

## 4 Programme Development

Figure 4.1: Overview of the complete programme (Author July 2021)  
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### Development of the Silverton Tannery

With the establishment of the South African Union in 1910, a newfound nationalism emphasised industrial development in Pretoria as small-scale leather tanning were largely undercut by cheaper imports from Australia (Naude & Naude 2007:53). The supply of imported leather dwindled during the First World War, allowing locally produced and manufactured leather products to be favoured out of necessity (Naude & Naude 2007:53).

With most of the leather tanneries in South Africa residing in the Cape at the time, the Silverton Tannery was opened in 1915 to take advantage of the economic and political opportunity, cementing Silverton (and by extension Pretoria) at the forefront of the leather tanning industry (Naude & Naude 2007:54).

The Silverton Tannery was directly connected to the NZASM eastern railway line towards Maputo and other major harbours enabling it to become South Africa's most sophisticated and largest tannery (Naude & Naude 2007:54). Unfortunately, during the 1980's, managerial decline, and environmental pressures, saw the Silverton Tannery converted into the current industrial park consisting of smaller diverse industries (Naude & Naude 2007:56).

### Development of new programmes

Historically, the Silverton Tannery played an instrumental part in the development of Silverton, paving the way for technologically advanced leather tanning processes. As the Silverton Tannery no longer exists in function, leather dyeing is to be reintroduced to Silverton by realigning it to natural dye processes.

One of the leading factors leading to the downfall of the Silverton Tannery was the environmentally unsustainable use of chemicals and heavy metals in the tanning and dyeing process. The re-introducing

of the leather dyeing programme through ecological processes indicates the possibilities of aligning industrial and natural processes. As a complementary programme, leather dye making will also take place, with the effluent from both programmes feeding into a bio-filter.

The new programme activating the Silverton cemetery mediates between the natural process of decay, mourning and time by introducing the industrial process of resomation. This process reduces the decomposition time of conventional burial to mere hours by utilising water at intense temperatures and pressures, resulting in an industrialised natural process. The programme is proposed as an experiential alternative to the clinical cremation process and as such, does not replace it.

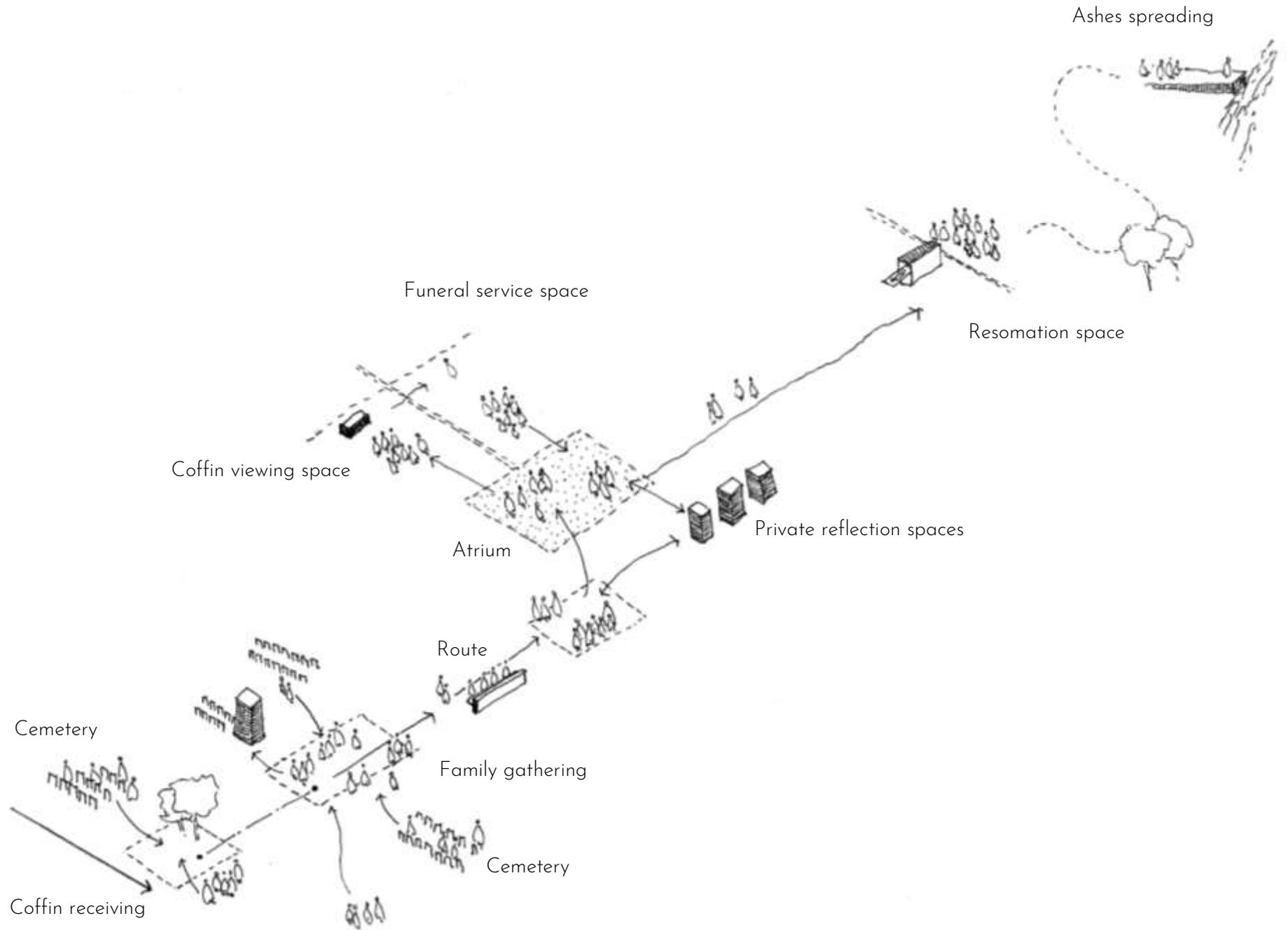


Figure 4.2: Overview of resomation route programme (Author November 2021)

## Programme - Resomation Route

## **Resomation route**

### **Coffin Receiving and family gathering spaces**

Connecting to the existing side-road of the Silverton Cemetery, the first space in the resomation route is dedicated to the handover of the coffin from the hearse to the awaiting close family. An additional administration office space is allocated to facilitate the administrative duties for the families.

### **Broader family gathering space**

With the handover of the coffin to the closest family members, the broader family and friends gather in a separate route, acting as a welcoming party and support for the journey to come.

### **The route to the funeral spaces and coffin viewing space**

The resomation route slowly descends into the ground, simulating the symbolic burial of the loved one, along with the family and friends. Once completely “buried” the procession has the opportunity to cleanse their hands and feet in preparation for the funeral ceremony and coffin viewing.

### **Funeral and coffin viewing space**

As the first main spaces on the route, the funeral service space and coffin viewing

space grants the family and friends the spaces to reconcile and confront the loss of their loved one individually or collectively. With the wet leather dripping dye water into the funeral and coffin viewing space, a patina of various colours and textures are stained into the wall, reminding of the hope for colour and vibrance in life after the departure of a loved one.

### **Atrium space linking to the ground floor leather facility**

The central atrium space connects the overhead leather drying space to the resomation route and serves to introduce the smells of the tanned leather (earthy and slightly musty) as a reminder of the process of burial and death. Seeing the leather hanging overhead, metaphorically connects to the death of the cow and possible new growth that can occur after the loss of a loved one.

### **Resomation space – family side and process side**

The next phase of the route leads the procession to the space where the resomation is to happen. Here stainless-steel cylinders house the coffin with the loved one in it and the process of resomation begins. This clinical and mechanistic process is separated from the family and friends through a brick screen

that allows glimpses of the process but preserves the sacredness of the procession. With the resomation process done, the family is provided with the ashes, encouraged to see the journey through.

### **Landscape route towards the river (ash spreading) and the columbarium**

Leaving the resomation space, the route quickly devolves into a raw, unkept landscape guiding the procession to the columbarium to bury the ashes or to the Moreleta Spruit to spread the ashes into the river.

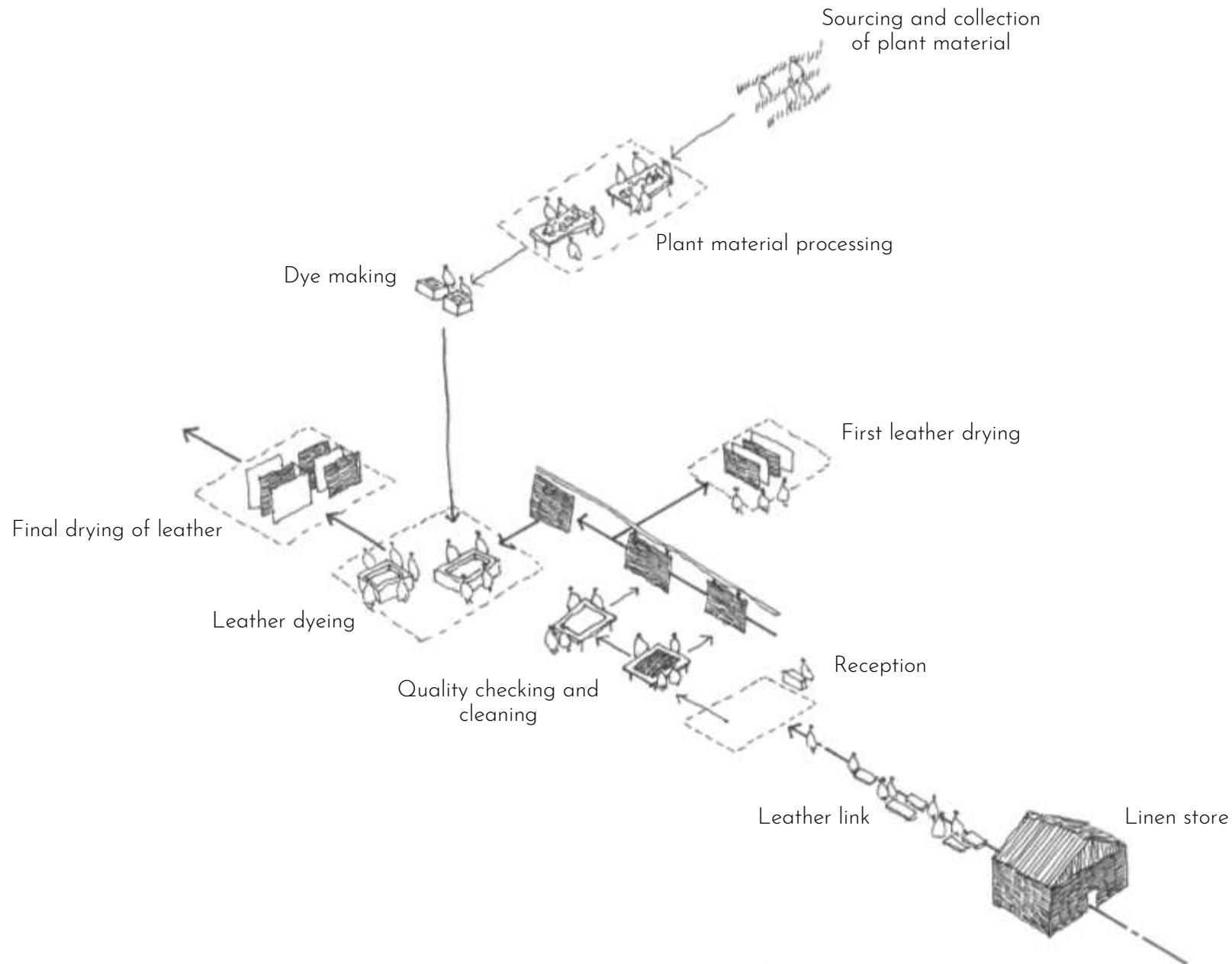


Figure 4.3: Overview of leather dyeing house programme (Author November 2021)

## Leather Dyeing House

The redevelopment of the historical Silverton Tannery programme is done by collaborating with existing leather tanners to provide a leather dyeing facility currently not catered for. The historical process of dyeing leather is heavily industrialised and optimised with heavy metals and hazardous chemicals (Naude & Naude 2007:53).

The proposed programme instead leans on the inclusion of natural dyes and natural dye making processes to supplant the industrial dye process. In this way the process acts as a bridge that connects industry/industrial processes and nature/natural processes.

## The linen shop

The existing linen shop acts as a vehicle through which the tanned leather can be transported to the leather dyeing house. This route mediates between the context and the new proposed intervention, with the link is defined as a shaded and paved route, allowing for interaction with pause spaces set in the landscape.

## Reception and receiving the leather

The tanned leather is received at the reception, allowing the delivery workers to pause, catch their breath and then return to the linen shop. Additionally, the main administration is also handled at the reception of the tanned leather.

## Quality checking the leather

With the tanned leather delivered, the quality of the leather is checked on a large inspection table, with the tanned leather not meeting the standards returned to the linen store. The main spatial requirement for the quality checking space is to have even, bright light that can facilitate the scrutiny of the tanned leather.

## Cleaning the leather

Following on the quality checking space, the tanned leather is cleaned with a natural acid, in this case vinegar. With the cleaning of the leather finished, the leather is hung from a ceiling mounted railing system that transports the tanned leather to the next stage of the process.

## Drying and hanging the leather

With the tanned leather still damp, it is left to dry overnight in the central atrium connecting to the resomation route. This allows the tanned leather to continue stretching and drying in an enclosed environment, with no direct sunlight that can cause a weakened product.

## Dyeing the leather

With the leather sufficiently dried and hanged, the tanned leather is submerged with natural dyes in concrete vats and left overnight for the dye to penetrate into the leather. When the leather has been dyed, it is removed and then hung again on the overhead railing system. The excess natural dyes are drained and then recycled to be used again.

## Second drying of the leather

The dripping leather is stored in a vertical drying space connected to the funeral space of the resomation route. This allows the excess water dripping from the dyed leather to be collected in the funeral space and then recycled.

## Sub-programme - Dye making process

### Collecting the plant materials

Plant material is collected by the Parks Management programme and the on-site harvesting of plants. The plant materials are sorted and checked for quality.

### Processing the plant materials

The processing of the materials keeps the usable parts of the plants and composts the excess plant material.

### Dye storage

The processed plants are boiled with water to produce a natural dye suitable for dyeing leather. This has to be stored overnight to intensify the colour and cool down.

### Integration into the leather dyeing house

The cooled natural dye is used in the leather dye house, with the effluent recycled back into the water system.

## Interaction between the existing and proposed programmes

Various already established and historical programmes on the site and in the context generate distinct patterns of activity and separate layers of within which the site exists. The Silverton Cemetery is currently one of the only publicly accessible spaces in Silverton, with direct access from Derdepoort Road. Repurposed structures in the centre of the site accommodate the Silverton Parks Management (SPM) maintaining public parks in and around Silverton. Plant materials generated with the public parks' maintenance is utilised in the tree nursery and composting initiative started by the SPM. The undeveloped green space is currently inaccessible by the public and not programmatically activated.

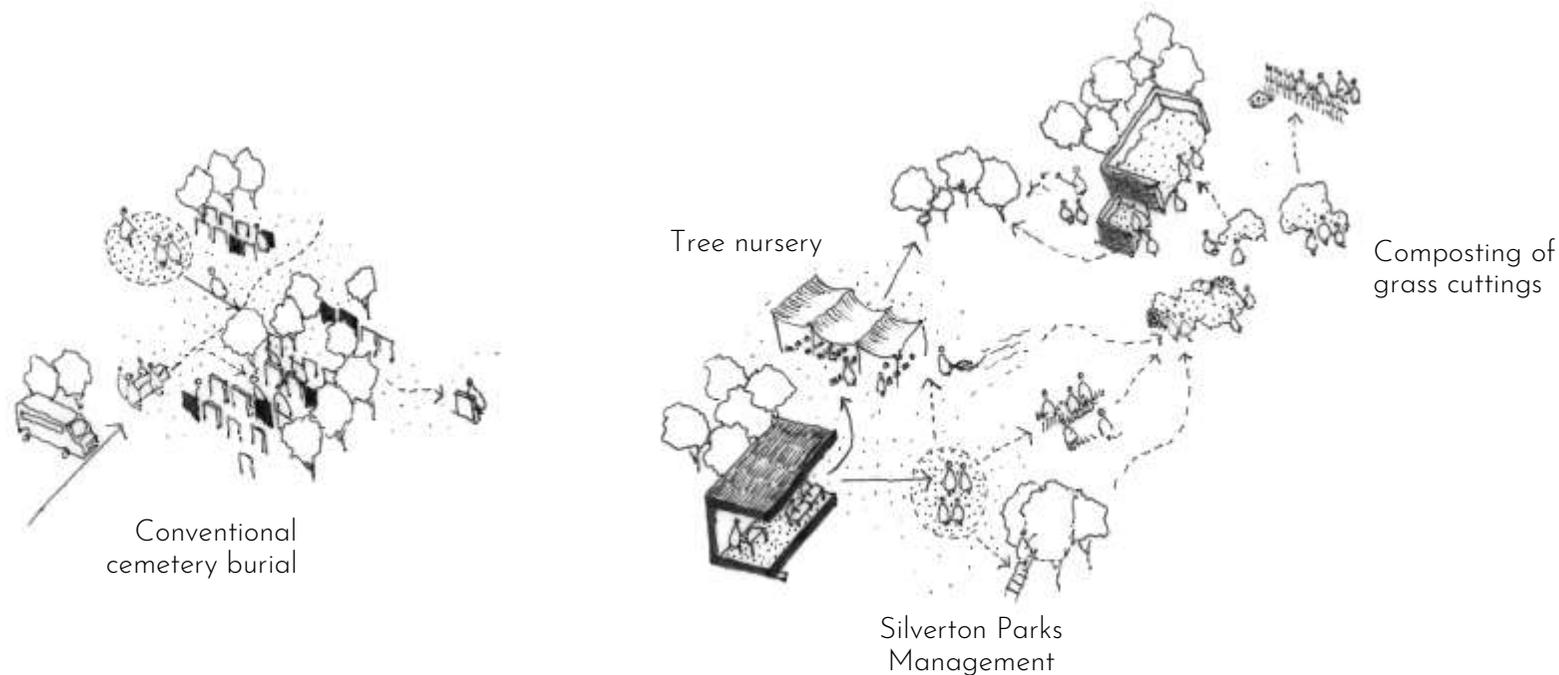


Figure 4.4: Diagram showing the existing programmes (Author July 2021)  
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The cemetery is to be redeveloped with the addition of the resomation process - an ecological acceleration of the process of decay using water - and additional ritual and sacred spaces for the users (Figure 22).

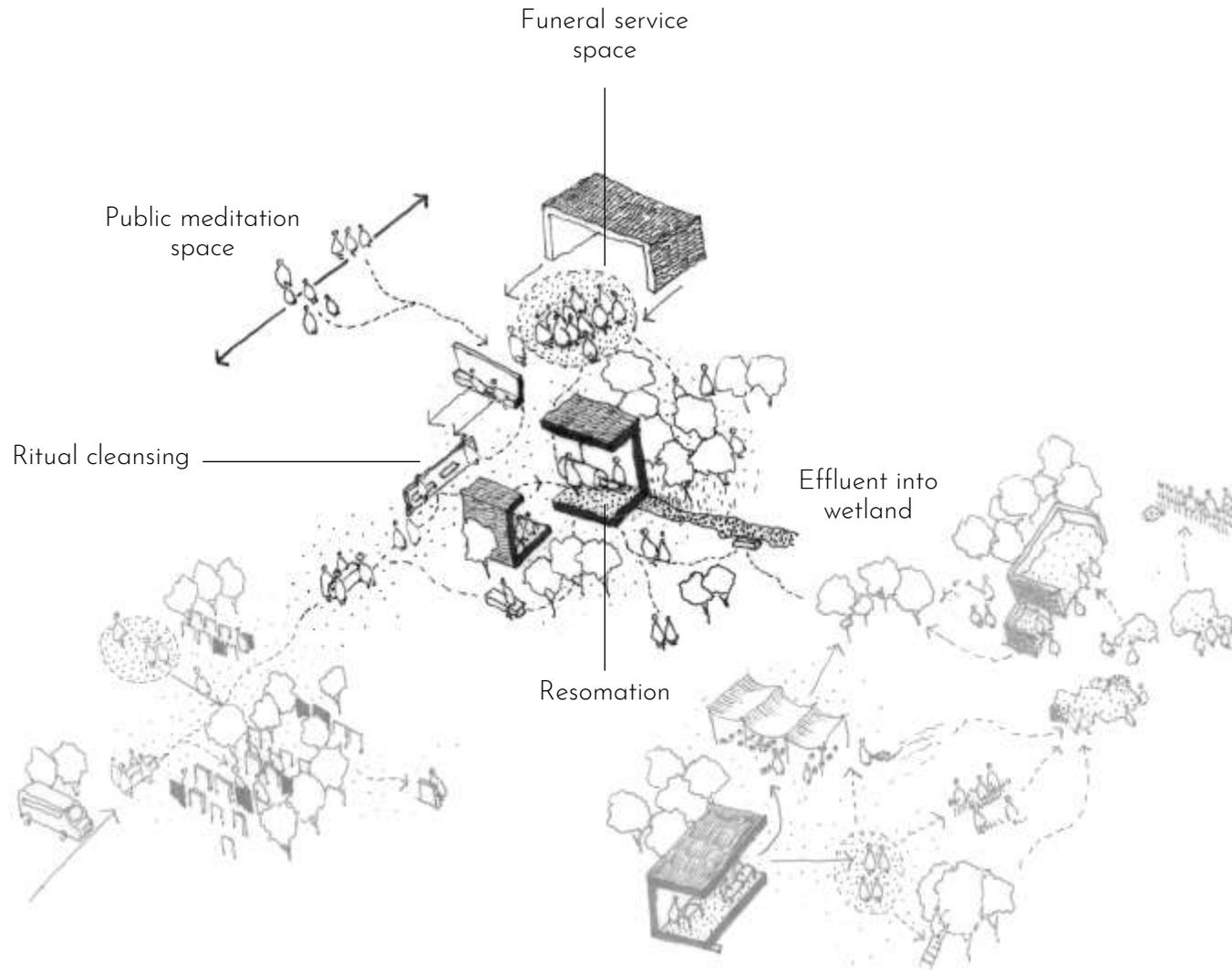


Figure 4.5: Diagram depicting the addition of the resomation process (Author July 2021)

The re-integration of the historical programme of the Silverton Tannery through an ecological lens, allows the previous industrial process to be re-aligned to ecological processes and environments.

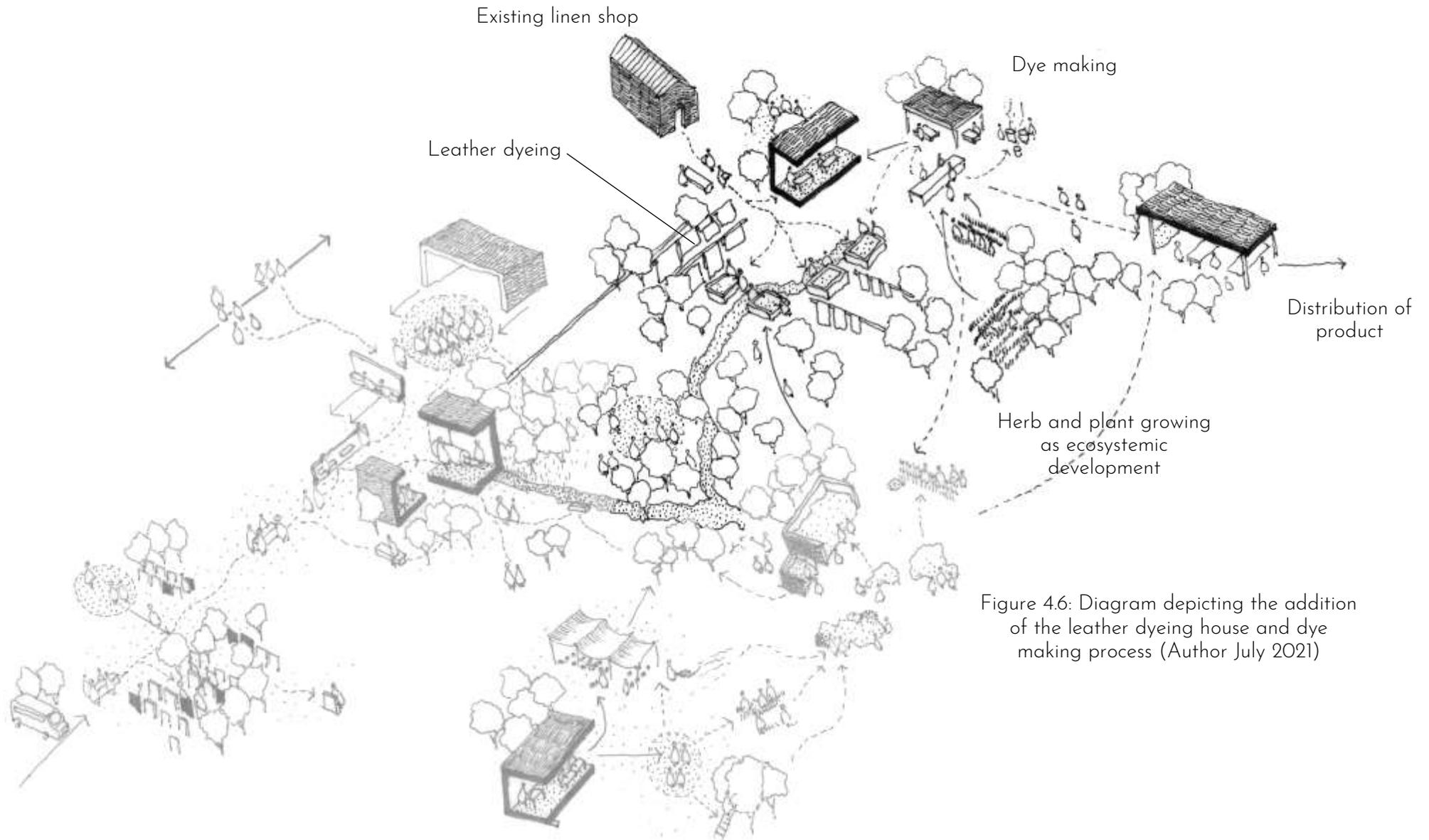


Figure 4.6: Diagram depicting the addition of the leather dyeing house and dye making process (Author July 2021)

The goal with the creation of the programme is to create an ecosystem of smaller programmes that interconnect and create symbiotic relationships. Waste products from one programme are fed into another programme as starting materials (Figure 24).

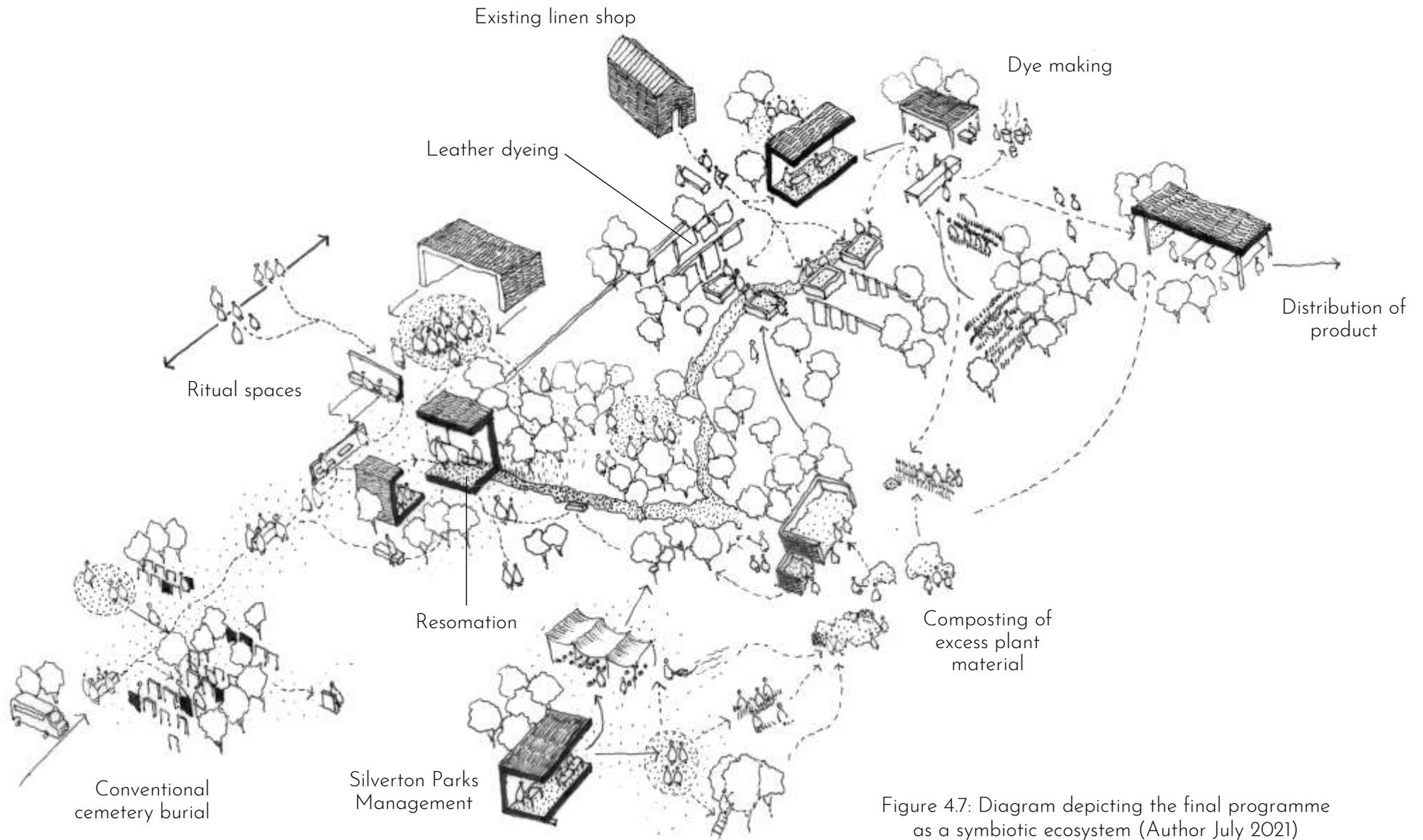


Figure 4.7: Diagram depicting the final programme as a symbiotic ecosystem (Author July 2021)