

Application to install new Irrigation Systems

Includes – Conversion from border-dyke to spray, new irrigation, & upgrading of existing systems

Company Name: Lower Waitaki Irrigation Company Ltd
PO Box 327
Oamaru 9444
Michael Lane (Race Manager) 027 220 2172

New Irrigation and Current Irrigation System Upgrades Process:

1. **Discuss with Race Manager** before contracting an irrigation designer to ensure you have all the necessary information needed. If new conversion, a Point of Take and engineering involved with the Point of Take will be discussed.
 - The Race Manager will then give you the required forms for the Designer to fill out
2. **Contract a Designer:** All new irrigation systems must be designed and installed according to “the Irrigation Code of Practice and Design Standards”
3. Submit to LWIC for **Design Audit:**
 - **This Application form** filled in by Shareholder/Designer (incomplete applications will not be accepted)
 - **LWIC Irrigation System Design Details** Spreadsheet
 - **Design Plans** (see check box page 3) including effluent area (if applicable)
 - Technical data on any **back flow prevention valves** (if spreading effluent via system)
4. **Site Approval** by Environmental Manager
5. A **Design Approval Certificate** must be obtained before any construction starts
6. Once construction finished LWIC to be informed and a **Commissioning Report** must be submitted to LWIC
7. A Company letter will then be sent to Shareholder of sign-off conversion or upgrade

Date of Application _____

Applicant Details:

LANDOWNERS NAME _____

PHYSICAL ADDRESS _____

POSTAL ADDRESS _____

TELEPHONE HOME _____ MOBILE _____

EMAIL _____

| Application Type | Tick (Type) | Area Ha | No Shares |
|------------------------|--------------------------|---------|-----------|
| Conversion BDK – spray | <input type="checkbox"/> | | |
| Upgrade system | <input type="checkbox"/> | | |
| New irrigation system | <input type="checkbox"/> | | |

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LWIC system information for Designers

Water allocation and flow meters

- LWIC shares are allocated on a per hectare basis, where 1 share corresponds to 1 ha of irrigation. Irrigators cannot irrigate more hectares than the number of shares they hold.
- The flow allocation per share depends on whether the land is new irrigation development or is being converted from border dyke to spray.
- LWIC has 2 classes of share 'A' shares and 'B' shares. All new irrigation shares are 'B' class shares.
- Maximum instantaneous allocation rates can vary depending on location and soil types of individual properties as set out in the Aqualinc allocation guidelines for LWIC.

Table 1: Instantaneous flow allocation rate.

| Description | Allocation L/sec/ha | | |
|--|---------------------|-----|-----|
| New irrigation 'B' shares | 0.40 | | |
| Spray conversion from 16-day return border –dykes (A shares) | 0.45 | .50 | .55 |

LWIC Requirements

- Designers should be aware of the **number of shares that farmers hold** and ensure that the irrigated area and the **maximum instantaneous flow rate comply with LWIC requirements.**
- All systems require **ECAN compliant electronic flow meters** be installed at the point of supply from LWIC's distribution. This measures the rate and volume of water delivered to the property. The installation and cost of flow meters will be the shareholders responsibility. Flow meters will remain the property of the landowner and will require calibration checks every 5 years at the cost of the owner.
- **Backflow preventors** must be installed for any effluent application
- **Effluent application** must be included in the design plans and there is to be no effluent spread closer than 20m from an irrigation race and 50m from a waterway
- LWIC will supply and install **Telemetry data loggers** on pump flow meters, these units will remain the property of LWIC all maintenance and running costs will be covered by the Company. Individuals will be given a personalised login and username to access pump flow data and place water orders.
- All irrigation system upgrades, and conversion **must comply** with Regional and District Council Rules and Consenting requirements.

Design Audit

- Designs maybe checked by an independent consultant such as Aqualinc prior to approval.
- Please ensure any newly irrigated land meets National Environmental Standard rules, talk to LWIC staff if you are unsure. Designers are also responsible for ensuring the system complies with any necessary land use/ or discharge consents and meets any other legal requirements

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- The design audit covers allocation, irrigation efficiency and environmental impacts. It does not involve an independent review of cost, durability, reliability, and maintenance requirements. The cost of this Audit will be covered by the landowner.
- Designers must complete and return the **LWIC Irrigation System Design Details** spreadsheet which should include all information in the information checklist below.

Table 2: Design Audit Information Checklist

| Description | Included (tick) | N/A (tick) |
|---|--------------------------|--------------------------|
| Designer contact details | <input type="checkbox"/> | <input type="checkbox"/> |
| Location plan of farm | <input type="checkbox"/> | <input type="checkbox"/> |
| Plan(s) of irrigation system (see plan information below) | <input type="checkbox"/> | <input type="checkbox"/> |
| Effluent/Fertigation/ chemigation - system | <input type="checkbox"/> | <input type="checkbox"/> |
| | Write value | |
| Instantaneous maximum water supply rate (l/s) | | |
| Daily power requirements(kW-hr) | | |

Table 3: Design Compliance Checklist:

| Description | Complies (tick) |
|--|--------------------------|
| Irrigated area (ha) \leq Number of LWIC shares | <input type="checkbox"/> |
| Maximum flow rate from LWIC distribution \leq Table 1 allocation | <input type="checkbox"/> |
| magFlow meter included | <input type="checkbox"/> |
| Irrigation efficiency \geq 80 % | <input type="checkbox"/> |
| Complies with Regional Council rules and applicable Resource Consents are obtained | <input type="checkbox"/> |

Table 4: Design Plans Checklist:

| Design Plan(s) of irrigation system should include: | Complies (tick) |
|---|-----------------|
| The point of supply from the LWIC distribution (generally located at the pump) | |
| Irrigated area clearly marked and total calculated | |
| Location of mainline pipes and pumps | |
| For centre pivots, pivot circles/ part circles/ extendable corner arms | |
| For travelling irrigators, hydrant locations and irrigator runs | |
| K-lines, long laterals, solid set, and fixed grid hydrant location | |
| If applicable: - detailed map showing application area of effluent/chemigation /fertigation | |

Ideally, irrigation plan(s) should be overlaid over an aerial photograph or topographic map

Submit to LWIC for Design Audit:

Lower Waitaki Irrigation Co Ltd

Document Name: P06.1 Application Form to Convert

Version: 16.0

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- This Application
- LWIC Irrigation design details** spreadsheet filled in by the Designer
- Design Plans
- Back flow prevention valves technical data (if applicable)

Once Design Audit approved a **Design Approval Certificate** will be given and construction can commence.

General Conditions:

1. The point of take and engineering for such has been approved by the LWIC Race Manager.
2. The Company will carry out a health and safety evaluation on the proximity of pump intakes to irrigation structures prior to work being undertaken.
3. The operator of the spray irrigation system will be required to place **water orders online** regarding starting and stopping of spray irrigation so as to enable race operators to distribute water effectively and efficiently when and where as required. Spray irrigation is only more efficient if we do not run excess water past your turn out that cannot be captured and is lost to the sea.
4. It is a compulsory requirement that all spray irrigation systems that incorporate the application of fertiliser's, chemical or effluent have a back-flow prevention valve installed to avoid contamination of company races. **All technical data on back flow prevention valves** must be supplied to LWIC with the application form.
5. All Otago Regional Council and Waitaki District Council rules have been followed

I _____ of _____ **Agree too and accept the above general conditions of this application.**

Signature _____

Date / / 2023

Please contact LWIC's Race Manager Michael Lane on 027 220 2172 or email racemanager@lowerwaitakiirrigation.co.nz if you have any questions or require help to complete this application form .