



**GUIDE TO
A GREEN
OFFICE**



FC BARCELONA



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PRESENTATION

FC Barcelona is aware of how important sustainability criteria are for the robust and lasting development of the institution and to construct and contribute to a more just society. As such, the Club aims to make its performance more **sustainable** in all areas within its reach, both internally and externally, and become a benchmark.

In this context and in the environmental field, the Club has developed this **Guide to a Green Office**. It is aimed at promoting a change of habits in our employees to promote a more responsible, efficient and environmentally friendly use of resources in daily tasks at their offices.

This guide thus aims to be a tool for workers, providing them with information and guiding them in selecting the criteria they need to follow to choose and use their resources in the best possible way, in order to reduce our environmental footprint, both as people and as a Club.

We spend approximately **1,700 hours a year** at our jobs, except in exceptional circumstances. Through our commitment and awareness-raising efforts, we want our day-to-day actions to help us become a green office, with all the benefits that entails. This means being more efficient and therefore reducing energy consumption. Reducing, reusing and recycling as much material as possible to minimise waste and open up possibilities to carry out **circular economy** projects. This saves money and reduces any episodes that could arise and affect health. In short, we are determined to move towards a more sustainable society and a safer and healthier environment.



BECOMING A GREEN OFFICE

Our Club is a large organisation with hundreds of internal employees and other associates, who carry out a large number of activities in various places and in many ways. This involves a significant consumption of materials and energy. The number and selection of consumer goods that need to be incorporated to carry out these activities and the way we use them are fundamental to our environmental footprint. Defining and agreeing on basic criteria for these aspects is essential to moving towards greater sustainability for the Club.

Some general criteria:

- **Save** resources, energy and water. This includes both using them and, if we can, understanding the production process and choosing the one with the smallest environmental impact.
- **Efficient use** of materials, energy consumption and water use as a factor for optimisation and savings.
- **Careful and responsible use of the resources** we consume.
- **Reduce** produced waste establishing a prior comparison, if possible, between two alternative products that would meet our needs. Choose the option with the least environmental impact and avoid those that contain substances that are toxic or problematic to recycle.
- **Reuse** materials whenever possible (back side of a sheet of paper, etc.) and, if possible, do not use disposables (plastic cups, etc.).

- **Use** renewable resources that use renewable sources (solar-powered calculators, etc.). Refillable materials (pens, etc.). Recycled materials (paper, etc.). Repairable materials (that have spare parts, etc.). Long-lasting materials.
- **Discard the waste produced in categorised recycling containers** (paper, plastics and packaging, special waste such as toners, face masks, fluorescent bulbs, batteries, etc.).
- **Introduce environmental criteria** in the conditions of tender documents, contracts and authorisations.
- **Encourage a circular economy**, giving value to and reincorporating produced waste into the cycle as resources.

In short:

- **We should save** resources, energy and water.
- **We should avoid** disposables.
- **We should use products responsibly and efficiently.**
- **We should strive** to properly follow **categorised recycling** to dispose of the products we use and should eliminate the generation of non-recyclable waste from our activities.
- **We should use** recycled, long-lasting and easily repairable materials produced with renewable resources that can be incorporated into the **circular economy**. We give value to reusable materials.
- **We should increase** our **environmental awareness**.
- **We should reduce** our **environmental footprint**.

A few channels exist in our society to make it easier to apply environmental criteria to the products we consume. One of these are the various types of **certifications** guaranteeing that the materials, processes, services or functioning of the products purchased have been subject to controls that contribute to environment and sustainability-related improvements. Some of these are official **ecolabels**, which supervise and approve these formalities and guarantee certain and explicit standards. They facilitate and help ensure that the changes to be introduced are proven and truthful and promote the basic Green Office criteria. Some of the most common are:

ECOLABELS			PAPER	FURNITURE	OFFICE SUPPLIES	CLEANING	FOOD	WASTE MANAGEMENT	TECHNOLOGY
	BLAUER ENGEL	Certification from the German Federal Environment Agency	■	■	■	■		■	■
	NORDIC SWAN	Certification of the Nordic countries	■	■	■	■			■
	ECOLABEL	Certification from the European Commission's Directorate-General for Environment	■	■	■	■	■		■
	EMAS (Eco-Management and Audit Scheme)	Indicates that the organisation has implemented an environmental management system and quantifies it						■	
	FSC (Forest Stewardship Council)	Certification for wood products (indicates sustainable forest management)	■	■					
	PEFC (Programme for the Endorsement of Forest Certification)	Similar to the FSC, driven by the forestry industry itself, and with less demanding criteria	■	■					
	GARANTIA DE QUALITAT AMBIENTAL	Certificate from the Department of the Environment of the Autonomous Government of Catalonia	■	■	■	■		■	■
	TCO	Certification of the Swedish Confederation of Professional Employees to guarantee ecological and ergonomic standards							■
	ENERGY STAR	U.S. Environmental Protection Agency (EPA) programme to promote efficient electric appliances							■
	GREEN RANGE	Certificate based on FSC and PEFC certifications. It only covers paper that is 100% chlorine-free or 100% recycled	■						
	GREEN STAR SYSTEM*	Certification that assigns a number of stars based on FSC or PEFC certifications	■						

* The Green Star System has been developed by a European leader in paper distribution. This system allows the paper to be classified into different levels of eco responsibility, assigning it a number of stars according to its environmental credentials. It is based on the origin of the wood fibres and the manufacturing process of the paper and states that the pulp with which it is made must be FSC or PEFC certified or contain at least 50% of post-consumption recycled fibres. In addition, the factory where the pulp is produced must be ISO 14001 certified or the paper must bear the Ecolabel certificate of the European Union.

SUSTAINABLE PRODUCTS IN THE OFFICE

Some frequently used materials

Below, we propose improvements to various products and processes to reduce the Club's **environmental footprint**. Together with their implementation, we will achieve other goals such as improving the corporate image, reducing financial spending and receiving new sponsors.

PAPER

Paper is one of the most traditional mediums for work. That said, we increasingly use electronic media to digitise it and, consequently, reduce its use.

In our daily lives we use folios, envelopes, business cards, notebooks and other stationery. That is why it is essential to know the negative effects that their production and use can have on the environment.

The use of non-recycled paper involves a high consumption of resources such as wood, water and energy. In addition, it pollutes our wastewater and generates atmospheric emissions, mainly through the process of bleaching paper with chlorine. By focusing on eco-friendly products,

we can choose the most sustainable alternative for our environment. Certain ecolabels refer to aspects such as the origin of **raw materials**, the **emissions** produced during paper production, the process of **bleaching** paper, sustainable **forest exploitation**, the origin of the **paper paste**, and others. But not all are equally demanding. Here are some examples:

■ **Chlorine** is an element widely used in the paper bleaching processes, which consequently generates a large environmental impact.

The **ECF** seal indicates that the paper is free of elemental chlorine but uses chlorine dioxide instead, which is consequently dumped into wastewater.



On the other hand, the **TCF** seal indicates that no chlorine or any derivative has been used in the bleaching process.



■ Similarly, **pulp** can have many origins, from wood scraps or paper recycling processes to chemical pulp from logging.

KPI

Annual consumption of writing materials

In 2021, we consumed **720,000 pages** in the Club, which means a consumption of almost 2,000 pages per day.

711

PAGES/EMPLOYEE/YEAR



The **FSC** eco-label guarantees that the fibre used in the manufacturing process comes from sustainably managed forests, but is not subject to other requirements during the manufacturing process. It is important to understand the differences between the three types of FSC labels:

100% from properly managed forests indicates that the product comes from audited forests and confirms they are managed according to standards



Recycled: indicates that the products are made with 100% recycled materials



Mix: indicates that the products are made with a mixture of recycled materials and wood



Taking into account the considerations mentioned above, we at the Club want to implement the use of recycled and non-chlorinated paper that is certified with the Blauer Engel seal. This paper uses fewer resources during the manufacturing process than conventional paper:

-100% WOOD 

-72% ENERGY 

-83% WATER 

-53% CO2 

How can we contribute to the responsible use of paper?

- Minimizing its use.
- Use **recycled** and **non-chlorinated** paper in all stationery.
- Make **double-sided** printouts in "economic" quality.
- Digitise** documents, whenever possible.
- Reuse** the unused sides of paper before putting them in the paper bin.
- In files and folders, **avoid mixed** materials (i.e. plasticised) and prioritise cardboard or 100% recyclable materials instead of plastic.

If this is not possible, separate paper from the plastic and placing each material in the appropriate container.

- Use **recyclable packaging** for shipments inside and outside the Club (cardboard boxes, adhesive tapes and protective material made of renewable materials).
- Recycle** paper at the **categorised recycling** stations located in the office so it can be re-used.



PLASTICS

Plastic has become a material that is present in all aspects of our daily lives. Its mass use began in 1950 and has **grown steadily** since then. Alongside the objects we all have in mind, such as packaging, toys, credit cards, etc., there are other objects comprised of plastics, such as wood coatings and paints, among others.

Plastic's popularity stems from its low production cost, light weight and flexibility. But we must not forget the serious environmental impact of using this material. It is made mainly from oil and takes a long time to biodegrade. It not only pollutes the planet due to the manufacturing process, but also accumulates in the oceans and landfills.

In recent decades, there has been a growth in the use of bio-plastics as an alternative to traditional plastic. However, the terms **biodegradable** and of **biological origin** should not be confused. The former can decompose. The latter, on the other hand, are those made with sustainable raw materials such as cellulose.

Due to the wide variety of plastics available, a **classification** system has been defined to identify them through symbols. These consist of triangles with a number inside them (1-7) and letters at the base. The smaller the number, the easier it will be to recycle. Below are the 7 types, with examples of products where we can find them:

300

More than 300 million tons of plastic are produced each year

4%

4% of the **world's oil and gas production** goes to the manufacture of plastics



TYPE	APPLICATION	CHARACTERISTICS
	<ul style="list-style-type: none"> Bottles of soft drinks Water Cooking oil 	<p>The most common plastic and easiest to recycle Highly transparent and admits dyes</p>
	<ul style="list-style-type: none"> Cleaning products Milk bottles Yogurt containers Shampoo and shower gel 	<p>Easy-to-recycle plastic Very resistant to impacts, chemicals and temperature</p>
	<ul style="list-style-type: none"> Toys Medical equipment Cable coatings 	<p>Plastic difficult (but possible) to recycle Very resistant</p>
	<ul style="list-style-type: none"> Transparent thread Bags 	<p>Plastic difficult (but possible) to recycle Very resistant to impacts and chemicals</p>
	<ul style="list-style-type: none"> Bottle caps Food packaging (i.e. butter) Tupperware Pill packaging 	<p>Plastic difficult (but possible) to recycle Very durable and easy to mould</p>
	<ul style="list-style-type: none"> Disposable glasses and plates Food trays 	<p>Plastic difficult (but possible) to recycle Its exposure to heat releases chemicals</p>
	<ul style="list-style-type: none"> Computers Sunglasses 	<p>Plastic that is very difficult to recycle Its exact composition is unknown</p>

A campaign was launched in 2010 to support a bill, which was never passed, with the goal of banning plastic bags in California. This video, **“The Majestic Plastic Bag”**, uses a sarcastic and critical tone to explain the serious environmental problems arising from the use of plastics



View the video via this QR link

How can we contribute to the responsible use of plastic?

- Use this material as **little** as possible, avoiding single-use plastics.
- Recycle at **categorised recycling** stations.

WRITING MATERIAL

There are elements that have become indispensable in our working day and also in our daily life. A clear example are computers and other electronic devices. Still, we can't forget about the small (but no less important) **traditional tools**, such as pens, pencils, or highlighters.

The **environmental impact** of these elements is very small on an individual scale. However, we must be aware of the large number of them that we use, in order to take into account environmental criteria to choose and optimise their use.

Disposable PVC pens are commonly used and their ink has thickeners, organic solvents and heavy-metal dyes. One alternative is pens with a recycled plastic casing.

Fluorescent highlighters are very similar. They are usually disposable with a plastic housing, although there are refillable and dry fluorescent models.

Pencils usually use “lead” made of plastic, metal or wood. The wood is usually lacquered on the outside with paints that are harmful to health and the environment.

How can we contribute to the responsible use of writing materials?

- By trying not to **lose** them so often.
- Making the most of them** until the end of the ink or “lead”.
- Using pens and markers with **recycled plastic** or that are refillable.

- If **refillable** materials are used, by **placing orders** for the respective top-ups.
- Using markers with a **recyclable** housing or dry fluorescents.
- Using **unpainted** pencils or mechanical pencils.
- Avoiding individual packaging**, like in the case of cardboard and plastic blister packaging.
- Writing materials should be **left** in the **waste basket** if they have a mixture of materials that does not make it possible to recycle them properly.

GLUES, ADHESIVE TAPES AND CORRECTION FLUID

In the office, it is common to use glues, adhesive tapes and correction fluids, especially in the case of packaging, to stick paper or cardboard together and to correct text. In these cases, we use products like glue sticks, adhesive tape, correction tape and rubbers. In most cases, these items come in **plastic** containers. Some are **disposable**, as in the case of correction tape or adhesive tape. In addition, the contents may contain organic solvents, preservatives or plasticised products that will not make it possible to recycle the materials on which they are applied, such as paper or cardboard. As alternatives, we can choose refillable products, adhesive tapes based on cellulose acetate and water-based adhesive bars that improve the impact on our health and the environment. Up to **70% of solvents** in glues and correction fluids



In 2019, Club employees used a total of **4,647 pens**.

with organic solvents are toxic for our health. On the other hand, water-based ones contain cellulose, starch or rubber and use water as a solvent, making them free of organic solvents. Conversely, in some cases, they may contain preservatives such as formaldehyde.

How can we contribute to the responsible use of glue, tape and white-out?

- Use them only whenever it is **essential**.
- Close** glue after use to optimise its service life.
- Do not buy** tape with **single-use** roll holders.
- Avoid individual packaging**, as it entails a large volume of waste.
- Place this waste** in the waste bin.

PACKAGING

There are many departments in our Club. Consequently, there is an imperative need for these different areas to communicate in order to achieve optimal operation. These communications involve sending materials such as documents, sports equipment and office supplies, among others. We must avoid the use of plastic packaging and prioritise envelopes, cardboard and paper boxes, in order to reduce our **environmental impact**. To

seal the boxes, you can use recyclable tape and cut paper to protect the contents, if fragile.

These are the same criteria that we must demand from the suppliers we work with in order to jointly reduce our environmental footprint.

How can we contribute to the responsible use of packaging?

- Avoid** using **plastics** in the inner packing process.
- Use cardboard** boxes or **paper** envelopes and **reuse them**, when possible, for future internal shipments.
- In case of fragile materials, **avoid using** protective bubble wrap and replace it with sustainable **alternatives** such as pre-cut paper, which would mitigate potential impacts.

INFORMATION TECHNOLOGY

New technologies have changed many of our **habits**, both personally and professionally. We have adapted to new ways of working that have involved implementing **new tools** such as computers and data storage devices, among others.

About **1/3 of the world's plastic** is used as **packaging material**.



30 Google searches are equal to the energy required to **boil one litre of water**.



According to the Environment DG body of the European Commission, we produce between **17-20 kg of electronic waste** per capita in **Europe** each year.

The consumption and use of information technologies makes our daily lives easier. Along with sustainability, they play a key role in the present and future of the economy and compliance with the SDGs. But they must also increase their energy efficiency and environmental and social perspective by incorporating **green algorithms**. The manufacturing phase, data centres and electronic network infrastructures are what consume the most energy and emit the most carbon in the digital realm, regarding all types of electronic equipment.

Data centres consume a significant amount of energy worldwide, about 100-200 times more than common office buildings.

Computers and printers account for a significant percentage of atmospheric carbon emissions and, along with their increasingly shorter life cycle, have a high environmental impact. In some cases, suppliers offer the option to lease, in order to return the devices once they stop working or proceed with their purchase.

We use computers to create documents, attend video conferences, access information with a single click, and more. Many of these tasks have allowed us to reduce the use of resources such as paper or transportation, but are we really aware of the real impact of this digitisation process?

In the case of printers, we use toners that may contain preservatives, heavy metals or pigments

Before you buy a **mobile phone**, **90% of the total energy** it consumes has been used during its manufacturing process (taking into account an average service life of 2 years).



Information technology (**IT**) accounts for **4% of carbon emissions**. A 2019 study, "Lean ICT - Towards digital sobriety", predicts that the figure could increase to **8% by 2025**. If so, the IT sector would have a greater environmental effect than cars and motorcycles combined.

A study by the Japanese Ministry of Resources and Energy indicates that after air conditioning and lighting, **printing is the most energy consuming service in the office**, surpassing computers and servers.



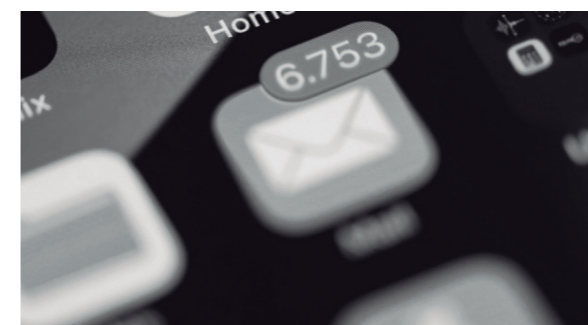
At the Club, we have a total of 150 printers and 1,191 computers. You may notice that some Lenovo computers have a CO2 Compensated logo. This is part of a Lenovo initiative that assesses the carbon emissions produced during the manufacturing, shipping and service life of computers. This amount is offset through its participation in projects overseen by the United Nations. Since this initiative was launched in 2021, more than 500,000 tonnes of carbon have been offset (equivalent to the emissions of more than 100,000 vehicles in one year).

with a certain degree of toxicity. For this reason, it is advisable to use models that allow them to be refilled, in order to extend their service life and reduce the volume of waste involved in this type of material.

Many electronic materials contain harmful substances such as mercury, lead and cadmium, among others. That is why it is important to recycle these devices correctly.

Email is one of the most widely-used working tools. For this reason, it is important to understand its contribution to climate change. Each of our emails is stored in three copies, on at least three different servers, for security reasons.

How can we contribute



According to a 2021 study, if the entire population of Spain deleted the **unnecessary emails** they had received, they would have prevented **820,000 tonnes of carbon emissions**.

to the responsible use of IT materials?

- Make **double-sided** printouts in an "economic" **quality**.
- Make **rational use of printing** in colour and on special paper.
- **Activate sleep mode** on the computer during work periods when we are not using it.
- **Turn off** the computer at the end of the working day.
- Regularly **classify** and **clean up** our inbox.

BATTERIES

Since the invention of batteries in the late 19th century, they have been evolving and continue



to do so, to the point that some of the most commonly used batteries not so long ago are no longer manufactured or are practically no longer in use. There are many types of batteries, and some of their components are a problem for the environment, as they contain heavy materials such as mercury, lead or cadmium. Currently, without going into details about shapes and sizes, a large subdivision can be made between batteries that are rechargeable and those that are not. Non-rechargeable batteries generate their own energy through chemical reactions, and the most popular are alkaline, saline (whose use is steadily dropping), lithium, silver oxide or zinc air. As we have already mentioned, since these chemical reactions are carried out using elements that can be highly polluting, batteries can have different degrees of toxicity. Rechargeable batteries are a good alternative for saving as they have a longer life than non-rechargeable ones, but they need to be charged beforehand to produce energy. Some are nickel cadmium (NiCd), nickel mercury (NiHg), lithium-ion, green oil and eco-friendly batteries.

Whenever possible, it is better to have a device connected to the mains than to use batteries, and if batteries are used, it is better to use rechargeable batteries for the reasons mentioned above. This is because batteries contain different components with different toxicities, when they are disposed of, they must always be separated into a specific container for batteries, and because manufacturing them



ENERGY

We have the privilege of living near the Mediterranean, where we have important sources of **renewable energy** at our disposal, which allows us to reduce our use of fossil fuels. The Club wants to promote this type of energy to **supply ourselves with energy** through the natural resources that surround us, such as the sun, wind, rainwater and geothermal energy, among others. This is an ongoing process and the Espai Barça project will make an important contribution to this.

Renewable energies are unlimited, but this aspect should not be confused with infinite availability or wasting such energy. For example, the resources needed to build solar panels and make them work (lithium, etc.) are also limited and scarce in nature. We must always use all natural resources **rationally** and optimise them to the maximum:

ELECTRICITY

At the touch of a button, we can now charge electrical appliances, turn on the heating or turn on a microwave. These small processes involve the use of electricity which can have multiple origins: **non-renewable** (coal, nuclear, gas, oil, etc.) or **renewable** (hydroelectric, wind, solar, geothermal, etc.). Fortunately, the contract the Club has for its electricity supply requires that the supply company provide 100% of the electricity that the Club receives from renewable source energies.

A clear example of when to pay special attention is in the case of air conditioning and heating, we must **avoid improper use** such as setting the temperature too low or too high or leaving the windows open during their operation, among others.

requires about 50 times more energy than they actually produce. There are some items, such as calculators, where we can choose a more sustainable version that is powered by the sun instead of batteries.

How can we contribute to the responsible use of batteries?

- 🔋 Whenever possible, **connect** to the electrical **grid** instead of using batteries.
- 🔋 Never **mix** old batteries with new ones, as the new ones recharge the old ones and the energy lasts less.
- 🔋 **Recycle** batteries in the corresponding container.
- 🔋 **Use rechargeable** batteries.
- 🔋 **Use** items with **alternative energy sources** to batteries.

cups made of plastics or mixed materials. On the other hand, food machines use a large amount of disposable plastic packaging.

Our goal as a Club is to become **more sustainable**. To do that, we need all of our suppliers and workers to collaborate. That is why it is a great idea to have our own bottles or cups in our workplaces to replace plastic or mixed material cups. For the rest of the packaging, we have **recycling points** next to the vending machines to make it easier to put this waste in categorised recycling.

It is up to us to make good use of the machines we have at our disposal.

How can we contribute to the responsible use of food and beverage vending machines?

- 🔋 **Use** our own **cups** or **bottles** at water fountains.
- 🔋 Correctly **recycle** packaging and containers, from vending machines, such as cans or bottles. Place them in the right bin.

FOOD AND BEVERAGE VENDING MACHINES

An increasingly common item in offices are food and beverage vending machines, which can be found throughout the Club's facilities. We must take care with the products they dispense and their **packaging**. Cold drinks mainly use disposable plastic containers and cans. We also have coffee machines or water fountains offering

Lowering the temperature of the heating in the office by 1°C can reduce energy consumption by 6%.



% of electricity from renewable resources

In 2021 the Club consumed 9,859,350 kWh of electricity in its facilities, 22.72% of which correspond to Camp Nou offices, Palau Blaugrana and Ice Ring, and 1.31% to Travessera Offices.



LIGHTING

Adequate lighting is essential to ensuring an **optimal work environment** without causing symptoms that are detrimental to our health such as vision problems, general fatigue and concentration problems. That is why it is extremely important to have an adequate level of **natural light** and to avoid overexposure to excessive artificial light. It is vital to incorporate intelligent lighting systems that allow us to use new technologies to optimise resources and ensure people's well-being. Some examples would be the installation of LED lights, which are more energy efficient than traditional light bulbs. Nonetheless, we should use digitisation to control energy consumption related to lighting and install motion sensors in low-traffic areas (toilets, dining areas, corridors, etc.) to optimise the use of artificial light.

How can we contribute to the responsible use of energy sources?

- ➊ **Set** the heating and cooling system to a reasonable **temperature**, 23–26°C in summer and 19–21°C in winter. Close the windows when these systems are operating.
- ➋ **Turn off** heating and air conditioning when leaving the rooms and/or at the end of the work day.
- ➌ **Take advantage** of **natural light** and turn off lights when not in use – efficient use of lighting.

Light quality affects both the **productivity** of workers and **energy savings**.



WATER

Water is life and one of the most important molecules on the planet, but it is limited. 70% of the Earth's surface is covered by water, although only 3% is fresh water. Of this, half is surface water and half groundwater. And only one third is available to living beings. Demand for this resource is growing, due to industry, agriculture and population growth. That is why **we need to manage it properly**, especially since rain is a scarce and unpredictable commodity in the Mediterranean climate, as it can rain a lot in a short time or nothing for weeks. This makes **groundwater reserves** unpredictable and a significant risk exists of a water deficit exacerbated by **climate change**. There are different water supply points that we use regularly in our offices. With common sense, we can use this important asset **rationally**. Shut taps off when you do not need the water and open

them to a reduced flow when a full flow is not necessary. Likewise, if you detect that a tap or toilet tank is leaking, notify maintenance so they can fix it. On the other hand, the ice rink, fridges and the groundwater that passes near Camp Nou show that water can be used as a sustainable part of the air conditioning of our facilities.

How can we contribute to the responsible use of water?

- ➊ **Use water responsibly**, avoid keeping the tap open when not needed. Save water.
- ➋ **Do not throw** any environmentally harmful products or paper towels into the toilet after drying our hands. Toilets are not a bin!
- ➌ **Install** double-load urinal cisterns.
- ➍ **Warn maintenance officials** if we detect leaks in taps or toilet tanks.

Annual water consumption

In 2021 the Club consumed 93,424 m³ of water in its facilities, 23.13% of which correspond to Camp Nou offices, Palau Blaugrana and Ice Ring, and 0.39% to Travessera Offices.



One **drop** of water dripping per second from a poorly closed tap means a loss of **1,000 litres/month** (1m³/month). As average daily water use in Barcelona is 105.5 litres/person/day (2015), a tap dripping for one month is the equivalent to 9.5 days of the average use in Barcelona. A poorly closed toilet tank loses between 150 and 250 litres/day.

WASTE: 3R STRATEGY

One of the main problems with waste are how much of it we generate and where to store it afterwards. **The best waste is never generated.** That's why it is essential to follow a strategy allowing us to optimise purchases based on our real needs in order to **reduce** the amount of waste we generate. In addition, it is vital to **reuse** products to extend their service life. This concept not only allows us to preserve the environment, but also our economy. If and only if we cannot reuse a material, we must **recycle** it correctly. That means using these products as raw materials to make new ones. There are specific cases where recycling is not an option due to the mixture of materials that make up the products. In that case, we place them in the general waste bin.

This reduce, reuse and recycle process for waste is known as the **3R strategy**, the ecological key to protecting and conserving our planet.

How can we contribute to the 3R strategy?

- Change our **mentality** about using the individual bins under the table. We usually place a mixture of materials there, meaning we do not properly recycle them.
- Know the location of all of the office's **recycling points**, including those located in the spaces designed for eating.
- Cardboard is a very bulky waste, please **fold** boxes before recycling them.
- Separate**, whenever possible, the different components of some materials to recycle them (e.g. paper envelopes with plastic window, staples/paper clips, etc.) and avoid placing them in general waste bins.
- Special care** must be taken with printing material like toners, as some of their components may be **toxic**. Empty toners



Proper use of the **categorised recycling points** will allow us to reduce our **environmental impact**.



The video **"Change your world"** shows a vision of the world in which we live and the need to change our way of thinking in order to recycle and preserve the environment.

should be placed in the appropriate containers, using gloves when necessary.

- Remove** spent batteries from electronic office supplies that use them and **recycle them** correctly. Some of these materials may be obsolete for us, but not for other areas of the planet, and can thus be reused.

- Face masks require **specific treatment**. That is why we must **avoid placing** plastic bags or other materials in bins designed for masks.

Which waste can we place in the different categorised recycling points you can find throughout the Club:

	Plastic and packaging	Paper and cardboard	Organic	Glass	General waste	Face masks	Toner	Batteries
YES	<ul style="list-style-type: none"> ✓ Bottles and plastic containers ✓ Cans ✓ Plastic cartons ✓ Plastic tops and tin ✓ Aluminium and EPS trays ✓ Plastic wrap and aluminium foil 	<ul style="list-style-type: none"> ✓ Paper ✓ Cardboard boxes ✓ Newspapers and magazines ✓ Paper bags 	<ul style="list-style-type: none"> ✓ Food leftovers ✓ Used napkins and paper towels ✓ Tea bags 	<ul style="list-style-type: none"> ✓ Glass bottles and containers 	<ul style="list-style-type: none"> ✓ Broken glass ✓ Non-recyclable office supplies (calculators, headphones, USB drives, pencil sharpeners, pencils, pens, markers, scissors, staplers, adhesive tape, packaging tapes, self-adhesive labels, rubbers, etc.) 	<ul style="list-style-type: none"> ✓ All kinds of face masks 	<ul style="list-style-type: none"> ✓ Toners 	<ul style="list-style-type: none"> ✓ Batteries
Deposit all containers without any food leftovers								
NO	<ul style="list-style-type: none"> ✗ Computer products with ink 	<ul style="list-style-type: none"> ✗ Plastic cartons ✗ Laminated paper 	<ul style="list-style-type: none"> ✗ Aluminium foil 	<ul style="list-style-type: none"> ✗ Bottle caps ✗ Broken glass 	<ul style="list-style-type: none"> ✗ Recyclable materials 	<ul style="list-style-type: none"> ✗ Face mask packing (plastic/paper) 	<ul style="list-style-type: none"> ✗ Other stationery 	<ul style="list-style-type: none"> ✗ Devices containing batteries



MOBILITY



The Club wants to minimise the **emission of gases** involved in climate change by promoting sustainable mobility—not only among its workers, but also its members, fans and its amateur and professional teams. The aim is to reduce its **environmental footprint** and contribute to mitigating the climate crisis by becoming a model and example for society to follow.

The transport sector is one of the largest emitters of carbon to the atmosphere. Mobility also entails other equally important problems, such as the deterioration of air quality, loss of natural habitats due to the construction of infrastructure and noise pollution from different means of transport.

This issue is relevant enough to deserve its own section to specify which actions will be taken in the short and long term.

How can we contribute to the responsible use of transport?

- ➊ **Avoid unnecessary travel** and take advantage of digital tools allowing us to make video calls.
- ➋ **Move** on foot whenever possible.
- ➌ **Use public transport.**
- ➍ If we use **means of individual transport**, **prioritise** ones that do not emit atmospheric gasses, like bicycles or scooters.

HEALTHY OFFICE ENVIRONMENT

While working in an office has always been considered safe, working people have to deal with **occupational hazards** like headaches, vision or joint problems, among others. These small risks can be avoided by taking measures that are within our reach. The office environment is a combination of factors like lighting, temperature, humidity, air quality, workplace design, cleanliness, and others. If we can find a **balance** between these factors, we can maintain a healthy work environment.

LIGHTING

We encounter factors on a daily basis that directly condition our well-being, both personally and professionally. A clear example is **sunlight**, which we humans, animals and plants depend on in order to live. In addition to playing a key role in our biorhythms, it is a key factor in the planet's climate

and affects our productivity during the workday.

The right combination of natural and artificial light will create an **optimal work environment** that prevents harmful effects like fatigue, headaches or concentration problems.

AIR QUALITY

In Europe, we spend an average of 80% of our time indoors, whether in the office, at home, or on public transportation. For this reason, we must take the air quality of these places into account, which is why the Club has incorporated CO2 concentration metres in the offices. The air in enclosed spaces can be between two and five times more polluted than outside. This aspect is due to inefficient **ventilation**. **Plants** are a good alternative to renew air indoors and reduce pollutant particles in the air.



A 2014 study from the University of Exeter in the United Kingdom showed that the presence of **plants** in the office **increases** the **productivity** and **well-being** of workers.



The **nuisances** caused in the **workplace** by factors like poor ventilation and lighting, inadequate temperature and humidity, air pollution and psychological factors like stress, lead to **disorders** in the people's health that affect their **everyday lives**.

HUMIDITY

Humidity is the amount of water vapor in the air. The optimal range is between 30 and 70%.

CLEANING

Our offices are busy areas. That is why it is essential to use cleaning products to maintain a clean and safe environment. Some of these products contain harmful chemicals and, along with their packaging, have a negative impact on the environment and our health. The Club has now introduced cleaning products that do not

use **products that are harmful** to health, thus reducing their environmental impact.

FOOD

Food accounts for one third of our environmental impact. This is because we consume products that come from other parts of the world or use large amounts of energy and/or synthetic fertilizers to grow. To reduce our environmental impact, the Club wants to promote the use of **local products** and replace single-use containers offered at different various food-vending points with biodegradable ones. At the same time, we



are gradually incorporating different actions to combat **food waste** in our facilities.

Global food production, including transportation, is responsible for 26% of greenhouse gas emissions.

So, it is necessary to generate a **healthy work environment**, by providing ergonomic work tools and a safe space, in order to optimise our performance during the working day. Apart from materials, the "people" component is very important. That's why we must carry out communication and training actions for all workers (regular medical check-ups, promotion of exercise and a healthy diet, etc.).

How can we contribute to a healthy office environment?

- Take advantage of **natural light** and turn off lights when not in use.
- Open windows and doors for short periods of time to allow for proper **ventilation**.
- Use **humidifiers**, when necessary.
- Take 10-minute **pauses** for every hour worked to improve performance.
- Do simple **exercises** in the workplace.
- Use environmentally friendly **cleaning products**.
- Correctly **recycle** the packaging of food consumed in the Club facilities.
- Use **bottles** and **glasses** and avoid using disposable cups or bottles.

We have designed this Guide to a Green Office as a **new tool** for all the Club's workers, whether external or internal, in order to improve our **environmental awareness** on an individual and collective level. Only by moving forward together will we be able to build a **more sustainable Club**.



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