



# HEPOMÄKI INDUSTRIAL AREA

## LOCAL DETAILED PLAN DESCRIPTION

INITIATION ANNOUNCED ON: 28 May 2025

APPROVAL PROCEEDINGS: CITY COUNCIL

PLAN PREPARED BY: THE CITY OF KUOPIO,  
URBAN PLANNING SERVICES,  
CITY PLANNING

BASIC AND IDENTIFICATION DATA

Description of the local detailed plan and its change which concerns the local detailed plan map that was updated on 12 March 2026.

The local detailed plan applies to: Properties 297-411-5-330, 297-411-21-6, 297-411-21-1, 297-411-5-321, 297-411-5-275 and 297-411-5-295 as well as parts of properties 297-411-5-306, 297-410-29-0, 297-410-5-94, 297-411-34-4, 297-411-21-13, 297-411-5-325, 297-411-32-2, 297-411-21-11, 297-411-33-6, 297-411-19-0, 297-871-1-2 and 297-36-9901-0 and water areas in Poskilampi.

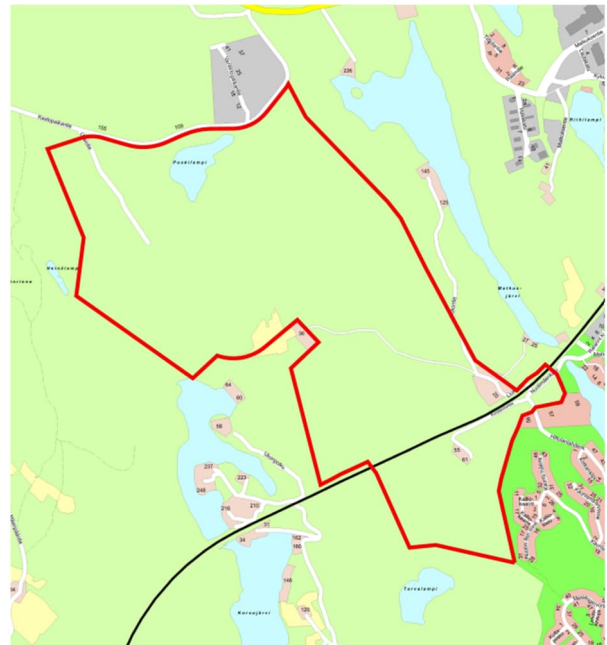
The change of the local detailed plan applies to: The street area of the 36th district (Hiltulanlahti) of Kuopio.

The local detailed plan will create: Kuopio's 36th (Hiltulanlahti) and 38th district (Kiviharju)...

The change of the local detailed plan will create: Kuopio's 36th district (Hiltulanlahti)...

The binding plot division creates: Supplemented in the proposal phase.

Location of area: Kuopio's 38th district Kiviharju and 36th district Hiltulanlahti.



Plan identifier: 857

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1 Track sheet (supplemented in the proposal phase)

2 Extract from the up-to-date local detailed plan and the local detail plan to be decommissioned

3 Binding building practice instructions (supplemented in the proposal phase)

4 Materials displayed in the proposal phase

5 Building survey

6 Nature survey

7 Connections of the flying squirrel

8 Statements and opinions received in the initial phase and responses

9 Traffic network image

10 ...

## 1 SUMMARY

### 1.1 Stages of the planning process

#### Initiation stage

- The participation and assessment scheme was discussed by the Urban Structure Board on 28 May 2025. (Section 114) The initiation of the plan was announced on the City website and on Viikkosavo.
- The participation and assessment scheme was available for public review between 4 June and 4 July 2025.
- A public event was organised regarding the initiation of the plan on 10 June 2025.

#### Draft phase

- The Urban Structure Board discussed the local detailed plan and the draft of the plan change on 25 March 2026.
- The draft of the local detailed plan is available for public review from xx.xx. to xx.xx.2026.
- A public event will be organised in the draft phase.

#### Proposal phase

- The Urban Structure Board discussed the proposal for the change of the local detailed plan on date (section)
- The proposal for the change to the local detailed plan is available for public review from xx to xx

### 1.2 Summary of the local detailed plan

The City of Kuopio has initiated the work for local detailed planning and changes to it for Heponiemi and its surroundings. The local detailed plan work for the Heponiemi industrial area was initiated in spring 2025. The purpose of the local detailed plan and its change is to investigate the possibility of creating a circular economy and industrial area and placing a small modular reactor (SMR) for district heating in the area. The City owns the majority of the area.

### 1.3 Implementation of the local detailed plan

The plan can be implemented in stages once it has legal force. The plan area contains unbuilt natural environment, and making use of the area requires the construction of municipal infrastructure. The areas south of Kaatopaikantie have, in places, preliminary construction. The principles of the implementation of the local detailed plan will be specified as the work progresses.

## 2 STARTING POINTS AND OBJECTIVES

### 2.1 Report on the conditions of the plan area

#### 2.1.1 General description of the area

The plan area is located in the Kiviharju and Hiltulanlahti districts a little over eight kilometres southwest from the Kuopio Market Square. The plan area is located mostly on forested, city-owned properties. The plan area also contains properties owned by private parties. A part of the area is excavation area where trees have been removed. The area contains an industrial hall, some industrial buildings, and a few detached houses near the railway line. In the north, the area is delimited by Kaatopaikantie; in the east it follows along Liukontie; in the south, the border is south of the railway line; and in the west, it runs through a forested area on the western side of Uusiotie towards Kaatopaikantie. The surface area of the plan area is approximately 271 hectares.

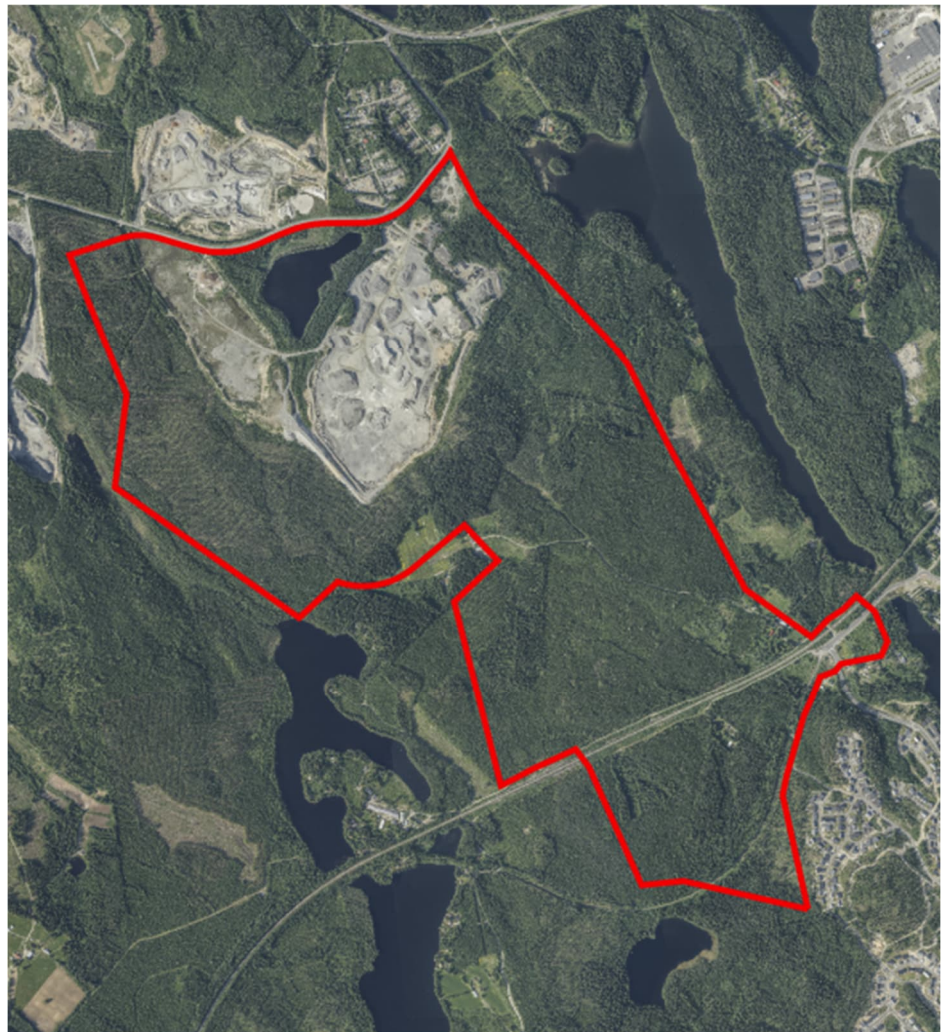


Image 1. Plan area



Image 2. From Kaatopaikantie into the plan area at the borrow area site.

### 2.1.2 Natural environment

The elevation differences in the area are significant and varying. The terrain slopes down towards the northeast, towards Matkusjärvi, towards the southeast, towards Korsujärvi, and towards the south. In the northeast, the elevation is at its lowest around 90-91 m from sea level. The elevation is the highest in the northern part of area near the borrow site located south of Kaatopaikantie, approximately 150 m from sea level. At the borrow site, the terrain has been evened in places. Most of the plan area is in its natural state and contains forests.

#### Landscape

The plan area is located in the area of Hepomäki, which is a hilly and forested area between the Korsujärvi Lake and Ylä-Matkus and Ala-Matkus. Landscape-wise, the plan area contains diverse sections.

The landscapes in the plan area can be categorised into three main types: natural, cultural, and industrial. Most of the natural landscape in the plan area is commercial forest. The small Poskilampi pond, which is located south of Kaatopaikantie, is part of the natural landscape. Due to the management of the commercial forests, the natural landscape in the plan area is constantly undergoing changes. Human activity has modified the environment from the traditional natural landscape, transforming it into a cultural landscape. The cultural landscape includes, among other things, historical settlements, buildings, farmland, passageways, and bridges. This landscape type in the plan area is represented, among others, by the following sites: the 100-year-old Liukko building and yard, roadbed built under the previous railway alignment south of the railway, private roads, and Savon rata. The excavation areas as well as other business operation areas can be classified as urban cultural landscapes, so-called "industrial landscapes".

The plan area is home to both close-up and panoramic views and important scenic views. One important scenic view opens up from the southwestern corner of Poskilampi over the pond into the northeast. Pedestrians, cyclists, and car drivers experience close-up views. The alignments of local and private roads enable diverse close-up views. Landscape-wise, a hierarchical point is located in Korpela, south of the excavation area. Some of the problematic views include the monotonous and austere views towards the excavation areas.

Some landscape damage can also be identified in the plan area. Landscape damage refers to the deterioration of the characteristics or the quality of the landscape due to an incident or an action. The most significant landscape damage in the plan area is around the excavation site in the south of Kaatopaikantie. The intention is to level the excavation site into buildable land for plots after the works end.

### Fauna and flora

As a part of the Hevisiirto project, a comprehensive nature survey has been carried out in the area: *Feasibility Study for the Green Transition in Hepomäki area of Kuopio, A-Insinöörit Suunnittelu Oy, 13 February 2026*. The Hevisiirto project was finished in February 2026.

The survey states that the Hepomäki area is part of the clusters of herb-rich forests in Kuopio (Kuopion lehtokeskus). This cluster is nationally valuable and contains significantly valuable forests. The range of species in the cluster of herb-rich forests is also extremely valuable. The nature survey is attached to the plan materials under the number 6.

The nature survey mapped out patterns throughout the whole survey area. The survey included a survey on habitat types in built environments (RYTY) and the nature value hectares for ecological compensation.

In addition, the nature survey investigated the following:

- Threatened habitat types (Lutu)
- Habitat types under the Directive (NATURA habitat types)
- Potential METSO sites
- Habitat types listed in section 64 of the Nature Conservation Act
- Habitat types listed in Chapter 2, section 11 of the Water Act
- Biodiversity sites listed in section 10 of the Forest Act
- Potential growth sites of species in the annex IV(b) of the Nature Directive
- Other valuable nature sites, such as occurrences of endangered species

On the basis of the recommendations of the nature survey, the following species will be investigated in the plan area in 2026:

- Bats
- Moor frog and northern crested newt
- Scarce fritillary
- Vegetation in moist herb-rich forests

The City of Kuopio has separately assessed the bird species and the flying squirrel in the area.

### Water areas

The Poskilampi Lake is located in the plan area. The following water areas are located in the plan area but outside the boundaries of the local detailed plan: Ylä-Matkus and Ala-Matkus, Poskilampi, Heinälampi, Tervalampi, and Korsujärvi.

In accordance with the nature survey (*Feasibility Study for the Green Transition in Hepomäki area of Kuopio, A-Insinöörit Suunnittelu Oy, 13 February 2026*), the ponds in the nature survey area are all in ecologically good condition. More than half of the running waters (approx. 78%) and spring complexes (approx. 69%) are clearly in good or better ecological condition.

The plan area is not classified as a groundwater area.

A small summary of the nature survey (*Feasibility Study for the Green Transition in Hepomäki area of Kuopio, A-Insinöörit Suunnittelu Oy, 13 February 2026*) regarding the plan site is compiled below under subheadings.

Special natural values

Habitat types (LuTu) have been investigated in the plan area. The LuTU classification is the official and primary classification of habitat types used in Finland that is used to identify and demarcate habitat types and to evaluate their threatened status.

The LuTU habitat types in the plan area are presented in image 3.



Image 3. LuTU habitat types in the plan area.

The plan area contains several Natura habitats, i.e. habitats protected under the Nature Directive. The habitats protected under the Directive and their representativities are marked in image 4.



Image 4. Natura habitat types in the plan area

Areas meeting the criteria of the METSO conservation programme have been investigated in a flora and vegetation survey in 2014 and in the most recent nature survey. The areas that meet the METSO conservation criteria in the plan area have been marked in image 5. Area-specific descriptions are available in the nature survey report.

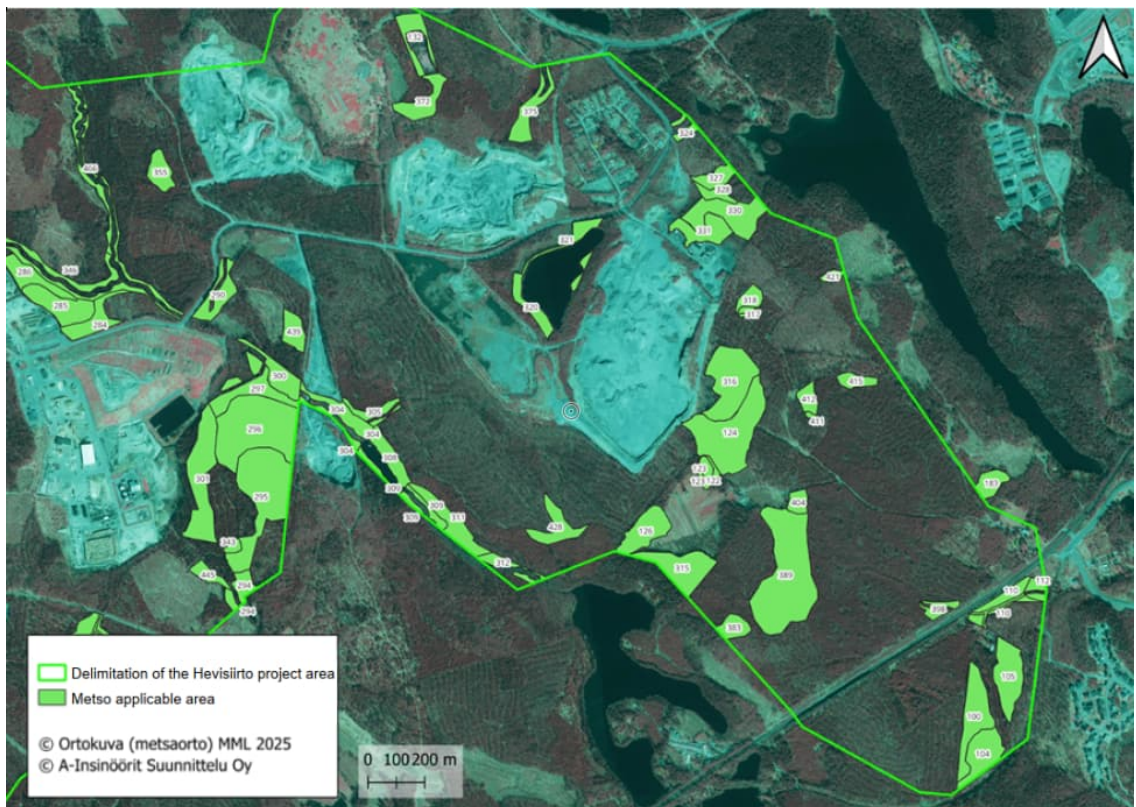


Image 5. METSO sites in the plan area.

Habitats protected under section 64 of the Nature Conservation Act were surveyed in the plan area but none were found.

Habitats protected under Chapter 2, section 11 of the Water Act were surveyed in the plan area. Under Chapter 2, section 11 of the Water Act, it is prohibited to endanger the natural state of a

coastal lagoon (flada in Finnish) with a maximum area of ten hectares, a lake created by land uplift (kluuvijärvi in Finnish) or a spring or, outside the region of Lapland, a streamlet or a pond or lake with a maximum area of one hectare. However, the permit authority may grant a special permit in individual cases. Some habitats under Chapter 2, section 11 of the Water Act are located in the plan area. The sites are visible in image 6.



Image 6. Habitats under Chapter 2, section 11 of the Water Act in the plan area.

Diversity sites protected under section 10 of the Forest Act were surveyed in the plan area. Section 10 of the Forest Act defines habitats of special importance in terms of biodiversity. They are sites in their natural or semi-natural state which can be clearly distinguished from the surrounding forest nature, are small in area, or have little significance for forestry purposes. Under section 10 of the Forest Act, forestry management and utilisation operations that are undertaken must either preserve or reinforce the characteristic features of the habitats. The diversity sites protected under section 10 of the Forest Act are presented in image 7. Descriptions of the sites are available in the nature survey report.

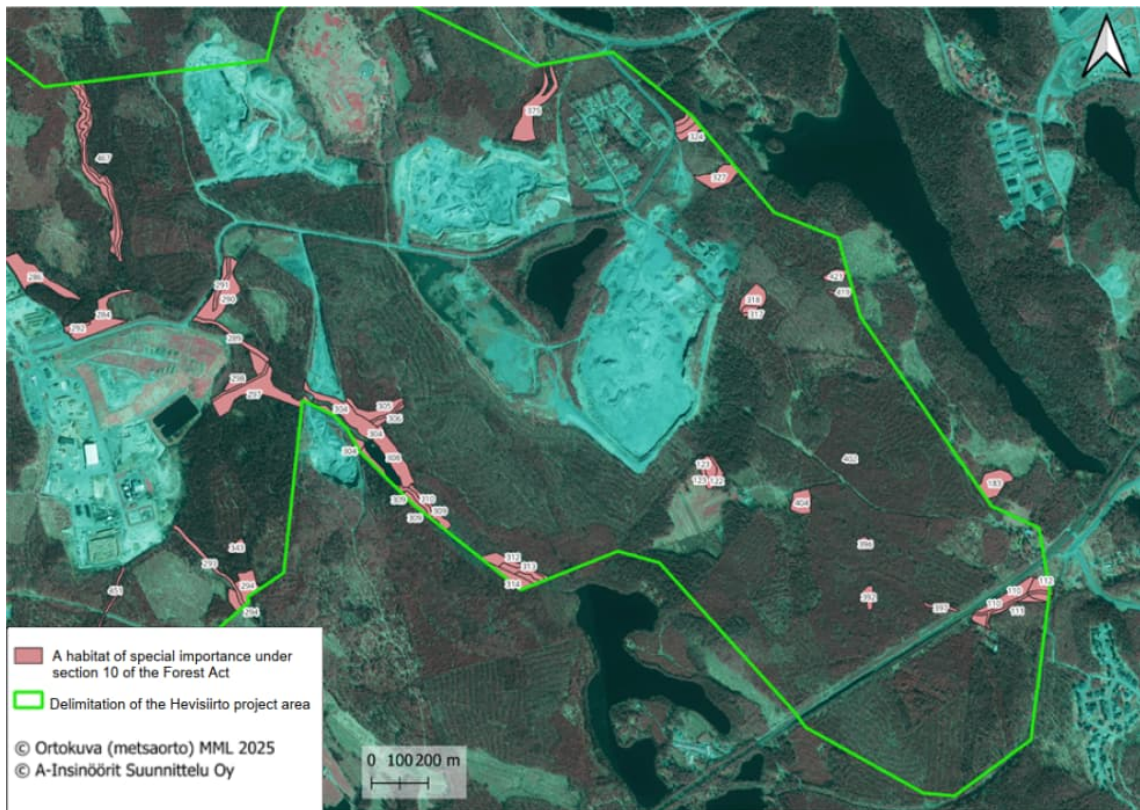


Image 7. Biodiversity sites listed in section 10 of the Forest Act located in the plan area.

Potential breeding and resting sites of species protected under Annex IV (a) of the Nature Directive (excluding the flying squirrel) and potential growth sites of species protected under Annex IV (b) of the Nature Directive have been surveyed in the area.

The survey found that the bat species that might occur in the area include Brandt's bat, northern bat, Daubenton's bat, and whiskered bat. No signs of large predators (lynx, bear, and wolf) or the otter were identified, but the Myllyjoki river, which is located under the local detailed plan area, could be a potential habitat for the otter. In Finland, the northern crested newt can be found in Åland and in eastern Finland. According to the survey, the presence of the northern crested newt is possible in the small ponds in the survey area in Heinälampi, Poskilampi, and the Korvalampi ponds. Many breeding and resting sites suitable for the moor frog were identified in the survey area. No dragonflies protected under the Nature Directive were identified in the plan area; however, there are suitable habitats for the species. The scarce fritillary may be present in the area. There are habitats suitable for this butterfly, and there are plenty of plants in the area that it feeds on (common cow-wheat and small cow-wheat). The survey area has habitats suitable for the woodland brown, but it is not likely that the species is found in the area. Some large blue have been sighted northeast of Kuopio but it is not likely that the species is found in the area. The Compton tortoiseshell might occasionally move through the area. The area might have habitats suitable for the *Graphoderus bilineatus* or *Dytiscus latissimus* beetles, but it is not likely that these species are found in the area.

The drooping woodreed occurs in the rocky slopes of the lush herb-rich forests near rills in the northeastern part of the Heponiemi survey area. The survey discovered drooping woodreed close to the site where it was last observed in the rocks of the rill letting into Matkusjärvi, and it might be possible to see more in other parts of the survey area in places where rocky herb-rich forests stand near rills. The survey also looked for mole-ladder, calypso orchid, and lady's-slipper orchid, but these were not found in the area.

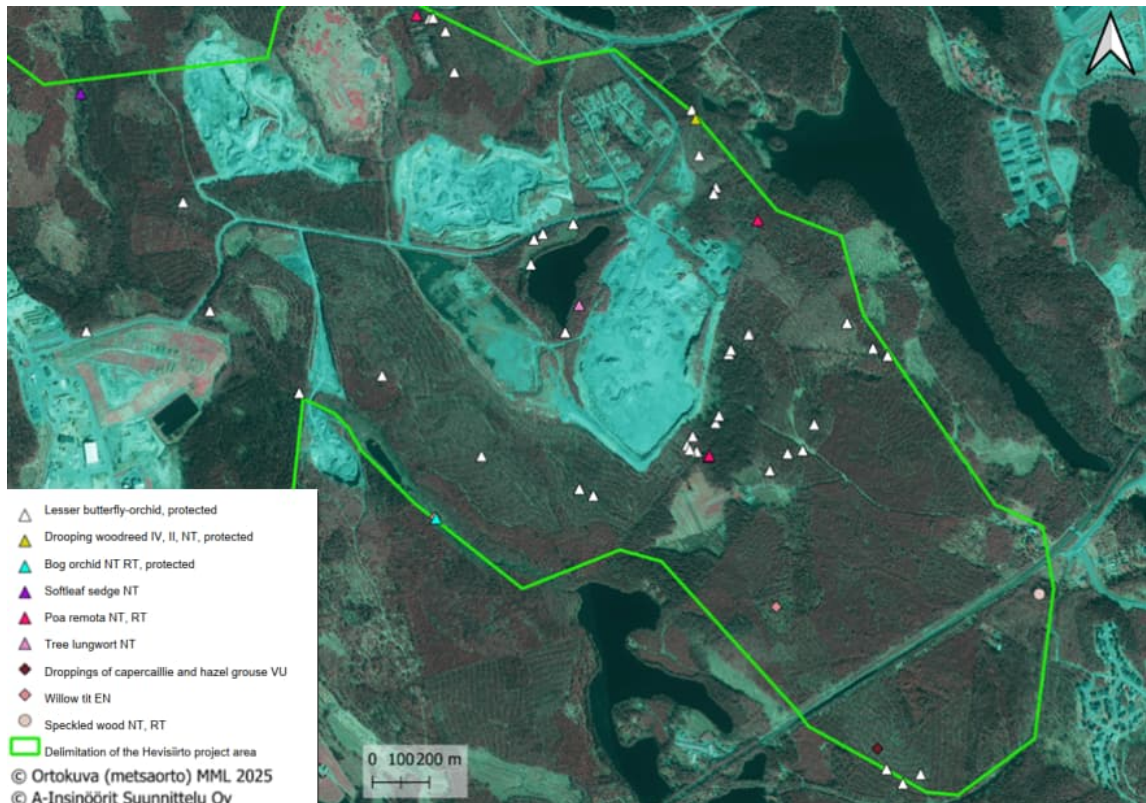


Image 8. Observed species in the survey area.

Other valuable nature sites were also observed in the nature survey area, including occurrences of endangered species. Some nationally near-threatened and regionally endangered species were also identified in the area. In addition, large occurrences of the lesser butterfly-orchid, which is protected throughout Finland, were found in the area. The species are listed in table 5 in the nature survey report.

The plan area contains some northern androsace, the habitat of which is protected by the nature reserve ERA255709 Pitkälähti established in 2022, 0.14 ha (section 47 of the Nature Conservation Act).

Habitat types of built environments (RYTY) were also surveyed in the area. Out of the surveyed habitat types of built environments, the natural yard of the Liukko farm stands out. Other sites representative of habitats of built environments in the plan area include the meadow patterns located around Hiltulanlahdenkatu, Korpipurontie, Nuolimäenkatu and the intersection of the old roadbed, and the old roadbed itself.

Nature sites located in the plan area that are protected under legislation are presented in table 6 of the survey (image 9).

Table 6. Sites protected under legislation in the Hepomäki area (category 1 sites).

1 sites protected under legislation	Discussed in section	Guidelines and recommendations
Sites referred to in section 11 of the Water Act, out of which 11 are rills, two spring areas (Korpela-Sulunkinkku area) and one pond (Heinilampi)	1.11	Endangering the natural state of the sites is prohibited. In individual circumstances, the Finnish Supervisory Authority may grant a special permit by application on the prohibition laid down in subsection 1 if the protection goals of the aquatic habitats listed in the subsection are not significantly endangered.
A growth site of drooping woodreed, a plant species referred to in annex IV b of the Nature Directive, in the eastern side of Kiviharju.	4.8.3.1 and 4.9.1	Sites where species listed in annex IV b are present must be safeguarded in land use planning.
A natural monument protected under section 95 of the Nature Conservation Act on the waterfront of the Poskilampi Lake	5.1	A protected natural monument may not be damaged or destroyed
Sites SL and S in the component master plan, 3 pcs	5.1	Plan symbols and provisions: nature conservation site, protected (SL), protected area, other archaeological cultural heritage site (S)
A nature reserve of a species under strict protection (Androsace septentrionalis) under section 77 of the Nature Conservation Act (ERA255709)	4.9.2	The site may not be destroyed or deteriorated.
58 habitats of special importance referred to in section 10 of the Forest Act, 6 of which are known	1.12	By itself, the Forest Act only applies to forestry use, but since the Hepomäki area experiences high volumes of forestry use, the sites have been highlighted in this category. Under section 10 of the Forest Act, forestry management and utilisation operations that are undertaken must either preserve or reinforce the characteristic features of the habitats.
Plant species protected under section 74 of the Nature Conservation Act; lesser butterfly-orchid and bog orchid (Nature Conservation Act 2023/1066)	4.9.1	Picking, collecting, cutting, uprooting, or destroying a plant or a part thereof is prohibited. The same applies to seeds of protected species. ELY Centres may grant special permits to deviate from the regulations on the protection of species.

Image 9. Sites located in the Hepomäki area that are protected under legislation (table from the *Feasibility Study for the Green Transition in Hepomäki area of Kuopio, A-Insinöörit Suunnittelu Oy, 13 February 2026*).

### Soil

The bedrock in Kuopio mostly consists of 2,500-year-old basal gneiss complexes which is in places covered by narrow streaks consisting of younger rock types.

Most of the soil in Kuopio consists of till. There are also extensive rocky areas. The soil in the plan area is reminiscent of the general soil types in the area of Kuopio. The plan area mostly consists of rocky soil with good bearing capacity where the C horizon consists of sandy till or fine-grained till, sand, or fine sand. A small section of the plan area has poor bearing capacity and is difficult to build on where the C horizon consists of coarse silt, clay, gyttja, or peat. There are some fill areas that consist of miscellaneous land masses in the northern part of the plan area.

Two separate areas where filling works have been carried out are located south of Kaatopaikantie, east of Poskilampi. The fill materials are not known. The area is used for i.e. the

temporary storage of land masses, and there is an asphalt factory (Skanska Oy). The area west of Poskilampi has some preliminary business plot development.

Ground survey results from the plan area are scarce. Therefore, the bearing capacity of ground must be surveyed in detail for each project.

The plan area is not located in groundwater area.

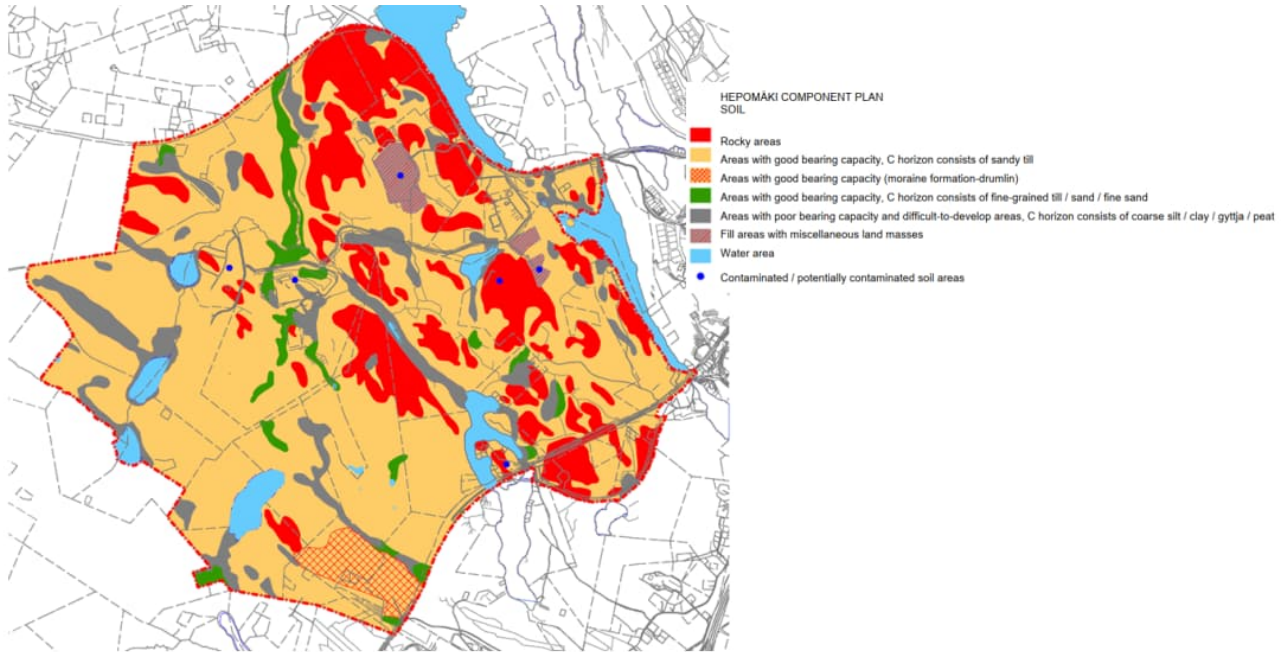


Image 10. Soil map

Contaminated soil areas

The plan area contains contaminated or potentially contaminated soil areas in the following sites:

- South of Kaatopaikantie, in the fill area east of the Poskilampi Lake.
- Operational Rudus Oy stone quarry.

In these soil areas, the contamination and bearing capacity of the ground must be thoroughly studied if buildings or other operations are planned for the area.

2.1.3 Built environment

Urban structure

The Hepomäki area is a part of the southern farmland area of Kuopio which, for the most part, is unbuilt and in its natural state. There are borrow areas in places in the plan area. Kaatopaikantie runs north of the plan area, and the railway delimits it to the south. In the southeast, the plan area extends to the street areas of Hiltulanlahdenkatu and Nuolimäenkatu. Three residential buildings are located in the plan area and a few people live there. Four detached houses are located in the plan area in the immediate vicinity of the area of the local detailed plan. There are no services in the area.

Urban landscape and building stock

The plan area is, for the most part, unbuilt and forested. Kaatopaikantie runs in the north of the plan area, from which the recently built Uusiotie road branches out. A railway runs through the southern part of the plan area in the northeast-southwest direction. A private road, Liukontie, runs in the western part of the plan area.

There are three residential buildings in the plan area. The Liukko farm complex is located along Liukontie and consists of the approximately 100-year-old main building and several old outbuildings. Previously, the old croft of the Koivumäki mansion was located between the railway and the current main building. Some stone foundation remains of the old croft. The farm complex has been surveyed. In the component master plan for Hepomäki, the site is marked with sr-3 (Area intended to be preserved. An area or part of an area that bears cultural history, architectural, or urban landscape value which should be preserved. The local detailed plan supports the preservation of the site by considering the permitted building volume and its placement in comparison to the value and level of protection of the site to be preserved.)



Image 11. The main building of the Liukko farm in November 2025. Photograph Erja Soranta.

#### Built urban environment

No ancient relics have been found in the area. In the view of the Kuopio Cultural History Museum, the old roadbed located in the component master plan area of Hepomäki and its structures are the most valuable and interesting cultural heritage sites in the component plan area. The old railway area is part of the Hepomäki plan area. The old railway area is marked in the valid local detailed plan as s-2 (Protected area, other archaeological cultural heritage site. Land use provisions: The removal of historical structures and layers in the area is only allowed for a special reason and after sufficient archaeological documentation. The museum authorities must be heard in plans concerning the area.)

The Liukko farm complex is also located in the plan area and has been determined to be a locally valuable site in the survey. The main building of the Liukko farm dates back to 1925 and its outbuildings and yard area to early 1900s. The site is included in the survey "Valuable built sites in the countryside, Southern Kuopio" and classified under building heritage in the countryside and landscape value. In the component master plan for Hepomäki, the site is marked with sr-3 (Area intended to be preserved. An area or part of an area that bears cultural history, architectural, or urban landscape value which should be preserved. The local detailed plan supports the preservation of the site by considering the permitted building volume and its placement in comparison to the value and level of protection of the site to be preserved.

### Traffic and parking

Kaatopaikantie runs in the north of the plan area, from which the recently built Uusiotie road branches out. The speed limit on Kaatopaikantie is 50 km/h. In the north, Kaatopaikantie connects to Karttulantie, and in the west, to Korvaharjuntie. Kaatopaikantie is used for internal traffic in the area and as a passageway to the Kuopio waste sorting centre. A private road, Liukontie, runs in the western part of the plan area. In the southeastern corner, the plan area extends to the street areas of Hiltulanlahdenkatu and Nuolimäenkatu. The speed limit on Hiltulanlahdenkatu and Nuolimäenkatu is 40 km/h. Hiltulanlahdenkatu and Nuolimäenkatu are roads that connect the Hiltulanlahti and Matkus surroundings while also serving the internal traffic in the area. A pedestrian and cycling lane runs alongside Hiltulanlahdenkatu and Nuolimäenkatu. A bus route also operates on Hiltulanlahdenkatu and Nuolimäenkatu.

A railway runs through the southern part of the plan area in the northeast-southwest direction.



Image 12. Liukontie runs under the railway.

### Municipal infrastructure

Most of the area has no existing municipal infrastructure. The surroundings of Hiltulanlahdenkatu and Nuolimäenkatu are within the municipal infrastructure area.

The land areas serviced by Kaatopaikantie are mostly owned by the City and are within the service network of Kuopion Vesi in terms of both water supply and wastewater management. The area of operations covers, among other things, Emergency Services Academy Finland, waste treatment plant, the old landfill, excavation areas, and Kiviharju.

Kuopion Energia supplies electricity to the few residential houses in the area as well as to the areas connected by Kaatopaikantie through its low and medium voltage networks.

### Environmental disturbances

The operations in the borrow areas cause noise and vibration disturbances from the southwestern and northwestern sides of the plan area. The railway running through the plan area also causes noise and vibration. Noise disturbance is caused by traffic on the roads and streets running through the area as well as the exercises of Emergency Services Academy Finland.

Smell from the waste treatment centre may carry far with wind. Small bits of household waste are also transported from the waste treatment plant, likely by birds, into local brooks. Scrap left in forests and unlawful storage also may cause environmental harm. The aforementioned factors may also cause contamination risks.

The plan area contains contaminated or potentially contaminated soil areas at the following sites:

- South of Kaatopaikantie, in the fill area east of the Poskilampi Lake.
- Operational Rudus Oy stone quarry.

#### 2.1.4 Land ownership

The City owns most of the plan area, excluding five private properties. The state of Finland owns the railway area. The water area in Poskilampi is owned by the joint property management association of Hiltulanlahti and the joint property management association of Haminanlahden hovi.

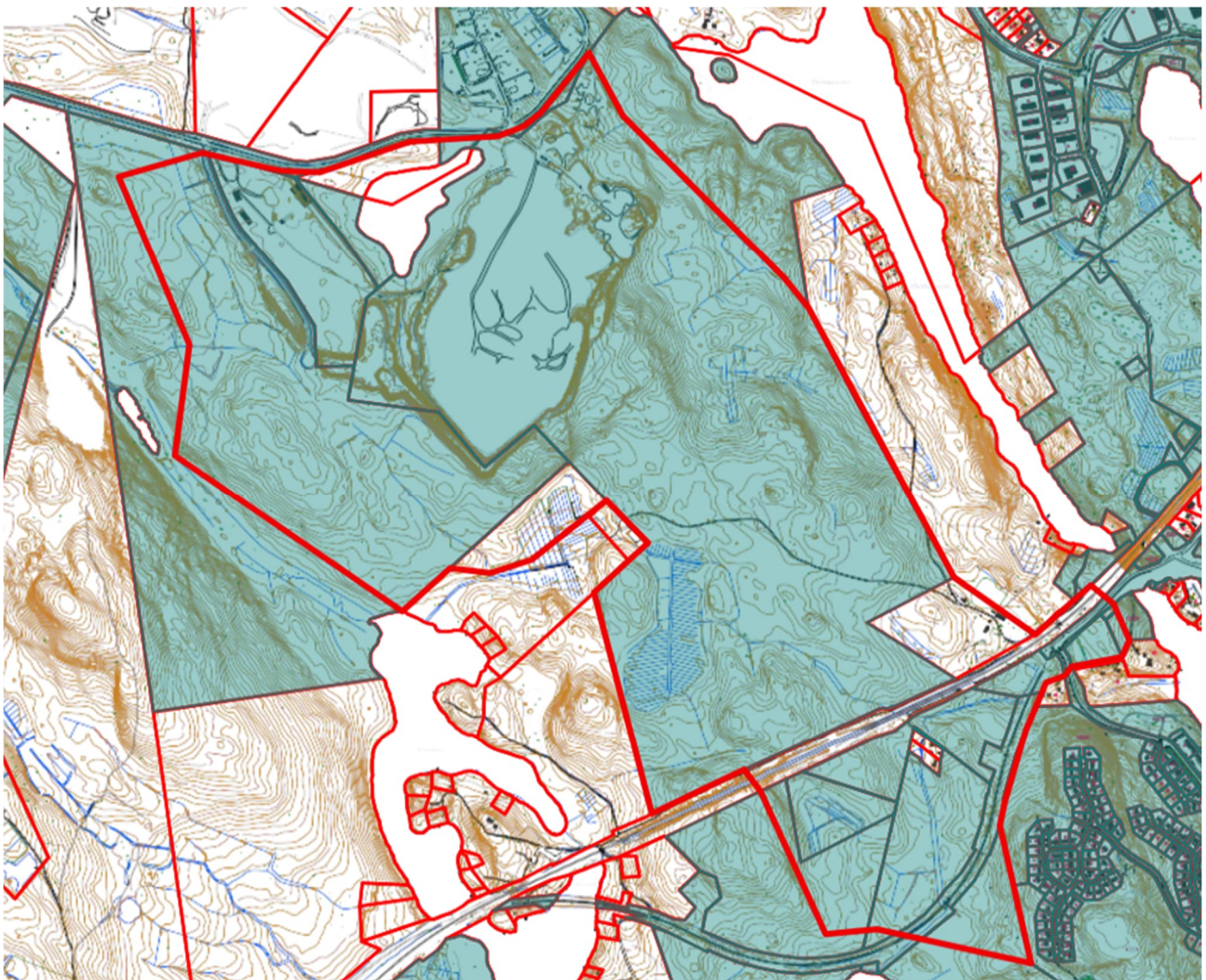


Image 13. Property limits. The limits of the plan area are marked in red. The areas owned by the City are marked in turquoise.

## 2.2 Planning situation

### 2.2.1 National land use objectives

National land use objectives are part of the planning system of land use, and they must be taken into account and their realisation must be promoted in regional planning, municipal plan

processes, and official activities of state authorities. The updated national land use objectives, which came into force on 1 April 2018, contain goals related to i.e. functional communities and sustainable mobility, efficient traffic systems, healthy and safe living environments, robust natural and cultural environments, and natural resources and energy supply capable of regeneration.

This plan project implements national land use objectives particularly by developing business activities, sustainable transport, national traffic systems, and existing transport connections and networks, and by considering the needs of a healthy and safe living environment, the goals regarding vital natural and cultural environments, and the production of renewable energy production as well as its logistical needs.

2.2.2 Regional plan

The regional plan of the Kuopio region was ratified in the Ministry of the Environment on 3 July 2008. The regional plan does not contain symbols that would affect the plan area.

The regional plan of North Savo 2040 came into force on 26 February 2025. The plan area is also included in the development zone of the Viitoskäytävä, Ysikäytävä and 23-käytävä corridors, the Kuopio–Siilinjärvi–Tahko tourism development corridor, a key natural area, an urban development area, a circular economy development area, and a protective zone, sv-11 814. The plan area has been allocated nature reserves (SL 616, sl 586), an area mostly in agricultural and forest use with special natural values, and ecological connection, an industrial and warehouse area or site (t 803), and a terminal for combined transports. An area has been reserved in the southern part of the plan area for Savonrata (a double-track main line for high-speed rail traffic).

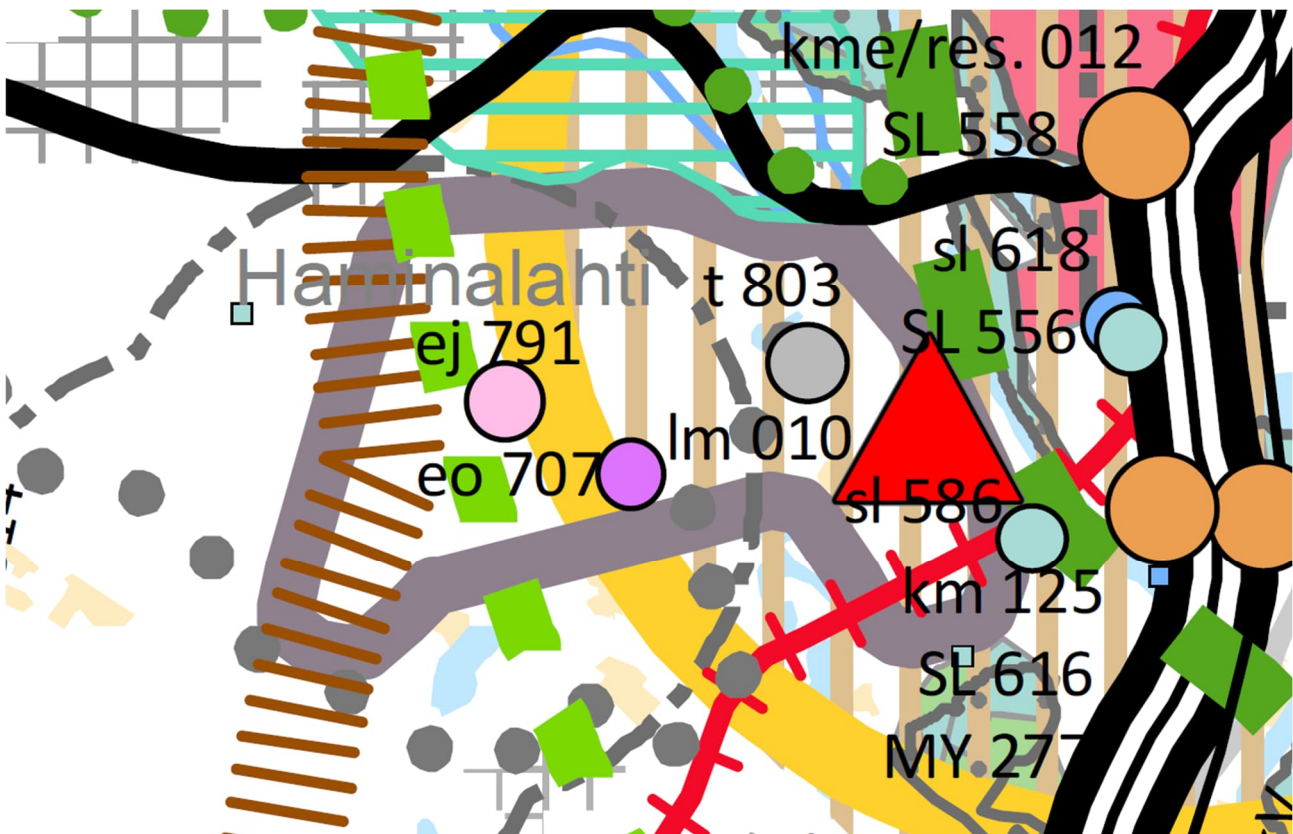


Image 14. Extract from the regional plan.

2.2.3 Master plan

The northern part of the plan area is covered by the Hepomäki local master plan and the southern part by the Hiltulanlahti component master plan. The City Council approved the component master plan for Hepomäki on 20 May 2019 and it came into force on 16 July 2019. The City

Council approved the component master plan for Hiltulanlahti on 17 August 2009 and it came into force on 26 May 2012.

In the component master plans, the plan area contains the following areas: an industrial and warehouse area (T), industrial area that does not cause environmental disturbances (TY), workplace area (TP), agricultural area with natural values and recreational use (MU), agricultural and forest area (M), recreation area (V), protective green area (EV), water area (W), and railway area (LR). The following have also been allocated to the area: main access for light traffic, indicative recreational route, indicative snow mobile route, underpass and overpass, need for a road access, nature conservation site, protected (SL-1) nature reserve, other archaeological cultural heritage site (s-2), areas of particular importance to biodiversity (luo, luo-1), borrow area (eo), spoil deposit and treatment site (eo-2), area intended to be preserved (sr-3), and an area section reserved for natural rainwater management (hule).

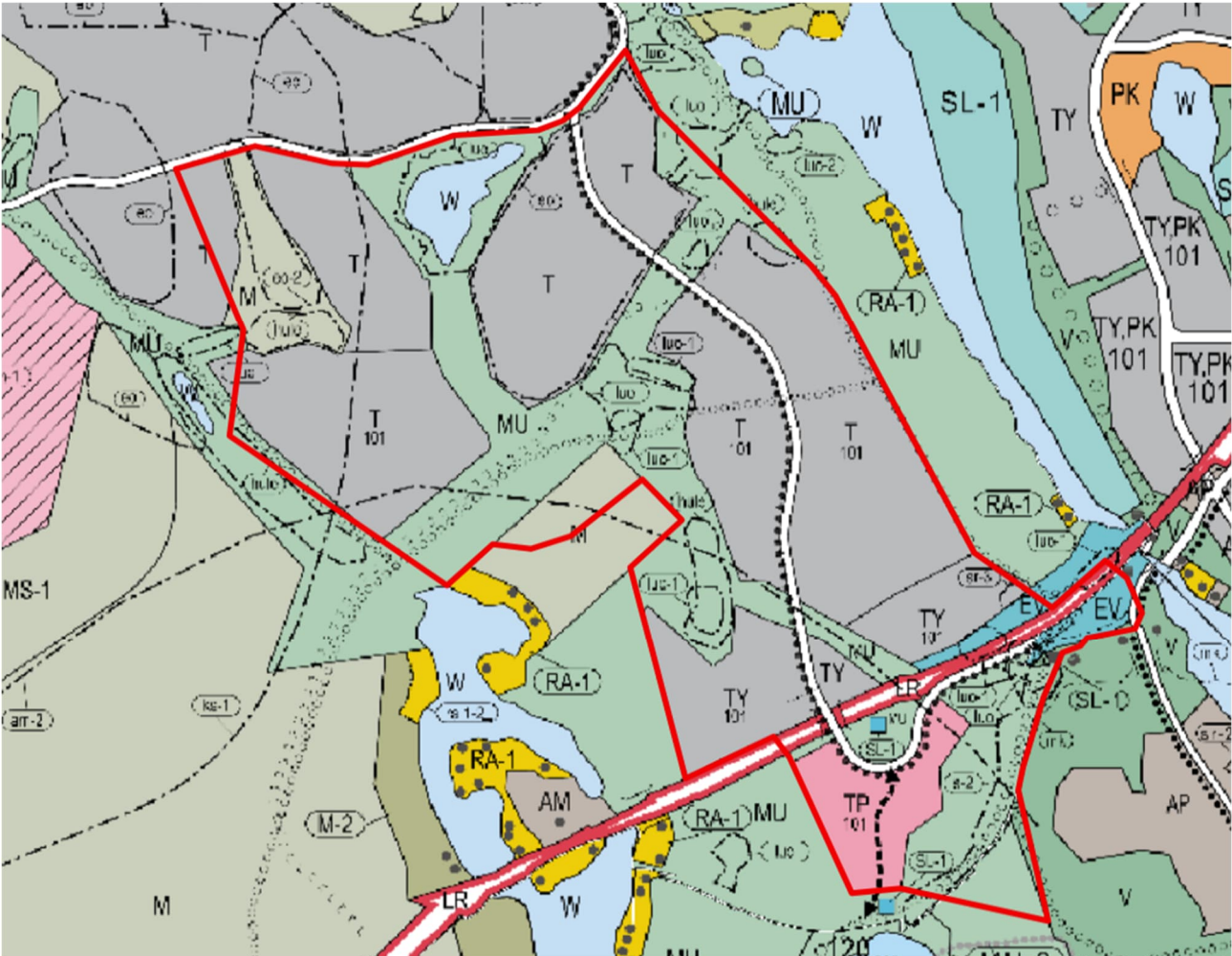


Image 15. Extract of the master plan; the Hepomäki industrial area is marked on the map with a red line.

2.2.4 Local detailed plan

The plan area is largely undeveloped. The southeastern corner of the plan area is within the area of the valid local detailed plan which was approved by the City Council on 23 May 2016 and came into force on 5 July 2016.

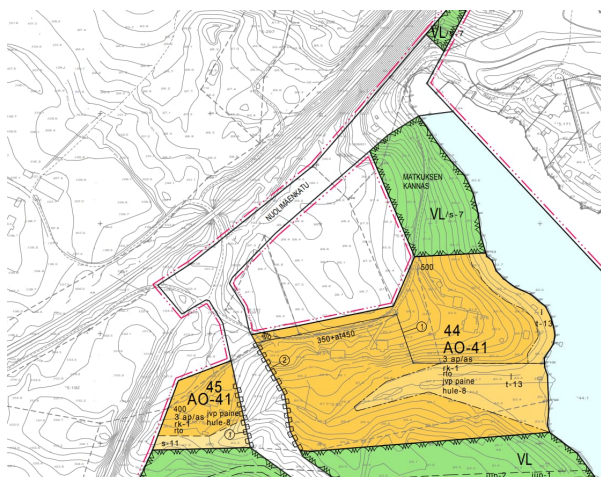


Image 16. Extract from the combination of local detailed plans.

### 2.2.5 City strategy

The Kuopio City Strategy until 2035 was approved in the City Council on 17 November 2025. The Kuopio City Strategy 2035 defines the direction of operations, business, and management in the City of Kuopio for the upcoming years. In the strategy, the city specifies that the offering of business plots shall correspond to the demand and support growth. New business areas covering 500 hectares will be planned by 2030. The city also promotes carbon neutrality, climate sustainability, and nature positivity. Biodiversity is strengthened, and accessible local nature improves the well-being of residents.

The public transportation programme of the City of Kuopio 2035 (12 March 2024) aims at directing at least 60% (k-m<sup>2</sup>) of new business developments along strong public transportation routes. Railway traffic is promoted by identifying potential locations for new stations and the promotion of land use near stations is enabled.

The Kuopio region transport system plan 2040 (4 October 2022) aims at developing, among other things, land use, housing, the traffic system, services and business, and promoting sustainable modes of transport and transportation in the Kuopio region.

The Kuopio region walking and cycling development programme (9 February 2023) aims to promote easy-to-use and safe cycling infrastructure and bicycle parking. The goal is to enable the promotion of walking.

The Kuopio traffic safety plan 2030 (5 April 2022) presents measures to improve the traffic safety of the intersection between Karttulantie and Kaatopaikantie.

The Viksu Kuopio programme 2024–2035 (10 June 2024) states, among other things, that land use planning and zoning will contribute to a climate and resource wise life in the city. The programme also mentions the goal to steer construction into the direction of carbon negativity and circular economy. It aims to pay attention to wise modes of transport and enable the construction of more railway lines in the future (local and distance trains). In the programme, it is stated that the Hepomäki circular economy area will be developed into an attractive base for circular economy business, energy technology, and businesses and innovations involved in clean energy and green transition.

Kuopio's Biodiversity Programme (LUMO) 2024–2030 (20 May 2024) contains the key objectives and measures that the City uses to ensure the preservation of biodiversity in its own operations.

The Waste Policy programme 2030 promotes the realisation of objectives of the national waste plan locally and supports the municipal strategies of the municipalities. The programme promotes the realisation of circular economy and the achievement of the statutory recycling goals.

The land policy's (14 December 2015) key objective is to enable an offering of plots that supports the city's attractiveness and sustainable urban structure.

The Kuopio Growth Programme 2025–2030 states that the green transition and circular economy business areas (Hepomäki, Sorsasalo) will be actively developed. Its goal is to bring data centres to Kuopio and its region.

#### 2.2.6 Building ordinance

The building ordinance for the whole urban area of Kuopio was approved by the City Council on 22 October 2018 and it came into force on 1 January 2019.

#### 2.2.7 Base map

The base map of the plan area meets the requirements of section 54 a of the Land Use and Building Act.

#### 2.2.8 Other plans and decisions

The City of Kuopio is drafting a Feasibility Study for the Green Transition in Hepomäki area of Kuopio, i.e. the Hevisiirto project. The city aims to bring new companies involved in circular economy, green transition, and clean energy to Hepomäki and to encourage the existing businesses in the area to develop their activities. The boundaries of the project and the project area are based on the component master plan for Hepomäki from 2019. The project is implemented by the City of Kuopio and the project period is 1 June 2024 to 28 February 2026.

### 2.3 Objectives

#### 2.3.1 Objectives arising from the base materials

##### Objectives set by the city

The Kuopio 2035 strategy, which was drafted by the city and dated on 17 November 2025, sets goals regarding the city's vitality. The strategy defines Kuopio as the best place for companies and investments. The strategy mentions the green transition, among other factors, as one of the factors enabling change. Green transition refers to a societal and economic change to be more environmentally sustainable. The goals of the City of Kuopio are to mitigate and adapt to climate change, utilise natural resources in a controlled manner, promote circular economy, and use renewable energy sources. In order to support the city's growth, a goal of zoning 500 ha of new business plots by 2030 has been set.

The Kuopio 2035 strategy aims to promote carbon neutrality, climate sustainability, nature positivity, and biodiversity. The prerequisites for functional public transport, cycling, and walking must also be promoted.

Kuopio 2035 has set a goal to promote the use of local food.

The strategy states that the city will not grow by any means possible but prioritises nature and financial resources.

The Kuopio Growth Programme 2025–2030 states that the green transition and circular economy business areas (Hepomäki, Sorsasalo) will be actively developed. Its goal is to bring data centres to Kuopio and its region.

The goal of the planning unit in the City of Kuopio is to investigate the implementation of a new circular economy area in the plan area.

Ideally, the area would allow a range of functions. Efforts are being made to create a plan where the plan symbols offer as much flexibility as possible.

Functions that might cause environmental disturbance, the data centre, and the small modular reactor (SMR) should be placed in the northern part of the plan area where there are no existing residences or other sensitive functions. Industrial functions that do not cause environmental disturbances are being planned on both sides of the railway near existing residential areas.

The planning work aims to take the area's natural values into account and reconcile them with the other goals of planning work. The goal is to take the green connections defined during the planning phase into account by utilising the conducted nature survey and the objectives of the local detailed plan.

The work also aims to enable pedestrian and cyclist commuter traffic. The ease and possibilities of public transportation should be examined from the perspective of commuter traffic. The planning process also aims to take into account the possibility of building a double track in connection with the current Savon Rata on its southern or eastern side.

During the planning process, the objectives have become more specific in regard to the small modular reactor (SMR) and the data centre that the city wishes to place in the area.

#### Objectives derived from the planning conditions

The planning work of the Hepomäki industrial area considers the symbols and provisions of the valid regional plan and the component master plan. In the regional plan, a circular economy area has been allocated to the Heponiemi area. The component master plan for Hepomäki, which was approved and came into force in 2019, specifies the objectives of the regional plan and serves as the foundation for the preparation of the local detailed plan for the Heponiemi industrial area.

#### Objectives arising from the conditions and features of the area

In its strategies, the City of Kuopio has set goals regarding climate change and natural values. Objectives on carbon neutrality, climate sustainability, and nature positivity have been entered into the strategy. One of the goals is to strengthen biodiversity and the well-being of residents arising from accessible local nature. The Biodiversity Programme (LUMO) compiles objectives and measures to help preserve biodiversity. The Viksu Kuopio programme 2024–2035 contains objectives on a climate and resource wise life. The programme also mentions the goal to steer construction into the direction of carbon negativity and circular economy.

On the other hand, in the strategy, the city of Kuopio aims to promote business activities in its region. The city's strategy has set goals on increasing business plots in the city, especially for circular economy businesses. The Kuopio Growth Programme 2025–2030 states that the green transition and circular economy business areas (Hepomäki, Sorsasalo) will be actively developed. Its goal is also to bring data centres to Kuopio and its region.

The City of Kuopio has prepared a Feasibility Study for the Green Transition in Hepomäki area, i.e. the Hevisiirto project. The city aims to bring new companies involved in circular economy, green transition, and clean energy to Hepomäki and to encourage the existing businesses in the area to develop their activities. During the project, the Hepomäki area was surveyed in a range of ways, e.g. nature surveys, flying squirrel surveys, spoil surveys, and water quality surveys in relation to the general plan of land use and bodies of water. The results of the surveys will be available in the planning work for the Heponiemi industrial area.

A key objective of the selected plan is to reconcile the objectives arising from the characteristics and natural values of the area and those of the city's business life.

In the component master plan for Hepomäki, the area of the old farm complex has been designed as an area that should be preserved (sr-3). The planning unit is investigating the component master plan's goals regarding the farm complex.

The Kaatopaikantie road branches south from Karttulantie and connects to Putkinotkontie in the south, and further through the Kurkimäki area it connects to Kurkimäentie. Kaatopaikantie is currently the only appropriate road access into the plan area. Hiltulanlahdenkatu and Nuolimäenkatu are located in the southern part of the plan area that connect the plan area to

Matkus and Hiltulanlahti. Kaatopaikantie is considered to be too steep for freight traffic. Therefore, it is now a goal to build a new access road into the area, which could be a new main street cutting across the Hepomäki industrial area. The new main street should be an appropriate option for freight traffic in the area.

### 2.3.2 Goals arising during the process, defining the goals

#### Stakeholder goals

The goal of Kuopion Energia Oy is to enable the construction of a small modular reactor (SMR) in the Hepomäki industrial area. Kuopion Energia Oy must replace the heat produced by the Haapaniemi 2 plant around the year 2035. Kuopion Energia Oy is committed to providing heat to the city. Other typical responsibilities of municipal energy companies include electricity transfer, the production and wholesale of electricity, the production and wholesale of cooling, and the sale of electricity. The production of combustion-based heat will become more difficult as a result of trying to get rid of fossil fuels and due to the end to Russian energy imports. Kuopion Energia Oy has sought alternative placement options for the small modular reactor in Kuopio. Possible locations have been surveyed in the following areas: Haapaniemi / Kumpusaari, Huuhanluola, Kallioniemi industrial area, Sorsasalo industrial area, Kolmisoppi, Pieni Neulamäki, and Hepomäki. Sorsasalo and Hepomäki industrial areas are considered to be the best potential locations since there are not a lot of residential buildings nearby nor other sensitive functions. The local detailed plans for Sorsasalo and Hepomäki industrial areas are being drawn up simultaneously. An environmental impact assessment (EIA) will be carried out in both areas in the same schedule with the planning work.

YIT Rakennus Oy wants to enable the construction of a data centre in the Hepomäki area and it has negotiated with the representatives of the city about acquiring a reserved plot in the land owned by the city in the plan area. YIT Rakennus Oy aims to market the area reservation to data centre operators in order to bring a data centre project that meets the criteria of a clean transition industrial project into the area. The Urban Structure Board approved the area reservation agreement with YIT Rakennus Oy in their meeting on 19 November 2025.

An access road should be planned and implemented into the holiday homes and other buildings located in the waterfront areas in Matkus.

The property owners in the plan area have goals regarding the future of their owned properties and their neighbouring areas. One of the goals is considering the surrounding nature, for example, the impacts of the local asphalt factory's operations on the natural conditions in the area. Negotiations are being held with stakeholders.

The participation and assessment scheme lists the stakeholders from the City of Kuopio, other authorities, and other interested parties. The goals of the aforementioned stakeholders have been heard and written down in the negotiations held during the planning process. The possibilities and reconciliation of the goals will be entered into separate notes.

#### Qualitative goals of the local detailed plan

The City of Kuopio wants to use the local detailed plan and its change is to investigate the possibility of creating a circular economy and industrial area and placing a small modular reactor (SMR) for district heating in the area. The City's goal is to enable the placement of diverse business and industrial functions in the area. The goal is to regulate the operations to the extent necessary for the nature of the planned operations. The City aims to take into account the valuable natural conditions of the area and reconcile them with the City's need for business plots. The City also aims to prevent environmental disturbances (e.g. noise) for the residents in the plan area and nearby areas.

The City aims to maintain the cleanliness and usability of the well water used by the properties in the area.

A stakeholder has expressed concern about waste from the local asphalt factory ending up in nature.

A stakeholder was concerned about the functionality of the city's rainwater management system in the vicinity of a private property. The rainwater solution determined in the final plan should not effect the balance of the underground rill in the waterfront area or its flow volume.

A stakeholder presented their goal that the valid local detailed plan would be taken into account in the symbols of the areas north of the railway, referring to the symbols in the business area. They are concerned about disturbance to residential areas.

A stakeholder presented their objective of protecting the 100-year-old Liukko farm complex in accordance with the currently valid local detailed plan.

## 3 PARTICIPATION AND INTERACTION

### 3.1 Interested parties

The parties are:

- The North Savo Regional Council
- Finnish Supervisory Agency (LVV)
- Economic Development Centre of Eastern Finland (EVK)
- Rescue Department of North Savo
- Kuopio Cultural History Museum
- Interested official parties and bodies of the City of Kuopio
- Residents of the area, property owners, businesses operating in the area
- Residents whose housing, employment or other circumstances may be affected by the plan
- Telecommunications and network operators
- Finnish Safety and Chemicals Agency (TUKES)
- Radiation and Nuclear Safety Authority (STUK)
- Finnish Defence Forces

### 3.2 Initiation stage

The participation and assessment scheme was given to the Urban Structure Board for information on 28 May 2025. The initiation of the plan was announced on the City website and on Viikkosavo and by letter to neighbouring properties. The participation and assessment scheme was available for public review between 4 June and 4 July 2025. During the review period, one opinion was received from a private person and six statements from stakeholders. The full opinions and statement are attached to this report.

#### Opinions

One of the received opinions proposes excluding an individual section from the plan area. The opinion also comments in favour of preserving natural values. It has been requested that it would be better to place the small modular reactor in Sorsasalo and not in Hepomäki where it would be close to residential areas.

#### Statements

In the initial phase, statements were given by Environmental protection, Digita Towers Oy, Radiation and Nuclear Safety Authority (STUK), North Savo museum with regional responsibility, DNA Tower Finland Oy, and Municipal engineering planning.

In its statement, the nature conservation stakeholder focuses on the climate perspective and provides general comments as well as commentary on the share of green areas in the local detailed plan, building and buildings, recovery of land masses, dismantling waste and recycled pulp, wise transport connections, permeable surfaces, and energy. Digita Towers Oy presents for the plan their need for a telecommunications mast and a telecom cabinet. In its statement, the Radiation and Nuclear Safety Authority (STUK) focuses on the general update of nuclear safety regulations regarding small modular reactors (SMR) and the safety of SMRs. At this point, The Radiation and Nuclear Safety Authority does not comment on the suitability of the Hepomäki industrial area as a location for a small modular reactor for district heating. The North Savo museum with regional responsibility does not have any comments on the participation and assessment scheme. DNA Tower Finland Oy comments on the need of mobile networks to construct base stations in the area. The municipal engineering stakeholder comments on street and traffic planning, green and recreation areas, and rainwater management.

#### Public event 10 June 2025

A public event was organised regarding the initiation of the plan at the Council Building. During the event, the public was informed about the city's ongoing Feasibility Study for the Green

Transition (Hevisiirto project) and the starting points and goals of planning work for the Hepomäki industrial area. After the presentations, the event opened for discussion.

#### Kick-off meeting for stakeholders on 17 June 2025

During the meeting, the starting points and goals of planning work were discussed and the statements of stakeholders were processed.

The kick-off meeting discussed the following, among other things:

- A rainwater management plan will be made for the area.
- A traffic network image will be prepared to support planning work.
- Planning work must take into account, among other factors: full access control areas, street junctions, unobstructed visibility in junctions, halt reservation in accordance with the Duo railway survey, space needed by street areas, street geometry, sufficiently gentle longitudinal profile of the main street, snow, turnout areas, and rainwater drainage routes.
- The plan area has a lot of elevation differences which must be taken into account when fitting streets and plots together.
- Will the public transport connection be routed through the plan area?
- Hevisiirto project: the preparation of the general land use plan initiated in June 2025. The surveys conducted for the project can also be utilised in planning work.
- The master plan for the area should be seen as very indicative and flexible.
- An extension to the local detailed plan is recommendable, which would also help include the already built Uusiotie in street management.
- The traffic solutions in the area and traffic connections into nearby areas must be planned carefully.
- The planning of main access routes of light traffic must also be taken into account.
- The natural values in the plan area must be taken into account.
- The Rudus excavation site is located in the northern part of the plan area and it will be granted a permit for the extraction of resources for it to finish its operations. The after-treatment of Rudus must be reconciled with the city's needs in order to create ready-to-build plots.
- The northern part of the plan area contains warehouses, an asphalt plant, and a treatment area for demolished concrete.
- The plan area is not known to contain any contaminated soil areas.
- The planning of the area should be carried out with consideration to climate change mitigation and to the resource wise and circular economy perspectives.
- Environmental health care should be added as a stakeholder to the plan in the participation and assessment scheme.
- There are plans to place a small modular reactor (SMR) in the area. Based on experiences from emergency drills, North Savo does not have the capacity to measure radiation from water or food products. In case the project moves forward, the measurement equipment and related competence must be ensured and safeguarded.
- The plan project is strongly reconciliatory and takes forests in their natural state into account.
- An environmental impact assessment (EIA) of the small modular reactor will be carried out in the plan project (as well as in the Sorsasalo plan project).
- Negotiations with authorities will be held in the autumn together with the Sorsasalo plan project.
- The local detailed plan and Hevisiirto project in Hepomäki present a need for a new electricity supply station in the area. The new electricity supply station requires the construction of a 110 kV overhead line. Sufficient area reservations must be made in the plan for electricity infrastructure, e.g. for transformer substations.
- The district heating line should be placed in connection with the street network.
- The EIA aims to investigate whether the soil is suitable for nuclear power. If it is, the EIA process will be completed in both plan projects. The location of the small modular reactor will only be chosen after this.
- A general plan for water management was drawn up for the Hepomäki area already in the component master plan phase, based on which the area planning will continue. In

terms of water management, the plan area is extensive, and it is likely that the network will also need to be extended outside the plan area.

- The needs of teleoperators need to be taken into account in planning work.
- The most recent regional plan must also be considered in planning.
- Radiation and Nuclear Safety Authority STUK comments on the plan. Any issues concerning the measurement of radiation will arise during the process. Continuous monitoring is carried out around the plant.
- Factors related to the soil, buildability, and mass balance will be taken into account in the planning work.

### 3.3 Draft phase

Negotiations with authorities in the draft phase 7 October 2025

Negotiations with authorities under section 66 of the Land Use and Building Act were held in the manner referred to in section 26 of the Act during the preparation phase of the local detailed plan and its change before the draft materials were put out for public review. Holding negotiations with authorities on the planning work in accordance with section 66 of the Land Use and Building Act was necessary since the project is investigating the possibility of placing a small modular reactor (SMR) in the area. The negotiations revealed the need for, i.e., negotiations and cooperation, sufficient background materials and surveys, sufficient and timely nature surveys, the specification of the exclusion zone for the reactor, the schedule of the permit process in accordance with the Nuclear Energy Act, the protection of natural monuments, the careful planning of rainwater management, the construction of sufficient infrastructure, and the needs of the rescue department.

The draft phase materials were given to the Urban Structure Board for information on 25 March 2026. The draft phase of the plan is announced on the City website and on Viikkosavo and by letter to neighbouring properties. In addition to the regular hearing, an international hearing will be organised on the draft plan materials.

### 3.4 Proposal phase

The description will be supplemented in the proposal phase.

### 3.5 Approval

The description will be supplemented in the proposal phase.

## 4 ALTERNATIVE PLANS

Two options were prepared in the draft phase that presented different solutions to the alignment of the main street south of the railway (draft plan options VE 1 and VE 2). In both plan options, the railway crossing site is in the same location. The final plan solutions differ in terms of the alignment of the main street in relation to the other parts of the plan before the main street connects to the intersection of Kaunismäenkatu and Hiltulanlahdenkatu.

The planning process must account for and present a solution for the environmentally valuable area south of the railway line. Tervapuro, which falls into the scope of habitats protected under Chapter 2, section 11 of the Water Act, runs south of the railway. The area south of the railway is estimated to contain Natura habitats, i.e. habitats protected under the Directive, representing categories excellent and good. Breeding and resting sites of the flying squirrel have been found in the area. The planning of the area south of the railway is also restricted by the presence of the Northern androsace, the habitat of which is protected by the nature reserve ERA255709 Pitkälähti established in 2022, 0.14 ha (section 47 of the Nature Conservation Act). The natural values are described in more detail in section 2.1.2. Natural environment.

The planning of the area south of the railway is further restricted by the old railway track which is marked in the valid local detailed plan as s-2 (Protected area, other archaeological cultural heritage site. Land use provisions: The removal of historical structures and layers in the area is only allowed for a special reason and after sufficient archaeological documentation. The museum authorities must be heard in plans concerning the area.)

### 4.1 Possible locations for the small modular reactor (MR)

The City of Kuopio and Kuopion Energia Oy have cooperated in surveying potential locations for small modular reactors before the initiation of local detailed planning for Sorsasalo and Hepomäki. In 2023, they surveyed seven potential locations, which are: Haapaniemi / Kumpusaari, the old petrol warehouse in Niirala, Kelloniemi industrial area, Kolmisoppi, Pieni Neulamäki, Sorsasalo industrial area, and Hepomäki. The locations are shown in image 9.



Image 17. The surveyed locations in 2023

The initial surveys were carried out assuming that the exclusion zone for the small modular reactor would be 500 m and that the reactor would be placed overground. The Radiation and Nuclear Safety Authority's provisions on the emergency planning of nuclear power plants changed on 1 January 2024, and now the exclusion zone is determined on the basis of the plant's features. Kuopion Energia has also specified their objective of building a small modular reactor (SMR) for district heating.

In local detailed planning, the assessment of suitable locations was targeted at Sorsasalo and Hepomäki. In preliminary assessments, the challenges with other potential locations included insufficient space, natural values, and soil properties. Stakeholder in areas that are not in the immediate vicinity of the city centre seem to generally approve of the plan more. In terms of the indicative effect of the local detailed plan, Sorsasalo and Hepomäki are suitable locations, as the reactor's location would be a single point in the plan and the local detailed plan enables industrial construction in both areas. Both locations require the construction of a long trunk distribution frame for district heating. In the case of Sorsasalo, the district heating pipeline would also enable the utilisation of waste heat of other industrial operations. Southern Kuopio, for its part, is the main direction of the business expansion, which means that the district heating pipeline would serve potential future users better.

Potential locations for the small modular reactor are being surveyed separately for each plan area in Sorsasalo and Hepomäki. In addition, Kuopion Energia has initiated an environmental impact assessment (EIA) in regard to the small modular reactor, and the data from the assessment will be used to support local detailed planning.

The local detailed plan draft does not propose alternative options for the location of the small modular reactor due to the conditions of the plan areas. However, the assessment of preliminary

sites is only indicative, and a public event on participation was arranged before the initiation of the planning process on 5 September 2024.

The goal is to prepare such local detailed plans for Hepomäki and Sorsasalo that both plans would enable the construction of a small modular reactor. Kuopion Energia only needs one location, but the potential decision on the project will be made after the local detailed plans have been finalised. The local detailed plan is exploring solutions that would enable the operations of other energy suppliers if the small modular reactor cannot be realised. However, the final plan must be prepared with consideration to the possibility that another nuclear power solution could be constructed in the area after several years in the framework of the local detailed plan.

4.2 Alternative plans in the draft phase

In plan options VE 1 and VE 2, the alignment of the main street that runs through the plan area is solved in different ways between the railway crossing and the intersection between Kaunismäenkatu and Hiltulanlahdenkatu. The alternative options aim at finding the best solution in terms of street planning, environmental conditions, and placement of business plots. The planning will become more detailed in the proposal phase.

In alternative VE 1, the main street curves on the southern side of the railway crossing from the northern side of the existing detached houses to run parallel to the railway and leads from there to the intersection of Kaunismäenkatu and Hiltulanlahdenkatu. Alternative VE 1 will potentially lead to a solution that would change the flow of the Tervapuro rill in a way that would partially move it into a new location along the main street.

Parts of Tervapuro fall into the scope of habitats protected under Chapter 2, section 11 of the Water Act. The natural state of the rill will likely be surveyed in the snow-free season in 2026. The field survey also aims to investigate whether the water from Tervapuro runs under the railway in a culvert or does the water come through the railway embankment by filtration.

In the option VE 2, the main street curves on the southern side of the railway crossing from the southern side of the existing detached houses to run parallel to the railway and leads from there to the intersection of Kaunismäenkatu and Hiltulanlahdenkatu. In alternative 2, Tervapuro needs to be crossed twice. The crossing could potentially be implemented using a culvert. It is possible that this method of crossing would not require a special permit on endangering the rill's natural state (meeting on 26 February 2026, the local detailed planning of the City of Kuopio and Finnish Supervisory Agency).

In both options VE 1 and VE 2, the business plots and local recreation and protective green areas are placed within the limitations of the alignment of the main street and other restricting factors.

4.3 Comparison of the options

The following table presents the comparison of the options assessed in the draft phase. The biggest differences between the options are the solutions concerning traffic network placements and the crossing of the Tervapuro rill.

- +++ significant positive impact
- ++ moderate positive impact
- + positive impact
- 0 no impact
- significant negative impact
- moderate negative impact
- negative impact

Impact target	VE 1	VE 2
URBAN STRUCTURE		

- connection to the urban structure	++ Connects to the urban structure through Kaatopaikantie, Hiltulanlahdenkatu, and Kaunismäenkatu.	++ Connects to the urban structure through Kaatopaikantie, Hiltulanlahdenkatu, and Kaunismäenkatu.
- utilising existing structures	- A newly constructed area cannot directly utilise existing structures.	- A newly constructed area cannot directly utilise existing structures.
- municipal infrastructure (energy, water, waste)	0 New infrastructure will be mostly built.	0 New infrastructure will be mostly built.
- recreation areas	+ The recreation areas are planned on the basis of the selected local detail plan option, adopting them to the final solution.	+ The recreation areas are planned on the basis of the selected local detail plan option, adopting them to the final solution.
- plan economics	(+) There are no essential cost differences between the options	(+) There are no essential cost differences between the options
PLOT USE		
yard areas on the plot	+ Both options would enable the diverse industrial use of the yard areas.	+ Both options would enable the diverse industrial use of the yard areas.
green environment	0 Due to the nature of the operations, only small green areas will be preserved on the plots.	0 Due to the nature of the operations, only small green areas will be preserved on the plots.
car parking spots	+ Car parking is placed on the plots.	+ Car parking is placed on the plots.
ENVIRONMENT		
- built environment	- The area contains little development. Existing buildings have not been particularly utilised in the plan solution.	- The area contains little development. Existing buildings have not been particularly utilised in the plan solution.
- disturbance factors	-- Operations planned for the northern side of the railway that cause environmental disturbances	-- Operations planned for the northern side of the railway that cause environmental disturbances

	<p>have not been prohibited in the plan solution. Operations that do not cause environmental disturbances will be enabled in the southern side of the railway.</p> <p>The traffic volume (commuter, heavy freight) will significantly increase in the area.</p>	<p>have not been prohibited in the plan solution. Operations that do not cause environmental disturbances will be enabled in the southern side of the railway.</p> <p>The traffic volume (commuter, heavy freight) will significantly increase in the area.</p>
- special features	<p>0</p> <p>x</p>	<p>0</p> <p>x</p>
TRAFFIC		
- traffic network	<p>++</p> <p>The plan solution is based on the existing traffic solution of the currently valid master plan.</p> <p>If the main street is constructed on the southern side of the railway, this would require the partial rerouting of the Tervapuro rill.</p>	<p>++</p> <p>The plan option is otherwise based on the traffic solution of the valid master plan but in this option, the main street is aligned on the southern side of the railway in a way that enables the crossing of Tervapuro in two places using culverts.</p>
- vehicle traffic	<p>+</p> <p>Traffic volumes (commuter, heavy freight) will increase with new development.</p>	<p>+</p> <p>Traffic volumes (commuter, heavy freight) will increase with new development.</p>
- pedestrians and cyclists	<p>+</p> <p>A pedestrian and cyclist road is being planned along the main street.</p>	<p>+</p> <p>A pedestrian and cyclist road is being planned along the main street.</p>
- service traffic	<p>+</p> <p>The plan solution accounts for service traffic in general.</p>	<p>+</p> <p>The plan solution accounts for service traffic in general.</p>
- traffic safety	<p>+</p> <p>Different modes of transportation have been generally separated.</p> <p>Requires further planning of intersections, connections, and street areas.</p>	<p>+</p> <p>Different modes of transportation have been generally separated.</p> <p>Requires further planning of intersections, connections, and street areas.</p>
- parking	<p>+</p> <p>Parking will be implemented on the plots.</p>	<p>+</p> <p>Parking will be implemented on the plots.</p>
ENVIRONMENTAL IMPACTS		

- carbon emissions and carbon sinks	- + Constructing new buildings and infrastructure produces a significant amount of emissions.  A small modular reactor would enable more low-carbon heat production in Kuopio.	- + Constructing new buildings and infrastructure produces a significant amount of emissions.  A small modular reactor would enable more low-carbon heat production in Kuopio.
- use of natural resources	- + + New construction consumes a significant amount of natural resources.  Circular economy functions will be enabled in the area.	- + + New construction consumes a significant amount of natural resources.  Circular economy functions will be enabled in the area.
- adapting to and preparing for extreme weather phenomena	+ - Snow and rainwater management are taken into account in the dimensioning of the area.  The structure is dense in places. If there are large, asphalted yard areas, they decrease the permeable area and the number of trees, which contribute to the accumulation of rain water and may, in places, contribute to the formation of heat islands.  Large, treeless plots are vulnerable to wind.	+ - Snow and rainwater management are taken into account in the dimensioning of the area.  The structure is dense in places. If there are large, asphalted yard areas, they decrease the permeable area and the number of trees, which contribute to the accumulation of rain water and may, in places, contribute to the formation of heat islands.  Large, treeless plots are vulnerable to wind.
- lifestyles and consumption	+ - The area is located outside of efficient public transportation connections. However, a circular economy area promotes more sustainable consumption.	+ - The area is located outside of efficient public transportation connections. However, a circular economy area promotes more sustainable consumption.
SOCIAL IMPACTS		
- living conditions and comfort	- + Natural environment is mostly turned into a built area.  Local recreation areas are planned on the basis of the final local detailed plan.	- + Natural environment is mostly turned into a built area.  Local recreation areas are planned on the basis of the final local detailed plan.
MUNICIPAL ECONOMY		
- appropriation / project cost estimate	0	0

	The plan economics are determined in more detail on the basis of the plan proposal. A new area will incur costs to the city, however, it will also respond to the demand for business plots. There are no significant cost differences between the options.	The plan economics are determined in more detail on the basis of the plan proposal. A new area will incur costs to the city, however, it will also respond to the demand for business plots. There are no significant cost differences between the options.
- business life	++ Enables business operations aligned with the city's objectives.	++ Enables business operations aligned with the city's objectives.
Business impacts		
	++ Enables business operations aligned with the city's objectives.	++ Enables business operations aligned with the city's objectives.

4.4 Selection and justifications

The best solutions out of the examined options are compiled on the basis of further planning, impact assessment, and received feedback into one plan in the proposal phase.

## 5 DESCRIPTION OF THE PLAN SOLUTION AND IMPACT ASSESSMENT

The plan description will be supplemented in the proposal phase. In regard to the small modular reactor, its impacts are also discussed in the ongoing assessment of environmental impacts. The plan solution and impact assessment are developed in parallel with the assessment of environmental impacts.

### 5.1 Structure of the plan change

The description will be supplemented in the proposal phase.

#### 5.1.1 Dimensioning

The description will be supplemented in the proposal phase.

#### 5.1.2 Services

The description will be supplemented in the proposal phase.

### 5.2 Realisation of objectives related to the quality of the environment

In further planning, environmental qualities will be monitored through local detailed plan symbols and general plan provisions and possibly through binding building instructions.

### 5.3 Area reservations, plan symbols, and provisions

The description will be supplemented in the proposal phase.

#### 5.3.1 Block areas

The description will be supplemented in the proposal phase.

#### 5.3.2 Other areas

The description will be supplemented in the proposal phase.

#### 5.3.3 Local detailed plan symbols and provisions

The local detailed plan symbols and provisions have been presented in the format required by the Land Use and Building Act while applying the transition regulation laid down in section 3 of the Ministry of the Environment Decree on the plan provisions and presentation of symbols of regional, master, and local detailed plans.

The local detailed plan includes an energy supply area that allows the construction of a nuclear power plant (EN-3). The goal of the final plan is to make it possible to place a small modular reactor and all of its necessary auxiliary functions in the area. In case the area is not required for this purpose anymore, the plan solution enables the construction of other energy supply operations, which has been taken into account in the maximum permitted height of buildings.

The size of the exclusion zone of the modular reactor will be determined during the permit process as referred to in the Nuclear Energy Act in accordance with the provisions of the Radiation and Nuclear Safety Authority on the reactor's emergency planning. The exclusion zone allocated in the local detailed plan shows the largest possible exclusion zone permitted by the provisions of the Radiation and Nuclear Safety. In addition, regulations will be issued on the exclusion zone marked in the local detailed plan which ensure that no sensitive or hard-to-evacuate functions are placed in the area. Thus, the local detailed plan provides sufficient regulations to steer construction, and the affected zone of the small modular reactor will be known since it is determined in the local detailed plan.

The description will be supplemented in the proposal phase.

## 5.4 Impacts of the local detailed plan

### 5.4.1 Impacts on the built environment

If implemented, the local detailed plan and its change will transform Hepomäki, which is largely in its natural state, into a built environment. Due to the nature of the industrial area, the planned functions will have a variety of impacts. The plan area will connect to the rest of the city structure via Kaatopaikantie, Nuolimäenkatu, and Hiltulanlahdenkatu.

The residential buildings in the area will not be allocated for housing in the local detailed plan as it is estimated that the current and future traffic - as enabled by the selected plan - and industrial and business activities would cause noise and other disturbances to the residences.

Private roads to houses or holiday houses will be partly removed so that the implementation of the plan solution is possible. All properties will be allocated connection solutions in the plan either as street or car access.

The old roadbed in the area will be kept as a part of the local recreation and protective green area.

In the future, the area will be part of the operating area of Kuopion Vesi. Infrastructure will be built to serve the area.

### 5.4.2 Traffic impacts

A street network will be built in the area of the local detailed plan in accordance with the selected final plan. The plan will increase traffic volumes in the area and around it. Heavy traffic and commuter traffic are typical to industrial areas. The increase in traffic will most likely be visible in the traffic volumes of Kaatopaikantie and Nuolimäenkatu. To an extent, traffic may also increase in Hiltulanlahdenkatu.

A pedestrian and cycling route will be planned and constructed along the main street, enabling recreational activities and commuting to also take place on foot or bicycle.

A public transport connection can be directed through the main street.

Service traffic and parking are implemented within plot areas.

The draft of the local detailed plan proposes two street connections to the energy maintenance area. This option enables creating an alternative route for rescue department vehicles if, exceptionally, one of the streets is out of order. The northern road connects to Kaatopaikantie and through it, to Karttulantie and national road 5. A few scattered residential buildings are located around Karttulantie before the national road 5. The southern road connects to Nuolimäenkatu and through it, to the Hiltulanlahti residential area and the surroundings of the Matkus shopping centre. The internal street network in the plan area creates access for industrial operations and their workers. Thus, any transportation of nuclear fuel could be organised through the lower street network in the north in areas with fewer other users. In terms of the small modular reactor, the southern route is preferable to employees and the rescue department.

### 5.4.3 Impacts on nature and the natural environment

The final plan has been prepared with consideration to the most valuable nature sites. The plan options VE 1 and VE2 have been superimposed on top of each other in the maps below together with the Natura habitats found in the nature survey (*Feasibility Study for the Green Transition in Hepomäki area of Kuopio, Hepomäki nature survey, A-Insinöörin Suunnittelu Oy, 13 February 2026*).

**ak0857 VE1**  
**Hepomäki industrial area:**  
**plan map and sites of particular importance,**  
**5 March 2026**

- ▭ Delimitation of the Hevislirto project area
  - NATURA habitat types**
  - ▭ 3160 Natural dystrophic lakes and ponds
  - ▭ 3260 Water courses of plain to montane levels with *Ranunculus fluitans* and *Callitriche Batrachion* vegetation
  - ▭ 7160 Springs and springfens
  - ▭ 7140 Transition mires and quaking bogs
  - ▭ 9010 Western taiga
  - ▭ 9080 Herb-rich forests
  - ▭ 9080 Deciduous swamp woods
  - ▭ 91D0 Bog woodland
  - NATI Representativity of the NATURA habitat types**
  - excellent
  - good
  - significant
  - not significant
- © Ortokuva (metsäorto) MML 2025  
 © A-Insinöörit Suunnittelu Oy

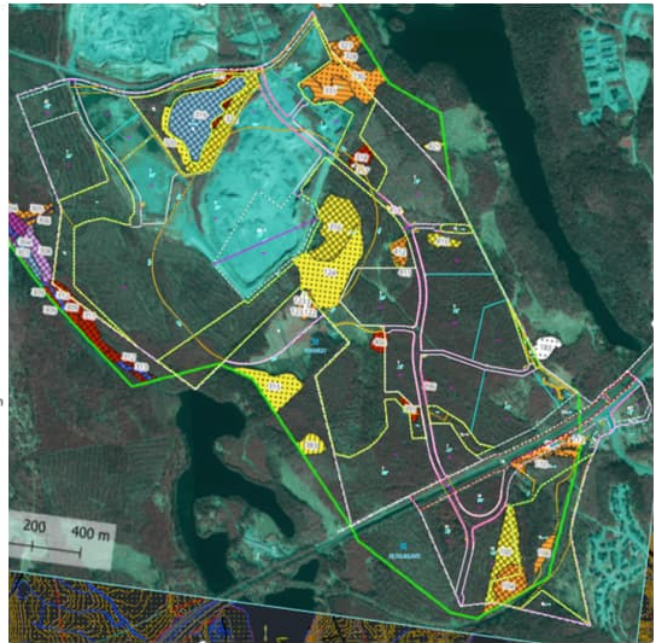


Image 18. Plan option VE 1 and the habitats protected under the Nature Directive investigated in the nature survey have been superimposed in the image.

**ak0857 VE2**  
**Hepomäki industrial area:**  
**plan map and sites of particular importance,**  
**5 March 2026**

- ▭ Delimitation of the Hevislirto project area
  - NATURA habitat types**
  - ▭ 3160 Natural dystrophic lakes and ponds
  - ▭ 3260 Water courses of plain to montane levels with *Ranunculus fluitans* and *Callitriche Batrachion* vegetation
  - ▭ 7160 Springs and springfens
  - ▭ 7140 Transition mires and quaking bogs
  - ▭ 9010 Western taiga
  - ▭ 9080 Herb-rich forests
  - ▭ 9080 Deciduous swamp woods
  - ▭ 91D0 Bog woodland
  - NATI Representativity of the NATURA habitat types**
  - excellent
  - good
  - significant
  - not significant
- © Ortokuva (metsäorto) MML 2025  
 © A-Insinöörit Suunnittelu Oy



Image 19. Plan option VE 2 and the habitats protected under the Nature Directive investigated in the nature survey have been superimposed in the image.

The plan will impact the natural environment. Development in the area requires the destruction of the forests in the built area. The construction of buildings, asphalted yards, and streets will increase the quantity of impermeable surfaces in the area, which affects water management and rainwater. Necessary rainwater management plans shall be drafted when choosing the local detailed plan to ensure rainwater management in the area and to prevent impacts on bodies of water. A preliminary plan on the management of rainwaters has been made in the draft phase and it will be planned in more detail in the proposal phase.

The plan solution takes into account the preservation of the most valuable nature sites in the Heponiemi area. The final plan has been negotiated with the Finnish Supervisory Authority (LVV) and the city's environment protection unit during the preparation of the draft plan. Implementing

the final plan will make the habitats of local fauna and flora smaller. However, the selected plan takes ecological corridors into account.

Plots will be pre-developed and the necessary street network will be built in connection with the implementation of the selected plan. These actions will cause changes to the soil and the natural shapes and elevations of the terrain. A small modular reactor is being planned for the bedrock of the excavation site.

The selected plan is based on the valid master plan, which defines the local recreation areas. The recreation routes in the area have been carefully planned and they connect to recreation areas in the nearby areas.

#### 5.4.4 Impacts on climate

The plan solution has both positive and negative impacts on climate. The plan's key objectives are to zone land for circular economy functions, a small modular reactor (SMR), and a data centre; on the other hand, the plan's implementation in a mainly undeveloped forested area leads to the removal of trees and undergrowth in large areas and to significant modification of terrain in the plot areas.

A small modular reactor for district heating would increase the amount of clean energy produced in Kuopio. From the environmental perspective, a small modular reactor would not be based on a more harmful way of producing energy through combustion. In this manner, the plan has a positive impact on climate.

Due to the shape of the terrain, some of the infrastructure in the area will be built in unfavourable conditions. Construction arising from the plan will decrease the surface area of forests, which may contribute to biodiversity loss.

The plan takes pedestrian and cyclist traffic into account by building a route along the main street.

#### 5.4.5 Social impacts and impacts on children

When the local detailed plan and its change are implemented, new jobs will be created in the area, which improves employment rates in Kuopio and thus the average earnings.

The exclusion zone of the small modular reactor (SMR) which will potentially be constructed in the plan area is designed in accordance with the Nuclear Energy Act so that no permanent residences or large numbers of employees of other operations are located in the area. The provisions of the local detailed plan set the preconditions for the impacts of the small modular reactor. However, the social impacts of the reactor include the general approval of nuclear power. Although a plan that enables the construction of a small modular reactor does not have direct effects on residents, the existence of the reactor may be considered to be a disturbance which may decrease the interest in the holiday housing and residential buildings outside of the Heponiemi area.

The plan does not have any special impacts on children.

#### 5.4.6 Cultural impacts

The local detailed plan and its change do not have a significant impact on the urban or residential culture.

The implementation of the local detailed plan and its change will significantly change the landscape as Heponiemi, which is mostly in its natural state, is transformed into a built environment.

The plan description will be supplemented in the proposal phase.

#### 5.4.7 Impacts on safety and land use restrictions

There are accident risks associated with the small modular reactor for district heating that affect the area and its neighbouring areas.

The impacts of a potential small modular reactor or another energy production plant have been limited in the selected plan by allocating a 250 m wide exclusion zone around the area where difficult-to-evacuate operations are prohibited. No permanent or holiday housing will be located within the exclusion zone. In case a combustion-based energy production plan is constructed in addition to or instead of the small modular reactor, the emissions in the area would increase. The emissions depend on the size of the plant and its production method.

#### 5.4.8 Economic impacts

Bringing new companies and jobs to the area produces more tax income to the City of Kuopio and contributes to better earnings by providing more jobs. The implementation of the local detailed plan and its change require building infrastructure in terrain that is in places challenging to build on, which increases the usual costs to the city.

### 5.5 Environmental disturbance factors

#### Noise

The railway and vehicle traffic in the area cause noise disturbance. However, no operations are allocated to the area which would be bothered by the disturbance, such as residences, so there is no specific need for noise control.

#### Air quality

Street traffic and business operations may deteriorate the air quality in the area.

#### Rain and flood waters

Rainwater management has been planned in a preliminary manner in the draft phase. The planning will become more detailed in the proposal phase.

#### Contaminated soil areas

If there are any contaminated soil areas, they are not estimated to cause issues with business operations in the area.

### 5.6 Nomenclature

The description will be supplemented in the proposal phase.

## 6 IMPLEMENTATION OF THE LOCAL DETAILED PLAN

The description will be supplemented in the proposal phase.

### 6.1 Plans guiding and specifying the implementation

Binding building instructions will be drafted for the area in the proposal phase.

The description will be supplemented in the proposal phase.

### 6.2 Implementation and schedule

Developing the area is possible once the local detailed plan has legal force.

### 6.3 Monitoring

The description will be supplemented in the proposal phase.

Kuopio, 12 March 2026

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