

Good practice guide to environmental sustainability

Purpose

A measure of the success of the *myplace* programme will be to develop a legacy of centres for young people that are environmentally sustainable which educate their users on the value of sustainability.

This guidance note identifies the key issues that *myplace* projects are likely to face and explains why they are important. It also considers actions you can take to address these issues.

Background

Long-term environmental sustainability is an important consideration for all projects. By considering the issues when you are likely to face them and understanding the interventions that you can make at both a strategic and technical level projects can be more sustainable.

It is important that *myplace* projects address issues of environmental sustainability as early as possible within the project.

Those involved with *myplace* projects may not have specialist knowledge in environmental sustainability. This best practice guide allows teams to understand some of the issues and how best to address them.

The guide is only a first step however, and you can get further advice on specific environmental sustainability issues from your design teams.

The key to developing a design and delivering a project that addresses environmental sustainability is to develop project objectives and to set specific performance targets. These goals can be:

- ↗ energy used and those resulting energy costs;
- ↗ renewable energy supplied to the project;
- ↗ water used;

- ↗ the environmental impact of the materials;
- ↗ the impact on surrounding plants and animals;
- ↗ the fall in the use of private transport; or
- ↗ the disposal of waste.

You can define these by setting a level of overall performance measured by schemes such as the Building Research Establishment Environmental Assessment Method (BREEAM) and others.

We consider these issues in more detail in the following sections.

The Issues

We can see sustainability as something that considers a wide range of social, economic and environmental issues to ensure we can have a better quality of life today and for the future. The *myplace* projects are contributing to this view by providing young people with a place to develop and grow. The choice of setting, its design, the materials selected and its use will have certain environmental results and by following this Good Practice Guide projects can reduce or avoid these.

The key issues facing the *myplace* projects are:

- ↗ **Climate Change**, the use of energy to power the buildings and its location, impact on travel arrangements and their resulting carbon dioxide (CO₂) emissions;
- ↗ **Resource Use** including water conservation and material selection;
- ↗ **Pollution and nuisance** including light, dust, sound;
- ↗ **Waste** including reduction of construction waste and maximising recycling,
- ↗ **Biodiversity** including protecting and improving the local habitats; and
- ↗ **Health** of the staff and young people attending the projects.

Climate Change

In the UK it is predicted that climate change will give us hotter summers, milder winters, decreased summer rainfall, increased

winter rainfall and an increase in severe storm events. Experts expect that the implications of climate change in other parts of the world will be more severe. It has been agreed internationally that something must be done to reduce and mitigate the effects of climate change. However, we may not see the results of our actions for some time and we may need to ensure that our buildings are able to adapt as the climate continues to change.

Energy

In the UK fossil fuels meet most of our energy needs. We use gas to heat our buildings and power stations fuelled by coal and gas produce the electricity we use. The use of these fossil fuels contributes to global warming through producing Carbon Dioxide (CO₂) emissions.

Carbon Dioxide emissions are the single biggest contributor to climate change. The UK government has set itself a target of achieving an 80% fall in Carbon Dioxide (CO₂) emissions by 2050 and a 26% fall by 2020. Legislation to encourage a fall in energy use has been introduced. The overall goal, however, will need interventions in both supply and demand.

One area of much focus is the use of Low or Zero Carbon technologies (LZC). These are technologies which produce significantly lower carbon emissions than traditional energy generation technologies. Getting planning permission now requires many projects to provide a percentage (usually 10%) of their energy supply from an LZC source. Adopting the 'Energy Hierarchy' during design is also encouraged. This hierarchy centres on reducing the demand for energy through good building design, through built form, orientation, levels of insulation, air-tightness and efficient technologies, before considering low and zero carbon forms of energy generation and green energy.

Reducing our overall energy demand and producing energy from LZC sources will help contribute to the Government's overall carbon reduction target and will help reduce the extent of global climate change.

Drainage and Flooding

The risk of flooding is increasing and the results of Climate Change will affect more areas. One cause of flooding is an increase in impermeable areas (for example, roofs and car parks). These impermeable areas increase the speed and volume of water that enters the drainage system and can put serious stress on existing drainage. A site may be liable to flooding and projects should consider this in the design.

If the project occupies a site with a large area of hard-standing surface or is in a flood risk area the failure to address this issue may affect neighbouring areas.

Travel and Transport

Daily travel forms a significant portion of the UK's carbon footprint and therefore contributes to climate change. The increase in respiratory illness and allergies has also been linked to emissions from vehicles.

Reducing the carbon footprint of travel is an important focus, and will require significant changes in our current practices. Businesses and public organisations will be held more and more responsible for the carbon they release, and a switch to lower carbon forms of transport will be encouraged. Some of the lower carbon transport methods such as walking and cycling have the added benefit of promoting healthier lifestyles for employees and those in the surrounding areas.

To promote carbon reduction, projects should consider the ways people travel to the site. Being near to public transport or providing cycle facilities encourages patrons to adopt low emissions forms of transport. By incorporating a travel plan within the design of the building these are easily accessible for both patrons and employees. Setting up a travel plan for construction workers can also promote public transport and relieve dependence on private car use. Many local authorities now want travel plans producing as part of the planning application.

Resource Use

Water

Water is becoming increasingly scarce in parts of the UK despite times of torrential rain and flooding. This is due in part to having too many hard surfaces that prevent the water from seeping naturally into the ground. This can result in large amounts of standing water or within a drainage system and increasing the risk of flooding. If predictions for Climate Change are correct pressures on water everywhere will continue to increase.

Water infrastructure is costly and takes a long-time to build. Therefore water conservation and managing surface water run off is important.

In the UK we use only 2% of all the water that comes into our buildings for drinking while the rest we use to flush toilets, for washing or irrigation purposes. Capturing rainwater or reusing water (often referred to as 'greywater') would decrease the demand on already overstretched resources and reduce cost.

Material Selection

The environmental impact of building materials can be significant when we consider the entire process from extraction to manufacturing. It is becoming increasingly important in building development to minimise these environmental impacts when selecting building materials.

The use of a building assessment method (for example, BREEAM) ensures that you consider the materials you select. Projects can do this by using a publication known as The Green Guide to Specification. This guide provides designers with a suggestion of the environmental impact of different materials and allows them to select more sustainable products.

The choice of any material has an environmental impact and good selection practices will involve adopting sound evaluation methods to ensure the impacts are minimal. We recommend that tender documents include the choice of materials identified to ensure compliance.

Where you get your materials from is also important. For example, buying timber for a project, if not controlled, could result in you using timber from unsustainable sources. Similarly, projects should prefer to select materials from manufacturers that have formal systems in place to manage their environmental impacts.

The choice of materials from a local supply chain is equally important. This includes choosing materials to blend in with the local surroundings, reduces transport miles and stimulates the local economy.

Transporting building materials also results in indirect impacts such as energy use, noise, air quality and traffic congestion. Considering these issues is part of best practice and depending on the nature and scale of a particular project, the local planning authority may impose conditions about transport servicing the construction site.

Pollution and nuisance

Existing or former land use may result in problems of pollution and nuisance. Pollution includes contamination of land and water from previous land uses or emissions from off-site. Nuisance includes issues such as noise, vibration, traffic congestion, excessive light and dust from both on and off-site. These impacts may arise during both building and managing your centre and we recommend that you employ suitable management plans to minimise their impact.

Waste

The issue of waste is simple. The UK is running out of landfill space and the costs of taking waste to landfill are increasing dramatically. The more waste there is, the greater the cost to the company and the greater the environmental effects. The construction industry has been traditionally wasteful despite low profit margins. However, until recently, little has been done to address their wastefulness. Recent work by the Waste and Resources Action Programme (WRAP) has made a notable impact by getting the construction industry to recognise the extent of waste and provide it with tools to analyse, check, measure and manage waste. The overall

cost of construction waste disposal includes a disposal fee, labour to fill skips and the value of the materials contained within them. This can be significant!

Under recent legislation, construction projects more than £300k need to produce a Site Waste Management Plan. Projects should address materials' use and waste minimisation at the design stage and then give this to the contractor. It is then the contractor's responsibility to carry out these measures and minimise waste on the construction site.

Key stages of a successful SWMP include logistics, material and waste segregation, transporting materials, sourcing of materials and incorporating products with recycled content. Choosing recycled materials makes a significant contribution to diverting material away from landfill as well as minimising extraction of virgin materials. There are also many other environmental impacts arising from the choice of construction materials and information considering these impacts is available from technical data sheets provided by manufacturers. The client could lead this agenda, but there is a significant opportunity for the contractor to carry out good practice measures. This initiative in corporate responsibility often increases cost savings as well as promoting good environmental practice.

Biodiversity

Biodiversity is the variety of plant and animal life in a given area. This includes the number and types of living organisms found in a site. Biodiversity helps to sustain and stabilise a given ecosystem, no matter how large or small. Increased biodiversity on a site will therefore increase its ecological value.

Before designing a development, projects should first get a report of the proposed site's ecological value and biodiversity. This may even be a requirement of any planning conditions. Although the ecological evaluation may limit some development on the site it also provides a great opportunity to include biodiversity in the design scheme. These opportunities can include green and brown roofing,

providing wildlife habitat and aiding in the protection for species and the ecological value of the site. It also offers an excellent opportunity to get an external organisation involved in your development (for example, the local wildlife group).

Incorporating and preserving green spaces on the site can also increase a development's aesthetic value and preserve existing species. Many accreditation schemes such as BREEAM consider measures taken to preserve and promote biodiversity in developments.

Health and Well-being

Around 2.2 million people work in Britain's construction industry. It is not only the country's biggest industry but also one of the most dangerous. In the last 25 years, over 2,800 people have died of injuries they received because of construction work while many have been injured or made ill. Construction workers are regularly exposed to dust and chemicals and caustic substances and noise and vibration. These may also lead to injury and illnesses.

The Construction Design Management (CDM) Regulations help to ensure that projects consider and design-out risks, but there are still many risks that need controlling at the construction stage. It is the responsibility of the principal contractor to ensure they carry out effective health, safety and well-being methods.

Buildings should be built with the occupants' well-being in mind. Several studies have shown the benefits of certain design features into buildings – including good levels of ventilation, access to outdoor areas and good levels of daylighting.

The Interventions

Climate Change

Energy

When identifying actions to mitigate and adapt to climate change we need to think about energy use, the prospect of renewable energy and emissions from vehicles. We also need to be able to adapt to climate issues such as hotter, drier summers and warmer, wetter winters. Projects can do this by considering more effective ways to keep a building cool, reducing flooding or selecting native plants suitable to the site's environment. Planning of outdoor spaces to ensure there is enough shade in the summer will also become increasingly important.

During the design stage, projects should consider the location and orientation of the building. These considerations will influence the building's ability to maintain a comfortable temperature, the possible use of natural ventilation and encouraging the flow of air while providing shade and controlling the heat the building absorbs. You may need to consider other methods to address thermal comfort including shape, orientation and appearance of the building.

When considering an energy source projects should adopt an 'Energy Hierarchy'. The energy hierarchy of 'be lean, be green, be clean' refers to the practice of:

- ↗ First – Minimise demand in the most cost-effective way;
- ↗ Then – Provide as much renewable energy as possible;
- ↗ Before – Looking to buy energy from green sources from the energy grids.

Low energy design will reduce energy demand and carbon emissions. These steps could involve using more heat efficient materials, increasing the thicknesses of insulation, and incorporating passive ventilation strategies to avoid unnecessary heating and cooling.

Meter, check and publish energy use so you can set targets and goals for energy reduction. As energy prices increase it is

important to know how much energy you are using and if any is being wasted. Investment in metering energy use is essential for any form of energy management. We recommend you review the existing metering of the building and, if necessary, install new meters that allow you to measure energy consumption.

Once you have reduced the energy demand as much as practical it is worth considering installing technologies that will supply the project with renewable energy. While many projects are unlikely to use large wind turbines there are other technologies to consider.

These include:

- ↗ Solar hot water heaters
 - ↗ Photovoltaic solar panels to produce electricity
 - ↗ Boilers fuelled by biomass, biogas or biodiesel
 - ↗ Ground or air source heat pumps
- Seek specialist advice on the aptness and applicability of these technologies. Please note that your local planning authority may need you to incorporate some of these technologies. In addition BREEAM rewards buildings that provide some of its energy from Low or Zero Carbon technologies (LZC).

You should encourage the design team to identify passive heating and cooling measures, the thermal performance of the building and issues such as daylighting that can avoid the need for artificial lighting and subsequently reduce energy demand. The design should also incorporate all suitable controls for lighting and heating and cooling. Avoid too complex mechanical and electrical plant and equipment as this is likely to be more expensive both in capital, running and maintenance costs. If you don't consider and integrate energy demand from the onset the result is the final project could cost more to run.

To ensure you adopt suitable design projects should carry out life cycle assessments and whole life cost analysis. These assessments ensure that projects consider the overall cost implications throughout the life of the building and not

just the early construction costs. The more information that is available and incorporated into the modelling the greater the likelihood the building will meet its energy targets.

For more complex buildings, we recommend the use of dynamic energy simulation modelling.

It is important that projects maintain any installed system and we recommend that projects create a simple to use Building Users Guide. A detailed maintenance strategy should include consideration for improvement or upgrades to lighting, with greater use of compact fluorescent lamps, light-emitting diodes and induction lighting, all of which have significantly lower energy consumption than older filament lamps. Controls linked to variable speed drives will allow for greater control and managed energy loads. We recommend the use of Building Management Systems that allow parts of the system to be shut down when they are not occupied.

Transport

The implications and impact of transport on a project can be significant and can lead to large Carbon Dioxide emissions as well as nuisance for others. During planning, give thought to the overall transport and access strategy for the project, including the number of car parking spaces (including disabled spaces, priority for alternatively fuelled cars and cycle storage). You can reduce some of these disturbances by public transport schemes. Locating a project within reasonable walking distance from transport hubs or interchanges can minimise traffic congestion, carbon emissions, noise and impacts on air quality. Consult with the local bus company; as bus routes and frequencies can sometimes be influenced to the benefit of your project.

Consider providing facilities for cyclists and promoting pedestrian and cyclist safety. This can include showers, lockers, lockable cycle stores and newsletters. Developing a travel plan can also reduce the need for private car use through car sharing schemes and provides those using the building with transport knowledge.

It is also important to consider the issue of mobility. Consider people who have permanent disabilities but also those with other limits such as anyone injured, carrying a heavy load or pushing a pram. The location and access to a building would also take this into consideration.

Drainage and Flooding

Drainage and flooding should be one reason considered when selecting a site for the project. Carry out a site evaluation to find out the flood risk, the potential impact and how to mitigate these impacts. This is called a Flood Risk Assessment, and will often be a condition of planning. To get an early sign of flood risk at your site consult the Environment Agency website which contains flood mapping information.

As well as needing a Flood Risk Assessment, planning applications may want developments to provide added mitigation measures to ease drainage and minimise flood risk. This may include solutions such as Sustainable Drainage Systems, green and brown roofs and underground temporary storm water storage. If sustainability is in the design intent, then it is important to explain this in the design brief so you can consider issues early in the design and properly evaluate them.

Resource Use

Water

Buildings should be designed, managed and maintained to use as little water as possible. As with energy, the less you use the less you pay for.

Keep drinking water used on the project to a minimum by using technologies and controls. Consider rainwater capture and storage for use in flushing toilets and other non-drinking uses. Make clear the levels of performance in the client's brief and ensure that you considered rainwater or grey water harvesting methods. The design should also specify a requirement for water efficiency with, for example, low flow systems, low or dual flush WCs, low flow taps and showers and waterless urinals. Consider controls such as "cisternmisers" and presence detectors and the use of

non-drinking water for flushing and other uses.

Introduce water meters to allow simple and easy access to consumption data that you can then compare to other *myplace* projects or industry benchmarks.

As with energy the use of life cycle costing can be useful in showing the business case for investment in more water efficient fittings, both at the early construction stage and during maintenance replacement cycles.

Material use

Considering material choices is important at an early stage, as these will affect external appearance and the internal environment. When starting the project the client's brief should clearly identify any targets and requirements in this area. Insist the contractor incorporates good practice measures into a management plan, clearly identifying responsibility and the measures for checking and recording compliance.

As the project develops it is important that robust procedures are in place to ensure requirements and specifications are carried out. This can include adopting an Eco Management and Audit Scheme (EMAS) or other ISO standards (for example, ISO14001) and to source all timber from schemes with a Chain of Custody (for example, Forestry Stewardship Council (FSC)). The use of BREEAM recognises these schemes and contributes to the credits.

It is important not to compromise the building's energy performance by the inappropriate choice of materials. We recommend a holistic approach as failure to look at all the issues increases energy and maintenance costs over time. If the project involves demolition it is important those activities are an integrated process that promotes the use of recovered materials and other measures to minimise waste to landfill. Consider using part, or all, of the existing building or using recovered and reclaimed materials.

Encourage the Design Team to standardise wherever possible, to minimise off-cuts, and reduce overall waste. This can include

the use of off-site manufacture and modular design, although this can reduce end of life reuse. Life Cycle Assessments will help with material selection because they consider the early cost and impacts and those throughout the life of the material. Leading practice design would also consider disassembly as this can reduce the life cycle impact of a material by its potential reuse.

As the UK construction industry becomes involved in the ever-larger global supply chain, the issue of responsible sourcing of materials is more and more important. You should consider this as part of an EMAS Scheme and it is recognised by BREEAM. This can include considering issues such as the working conditions involved in the extraction, manufacture and transport of these materials (for example, health and safety of the workers, working hours, freedom of association and salary).

Pollution and Nuisance

When considering actions to minimise pollution and nuisance it is important to ensure that you identify issues and produce a plan to mitigate and manage any risks. This can include good acoustic insulation and the use of planting or screens to reduce the noise to and from the site. Also consider technologies to reduce emissions or the use of renewable energy sources and selecting and locating efficient fittings to minimise light pollution.

One of the most significant nuisance impacts during construction is noise. Vibration can also be an issue during operations. Badly kept plant and machinery can also contribute to poor air quality and inadequate measures during dry periods can lead to dust nuisance.

To minimise disruption from site work the contractor should produce a management plan about noise, vibration, dust and air quality. This should include information on the potential pollution or nuisance and the actions to take to mitigate, minimise and manage these.

During normal building operation significant pollution events are unlikely. However, you should develop a plan for potential events,

for example, a fuel spill. Nuisance may be an issue at some **myplace** projects since many include space for sport or music. Projects should forecast the potential nuisance and put in place measures for reducing these.

Waste

Much of the rubbish created on a project is the result of design decisions that do not consider sizes, which results in unacceptable levels of waste.

Minimising waste needs to start at the concept design stage. We recommend that specific requirements for the design team should consider waste in the design and the implications of their design choices should be calculated in a Site Waste Management Plan (SWMP).

Good practice shows the SWMP can minimise the generation of waste and materials used in construction rather than just displaying legal compliance. This will include its design, delivery, storage, segregation for recycling and its resulting disposal. Also, consider the issue of packaging both in design and through the supply chain as part of procurement.

We recommend that contractors incorporate these good practice measures into the plan, with clear roles and responsibilities and management measures identified, as well as methods for checking and recording compliance during the works. It is important the plan also clearly identifies any legislative requirements.

Treat any waste produced during the use of the building in the same way as construction related waste and adopt the 'Waste Hierarchy' (Reduce, Reuse, Recycle). Day-to-day waste generation occurs and inevitably includes paper, plastic and food-related wastes. Consider reducing such waste through setting up an Environmental Management System. In any event, include waste within the post of the Asset and Facilities manager and cover within the scope of an Asset and Facilities Management Plan for the building.

Technological developments have occurred over the last few years, with more consideration given to waste and energy

technologies. Depending on the amount and type of waste produced from the property, this technology may prove a cost-effective alternative.

Biodiversity

Addressing biodiversity should start as early in the design stage as possible. New buildings could consider green or brown roofs and external landscaping and habitat provision, for example, bat boxes. Appoint a professional ecologist to ensure the treatment is suitable for the area and aligned with locally identified needs.

Before starting on-site there will be a need to find out the ecological value of the site and the presence of any protected species. We recommend that you include this as part of the predemolition or remediation survey and employ a qualified ecologist. They can then identify the necessary actions and any specific requirements to incorporate into contract documents.

Biodiversity is a category within the BREEAM assessment method and setting standards and goals early in the design stage are more likely to ensure cost-effective results.

If the project already has a diverse and significant number of species the planning permission may contain requirements to protect, mitigate or increase depending on the design proposed.

Improving biodiversity need not necessarily be expensive. Examples of measures could include treatment to facades to incorporate 'nooks and crannies' for invertebrates and some bird species, bat boxes, or consideration of ground level landscaping to provide more biodiversity interest. The ecologist and a landscape architect will need to work together to consider issues such as soil make up and the type, number and location of species within the landscape design.

Consideration of plant species that adapt to Climate Change is also important during the design stage, by selecting drought resistant or tolerant plants as this will impact on irrigation.

Health and Well-being

Consider health issues at the earliest possible time during the design stage and have due regard for the staff and users of the future project. The client's brief should include the requirements for activity and space provision and indoor environmental quality that will ensure you give thought to how the building is laid out, ventilated, lit, the internal finishes and the final commissioning.

Strategies for ventilation and daylighting are important and need to be considered as early as possible. Designing a building to increase daylight and natural ventilation may include issues such as size of floor plate, provision of atria or lightwells, overshadowing or introducing light shelves or sunpipes.

At the design stage consider details such as:

- ↗ ventilation rates;
- ↗ avoidance of glare while still providing enough light;
- ↗ specification of sound absorbing materials;
- ↗ strategy and provision for individual and local control of climate; and
- ↗ specification of low VOC emitting materials (VOC being volatile organic compounds).

Include an indoor air quality expert in discussions during the changing design to ensure that any concern about material specification and placement of exhausts and intakes is considered.

As well as developing a heating and ventilation strategy that delivers the required occupant comfort, also consider other issues that can affect internal air quality impacts, such as floor coverings, paints and finishes, adhesives, sealants, insulation and furniture.

Building acoustics are another consideration in providing a productive and healthy internal environment, so it is important to consider the choice of materials and location of noise emitting sources both inside and outside the building.

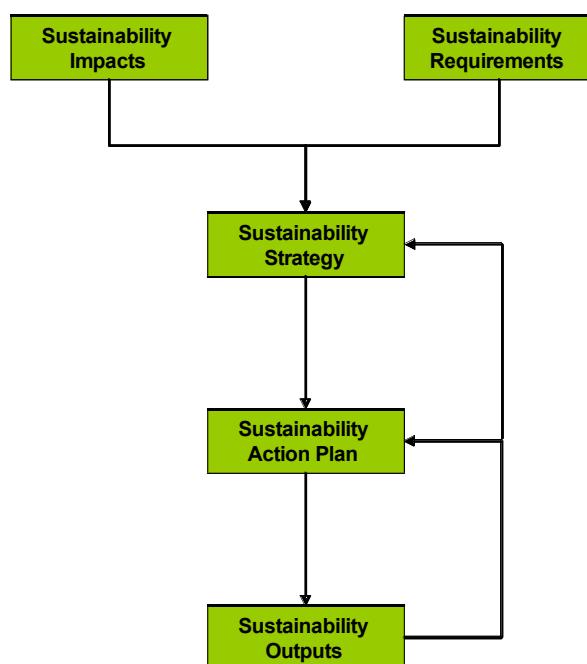
Managing Sustainability

A Framework

There are a significant number of sustainability issues that might impact on your project and there are several responses your project can take to respond to this.

Use the checklist provided to identify where you are already taking action – or to suggest areas where you could make improvements.

In the whole design and construction process it is important that you have in place a framework to manage sustainability on your youth centre. Figure 1 below sets out a simple framework that enables you to do this. We discuss each issue in more detail below.



Understand your Potential Impacts

It is important that you understand the potential environmental impacts that your scheme will have on the environment. This should be informed, where possible, by information on any environmental features or designations present on your site (for example, listed building status, tree preservation orders, presence of protected species, flood risk).

Understand your Sustainability Requirements

Each **myplace** scheme is likely to have several sustainability requirements placed on them. These can typically be broken down into the following areas:

Funding – funders of the project may place several sustainability requirements on the project. These include items such as a required BREEAM rating, achieving a certain energy rating requirement, incorporation of recycled materials etc. Currently **myplace** does not place any specific funding requirements on sustainability, although the programme does have an ambition that new build projects will achieve an excellent BREEAM rating and that refurbishment projects will achieve a very good rating.

Legal – there is a wide body of legislation requiring consideration of environmental issues in a project. This includes waste (for example, the Site Waste Management Plan Regulations 2008), Carbon (for example, Part L2A of the Building Regulations) and Biodiversity (for example, the Countryside and Wildlife Act). A link to NetRegs, a website that provides details on all areas of environmental legislation, is at the end of this document.

Planning – most **myplace** projects will need planning permission. The planning authority will often want information about the sustainability of the project to be issued as part of the application. The permission granted is also likely to have several conditions incorporated into it needing certain environmental actions to be undertaken. When looking at planning requirements it is essential that you look at your Local Plan (or Local Development Framework) and, if possible, consult with the planning officer for your project. This will enable you to find out exactly what sustainability measures will be needed.

Statutory – in some projects there will be statutory consultees, who may place conditions on your project. For example, the Environment Agency may impose conditions on the discharge of water from your site.

Stakeholder – a project will have a range of stakeholders. The most important will obviously be young people: the users of the centres. However, other stakeholders include staff, neighbours and local community groups. It is important to consult widely with such groups and try to identify if they have any specific concerns or requirements.

Sustainability Strategy

Once you understand your likely impacts and your likely needs you should consider developing a Sustainability Strategy. The strategy should set out in clear terms what you want to achieve from the project from a sustainability perspective. Use the strategy to inform your overall brief and to provide a clear direction to the design and construction teams. Base the strategy on a few objectives. For example, to reduce the centre's contribution to climate change. Accompany each of these with a set of specific measurable targets (for example, the centre should achieve an Energy Performance Certificate Rating of A).

Action Plan

Once you have a strategy it is important that you develop an Action Plan that details the specific actions that you and the design and construction team will undertake.

The action plan will help enable you to track progress on your strategy and will also ensure that you understand who is responsible for these actions. The action plan can be a simple document – but should include details of the action, responsibility for the action and timescale for completing the action.

Sustainability Outputs

The framework will result in the production of a wide range of outputs at various stages in the design and construction process. These may include outputs such as BREEAM certificates, Energy Performance Certificates and Site Waste Management Plans.

Further Information

	Organisation	Website	Contact
General	Environmental Agency – NetRegs	http://www.netregs.gov.uk/netregs/default.aspx	enquiries@environment-agency.gov.uk
	MAGIC	http://www.magic.gov.uk/	Support.magic@defra.gsi.gov.uk
	UK Green Building Council	http://www.ukgbc.org/site/home	info@ukgbc.org Telephone: 020 7580 0623
	Sustainable Development in Government	http://www.defra.gov.uk/sustainable/government/	
Energy	Carbon Trust	http://www.carbontrust.com/EN/Home.aspx	enquiries@carbontrust.com
	Energy Saving Trust	http://www.energysavingtrust.org.uk/	Telephone: 0800 512 012
	South East Excellence	http://www.southeastexcellence.co.uk/sustainability/?/785/Low%20and%20Zero%20Carbon%20Energy/	southeastexcellence@seeda.co.uk Telephone: 01483 501364
Transport	Letz Go Green – Travel Plan Support	http://www.letzgogreen.org/schooltravelplans/index.php	travelwiseschools@centro.org.uk Telephone: 0121 237 4766
	Department for Transport	http://www.dft.gov.uk/pgr/sustainable/travelplans/work/	Telephone: 0300 330 3000
Resource Use	Breglogal – Green Guide	http://www.thegreenguide.org.uk/	Telephone: 01923 664 462
	GreenSpec	http://www.greenspec.co.uk/	
	Cpet – Central Point of Expertise on Timber Procurement	http://www.proforest.net/cpet	cpet@proforest.net Telephone: 01865 243766
	WRAP	http://www.wrap.org.uk/construction/	Telephone: 01295 819900
Waste	WRAP – AggRegain	http://www.aggregain.org.uk/	Telephone: 01295 819900
	EnviroWise (SWMP aid)	http://www.envirowise.gov.uk/uk/Sectors/Construction/SWMP-Builder.html	Telephone: 0800 585794
	Environment Agency	http://maps.environment-agency.gov.uk/wiyby/wiybyController	
Water	Burdens Environmental – sustainable building materials and plans	http://www.burdenselective.com/	Telephone: 0845 601 1188
	Waterwise	http://www.waterwise.org.uk/	Telephone: 0207 344 1882
Biodiversity	Natural England	http://www.naturalengland.org.uk/	enquiries@naturalengland.org.uk Telephone: 0845 600 3078
Pollution & Nuisance	Considerate Constructors Scheme	http://www.considerateconstructorscheme.org.uk/	enquiries@ccscheme.org.uk Telephone: 01920 485959
	BREEAM	http://www.breeam.org/	bream@bre.co.uk Telephone: 01923 664462