

DESIGN GUIDE FOR COUNTY COUNCIL DEVELOPMENTS



Forward

To be completed before adoption

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INTRODUCTION

1. The design of public buildings and their surroundings should contribute to and enhance the quality of the environment, rather than simply respond to funding or contractual requirements. They should be a source of pride and inspiration, and should help to reinforce the sense of place and character in the neighbourhoods within which they are located. Poor design can result in a legacy for current and future generations and a loss of civic pride in an area contributing towards the deterioration of the urban and social fabric of an area. This is because of the often prominent locations of developments, and the role they have in the lives of the local community.
2. The purpose of this guide is to promote best practice in the design of County Council developments by:
 - a. explaining the policy context relevant to design;
 - b. outlining broad policy objectives that designers should consider when formulating a proposal;
 - c. influencing procedural improvements in the development process by bringing design issues to the forefront of procurement, conception, planning and construction;
 - d. providing advice on the appropriate form and content of a design and access statement (required under planning procedures); and,
 - e. demonstrating best practice through a range of case studies.

Structure and Content

3. This guide is not only about good design but how it fits with the planning process. It is divided into a number of sections. The first section will outline the design process including an explanation of planning policy. The second section advises upon various attributes of the design (e.g. landscaping) of a building or place, and good practice. This is concluded with a checklist for applicants. Finally, the guide provides a number of case studies of good practice to show examples of successful development proposals which exemplify the advice in this document.

Good design allows a new building to flourish in its historic context.

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Good Design

4. Good design and the provision of efficient services are objectives of the Leicestershire Sustainable Community Strategy¹. The provision of well designed buildings and places links and contributes to achieving a variety of transportation, environmental, educational and social outcomes. These objectives are also embedded in government advice, policy and legislation that govern built development and the conduct of local authorities².

5. It is intended that this document is used by all those involved in bringing forward the County Council's building and development programme. These will include property managers, architects, agents, planners, budget holders, managers, members of the Council and decision makers. The types of development may include new public buildings such as schools, libraries, community centres and museums, or modifications to existing buildings as well as roads, waste management facilities, town centre improvements, engineering works and other public spaces.



6. In particular, promoters of development, such as clients, architects, and property managers, should interpret the guidance in a site specific way so that important design considerations are taken into account at an early stage. Where planning permission is required, decision makers will use the guidance as part of the process of determining planning applications.
7. The government's fundamental objectives for planning are outlined in Planning Policy Statement 1. This makes it clear that designs which are inappropriate in their context or fail to take the opportunities available for improving the character and quality of an area, should not be accepted. It is therefore important that an applicant demonstrates that their proposed development has emerged from a full assessment of a site's circumstances and characteristics. Developers should be seeking advice from planning officers and environmental specialists at the earliest possible stage in a schemes development to gain a detailed understanding of the site's constraints and opportunities for meeting Council or local communities aspirations as part of the development.

Status of this document

8. This document is adopted County Council guidance that guides project development and a material consideration when determining applications for County Council development.

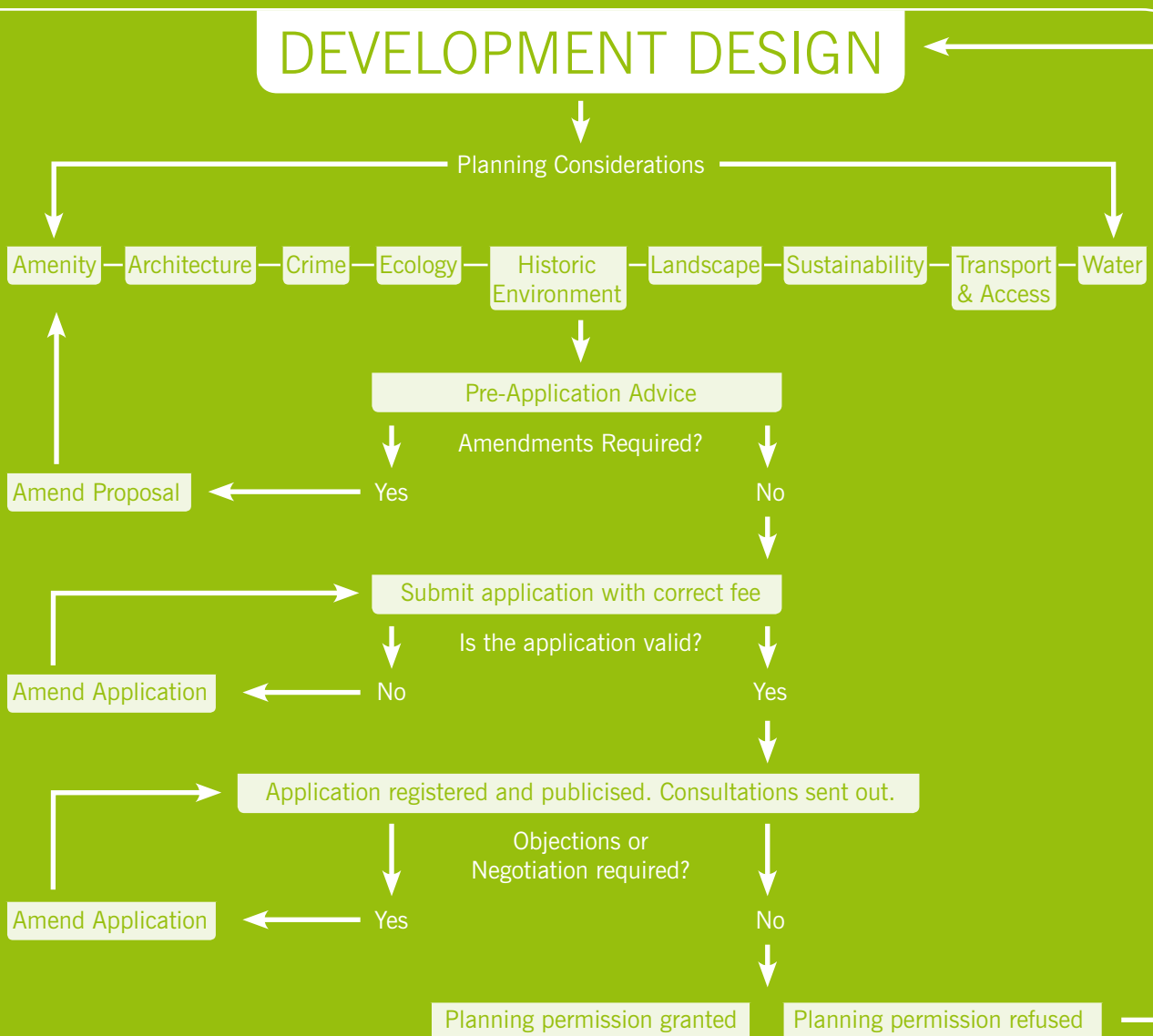
How to use the guide

9. It must be stressed that this Design Guide is only one of a number of tools for creating the potential for high quality and relevant developments; it is no substitute for employing skilled, multi-professional design teams and having elected members with an ambition for a high quality built environment.
10. This guidance does not prescribe preferred design solutions for individual projects but highlights pertinent concepts and features, highlights recent successes in terms of design in the County and seeks to develop further successes in the future.



Planning permission

11. Whilst the County Council is responsible for granting planning permission for its own development proposals, this does not mean that it applies any lesser standard than it would to others applying for planning permission. In fact, the County Council needs to be equally if not more vigilant and robust in the way it deals with its own development if it is to command public confidence in the way it approaches other developers, and if it is to avoid accusations of double standards. National and local planning policies, rules and regulations apply equally to the County Council's own developments as it does to that of private developers. A flow diagram of the development process is detailed below.



THE DESIGN PROCESS

12. The submission of a Design and Access Statement to accompany a Planning Application should not be seen as an end in itself, but as an opportunity to explain how and why the Design Process has resulted in the particular proposals tabled. The Design Process can only successfully commence when a number of factors have been agreed and are in place. These would include.

i) Vision

The client and design team should agree their vision in the form of a business plan, a clear brief and a realistic definition of requirements, if a building, in the form of a schedule of accommodation, Room Data Sheets and specification of quality to be achieved. The use of tools such as Design Quality Indicators can assist in focusing on priorities.

ii) Team

The Stakeholder team should be in place to fully inform the brief and could include users, clients, authorities, districts, utilities, consultants and contractors as well as the traditional team of designers and engineers. With larger projects the appointment of a Facilitator to develop the team, and a Design Champion to provide focus as well as Project and Design managers may well be appropriate.

iii) Procurement

Procurement methods that result in the early involvement of contractors in the visioning and briefing stages are preferred as they often result in the best overall solutions.

iv) Procedures

Agreed procedures should be in place to plan, manage, monitor, record and guide the Design process and control risks to progress, cost and quality.

v) Information and Site Selection

A database of relevant factual information in the form of Surveys and Reports from approved consultants should be pre prepared to inform the team. This information may not be immediately to hand and its preparation may require long lead in times e.g. Planning and Crime Reports, Travel Plans, Environmental, Traffic Impact and Flood Risk Assessments, Asbestos, Topographical Surveys, Ecological, Archaeological and Ground Investigations, and Tree Surveys. The design team should also agree which appropriate regulations are to be met whether User, Planning, Building, Safety or in the form of Building Bulletins etc.

vi) Appointments

The appointment of a Health and Safety Coordinator at the outset of a project is a legal requirement, whilst the appointment of specialist consultants may be required to provide the survey information and advice for the survey information database above, or on fire or access requirements.

vii) Funding

Design work would not normally commence until funding approval has been agreed and a “cost plan” and “value management procedure” put in place within a Whole Life Costing context.

viii) Feasibility Guidance

Early Involvement and discussion with all relevant parties in particular the Client, Planning Officers, Highway Engineers, Building Control, Landscape Architects and Aboricultural Consultants, Ecology, Archaeology, Sustainability and Conservation officers is crucial and will assist in achieving excellent developments as quickly as possible and avoiding abortive work. It could be that preliminary Design Option Appraisals could demonstrate that a temporary building or adaptation or extension of existing buildings, as against New Build, is more appropriate and in some cases might resolve an accommodation issue without recourse to building works at all.

Advice is available and techniques are recommended to assist in ensuring that these requirements are in place. Guidance on the development process can be sought from the County Council’s Property Services Department (0116 305 6724). There are also a variety of sources of information in respect of planning policy and building materials, techniques and standards in the form of web links in Appendix 2 of this guide.



PLANNING POLICY

National legislation and policy

13. In Planning Policy Statement 1 and its supplementary statement (Planning and Climate Change³) the government seeks to raise the standards of design and environmental performance in all development, and advises the following:
 - Applicants for planning permission should consider how well their proposals for development contribute to the Government's ambition of a low-carbon economy and how well adapted they are for the expected effects of climate change.
 - Design which fails to take the opportunities available for improving the character and quality of an area should not be accepted.
 - Good design ensures attractive usable, durable and adaptable places and is a key element in achieving sustainable development. Good design is indivisible from good planning.
14. The Planning and Compulsory Purchase Act (as later set out in Circular 01/2006) made the requirement for the majority of planning applications⁴ to be accompanied by a Design & Access Statement. This statement is required to explain (inter alia) the design principles and concepts that have been applied to a development together with how issues relating to access to the development have been dealt with. The purpose of a statement is to show how a development aims to help fulfil the Government's objectives towards sustainable development, with a greater emphasis on good design in accordance with PPS1. In addition the statements:
 - a. allow developers and agents to demonstrate commitment to good design and ensuring accessibility;
 - b. ensure proposals are based on a thoughtful design process and sustainable approach to access and explain the rationale behind these elements of the scheme;
 - c. improve the quality, sustainability and inclusiveness of development; and,
 - d. provide a better understanding and transparency of proposals to local communities and stakeholders.
15. The Commission for Architecture and the Built Environment (CABE) has created detailed guidance on writing Design & Access Statements⁵. The County Council has produced a summary guidance note confirming when Design & Access Statements are required and what information should be included⁶.

Local Planning Policy

16. Local level policy is contained within the District/Borough Local Plans (soon to be replaced with Local Development Frameworks). This policy is often more prescriptive and site specific, however, whilst the districts of Leicestershire have different approaches to design the main characteristics remain the same as at county level. A development should be appropriate to its context, aesthetically pleasing, use appropriate materials, promote energy efficiency and promote safe and inclusive environments. A development proposal which conflicts with one or more provisions of the development plan could be considered a 'departure' and may have to be referred to the Secretary of State for approval.



8

St Luke's Primary School (Thurnby) has a distinctive character

SUSTAINABLE CONSTRUCTION

17. Sustainable development is firmly embedded in national policy and actions and we all have an obligation to ensure that development is sustainable if we are to tackle climate change and have a secure future. The climate is changing and in the future it is predicted in the UK there will be hotter, drier summers, milder winters, higher sea levels and a greater risk of flooding to low lying areas. Leicestershire County Council is committed to tackling climate change through reducing carbon dioxide emissions from its estate.
18. The Council has signed the Nottingham Declaration on Climate Change committing it to tackling climate change and adapting plans and services to future climate conditions and developed a Strategy and Action Plan setting out how this will be done. Under the National Performance Framework¹⁵ the Council will be measured on performance of carbon dioxide emissions from its own operations (NI 185) and the local community (NI 186) as well as preparing for future climate conditions under NI 188 and as such is preparing a climate change adaptation plan. Within the Local Area Agreement there is a target for the Council to reduce carbon dioxide emissions by 4% per annum in partnership with the Districts and there is also a LCC specific target to reduce carbon dioxide emissions by 30% over the next five years from 2009/10. These figures all help to meet the national government target to reduce emissions, against a 1990 baseline, by 34% by 2020 and 80% by 2050. The Council has revised its Environmental Policy for 2009 along with the Environment Strategy and Action Plan which implements this policy.
19. Building design has a huge role to play in implementing the Environment Policy which commits us to reducing energy and transport to tackle carbon dioxide emissions, as well as reducing waste, water use, pollution and improving land for biodiversity all covered by this document. From 2010 large energy consuming organisations, such as the County Council, will come under the Carbon Reduction Commitment so will be required to reduce carbon dioxide emissions. Separately the Government has also set proposed targets for all new domestic buildings to be zero carbon by 2016 and for non domestic buildings to be zero carbon by 2019. The government's sustainable construction strategy¹⁶ states:

“The overall objective of good design is to ensure that buildings, infrastructure, public spaces and places are buildable, fit for purpose, resource efficient, sustainable, resilient, adaptable and attractive. Good design is synonymous with sustainable construction. Our aim is to achieve greater use of design quality assessment tools relevant to buildings, infrastructure, public spaces and places.”
20. Sustainable construction should consider the following matters.

Energy

21. In the UK, energy used in buildings is a key contributor to climate change with over 45% of all carbon dioxide emissions from buildings. This is even higher when energy from manufacturing and transportation of materials and the transport of people to and from site is considered.
22. Energy efficiency measures help to reduce the amount of energy required to manage and operate a building. This can be achieved using a number of different methods including conserving heat loss and reducing the amount of energy required to operate a building. Saving energy has the dual benefit of reducing fuel costs and reducing carbon dioxide emissions thus helping to tackle climate change.



Photovoltaic Panels

23. Some of the ways sustainable energy use can be achieved are as follows:

- All loft insulation to be 250mm or more;
- All cavity walls to be filled;
- All windows to be triple glazed using low emissivity glass to reduce heat loss;
- Make use of natural ventilation to reduce need for air conditioning;

- Maximise solar gain through orientation of building to face south to make best use of natural lighting and heating to reduce requirements for artificial heating and lighting;
- The use of A or A+ rated electrical and gas appliances;
- Install energy efficient lighting using compact fluorescent lamps or light emitting diodes (L.E.D's);
- Use task lighting to reduce need for background lighting in offices;
- Install energy efficient lighting with up to date photo or motion sensitive technologies;
- Where possible integration of a thermal hot water heating system, photovoltaic roof panels, wind turbines, ground source heat pumps and biomass boilers.



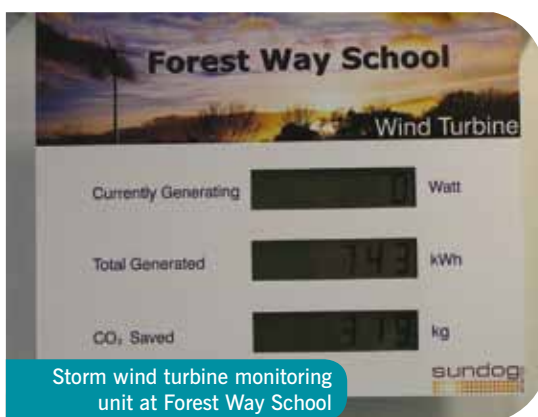
Glass atrium

Water and Drainage

24. Maps showing the extent of fluvial flooding (from watercourses) and pluvial flooding (e.g. due to rainfall and poor drainage) are available on the County Council's GeoMap GIS. Where a planning application is located within Flood Zones 2 & 3 or the site is greater than 1 hectare within Flood Zone 1, a Flood Risk Assessment should be submitted with a planning application. The Environment Agency will often be consulted on certain types of development within a Flood Zone, and may not look favourably upon development or recommend the imposition of planning conditions to mitigate the impact of the proposal.
25. Climate Change is likely to change rainfall patterns so that there is less rainfall in summer leading to drought conditions and a greater risk of flooding from shorter, sharper bursts of heavy rainfall at other times. There are a number of features that developments should seek to integrate to reduce the impact of climate change (e.g. increased frequency of extremes of weather conditions) in the future for the buildings themselves and the wider community, including:



Rainwater monitoring unit



Storm wind turbine monitoring unit at Forest Way School

- Incorporate landscape features to absorb floodwater in larger developments;
- Ensure buildings are sited above flood risk areas;
- Use of rainwater collection facilities and grey water recycling;
- Incorporate shading into landscape features in areas of public open space e.g. playgrounds in schools;
- Use of passive ventilation;
- Incorporate landscaping to provide protection/shelter from prevailing winds;
- Use push taps;
- Spray nozzles;
- Recycle grey water for flushing Toilets;
- Install low flush toilets;
- Rain water harvesting;
- Install waterless urinals;
- Use of Sustainable Urban Drainage Systems including permeable surfaces, green roofs, swales and basins, infiltration trenches, ponds and wetlands, which in turn have benefits for improving biodiversity and green infrastructure; and,
- Avoid developments on flood Plains.

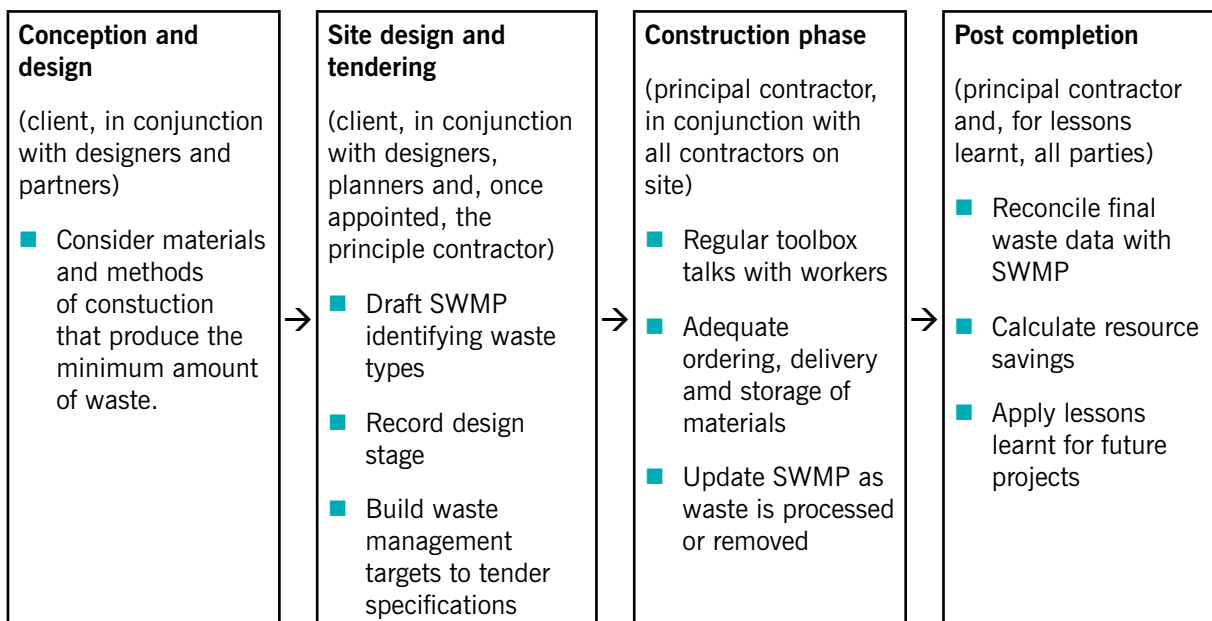
Waste

26. The East Midlands region generates 11m tonnes of Construction and Demolition (C & D) waste every year, which equates to around 50% of the total waste arisings in the region. In Leicestershire C & D waste makes up around 53% of waste arisings. In the East Midlands region around 1.4m tonnes of C & D waste is disposed of by landfill every year. This waste costs money, not only in terms of collection and disposal costs but is also a waste of resources in terms of materials, labour and transport. In order to reduce the amount of waste produced by Construction & Demolition operations, from April 2008 it was made a mandatory requirement that all projects with an estimated cost of over £300,000 (excluding VAT) must produce a Site Waste Management Plan (SWMP). For projects valued at over £500,000 there is a requirement to produce a more detailed plan. The regulations state that the main requirements of a developer or contractor are:

- To describe each waste type expected to be produced in the course of the project;
- To estimate the quantity of each different waste type expected to be produced; and
- To identify the waste management action proposed for each different waste type, including re-using, recycling, recovery and disposal.
- To record the record the person removing the waste, the types of waste removed and the site the waste is being taken to.

27. DEFRA has recently published a document called Non-statutory guidance for Site Waste Management Plans. This provides guidance for developers on the implementation and regulation of Site Waste Management Plans. The overall SWMP process can be summarised as follows:

Resource efficient approach to using SWMPs



Transport and Accessibility

28. The effects of transport on the environment are significant at the local, regional and national level, contributing to air pollution, climate change, health problems and serious injury and even death from speeding motorists. Transport accounts for around 25% carbon dioxide emissions in the UK. These problems can be reduced by reducing the number of motor vehicles on the road, particularly single occupancy vehicles



29. Locating developments near to existing public transport routes such as bus stops and train stations and enhancing off road facilities for pedestrians and cyclists will help to reduce the number of journeys by car. The layout and design of developments is also important to help encourage cycling and walking by:

- Ensuring that new developments contribute to and link into the Green Infrastructure network to maximise access by walking and cycling;
 - Being well lit;
 - Suitable for all users – pushchairs, wheelchairs;
 - Lobby areas for information about public transport and car share schemes;
 - Cycle storage facilities;
- Adoption of a Green Travel Plan;
 - Provisions for lockers, showers, changing facilities and drying areas; and,
 - Make provisions for car club vehicles and car sharers.



Construction Materials

30. The use of sustainable construction materials is a key factor in the design of a sustainable development. Reference should also be made to the County Council's Environmental Procurement Guidelines. Some tips on sourcing and specifying sustainable construction materials are:

- Use FSC timber products which guarantee the timber has been sourced from a sustainably managed forest and not an illegal, tropical forest;
- Often timber framed windows require less energy to manufacture them than UPVC;
- Avoid using concrete if possible. (alternatives include lime);
- Use reclaimed materials and materials containing a recycled content;
- Use water based or low emission (volatile organic compounds) paints which do not destroy the ozone layer;
- Use recycled aggregate for roads/car parks;
- Use timber cladding and timber frames which are more sustainable than other building materials; and,
- Use locally sourced products wherever possible to reduce transport emissions from manufacture, collection and delivery.



Double glazed timber windows can be used to good effect on new developments in the historic environment

HIGHWAY AND ACCESS DESIGN

31. Government transportation planning policy is detailed in Planning Policy Guidance Note 13 (PPG13). The thrust of national planning policy is to ensure that development proposals:
- i) promote more sustainable transport choices;
 - ii) promote accessibility to jobs, shopping, leisure facilities and services by public transport, walking and cycling, and
 - iii) reduce the need to travel, especially by car.
32. Highway and access design is prescribed by the County Council in its role as Highway Authority. Given the requirements of a development to meet accessibility requirements, often in the interests of highway safety, a potential developer should seek to engage the Highway Authority at the earliest possible stage of a development. The Highway Authority has produced highway a design guide (Highways, transportation & development⁷) which specifically helps developers think about how to cater for vehicular and pedestrian access to their developments that creates an environment that is safe for all road users and in which people are encouraged to walk, cycle and use public transport and feel safe doing so; and help create quality developments in which to live, work and play. This can result in the requirement to produce highway evidence to be submitted with a planning application stage (e.g. a Transport Statement or Transport Assessment). A development may also be required to undertake modifications to the access or public highway. The guidance can be found at:
- http://www.leics.gov.uk/index/highways/road_improvements/htd.htm



HISTORIC BUILT ENVIRONMENT AND ARCHAEOLOGY

33. The physical survivals of the past should be valued and protected for their own sake, as a central part of our cultural heritage and our sense of identity. They are an irreplaceable record which contributes, through formal education and in many other ways, to our understanding of both the present and the past. Their presence adds to the quality of our lives, by enhancing the familiar and cherished local scene and sustaining the sense of local distinctiveness which is so important an aspect of the character and appearance of our towns, villages and countryside⁸. The quality of the built heritage of Leicestershire is important to the perception of the County as an outstanding place to live, work or visit.

Historic built environment

34. The unique historic built environment of Leicestershire includes nearly 4500 statutorily listed buildings and about 200 designated conservation areas, and ranges from small scale structures to whole towns and villages. It is an integral part of its cultural heritage and sense of identity and is a constantly changing valuable social and economic resource. Whether development involves new buildings/structures or alterations to places or buildings, it should respect and respond to the individual conditions of a locality in order to maintain or strengthen the diverse and distinctive character of that area.



The Tithe Barn, Bosworth Battlefield



The Tithe Barn, Bosworth Battlefield

35. Local authorities are expected to lead by example in respect of their own proposals within sensitive historic environments and provide examples of good practice to other owners⁹. Public buildings are often seen as an essential part of the 'familiar and cherished scene' and County Council commissioned development has the potential to shape the historic built environment.
36. The historic built environment of Leicestershire is much too varied to be able to give detailed design guidelines which can be applied across the county on every occasion but new development in sensitive places must be sympathetic in their form, scale and materials. Proposals should seek to retain the positive qualities of an area whilst exploiting any opportunities for improvement. Diluted or superficial reflections of historic forms should generally be avoided so as not to devalue the integrity of the environment.

Designations

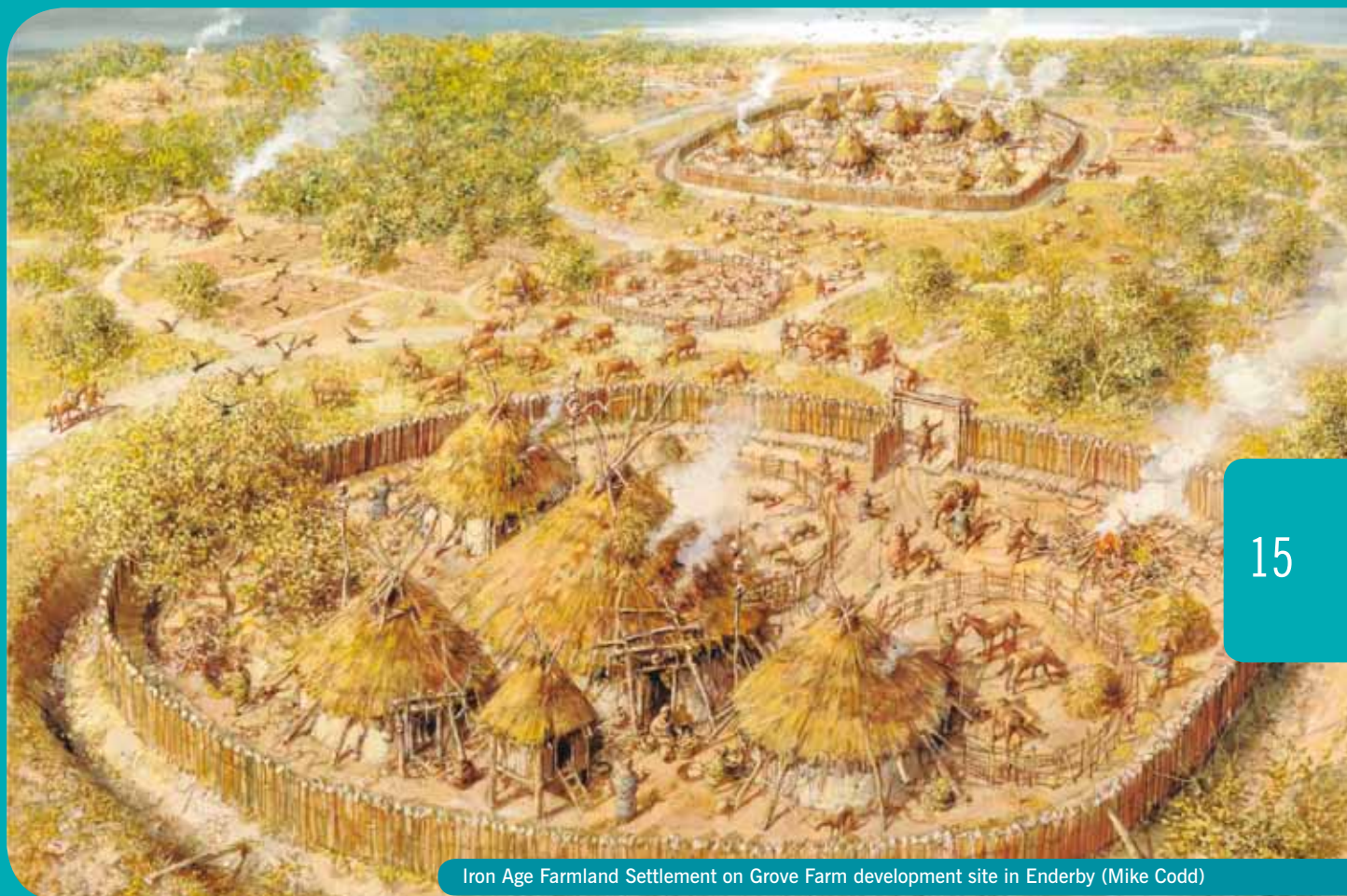
37. The special quality of many parts of the historic built environment has been recognised through statutory and local designations; including listed buildings and conservation areas. Councils have a duty to consider the desirability to preserve or enhance conservation areas and protect the special historical and architectural interest of listed buildings and their setting¹⁰. It should be remembered that even those places, buildings and structures which are not protected by the statutory system may be of merit and important to local communities and development may offer the opportunity for beneficial change. General planning policies also place an emphasis on respecting the character of an area.

Good design

38. Good design responds positively to its context and a rigorous and objective analysis of a place or building is normally essential to help understand its significance and inform how, if at all, new development can be accommodated successfully within a particular location. Such an analysis will usually form part of a Design and Access Statement and if used effectively will help to guide the development process from an early stage. If a proposal is found to have a negative impact on the essential character and appearance of the historic built environment, which is not outweighed by other factors (other than purely financial considerations), it will be necessary to consider alternative solutions.
39. There are a number of guidance documents that can provide assistance, and advice is available through pre-application discussion with relevant planning and specialist officers within the County Council (see Appendices 1 and 2). The English Heritage document, Conservation Principles, Policies and Guidance for the Sustainable Management of the Historic Environment (2008)¹¹, sets out in detail guidelines for assessing the significance of historic places and managing change within them. Building in Context (2001) published by CABI/English Heritage¹² provides guidance on new development in historic areas and includes several useful case studies.

Archaeology

40. The historic environment incorporates the broad range of buried and above ground remains that provide evidence for human evolution, occupation and settlement, and our interaction with the natural environment. It encompasses 'traditional' buried archaeological remains, earthworks and up-standing structures, as well as evidence of former environments, and designed, managed and modified landscapes. Within Leicestershire the historic environment provides a fragmented record that can trace human presence from the earliest Palaeolithic, 750,000 years ago, to the present day. However, whilst extensive in its range the historic environment and its constituent parts are often vulnerable to poorly managed change and once lost cannot be replaced. Given their finite character, care must be taken to ensure these remains are not needlessly or thoughtlessly destroyed, in part for their intrinsic worth, but also because of the contribution they make to our sense of place and local identity, as well as to education, leisure and tourism.



Iron Age Farmland Settlement on Grove Farm development site in Enderby (Mike Codd)

Legislative framework

41. There are two tiers of protection provided for the historic environment: first, nationally designated sites or structures, either 'scheduled' under the provisions of the Ancient Monuments and Archaeological Areas Act 1979 or buildings included on the statutory list protected by the Planning (Listed Building and Conservation Areas) Act 1990. The second group comprises all non-statutorily designated elements of the historic environment, this includes the vast majority of recorded archaeological remains, historic buildings and landscapes, Historic Parks & Gardens and Battlefields. The latter non-statutorily designated sites still are a 'material consideration' in the determination of a planning application and will need to be addressed appropriately when considering a scheme.

Scheduled and Unscheduled remains

42. Scheduled Monuments represent sites and remains deemed to be of national importance. Development affecting such sites or their 'setting', in addition to planning permission, requires separate approval, or Scheduled Monument Consent (SMC). It is exceptionally unlikely that planning permission and/or SMC will be granted for development that will detrimentally affect a scheduled monument or its setting. Any development proposals that may impact upon a scheduled monument or its setting must be carefully considered and discussed with the Secretary of State's archaeological advisors (English Heritage) at the earliest opportunity. It is strongly recommended that these discussions should be undertaken in conjunction with the County Council's archaeological advisor.
43. The management of remains which are not the subject of a statutory designation are a 'material consideration' within the planning process (under national legislation) supported by national planning policy and applied locally through Local Plans and Development Frameworks. In this context, key to achieving proper consideration of the historic environment, is early consultation with the County Council's archaeological advisory service, and where relevant English Heritage. Where appropriate, these consultations may lead to a need for further detailed assessment of the relevant archaeological matters possibly including desk-based analysis and field investigations. Provision for this type of study should be made within the initial project estimates, as the results of this work should be used, first, to assist in the design process and second, to support the submission of any planning application.

Management and Mitigation

44. Consideration and appropriate management of the historic environment should be central to the preparation of a development proposal. As a 'material consideration', proactive management of these issues can assist in gaining planning permission and minimise or avoid unexpected costs and delays caused by the late identification of archaeological remains. The works associated with resolving this can often result in significant delays and an application cannot be progressed until such work is completed. In larger projects, a multi-stage programme of archaeological investigations may be required. It may well be appropriate to commission an external archaeological consultant to support this process to ensure dedicated consideration of these matters.
45. When considering the management of the historic environment the first priority is the preservation of significant archaeological remains in situ. To achieve this, the archaeological impact of the development should be minimised by, for example, sympathetic foundation design or amendments to the layout. Occasionally, the requirement to preserve remains in situ may lead to a recommendation to refuse permission on archaeological grounds, specifically where in situ preservation cannot be satisfactorily achieved. Where preservation of archaeological remains is not required, a programme of appropriate excavation, recording and publication prior to the impact of development represents an alternative approach.
46. Having established the likely impact of a development scheme through the necessary pre-application assessment, an appropriate programme of archaeological mitigation (excavation and/or design solution) will be sought and secured in a planning permission by the use of a planning condition(s).



Archaeological remains identified during trial trenching at Oakham

Interpretation and Display

47. The results of archaeological investigation have the potential to generate significant public interest. Excavation or survey projects can create an extremely effective public relations opportunity, and also offer potential material that can contribute to the design, layout and presentation of a development proposal. Careful consideration should be given to the possible opportunities raised by the results of archaeological assessment. At the most basic level this might involve a public relations opportunity and raised media profile. It may be appropriate to present an interpretation of the results, on and/or off site. In its most complex form, the heritage of a site may significantly influence the form and character of a development.

BIODIVERSITY AND THE NATURAL ENVIRONMENT



48. Biodiversity is a core component of sustainable development. Access to natural places and the opportunity to watch and learn about wildlife plays a key role in sustainable communities. It contributes to local quality of life, health and wellbeing, social cohesion and a “sense of place”. Conservation of biodiversity is an important part of adapting to climate change and in the delivery of key ecosystem services such as flood management, clean air and water. Under national legislation all local authorities have a duty¹³ to ‘have regard to the conservation of biodiversity’ in exercising their functions and therefore it must play an integral part of the design of development proposals.

49. Leicestershire is not as rich in biodiversity resources as many other counties - for example, less than 2% of our land is protected as a Site of Special Scientific Interest (SSSI) (compared to 7% of England as a whole) – but it has over 1,000 non-statutory ‘Local Wildlife Sites’, Nature Reserves and other sites such as Country Parks. These sites, alongside SSSIs, are the most important reservoirs of rare, local and declining native species and are the best examples of typical Leicestershire habitats, so it is important to protect these sites. Species protected by national legislation (e.g. Badgers – see below) are also abundant around the county. Although development of land may sometimes be a threat to biodiversity, it can also be an opportunity. The County Council should seize any chances for creating, enhancing or restoring the biodiversity.

Surveys, evaluation, impact assessment and mitigation

50. When considering the development of a proposed site, the first step is to find out what is present on the site. Certain species are protected by law – such as Badgers, Great Crested Newts, Bats, Water Voles, Barn Owls, Kingfishers and White-clawed Crayfish. It is almost always necessary to carry out specialist surveys for these species prior to drawing-up development proposals. This helps to avoid the applicant breaking the law and contributes towards compliance with national planning policy¹⁴. Paragraph 99 of Circular 06/2005 states that: *It is essential that the presence or otherwise of protected species, and the extent that they may be affected by the proposed development, is established before the planning permission is granted, otherwise all relevant material considerations may not have been addressed in making the decision.* Early consultation with the County’s Historic & Natural Environment Team is advisable.



51. The presence of protected species generally means that development can only proceed with a 'mitigation plan' (often forming part of the pre-application work) to minimise the impact on the species. Often this can affect the siting, working method, materials, design, timing and programming of the work, so it is important do the surveys very early on in the project design stages.
52. It may sometimes be necessary to get a licence or permit from Natural England before work that could affect a protected species or site takes place. This can be a lengthy process. In a very few cases, the impact of a proposed development on protected species or a SSSI may be so severe that Natural England will not allow the development to go ahead in the form envisaged. Again, it is important to know this early on in the process, so that changes to the development can be negotiated and agreed by Natural England.



53. As well as a protected species survey, some sites will also need to have a habitat survey and evaluation, undertaken. Valuable habitats such as species-rich grassland, ponds, wetlands, mature trees, hedgerows etc, will be flagged up in the survey. It is likely that a mitigation plan will be required to minimise impact on these habitats. It is important to remember that some surveys can only be carried out during certain parts of the year so it is important to think about this aspect as part of the overall project time table.
54. Sometimes, if habitat loss is unavoidable and cannot be mitigated, compensation in the form of creation of a new habitat nearby will be required.

Mitigation and opportunities for biodiversity enhancement

55. Often, the site's position in the wider ecological network or 'green infrastructure' will help to decide on the best approach towards mitigation, compensation and enhancement –for example:
 - Is the site along a wildlife corridor like a railway, river or canal?
 - Are there habitats nearby that can be connected by some well-placed habitat creation?
 - Is there an opportunity to help meet one of our local Biodiversity Action Plan targets?
56. This is particularly important in the context of wildlife's adaptation to climate change, because a network of connected habitats may allow some species to naturally disperse along them in the wake of climate change. Opportunities should be taken to provide interpretation and improve means of access to and enjoyment of the natural environment.

57. Examples of mitigation and enhancement are:

- Planting new hedges, woodlands and parkland using locally native species of trees and shrubs – especially as part of landscape schemes
- Creating wetlands – especially in association with SUDS (sustainable urban drainage schemes)
- Green roofs and green walls – especially in areas with little other opportunity for habitat creation
- Creating shelters for protected and other species – such as bird and bat boxes, new bat roosts, newt hibernation habitats, artificial badger setts, etc.
- New paths, entrances, site signs, interpretation, etc.

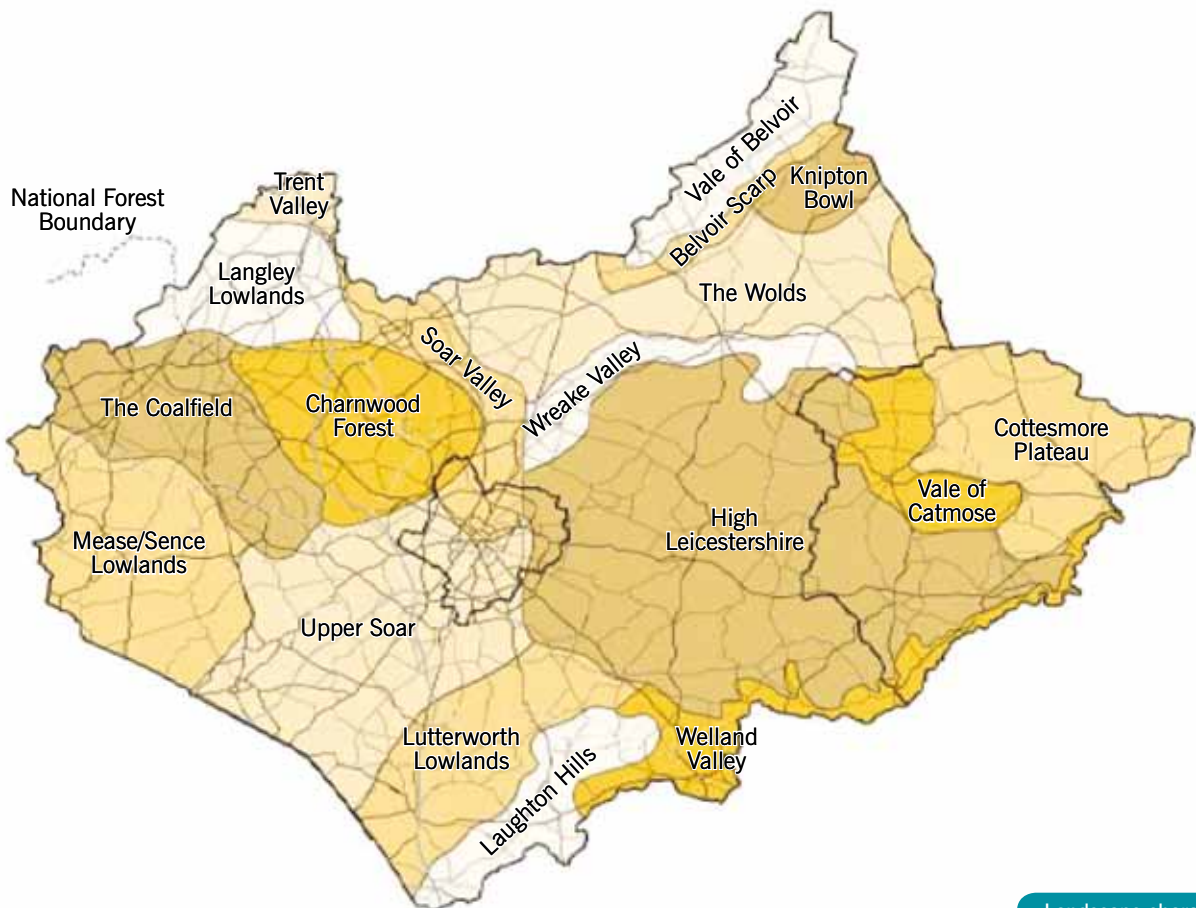
Advice

58. Advice on biodiversity matters are available from the County Council's ecological adviser at the Leicestershire Environmental Records Centre (LERC). LERC has a database of the known biodiversity sites, habitats and species locations in the County and should always be consulted early on in the development process so that potential constraints and opportunities for biodiversity are known well in advance and can be accommodated within the design of the development. LERC can also give advice on scoping and evaluating ecological surveys and briefing specialist ecological consultants.



LANDSCAPE

59. Leicestershire is a predominantly rural county with a number of large settlements, market towns and villages. The landscape can be divided into 18 distinct character areas which are identified in the Leicester, Leicestershire and Rutland – Landscape and Woodland Strategy¹⁵ (shown below) (available at: http://www.leics.gov.uk/index/community/community_services/environment_and_heritage/environment_heritage_policy_documents/landscape_woodland_strategy#into).



Landscape character areas

60. Each landscape character area is defined by a sense of place and a unity of character when viewed from a countywide perspective. Some areas are easily recognisable such as The Wolds and the Charnwood Forest whilst others are less well known. However, each individual area has to be carefully considered throughout the design process to avoid the character being weakened by unsympathetic development and the loss of local landscape features, as well as a development appearing out of character with the landscape context.

Landscape setting and features

61. There are several key principles which need to be considered in the design of new development in both rural and urban landscapes.

Rural Landscapes

62. Development should be integrated into the landscape setting by the careful siting of buildings to maximise the use of the existing landform and avoiding major changes to the site contours. Distinctive landscape settings should be preserved by avoiding intrusion onto sensitive ridgelines and avoiding development on prominent slopes. It is important to retain significant views both towards the site and over the broader landscape. This can be achieved by avoiding the loss of important off-site views towards features (e.g. church towers or tree groups).

63. The siting of buildings should retain existing landscape features, particularly significant vegetation (e.g. established hedgerows) and mature trees, taking into account root protection areas in accordance with BS5937:2005¹⁶. New development should respect local distinctiveness and the scale of the landscape, which will help to reinforce the local character area. Conserving, restoring and replicating landscape features such as woodlands and field patterns will help new development to fit into its setting by giving a sense of maturity to the site and providing important screening. Existing boundary treatments such as mature hedgerows are a particularly important site feature which provides valuable screening and helps the new development to blend into its surroundings.



The Built Environment

64. Within the built environment (e.g. market towns) a different set of criteria is required in the design of new development. The siting of development should reflect local settlement and building patterns, with the detailed design respecting the existing street scene by taking into account the scale, density, height and massing of buildings. When assessing a townscape, consideration should be given to the historic street pattern, building lines and boundary treatments. Important townscape features should be retained to enhance the sense of place and respect local distinctiveness.

Building colour and design are critical to blend them into the surrounding landscape. This sports hall could have been better blended



65. The design should also take account of the vernacular architecture, building detailing and materials that are local to the area, and avoid the introduction of inappropriate materials or detailing which weaken the character of an area. Careful consideration should be given to the relationship of the spaces between buildings.
66. Mature trees, hedgerows and other distinctive landscape features can be especially important in urban areas and often make a significant contribution to the built environment.

Landscape Survey and Appraisal

67. When considering a proposed development, it is essential to carry out a thorough appraisal and landscape survey. This will help to identify all potential impacts on the landscape which need to be addressed in the preparation of the Design & Access Statement and landscape scheme. The following list covers the main areas to be considered:
- A general survey showing all site constraints such as contours, public footpaths, boundary treatments and above ground/underground services.
 - A desk study researching the development site for any statutory protection such as County and District Tree Preservation Orders, Conservation Area status and SSSI's.



Mature landscape features - Steeple Row Loughborough

- c. A detailed tree survey in accordance with BS5837:2005 indicating species, age, form, size of crown, trunk and root system, condition/health of tree and any significant defects. The survey information should also record all other site vegetation such as hedgerows, listing the species, height and condition.
- d. Site appraisal indicating important views, prominent ridgelines/landform and aesthetically important features in the landscape.
- e. Visual impact assessment identifying any potential adverse effect the proposed development might have on the surrounding landscape and settlement.

Proposed landscaping

68. The main aim of a landscape scheme is to provide the most appropriate setting for a new development ensuring that it effectively fits into the existing landscape and enhances the overall appearance of the area. The landscaping should take account of all the issues identified during the survey and appraisal stage and mitigate any adverse impacts on the site and the surrounding area. The scheme should aim to create a high quality landscape which provides an asset or resource giving enjoyment and benefit to the users of the new development. The following considerations should apply when designing a landscape scheme:

69. All trees, hedgerows and significant vegetation identified for retention at the survey and appraisal stage must be adequately protected during the construction process. Siting of strategic planting for the provision of essential screening is important where it is required for a development proposal. Native planting is generally the most appropriate choice for mitigating visual intrusion on the surrounding landscape. Species common to the area will have been identified in the survey process, and should be a guide as to which plants will look right and are likely to grow well in that particular landscape. In choosing species and locations of planting consideration must also be given to the long term maintenance of all aspects of the approved landscape scheme.

70. When considering hard landscaping the choice of appropriate materials for hard landscaped areas is integral to the overall scheme. Consideration should be given to appearance, durability and safety when selecting hard surfaces finishes. Natural materials should be used, particularly in Conservation Areas and where there is a good quality public realm, as they tend to fit more comfortably in the townscape. Where it is not feasible to use natural materials, care should be exercised in selecting a palette of materials that blend in with both the new development and the local environment by selecting colours and tones that reflect the underlying geology of the landscape character area.

71. The users of a landscaped area will also need to be considered, for example circulation and accessibility. It should be ensured that pedestrian and cycle routes follow desire lines. Personal safety is also important and users should not feel threatened by the landscape. It is important to create an environment which retains natural surveillance and avoids creating 'hiding places' amongst dense planting. Lighting is important in the perception of personal safety, therefore all major pedestrian routes should be well lit. Feature lighting can also be used to good effect to light up buildings, but should avoid excessive light pollution particularly in a rural setting. However, care should be taken to avoid street clutter, particularly in historic settings. In certain situations, it may be feasible to attach lighting to buildings to avoid the clutter of excessive poles/columns. Traffic signs can often be combined on one column or onto buildings to reduce excessive posts. Where street furniture is proposed a consistent theme should be adopted. All street furniture should be appropriate to its context, durable, low maintenance and vandal resistant.



Native species hedge giving effective screening to farm building

72. Where possible, an 'off the peg' solution for street furniture should be avoided. Custom made street furniture will add to local distinctiveness and can often include a historical theme that is specific to the area (see above). Creative Leicestershire is a database of over 1500 local designers and artists who could help create more bespoke furniture and artwork (available at: <http://www.leicestershirecreatives.org.uk/>).



Bespoke thread-needle railings to reflect the County's heritage in Sileby



Bollards decorated with ram's head provide a barrier to vehicles and reflect Shepshed's heritage

73. An attitude of 'less is more' should be adopted in the design of street furniture and nothing should be placed in a street unless there is clear public benefit:

- Seating should be carefully sited, avoiding cold north facing locations and close proximity to residential properties where there is a perceived fear of anti-social behaviour.
- Ensure when specifying litterbins that the long term maintenance is in place, in terms of who will empty the bins and the frequency.
- Where possible try to avoid the overuse of bollards. Clever siting of other street furniture such as seats, cycle racks or tree planting can effectively restrict access.

74. Quality landscaping can lift an area significantly and integrate it as part of the public realm, as shown by Phoenix Green in Coalville, before (left) and after (right).



ARCHITECTURE AND APPEARANCE

75. Development should seek the highest standards of design and materials appropriate to its proposed lifespan and usage.

Design

76. Good Design has been shown to positively affect the environment and the building users. In particular it has been found to improve the health of patients and their carers, the behaviour, education and enjoyment of pupils and their teachers as well as the productivity and satisfaction of workers and their employers.

Form, Materials, Scale and Detailing

77. As well as functional requirements contributors to good design should include consideration of appearance in terms of form, materials, scale and detailing.

Style

78. Both traditional and innovative contemporary proposals can be successful when used appropriately and when they consider their location, their neighbours and the specific local planning policies in place.

Decoration, Texture and Colour

79. The extent of decoration, the texture and colour as well as the scale and form should all be considered in the selection of materials not only with reference to the development in hand but again together with its neighbours, landscape and surroundings. The form and quality of finishes should all be appropriate to the developments life expectancy in terms of whole life costing and with the specific requirements of human scale, sustainability, accessibility, security, lighting, circulation and tactile way marking



Delight

80. Successful design should delight and inspire and in context some developments would be appropriate as landmarks whilst others might best be preferably less conspicuous.

Design and Access Statement

81. A planning "Design and Access Statement" will seek to explain and justify (in summary) the appearance of the proposed development both in terms of buildings and spaces, and a demonstration of how they relate to their surroundings. The statement should also include explanations for the architectural form, materials, decoration, lighting, colour and texture. Successful designs would integrate all parts of the development and demonstrate how decisions on appearance have involved all other aspects of the scheme and its environment.

LIGHTING

82. Exterior lighting is attached to most buildings or part of many sites in the form of free standing columns. In some facilities lighting is an integral part of the proposal (e.g. flood lit synthetic facilities). Whilst lighting installations are small in size they often have a substantial impact upon the appearance of a building or site and the way it operates. It can also have a significant environmental impact on nearby uses and properties.



83. Lighting is often required to allow a site or facility to be able to operate when it is dark (e.g. for health and safety reasons). It can also be important in discouraging crime by lighting up areas that could be used to hide. It is important that lighting is chosen that is fit for its purpose and lights an area sufficiently so that it can be used safely. However, lighting can also be a source of wasted energy through lights being more powerful than necessary, lights being left on for longer than needed and light spillage. This should be avoided as it wastes money on fuel bills and is also harmful to the environment both through energy consumption and light pollution.
84. Light pollution can affect nearby residents and could lead to a statutory nuisance being caused to one or more properties. Due to the effect upon amenity of properties light emissions are also a material consideration in the determination of a planning application. The Planning Authority must consider whether the light emitted from a development is so damaging that it should prevent planning permission being granted. If there is insufficient information provided within a planning application it can also result in significant delays. To avoid problems during the application process (through not providing sufficient information) or post development (as a result of causing a nuisance to nearby properties), the way a development is to be lit should be considered early in the design process.
85. When submitting proposals to obtain planning permission, if significant exterior lighting is proposed, the application should be accompanied by an Isolux Diagram or other lighting scheme. An Isolux Diagram shows contours of light intensity emitted from a light source. This diagram is used to make sure that a development would meet the Institute of Lighting Engineers Guidance Note for the Reduction of Light Pollution. This 4 page guidance note provides standards to which a development should seek to adhere to as well as general guidance on reducing light pollution for potential developers and planning authorities.

NOISE

86. All development proposals, sites and operations by the County Council will create noise emissions over their operational life. These noise emissions can have a significant effect on the environment and on the quality of life enjoyed by individuals and communities. Due to the potential impacts that noise can have on the surrounding environment and the amenity enjoyed by people, it is a material consideration in the determination of a planning application. Due to the importance of noise as an environmental impact, policy guidance has been provided by the government in Planning Policy Guidance Note 24 (Planning and Noise).
87. Noise emissions are measured in decibels (generally expressed as dB(A)). The noise impact of a site or development is generally considered by comparing the existing ambient (or background) noise level to that likely to be emitted from a development. Noise measurements and calculations can be expressed in a number of different units and measured in accordance with a variety of different guidance standards, such as BS4142: 1997, BS 7445: 1991, BS5228: 1997, and specialist guidance for measuring road traffic noise. These guidance notes and British Standards are fully referenced in Appendix 2 of this guide.
88. The County Council requires that a planning application which proposes development that would involve external operations, plant / machinery or would risk disturbing noise sensitive properties, should assess the development and provide mitigation measures, and that a detailed noise impact assessment should be prepared by a suitable qualified acoustician. In practice a limited number of developments would require a noise assessment to be submitted. New or expanded Civic Amenity sites, new roads and large buildings that require significant plant to operate (e.g. substantial air conditioning), sports facilities and synthetic sports facilities may all be required to undertake a noise assessment.



Poorly sited boiler flue - a potential source of statutory nuisance to nearby residential properties

89. When planning development proposals care should be taken to ensure that where possible, the elements of a development most likely to generate noise are located away from noise sensitive properties. Air conditioning, large boilers, swimming pool plant, car parks and mechanical plant and machinery are all sources of noise which need to be considered carefully when designing a building. Particular regard should be had to the likely operating times of noise emitting development. For example, an air conditioning unit which creates an apparently low level constant tone during the day, may be considerably more noticeable and cause a statutory noise nuisance at night, when ambient noise levels are much lower (i.e. due to reduced traffic and other activity).
90. When a development is being planned that is likely to generate significant noise emissions you are advised to contact the County Council's planning staff as soon as possible, who will be able to advise (in consultation with the District/Borough Council Environmental Health Officer) whether a noise assessment will be required. The Environmental Health Officer will be able to provide in-depth knowledge on the scope of the assessment and the appropriate measurements and rating methods.

DESIGNING OUT CRIME

91. Section 17 of the Crime and Disorder Act 1998 places a duty on all local authorities 'to exercise its various functions with due regard to the likely effect of the exercise of those functions on, and the need to do all reasonably can to prevent, crime and disorder in its area'. This theoretically imposes a requirement on every employee involved in the planning, conception, construction and management of a facility. Whilst this duty may seem rather onerous, designing out crime is as much a matter of common sense and good design practice rather than anything unduly complex or onerous.
92. In PPS1 (para 30) the government explains that good design will create safe and accessible environments where crime and disorder or fear of crime does not undermine quality of life or community cohesion. Safety and security are essential to successful, sustainable communities. Not only are such places well-designed, attractive environments to live and work in, but they are also places where freedom from crime, and from the fear of crime, improves the quality of life. The government has published a Safer Places: The Planning System and Crime Prevention which is a comprehensive manual to encourage greater attention to the principles of crime prevention and to the attributes of safer places. It defines seven general attributes to sustainable communities and a comprehensive checklist at Annex 4 of that document which project teams of substantial new developments should consider.
93. Not only can the careful design of a development benefit the wider community, it can also result in reduced running costs of a facility through reduced insurance premiums, reduced cost from crimes committed at a site, and reduced maintenance costs. The County Council has its own Buildings Risk Management Group which works to identify and implement practical ways of reducing the likelihood of damage to the Council's properties. The Group includes representatives of all service departments as well as representatives from Leicestershire Constabulary, and Leicestershire Fire and Rescue Service.

The group has its own website: (http://www.leics.gov.uk/index/education/support_for_schools/buildings_risk_management.htm).
94. The website covers a variety of aspects of crime prevention and the contact details of specific officers within the County Council and external colleagues in the Leicestershire Constabulary and Fire & Rescue Service who can advise upon integrating suitable crime prevention and safety measures within a development.



Well lit and secured parking areas with attractive designed fencing

TEMPORARY ACCOMMODATION

95. Particularly in relation to school accommodation there are occasions when additional accommodation is needed quickly and economically to meet an increase in pupil numbers. This is often provided in mobile modular unit, such as mobile classrooms. By their very nature they are functional in form which is reflected in their uninspiring design. Quite often they are only acceptable in design terms because of their temporary nature provided to meet a short term requirement. Notwithstanding this, where planning permission is required, a planning application for such a structure should be prepared with consideration to all the relevant criteria in this Guide. No less a standard is expected in the content and quality of such applications just because the application is for a temporary structure. In fact, the converse is likely to apply to justify consent being granted to these utilitarian temporary structures.
96. The siting of temporary accommodation should be determined taking into consideration the use of existing buildings and vegetation for screening. The orientation/colour and style of temporary accommodation can go some way to improve its acceptability in the landscape/site. Temporary buildings will generally not be permitted in Conservation Areas, or within the curtilage of, or affecting the setting of a Listed Building.
97. Usually a permission for temporary accommodation includes a condition limiting the life span of the development but due to lack of funding in the past there have been many cases where these structures have remained in situ following successive renewals of temporary permissions. The County Council will make every effort to avoid this practice continuing.



EQUALITY AND DIVERSITY

98. Inclusive design is about providing buildings and environments that are convenient and enjoyable for everyone to use, aiming to remove attitudinal and procedural barriers, and designing for the diversity which exists in the population. In practical terms, this is not just about improvements in physical accessibility but also about ensuring equality of provision across all environments and neighbourhoods. Ensuring internal design and furnishings and staff attitudes are welcoming and friendly are more likely to have a positive impact on groups who experience exclusion in other walks of life. The recently refurbished Wigston library has seen an increase in the number of users since the improvements, providing an environment where people can linger, feel comfortable and connect up to their families.



Integration of an inclusive access ramp into the new Kirby Muxloe Library building.

99. The County Council has an important responsibility to those with learning disabilities to provide support in using services and activities in the community as well as improving services. Making connections between the building and external pedestrian and access routes, such as wide footpaths and surface finishes helping visually impaired people and wheelchair users, provides an integrated approach to design and access and reduces barriers across the community. Consultation is key to inclusive design. Right from the outset, particular attention should be paid to those likely to be overlooked or whose views less likely to be accommodated. Further advice is provided in the CABI publication Inclusion by Design: Equality, diversity and the built environment.



Covered flat vehicle drop-off area at the entrance to the new Dorothy Goodman Special School.

CONCLUSION

100. As the opening sentence of this guide stated: “The design of public buildings should contribute to and enhance the quality of the environment, rather than simply responding to funding or contractual requirements”. This guide has sought to demonstrate what constitutes good design and also what good design isn't. This guide has shown that good design, often does not require expensive or lavish solutions, it simply involves careful thought and early consultation with other stakeholders and professionals of the County Council. Most importantly, well designed development contributes towards sustainable communities and has positive benefits to meet the over-arching objectives of the County Council's Sustainable Community Strategy, to enhance community well-being and the environment in which we live.
101. To help draw-out the key messages in this guide to achieving good design, a checklist has been drawn-up, which can be applied to a multitude of developments.

DESIGN CHECKLIST

The following checklist has been designed as an introductory tool to guide the sustainable design of county council development from the outset and to provide an indication of what has been considered and implemented in the development design. It is not exhaustive, but provides a way of checking if the key issues relating to site design that should be considered in an application are provided. It should be supplemented by discussions with the relevant technical officers at the Council, contact names and details of which are provided in Appendix 1. Not all points below will be applicable to a development, but addressing those points that are applicable will help to ensure that the Design & Access Statement for the development will contain sufficient information.

Baseline information about the proposal site	
Have the physical constraints of the site been considered such as topography, the existing built form, landscape features, roads, public rights of way?	
Is the site in a Conservation Area, adjacent to/near a Listed Building/ Scheduled Ancient Monument/historic landscape?	
Has an assessment of the potential archaeological deposits at the site been considered?	
Are there any access restrictions associated with the site?	
Has a landscape and visual appraisal of the site been undertaken and the local landscape character area been taken into consideration?	
Has a check for Tree Preservation Orders been made, and has a tree survey in accordance with BS5837:2005 and appraisal of the important landscape features (landform and screening) been undertaken and documented?	
Has the ecological potential of the site been assessed? Are there any ecological constraints?	
Have plans showing the site ownership, the application area, existing buildings, gardens, open spaces, vegetation and car parking been prepared?	
Assessment of the proposal	
Wider Setting	
How does the proposal relate to the wider setting?	
In the wider setting, has the impact of the building in views and vistas been considered?	
Does the development distract the eye from the focus of the view and if so, does it provide something better to look at?	
Impact upon the site and immediate surroundings	
Has the impact of the building in close views been assessed? Does it respect the scale and design of its neighbours? If not explain why it has been designed to stand out?	
Does it form a harmonious group or composition with existing buildings or features in the landscape?	
Does it distract the eye from the focus of the view and if so does it provide something better to look at?	
Will the development enhance or damage the quality of the townscape?	
Are the street pattern and the grain of the surroundings respected?	
Do the proposed materials relate to those of the surrounding buildings?	
Has consideration been given to the space created between buildings?	
Has consideration been given to the light and noise implications of the proposed development on nearby properties and land uses?	
Public Realm	
What contribution does the proposal make to the public realm?	
If new open space is created is it clear that it will provide a positive benefit and have a genuine use, and how will it be managed in the longer term?	

Are access arrangements convenient and existing routes respected?	
Ecology	
Will development of the site affect connectivity of habitats (or could development enhance connectivity)?	
Is there an opportunity to contribute to meeting a local biodiversity action plan target?	
Transport and Alternatives	
Does the development encourage the use of public transport, walking and cycling?	
Sustainable Construction	
Can the development adapt to the changing needs of the use and the evolution of the place?	
Has the building been designed to benefit from passive solar gain?	
Does the design include additional insulation/ draught proofing?	
Have 'A rated' appliances been specified?	
Will the construction make use of recycled, reclaimed, non polluting or recyclable materials?	
Will the timber be from a recognised sustainable source?	
Are materials obtained locally?	
Has the feasibility study of renewable technology options been conducted and the results provided?	
Has a Site Waste Management Plan been completed?	
Will the development provide sufficient storage space to accommodate the District/Borough Council's waste recycling and collection service?	
Will water consumption at the site be minimised by the use of water efficient appliances and low water flow fittings and facilities for collection and use of rain water/grey water?	
Have sustainable urban drainage systems (SUDS) been included in the design, will green or brown roofs or other planted areas be included to decrease surface water run off?	
Involvement and Consultation	
Have people been consulted during the design process, including user groups, community groups, professionals, nearby neighbours?	
Has the outcome of consultation on the design been documented?	
Drawings and information to support the proposal	
Show the siting of any new building or extension, vehicular/pedestrian access, changes in level, trees to be removed, new planting, new or altered boundary walls and fences and new hard-surfaced open spaces.	
Drawings should specify the type and layout of any hard landscaping such as paving, walls and fencing.	
Drawings should show the location and specification of all proposed street furniture.	
Where appropriate, the drawings should indicate the position and type of lighting to be provided.	
Landscape drawings should accurately show the location and canopy spread of all trees and vegetation to be retained, the root protection area of all trees in accordance with BS5837:2005 and the position of suitable protective fencing	
Landscape schemes should indicate the species, size and distribution of all proposed planting.	
Landscape schemes should give an indication of the required maintenance regime and the establishment period	

CASE STUDIES OF GOOD PRACTICE

Case Study for Sustainability Measures: Rain Harvesting in a Toilet Block at Market Bosworth Country Park

In August 2002 a new toilet block was opened at Market Bosworth Country Park, replacing the obsolete chemical toilets which had served the Park for many years. As part of the design, the new block featured a number of energy/service cost saving features. At the time water cost around 85p/m³ and it was estimated that the annual water consumption for the toilet block was 286 m³.



All the roof water was directed, via a vortex trash filter, into a storage tank in the plant room from which it was pumped (via two filters), into the loft to a storage tank which fed 5 toilet cisterns by gravity. The pumping arrangements are via a 12 volt battery powered pump which derives its energy from 2 solar panels on the southern roof slope. To reduce the amount of flushing water, smaller volume flushing WCs were installed. A new mains water feed pipe and meter connection was made as it was recognised that harvested water could not meet all the needs of the block. To further reduce water consumption, waterless urinals were also installed, which were completely energy free, and used no consumables other than warm water to clean them.

To monitor consumption, regular readings were taken of the mains meter. It has been shown that harvesting rainwater of the roof of this 85m³ building has made a significant impact on running costs. In the period between Aug 2004 and Aug 2007, the building used approximately 70m³ per year. Compared to another site using conventional toilets on mains, located at Foxton Locks, which used 286m³ in 2001.

Case Study for Design and Sustainability Measures: The Former Measham Railway Station



The County Council purchased the line of the former Measham to Moira railway line in 1987. Since then much of the route has been restored to create the Ashby Woulds Heritage trail. The former station building was empty for a number of years resulting in dereliction and an eyesore, despite being located within the Measham Conservation Area.

The County Council proposed to undertake essential repairs and restoration of the building and provide accommodation for Measham Museum and associated offices together with community uses, a shop and café. The physical work on the building proposed included improving the roof/external walls and replacement of doors and windows.



A key objective of the refurbishment scheme was to ensure a high level of energy efficiency and initially included modern 'standard pattern' double glazed windows, which would have had a major impact on the appearance of the building. The project architect was able to prepare a specification which accurately reproduced the fine detailing and proportions of the original sash windows, including a thin-section central glazing bar, graceful arched heads and finely moulded architraves, but which could accommodate double glazed sealed units. It was necessary to engage specialist contractors to make and install the replacement windows.

In addition the stone used to repair the external window dressings was recycled from a Council owned, former railway bridge. The original scheme also included slate imported from China but at only a relatively small additional cost reclaimed natural Welsh slate was used – ensuring that the original appearance was maintained and avoiding the transportation of materials half way round the world. The proposals for the refurbishment of the former station building were developed in close consultation with members of the County Council Heritage Services, the Community Museums Officer, and the County Council landscape advisers.

Case Study for Sustainability Measures: Castle Rock High School

Castle Rock High School, Coalville, is one of four new schools built by the County Council in the last few years, which opened in April 2006. The brief required the design to secure a BREEAM rating of “very good”, to sit comfortably into its National Forest location at Warren Hills in Coalville, as well as achieve function, quality, time and cost requirements. The design was developed together with a wide field of stakeholders and early meetings with the local community, governors, pupils and teachers in particular lead to refinements in the scheme, its location and for the use of the building as a teaching aid.

Through the design of the Castle Rock building, in particular, the location and dominance of a centrally located glazed roofed library, the new school places learning at its centre.

A School Travel Plan was produced in readiness for occupation of the new building. New cycle paths and cycle racks are contained within the overall scheme. Site security has been improved as have drop-off facilities from buses and cars. The school was located and designed to maximise access by pedestrians, cyclists and public transport/bus users. Parking provided includes for disabled vehicles located adjacent entrance.

It was constructed to utilise a number of sustainable materials, technology and attributes. The proposal was constructed of a glue-laminated timber frame and rubber roof, including cedar wood cladding. Technology utilised includes photovoltaic panels, rainwater harvesting and low water use systems. The building as a whole was also constructed to ensure increased insulation and decreased air leakage above those required by Building Regulations.

The design maximises the advantages of natural light, and stack and cross ventilation is controlled by an automatic Building Management System, which is over-rideable by the occupants. Concrete suspended floors provide thermal mass to the building which has been designed to meet the latest BB93 acoustic requirements, incorporates a sprinkler system, low emission double glazing, low nox boilers, occupancy sensing for lighting control as well as zoning for heating & security to allow out of hours community use.

The school won the ‘Large Building of the Year’ and the ‘Sustainable Development of the Year’ prizes at the ProCon 2006 awards.



Case Study for respecting the landscape and historical environment : Sports Hall at Redmile Primary School

Redmile Primary School is located within the village envelope of Redmile. The main school building is a traditional Victorian red brick building with a half-hipped gabled roof, which reflects the vernacular of many of the buildings in the village, particularly adjacent to the school. Many of the buildings are located within the extensive Redmile Conservation Area, including the main school building.

Available areas of land around the school site are particularly sensitive due to their location within or adjacent to the Conservation Area, Open Countryside or Protected Open Space, as well as affecting the setting of a nearby Listed Building.



For many years the school has needed a purpose built sports hall, as many Physical Education activities took place off-site which meant pupils having to travel. The hall also allowed the school to provide a venue for assemblies. Therefore notwithstanding sensitive location the development had to be of a substantial size to be fit for its purpose.

The development integrated bricks, roof tiles and half-hipped gable ends to match the existing school building, together with a number of other properties within the Redmile Conservation Area. The proposed development also integrated high quality wooden double glazed windows and a traditional fenestration. Such details were agreed at the pre-application as a result of negotiations between the applicant, the planning officer and the County Council's historic building adviser. Some difficulties arose from the need to integrate highway design standards (e.g. width and construction of access) whilst protecting the undeveloped nature the area. This was achieved through using a 'grasscrete' finish for the access.



Case Study for Archaeological works: Rearsby By Pass, Rearsby, Leicestershire

Initial discussions begun between the LCC's archaeological advisor and Highways, Planning and Transportation in 1991 resulting in a desk-based appraisal and programme of fieldwalking in early 1992. A recommendation for targeted trial trenching and further archaeological investigation was offered in relation to the planning application. Planning permission was granted for the development in late 1992. The scheme was revised through the 1990's, although this did not include significant additional archaeological work.

A new scheme was submitted in 2001, with updated archaeological advice recommending the completion of a geophysical survey of route and trial trenching prior to determination. Against a tight planning timetable, the Highway Authority commissioned a geophysical survey which revealed evidence of previously unrecorded buried archaeological remains, this was followed up with a pre and post-determination programme of trial trenching. The initial phase of which was designed to target critical areas where either significant archaeological remains were suspected or where the baseline data remained poor. The remaining trenching was secured by condition alongside follow-up mitigation (e.g. area excavation, monitoring during construction).

Six areas of archaeological remains were identified during trial trenching, including those previously located during the geophysical survey. In response a further phase of archaeological investigation was required including excavation to be completed prior to the construction works and monitoring during development.



The fieldwork identified a number of occupation sites. The earliest evidence demonstrated the transient presence of Mesolithic hunter-gatherers (Middle Stone Age 9500 B.C. - 4500 BC). This was succeeded by a scattered complex of pits, postholes and hearths dating to the Neolithic period. Due to later truncation the nature of occupation remains obscure, but the concentration of finds and features suggests the presence of a settled community on or in the immediate vicinity.



Iron Age (c.700 B.C. - A.D. 43) settlement was represented by two sites at the eastern and western ends of the Bypass. The first of these produced evidence of a fairly typical Iron Age farmstead, with indications of enclosures and at least one roundhouse. The second, found to the east of Queniborough, was of similar character but included evidence a series of rectangular structures, and a possible burial area

Finally, again to the east of the Rearsby, a Romano-British farmstead was located situated beside the Rearsby Brook. This site was probably occupied between the 1st and 4th centuries A.D. Here, a number of structures were enclosed within a series of probably banked and ditched enclosures. On the fringes of the settlement, the remains of three probable



graves were recorded.

Case Study for: demonstrating how new buildings can preserve and enhance their historic setting: Mountsorrel Library

Mountsorrel Library opened to the public in 2007, after being relocated from a site out of the village centre. The County Council had initially been looking to co-locate the library with a leisure centre, when a local firm of architects and developers, approached Library Services about working together to develop a library and community facility in the former Church Rooms, close to the leisure centre.

Mountsorrel Library was created by building a modern two storey 240m² extension onto an existing 1912 building of 95m². The site is located within a prominent location within the Mountsorrel Conservation Area and within the setting of at least five Listed Buildings.



Funding was obtained from the County Council, the local firm of architects who donated Church House, Leicester Shire Economic Partnership (LSEP), Charnwood Borough Council and Mountsorrel Parish Council. The new building is on two floors and has floor area of approximately 340 square metres. The ground floor is mainly for library use, and the first floor contains a meeting room, general community space and an ICT learning centre.

The vision was to interface the building with the attractive setting of The Green. The building utilised a combination of materials and colours which make up Mountsorrel's distinctive character and tie in with the very important roof to the existing Church House. The original Church Rooms have been converted and extended in a contemporary and sympathetic manner to become a focus for community use.



All the materials used were sourced locally, with stone from a local quarry, and recycled Swithland slates for the roof. The building is fully compliant with DDA requirements. The building has won a Green Apple award for environmental best practice, a Leicestershire and Rutland Society of Architects award and commended in a Charnwood Borough Council design award for imaginative schemes which provide lasting benefit.

IN-TEXT REFERENCES

- 1) Leicestershire Together (2008) Leicestershire Sustainable Community Strategy, LCC.
- 2) Para 34, Planning Policy Statement 1: Delivering Sustainable Development (2005) ODPM.
- 3) Planning Policy Statement: Planning and Climate Change. Supplement to Planning Policy Statement 1 (2007) DCLG.
- 4) Para 69 of Circular 01/2006 Guidance on Changes to the Development Control System
- 5) Design & Access Statements: how to read them, write them and use them (CABE)
- 6) http://www.leics.gov.uk/design_and_access_guidance_note-2.pdf Design & Access Statement Guidance Note
- 7) Highways, transportation & development (revised edition – April 2009) <http://www.leics.gov.uk/htd>
- 8) Paragraph 1.1: Planning Policy Guidance Note 15: Planning and the Historic Environment.
- 9) PPG 15, Planning and the historic environment, 1994 and The Historic Environment: A Force for Our Future DCMS 2001
- 10) Town and Country Planning (Listed Buildings and Conservation Areas) Act 1990
- 11) English Heritage document, Conservation Principles, Policies and Guidance for the Sustainable Management of the Historic Environment (2008).
- 12) Building in Context (2001) published by CABE/English Heritage.
- 13) Natural Environments and Rural Communities Act – 2006
- 14) Circular 06/2005 – Biodiversity and Geological Conservation: Statutory Obligations & Planning Policy Statement 9: Biodiversity and Geological Conservation.
- 15) Leicester, Leicestershire and Rutland – Landscape and Woodland Strategy available at: http://www.leics.gov.uk/landscape_woodland_strategy_feb_2001_addendum_feb_2006.pdf
- 16) Leicestershire County Council Tree Survey Guidance http://www.leics.gov.uk/tree_survey_guidance.doc
- 17) The New Performance Framework for Local Authorities & Local Authority Partnerships: Single Set of National Indicators
- 18) Strategy for Sustainable Construction (June 2008) HM Government.

APPENDIX 1 – CONTACTS

Contact with the relevant technical officers during the design and procurement stages will result in a greater understanding of the site and the surroundings and provide information that will inform decisions made during the design process.

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APPENDIX 2 – REFERENCES AND RELEVANT DOCUMENTS

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Office of the Deputy Prime Minister. (2004). Planning Policy Statement 24: Renewable Energy. The Stationery Office, London.

Office of the Deputy Prime Minister. (2006). Building Regulations: Approved Document - Part L (Conservation of Fuel and Power). RIBA Enterprises Ltd, London.

Further information

Energy Efficiency

BREEAM (Building Research Establishment Environmental Assessment Method) – Provides a number of nationally and internationally recognised tools and accreditations to assess the environmental impact of buildings.
<http://www.breeam.org>

Energy Saving Trust – Information for the local authorities and businesses on energy efficiency
<http://www.energysavingtrust.org.uk/business>

Carbon Trust – Information on energy efficiency measures and publications for businesses and local authorities.
[http:// www.carbontrust.co.uk](http://www.carbontrust.co.uk)

Building Regulations (Part L) – Legal framework for conservation of fuel and power for new buildings
[http:// www.planningportal.gov.uk/england/professionals/en/400000000562.html](http://www.planningportal.gov.uk/england/professionals/en/400000000562.html)

Department for Business Enterprise & Regulatory Reform (BERR) – provides information on renewables technology, policy and regulations.
[http:// www.berr.gov.uk/whatwedo/energy/sources/renewables/index.html](http://www.berr.gov.uk/whatwedo/energy/sources/renewables/index.html)

Sustainable Construction

Building Research Establishment – A national/ international certification organisation for buildings and materials
www.bre.co.uk

Green Building Store – A supplier of sustainable building products
[http:// www.greenbuildingstore.co.uk](http://www.greenbuildingstore.co.uk)

Green Spec – A directory of sustainable construction materials, products and technologies
<http://www.greenspec.co.uk>

Net Waste Tool – online waste calculator and toolkit for recovering waste on site
http://www.wrap.org.uk/construction/tools_and_guidance/the_role_of_the_net.html

Salvo – Directories of Architectural and Salvage Antiques & Reclaimed Building Materials
<http://www.salvo.co.uk/leicestershire/directory.html>

Site Waste Management Plan Template (from WRAP)
http://www.wrap.org.uk/construction/construction_waste_minimisation_and_management/swmp_form.html

The Construction Industry Research and Information Association – Guidance on good practice in the the implementation of Sustainable Urban Drainage Systems.

<http://www.ciria.org/suds>

The Green Roof Centre – An independent research and demonstration hub which demonstrates the potential benefits of Green Roofs

<http://www.thegreenroofcentre.co.uk>

Waterwise – An NGO that undertakes and publishes water efficiency research for appliances

<http://www.waterwise.org.uk>

Waste Resources and Action Programme – An organisation to help businesses, individuals and organisations recycle more waste

<http://www.wrap.org.uk>

Miscellaneous

Commission for Architecture and the Built Environment (CABE) – the government's architecture, urban design and public space

www.cabe.org.uk

Design Quality Indicator – a method for evaluating the design and construction of new, and the refurbishment of buildings

<http://www.dqi.org.uk/>

Leicestershare – Leicestershire Car Sharing scheme

<http://www.leicestershare.com>

Partnerships for Schools – Is responsible for delivering the government's secondary school renewal programme, Building Schools for the Future

<http://www.partnershipsforschools.org.uk/>

SMARTWaste – A set of tools and a consultancy (established by the Building Research Establishment) for minimising construction and demolition waste

<http://www.smartwaste.co.uk/index.jsp>

Sustrans – A sustainable transport charity promoting travel by sustainable and healthy modes of transport

<http://www.sustrans.org.uk>

National Planning Policy

Supplement to Planning Policy Statement 1: Planning and Climate Change

<http://www.communities.gov.uk/publications/planningandbuilding/ppscclimatechange>

Planning Policy Statement 9: Biodiversity and Geological Conservation

<http://www.communities.gov.uk/publications/planningandbuilding/pps25floodrisk>

Planning for Biodiversity and Geological Conservation: A Guide to Good Practice

<http://www.communities.gov.uk/publications/planningandbuilding/planningbiodiversity>

Planning Policy Statement 10: Planning for Sustainable Waste Management

<http://www.communities.gov.uk/publications/planningandbuilding/planningpolicystatement10>

Planning Policy Statement 25: Development and Flood Risk

<http://www.communities.gov.uk/publications/planningandbuilding/pps25floodrisk>

Greenhouse Gas Emissions

Carbon Reduction Commitment – A mandatory carbon trading scheme to begin in 2010 for organisations of a certain size

<http://www.carbonreductioncommitment.info/>

Regional

Tackling Climate Change in the East Midlands: Regional Plan of Action 2009 – 2011

<http://www.emra.gov.uk/files/climate-change-poa2009-11.pdf>

Local

Leicester, Leicestershire and Rutland Biodiversity Action Plan

<http://www.lrwt.org.uk/bap.asp>

Leicestershire County Council Environmental Purchasing Policy and Guidelines

http://www.leics.gov.uk/environmental_purchasing_policy.pdf

Leicestershire Local Transport Plan 2

http://www.leics.gov.uk/index/highways/transport_plans_policies/ltp.htm

DESIGN GUIDE FOR COUNTY DEVELOPMENTS

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