

Feasibility Study (Section 78, Municipal Systems Act 32 of 2000)

Provision of Leiwater (Irrigation Water) in Barrydale via the Barrydale Leiwater Association (External Mechanism)

Municipality / Water Services Authority	Swellendam Municipality
Service / Activity	Leiwater (irrigation water) conveyance and distribution within Barrydale
Proposed mechanism	External mechanism: Service delivery agreement with Barrydale Leiwater Association
Prepared for	Municipal Council and Administration
Prepared by	Municipal Manager
Date	27 March 2026
Status	Draft for consultation

Executive Summary

This feasibility study is compiled to support a decision in terms of section 78 of the Local Government: Municipal Systems Act, 32 of 2000 ("Systems Act"), regarding the future mechanism for provision of leiwater (irrigation water) services in Barrydale. The envisaged arrangement is that the Barrydale Leiwater Association ("the Association") will in future provide the leiwater service through an external mechanism, in terms of a service delivery agreement with the municipality as the relevant authority.

The Systems Act requires that, after the municipality has considered internal provision (section 78(1)–(2)), and if it wishes to explore external provision, it must (i) give notice to the local community, (ii) assess external service delivery options, and (iii) conduct/commission a feasibility study that must be taken into account when deciding the service delivery mechanism. This document sets out the required feasibility components for an external mechanism, tailored to the leiwater context.

Key preliminary conclusions (to be confirmed through consultation, costing and due diligence):

- The leiwater service is best treated as a local, geographically defined municipal service/activity with clear users, assets and operating rules, suitable for an external mechanism with strong community governance.

- The Association model can enhance sustainability and responsiveness, provided that governance, accountability, minimum service standards, safety, and financial reporting are formalised in a service delivery agreement.
- Municipal risks (legal compliance, asset stewardship, public safety and environmental compliance) can be managed through a contract, performance monitoring, and defined escalation protocols.
- A phased implementation approach is recommended, starting with formalisation of the operating model, verification of assets and user register, and agreement on tariffs/charges and maintenance responsibilities.

Note: This is a draft feasibility study template populated with project-specific narrative where possible and with placeholders where municipal/Association information must still be confirmed (e.g., asset lists, costs, user numbers, tariff/charge model, and consultation results).

1. Introduction and Purpose

The purpose of this document is to provide a legally aligned feasibility study to inform a municipal council decision on the appropriate mechanism to provide leiwater (irrigation water) services in Barrydale, with a specific focus on the option of external provision via the Barrydale Leiwater Association.

1.1 Scope, boundaries and assumptions

Geographic scope:

The town of Barrydale lies in the Tradouw valley approximately 60 kilometres east of Montagu and 50 kilometres north of Swellendam (Fig. 1). The Tradouw valley lies at the geographical point of transition from the Overberg to the Little Karoo. Barrydale is cradled by mountains on all sides - to the south and west by the Langeberg mountains which divide it from Swellendam and on the other sides by the slightly smaller 'rolling' mountains typical of the Little Karoo. The Huis Rivier, or Tradouwshoek Rivier as it is also called, and various smaller mountain streams flow through the Tradouw valley, their sources being mainly in the Langeberg mountains to the south of Barrydale.

Although Barrydale lies on the interface of the Overberg and the Little Karoo, the climate and consequently the vegetation tends more towards that of the Little Karoo than that of the Overberg. The valley lies slightly too far north of the Swellendam mountain range to catch most of the rain that falls along that mountain belt in the winter months. The fynbos, which grows in such proliferation along the Overberg mountain range, effectively ends at the

north-eastern foothills of the Swellendam mountains and is replaced by the low shrubs and succulents of the Little Karoo. The ground is generally dry, rocky and hard although the banks of the Tradouwshoek Rivier for most of its length comprise good fertile land. Being in a low rainfall area, 355-400 mm per annum, has meant that Barrydale has traditionally relied on the rivers that flow out of the surrounding mountains for both its drinking and its irrigating water. The availability and access to water has therefore been a significant factor in the formation and development of Barrydale. The degree of its importance can be seen in the considerable attention paid to the control of water rights in the founding agreement signed by the van Coller brothers on 17 January 1878 (see Addendum A).

The schematic below indicates the oldest map of dry and wet erven of Barrydale:

Figure 15: Water and Droë-Erwe.



(Source: VASSA Journal by Stephan Dugmore)

SERVICE SCOPE

The Leiwater system is guided by the Swellendam Municipality's By-Law on Leiwater, Attached as Addendum B to this report. There are 123 erven that currently receives leiwater. In some cases, the right to leiwater is entrenched in the title deeds of the respective policies, whilst in other cases there is an annual application period where slots are awarded according to availability.

The irrigation water is channelled through a sluice system, with each property owner responsible for the maintenance of the channels that run over their property. Not every property that contains a part of the channel, is allowed to receive/use leiwater.

The Municipality is responsible for the maintenance of the overall system of the leiwater channel, the management of the leiwater system and the enforcement of the applicable by-law. The revenue of the leiwater goes to the Municipality and levies for the leiwater is annually determined within the municipal budgetary process.

Raw water resource management (allocation/licensing) remains subject to national water law and lawful authorisations.

- **Institutional scope:**

It should be noted that in some sections the leiwater channel system doubles as stormwater channels.

The Municipality employs one full-time labourer to manage the leiwater system, whilst management oversight is provided by the Manager: Roads and a Supervisor in Barrydale.

Once a year there is an application process to determine the user time table and allocation. Whilst certain erven contains a right to leiwater in their Title Deeds, slots are also allocated to other's if slots are available..

The allocation of user rights is determined in collaboration with the Barrydale Leiwater Association. The latter has become more and more active in the day to day management and maintenance of the Leiwater system, in recent years, due to capacity shortages within the municipal staff complement and the fact that leiwater is not seen as a core service by the Municipality.

Though the Municipality is responsible for leiwater maintenance, there is not sufficient funds to undertake this. The system is in significant disrepair, especially the channel system from the source, main dam and the beginning of the user erven. The Barrydale Leiwater Association has been clearing the overgrown channels and repairing the upper channels for the last three years, with some assistance of the Municipality.

Swellendam Municipality levies leiwater fees on a monthly basis.

The Barrydale Leiwaterr Association is a legally competent entity able to contract, hold a bank account, keep records, and comply with applicable law.

The Barrydale Leiwaterr Association documentation is contained in Addendum C.

- **Exclusions:** this study does not replace any required water use authorisations, environmental authorisations, or engineering designs; it focuses on the service delivery mechanism decision and feasibility at municipal level.

2. Legislative and Policy Framework

This feasibility study is primarily guided by Chapter 8 (Municipal Services) of the Systems Act, and specifically sections 76 to 78, which govern how a municipality must decide on an internal or external mechanism for providing a municipal service.

- **Section 76:** A municipality may provide a service through an *internal mechanism* (within its administration) or an *external mechanism* (via a service delivery agreement with another entity).
- **Section 77:** Triggers when a municipality must review/decide on a mechanism (e.g., when a service is significantly upgraded/extended, when required by planning/performance review, or when requested by the community).
- **Section 78(1):** Requires an initial assessment focused on internal provision (costs/benefits including environment and health; municipal capacity; ability to reorganise; development and employment impact; labour views).
- **Section 78(3):** If the municipality decides to explore external provision, it must notify the community, assess external options, and conduct/commission a feasibility study covering costs/benefits (including environment and health), prospective provider capacity, community views, development/employment impacts, and labour views.
- **Other applicable legislation:** Depending on the final model, the municipality must also comply with procurement and financial management requirements (including the MFMA where applicable), labour legislation, occupational health and safety requirements, and national water and environmental legislation relevant to abstraction, conveyance and discharge (as applicable).

2.1 Institutional roles and definitions (project-specific)

Role	Description for this project
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Municipality Council	/	Decides on the service delivery mechanism; approves service standards and the service delivery agreement; monitors performance.
Municipal administration		Conducts/commissions Section 78 assessments, manages consultation, negotiates and administers the agreement, monitors compliance.
Barrydale Leiwat Association		Proposed external service provider responsible for operation and maintenance of the leiwat distribution system as defined in the agreement.
Leiwat users properties	/	Beneficiaries/users who receive scheduled irrigation water turns; pay applicable charges/fees and comply with operating rules.
Organised labour		Represents municipal employees potentially affected if the service is provided externally; must be consulted and their views considered.
Regulators (water/environment)		National/provincial authorities responsible for water use, ecological reserve, environmental compliance and related authorisations (as applicable).

3. Background and Current Service Arrangement

Barrydale has a historically established leiwat system that conveys irrigation water to properties through a network of canals and/or pipelines, controlled by valves, sluices and scheduling rules ("beurte"). The system supports household gardens and small-scale/agricultural production, and forms part of the town's cultural heritage and local economic activity.

Swellendam Municipality has been managing the Leiwat system in collaboration with the Barrydale Leiwat Association in recent years, sharing the maintenance burden with the Association.

3.1 Existing assets and system description

Leiwat is provided from the Rooi Dam in Barrydale and is only available in times when there is water flow available. Leiwat is not seen as an essential municipal service, but the right to leiwat is entrenched in several title deeds of properties. The leiwat system also doubles as stormwater channels in certain areas. Although the system's management is the overall responsibility of the Municipality each property owner is responsible for the leiwat channel portion that runs over their property.

3.2 Users, demand profile and service levels (to be confirmed)

Number of user properties: 123

Typical service level: scheduled irrigation turns once a week according to an allotted time table and subject to availability and operating rules.

There is peak demand during summer months, with regular maintenance shut down periods and rationing takes place if water levels are low.

4. Problem Statement, Need and Objectives

In recent years the maintenance of the leiwater system has been severely lacking. This can be ascribed to the system being very old; some even that actively used the leiwater allotment, not using their rights and the fact that this is not seen as a basic core municipal function. With municipal funding pressure, maintenance, especially in the upper region of the system, was lacking.

The Barrydale Leiwater Association has been partnering with the Municipality and assisted with guidance on the scheduling of the timetable for users; interfaced with the users to resolve day to day queries and conflict and over the last three years, actively partnered with the Municipality on the maintenance of the leiwater channel system.

During engagements with the Leiwater Association the option of the Leiwater Association managing the system on behalf of the Municipality was mentioned. This option will allow the Municipality to focus on their core competencies, as Barrydale has a very limited staff complement. Swellendam Municipality will remain the Water Service Authority, with the day to day operations still to be guided by the Leiwater By Law and a service level contract with the Association.

5. Service Delivery Mechanism Options (Section 76) and Shortlisting

In terms of section 76 of the Systems Act, the municipality may provide the leiwater service through an internal mechanism or an external mechanism. The following options are typically relevant for a leiwater service:

Option	Description	Notes
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Option A (Internal)	Municipal department/business unit operates and maintains the leiwater system, with direct municipal staffing and budgeting.	Requires municipal technical capacity, clear asset register, operational procedures, and funded maintenance plan.
Option B (External – CBO/Association)	Service delivery agreement with a community-based organisation / users association (Barrydale Leiwater Association) to operate and maintain the system.	Requires legal personality, governance, financial controls, performance standards, and municipal oversight.
Option C (External – contractor)	Municipality appoints a private contractor to operate/maintain the system under contract.	May increase cost; requires procurement and contract management; community governance is weaker unless designed in.
Option D (External – another organ of state/municipality)	Another municipality or organ of state provides the service under an agreement.	Usually less practical for a local leiwater reticulation system; may be considered if regional capacity exists.

For purposes of this feasibility study, the primary focus is Option B (external mechanism via the Association).

6. Section 78(1) Internal Mechanism Assessment (Summary)

Before selecting an external mechanism, section 78(1) requires the municipality to assess internal provision.

The Municipality provides the service with one general worker responsible for the day to day management of the system, whilst two senior officials, a Barrydale supervisor and the Manager: Roads responsible for overall oversight. When maintenance work is to be conducted it is done by the work team of Barrydale and involves more workers and the leasing of digger loaders and other heavy equipment. Due to the age of the system, the maintenance of the system within the build-up area have increased significantly which required pipe replacement.

The billing and collecting of fees are undertaken by the financial department's back office. Queries on the day to day workings are tended to by the Manager: Roads and the Manager: Water and Sanitation.

The income and expenditure for leiwater for the 2025/26 financial year can be seen as Addendum D.

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It should be noted that the leiwater system doubles as stormwater channels in the build up area of Barrydale and as such the Municipality will have to retain involvement in the management of the system, even if it is to be provided by an external party.

The Municipality has a positive relationship with the Barrydale Leiwater Association, with the latter assisting in resolving day to day issues amongst users and providing supervision and own funding towards maintenance.

The maintenance plan of the stormwater/led water channel management on the site includes the following:

1. Inspection and maintenance of all stormwater pipes/channels on the site by the water supplier on a weekly basis.
2. Regular inspection by the S&S supervisor of all stormwater outlet pipes, manholes, and open channels.
3. Weekly inspection at the red dam/led water dam to physically verify the dam level.
4. Inspection and maintenance of the outlet pipes downstream from the red dam/led water dam.
5. Prune overgrown vegetation near stormwater inlets and outlets to prevent blockages and maintain access (this excludes the irrigation channel on private land).
6. Address any structural damage, erosion, or leaks immediately to maintain system integrity.
7. Routine maintenance should be carried out quarterly, with additional inspections after major storms. Emergency response procedures must be in place for unplanned events such as floods or system interruptions.

8. Document all maintenance actions, inspections, and repairs for compliance and monitoring purposes.

9. Notify the Barrydale irrigation water users association immediately should any defects/mismanagement of irrigation water on private property be observed.

10. This plan does not replace the agreement between the municipality and the irrigation water users association. It is purely for the operational management of the stormwater system to ensure its effectiveness.

The current maintenance request for the leiwat system can be seen in Addendum E.

7. Section 78(3) External Mechanism Feasibility Study

7.1 Notice to the local community and participation process

Section 78(3)(a) requires notice to the local community of the municipality's intention to explore external provision. The Municipality will advertise their intention to contract the Barrydale Leiwat Association to manage the Leiwat system per public notice. The inputs of organised labour will be solicited via the Local Labour Forum engagements.

7.2 Assessment of external service delivery options (Section 76(b))

The municipality must assess different external options. For leiwat, the most realistic external options are a community-based association (users' association) and a contracted operator. The assessment below provides a structured comparison.

The Barrydale Leiwat Association is a legal entity that manages the interest of the leiwat users. They are involved in the allotment and scheduling of the leiwat turns and recently have been funding and undertaking much needed maintenance of the leiwat system. They have a proven track record and thorough knowledge of the leiwat system and its requirements.

Over the past three years they spend in excess of R50 000 of own funds on the maintenance and upkeep of the leiwat channel system.

The Barrydale Leiwat Association is recognised in the By Law on Leiwat and the option to outsource the management of the leiwat system to them, is recognised and provided for in the specific by law.

Should the Barrydale Leiwat Association by contract take over the management of the leiwat system they will be responsible for the scheduling and management of the leiwat turns; day to day queries and management as well as the maintenance of the system. They would have to determine and levy fees for the use of the system and collect these funds themselves. Should the Barrydale Leiwat Association take over the management of the leiwat system, the income derived from the leiwat user tariff, will go to them and no longer to the Municipality.

The Municipality will be obliged to make a contribution towards the maintenance of the system in as far as it concerns the stormwater function.

7.3 Feasibility components (as required by Section 78(3))

7.3.1 Direct and indirect costs and benefits (including environment and human health)

Swellendam Municipality do not have any planned capital projects as far as the leiwat system is concerned. The direct maintenance cost as well as staff complement cost is available in the financial annexure.

There is no environmental, occupational health and safety or other risk to the Municipality should the Barrydale Leiwat Association take over this function. The importance of the protection of the heritage value and incident management, can be managed through a service level contract. Swellendam Municipality will remain the Water Service Authority in the area. The Municipality will lose the income derived from the leiwat levies, but will save on the salaries and administrative operations regarding leiwat management.

By outsourcing the management of the leiwat, the Municipality will be freed to concentrate on its core municipal functions.

7.3.2 Capacity and potential future capacity of the prospective service provider

The Barrydale Leiwat Association has proven that they have the internal capacity to undertake the maintenance and management of the leiwat

system. They have historical knowledge of the management of the leiwater system; are familiar with seasonal requirements, have proven ability of stakeholder management and is a legal entity.

Amongst their members they have a senior Health and Safety Practitioner.

As the Municipality will remain the Water Services Authority, the Service Level Agreement will require certain service level standards and reporting requirements.

7.3.4 Likely impact on development, job creation and employment patterns

The leiwater system can support local development by enabling irrigation for household food security, small-scale agriculture, and the amenity value of gardens that contribute to town character and tourism. The chosen mechanism should maximise local economic benefit without compromising safety and sustainability.

It is foreseen that the Barrydale Leiwater Association will employ local labour for certain periods to undertake the maintenance of the system..

7.3.5 Views of organised labour

If the shift to an external mechanism may affect municipal employees, organised labour must be consulted and their views considered. The views of the Local Labour will be secured through the Local Labour Forum.

8. Proposed External Mechanism: Service Delivery Agreement Outline

If the municipality selects the Association as external mechanism, the relationship must be formalised through a written service delivery agreement that sets standards, responsibilities and accountability. The agreement should include, at minimum, the elements below.

- **Parties and legal status:** municipality and Association; authorised signatories; definitions.
- **Service description and boundaries:** assets and area covered; what is included/excluded.
- **Service standards and KPIs:** scheduling rules, response times, planned maintenance, water losses, incident reporting.
- **Asset ownership and responsibility:** asset register; responsibilities for renewal/rehabilitation; handover and return conditions.

- **Financial arrangements:** user charges/fees; municipal contributions (if any); budgeting; banking; audit; reporting.
- **Customer/user management:** user register; complaints handling; dispute resolution (beurte conflicts).
- **Health, safety and environmental compliance:** risk assessments; safety near canals; pollution prevention; emergency response.
- **Monitoring and enforcement:** municipal oversight arrangements; performance reviews; penalties/remedies; step-in rights.
- **Duration and renewal:** contract term (e.g., 3–5 years) with review points.
- **Termination:** triggers, cure periods, and continuity plans.

The Service Level Agreement will be concluded after the public participation process on the Section 78 process have been completed and will be advertised for public input.

9. Financial Considerations and Tariff/Charge Principles

Should the function of the Leiwat be outsourced to the Barrydale Leiwat Association, it will be expected of the Barrydale Leiwat Association to follow a public participation process amongst their leiwat users to determine annual tariffs to be levied. The levies should be sufficient to cover the full operational costs of the leiwat function.

Swellendam Municipality is expected to annually contribute a maintenance fee, to be consulted between the parties, as a contribution towards stormwater management as the system doubles as a stormwater system in the build up areas.

10. Risk Assessment and Mitigation

The Municipality will remain the water services authority with the Barrydale Leiwat Association as the water service provider in so far as it pertains to leiwat in Barrydale. All risk will be managed by a service level agreement according to contract management principles.

11. Implementation Plan

The Municipality intends to advertise the intention to outsource the management and operation of the Barrydale leiwat system to Barrydale Leiwat Association. Subject to the outcome of the public participation process, the Municipality will deliberate on the outsourcing of the service at the end of May 2026.

12. Recommendations and Draft Council Resolution Framework

Recommendation : Subject to completion of the outstanding confirmations and consultation record, it is recommended that Council approve the provision of the leiwater service in Barrydale through an external mechanism, namely a service delivery agreement with the Barrydale Leiwater Association, provided that the agreement includes clear performance standards, financial governance, asset management responsibilities, and municipal oversight.

Addendum A

Appendix

Original Agreement

VOORWAARDEN

Waarop de Bezitters van TRADOUW'S HOEK een voornemen zijn een gedeelte van hunne Woonplaats en aangrenzenden Grond in Erven te verkoopen, ten einde een Nieuw Dorp te stichten.

Zij het kennelijk dieu het moge aangaan.

Wat wij Ondergeteekenden, PETRUS JOHANNES VAN COLLER en ADOLPH JOHANNES VAN COLLER, als Bezitters voornemd aan den eenen kant, en DE WEL-ERW. HEEREN A. MACGREGOR, S. HOFMEYER en den Ouderling des Heer JAN DANIEL DE WET, als Commissie tot vermeerdering van Gemeenten in den Swellendamischen Ring aan den anderen kant, overeengekomen zijn:

TEN EERSTE. De Ondergeteekenden nemen aan, de Erven van het Nieuwe Dorp met den Weigronde, zoo als aangewezen is, te doen opmeten en verkoopen voor hunne eigene Rekening.

TEN TWEEDE verbinden zij zich om den vollen stroom Water van de plaats Tradouw's Hoek af te staan aan gemeld Dorp Drie en een Half dagen ($3\frac{1}{2}$) en Drie (3) Nachten, beginnende met Donderdag Morgen ten 6 Ure tot Zondag Middag ten 12 Ure van Elke Week, het Water te leveren bij de Dammen in de Rivier. Verder zal in de overige dagen en nachten der Week Drinkwater naar het Dorp moeten loopen, als volgt:

In de Watervoor aan de Noord Zijde van het Dorp Twee en een Half Duim ($2\frac{1}{2}$), en in de Watervoor aan de Zuidzijde van het Dorp ($1\frac{1}{2}$) Een en Een Half Duim door Sluizen, waarvan de Gaten minstens Zes Duim onder de oppervlakte van het Water moeten geplaatst worden, en de Watervoor niet breeder te zijn dan Twee Voet.

Verder verbinden zij zich om den Dorpsbewoners toe te staan de Waterslooten over de plaats loopende tot naar de Dammen schoon en in goede reparatie te houden tegen Water-verspilling, en beloven daarin behulpzaam te zijn.

TEN DERDE verbinden zij zich om de noodige Erven voor Kerk en Pastorie af te staan aan den in der tijd te kiezen Kerkeraad der op te richten Gemeente, of een daartoe door den Ring te benoemen Commissie.

TEN VIERDE verbinden zij zich elk Erf te verkoopen met een jaarlijksche Belasting van (10s.) Tien Shillings Sterling per Erf, ten behoeve van het Predikants Salaris in der tijd, betaalbaar van af den Verkoopdag.

TEN VIJFDE verbinden zij zich ten slotte het ($\frac{1}{10}$) Een Tiende van het Netto Bedrag van den Koopschat van Erven af te staan aan den Kerkeraad, ten behoeve der Gemeente of aan bovengemelde Commissie.

De tweede Ondergeteekenden keuren bij dezen goed, op bovengemelde Voorwaarden, het aanleggen van een Dorp, op de Plaats Tradouw's Hoek, door bovengenoemde Bezitters. Aldus overeengekomen te Tradouw's Hoek, op heden, den 17den Januari, 1878.

Als Getuigen:

Get. M. KANNEMEIJER,
J. S. P. BRUWER.

Geteekend:

P. J. VAN COLLER	Eerste
A. J. VAN COLLER,	Ondergeteekenden.
A. McGREGOR,	
S. HOFMEIJER.	Tweede
J. D. DE WET	Ondergeteekenden.