

Diploma program updates

Title of the project: New Grønmo park

Diploma candidate: Yang Zhang (s101681)

Institute: Institute of Architecture

Main supervisor: Neven Fuchs Mikac

Second supervisor: Julie Aars

External supervisor: Thea Kvamme Hartmann

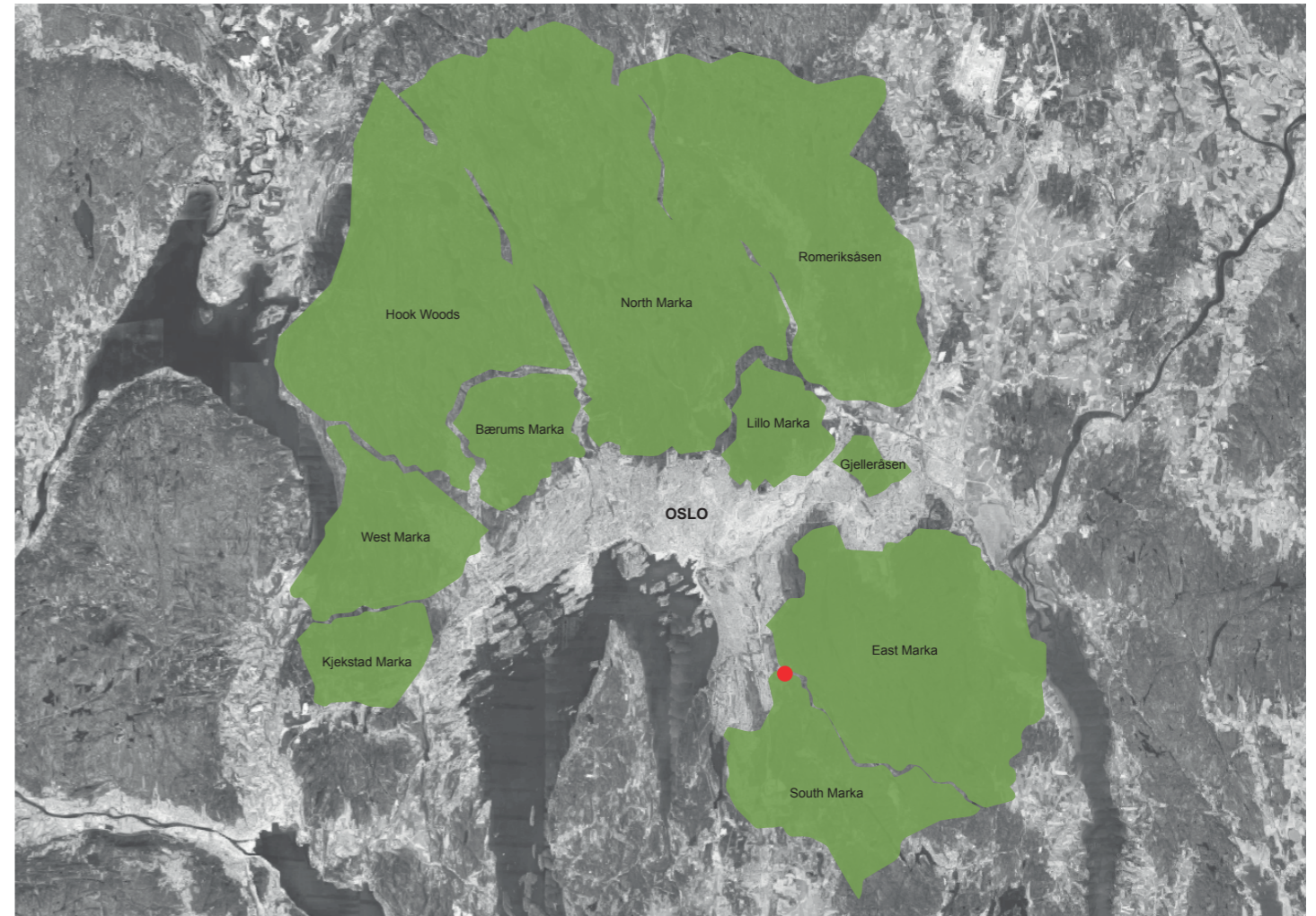
A handwritten signature in blue ink, appearing to be 'Yang Zhang', located in the bottom right corner of the page.

CONTENTS:

1. Introduction
2. History
3. Intention
4. Program
5. Site
6. Delivery
7. Research

1. Introduction:

This project aims to transform the Grønmo area with large existing rubbish collection zones into a recreational park. At the same time, the current rubbish functions, material recycling, material composting and material sorting will be kept and be converted sustainable within the idea of the public park. The whole Grønmo area is around 42.5 hector. This transformation will reaffirm the qualities of river, forest, field site with the concept to infill new experiences into the area. There could be new activities in this area, including recycling learning classroom, birds watching, hiking, campfire festival, bicycle group gathering, picnic, Christmas tree market etc. This transformation project includes new organisation system of material collection, 2nd hand market, new organisation system of material sorting, new organisation of material composting, visitor centre, new system of contaminated water filtering. To be able to connect the area to the existing morphology and natural environment of South eastern of Oslo, this project is part of the effort to turn the contaminated areas around Oslo into a new landscape scenery. The task of the thesis is on the crossing section of landscape design, architecture infrastructure design and architecture design.

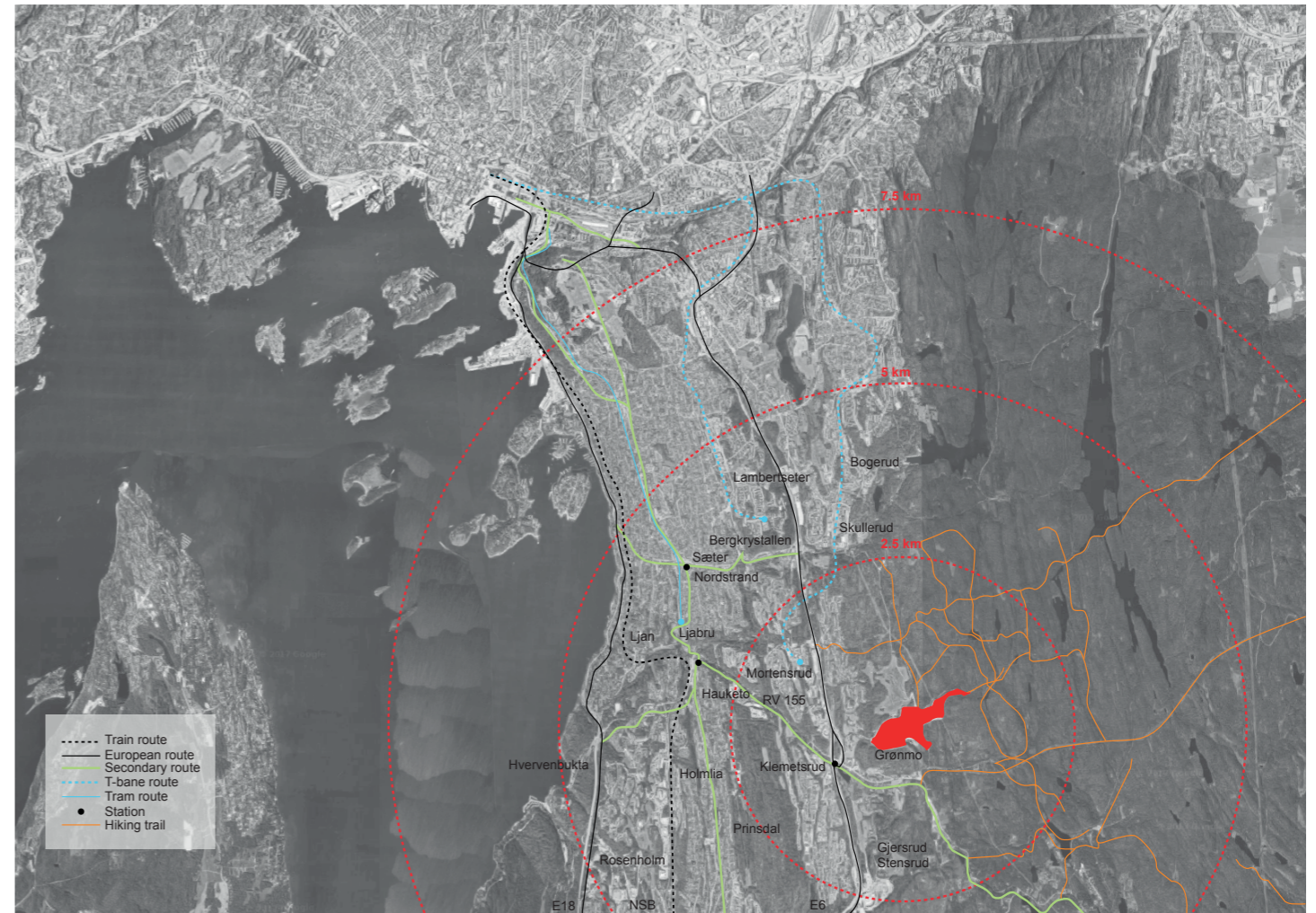


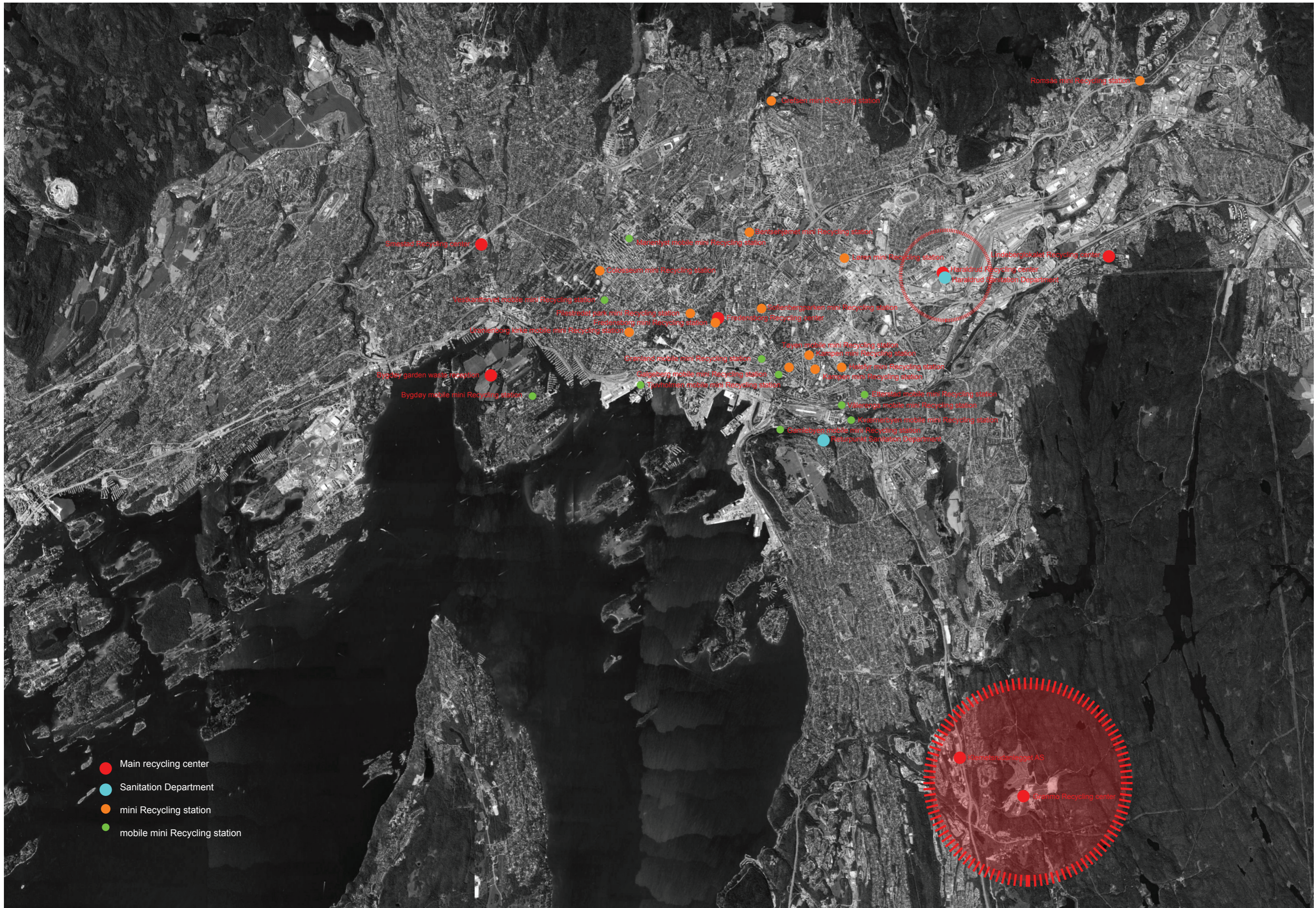
2. History

Grønmo is located in the south eastern part of Oslo in the district of Søndre Nordstrand approximately 12km southeast of the Oslo Centre. The size of the project site is around 42.5 hector, approximately to 1.5 times size of the Frogner Park. This area is close to Sørliveien on the west and Grønmo golf course on the north. On the south, east and partly north, this area is surrounded by Østmarka as an important gateway to the forest. It is close to the E6 highway. Many hiking trails start from here. It serves as good meeting places outside in the area between the noisy city life and the quiet forest.

Grønmo was entirely covered by forest in the past. But now it is a large rubbish collection and treatment area. The Grønmo landfilled used to be the largest one in Northern Europe. Having functioned as Oslo's main spot for the unwanted since 1969, Grønmo counted over 8 million cubic meters of trash. It was closed in 2009. Today the waste is covered by a thin piece of soil top cover with green dressed.

Right now, after the closure of the landfilled place, there are a recycling station, a sorting area and a composting plant on site.





3. Intention

On the level of architecture and on the level of landscape, Grønmo will be constructed as a new meeting area between the natural environment and the man-made artificial landscape. Grønmo will be given new identity through good coexistence between recreation, learning and municipal engineering facilities and recycle material treatment.

4. Program

A. Visitor center, ca. 600 m²

- Restaurant and Cafe
- Small auditorium
- Small exhibition space
- Office

B. 2nd hand flea market, ca. 1000 m²

- Outside space: temporary market space
- Inside space: market shops
 - offices
 - meeting rooms
 - storage
 - equipment rooms

C. Material recycling area, ca. 9250 m²

- Outside space: roof
- Inside space: material collection containers area
 - administration office
 - storage
 - equipment rooms

D. Composting area, ca. 21400 m²

- Operational equipment space
- Curing and compost storage
- Raw material storage
- Composting pad

E. Material sorting and treatment area, ca. 7000 m²

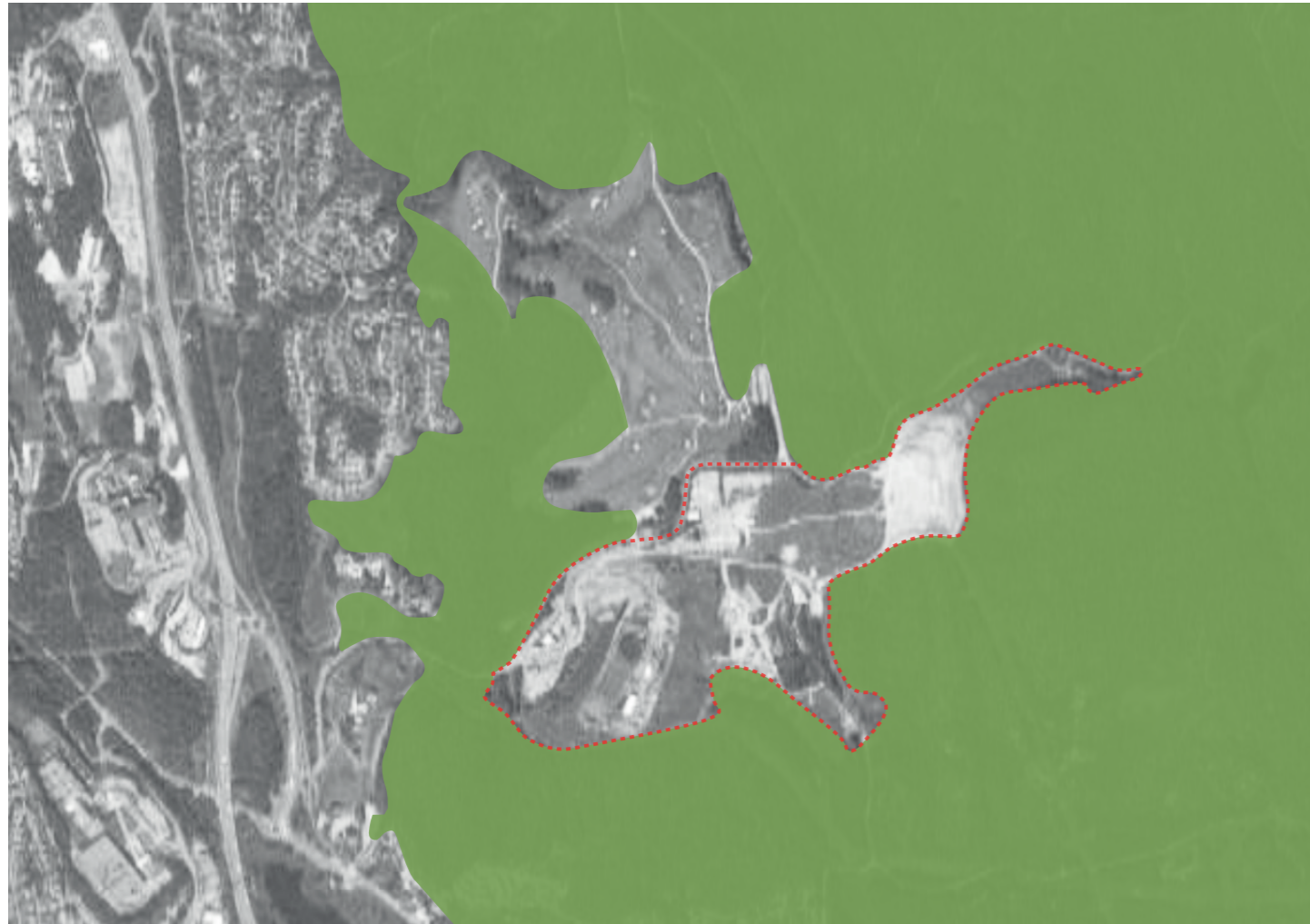
- Material sorting and treatment area
- Operational office

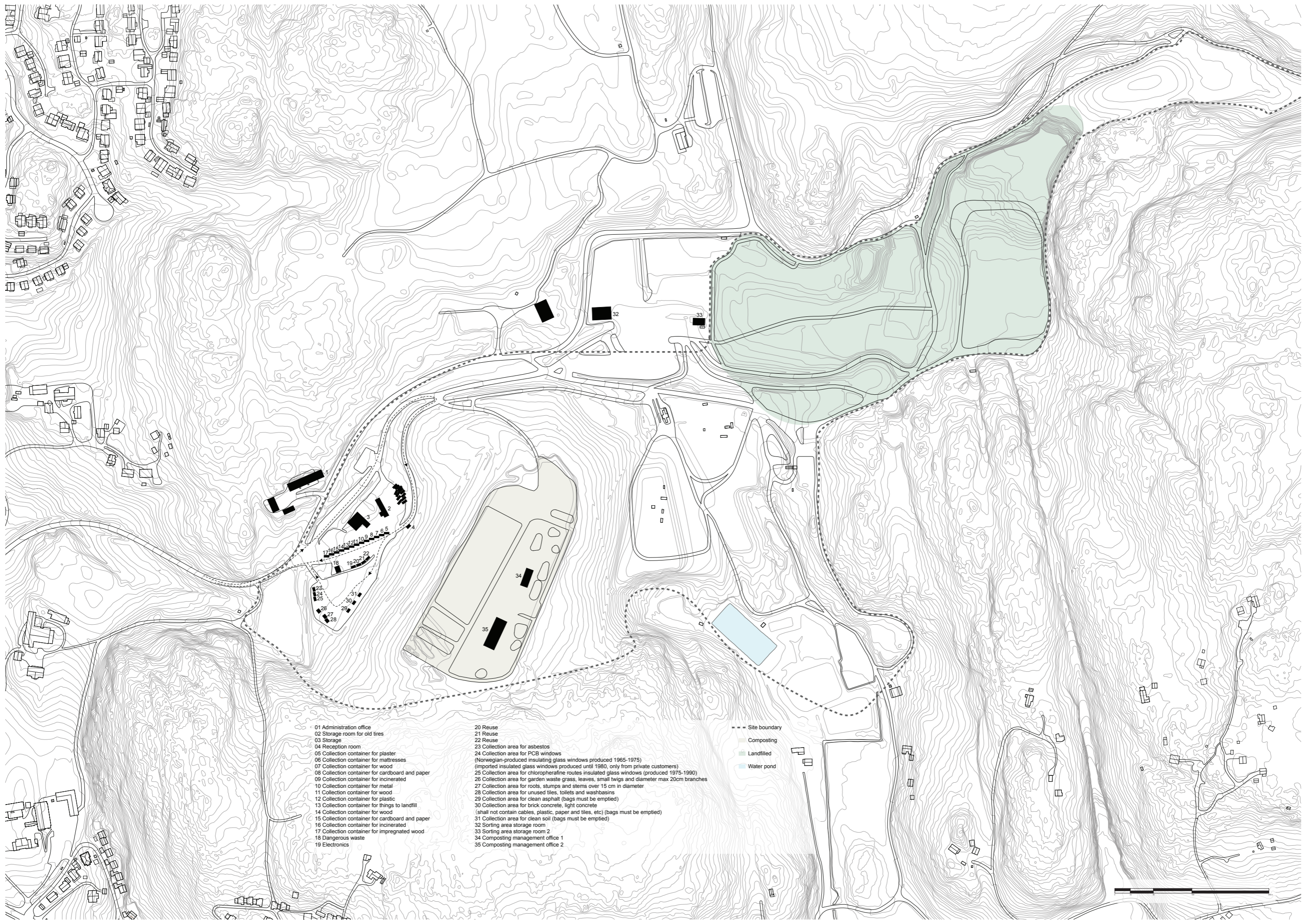
F. Landscape areas

- Public area: parking area
- scenery platform
- gathering space
- skating plate
- landfilled park

- Infrastructural landscape: warm water pond
- oxidation pond
- enhancement pond
- leachate water pond
- clean water pond
- wetland area

5. Site





- 01 Administration office
- 02 Storage room for old tires
- 03 Storage
- 04 Reception room
- 05 Collection container for plaster
- 06 Collection container for mattresses
- 07 Collection container for wood
- 08 Collection container for cardboard and paper
- 09 Collection container for incinerated
- 10 Collection container for metal
- 11 Collection container for wood
- 12 Collection container for plastic
- 13 Collection container for things to landfill
- 14 Collection container for wood
- 15 Collection container for cardboard and paper
- 16 Collection container for incinerated
- 17 Collection container for impregnated wood
- 18 Dangerous waste
- 19 Electronics

- 20 Reuse
- 21 Reuse
- 22 Reuse
- 23 Collection area for asbestos
- 24 Collection area for PCB windows (Norwegian-produced insulating glass windows produced 1965-1975) (imported insulating glass windows produced until 1980, only from private customers)
- 25 Collection area for chlorophenylene routes insulated glass windows (produced 1975-1990)
- 26 Collection area for garden waste grass, leaves, small twigs and diameter max 20cm branches
- 27 Collection area for roots, stumps and stems over 15 cm in diameter
- 28 Collection area for unused tiles, toilets and washbasins
- 29 Collection area for clean asphalt (bags must be emptied)
- 30 Collection area for brick, concrete, light concrete (shall not contain cables, plastic, paper and tiles, etc) (bags must be emptied)
- 31 Collection area for clean soil (bags must be emptied)
- 32 Sorting area storage room
- 33 Sorting area storage room 2
- 34 Composting management office 1
- 35 Composting management office 2

- Site boundary
- Composting
- Landfilled
- Water pond



6. Delivery

Situation plan: 1:2000

Plans and sections: 1:1000

Detailed plans and sections: 1:500 / 200

Situation model: 1:3000

Landscape model: 1:1000

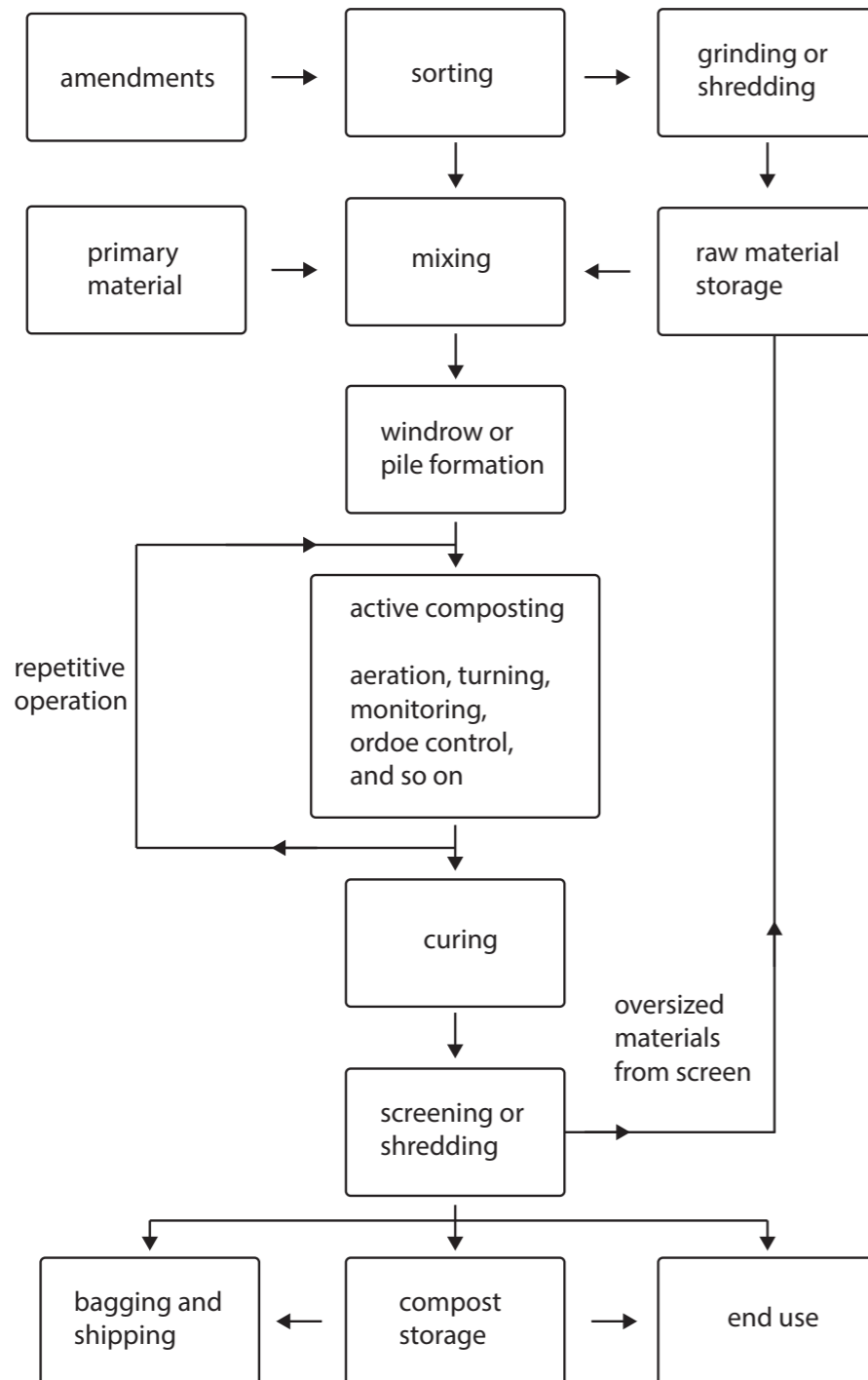
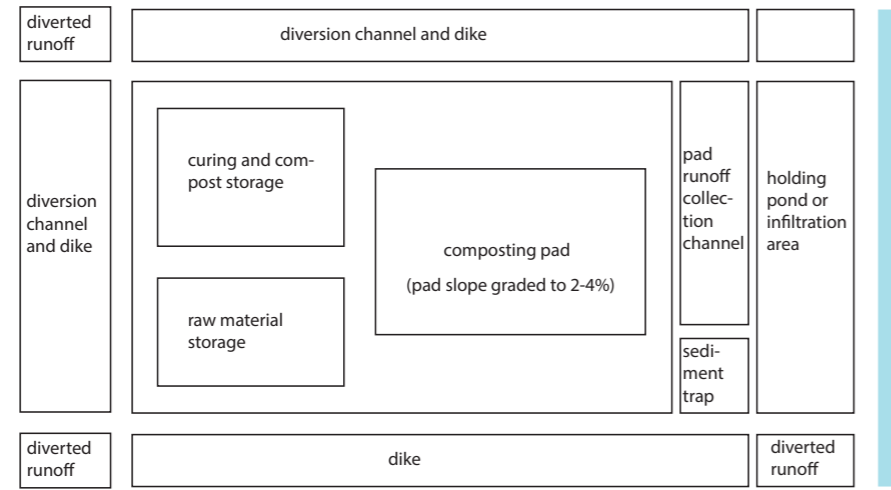
Detailed models: 1:500 / 200

Diagrams

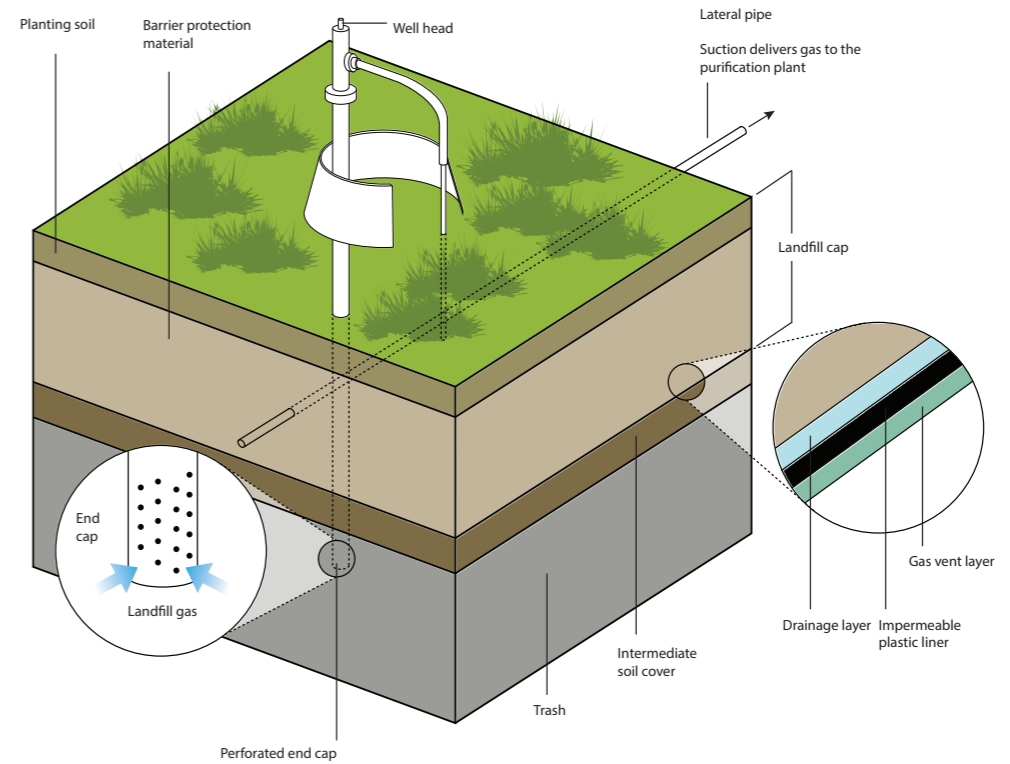
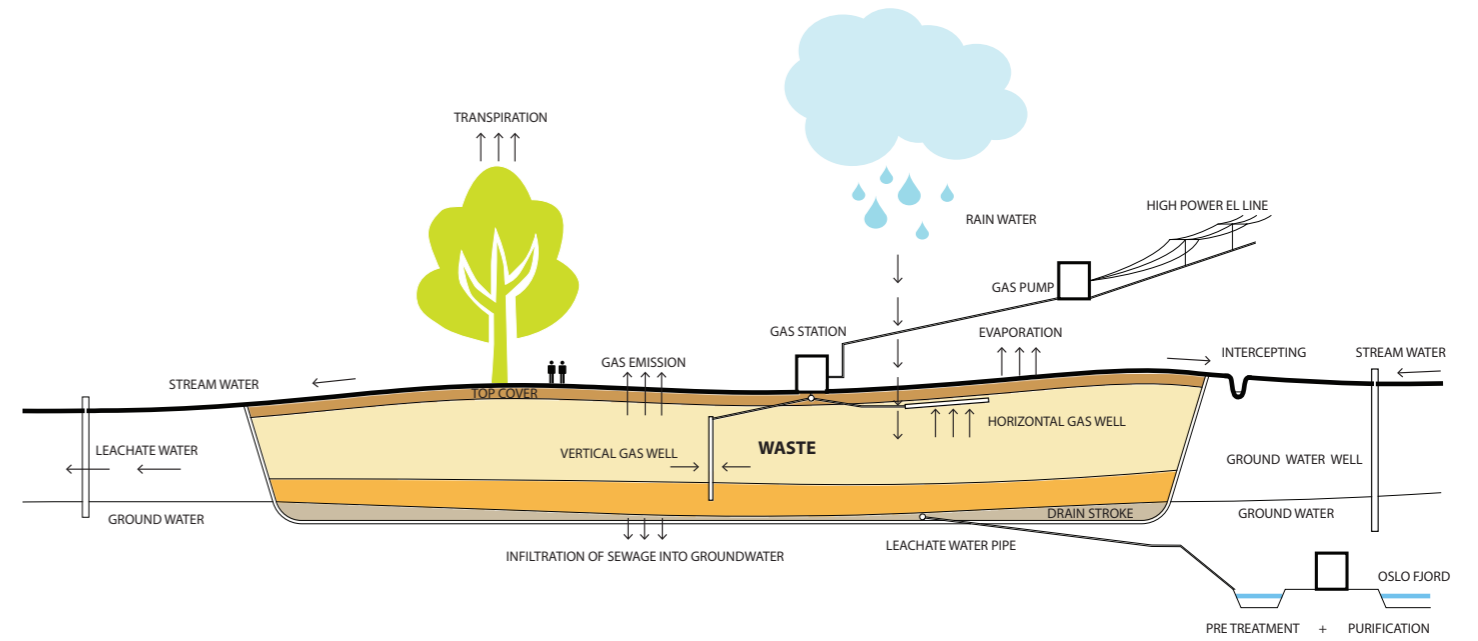
Book

7. Research

Research about composting process and organization

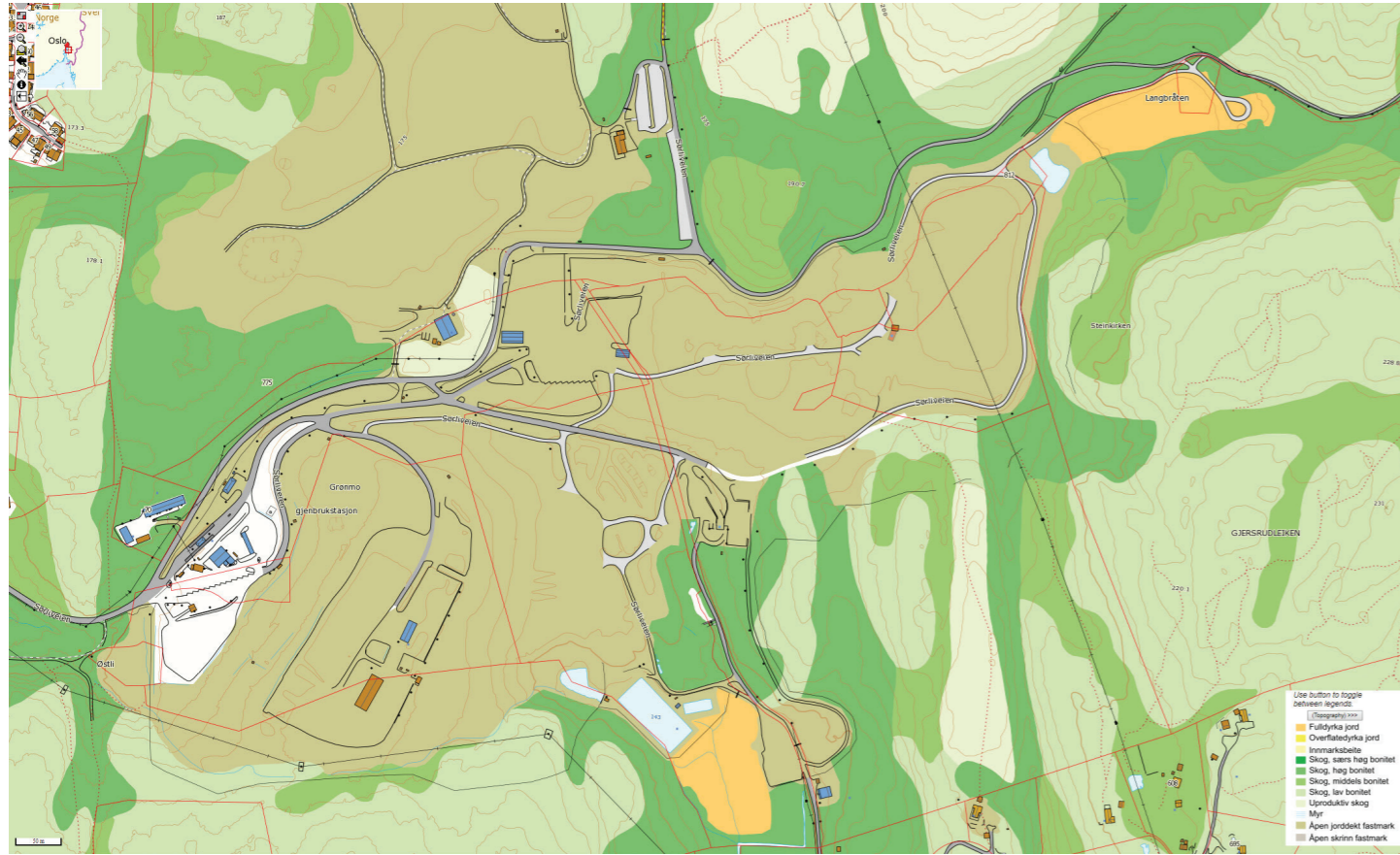


Research about the landfilled



Picture source: New York City Sanitation Department

Research about the water system on site



Research about the wind on site

Wind & weather statistics Oslo/Solveien - Windfinder

9/18/17, 1:57 PM

[BACK TO MAPS \(/#9/59.8567/10.7897\)](#)

Wind & weather statistics

Oslo/Solveien

5 kts

South-Southwest

18°C

No severe weather warnings active

Report from local weather station at 13:50 local time.

SUNRISE	SUNSET	LOCAL TIME	ELEVATION
6:50	19:30	13:56 (UTC +2)	100 m

Forecast(/forecast/oslo_solveien) Wind statistics(/windstatistics/oslo_solveien) Tides(/tide/oslo_solveien) Webcams(/webcams/oslo_solveien)

Month of year	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Year
Dominant wind direction	01	02	03	04	05	06	07	08	09	10	11	12	1-12
Dominant wind direction	1	1	3	4	5	4	2	1	2	2	1	1	2
Average Wind speed	3	2	4	4	5	4	4	3	3	4	3	3	3
Average air temp. (°C)	-2	1	5	10	15	19	22	19	16	9	4	0	10

WIND STATISTICS

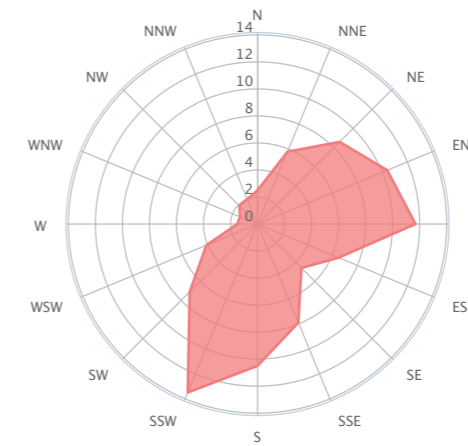
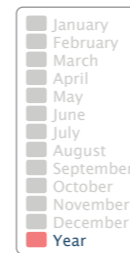
(/) Statistics based on observations taken between 05/21 data in Excel format from our historical weather data

[Find weather station](#)

[order the raw wind and weather \(/setting#\)](#)

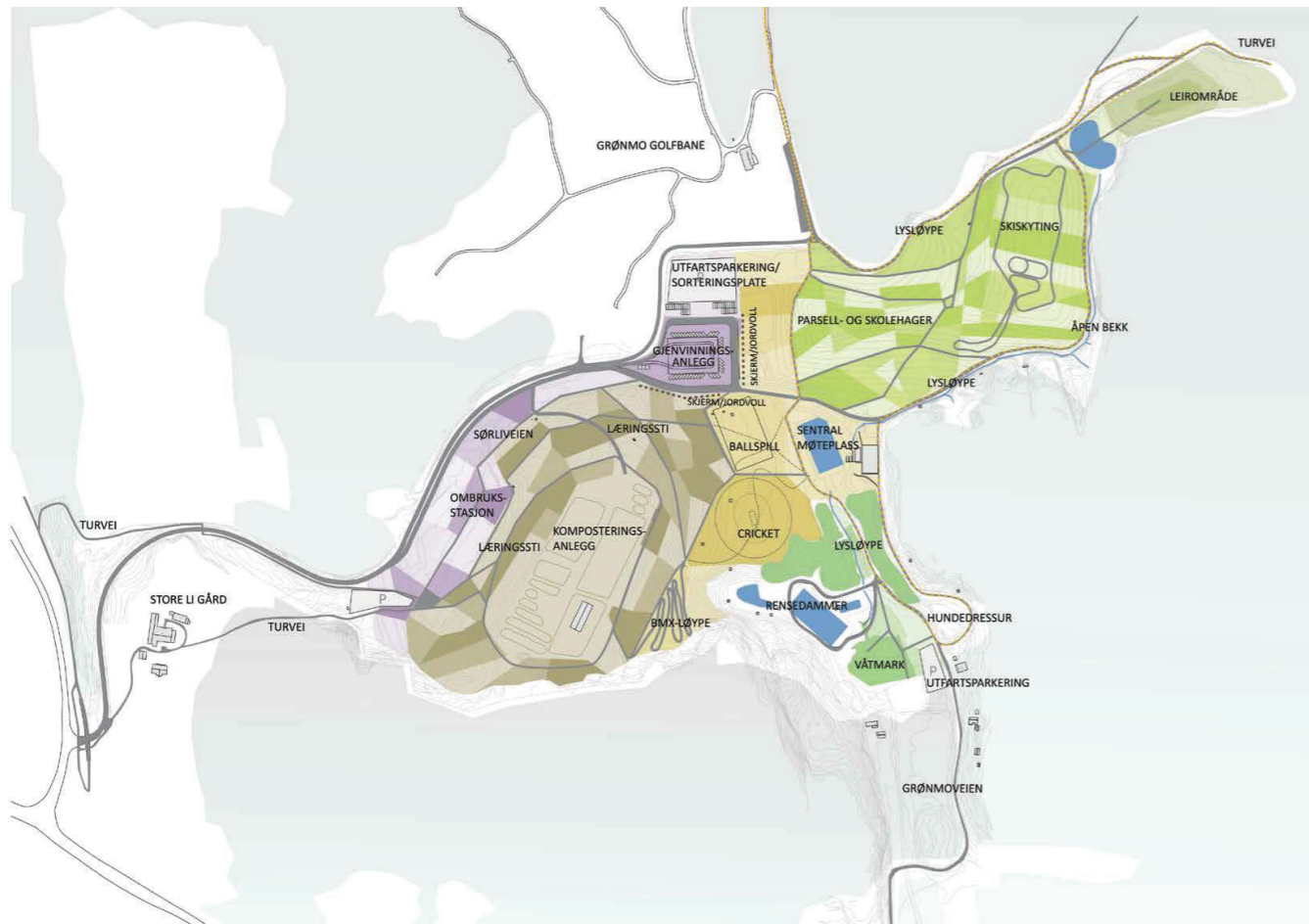
[/help#statistics](#)

Wind direction distribution in (%)
Year

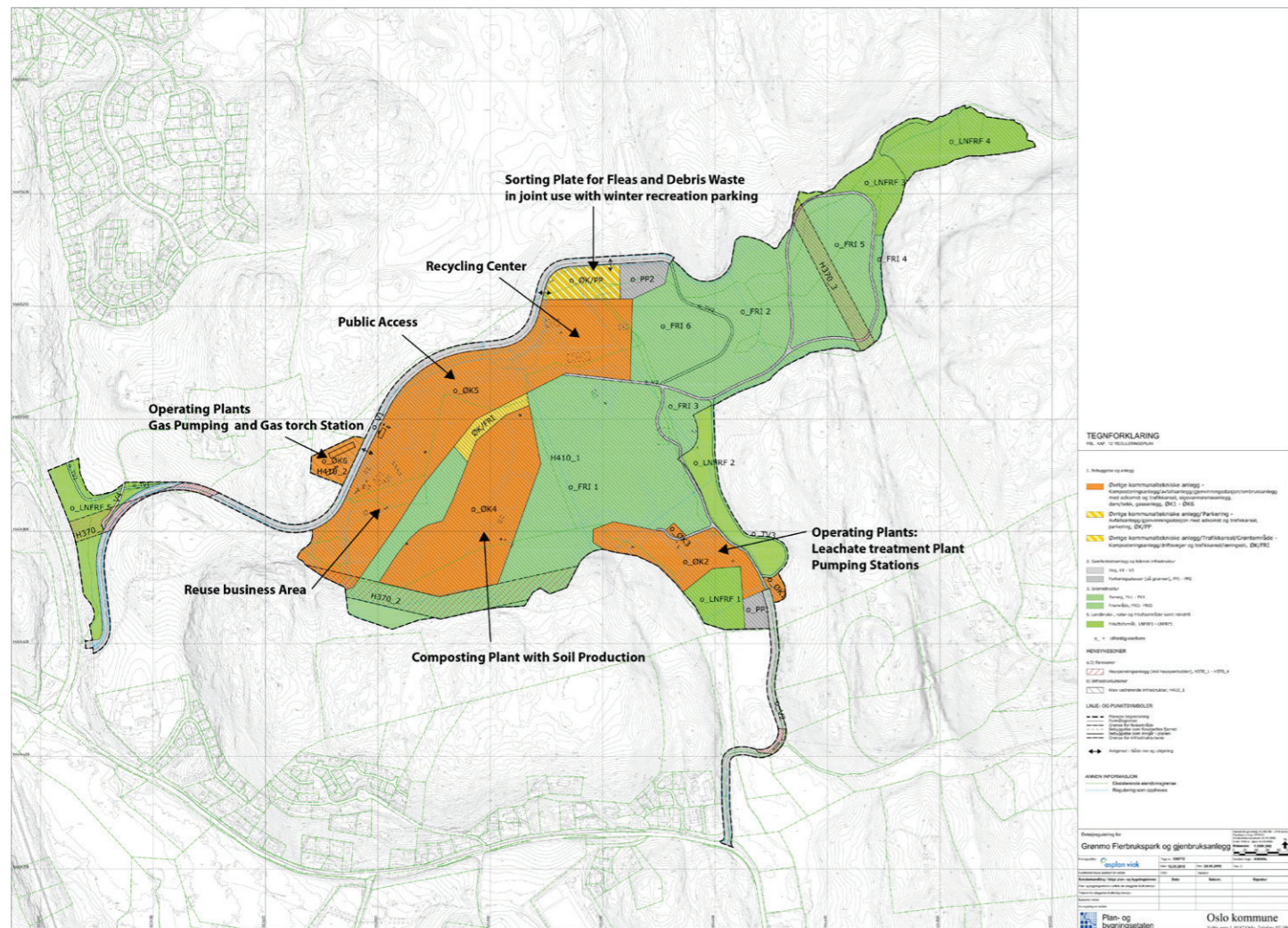


© windfinder.com

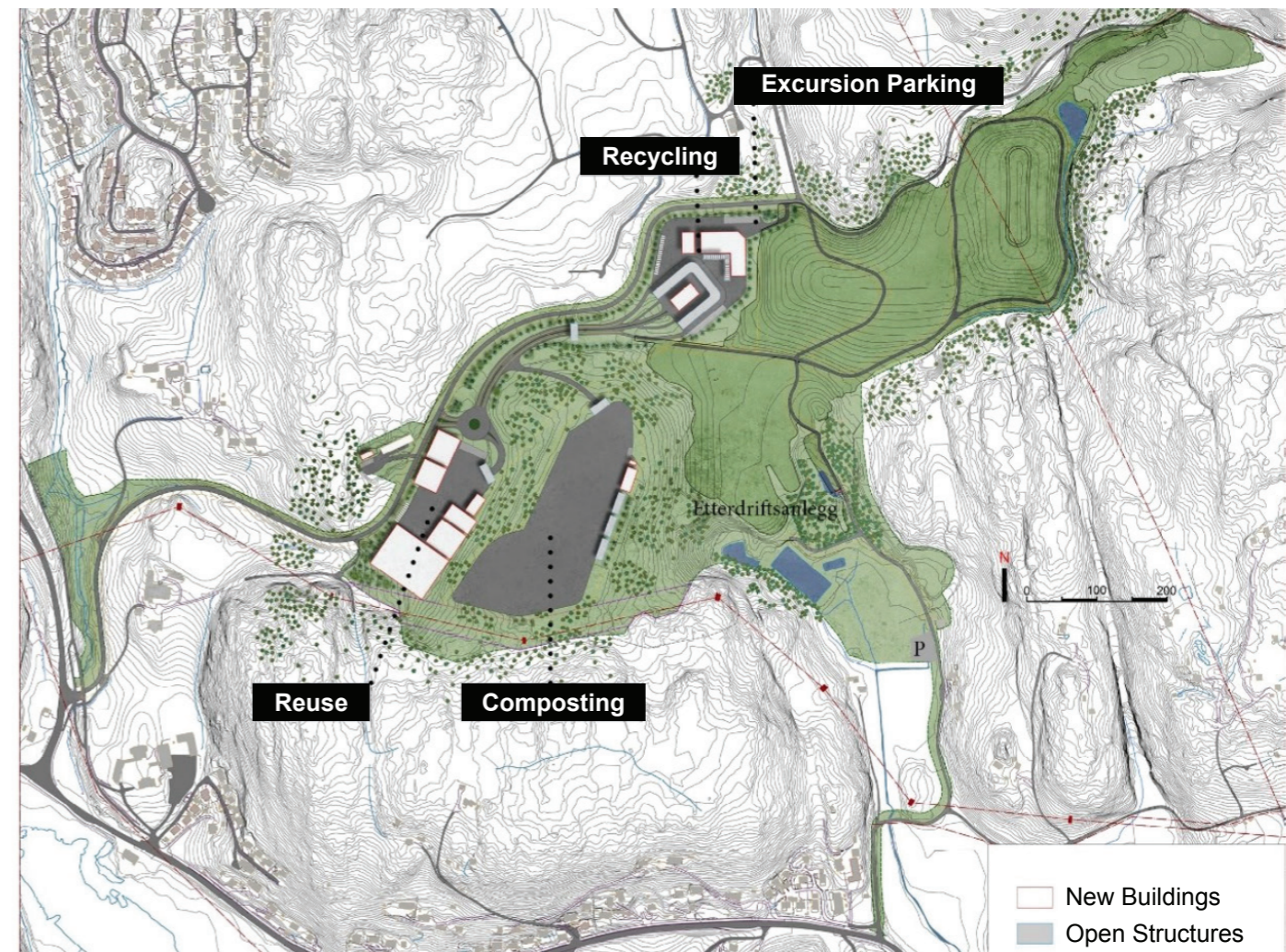
Research about the long term plan by the Oslo government



Picture source: <http://innsyn.pbe.oslo.kommune.no/saksinnsyn/casedet.asp?direct=Y&mode=&caseno=200804068>
 Illustrasjon idrettsanlegg Groenmo



Picture source: <http://innsyn.pbe.oslo.kommune.no/saksinnsyn/casedet.asp?direct=Y&mode=&caseno=200804068> Revidert plankart



Picture source: <http://innsyn.pbe.oslo.kommune.no/saksinnsyn/casedet.asp?direct=Y&mode=&caseno=200804068>
 Planbeskrivelse