The first structures for the dead in the landscape were grave mounds. These were placed in the vicinity of settlements.

Methodology schema

Death in the city

Background research
- Death as a social and physical phenomenon
  - Historic analysis
  - Environmental impact
  - New methods
    - New spatial configurations
  - Social trends
    - Mourning models

Location research
- The Hague
  - Material & Ecological
  - Social & Economic

Concept
- Urban analyses
- Healing effects of nature
- Commemorationscapes

Toolbox urban funerary spaces

Experimental design

Historic: Ancient

The first structures for the dead in the landscape were grave mounds. These were placed in the vicinity of settlements.
**History: Christian.**

Burial in and around churches became the preferred option. In these times the churchyard was often used as public green space.

**History: Modern.**

The last period in the history of dealing with the death is characterised by the reintroduction of cremation. This new technique got really prominent after the Second World War.
What happens with the bodies?

The most prevalent methods of bodily disposal, burial and cremation have each a different impact on the surrounding.

Cremated remains are mostly calcium and phosphorous compounds, but also contains heavy metals.

Influencing factors:
- Water content
- Temperature
- PH Value
- Soil type

- 0.5 l/kg leachate
- 60% water
- 30% salts
- 10% organic substances

- Trees with deep roots prevent contamination of surrounding areas by slowing water velocity and filtering contaminants by adsorption

- Ensure proper burning
- Prevent pollution particles from exiting the chimney

- Test every 5 years
- Prevent too high levels of heavy metals

- 1 meter above the highest natural water table to prevent contamination and ensure decomposition

- Size Cremains: ~3 kg. Calcium, phosphorous compounds and a few heavy metals.

- Soil permeability
  - Balanced between too permeable (rare catch run off) and not permeable enough (conditions for corpse wax)

Buffer zone of trees with deep roots prevent contamination of surrounding areas by slowing water velocity and filtering contaminants by adsorption.
Impact on the soil

Cremation and burial highly differ in how they impact the soil. The initial impact of burial is quite large due to the disturbance of the soil but the nutrients are released over time. While scattering the ashes immediately changes the nutrient levels.

Funeral process

What is most striking about the spatial needs of that is the difference between the spatial need at time of the funeral and the spatial needs later in the mourning process.
Models of mourning

While our societies have changed over time due to urbanisation and globalisation so has our mourning changed. Three types of mourning are distinguished.

Traditional mourning

Modern mourning

Post-modern mourning

The relation between the dead and the city

As society changed so has the spatial relation with death. First: churchyard as centre of the village. Second: large cemeteries outside the city walls. Third: large cemeteries enclosed by urban sprawl. Fourth: a new proposal.
Commemoration scapes

My proposal entail a new type of death spaces: commemoration scapes. These places are small scale, tied to neighbourhoods and use living memorials.

Site selection

Two main criteria narrowed my search down to The Hague: My preference for coastal landscapes and the density of the area.
**Relevant data**

Ideal testing sites are located in residential neighborhoods with relatively low income and high death density.

<table>
<thead>
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<th>Main functions of buildings</th>
<th>Population Density (1000 Inhabitants/ha)</th>
<th>Average income</th>
<th>Death Density (Deaths/km²/year)</th>
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<td></td>
<td></td>
<td>13.500 +</td>
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</tr>
</tbody>
</table>

*The meadow*

The meadow is a wide-open plane, where sunshine can banish the dark. Seas of wild flowers all season. The wind rushing through the tall grasses, insects chirping.
The forest

They are ancient witnesses to our ephemeral lives, places of refuge and the homes of mythical encounters, but also harboured dangers of outcasts and wild animals.

The garden

Gardens are traditionally intermediate zones, between inside and outside. Gardens strive to make up for these lost worlds, and in doing so, creating a new earthly perfection, whose transience underlines the lamented
Precise site selection was based on the neighbourhood typologies and location of social and commercial facilities.

Forest species
The forest zones are planted in three layers: Trees, shrubs and ground covers.
Species for the different layers

- Beech
- Oak
- Linden
- hawthorn
- elderberry
- Viburnum
- Rhododendron
- hazel
- Wood anemone
- Lily of the Valley
- Bear’s leek
- bracken

Species selection

The garden species are selected to only contain white flowers. Mourners are invited to plant a coloured annual in the garden to commemorate a lost one.
1. Scattered ashes or buried urns

Cremated remains are mostly calcium and phosphorous compounds, but also contains heavy metal compounds.
1. Scattered ashes or buried urns

Cremated remains are mostly calcium and phosphorous compounds, but also contains heavy metal and elements Cremated remains are mostly calcium and phosphorous compounds, but also contains heavy metal and elements.
Meadow species selection
The wild flower meadows are sown with seeds of white flowering wild flower species that are native to our country. Flowering one after the other from May and October.

- *Achillea millefolium* (gewoon duizendblad)
- *Allaria petiolata* (look-zonder-look)
- *Cardamine pratensis* (pinksterbloem)
- *Centaurea montana* ‘Lady Flora Hastings’ (knoopskruid)
- *Chenopodium bonus-henricus* (brute Hendrik)
- *Cleontonia perfoliata* (winterpotzelen)
- *Coriandrum sativum* (koriander)
- *Cosmos bipinnatus* ‘Sonata White’ (knuim)
- *Daucus carota* (wilde peeri)
- *Echiums ophiocarpus*
- *Fagopyrum esculentum* (boekweit)
- *Filipendula ulmaria* (meerspaar)
- *Galium mollugo* (glad waldro)
- *Helianthus annuus* ‘Italian white’ (zonnebloem)
- *Leucanthemum vulgare* (wilde margriet)
- *Luzula campestris* (gewone veldbies)
- *Malva moschata* ’Alba’ (kaasjeskruid)
- *Matricaria recutita* (echte kamille)
- *Nigella damascena* ‘Miss Jekyll White’ (jauffertje in ’t groen)
- *Plantago lanceolata* (smalle weegbree)
- *Raphanus sativus* subsp. oleiferus (baldrommenus)
- *Reseda lutea* (wilde reseda)
- *Reseda luteola* (wouw)
- *Serradella Ornithopus sativus* (serradella)
- *Silene latifolia alba* (avondkoekoeksbloem)
- *Silene vulgaris* (blaassilene)
- *Trifolium arvense* (hazepootje)
- *Valeriana officinalis* (echte valeriaan)

Garden species selection
The gardens are filled with flowers that flower throughout the season. The designed selection features plants that flower at different times and attract insects throughout the seasons.

- *Buddleia ‘White Ball’* (butterfly bush)
- *Chrysanthemum*
- *Viburnum Davidii*
- *Camellia japonica* (White)
- *Lavandula angustifolia* ‘Alba’
- *Echinacea purpurea* ‘White Swan’
- *Salvia nemorosa* ‘schneebungel’
- *Aconitum mollis* ‘Rae Lockan’
- *Lupinus ‘Noble Maiden’*
- *Empetrum ramosum* (Zonne)
- *Deutzia gracilis* ‘Nikko’
- *Fatsia japonica*
- *Spinacia balsamica* ‘Tov’
- *Helianthemum ‘The Bride’*
- *Hydrangea paniculata Savill Lace’
- *Lewincorner* (serotine)
- *Phlox ‘Caladium White’*
- *Narcissus triandrus* ‘Ice Wings’
- *Phytoecia virginiana* ‘Summer Snow’
- *Arnica dioica*
- *Helleborus niger*
- *Tulip ‘mount Tacoma’*
- *Lilium masuci ‘Momme White’ & Muscaris botryoides ‘Album’*
- *Prunus subhirtella* ‘Autumnalis’
- *Wisteria sinensis ‘Alba’*
- *Fallopia aubertii*
Garden 1: moments
Cremated remains are mostly calcium and phosphorous compounds, but also contain heavy metals. Cremated remains are mostly calcium and phosphorous compounds, but also contain heavy metals.

Garden 1: eternity
This garden in the series tries to stop the forces of time. A place that will remain the same regardless of what happens around the garden. The centre piece of this garden is a reflecting pool that links heaven to earth in its reflection.
Garden 1: autumn

This garden has benches placed facing the hedge and the small lily ponds that are placed in the garden. The middle of the garden is taken by two espaliers that blocks the benches from the view of those who choose just to pass.

Garden 1: the orchard

The second space is an orchard of flowering apple trees where a path of tiles leads the visitor on to the next garden. On the side of the meadow the garden is enclosed with a low hedge, and on the side of the forest a higher hedge.
Garden 1: the meadow

The wild flower meadow allows for enjoyment of the sunshine. The meadow is bordered by a walkway that links all the spaces together. In the meadow a magnolia tree is placed to provide shade and privacy for the ends of the walkway.

Garden 1: the entrance

The flower entrance is designed to give a homely feel and invite the visitor in. This atmosphere tries to put the visitor at ease. The path is lined with borders that will flower white and bright.
Urban theories

Urban acupuncture provides the theory for the placement of these gardens. Assemblage theory informed the imbedding in the site.

Garden 1: concept on site

progression through the garden

circulating routes

sequential themes
**Garden 2: the watch tower**

The wild flower meadow allows for enjoyment of the sunshine. The meadow is bordered by a walkway that links all the spaces together. In the meadow a magnolia tree is placed to provide shade and privacy for the ends of the walkway.

**Garden 2: wisdom**

A single weeping mulberry tree takes the centre in a square, reminiscent of a cloister garden. The garden is enclosed by a wide protective evergreen hedge. Along the hedge a wooden pergola structure allows for circular walks.
Garden 2: reflection

The pool aids in reflective thoughts by accentuating the other side. When sitting under the dense canopy of the forest trees one sees the open meadow reflected in the pool and vice versa.

Garden 2: reflection

In contrast to the modern minimalist design of the reflective pool with its mirror smooth surface, the surrounding hedges are big and wild rhododendron shrubs displaying an abundance of white flowers.
The first and largest garden represents the lengthiest part of life: our productive life. This garden takes shape as an orchard with fruit producing trees.

The strength that belongs in this life phase is translated into the use of deciduous hedges that shed their leaves in fall, opening the garden up to the surroundings.
Garden 1: detail
The fountain basin is constructed from reinforced concrete and finished with a layer of decorative brick. The brim is wide enough to sit upon and the brick continues in the planting features.

Metropolitan implications
On the left the two gardens designed and their circle of influence are highlighted. The right image shows these ideas continuing throughout the city.
Garden 2: the forest path
Impression of the layers and species in the forest.
Concept

Three zones

Circulating routes

Themes in the garden

Three zones

Garden 2: concept on site
Garden 2: the watchtower

In the beginning of the forest zone a watchtower is placed. The tower leads to a viewing platform 12 meters high. This platform provides an panoramic view over the garden.
The forest of the second garden is constructed on a ridge that is created at the site. The path through this forest is slightly elevated.