

Thomson Terrace Allotments C.I.C.

Fair-Use Water Policy and Water Saving Techniques

1 Objective

- 1.1 To ensure long-term water sustainability for the Allotment, this policy mandates the use of harvested rainwater as the primary water source for all plots. Water is a shared resource. By utilizing winter and spring rainfall, plot holders can significantly reduce reliance on the metered mains supply during the critical growing season, troughs running dry during long periods of high temperature and reduce the overall cost of water to the allotment. For 2026-27, all plot holders are required to have a clean and operational rainwater collection system in place by 31st August 2027,
- 1.2 To implement a **“Rainwater First” Policy**, Every plot should have sufficient rainwater harvesting capacity to make harvested rainwater the primary source of irrigation throughout the growing season. Mains water troughs are intended for new seedlings only and as supplementary water during prolonged dry periods or exceptional weather conditions.
- 1.3 **To implement a £4/pole Annual Water Surcharge (£40 for 10-pole plot, £20 for 5-pole plot) for any plot not complying with 1.1 and 1.2 above.** Payment for annual water surcharge will be due 1st September 2027 and 1st September in subsequent years.
- 1.4 To build greater long-term resilience into allotment growing as we experience higher and higher summer temperatures. As the climate changes we are at risk of hose pipe bans, shutting off any access to water for growing.
- 1.5 To promote water-saving innovation, including no-till methods, mulching, drought-resistant crops, and wind barriers. Initiatives will be shared via the TTACIC website and WhatsApp.

2 Purpose

- 1.1 The purpose of this policy is not to eliminate the use of mains water. Rather, it is to ensure every plot has sufficient rainwater harvesting capacity to make rainwater the principal source of irrigation throughout the growing season.

3 Rainwater Collection and Storage Requirements

- 3.1 All plot holders are required to install, maintain and utilize a rainwater collection system as the first source of all watering, “Rainwater First”, on each plot by 31st August 2027. Failure to do so will result in the Annual Water Surcharge (See 1.3).
- 3.2 New tenancies starting after 1st September 2026 will have requirements stipulated in their plot holder agreement.
- 3.3 **Minimum Storage Requirement** The minimum rainwater storage capacity for each plot is based on three principles:
 - a. the size of each plot, which determines typical irrigation demand. Where plot holder have multiple plots, each plot has separate capacity requirements;
 - b. the objective of storing approximately one month's peak summer water requirement;
 - c. the ability of the available roof area (or other approved catchment surface) to refill the storage during the autumn and winter rainfall period.
 - d. This approach provides a fair and consistent method of determining storage requirements while recognizing that different plots have different layouts.

3.4 The required minimum storage capacity is calculated using:

- a. **Required Storage (litres) = Peak Monthly Water Demand × Resilience Factor**

Where:

Peak Monthly Water Demand = 150 litres per pole per month***

Base Resilience Factor = **1.0** (approximately one month's peak irrigation demand but is higher for other plot/watering use conditions. See 3.4d)

- b. This produces the following minimum storage capacities.

Plot size	Minimum Rainwater storage***
5 poles or less	750 litres (rounded to 800 litres min)
6 poles	900 litres
7 poles	1,050 litres
8 poles	1,200 litres
9 poles	1,350 litres
10 poles	1,500 litres

- c. *****Additional Storage Requirements for higher water use demands.** Plot holders to review their personal plot/watering use and increase the **Resilience Factor** in the above formula by the following factors for each of the following criteria:

- extensive cultivation under polytunnel/greenhouse increases irrigation demand-**increase Resilience Factor by .2;**
- poultry require regular water supplies-**increase Resilience Factor by .2;**
- irrigation regularly exceeds the standard estimate of 150 litres per pole per month-**increase Resilience Factor by .2;**
- monoculture plots where any one crop > 30% of coverage -increase Resilience Factor by .2 **increase Resilience Factor by .2;**
- the plot holder wishes to increase resilience during prolonged dry periods- **increase Resilience Factor by as needed;**
- The Committee may make individual plot recommends for increased storage where repeated high water trough use demonstrates that the standard provision is insufficient.

- b. **Additional Storage - Worked Example:**

For a 10-pole plot with a greenhouse(+.2) and hens(+.2), your

Resilience Factor is 1(for Base)+.2(for Greenhouse)+.2(for hens)=1.4

The minimum required storage would be:

10 poles x 150 litres per pole per month x 1.4 Resilience Factor = 2,100 litres.

- 3.5 **Roof Catchment Requirements.** Plot holders should provide sufficient roof or "**catchment canopies**" to replenish the required storage capacity during the winter recharge period. The minimum combined roof plus catchment canopies area shall be 5m².

- a. Annual rainwater collection is estimated using:

$$\text{Collected Water} = \text{Annual Rainfall} \times \text{Roof Area} \times \text{Collection Efficiency}$$

Using the long-term average annual rainfall for Oxfordshire of approximately 650 mm and an efficiency of 80%, every square metre of roof can collect approximately:

520 litres per year

- b. Approximate annual collection is therefore:

Catchment area	Water collected/year
5 m ²	2,600 litres
8 m ²	4,160 litres
10 m ²	5,200 litres

- c. For plots with no structures or insufficient roof area to meet catchment area: the plot holder must install auxiliary "**catchment canopies**" (e.g., corrugated roofing or tarpaulin frames- minimum area 5m²) to ensure winter recharge.

3.6 Technical Standards:

- Tanks must be opaque, dark-colored or provided with tank covers to prevent algae growth.
- Plot holders are required to maintain permanent rainwater collection structures with fitted with functional, well-maintained guttering connected to the storage tanks to avoid water leaks.
- Plot holders are required to annually clean and re-connected to guttering by November 1st each year to capture winter recharge.

4 Usage Hierarchy & Best Practices

- 4.1 **"Rainwater First"** Rule: Rainwater stored water is the primary source for all irrigation. Mains water (water troughs) is reserved exclusively for supplemental use once storage is depleted.
- 4.2 The Committee expects compliant plots to meet the majority of their irrigation needs from harvested rainwater. Mains water trough is intended only to supplement rainwater during prolonged dry periods.
- 4.3 Efficiency Measures:
 - Watering the soil at the base of plants (under their foliage), using a can, (without rose) will direct more water towards their roots.
 - If you water in the middle of a sunny day, much of the water will evaporate before reaching your plants. If you can water early (before the ground gets hot) or late (after the sun has set) your plants' roots will have more chance to absorb the water
 - The "Mulch First" Rule:** Plot holders are required to mulch crops (using straw, compost, chop and drop or leaf mould) before the arrival of June to reduce the evaporation of stored water.
 - Consider no-dig or no-till methods preserve water moisture.
 - Introduce more diversity in planting so to diminish water demand of found with monoculture planting. Maximum of any one crop is limited to 30% of site coverage.
 - Keep water trough lids closed to reduce evaporation of tanks.

1. Performance Data (Rainfall Collection vs. Watering Demand)

- 1.1. **Water demand** varies according to weather, soil type and cultivation methods. The estimates below represent a typical growing season using good water conservation practices including mulching and watering directly to the soil.

Plot size	Estimated annual demand	Peak monthly demand
5 poles	2,500 litres	750 litres
10 poles	5,000 litres	1,500 litres

- 1.1.1. Plot holders using substantially more water may require additional storage or may be encouraged to adopt further water-saving measures. See 3.4c.

1.2. Rainwater collection Calculation

- 1.2.1. Oxford receives approximately 650mm of rain per year.

Assuming an 80% collection efficiency:

Each square metre of roof can collect approximately 520 litres of water each year.

6 Compliance

- 6.1 Monitoring: The committee will conduct routine inspections to ensure guttering is functional and tanks are correctly installed.
- 6.2 Enforcement: Failure to maintain the minimum storage capacity or evidence of persistent reliance on mains water troughs without reasonable rainwater harvesting capacity will result in formal warnings. Persistent non-compliance may lead to the loss of tenancy.