

1. Farm overview & risk context

Farm name:

Location:

Date completed:

Completed by:

Current farm system

- Enterprise(s):
- Total area (ha):
- Irrigated crops? (circle or highlight) YES / NO
- Livestock types:

Key past impacts (e.g. previous droughts or water related events):

2. Water sources & supply security

Question	✓ / ✗ / N/A	Notes (location, condition, risks)
Does your main water supply on farm come from mains?		
Do you have multiple water sources? E.g. mains water, surface water abstraction (rivers/burns), on-farm pond or irrigation lagoon, borehole, etc.		
In the past ten years, have any of your water sources been impacted by low flow/capacity following changing weather patterns (e.g. dry periods)?		
Do you monitor water availability seasonally?		
Do any sources run low or dry in summer? (If so, list which ones)		
Do you abstract from rivers, burns, or groundwater?		
Is your current authorised abstraction volume suitable for your needs?		

Key risks identified:

3. Water storage capacity

Storage is critical to buffer drought risk and capture winter rainfall.

Question	✓ / ✗ / N/A	Notes
Do you have on-farm water storage (tanks, lagoon)?		
To date, has this storage been sufficient for peak demand?		
Can you store winter rainfall for summer use?		
Do you regularly check and maintain your tanks/lagoons?		
Is stored water protected from contamination?		
Are tanks covered to reduce evaporation?		

Estimated storage capacity (m³): _____

Notes on storage gaps:

4. Water demand & efficiency

General efficiency

Question	✓ / X / N/A	Notes
Do you monitor / meter water use?		
Have you compared / benchmarked your water use or efficiency against similar farm enterprises?		
Have you identified opportunities to use water more efficiently on farm?		
Are leaks regularly checked and repaired?		
Do you monitor near-future weather forecasts and SEPA water scarcity updates to determine if water applications are required?		

Livestock

Question	✓ / X / N/A	Notes
Have you calculated peak livestock water demand? ¹		
Are troughs sufficient in number and size?		
Are there leaks or overflow issues?		
Are troughs shaded to reduce evaporation?		
Have you considered how changing weather patterns may reduce water availability to livestock on farm?		

¹ For a useful guide, see [DairyCo - Effective Use of Water on Dairy Farms: The Dairy Farm DIY Full Water Audit Pack](#).

Irrigation / cropping

Question	✓ / X / N/A	Notes
Do you irrigate crops or pasture?		
Do you monitor time spent irrigating? Associated energy costs?		
Do you have a scheduling plan for applying water to your land?		
Do you think your current irrigation system is the most efficient for your business requirement?		
Have you changed your irrigation methods to improve water efficiency, such as drip irrigation (where relevant)?		
Have you checked you are using the correct pipe and nozzle sizes on irrigation equipment?		
Do you monitor soil moisture? (e.g. real-time sensors or other methods) ²		
Do you base your irrigation schedule by utilising monitoring tools such as soil moisture gauges/ monitoring predictive tools?		

² A map of water availability based on soil type can be found here: Map of available water capacity <https://soils.environment.gov.scot/maps/thematic-maps/map-of-available-water-capacity/>

5. Soil & land management (water retention)

Healthy soils improve water holding capacity and drought resilience.

Question	✓ / ✗ / N/A	Notes
Are soils regularly assessed (e.g. compaction)?		
Are fields prone to drought stress identified?		
Do you use cover crops or diverse rotations?		
Is organic matter actively managed?		
Do you practice grazing management for drought tolerance (e.g. rotational, higher residuals, multispecies swards)?		
Do you minimise soil disturbance (reduced tillage)?		

Opportunities to improve soil water retention:

6. Natural assets & landscape features

Trees and habitats can reduce heat stress and improve water retention.

Question	✓ / X / N/A	Notes
Do you have hedgerows, shelterbelts, or trees?		
Are there shaded areas for livestock?		
Do you have ponds or wetlands present on your farm?		
Are there opportunities for agroforestry?		

7. Drought preparedness & contingency planning

Question	✓ / X / N/A	Notes
Do you have a drought plan (rationing, scheduling, storage, rotations)?		
Do you have a backup water source?		
Have you planned for livestock welfare in heat?		
Do you coordinate water use with neighbours?		
Do you receive weather or SEPA alerts?		
Do you have back up water supply in times of water shortage?		

8. Infrastructure resilience

Question	✓ / ✗ / N/A	Notes
Are pipes and troughs in good condition?		
Are pumps and systems regularly maintained?		
Are systems resilient to failure (backup pumps, power)?		
Do you have a rainwater harvesting system in place?		

9. Compliance & regulation (Scotland-specific)

Question	✓ / ✗ / N/A	Notes
Do you have the suitable authorisation registered with SEPA for your needs?		
Do you comply with Environmental Authorisations (Scotland) Regulations?		
Are you aware of water SEPA abstraction restrictions which may apply to you in times of water scarcity?		

10. Risk scoring (overview)

The following overview on how to conduct a farm drought risk assessment is taken from the [Centre of Expertise for Waters \(CREW\) guide: Planning for Water Scarcity](#). For detailed guidance on how to complete a full assessment, follow the link to access that resource.

Farm drought risk assessment: 5-step process infographic.



Step 1 – Understand your local hazard (p27-28, 76-78).

- Check SEPA Water Scarcity (May-Sept)
 - Check [Drought Risk Assessment Tool \(DRAT\)](#) consecutive low-flow days
 - Log past restrictions and seasonal hotspots
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Step 2 – Assess your exposure (p28-30, 79-80).

- Map water sources and uses
 - Meter peak day demand
 - Identify high-value irrigated crops and stock needs
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Step 3 – Assess your vulnerability (p31-33, 81-82).

- Storage days of cover = storage – peak demand
 - Backup sources; soil rooting
 - Efficiency: leaks, pressure
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Step 4 – Build your drought risk profile (p83-85).

- Score hazard/exposure/vulnerability
 - Overall risk
 - Set triggers
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Step 5 – Test your resilience (p85-88).

- Tabletop plus live drill
 - Water budget
 - Rationing rules and neighbour rota
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11. Action plan

Based on your risk assessment above, what priority actions (next 12 months) could make the most difference? Many of these are highlighted as key adaptation actions for Scottish farms facing water scarcity:

- Increase water storage (e.g. reservoirs, tanks)
- Improve irrigation efficiency
- Enhance soil organic matter
- Introduce drought-tolerant crops
- Expand tree cover / shade
- Collaborate locally on water use

Action	Priority (H/M/L)	Timescale	Notes

Longer-term actions (1–5 years)

Action	Notes

12. Review & update

Next review date:

Changes since last audit:

Appendix: Farm water sources and uses map

A space below is provided for you to draw a map of your farm's water sources, storage, and uses. This can be an accurate / to scale map of your farm, or more of a schematic which just depicts your water system.

Important aspects to consider in drawing your map include:

- Sources, including back-ups or emergency measures
- Storage (or future opportunities for storage, e.g. low areas where a new pond or storage lagoon may be applicable)
- Meters and places you collect monitoring data
- Water infrastructure requiring routine maintenance or checks (pipes, pumps, tanks, reservoirs)