energy Performance).

Opportunities have begun to emerge through the reported findings thus far in the report. More specifically, opportunities have been identified through:

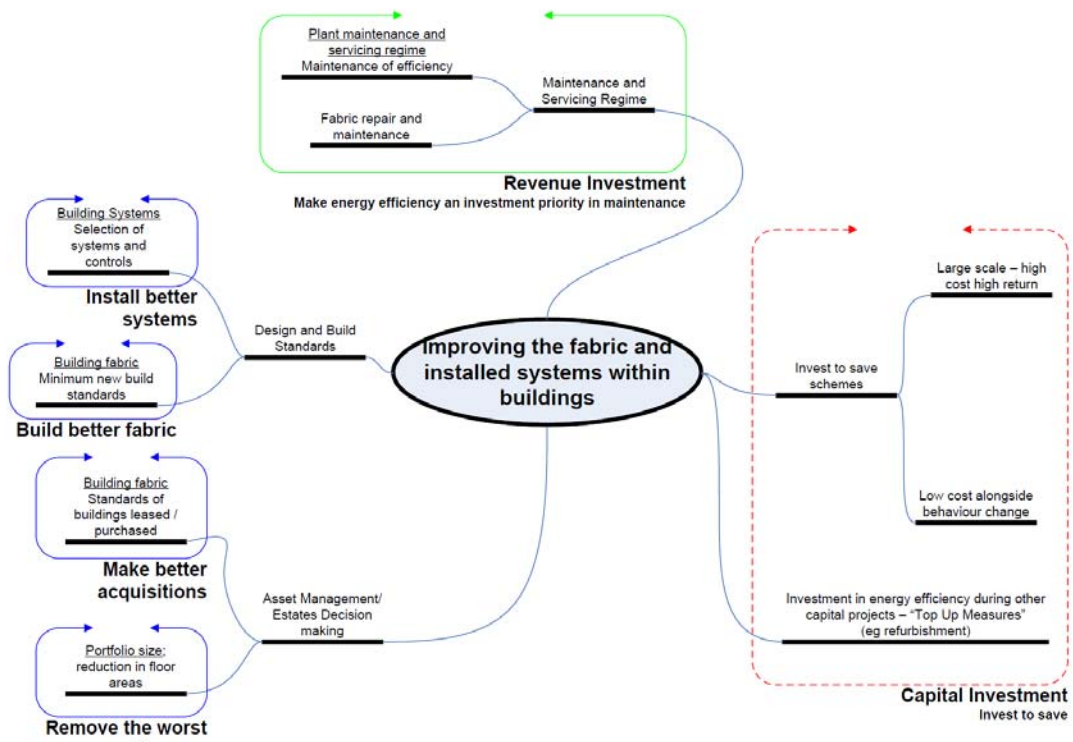
- (i) Research including evaluation of identified good practice together with reviews of statutory and non-statutory guidance and developing industry trends;
- (ii) Stakeholder consultation, including one to one and workshop meetings with peer organisations, potential suppliers of various energy services, existing partners (including ESPO and TEAM energy), end users and potential external customers of LCC services;
- (iii) A SWOT (Strengths, Weaknesses, Opportunities and Threats) Analysis undertaken in consultation with key personnel and stakeholders.

### 3.1 Energy Performance

This section considers the building fabric and installed systems of the LCC estate. As the data and findings in Section 2 have illustrated, the LCC estate is not of high quality with respect to energy efficiency. There are a range of opportunities to improve the performance of the building fabric and systems. These are summarised in Figure 3.1 below but they fall under the broad objectives to:

- Remove the worst performers
- Make better acquisitions
- Install better systems
- Make energy efficiency a priority in
  - revenue maintenance and management
  - capital investment in buildings

**Figure 3.1 The key opportunity areas to improve the fabric of LCC’s estate**



All the opportunities highlighted above require improvements in the areas of ‘Energy Policy’ and ‘Energy Practices’. The detailed opportunities are provided below under these subsequent headings.

## 3.2 Energy Policy

**Section 2 reveals that LCC is virtually completely devoid of any recognised or established property related energy policies.** The principal opportunity, therefore, is to fill this void and to produce a corporately accepted and implemented set of policies for procuring, planning and managing energy and for dealing with carbon emissions across the County Council's asset base. Additional specific policy-setting opportunities include:

- Compliance with statutory requirements relating to CRC and energy performance and management of buildings
- Aim to minimise energy inefficiency and CO2 emissions of buildings and to reduce CRC and energy costs
- Include energy performance information in all relevant decisions concerning LCC's ownership, use, management and occupation of property
- Set minimum energy performance standards to guide decisions about:
  - Acquiring property
  - Occupying buildings
  - Construction, refurbishment and development of buildings
  - Maintenance of buildings
- Produce building operating times and out of hours policy for all LCC buildings
- Produce a temperature management policy for all LCC buildings

## 3.3 Energy Procurement and Sourcing

As seen in Section 2, the energy (gas and electricity) purchasing service that LCC presently procures from ESPO appears to be cost effective. Both the gas and electricity contracts are due for review in 2016 and nothing in the current performance indicate that earlier action would be necessary. Opportunities do exist for LCC to adopt a stronger contract management approach regarding the current contract which would include taking a more active role in the governance processes.

In terms of energy sourcing, Section 2 exposes LCC's over-reliance on grid-supplied gas and electricity. There are opportunities both now and during 2015 before the ESPO energy supply contracts expire in 2016 to explore the potential benefits of increasing 'green' energy sourcing and procurement.

- Continue with existing ESPO energy purchasing arrangements, review and re-appraise against possible alternatives in 2016.
- Allocate contract management responsibilities for the existing ESPO contract to the lead energy role in Strategic Property Services (see details in section 3.4 below)
- Identify lead officer responsibility (either Finance or Strategic Property Services) in the governance arrangements for the existing ESPO contract
- Investigate the scope and feasibility of opportunities for increasing procurement of energy from renewable sources, including opportunities for renewable energy generation from LCC's estate (e.g. the development of solar farms; production of wood chip fuel)

## 3.4 Energy Practices

**As identified in Section 2 there is no over-arching energy lead role or responsibility in either Strategic or Operational Property Services. As a consequence, there is no effective approach at present towards planning, designing, managing or monitoring the energy and CRC emissions performance of the County Council's properties.** Energy practices are in existence, as outlined in Section 2, but they are un-coordinated and largely reactive. Establishing the proper organisational structure, complete with specified roles and responsibilities, is the essential starting point for improving upon the current situation and delivering an effective energy management service in the future.

The remaining opportunities considered in this Section to improve current energy practices are assuming that the proper organisational structure within which these practices are to be delivered has been established.

### 3.4.1 Roles and Responsibilities

- Create dedicated lead roles in both Strategic and Operational Property Services for delivering the energy services that are necessary to ensure maximum energy and CRC efficiency across LCC's estate. The proposed organisational structure diagram for future energy services: roles and functions are shown in Figure 3.2 at the end of this section.
- Within the new structure, allocate management responsibilities for delivering the invest to save proposals arising from the ongoing RE:FIT EnPC and Better-Off projects, subject to business case testing of these proposals.
- Develop clear workflows and responsibilities for dealing with:
  - energy related issues raised from the end-user of a building (e.g. reports of heating problems)
  - energy issues arising from work/projects commissioned by Strategic Property Services
  - production and maintenance of building systems records for all buildings
  - preparation, management and monitoring of energy budgets
  - management and monitoring of energy performance and CRC emissions

### 3.4.2 Acquisition and ownership of buildings

- Include energy performance and CO2 emissions information in property acquisition and ownership decisions
- Set a minimum energy performance standard for new acquisitions e.g. minimum 'C' EPC rating (provide an energy performance improvement plan for exceptional cases where minimum standard cannot be met e.g. historic or listed building)

### 3.4.3 Design and construction of buildings and building systems

- Apply set energy performance standards/agreed industry standards in design and construction of buildings and building systems
- Set a minimum energy performance standard for new build and refurbishment e.g. minimum 'B' and 'C' EPC rating respectively (provide an energy performance improvement plan for exceptional cases where minimum standard cannot be met e.g. historic or listed building)

### 3.4.4 Use, operation, maintenance and management of buildings and building services

- Use recorded energy performance PI's to inform asset management planning decisions and business case analysis
- Include energy performance information of buildings and building systems in condition surveys and maintain this information on a centralised database. Apply this information in:
  - the development of planned maintenance programmes and budgets
  - the development of capital programmes and budgets including invest to save opportunities
  - whole-life costing and business case appraisals
  - performance reporting on behaviour change activity
- Produce and utilise holistic building management manuals encompassing regularly updated information about energy systems; schematic diagrams; operating requirements; service records; change logs; maintenance and management plans
- Review Heating, Ventilation and Cooling (HVAC) servicing contracts to ensure they adequately cover energy efficiency requirements
- Apply building operating times and out of hours policy for all occupied buildings
- Set and apply HVAC operating standards for all buildings e.g. thermostat settings; hours of use; weekend and evening settings; holiday settings
- Clarify the role and responsibilities of the "building manager" in every site with respect to the application of energy policies and energy management activity
- Property Services to work with LCC's 'Go Green' initiative to promote energy saving changes through end-user behaviour e.g. turning off lights and electrical devices when not required; keeping windows and doors closed to prevent heat loss; closing blinds to avoid heat gain.
- Continue to review and explore the potential benefits of energy performance partnership arrangements e.g.:
  - APSE (the Association for Public Service Excellence) – developing a future initiative for collaborative energy management working between Local Authorities
  - University led energy initiatives (Loughborough and DeMontfort)
  - East Midlands Property Alliance (EMPA), with a focus on shared public sector procurement opportunities
- Subject to business case, continue utilisation of Energy Performance Contracts to deliver guaranteed energy savings for the highest energy consuming assets in the LCC portfolio

### 3.4.5 Performance measurement, monitoring and reporting of CRC, energy consumption and costs

As seen in Section 2, various energy performance and reporting activities are in existence but they are spread across a range of service areas in response to separate and un-related initiatives e.g. CO2 emissions are collated and reported for the purposes of submitting the annual CRC report to government; expenditure on energy is assessed and monitored simply in response to MTFS budget reviews. Despite holding energy consumption data within the centrally managed database in Strategic Property Services, this information is not used in any recognisable performance management way to monitor and identify opportunities to improve upon the CRC or energy performance of buildings. **Opportunities under this heading, therefore, start with and depend upon creating the structure and**



### **responsibilities for developing an energy performance management function in Property Services.**

- Establish the allocation of responsibilities and working relationships between the lead energy roles created in Strategic Property Services and Operational Property Services for the performance measurement, management, monitoring and reporting of CRC and energy consumption and costs
- To ensure that all energy and CRC information and data continues to be collated and retained on a centrally managed and maintained database
- Produce and record CRC and energy performance PI's for all LCC occupied assets on a centralised database
- Include energy performance data and energy performance improvement plans within the individual action plans that are to be produced for all LCC assets under the revised Asset Challenge process that is to be developed during 2014/15
- Retain building management manuals (as described in 3.4.5 above) in a centralised electronic format
- Make a decision regarding the extension or termination of the TEAM Energy Services contract as soon as possible, due to expire in November 2014. If to be extended to decide and define the scope and costs of the services to be procured is to be terminated to decide and determine the alternative arrangements for providing the previously procured energy auditing and reporting services.

#### **3.4.6 Traded Services**

**As seen in Section 2, energy management and other energy services do not form part of the traded services that are currently offered by Property Services to external customers since this is neither a strength nor a marketable competency at present.** The only form of energy service that is presently offered externally by LCC is the behaviour change programme delivered by the Climate Action Team (in Environment and Transport) to Leicestershire schools.

- Following the establishment and development of the in-house energy services suggested in this section, to explore the opportunities for developing an income generation traded service as an Energy Services Contractor for schools and other public sector partners e.g. CRC and energy measurement, monitoring and reporting; energy performance consultancy advice; energy management service

#### **3.4.7 Partnerships**

There is an emerging opportunity for greater partnership working which can support the future energy management practices by Property Services. In particular, the potential values of these are three key opportunities that are being explored at present:

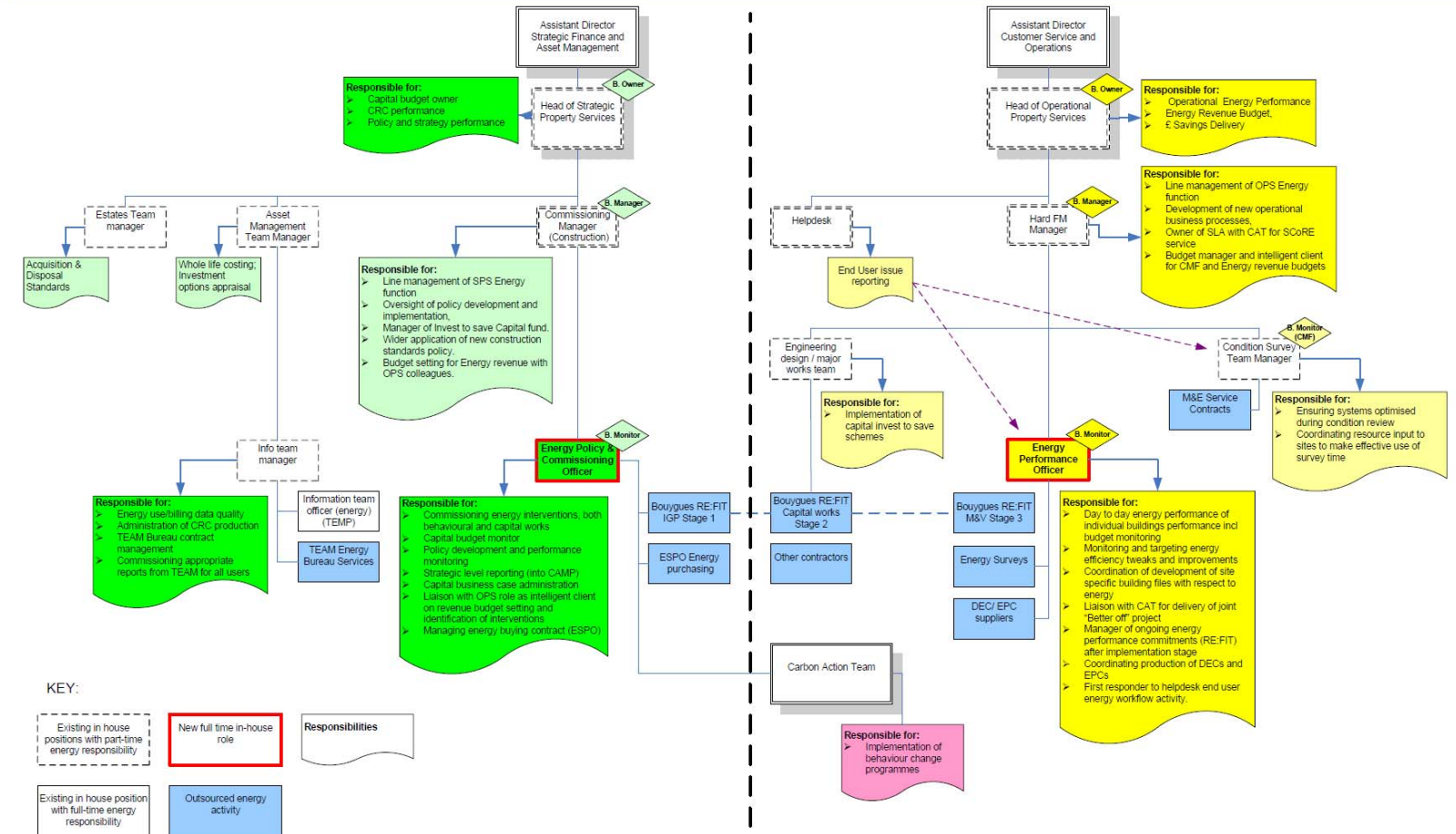
- APSE (the Association for Public Service Excellence) has just launched its prospectus for collaborative working on energy management between local authorities, which sets out a vision to form an effective collaboration of a large number of local authorities to enable and facilitate the municipalisation of energy services.

- DeMontfort University continues to offer academic leadership in energy, notably in renewable energy, and electrically heated buildings, LCC may be able to gain expertise and contribute to academic knowledge of the application of solutions within its portfolio
- Finally, as a member of EMPA (the East Midlands Property Alliance) LCC continues to develop relationships with the five upper tier local authorities in the East Midlands, sharing good practice and in some areas, procurement approaches. This relationship will continue to be explored for energy management.

Figure 3.2 Proposed Energy Management Resources and Activity

LCC Proposed Organisational Distribution of Energy Management Related Activity

Thursday, February 13, 2014



## 4. Recommendations

The previous Section 3 identified the opportunities for improvement under the headings of energy performance; policy; procurement and sourcing; practices.

It is recommended that all the improvements identified in Section 3 are pursued. This section explains how this can be achieved through delivering the four key building blocks that are recommended below.

### 4.1 Building Block 1: Structure

The starting point is to establish the organisational structure, roles and responsibilities for delivering an energy management function. This involves:

- i) Allocating energy management and planning activities and responsibilities across Strategic and Operational Property Services as presented in Section 3 Figure 3.2: Proposed Energy Management Resources and Activity, and between the Carbon Action Team and the end users of buildings across the organisation
- ii) Creating 2 full-time energy lead roles as presented in Figure 3.2 for:
  - Energy Policy Commissioning Officer (Strategic Property Services)
  - Energy Performance Officer (Operational Property Services)
- iii) Reviewing and updating Job Descriptions to reflect energy management responsibilities within existing roles

### 4.2 Building Block 2: Culture

The structure needs to be supported by the right culture. It is necessary to create and maintain an energy conscious and energy responsible culture towards the Council's ownership and use of property. The County Council is currently some distance from having this type of culture and a good deal of work is required to cultivate the behavioural change and belief that property energy efficiency is everybody's responsibility from the end user/occupier who can change a radiator thermostat to the senior executive and political leaders who set the tone of the organisation's attitude towards environmental and energy responsibility. This requires:

- i) Developing and establishing the Council's Property Energy Policy. The lead responsibility for producing the policy will lie with Strategic Property Services (Energy Policy and Commissioning Officer). The policy will require formal approval and acceptance through the asset management corporate governance process, including CMT and members followed by a robust and comprehensive communication plan to ensure the policies are embedded in the wider operation of the organisation.
- ii) Including energy and CRC information at all levels of property related decision-making. This will affect day to day property management activities and responsibilities (as delivered across Operational Property Services) Specific considerations for associated improvements to existing practices and procedures are contained within Section 3.4 Energy Practices.
- iii) Routinely reporting upon property energy and CRC performance and expenditure in key corporate documents (e.g. Corporate Asset Management Plan) and to relevant senior executive and member groups

- (e.g. Corporate Property Steering Group; Environment Strategy Board; CMT; member groups).
- iv) Including Energy Performance Plans and targets in Service Plans for Strategic and Operational Property Services as well as for Corporate Resources.
  - v) Including energy performance in Environmental 'dashboard' reporting

### **4.3 Building Block 3: Resources**

Ensuring that there are sufficient and appropriate resources available to deliver the required energy management function is crucial to the success (or otherwise) of the future Property Energy Strategy. The resources required concern:

- i) People with the requisite skills and expertise. Adopting the organisational structure recommended under Building Block 1 support this requirement. This will also include continuing to make best use of externally procured specialists to support in-house resources and capacity. Examples include Energy Performance Contractors; Energy Bureau Services; Energy Procurement Services; other potential future partnerships such as recently developed by the Association for Public Service Excellence. Additionally, the Go-Green champions can play a helpful role in promoting the positive support of the end users of buildings.
- ii) Information and knowledge. Specific recommendations are contained in Section 3.4 Energy Practices but the fundamental requirement is to develop and maintain centralised energy information databases, building upon the prevailing centralised systems in Strategic Property Services' Asset Management Information Team.
- iii) Funding. Revenue funding is required for the 2 energy lead posts in Strategic and Operational Property Services. Opportunities for generating new funding should be continuously explored and realised. Examples include providing capital to support Invest to Save projects, including the procurement of Energy Performance Contracts; targeting management and behavioural initiatives to reduce electrical consumption across sites with half hourly meters in order to reduce or possibly eliminate CRC payments as well as emissions.

### **4.4 Building Block 4: Doing The Right Things**

It follows that the final recommendation rests upon ensuring that the correct practices and procedures are in place to deliver the Council's future Property Energy Strategy. Some of the practices and procedures are incorporated within the previous 3 Building Blocks. The full and comprehensive list is contained in Section 3 Opportunities for Improvement.

In summary, the above 4 Building Blocks represent the core recommendations for creating the right organisational structure, cultivating an energy conscious and responsible management culture, providing sufficient and appropriate resources and making sure that the right actions are being taken. Delivering these Building Blocks will move the County Council from its current position of ineffectiveness and vulnerability with regards to the energy management of its property resources to one of considerable strength and control. The final sections of this report set out the implementation plans to make this happen.

## 5. Risk Register

Figure 5.1, on the following page, identifies the key risks and proposed mitigation approach associated with the recommendations and proposals for delivery set out in this report.

The risk register utilises the County Council's corporate risk management approach. The scoring criteria and rating scale are set out in Figure 5.2, following the risk register.

**Figure 5.1 – LCC Property Energy Strategy Risk Register****Property Energy Strategy  
Risk Register**

25/02/201

Ref No	Workstream	Risk	Cause	Current Impact	Current Likelihood	Current Risk Rating	Mitigation Actions Required	Current Progress	Risk Owner	Co- Owner	Date Last Reviewed	Impact Date
R01	Structure	Ownership and performance of energy management impaired by process of reorganisation.	Lack of clarity over new roles and responsibilities of SPS/OPS and CAT	3	3	9	Identify, define and implement new roles for energy management in early stages of review. Clear communication plan and delivery thereof.	Risks defined and included in strategy documentation.	EC	HF/GR	19/02/2014	01/04/2014
R02	Structure	Absence of clear performance ownership for energy, including budget management could result in poor financial management.	Lack of defined and dedicated roles with suitable clear responsibility and ownership of issues	3	3	9	Define and allocate key organisational roles (Budget owner, monitor etc. CRC responsibility) between SPS and OPS. Ensure OPS and SPS stakeholders buy in to new split of R&R	Risks defined and included in strategy documentation.	EC/GR	RL	19/02/2014	Ongoing
R03	Culture	No clear direction of travel for engineers, managers and end users to follow for interventions	Lack of clear LCC policy regarding energy	2	2	4	Develop and apply LCC policies for energy. Clear communication plan and delivery thereof.	Risks defined and included in strategy documentation.	EC		19/02/2014	Ongoing
R04	Culture	Use of buildings contradicts with design of systems and settings	No formal process for capturing and managing changes to opening hours and use	3	2	6	Develop and apply LCC policies for operating hours within energy policy including change control mechanism.	Risks defined and included in strategy documentation.	EC	GR	19/02/2014	Ongoing
R05	Culture	Behaviour change required to support new policies and energy management regime is not delivered.	Lack of clarity over roles. Lack of end-user support/trust due to historic perceived underperformance by property. Lack of corporate strategic backing. Inability to "commission" aligned behaviour change programmes.	3	3	9	Define and allocate business processes and roles between end user, CAT and OPS in relation to end user issue reporting and behaviours. Early strategic engagement with departments at AMWG, CPSPG and ESB. Clear communication plan and delivery thereof. Develop	Risks defined and included in strategy documentation.	EC/HF		19/02/2014	Ongoing
R06	Resources	Insufficient revenue funding to support required posts.	Revenue savings requirements means SPS/OPS revenue budgets are contracting. Insufficient invest to save funding set aside.	3	4	12	Ensure Strategic Finance support requirement for new posts. Set aside and plan for total savings to ensure posts funded.	Risks defined and included in strategy documentation.	EC/GR	RL	19/02/2014	01/04/2014
R07	Resources	Lack of resource to mobilise strategy and early initiatives	New structure in SPS/OPS to take effect for 1 October 2014, after initial work required to be undertaken.	4	4	16	Identify interim resourcing strategy for delivery of project roll out tasks and initial engineering projects.	Risks defined and included in strategy documentation.	EC/GR	HF	19/02/2014	01/04/2014
R08	Resources	Revenue savings not delivered in line with MTFS.	Failure to deliver sufficient improvements in consumption. Exceptional energy use due to climate change. Rising prices overtake savings from reduced consumption.	3	3	9	Ensure robust and conservative savings forecasts included in strategy business case. Ensure savings forecast and annual budget setting/inflationary rises is linked to external factors and correlation of energy cost with	Risks defined and included in strategy documentation.	GR	RL	19/02/2014	01/04/2017

**Figure 5.2 – LCC Corporate Risk Management Scoring Criteria and Rating Scale**

<b>Risk Impact Measurement Criteria</b>						
<b>Scale</b>	<b>Description</b>	<b>Departmental Service Plan</b>	<b>Internal Operations</b>	<b>People</b>	<b>Reputation</b>	<b>Financial per annum / per loss</b>
<b>1</b>	Negligible	No impact to objectives in service plan	Limited disruption to operations and service quality satisfactory	N/A	Public concern restricted to local complaints	<£50k
<b>2</b>	Low	Minor impact to service as objectives in service plan are not met	Short term disruption to operations resulting in a minor adverse impact on partnerships and minimal reduction in service quality	Residents inconvenienced	Minor adverse local / public / media attention and complaints	£50k-£250k
<b>3</b>	Medium	Considerable fall in service as objectives in service plan are not met	Sustained low level disruption to operations / Relevant partnership relationships strained / Service quality not satisfactory	Potential for minor physical injuries / Stressful experience	Adverse local media public attention	£250k - £500k
<b>4</b>	High	Major impact to services as objectives in service plan are not met	Serious disruption to operations with relationships in major partnerships affected / Service quality not acceptable with adverse impact on front line services	Exposure to dangerous conditions creating potential for serious physical or mental harm	Serious negative regional criticism, with some national coverage	£500-£750k
<b>5</b>	Very High	Significant fall/failure in service as objectives in service plan are not met	Long term serious interruption to operations / Major partnerships under threat / Service quality not acceptable with impact on front line services	Exposure to dangerous conditions leading to potential loss of life or permanent physical/mental damage	Prolonged regional and national condemnation, with serious damage to the reputation of the organisation	>£750k



**Risk Likelihood Measurement Criteria**

Scale	Likelihood of Occurrence	Projects	Probability %
1	Expected less than 1 time in next 10 years	1 in every 50 projects	0-5%
2	Expected 1 time in next 5 to 10 years	1 in every 25 projects	6-20%
3	Expected 1 time in 3 to 4 years	1 in every 12 projects	21-40%
4	Expected 1 time in 2 years	1 in every 6 projects	41-60%
5	Expected annually	1 in every 3 projects	66% +

## 6. Implementation Plan

### 6.1 Timetable and Structure for Implementation

An Implementation Plan has been developed which reflects the structure of the recommendations made in Section 4, and is proposed to be put in place across two key stages, as below. The plans are illustrated by the Gantt charts, figure 2.1 and 6.2 on the following pages:

#### Stage 1 – Transformation (March to June 2014).

In the first stage of implementation, the Building Blocks of a new energy management approach will be put in place, to establish:

- (i) **A new organisational structure for energy management**, with the staffing and performance management regimes required;
- (ii) **An organisation-wide culture** which will support the delivery of future energy management, with the development and incorporation of new energy policy, the delivery of a communication strategy to raise awareness of roles and responsibilities and the embedding of energy performance in existing reporting procedures and service plans;;
- (iii) The necessary **resources for delivery**, in terms of information resources (systems and recording practices), funding (for measures and staffing) and the people (both in-house and outsourced support as required).

#### Stage 2 – Consolidation and Delivery (2014 to 2017).

The delivery stage, aligned with the period of the current Medium Term Financial Strategy, proposes the implementation of a number of key strands of activity designed to reduce the energy consumption, and the corresponding financial and environmental costs for LCC:

- (i) **Energy management practices**; reviewing the existing TEAM energy bureau contract, initially for the 2014/15 financial year, and then undertaking a re-procurement exercise to deliver a replacement contract from 1 April 2015.
- (i) **Energy procurement and sourcing**; Putting in place business case evaluation techniques that facilitate the implementation of renewable energy technologies as part of other investment projects;  
Utilising revenue recovery services to recover historic aberrant charges by utility suppliers in past years;  
Completing a review of energy procurement arrangements as the existing ESPO contracts come to their conclusion in 2016; Energy interventions alongside other capital projects, utilising new project scoping processes to ensure no opportunity to invest in energy efficiency is missed as other property works are completed;
- (ii) **Energy Performance Contracting**, utilising the RE:FIT energy performance framework, over a series of phases, capital investment to be made in the highest consuming sites to deliver guaranteed energy savings. These projects will mainly target the 25 sites representing 75% of the energy consumption across the estate;

- (iii) **Energy Efficiency reviews** of all other sites in scope; adopting the “Better Off” brand, alongside wider asset challenge procedures, building on the lessons learnt from the Better-off pilot project, identifying opportunities for capital investment in energy efficiency and the application of renewable energy solutions, but most importantly to optimise existing systems to reflect actual use of the sites by end users. This process will include the introduction of standardised building & system manuals, and the setting of site specific performance targets.
- (iv) Energy **interventions alongside other capital projects**, utilising new project scoping processes to ensure no opportunity to invest in energy efficiency is missed as other property works are completed;
- (v) **Behavioural change programme**, building on existing environmental benchmarking and leadership provided by Go-Green champions, to include the introduction of competition-based incentives to reduce energy use.

Figure 6.1 – Implementation – Stage 1: Transformation

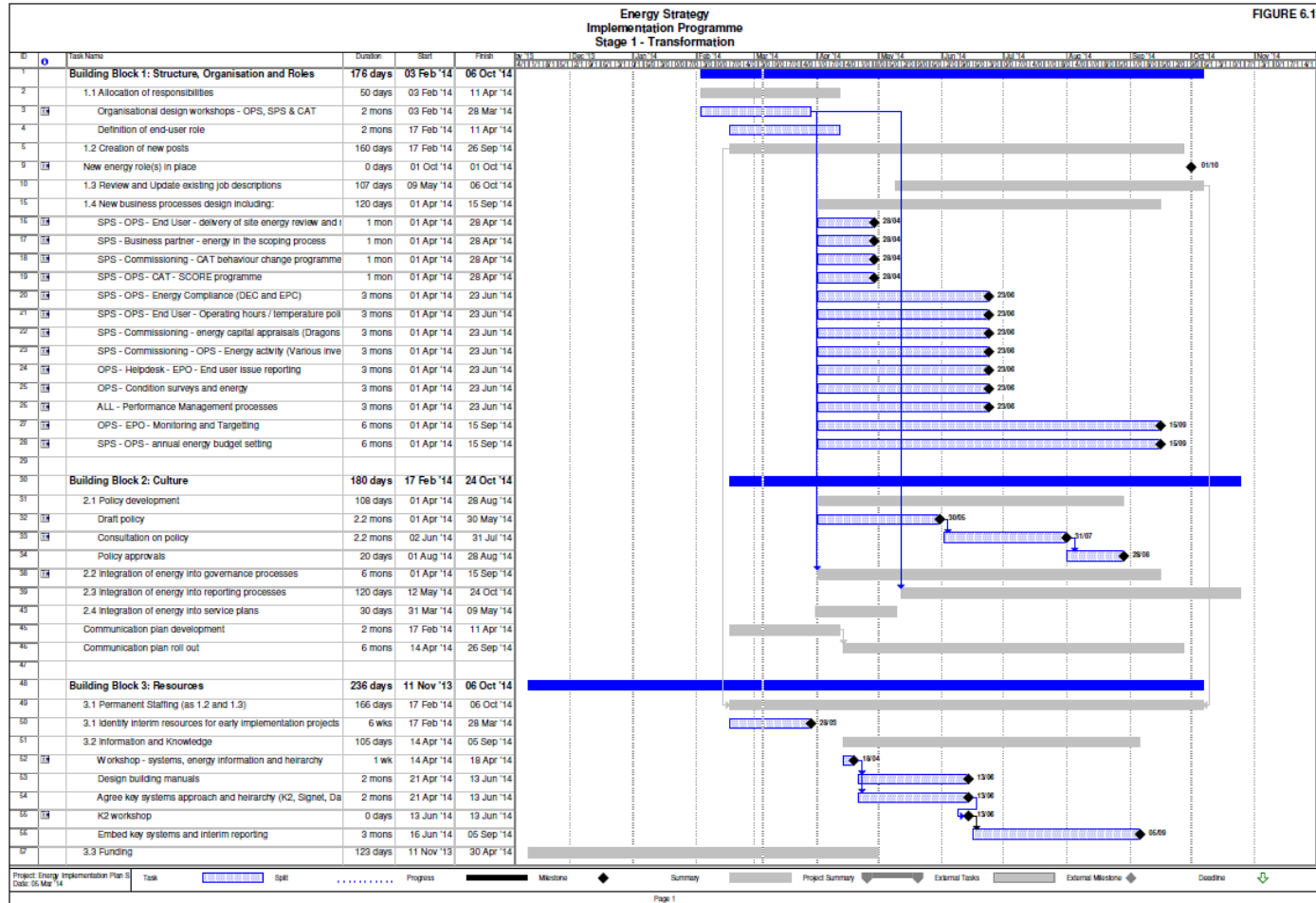
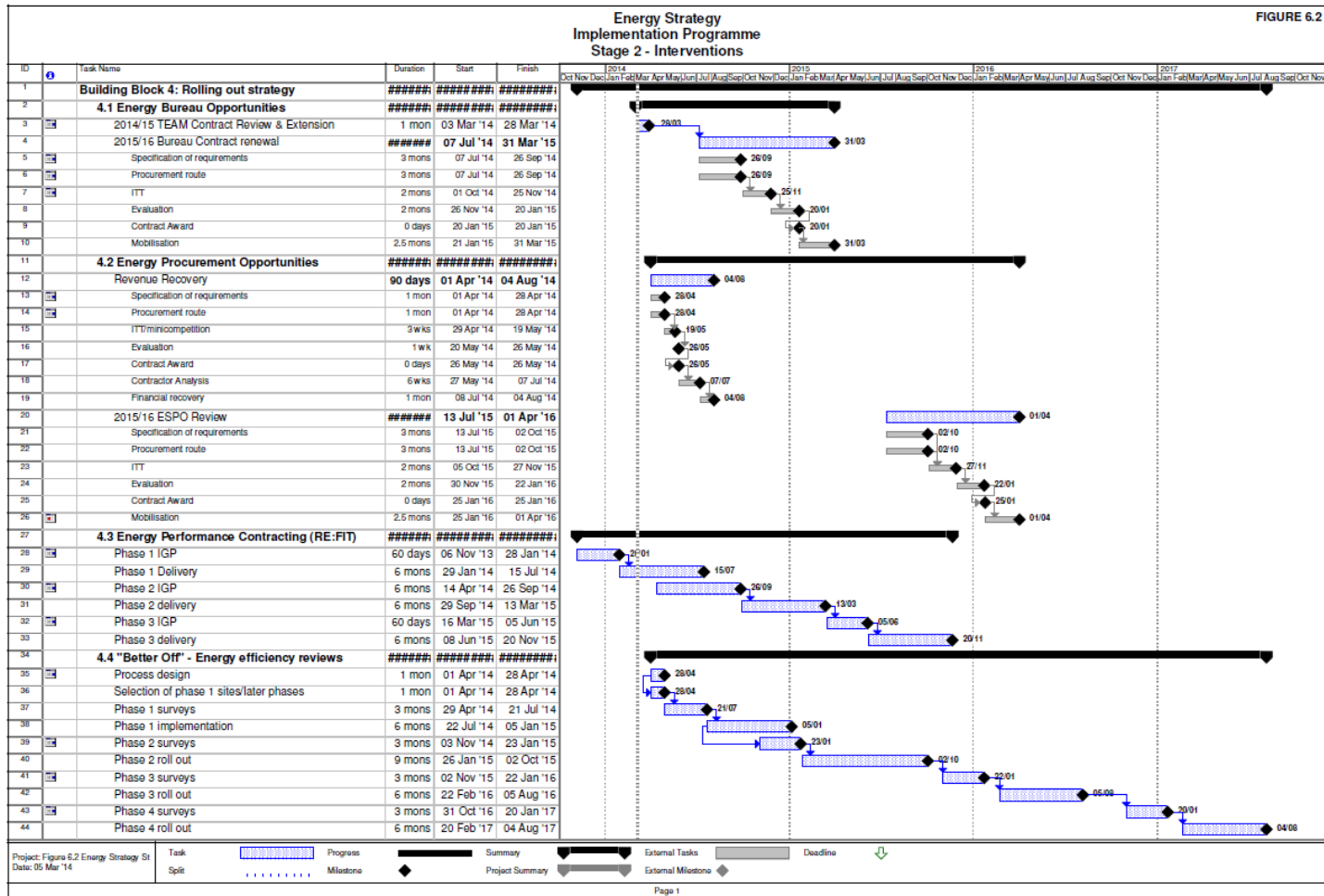


Figure 6.2 – Implementation – Stage 2: Delivery



## 6.2 Performance Targets

The following performance targets will keep the delivery of the Implementation Plan focussed on the essential required outcomes.

### 6.2.1 Core performance targets:

#### Energy Consumption:

**A global reduction of 24% in weather adjusted energy consumption by the end of the 2017/18 financial year is proposed** as the overriding objective of this strategy, compared with a baseline for the 2013/14 financial year (assuming the current proportions of electricity and gas use across the estate remain broadly consistent) which will ensure the required financial and CO2 cost reduction outcomes are met, specifically:

- the financial savings targets required by the MTFs by April 2017, as set out in Figure 6.3 below;
- the CO2 reductions of 34% (compared to the 2008 baseline) required by the Environment Strategy by 2020.

#### Energy Sourcing

**A progressive target of an annual 1% (year on year) increase in the sourcing of energy from renewable sources across the LCC estate is to be targeted**, as an integral part of the initiatives set out in Section 6.1.

#### Financial Savings

Using conservative estimates of the benefits to be achieved and calculating savings compared to the actual spend on energy consumption in 2012/13; figure 6.3 illustrates how the measures set out in this strategy are expected to deliver the revenue savings required in the Medium Term Financial Strategy.

Monitoring performance of the delivery of the intended savings below will require adjustments in the targets to take account of:

- Rising energy fuel prices;
- Variable consumption as a consequence of climate/weather changes.

The table below assume energy prices at October 2013 levels, and forecasts savings against present day costs (i.e. excludes the influence of inflation).

### Figure 6.3 – Revenue Budget Savings Forecast

Key assumptions and basis of financial projections in Figure 6.3:

MTFS requirement	2014/15	2015/16	2016/17
	£'000	£'000	£'000
MTFS Targets - Jan 2014		-200	-395

Project	2014/15	2015/16	2016/17
1 Energy purchasing (revenue recovery project)	-20		
2 Energy Bureau - savings through re-procurement	-10	-20	-20
3 Better Off - Energy Efficiency Review	-25	-75	-150
4 Energy Performance Contracting (Phase 1 RE:FIT)	-115	-180	-180
5 Energy Performance Contracting (Phase 2/3 RE:FIT)			-120

6	CRC reduction (24% of £125k)			-30
	<b>Total (gross)</b>	<b>-170</b>	<b>-275</b>	<b>-500</b>
7	New revenue costs	75	75	75
	<b>NET savings</b>	<b>-95</b>	<b>-200</b>	<b>-425</b>

Key assumptions and basis of financial projections in Figure 6.3:

1. A one off £20k saving from retrospective revenue recovery activity is forecast. This will be a one-off piece of worked linked to energy bureau service activity targeting historic charges by utility suppliers.
2. The savings anticipated from the outsourced energy bureau service savings are anticipated from two sources; first, in 2014/15, through a reduction in service requirements as a result of academy transfer and changes to CRC compliance; second in 2014/15, through a re-procurement process.
3. The savings projections planned from the Energy Efficiency Review process are based on the opportunities identified through the Better Off project pilot. A very conservative projection of this opportunity has been made at this stage, with a saving of around 5% across the sites in scope anticipated.
4. Energy Performance Contracting opportunities are divided into two phases; with the first phase set out and supported by the Investment Grade Proposal provided by the supplier. The second phase (line 5) is a conservative projection on the return on investment to be achieved; at around 15% energy savings.
6. CRC reduction savings are based on achieving the overall energy reduction target of 24%, and this saving being reflected in a comparable reduction in the CRC payments made only across the corporate property portfolio (not in other CRC liable areas such as street lighting).
7. New revenue costs include the funding to cover the costs of one new post (the other being affordable within existing funding) and an allowance for new revenue costs associated with new business processes, including supporting the development of building manuals and site system records.

### 6.2.2 Extended performance targets:

A targeted reduction in electricity use in LCC's largest sites (those on half-hourly metered electricity supplies) can deliver a sufficient reduction in consumption to exclude LCC from qualification for the third round of the CRC scheme, and thereby avoidance of the costs of the CRC levy.

A reduction of 23% in the total half-hourly consumption (to secure an overall half-hourly electrical consumption of less than 6million kWh) will remove the LCC qualification for the CRC, under the present regulations.

## Appendix 1

UPRN	SITE	UPRN	SITE
4	COUNTRESTHORPE CHILDRENS CENTRE	962	COALVILLE THE BUSINESS CENTRE
14	QUORN ADULT LEARNING SERVICES	962	COALVILLE BUSINESS CENTRE SOCIAL SERVICES
50	BRAUNSTONE TOWN CHILDRENS CENTRE	963	COALVILLE ADAPTATION TECH W/SHOP (UNIT 5) SOCIAL S
60	JOHN FERNELEY HIGH SCHOOL - TECHNICAL SERVICES	969	COALVILLE WORKSPACE 17 LANDLORD
86	THE DRIVE, COUNTRESTHORPE	981	LOUGHBOROUGH TECHNOLOGY CENTRE
99	THE MOUNT DAY CARE CENTRE	1003	BEAUMANOR HALL & PARK
108	COALVILLE CONTACT & FAMILY CENTRE	1173	CROFT HIGHWAYS DEPOT
109	HAMILTON COURT LD HOME	1179	MELTON MOWBRAY HIGHWAYS DEPOT
114	THE TREES	1181	MOUNTSORREL HIGHWAYS DEPOT
115	MILLFIELD DAY CENTRE	1182	BILLESDON HIGHWAY DEPOT
116	HINCKLEY CONTACT & FAMILY CENTRE	1183	MARKET HARBOROUGH HIGHWAYS DEPOT
177	ROMAN WAY DAY CENTRE	1185	NAILSTONE HIGHWAYS DEPOT
178	MELTON SHORT BREAK CENTRE & BUNGALOWS	1205	CASTLE HOUSE (JUDGE'S LODGING)
181	CATHERINE DALLEY EPH	1214	LOUGHBOROUGH MOIRA ADULT CENTRE LALS
182	MOUNTSORREL DAY CENTRE	1244	ABINGTON HOUSE AREA OFFICE
193	WATERLEES COURT	1246	THURMASTON COLLINGTON HOUSE-CTS-STONELEIGH PLAY SC
194	GREENGATE HOUSE	1252	GREENHILL YOUNG PEOPLES CENTRE
232	BROUGHTON ASTLEY CHILDRENS CENTRE	1253	THRINGSTONE HOUSE COMMUNITY CENTRE
440	MOIRA CHILDRENS CENTRE	1257	VENTURE HOUSE YOUTH CENTRE
525	WIGSTON MAGNA CHILDRENS CENTRE	1258	KEGWORTH COMMUNITY CENTRE
577	COUNTY HALL CAMPUS	1262	MUSEUM STORE THE SHERRIER CENTRE
578	SNIBSTON DISCOVERY PARK	1321	LUTTERWORTH CHILDRENS CENTRE
579	DONNINGTON-LE-HEATH MANOR HOUSE	1324	BROOKLANDS AREA OFFICE
592	CARNEGIE MUSEUM	1355	COALVILLE COMMUNITY RESOURCE CENTRE
598	ANSTEY LIBRARY & SURE START CENTRE	1389	RESPIRE CARE UNIT
599	BARROW UPON SOAR LIBRARY	1390	COALVILLE AREA OFFICE
601	BIRSTALL LIBRARY	1410	FLECKNEY LIBRARY (FORMER SCH ANNEXE)
602	BLABY LIBRARY	1419	COALVILLE AUDIOLOGY CENTRE
603	BROUGHTON ASTLEY LIBRARY & ACCESS CENTRE	1423	SOUTH WIGSTON LIBRARY - BASSETT CENTRE
604	BURBAGE LIBRARY	1424	SOUTH WIGSTON AREA OFFICE
605	CASTLE DONINGTON LIBRARY	1425	COUNTY RECORDS OFFICE
606	COALVILLE LIBRARY & ACCESS CENTRE	1430	ALBERT & VICTORIA STREET DAY CENTRE
607	COSBY LIBRARY	1466	OAKFIELD 5-14 SHORT STAY SCHOOL
608	COUNTRESTHORPE LIBRARY	1469	MEASHAM HUNTINGDON COURT
609	DESFORD LIBRARY	1487	ASHBY DE LA ZOUCH LIBRARY
610	EARL SHILTON LIBRARY & ACCESS CENTRE	1507	EAST GOSCOTE LIBRARY
611	ENDERBY LIBRARY & ACCESS CENTRE	1516	LOUGHBOROUGH CONTACT & FAMILY CENTRE
614	GREAT GLEN LIBRARY	1521	ASTON FIRS CARAVAN PARK
615	GROBY LIBRARY	1720	BEACON HILL COUNTRY PARK
616	HATHERN LIBRARY	1726	WOODHOUSE EAVES BROOMBRIGGS FARM
617	HINCKLEY LIBRARY	1736	SHENTON STATION
619	KEGWORTH LIBRARY	1737	BATTLEFIELD HER. CENTRE & COUNTRY PARK
621	KIBWORTH LIBRARY	1744	MKT BOSWORTH COUNTRY PARK
622	KIRBY MUXLOE LIBRARY	1754	SYSTON WATERMEAD PARK TOILET BLOCK
645	LOUGHBOROUGH LIBRARY	1755	RANGERS OFFICE/ PROPERTY STORE WANLIP
648	MARKET HARBOROUGH LIBRARY AND MUSEUM	1773	ASHBY PASSENGER FLEET DEPOT
650	MARKFIELD NEW LIBRARY	1777	GLENFIELD CTS DEPOT
651	MEASHAM LIBRARY	1800	MOUNTFIELDS LODGE YOUNG PEOPLES CENTRE
655	NARBOROUGH LIBRARY	1835	DONISTHORPE WOODLAND CANAL PUMP
656	NEWBOLD VERDON LIBRARY - OPEN 2009	1846	BOTTESFORD LIBRARY
660	RATBY LIBRARY	1847	MENPHYS CENTRE
661	ROTHLEY LIBRARY	1860	MOIRA TOILET BLOCK SARAH'S WOOD
663	SAPCOTE LIBRARY	1866	SURE START & YOUNG PEOPLES CENTRE
664	SHEPshed LIBRARY	1935	OADBY CTS CLIENT TECHNICAL SERVICES
665	SILEBY LIBRARY	1971	SHORTHETH LOCK PUMP
666	STONEY STANTON LIBRARY	2017	MUSEUM STORE BARROW
667	SYSTON LIBRARY	2035	WELLAND HOUSE CHILDREN'S HOME
668	THURMASTON LIBRARY	2040	HOOD COURT DAY CENTRE
670	WIGSTON LIBRARY	2063	WIGSTON DAY CARE CENTRE (FIRST FLOOR)
675	HINCKLEY AREA OFFICE	2066	GLENFIELD LIBRARY (SANDOWN COURT)
708	GLEBE HOUSE	2075	GLENHILLS LIBRARY (2004)
737	41A COVENTRY RD INC. MKT HARBOROUGH REGISTRARS OFFICE	2083	BLABY DAY CENTRE
765	BIRSTALL DAY CENTRE WATERMEAD PROJECT	2093	ROMULUS COURT AREA OFFICE
774	KINGSWAY SPECIALIST TEACHING SERVICE	2099	MOUNTSORREL LIBRARY & LEARNING CENTRE
788	DESFORD ADULT LEARNING SERVICE	2154	BRAUNSTONE TOWN LIBRARY
789	ADULT LEARNING SERVICES (BROCKINGTON)	2162	OADBY LIBRARY (2007)
803	LEICESTER FOREST EAST LIBRARY	2188	HUNCOTE PAVILLION CHILDRENS CENTRE
854	LEICS ADULT LEARNING SERVICES	2189	CARLTON DRIVE SHORT BREAKS
910	MELTON AREA OFFICE & MELTON DAY SERVICE	2327	BAGWORTH SURE START CHILDREN'S CENTRE
912	PENNINE HOUSE/LINK HOUSE	2331	LUTTERWORTH LIBRARY
961	COALVILLE LIBRARY STORE	2354	SPEED AWARENESS TRAINING & DEW OFFICES