# TER Calibration Ltd
# Environmental System and Policy

## Every improvement no matter how small adds to make a better world for the future


**TER Calibration Ltd in the first zero-energy cost Business Park in the UK using the very latest technologies**

## General Policy Statement

It is the policy of TER to continually improve our environmental performance, set our rigorous environmental targets and surpass any targets set by our customers. TER also adheres to all national legal environmental requirements.

# Present Position – Successful Initiatives

### 1. Wind Turbine

Simply a wind turbine converts wind power into electricity that can be used locally or exported to the National Grid, unlike a windmill which uses the wind to drive specific machinery. The chosen wind turbine will generate 20,000kW of electricity per annum and save 11 tonnes of CO2 per annum.

### 2. Photovoltaic Panels

Essentially roof mounted panels collect solar radiation. Inverters convert the direct current into usable alternating current. Some 8,400kW of electricity will be generated this way for tenants to use. Any surplus energy will be sold to the National Grid. These photovoltaic panels will save 4.6 tonnes of CO2 per annum.

### 3. Solar Hot Water Heating

This renewable technology involves roof mounted solar collectors heating water and storing it in a very well insulated cylinder to be used by tenants for showering and washing. To encourage cycling to work, the hot water cylinder can always be topped up from the Air Source Heat Pump if required. Solar hot water heating will save 0.9 tonnes of CO2 per annum.

### 4. Transpired Solar Collector Heating

This renewable technology uses solar radiation to deliver naturally warmed fresh air into a building with no moving parts, minimal energy running costs and minimal CO2 emissions. It is achieved by an additional layer to the cladding system with perforations

drawing in warm air to heat the internal space. It works in conjunction with the warehouse heating through an intelligent Building Management System (BMS), saving 2.7 tonnes of CO2 per annum.

### 5. Transpired Solar Collector Cooling

To improve tenant comfort during warm periods, this technology takes the heat striking the outer cladding away from the building, as warm air rises through the cladding system and is ventilated. Bypass dampers can be used to cool the concrete floor slabs during the night time.

### 6. Rainwater Harvesting

Essentially, rainwater harvesting is the accumulation and storing of rainwater for reuse to flush toilets, vehicle washing and landscaping. The introduction of rainwater harvesting saves money and the associated carbon cost of water and it also helps local drainage in times of heavy rainfall. Simple filters ensure that leaves and debris do not enter the storage vessels and in times of low rainfall, each tank can be topped up from mains supply, but this is not expected to happen.

### 7. High Efficiency Warehouse Heating

With the transpired solar collector providing the majority of the heat load requirement, gas fired heaters are merely used as a top up on days when there is insufficient heat from the transpired solar collector. Naturally, the chosen gas fired units are 100% efficient in converting the gas into heat energy and fully controlled by the intelligent Building Management System (BMS). High efficiency warehouse heating saves 0.4 tonnes of CO2 per annum.

### 8. Air Source Heat Pump

Offices are fitted with an air source heat pump as a way of providing very efficient office

and toilet space heating, plus top-up heat to the solar hot water heating cylinder. The chosen heat pumps provide four units of heat energy for every one unit of electricity they consume (i.e. 400% efficient). The Photovoltaic panels provide this electricity, saving cost and carbon emissions to provide office heating.

### 9. LED Internal and External Lighting

Energy efficiency at its best with positive Health and Safety implications. LED light is a solid-state lamp that uses light-emitting diodes (LEDs) as the source of light, reducing energy consumption by almost 80% from traditional lighting. Daylight sensors and Passive Infrared (PIR) based motion detectors, further reducing the cost of running the lighting by 4%, especially when combined with good quality and plentiful roof lights. LED lights last longer (reducing the time employees spend working at height replacing bulbs) and provide more natural 'daylight' light to improve comfort. LED lighting will save over 4 tonnes of CO2 per annum.

### 10. Heat Recovery Ventilation

Office and toilet areas incorporate a high efficiency heat exchanger to transfer heat energy from the extract air to the incoming supply air. This minimises the heating load required to each unit. High levels of insulation and exceptionally high standard of air tightness mean buildings become less ventilated. This form of energy efficiency provides that air in the most energy efficient way, reducing costs.

### 11. Energy Efficient Control System

Sophisticated control systems and full Building Management System's (BMS) are being provided to maximise the efficiency of the warehouse and ancillary heating systems. They include optimum start / stop, weather compensation controls and automatic cut-off switches for warehouse heating when the doors are open. Full training will be given to each tenant and an easy to follow manual for help.

### 12. Improved U Values

A “U” value is the measurement of the rate of heat loss through a material. Each material chosen has been challenged to improve the thermal efficiency of the buildings. In addition to material selection, thought has been given to how the materials join. All “U” Values are an improvement to 2010 Building Regulations, some improved by 58%, reducing energy consumption and costs. It includes triple glazing for each unit.

### 13. Automatic Monitoring and Targeting

One of the most significant tools to reduce and understand energy use because without knowing where energy is consumed, we do not know how to reduce it. Tenants will be able to see on a screen in their business unit exactly what energy is being generated on site at any one time and exactly what energy is being consumed in their business unit at any one time. This energy use will be broken down into heating, lighting and operational use with many meters around the business unit measuring 'real time' information. Software will help to prove the savings and help tenants with continual improvement.

### 14. Electric Vehicle Charging Point

With electric vehicles achieving up to 3 times more miles per gallon than the most efficient petrol or diesel cars / vans and with motor manufacturers improving their range, tenants will be able to charge electric vehicles, with energy generated on site, significantly reducing operation costs.

### 15. Air lock

In order to retain the air temperature, humidity and other conditions in the building while the roller shutters are used, the building has an air trap. This significantly reduces the workload required by the temperature/humidity maintenance systems when the doors are used.

## Policy Objectives

TER ensure that we meet all legal requirements for all countries and places where we operate. We will ensure any licence requirements are in place.

To have support for environmental improvement initiatives at all levels of the company from the Board down.

To include environmental improvement objectives as part of TER's integrated business & marketing plan.

To educate staff on The Environment and to show that even small initiatives accumulate to produce significant effects.

TER believes it is important to provide training regarding environmental improvement initiatives. Expert training is targeted at the 'Environmental Officer' and general training for all other members of the company.

TER believes it is the responsibility of all members of staff to strive to find ways of improving the environment.

Where possible TER will change processes to improve the company's environmental performance.

Where applicable, reusable items will replace disposable items.

TER believes in compliance with present and future legislation regarding environmental issues.

## Policy Personnel

TER believes that all staff members are responsible for meeting our environmental goals.

It is the responsibility of the environmental officer to make company members aware of impacting issues, existing policy and new initiatives. Furthermore, the officer has authority to escalate environmentally impacting management decisions up to board level. It is also the officer's duty to advise company directors of environmental issues.

It is therefore the overriding responsibility of the board of directors that TER achieves the goals relating to this policy document.

## Resource Management - Policy Statements

To attempt to be more efficient in our use of energy by improving building insulation, assessing the efficiency of our heating control systems and making power consumption one of the key specifications for our buyers when purchasing new Electric and Electronic calibrators.

To develop our IT systems and move further towards a paperless system.

To utilise re-cycled products e.g. paper, printer cartridges, and product packaging.

To purchase environmentally friendly products; avoiding CFC's.

To ensure that TER's fleet of vehicles is maintained to the highest standards in order to reduce fuel consumption, and emissions.

To promote defensive driving practices for drivers, holding regular reviews where best practices i.e. accelerating, braking, cornering, and carrying are assessed.

TER encourages a no smoking policy by restricting and rigorously enforcing the areas within the company where smoking is permitted.

## Environmental risk assessment?

Assess the likelihood that a TER action, process or procedure is causing harm to the environment. Describe potential hazards and impacts before taking precautions to reduce the risks.

Risk Assessment Process:

1. identify any hazards
2. describe the harm they might cause
3. estimate the probability of occurrence and identify precautions
4. record the results of the assessment and implement precautions
5. review the assessment at regular intervals

Consider

- waste storage and disposal
- emissions, e.g. dust and other substances to the air including vehicle emissions
- hazardous substance storage, use and disposal
- liquid waste drainage and disposal
- environmental impact of raw materials
- environmental impact of packaging
- energy usage
- water usage

## Incident Reporting

TER will maintain a database of any/all environmental incidents and near misses. Incidents will be reported and the management of TER will use Root Cause Analysis to investigate the incident. A preventative action plan will be put in place along with a system of reminders.

Reporting Process

1. **Incident Description**: Gather and document the details of the incident.
2. **Identification of Causes**: Identify the factors that contributed to the incident.
3. **Identification of Changes**: Then determine necessary organisational and process changes to prevent similar incidents.
4. **Learning: Finally**

**Reporting**
If a member of staff, supplier or any interested party becomes aware of an incident or potential incident (near miss) then they should report this to the TER Environmental Officer.

1. The TER Environmental Officer will log the incident in the environmental log book. ENVlog.doc.
2. The TER Environmental Officer will determine if the incident is reportable under legislation.
3. Establish a category (Near miss, environmental impact causing loss of time, environmental impact causing lasting damage, direct injury to a person or to people (also causing H&S incident).
4. The TER Environmental Officer will determine the level of reporting and escalation.
5. The TER Environmental Officer will log and work to implement the follow-up actions.

## Review Period
This policy document will be reviewed at least every two years.

## Contributing to Environmental Accountability
By ensuring compliance with all legal obligations and those higher voluntary standards to which we subscribe.

Through setting objectives and targets for continuous improvement and by measuring and constantly reviewing our performance (i.e. our BS EN ISO 9002 accreditation).

By engaging with, listening and acting upon the input of all our customers and employees.

To include health, safety, and environmental performance in the appraisal of staff and reward accordingly.

We expect everyone who works for TER to take responsibility for living up to our commitments concerning environmental and social responsibility. All employees are fully accountable for policy implementation and must provide assurance on compliance for their specific areas of responsibility.

## Amendments from previous policy
No Amendments

## Issue

Date: 15/07/24

Review Date: 14/07/25

Number: ENVPOL24v1

Officer: Alastair Slinn

*Details of environmental projects can be obtained from the TER Calibration Ltd.