



ECB Tackling Climate Change Fund Toolkit

Essential guidance for applicants – July 2026

Introduction to the toolkit

YOU CAN NAVIGATE THIS DOCUMENT USING THESE TABS – JUST CLICK ON THE TAB TO TAKE YOU TO THE RIGHT SECTION

The ECB has developed this toolkit to support applicants to our Tackling Climate Change Fund.

This guide walks you through different types of project, how to achieve sustainability benefits and what information we will need to support your application.

An overview of the toolkit and its contents is set out below.

FROM THIS MAIN MENU YOU CAN NAVIGATE TO ANY SECTION BY CLICKING ON THESE BOXES

Flood Resilience Projects

Example projects:

- Protecting buildings
- Targeted drainage
- Ditch/culvert clearance

Drought Resilience Projects

Example projects:

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- Rainwater harvesting
- Irrigating squares

Heat Resilience Projects

Example projects:

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- Ventilation
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Energy Saving Projects

Example projects:

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- LED lighting
- Solar PV
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- Energy efficient (kitchen) appliances

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Example projects:

- Water saving sanitaryware
- Greywater recycling
- SUDS & Stormwater attenuation

Electric maintenance machinery

Example projects:

- Electric mowers
- Electric rollers
- Robotic mowers

Flood Resilience Projects

If your club is experiencing or has recently experienced flooding – visit www.ecb.co.uk/flooding for advice and support.

The importance of flood resilience

Flooding* has an almost yearly impact on cricket in England and Wales. Flooding can have a significant impact on affected clubs with many cricket grounds at risk.

Becoming more flood resilient can help a flood-affected club limit costly damage, recover more easily and get back playing cricket more quickly.

By following these six steps you can become more flood resilient as a club.

*in this context of this fund and this guide, we mean flooding from rivers, sea or surface water flooding. Flooding from leaking or burst pipes, overflowing sinks etc is not covered by the Tackling Climate Change Fund; please refer to your building insurance.

For more advice on flood resilience and protection see www.ecb.co.uk/flooding



Taking steps towards flood resilience

1. Find out if you are at risk of flooding

You can find out if your cricket ground is at risk of flooding by looking at government flood maps,

In England visit: [UK Government Flood Map](#)

In Wales visit: [Natural Resources Wales Flood Map](#)

You may have experienced flooding at your club already, gathering understanding from historical events about where water comes from, how high it gets and where it has got into in the past is valuable in understanding flooding at your ground.

2. Understand the impact of flooding

When you look at the flood map, look at what parts of your ground are at risk. Is it your pavilion or grounds shed at risk or is it a corner of the outfield or carpark? You need to know prioritise to the highest impact areas and identify the right solution(s).

Higher impact	Pavilion
	Grounds shed
	Nets & Squares
	Outfield
Lower impact	Carpark

3. Identify appropriate resilience solutions

Protecting buildings requires different solutions from protecting squares and outfield. It is important to match the solution to the potential hazard.

This fund typically supports three types of protection:

- Flood barriers to stop water getting into buildings
- Small drainage projects to help clear prolonged wet areas after flooding
- Clearance of ditches and culverts adjacent to your ground.

4. Apply for funding

Once you are clear on your solution you can apply to this fund for financial support.

5. Make a flood plan

Many flood resilience measures will require you to put them in place before a flood happens.

A flood plan can help you identify

- How to get flood warnings for your ground
- What actions to take before a flood
- How to respond to a flood
- Who needs to act at each stage

There is no point in having flood defence measures if you do not put those in place.

For more information see ecb.co.uk/flooding

6. Put your plan into action

Get flood warnings
Put your plan in place
Keep safe

For more information see www.ecb.co.uk/flooding



Example projects ideas – protecting buildings

Flood protection products, such as flood barriers across doorways can be effective in preventing, or slowing flood water ingress into buildings. The fixings are installed in place but do not obstruct normal ingress/egress of people – but ahead of a flood, the barrier can be fitted in place to help prevent water ingress.

Other flood protection devices include one-way non-return flaps on sewer pipes to stop sewers flooding back into buildings and sealed inspection chambers that prevent drain covers coming off during a flood.

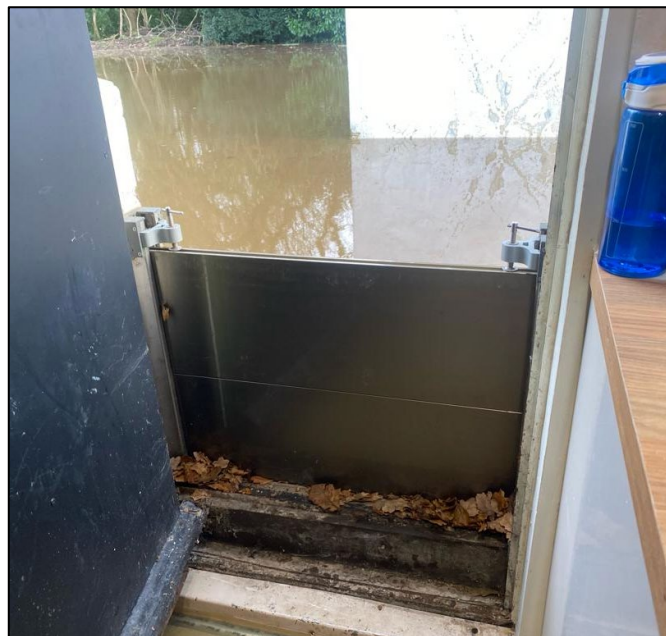
The Blue Pages is an independent, online directory of flood products and services that you might find useful in identifying solutions for your ground:

www.bluepages.org.uk

If you are unsure of product suitability or the right solution for your ground speak to manufacturers and suppliers. You can also seek independent advice from a civil engineer or specialist flood advisers. Or the flood officer in your local authority may be able to help.



Flood barrier in place on a pavilion doorway ahead of a flood. Note that the door already has a raised threshold to help reduce flood ingress.



During a flood, the barrier prevents water entering the building (as long as the water level does not exceed the barrier height).



Fitting non return valves (L) and flaps (R) to your sewer pipes can help flood water entering through drains

Example projects ideas – small drainage projects

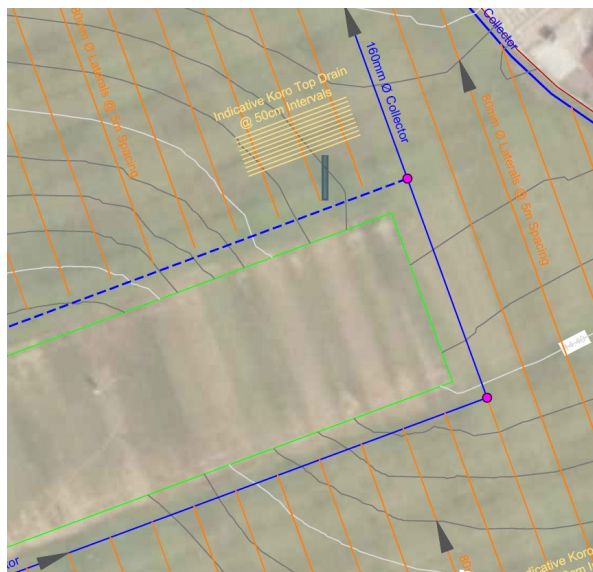
Properly draining a whole outfield can cost upwards of £75,000 and should be done under the guidance of an experienced consultant.

However smaller projects to treat persistently wet areas, or areas that are slower to drain after a flood recedes, can be drained on a small area basis. The Tackling Climate Change Fund will contribute towards smaller drainage projects to help alleviate problem areas.

When draining even small areas we encourage you to seek good advice. You can find guidance on drainage in [ECB TS4](#) available from our website, and in Sport England's [Design Guide for Natural Turf](#). If you are not employing the services of a sports turf consultancy, we would recommend engaging an experienced sports drainage contractor using the right equipment.

In particular, controlling the grade of drainage pipes (ensuring the water flows down hill to your outfall) is best completed with a drainage trencher or similar and not with a mini-digger or by hand. It is also very important to use the right pipes, connections, back-fill materials and install to the correct depths and grades.

One of the biggest challenges for any drainage is having an outfall; somewhere for the drained water to go. On some sites this might be a soakaway into the ground, but on many sites, this will require connecting to ditches, streams and rivers and even sewer systems. Laws and regulations on drainage connection to these systems is complicated, so you should seek advice to ensure you have the right permissions.



Good drainage begins with good design, whatever the size of your project. You need to make sure that water will flow down your pipes and connect to outfall. If in doubt, get good help.



Good installation is also essential. You should engage an experienced drainage contractor using the right equipment to install the right system.



Effective outfall is essential – you will need to make sure you do not move your problem somewhere else. Make sure you have the right permissions in place to connect to your outfall. You can add a non-return flap to drainage outfall to prevent back flooding from a ditch or watercourse

Example projects ideas – ditch and culvert clearance

The role of ditches

A number of cricket grounds are bordered on one or more sides by drainage ditches which are usually part of a wider connecting drainage scheme across an area. Ditches may be routed through culverts to allow access over the ditch.

When these drainage ditches and culverts are working properly, they will carry water past, and away from your ground, often collecting water from the surface and from drainage outfalls from any pipes under your ground.

They will fill up during wetter weather, particularly in the winter when the surrounding ground is saturated and should drain down to dry levels in the summer and during dry periods.

However, drainage ditches will become vegetated and silted up over time reducing flow and storage capacity. Ditches, and any culverts they pass through, can also become blocked with natural debris such as fallen tree branches and leaves (but sometimes waste from neighbouring properties up stream).

Maintaining your ditches – rights and responsibilities

Regular ditch maintenance to clear vegetation, silt and debris is part of good land management but should be carried out sustainably.

Drainage rights (such as the right to maintain or to output pipe drainage) and responsibilities (such as the responsibility to maintain) can be complicated.

(Continued on next page.)



Ditch clearance in progress. The size of the machine will depend on the depth and width of the ditch, but care should be taken to protect the outfield from machinery tracks.

Example projects ideas – ditch and culvert clearance

Maintaining your ditches – rights and responsibilities (continued)

This can be complicated further by land ownership arrangements (such as tenancies) and when a cricket club only owns one side of the ditch and joint responsibility applies.

It could also be complicated by downstream blockages away from your ground that cause the ditch alongside your ground to back up and overflow.

In all cases – good relationships with landlords and neighbouring land-owners are key. Joint plans are often required to solve issues like this.

Timing

To reduce risk of harm to wildlife, the best time of year to clear your ditches is September to October when vegetation has died back and bird nesting season is over.

Spoil disposal

You must plan for what to do with the material removed. You do not want to deposit this on the outfield, and you do not want to create a bund that stops water flowing to the ditch. If the removed material cannot be stored on site (or on the far side of the ditch) then you will need to allow for the material to be removed off site as muck away. Depending on how much material needs to come out, this can be expensive, so speak to your contractor.



With ditch clearance, care needs to be taken with the disposal of spoil to make sure that surface drainage from the cricket outfield is not impeded.

What we will need to see with your application if you are applying for the Flood Resilience theme:

At the Expression of Interest (EOI) Stage

Explain what the flood risk is at your site (check the flood map and share your experiences of historical floods).

Tell us about your ideas, how you intend them to work and how they fit into your flood resilience strategy and your flood action plan.

The flowchart [here](#) will help you with this.

Consult with your insurer

Remember to speak to your insurers about your flood resilience project plans before you undertake them to ensure that you will be covered.

Your insurers may have asked you to take specific steps to reduce flood risk – make sure you speak to them about your plans and confirm that they will meet your insurer's requirements.

You may even receive a discount on your premium for taking measures to reduce flood impacts.

At the Full Application stage

Details of your proposed flood resilience solution and how it is going to work, for example product details or a drainage plan.

Any recommendations from engineers or insurance companies related to the application

Evidence that you have the permissions required to carry out the work such as letters from landlords or agreements with neighbouring landowners.

We need to see a drainage plan for all drainage projects, including all pipe diameters, depths and detail of back fill materials.

All supplier quotations/tenders and your analysis of these quotations/tenders in line with the Funding Guidance Notes for this scheme.

Drought Resilience Projects



Why do cricket clubs need to be more drought resilient?

Drought, or prolonged dry conditions are increasingly common in England and Wales as our climate changes and demand for water increases.

Whilst interruptions to water supplies for drinking and hygiene at cricket clubs are extremely rare, prolonged dry periods can lead to 'Temporary Use Bans' (or hosepipe bans) that can affect irrigation to squares and outfielders.

Irrigation to grass squares, and even some non-turf pitches is essential for safety in the game. You can find guidance on how to irrigate effectively and efficiently, and what to do during drought restrictions in the [Grounds Management Toolkit for Cricket](#) provided by the Grounds Management Association (GMA).

Most cricket clubs do not use large quantities of water for irrigation (most only irrigate pitches and squares, which are smaller areas).

However, diversifying away from mains drinking water, or reducing the amount of mains water that you use is one of the best ways to become more drought resilient. It will reduce the risk of temporary use bans and reduce your water bill (where you are metered).

Example of Drought Resilience projects that this scheme will fund include:

1. Borehole projects
2. Rainwater harvesting projects
3. Projects to improve irrigation to cricket squares to improve the safety and quality of pitches.



Square irrigation projects

Overview

Square irrigation projects can help to improve water management and water use efficiency.

Watering effectively is about having the right equipment to put water where it needs to be, at the optimum time. There's lots of advice on how to water in the [Grounds Management Toolkit for Cricket](#).

Types of irrigation system

Hydrant points - in its simplest form, square irrigation systems pump water from a holding tank outside the boundary, through an underground pipe to a hydrant point by the square. A grounds manager can then connect a hose or a sprinkler to water areas of the square as required.

Automated sprinklers - more complex systems will also use pop-up sprinklers to water the square, or parts of the square. This can make watering more efficient because it can be scheduled to water in the very early morning, reducing evaporation losses, and it can reduce grounds manager time. Automated sprinkler systems around squares should always be combined with one or two hydrant points to help focussed hand watering which is a vital part of pitch preparation.

Outfield irrigation systems are less common in grassroots cricket because the area being irrigated is so much larger and everything needs to be scaled up including the quantity of water and the budget. Outfield irrigation projects are not covered by this fund.

Designing your irrigation system

We recommend that you always speak to an experienced sportsturf irrigation designer/contractor when procuring an irrigation system.

This following page is not design guidance but explains what we look for when reviewing applications for irrigation.

We always want to see an irrigation design plan, as well as contractor quotations – so please make sure to include one in your application. The plan needs to show:

- Your ground
- Water supply(ies)
- Where you will site the tank
- Where you will site the hydrant
- The design of any sprinklers – including their arcs (throw distance and rotation).
- Pipe routing
- Control cable routing (where applicable).
- Control system location

Square irrigation projects – designing your system

Water Supply

Where it is possible, it is better to use groundwater from a [borehole](#) or [harvested rainwater](#) from roofs than mains drinking water. These are eligible for ECB Tackling Climate Change funding (see following pages).

Where mains water is used for irrigation, it must be in a system that has WRAS Category 5 backflow protection, which involves a tank with an overflow positioned so that there is an air gap between the full tank water level and the mains water supply.

Tank size

The tank needs to hold enough water so that you can pump out the water you need to irrigate, without emptying the tank and having to wait for it to refill.

Smaller squares usually require a 5 m³ tank, larger squares will require a 10 m³ or even larger tank. Tank size also depends on the rate that water is refilling your tank – speak to your irrigation design/contractor and they will be able to size the tank for your needs.

Pump

Your pump will need to be powerful enough to deliver the water to the square with enough pressure and flow to water effectively. Be aware some travelling irrigators and automatic sprinkler systems will require more pressure and flow rate to work correctly. Selecting the right pump also depends on your power supply – speak to your irrigation designer/supplier.

Hydrant points

Hydrant points should be placed below ground level in a proprietary irrigation box or similar, located in the outfield near the cricket square, but avoiding bowler run ups. The supply pipe is normally terminated with a valve and a connector for fitting different hoses and equipment (usually a Geka-type, but can be different). Domestic ‘Hoselock’ type connectors are not suitable because their diameter is too narrow.

Automatic Sprinklers

These systems have an array of sprinklers that pop up and move through 180° (along the sides) or 90° (in the corners) arcs. The sprinklers come on individually or in groups and are controlled by a small computer that also schedules timings and durations.

Selecting the right sprinkler type and control system is specialist design and should be done by a recognised sports turf irrigation designer/contractor.

Pipes and joints

It’s really important to make sure you have the right pipe diameters and that the pipes are jointed/connected correctly. If your pipe diameter is too small you will not have enough flow rate, if it is too large for your pump then it will be difficult to deliver the right pressure and it will cost more. Speak to your designer/contractor.

Irrigation Equipment

Finally, make sure you have the right equipment to water with – that can include hoses, hand watering lances/rosettes, travelling or static sprinklers and ‘leaky hose’ irrigators.

Borehole projects

Groundwater abstraction

An alternative water source for irrigation is groundwater. This is water stored in the rocks below your ground. Depending on the rock type, large reservoirs of groundwater (aquifers) can exist below your ground.

Under current legislation, up to 20 m³/day can be abstracted from groundwater without an abstraction licence. This is usually more than enough to water most cricket squares (which typically take 5-10 m³/day to water).

If you need to abstract more than 20 m³/day (for example to water a whole outfield during hot periods, you will need to apply for an abstraction licence.

Finding Groundwater

Drilling a borehole is a technical project and should only be undertaken if there is an aquifer below your ground at a reachable depth.

A reputable, local Well Driller (borehole installer) should be able to provide information on the likelihood of being able to reach an aquifer at your site. They will base this assessment on geological records and their experience of installing boreholes in your area. However, Well Driller's rarely guarantee to hit water, and borehole projects are conducted at risk.

To reduce the risk, The British Geological Survey (BGS) provide a service that examines your location and provides a prognosis of whether there is an aquifer, the depth of that aquifer, the likely yield (m³/day), water quality and engineering difficulty of drilling the borehole.

You can obtain a borehole prognosis report (for a fee) from the British Geological Survey website:

https://shop.bgs.ac.uk/Shop/Product/GRC_C105

What you need to consider

If you do install a borehole, you will need to get the water from the aquifer to the surface (using a borehole pump) and then out to your square. You can directly pump from the borehole to the square using a variable speed borehole pump but if you have a larger irrigation system (driving pop-up automatic sprinklers for example) it is best practice to pump from the borehole into a holding tank, and then out from the tank to your sprinklers.

Whatever way you choose to do it, you will need to submit an irrigation plan with your application. Your plan should show how you plan to get water from the borehole and apply it to your square, so it should include:

- Borehole location
- Pump location(s)
- Tank location and size
- All distributing pipework (including the diameter of the pipes),
- Hydrant points
- Any sprinkler locations (and arcs)

For more information on square irrigation – see [Square Irrigation](#) above.

To reduce manual handling, we recommend that you install below ground pipes connecting to a hydrant near the square – this can be fitted in a proprietary plastic irrigation box with a non-slip lid. This is preferable to handling and storing long hosepipes run from the boundary edge out to the square.

Rainwater harvesting projects

Using rainwater

Rainwater harvesting projects collect water, usually from building roofs, in a tank. This water can then be pumped out for [irrigation of your square](#).

The water is not suitable for drinking but can be used for irrigation as long as it is not stored and handled in a way that causes waterborne pathogens. It is dangerous to leave water stagnating in a tank for a long period of time because harmful pathogens such as Legionella can build up and can then be inhaled or ingested by people using the irrigation system.

Designing a rainwater harvesting system

Rainwater harvesting systems should be designed and installed to BS EN 16941-1:2024.

Water is collected from the roof by connecting downpipes from the guttering to a single tank where the rainwater is stored and then pumped out to a hydrant point by the square.

The key challenge with rainwater harvesting is that a cricket ground needs water most when it is not raining and therefore tanks can empty quickly.

Depending on your roof area typical rainwater tanks are 10-20 m³ but may need to be larger if you are collecting water for irrigating large squares or combining with a grey water reuse system in your pavilion – always speak to your designer. There are online calculators you can use to give an indication of tank size but always confirm with an experienced designer or supplier.

Building a bigger tank means that more water can be stored but it is expensive to build a tank big enough to meet demand over a sustained dry period and water can be stored for too long in over-sized tanks. Seek the advice of a rainwater harvesting specialist to size your tank correctly.

The amount of water available also depends on the size of your roof(s) and how frequently it rains in your area. We recommend that a back-up water supply (whether from a borehole or from mains water) is included. Rainwater can be part of your supply, but not usually all of your supply.

You will also need an overflow to a sewer, permitted water course or soakaway so that you do not flood.

Cost – Benefit

Look at the cost-benefit analysis carefully – the most efficient time to install a rainwater harvesting system is when you are constructing a new building. Retrofitting can be more expensive, especially for system with below-ground tanks.

A rainwater harvesting system connected to mains water in this way must comply with the Water Supply (Water Fittings) Regulations 1999. When connecting a mains water backup supply it must have WRAS Category 5 backflow protection (usually in the form of a break tank with an air gap). An alternative to a break tank is a tundish device – if your supplier is providing a tundish system, make sure that the flow rate into your tank can keep up with the rate you are pumping it out to the square.

Top tips

1. Work with a specialist supplier of rainwater harvesting systems and look for systems compliant with BS EN 16941-1:2024.
2. Collect from as large a roof area as possible.
3. Always install a back up water supply for when your tank runs dry.
4. Always follow supplier's information on operation and maintenance to help reduce the risk of build up of harmful pathogens in the tank.



What we will need to see with your application if you are applying for the Drought Resilience theme:

At the Expression of Interest (EOI) Stage

Tell us about your ideas, how you intend them to work and how they fit into your drought resilience strategy. Also tell us about how they will help you reduce your water consumption and bills.

At the Full Application stage

Details of your proposed drought resilience system and how it is going to work.

Any recommendations from engineers or insurance companies related to the application

Evidence that you have the permissions required to carry out the work – such as letters from landlords or agreements with neighbouring landowners.

An irrigation design plan.

All supplier quotations/tenders and your analysis of these quotations/tenders in line with the Funding Guidance for this scheme.

Heat Resilience Projects



Creating shade and passive cooling

Adapting to hotter summers

Recent years have seen heat records tumbling because of climate change and managing extreme heat has become part of cricket in England and Wales.

Many cricket grounds will benefit from investment in creating shade, both to outdoor areas near pavilions, but also to reduce sunlight falling on windows and associated solar gain inside buildings.

Clubhouses may also benefit from passive cooling measures such as increasing ventilation by installing new window openings or roof openings or installing circulation fans.

The ECB Tackling Climate Change Fund will fund projects of this type where there is a permanent improvement to shade or passive cooling (this fund does not cover air conditioning systems).

Permanent systems include:

- Awnings fixed to buildings or permanent structures (including retractable types).
- Covers to patios and outdoor seating areas (including canvas types as long as the structures to which they are fixed are permanent).
- Permanent outdoor shelters.
- Brise soleil.
- New windows as part of a demonstrable ventilation strategy.
- Ceiling fans (permanently fixed).
- Perennial planting, including trees, for the purposes of shade.

Tree planting

This could include strategic tree planting to increase shade on buildings – deciduous trees can provide shade during the summer but still allow sunlight to fall on buildings during winter to help reduce heating bills. When planting trees near buildings you should always seek advice from engineers, architects or surveyors on what distance to plant a tree from your building. Speak to arboriculturists and landscape architects on what types of tree to plant and management of those trees and what the tree will look like when it is mature, not just on the day you plant it.

You should also make sure that your tree planting does not impact cricket – for example by being within three yards of your boundary, or dropping leaves over your nets, or even worse affecting surface levels with their roots. You do not want to obstruct sight lines to the cricket either!

What we won't fund

- Air conditioning systems (whether portable or fixed)
- Portable fan systems
- Temporary shade projects such as gazebos, parasols or umbrellas
- Temporary planting (such as annual plants) or non-hardy planting
- Kitchen or bathroom extraction

What we will ask for in your application:

In your expression of interest, we want to hear about your project and how you think it will help. Explain what the current situation is, what you plan to do about it and what you expect the benefit to be.

At the full application stage we will ask for supplier quotes and about your design.

Energy Saving Projects



Energy Saving Projects – Planning your project(s)

Energy saving projects work best when combined

On the next few pages you will see a range of ideas that can help reduce your energy consumption and bills. The solutions do not all cost the same and they do not all achieve the same benefit. Commonly they work best together. For example:

- An air source heat pump will work best in a well insulated building.
- Loft insulation is cheaper than wall insulation and will provide a bigger saving per pound spent if you currently have a poorly insulated loft - so insulate your loft first.
- Each should make a difference, but the extent of the savings will depend on how well insulated your building is.
- Use a smart meter to get a good understanding of when you consume the most electricity before you invest in Solar PV – that way you will know whether a battery is beneficial or not, and what size battery you will need.
- If you are going to invest in an electric roller – think about solar PV to help reduce running costs.

Be strategic – get tactical: plan and get good advice

Before you launch into an energy saving project - carry out an energy audit/assessment on your building – this is an assessment of heat and energy consumption and loss in your buildings.

There are specialist surveyors who can do this – they can even give your building an energy performance certificate.

This will help you build a plan on what you can do in your building(s) to reduce energy waste and energy consumption, and what you can do to reduce your bills.

By building a plan like this, you will be able to work out what you need to do, in which order and what parts of that plan you will fund with help from the ECB Tackling Climate Change Fund and other sources of funding.

So don't think about one project in isolation – think about how you can add these projects together for maximum benefit for your club.

Reducing your energy consumption – and your energy bill



Guidance on reducing your energy consumption is in our online guide [How to Reduce Your Energy Consumption](#).

In that guide you will find examples of projects that you can invest in, with the support of the ECB Tackling Climate Change Fund that will make a real difference to your operating costs, your consumption and carbon emission reduction.

Take a look and see what works for your club.

The following pages include information on what to think about as you develop your project. They also detail the information we will need you to submit with your application.

Reducing heat loss - insulation, windows and doors

Insulation

Modern pavilions are built with lots of insulation to help minimise energy consumption in heating (and cooling). However older pavilions can have less insulation in walls, floors and roof spaces meaning energy consumption and energy bills are higher.

When done the right way, retrofitting insulation is one of the most effective things you can do to reduce energy bills.

ECB supports projects to insulate:

1. Roofs and loft spaces (because heat rises, and loft insulation is relatively cheap to install, this can be one of the most cost-effective projects for a pavilion that doesn't already have good insulation).
2. Floors (for example above unheated spaces or under wooden floors)
3. Walls (where existing walls allow heat and cold to move in and out easily)

Managing damp

Insulation, particularly in loft spaces can increase condensation – make sure you discuss with your supplier or a competent roofer about managing moisture in your roof space and pavilion.

What we will ask for in your application:

In your expression of interest, we want to hear about your project and how you think it will help. Explain what the current situation is, what you plan to do about it and what you expect the benefit to be.

At the full application stage we will ask for quotes and what the U-value is for your new insulation. The U-value (usually expressed as W/m^2K) is the rate of heat loss, so the lower, the better.

Windows and Doors

Like floors, walls and roofs, another way heat escapes from a building is through windows and doors – especially where these are single glazed or conduct heat easily.

There will be a number of local and national companies that can supply and fit replacement windows and doors – in your project think about:

1. The insulation value of the scheme and the difference in terms of energy reduction (kWh/y) and cost ($£/y$) this will make – ask your supplier, as they should be able to provide a calculation.
2. Practicality and accessibility – which windows will open and close, which sightlines do you need to protect, how do you connect indoor and outdoor space on matchdays and how you will make sure your facility is accessible to people with disabilities.
3. Sound insulation as well as heat insulation – if your venue hosts events and you need to contain sound as well as heat – how will you manage this?
4. Safety and security – how will you make sure your pavilion is safe and secure both when unattended and during an emergency, such as a fire?

Solar PV and Solar Thermal Projects

Solar PV

Solar photovoltaic (PV) panels can be an effective way to reduce your electricity consumption and bills. They are an onsite renewable electricity generator – significantly reducing greenhouse gas emissions.

Planning – Schemes fitted to roofs are exempt from the planning process in most cases (unless you are in a conservation area for example) – you will need to check with your supplier. Ground-mounted schemes usually do require planning.

Suppliers and design – There are a number of suppliers of solar PV systems. Designers will take into account your location, roof type, roof orientation and shading to design the optimum panel layout and scheme size for your building(s). They will also take into account the performance (measured in kWp) of their products. From all this information they will also be able to calculate the potential energy savings and cost savings (using standard models).

Storage batteries – rather than return excess energy to the grid, it can be more efficient to store this energy in a specialist battery. The stored energy can then be used in dull or dark conditions, extending the savings. The bigger the battery, the more energy can be stored – but the cost of the battery will go up with size. There is some fire-risk associated with storage batteries, so you need to think about location carefully with your designer. Also be aware that they reduce in capacity over time and good battery care and maintenance is important.

Solar Thermal

Solar thermal is a technology that pre-heats water by circulating in special panels on the roof. This pre-heated water then reduces the amount of heating your boiler or water heaters need to do to produce hot water.

Solar thermal can reduce your water heating costs by 40-60%, however, the potential savings do depend on what proportion of your energy costs are related to water heating. Solar Thermal systems have greater installation costs because of the plumbing required. Also, a solar thermal system can only heat water, whereas a solar PV system on the same roof space can generate electricity for a range of uses. The combined long pay-back periods and reduced flexibility mean that in most cases Solar PV is preferred these days.



Solar PV Panels on a pavilion roof can help to reduce electricity bills and reduce greenhouse gas emissions by generating electricity on site.



Solar PV and Solar Thermal Projects

Ball Strike (Solar PV and Solar Thermal)

Cricket ball strikes can damage panels in both systems if your roof is frequently struck by balls from the field. You could consider protective netting (or similar) but this can reduce the performance of the system slightly.

Consult with your insurer

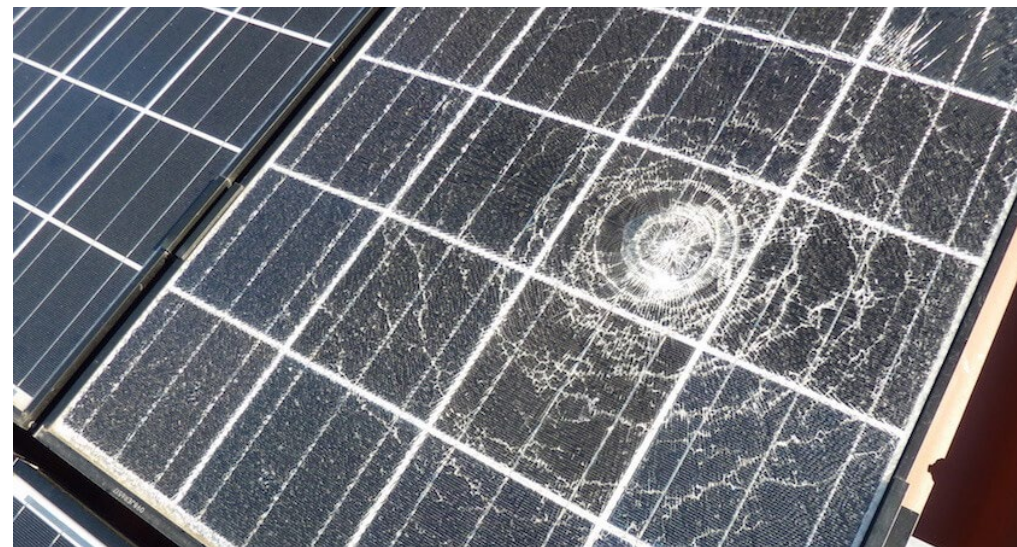
Remember to speak to your insurers about your Solar PV or Solar Thermal projects before you commit to ensure that you will be covered during and after the works.

Your insurers may ask you to take specific inspections and maintenance actions on a regular (e.g. annual) basis.

What we need in your application

At the expression of interest stage we want to hear about why you want to install a system of this type.

At the full application stage we will need to see the design proposals and quotes from your potential suppliers, that they have surveyed your roof(s) and determined suitability, confirmation that you have contacted your insurer. We will also ask you for key data from the suppliers modelled performance and savings for the scheme.



Always check with your insurers before installing Solar PV and Solar Thermal to make sure they are happy with works to the roof. It is also important to understand what is and what is not covered and what maintenance and inspection they will need you to carry out.

Energy Efficient Heating Systems

Air source heat pumps

Air source heat pumps extract heat from the air and transfer this air to water circulating in your heating system. They are low carbon because they use electricity rather than natural gas.

Having a well insulated building is important for getting high efficiency from air-source heat pumps – so look at the previous pages in this section.

There is an increasing number of suppliers and installers for air source heat pump technology and retro fit is relatively straight forward where you have a hot-water wet heating system.

If you currently use electric panel heaters or similar a Solar PV/battery combination will be a better solution, otherwise you will need to install a hot-water heating pipe and radiator system as well.

Ground source heat pumps

This scheme does not fund ground-source heat pumps because of the associated costs and disruption to cricket when systems are installed into outfields.

Energy efficient gas boiler replacement

The ECB Tackling Climate Change Fund will support replacement of older, less efficient gas boilers with modern high efficiency boilers where the ErP (Energy-related Products) rating of the new boiler is A-rated or better and the boiler being replaced is over 10 years old.

What we need in your application

At the expression of interest stage we want to hear about why you want to install a system of this type.

At the full application stage we will need to see the design proposals and quotes from your potential suppliers, any information on ErP for the proposed scheme and any predicted data on savings and efficiencies.

EV, Energy Efficient Appliances and LED Lighting

EV Charging

The scheme will support the installation of EV Charging technology. EV Chargers help to carbon emissions by servicing the growing number of electric vehicles. They can also provide an income stream for clubs, where they choose to charge.

When considering EV charger projects you will need to ensure that you have a large enough electrical supply to provide this service with enough capacity to run everything else at your venue.

Think carefully about how you will cover the cost of providing the electricity and prevent unauthorised use and unauthorised parking blocking the charger.

You will need to check with your insurer that you are covered to provide EV charging at your venue.

Energy Efficient Appliances

We will support replacement of older appliances in pavilion kitchens and bars such as dishwashers, refrigeration and other large appliances where it can be demonstrated that the new appliance is more energy efficient than the appliance being replaced.

LED Lighting

One of the lowest cost, best return projects is replacement of older incandescent, fluorescent or halogen lighting with modern LED lighting. The Tackling Climate Change Fund will support projects that do this at scale throughout a pavilion.

Modern LED lighting offers a range of control systems to dim lighting and switch lighting on and off. This can be linked to PIR lighting controls that use infrared to detect whether someone is in the room, ambient/background light sensors, automatic switch off (and on) and remote control (via a phone app or computer). These are all ways to reduce consumption and cost by making sure lights are not left on when they are not needed.

Water Saving Projects



Water saving technologies

Water-saving sanitary wear

Water-saving sanitary wear includes devices that reduce water consumption by:

1. Preventing water supplies being left on when not in use. Examples include:
 - Non-concussive (self closing /push) taps for basins and showers.
 - Infra-red/electronic taps for basins
 - Leaky loo detection strips
2. Reducing the amount of water used. Examples include:
 - Low water toilets, including toilets with variable flush volumes.
 - Infra-red valves for flushing urinals after use, rather than on timer.
 - Waterless urinals
 - Tap aerators
 - Water reducing shower heads

Greywater recycling

Greywater recycling schemes collect water from washbasins and showers and then reuse this water for flushing toilets, irrigation (with suitable treatment) and machinery wash-down.

Greywater systems can be combined with rainwater harvesting systems to increase water volumes and reduce mains water use.

Greywater projects are not low-cost projects because tanks need to be installed, water filtration and treatment systems need to be added and separate plumbing is required (grey water cannot be mixed with mains water plumbing in a building by law).

Greywater projects costs are lower (but still not low cost) when installed as part of a new building.

They require specialist design – there are proprietary providers who will supply and install systems and can be approached for costs.

For all greywater recycling schemes we will need to see full design proposals from suppliers and where integrated with irrigation, we will need to see an irrigation plan – see advice on irrigation in the [Drought Resilience](#) section.

SUDS – Sustainable Urban Drainage Systems

Surface Water Attenuation

The aim of Sustainable Urban Drainage Systems (SUDS) is to retain water where it falls and then discharging that slowly to help reduce the risk of flooding and improve the quality of water.

Having a SUDS system is usually an essential requirement for new buildings and they can be retrofitted to existing buildings. Investing in a SUDS system could help to reduce any surface water / storm water charges that your water company might make for collecting your rainwater from your roofs and car parks (see the advice on [Rainwater Harvesting for irrigation](#) in this guide).

SUDS projects need to be designed by civil engineers and landscape architects familiar with surface water attenuation and good drainage design. Always work with a specialist before undertaking work of this type.

Example SUDS projects include:

- Permeable paving – that allows water to infiltrate into the soils and rocks below, rather than running off into drains.
- Attenuation tanks – these collect surface water in below ground tanks that have a flow restriction device on their outfall, creating a long slow discharge rather than a fast rush of water into sewers or ditches that can cause flooding.
- Attenuation ponds or swales (that work like natural attenuation tanks and can improve water quality through filtration when combined with reed beds). Note that locating ponds and swales near cricket grounds needs to be thought through carefully because if put in the wrong place they can cause balls to be lost.
- Green roofs that are vegetated and capture and use water on the roof before it reaches drainpipes. Retrofitting green roofs is complicated and expensive because it can increase the load on a roof significantly.

What we need in your application

At the expression of interest stage we want to hear about why you want to install a system of this type and how you plan to do it.

At the full application stage we will need to see the design proposals and quotes from your potential suppliers. You will need to demonstrate that your design has been produced by the appropriate specialist. You will also need to have any applicable discharge consents and planning consents in place.



Electric Maintenance Machinery



Electric grounds maintenance machinery

Electric Mowers and Rollers

Electric machinery is becoming more common in grounds management and offers a zero emission (on site) alternative to petrol or diesel machinery.

When choosing machinery, it is always important to select the right machine for the job, and the right machine for you as an organisation. There is no point in selecting a mower or a roller just because it is electric if it cannot do the job you need it to do.

You can find advice machinery selection in the Grounds Management Toolkit for Cricket by following the links to [mowers](#) and [rollers](#).

The Tackling Climate Change Fund will fund 25% of new machinery purchase costs, up to the funding limit for the scheme. You may also be eligible for an ECB interest free loan that can be used towards machinery.

Robotic Mowers

Robotic mowers are becoming more common, and the right sized mower can be effective in cutting outfields.

They can be programmed to cut the outfield when the ground is not in use and do this on a 'little and often' basis – removing a small amount of grass that breaks down easily without leaving large clumps of clippings that can be disruptive to play.

Most commercial robotic mowers are rotary mowers and do not collect clippings, therefore they are not suitable for use on a square.

The mowers use GPS to cut to a template that is programmed in, so that the mower knows the extent of the outfield boundary, without leaving clippings on the square. The mowers are battery operated and can be programmed to return to a charging station.

When considering robotic mowers, think about:

- **Coverage** – can the mower cover the outfield in the time available? If the mower is too small, and/or the battery is too small it will not be able to cut your outfield in time. If you have more than one outfield, you might need more than one mower.
- **Minimum cut height** – your mower should be capable of cutting to your preferred outfield cut height, some robotic mowers will not cut below 20-25 mm – look for mowers that can cut in the range of 15-20 mm
- **Safety and Security** – good mowers will have proximity sensors that mean that they shut down when somebody approaches. They will also include anti-tamper and anti-theft devices, including trackers. However, if you are in an open public space then theft, vandalism and other nuisance behaviour that are a risk. In these circumstances, robotic mowers may not be the right solution – we will consider this in your application.