



UMEÅ DISTRICT COURT JUDGMENT (PART JUDGMENT) Case no. M 1573-  
20 The Land and Environmental Court 2023-04-05  
announced in Umeå

## **PARTIES**

### **Applicant**

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**Counterparties**

Swedish authorities and organisations

1. The County Administrative Board in Norrbotten County
2. The authority for social protection and preparedness
3. The Nature Conservation Society in Norrbotten
4. The Nature Conservation Society in Luleå
5. Region Norrbotten

27. Anette Johansson
28. Eric Johansson
29. Jan Johansson
30. Elisabeth Johansson Halldén
31. Päivi Juuso
32. Lennart Karlsson
33. Lotta Lagermalm
34. Tarja Leinonen
35. Anders Lidström
36. Ulrik Lidström
37. Ann-Katrin Lindblom
38. Fredrik Linghall

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6. Gabna Sami village
7. Saarivuoma Sami village
8. Talma Sami village

Representative for Talma Sami village: Lawyer  
Camilla Wikland and legal assistant  
Amanda Mikaelsson

Single

9. Jávna Allas
10. Martin Baas
11. Elin Belleza
12. Erika Bjurholt
13. Per-Erik Bjurholt
14. Tobias Daffeh
15. Barbro Eliasson
16. Åke Eliasson
17. Lena Fergman
18. Beatrice Floystad
19. Sverker Forsén

Doc.Id 432276

20. Johannes Fredriksson
21. Boel Halldén
22. Håkan Hansi
23. Jörgen Hansson
24. Sonja Hansson
25. Bengt Henriksson
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39. Joakim Linghall
40. Håkan Lundström
41. Lars-Inge Lööv
42. Lars Jonas Lööv
43. Märta Lööv
44. Simon Marianen
45. Mats Myhr
46. Johan Nilsson
47. Kalle Nilsson
48. Kenneth Nilsson
49. Per-Anders Nutti
50. Peter Pettersson
51. John Thomas Pope
52. Roger Rehnblom
53. Hanna Råman
54. Gudrun Stålnacke
55. Marita Sandmark
56. Ellinor Sydberg
57. Ulrika Sydberg
58. Urpo Taskinen
59. Helena Thyni
60. Annelie Uvén
61. Johan Uvén
62. Johanna Ögren

Finnish authorities and organisations

63. Kukkola samfällighetsförening (Kukkola samfällighetsförening)
64. ELY-Keskus of Lapland (Närings-, trafik- och miljöcentralen i Lapland)
65. ELY center of Lapland, Northern Finland's fisheries services (Fiskerimyndigheten vid Lapplands NMT-central)
66. Enontekiö municipality (Enontekiö kommun)
67. The Confederation of Lapland (Lapplands landskapsförbund)
68. Natural Resources Center (Naturresursinstitutet)
69. Forestry Agency (Forststyrelsen)
70. Paliskuntai Association (Renbeteslagsföreningen)
71. City of Rovaniemi (Miljönämnden i Rovaniemi stad)
72. Sodankylä municipality (Sodankylä kommun)
73. SLL Lappi (Finlands naturskyddsförbund i Laplands krets)
74. Ylitornion - Pello Nature Association (Finlands naturskyddsförening)
75. Ylitornio municipality (Ylitornio kommun)
76. Limits to the Mines of Lapland (Föreningen Begränsning av gruvor i Lapland)

Others

77. The Finnish-Swedish Border River Commission

**THE THING**

Application for a permit according to the Environmental Code for mining activities etc. at Nunasvaara Södra in Kiruna municipality (activity code 13.10, 13.40 and 90.290-i)

Catchment area: Tor neälven (1)

Coordinates (SWEREF 99TM) N: 7525102 E: 770566

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**JUDGMENT**

See page 3.

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**JUDGMENT****M ENVIRONMENTAL ASSESSMENT**

The Land and Environmental Court assesses that the prepared environmental impact statement meets the requirements in ch. 6. the environmental code. The environmental assessment can therefore, in accordance with ch. 6. Section 43 of the Environmental Code is completed.

T ILL CONDITION M . M. \_

**Permission**

The Land and Environmental Court rejects the claims made that the application should be rejected and grants Talga AB, within the area of operation that appears in judgment appendix 1, permission

1. to mining operations (environmentally hazardous operations) at Nunasvaara Södra in Kiruna municipality including
  - a) mining and beneficiation of graphite ore up to an amount of 120,000 tons per year,
  - b) storage of waste rock and enrichment sand and sludge (waste category 01 01 02 as well as 01 04 99 and 01 03 06) in a combined sand and waste rock warehouse next to an amount of 4,500,000 tons of waste rock, 1,000,000 tons of enrichment sand and 5,000 tons of sludge,
  - c) backfilling of waste rock, enrichment sand and sludge in excavated open pits,
  - d) building and operating the facilities and taking the measures in general that are needed for the planned activities.

2. to water activities including
  - a) removal of leaking water from the opencast mines and construction and maintenance of facilities for this,
  - b) construction of sedimentation and clarification basins,
  - c) removal of surface water from Hosiojärvi next to a total amount of 4,500 m<sup>3</sup>, as well as construction and maintenance of facilities for this,
  - d) filling of surface water for construction of a combined sand and waste rock reservoir, as well as
  - e) construction of ditches for the operation's water management.

**Nature 2000**

The Land and Environmental Court grants Talga AB permission according to ch. 7. Section 28 a of the Environmental Code to, within the framework of what the permit otherwise allows, conduct activities that can significantly affect the Natura 2000 area Torne and Kalix river system (SE0820430).

**Time limitation of the permit**

The permit now announced is valid until 18 May 2070 at the latest.

**Species protection dispensation**

Talga AB is granted an exemption from the prohibition in § 9 of the Species Protection Ordinance for reef lumber, carpet lumber and flat lumber.

**Terms***General condition*

1. The business must be conducted, facilities designed and work carried out in main accordance with what the company has stated in the application documents and has otherwise stated or undertaken in the case, unless otherwise stated in this judgment.

*Explosions*

2. Blasting in open pits may only be carried out on weekdays during the day between 07.00-18.00 after a predetermined time and after a clear audible warning signal. Nearby residents who wish to do so must be informed about times for blasting.
3. Blasting in the open pits must be carried out so that vibrations in the nearest homes are minimized. Vibrations as a result of blasting in the open pits must not result in a higher oscillation speed in the vertical

direction in the housing's supporting basic structure such as plinth or plinth than 5 mm/s in more than 5% of the blasting occasions per calendar year and never exceed 7 mm/s.

Control of ground vibrations must take place at each blasting occasion by measuring at a nearby residential building. Measurement must comply with SS 4604866:2011.

4. Air shock waves resulting from the blasts in the opencast mines must not exceed 100 pascal free field value in more than 5% of the blasting occasions per calendar year and must never exceed 200 pascal. Control of air shock waves must take place at each blasting occasion by measuring at a nearby residential building. Measurement must follow SS 02 52 10.

#### *Noise*

5. Noise from construction work other than particularly noisy construction work (such as drilling, rock knocking and piling) must not give rise to a higher equivalent noise level at homes than
- |  |                |        |
|--|----------------|--------|
| Non-holiday Monday – Friday (day)      | At 07.00-19.00 | 60dBA  |
| Weekend off Monday – Friday (evening)  | At 19.00-22.00 | 50 dBA |
| Saturday, Sunday and holiday (day)     | At 07.00-19.00 | 50 dBA |
| Saturday, Sunday and holiday (evening) | At 19.00-22.00 | 45 dBA |
| At night                               | At 22.00-07.00 | 45 dBA |

Particularly noisy construction work may only be carried out on weekdays at 07.00-19.00.

6. Noise from the activity must not give rise to a higher equivalent noise level at homes
- |                                   |                |        |
|-----------------------------------|----------------|--------|
| Non-holiday Monday – Friday (day) | At 06.00-18.00 | 50 dBA |
| Night time                        | At 22.00-06.00 | 40 dBA |
| Other times                       |                | 45 dBA |

Work steps that can typically result in instantaneous noise levels above 55 dBA in homes may not be carried out at night.

Control must take place through immission measurements or through near-field measurements and calculations. An initial check must take place within three months from when all parts of the business that may cause noise have been put into operation. Inspections must then take place as soon as there have been changes in the operation that may lead to increased noise levels, but at least once a year.

*Chemicals and hazardous waste*

7. Storage of chemicals and liquid hazardous waste may only occur on an embanked and sealed surface equipped with rain protection. The embankment must contain the volume of the largest storage vessel and 10% of the total volume of other storage vessels. The storage must be protected against collision. Spills and leaks must be collected and taken care of immediately.

*Dusting*

8. Measures must be taken to limit the spread of dust that may pose a nuisance to human health and the environment.

*Reindeer nutrition*

9. The company must annually carry out consultations with Talma Sami village and Gabna Sami village with the aim of minimizing the negative impact of the operation on the reindeer husbandry. The company must provide information in the environmental report that consultations have been held during the year.
10. During the period from 1 December to 31 May inclusive, the company may not carry out blasting or drilling for production in the open pits, primary crushing of mined ore or transport of ore or waste rock from the open pits.

*Release to water*

11. County retention water, contact water and potentially contaminated water must undergo purification before it is allowed to overflow into Hosiojärvi (county retention water from open pits, runoff from industrial areas, ore stockpiles and non-final-covered parts of sand and waste rock reservoirs, leachate from the sand and waste rock reservoir, water from cells for sludge and process water from the concentrator).

*Facility*

12. Ditches, pump pits, basins and other plant parts that handle the water that is intended to undergo purification must be tight. Relationship drawings must be submitted to the supervisory authority at a time determined in consultation with the supervisory authority.
13. Breakaway masses of moraine and peat and such masses that are otherwise taken out of the business must be used in the business or stored to the extent required for the post-processing of the business and used for

this purpose. The company must report to the supervisory authority the planned design of moraine storage before the construction of such moraine storage begins, and must then annually report to the supervisory authority a balance of the amount of moraine stored and consumed.

14. The sand and gravel reservoir must, with the exception of parts of the gravel embankment, be constructed with a foundation consisting of a liner, which is connected to a collecting ditch. Drainage systems must be installed under the respective upper liner and with separation of the respective drainage water. Construction of the sand and gray rock reservoir can take place in stages.

Inspection of completed construction works (complete and in stages) must be carried out by an independent inspector, who is appointed by the company after consultation with the supervisory authority. The inspection report and relationship drawings must be submitted to the supervisory authority at a time determined in consultation with the supervisory authority.

#### *Finishing*

15. The waste in the sand and waste rock storage must be covered with a qualified cover. Covering must begin within one year from when the surface, or part of it, is completed to its final form.
16. Backfilling in open pits that are above the equilibrium level for groundwater in the respective open pits must be covered with qualified coverage. Coverage must begin within one year of the completion of backfilling of an open pit.
17. The qualified cover must be designed and carried out with criteria to ensure that the oxygen transport rate through the cover in a normal year is limited to a maximum of  $0.5 \text{ mol/m}^2$  and year. The cover must be designed with a 0.5 m thick sealing layer of moraine mixed with bentonite, a 2 m thick protective layer of moraine and a 0.1 meter thick plant establishment layer that is vegetated, or another design that provides an equivalent oxygen transport rate.
18. An implementation description for final post-processing must be submitted to the supervisory authority no later than one year before the operation is planned to finally cease.

#### *Ecological compensation*

19. The company must carry out measures to compensate for the loss of natural values that arise through the operation. The compensation measures must correspond to at least 115% of the impact value, calculated according to the CLImB calculation model or a similar calculation model. The compensation area must be located within

Kiruna municipality or, alternatively within Norrbotten county. The compensation plan must be drawn up in consultation with the supervisory authority and submitted to the supervisory authority no later than one year from when the permit has gained legal force and has been used or later if the supervisory authority so allows. The supervisory authority may then decide on compensatory measures.

*Species protection*

20. Felling within the area of operation may not take place during the period from May 1 to July 31 inclusive.

*Financial security*

21. The company must provide financial security for costs for carrying out the restoration measures that the business may cause as follows

- a) Basic security must be provided with SEK 140 million (140,000,000). The security must be submitted to the Land and Environmental Court for review no later than three months after the legally binding permit judgment.
- b) Security for post-treatment of the sand and gray rock reservoir must be set up in stages so that it finally covers a total of SEK 85 million (85,000,000) as follows
  - a security of SEK 30 million (30,000,000) must be submitted to the Land and Environmental Court for review no later than two years after the permit has been claimed,
  - security of SEK 25 million (25,000,000) must be submitted to the Land and Environmental Court for review no later than five years after the permit has been claimed, and
  - security of SEK 30 million (30,000,000) must be submitted to the Land and Environmental Court for review no later than seven years after the permit has been claimed.

When the basic security according to point a) is to be provided, the amount must be calculated using the consumer price index. When the staged security according to point b) is to be provided, both the basic security and the staged amount/s must be calculated using the consumer price index. January 2020

shall constitute the base month and calculation shall take place against the latest valid consumer price index as of the day the security is submitted to the court.

### *Control*

22. The company must draw up a special control program regarding conditions 15-17 that ensures and documents that the coverage meets the requirements in condition 17. The control program and relevant relationship drawings must be submitted to the supervisory authority before coverage begins.
23. A program for self-control regarding the construction phase of planned facilities must be drawn up and reported to the supervisory authority no later than one month before construction work is intended to begin. The control program must specify measurement methods, measurement frequency and evaluation method.
24. A program for self-control regarding the operation of the business must be reported to the supervisory authority no later than three months before the intended commencement of mining operations. The control program must specify measurement methods, measurement frequency and evaluation method.

### **Deferred questions**

#### *Deferred questions*

The Land and Environmental Court postpones for a trial period the decision on which final conditions shall apply to

1. emissions to water of copper, nickel, zinc, lead, cadmium, uranium, nitrate nitrogen, arsenic, chromium, total phosphorus, mercury, sulfate and suspended substances from the operations.
2. emissions to air of dust.

#### *Investigation regulations*

During the trial period, Talga AB must carry out the following investigations and investigations

#### Release to water

- U1 The company must investigate the technical, environmental and economic conditions for limiting the operations' emissions to water of copper, nickel, zinc, lead, cadmium, uranium, nitrate nitrogen, arsenic, chromium, total phosphorus, mercury, sulfate and suspended substances. The B company must also measure the size of the flow from the clarification basin.

The results of the investigations and proposals for final conditions must be submitted to the Land and Environment Court no later than two years after the enrichment plant has been put into operation.

Emissions to air

U2 The company must follow up and control dust fallout from the operations. The control must include sampling points at the border of the operational area, points of influence mainly in the prevailing wind direction and reference points. Against the background of the results, the company must further investigate the effects of precautionary measures taken to limit dusting from the operations in the impact points and what further measures can be taken, with the aim of limiting the dust fallout at such points to a maximum of 500 g/100 m<sup>2</sup> / 30<sup>days</sup>.

The result of the investigation with proposals for final conditions must be submitted to the Land and Environmental Court no later than four years after the permit has been claimed.

*Provisional regulations*Release to water

During the investigation period and until it is decided otherwise, the following provisional regulations shall apply.

(P1) Until otherwise determined, the levels in purified excess water discharged to Hosiojärvi may not exceed the following values. For pH, the value must be within the range 6.5-7.5 for 90% of the measurements and within the range 6.0-8.0 for every measurement.

<u>Parameter</u>	<u>Monthly average value</u>	<u>Maximum value</u>
Copper, Cu (µg/l)	14	
Nickel, Ni (µg/l)	4.0	60
Zinc, Zn (µg/l)	30	
Lead, Pb (µg/l)	2.0	26
Cadmium, Cd (µg/l)	0.05	2.8
Uranium, U (µg/l)	0.05	16
Nitrate-nitrogen, NO <sub>3</sub> -N (µg/l)	1,200	20,000
Arsenic, As (µg/l)	1.0	14
Chromium, Cr (µg/l)	1.0	

Total phosphorus, Tot-P (µg/l)	20	
Mercury, Hg (µg/l)		0.13
Sulphate, SO <sub>4</sub> (mg/l)	1,200	
Suspended substances (mg/l)	10	15

Metals refer to dissolved levels (filtered samples 0.45 µm).

The monthly averages must be included for at least 10 out of 12 months during a calendar year. The maximum values must be included in each measurement. Control must take place every week during the periods when emissions occur.

### **Delegation**

The Land and Environmental Court transfers with the support of ch. 22 § 25 paragraph three of the Environmental Code allows the supervisory authority to notify additional conditions that may be necessary D1 Compensation measures (condition 19).

IN START-UP TIME M . M. \_

### **Start-up time and working hours**

The environmentally hazardous activity authorized in the judgment must have been started within ten years from the date this judgment became final, otherwise the permit in that part expires. The works relating to water activities that are covered by the permit in this judgment must be carried out within ten years from the judgment having gained legal force in this part, otherwise the permit in those parts expires.

### **Unforeseen damage**

If the water activity referred to in the permit causes damage that the Land and Environmental Court did not anticipate, the injured party may make a claim for compensation. Such a claim must be presented to the court no later than five years from the end of the working hours determined above.

### **Enforcement order**

The Land and Environment Court rejects Talga AB's request that the permit be used immediately, even though the judgment has not gained legal force.

TO CORRECT

1. Talga AB must notify the land and environmental court and the supervisory authority in writing without delay when the permit is used.
2. Talga AB must notify the Land and Environmental Court in writing without delay when the enrichment facility has been put into operation.

K COSTS

**Trial fee**

The Land and Environmental Court does not change what was decided in the decision on 3 June 2020 about the examination fee in the case.

**Legal costs**

The Land and Environmental Court rejects Gabna Sami village's and Talma Sami village's respective claims for compensation for court costs.

A DISPLAY

The Land and Environmental Court rejects Erika Bjurholt's, Per-Erik Bjurholt's, Peter Petterson's and Jan Johansson's, Anette Johansson's and Eric Johansson's claims for financial compensation as a result of the applied mining activity.

Ö REVERSE REQUESTS

The Land and Environmental Court rejects all other claims made in the case and not specifically stated above.

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**SUMMARY**

## S SUMMARY OF NOTIFIED PERMISSION

Talga AB (hereinafter Talga or the company) has applied in May 2020 for an environmental permit for mining operations to extract graphite in the part of the national interest Nunasvaara that has been named "Nunasvaara Södra". The Land and Environmental Court has granted the requested permission. The permit covers the mining of 120,000 tons of graphite ore in open pits annually and i.a. to build and operate the facilities needed for the business. Talga has also received a so-called Natura 2000 permit regarding the impact on the protected area Kalix and Torne river system. Dispensation from the species protection regulation for three larch species that may be affected in the area has also been granted. The permit has been combined with a total of 24 conditions. The conditions have included the precautionary measures and protective measures needed to be able to issue a permit, i.a. conditions on noise, blasting, reindeer husbandry, construction and finishing as well as control. The company has also been ordered to carry out compensation measures for the loss of natural values. The court has postponed the determination of final conditions for discharges to water of certain substances and discharges to air of dust. Talga's request for a so-called enforcement order has been rejected.

## MORE ABOUT THE TEST

Since the business has been covered by the requirements for a specific environmental assessment according to ch. 6 the environmental code, the court has examined whether this can be completed. Objections have been raised against the implementation of the cross-border consultation, about the delimitation of the application and about shortcomings in the examination documents. The Land and Environment Court has examined the objections and assessed that the consultation documents are sufficiently comprehensive and that they have been taken into account in the preparation of the environmental impact statement. The cross-border consultation has fulfilled the requirements set because Finnish parties have been assured of the necessary information and documentation and that there has been equal treatment of parties. The application covers all the mining activities with related activities that are intended to be carried out at Nunasvaara Södra and the project is thus not dependent on other projects or environmental permits. Overall, the court has therefore assessed that the application can form the basis for an examination of the merits of the case. The fact that additions have taken place after the announcement has not been considered to mean that there are deficiencies in the examination documents. The court has considered objections to the company's description of the impact on the reindeer industry to be aimed at the company's final assessments regarding the environmental consequences that arise. The court has judged that the environmental impact statement

with additions that have been submitted meets the set requirements and constitutes a sufficiently comprehensive and reliable basis for assessing and testing the activity's impact on the affected Natura 2000 area and the other collective environmental effects of the activity. The specific environmental assessment has been completed.

Since the court has judged that the specific environmental assessment can be completed, the court has examined the application on its merits. The examination has included the business's location and its impact on, among other things, human health, reindeer husbandry, water environments, species and Natura 2000 areas. This has also included that the court has examined which precautionary measures and protective measures are needed in order to be able to issue a permit. Two important issues in the case have been the activity's impact on reindeer husbandry and the impact through emissions to water. The court has concluded that the activity is permissible and that a permit can be issued.

The Land and Environment Court has considered that the location is suitable and that the activity will not cause damage or inconvenience of significant importance to human health and the environment and that this is ensured by the conditions prescribed in the permit. The business with the land areas that are claimed has been judged to be able to exist together with the opposing interest, reindeer husbandry, and it is judged not to significantly harm any national interest. The court has considered that the company's commitment to only conduct mining during the six months per year that the Sami villages are not in the area is an important protective measure and this has therefore been prescribed as a condition for the permit.

According to the court, the investigation that Talga has presented has shown that as long as potentially contaminated water is cleaned, the operation will be able to be conducted without risk of unacceptable environmental impact on lake Hosiojärvi and the Östra bäcken named in the case. In the case of Torneälven, into which Östra bäcken empties, the activity is not considered to be contrary to the water directive's non-deterioration requirements and prohibition of endangerment. Taking this into account, Natura 2000 permits have been deemed to be able to be issued. Taking into account the final basis in the case, the court has judged that it can be ruled out that the activity will lead to any cross-border environmental impact in Finland. Conditions have been announced to ensure the construction of the extraction waste facility and treatment of potentially contaminated water to protect land and aquatic environments. Since it is a question of a new establishment of the business, the court has considered that the question of final conditions for the release of certain substances into

water should be postponed for a trial period and that Talga should carry out investigations. In order to ensure restoration of the area after mining operations, the permit has been combined with conditions on this and conditions on financial security.

#### THE COURT'S MANUAL

The processing time from the time the application was received until the Land and Environmental Court decided the case has amounted to almost three years. During the first two years of processing, additions to the application have taken place. In the case, international agreements on consultation in the event of transboundary environmental consequences have been applied and essential parts of the application have therefore been translated into Finnish and the case has also been announced in Finland. The application was made available to the public in Sweden during April 2022 and in Finland during May 2022 by announcing the target. At the beginning of 2023, the Land and Environment Court held a main hearing that lasted four weeks. The court's partial judgment can be appealed within three weeks to the Land and Environmental Court of Appeal at the Svea Court of Appeal.

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## BACKGROUND

About 10 km west of Vittangi and 50 km east of Kiruna in Kiruna municipality there is a graphite deposit, Nunasvaara. Sweden's Geological Survey has decided on 8 June 2020 (dnr 31-388-2019) that the graphite deposit continues to meet the requirements as national interest for valuable substances or materials and the authority has demarcated the area according to the map and coordinate list.

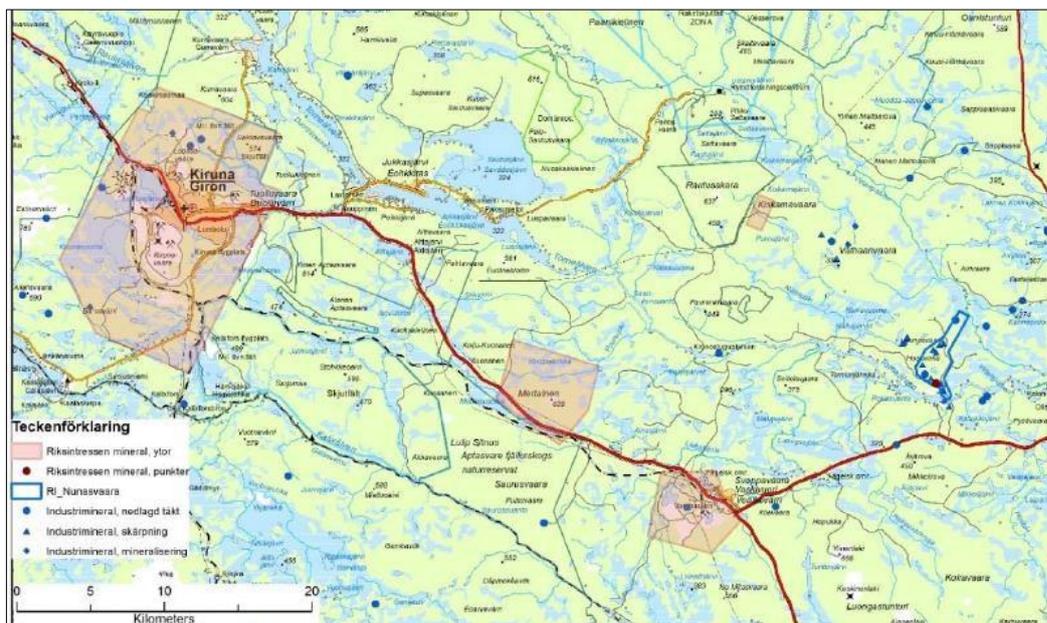


Figure of Sweden's geological survey with overview localization of the national interest Nunasvaara in Kiruna municipality (marked in blue).

At the Umeå District Court, the Land and Environmental Court, Talga AB (Talga) has applied for a permit according to the Environmental Code for mining operations, etc. The application includes a

permit to conduct mining operations in part of the national interest Nunasvaara, the ore body Nunasvaara Södra.

The application covers the mining of up to 120,000 tons of graphite ore per year in an open pit on the property Stenbrottet 2:1 in Kiruna municipality. The application also includes permission to build and operate the facilities and otherwise take the measures needed for the business, e.g. permit for storage of waste rock, enrichment sand and sludge as well as backfilling of waste rock, enrichment sand and sludge in excavated opencast mines. The application also includes a permit for diverting seepage water from open pits, construction of sedimentation and clarification basins, diversion of surface water from Hosiojärvi, construction of ditches and permission to construct and operate facilities needed for water operations. Talga has also applied for a so-called Natura 2000 permit and a reservation exemption from the species protection ordinance. The operation is covered by the requirements for a specific environmental assessment according to ch. 6. the environmental code.

#### **PROCEEDINGS OF THE CASE AT THE LAND AND ENVIRONMENT COURT**

The application and the environmental impact statement were received by the court on 27 May 2020 and the examination fee has been paid. The target has been sent on a so-called completion round in Sweden. The authority for public safety and preparedness has stated in its opinion that, based on the risk of serious accidents, the authority saw no need for additions and that the authority saw no need to bring legal action in the case. The Swedish Transport Administration has stated in its statement that the authority saw no need for additions and has provided information that the application may require a road plan. The environmental committee in Kiruna municipality (the committee), the Swedish Maritime and Water Authority, the Geological Survey of Sweden, the Swedish Environmental Protection Agency and the County Administrative Board in Norrbotten County (the county administrative board) have provided views on the need for additions. Opinions received on the need for supplementation before announcement are not specifically reported in this judgment.

After the applicant supplemented the application at the beginning of 2021, the Land and Environmental Court has provided the authorities that previously submitted comments on the need for supplementation the opportunity to comment again on whether the authorities considered that there was a need for further supplementation of the application. Opinions on the need for further additions have been received from the committee, the county administrative board, the Geological Survey of Sweden and the Norwegian Sea and Water Authority.

The Swedish Environmental Protection Agency has refrained from commenting.

During the spring of 2021, the applicant has submitted certain clarifications and additions. The Land and Environmental Court has further assessed on 22 June 2021 that, on the then present basis, it could not be ruled out that the applied for activity could cause transboundary effects on the status of the waters or their use. The provisions of the Act (2010:897) on the transboundary river agreement between Sweden and Finland (the transboundary river agreement) are therefore applicable in the case. Furthermore, in June 2021, the court has notified the Finnish-Swedish border river commission and the Finnish monitoring authority, the Finnish Center for Business, Traffic and Environment in Lapland (NMT center) about the case in accordance with the border river agreement.

During the fall of 2021, further additions to the case have been received from the applicant. Talga has further informed the court that the company, in consultation with the Swedish Environmental Protection Agency, had initiated consultations in accordance with the Convention on environmental impact assessments in a cross-border context (the Espoo Convention) with Finland regarding the planned activities. In the spring of 2022, further additions to the case have also been received from the applicant at the court's request.

On April 20, 2022, the Land and Environmental Court announced the application and the environmental impact statement in Sweden. In connection with the announcement, the court has also drawn up a timetable for the further processing of the case. The court has translated the announcement and parts of the application into Finnish in accordance with the court's obligation under the Transboundary Agreement. The NTM center in Finland is the monitoring authority that has been responsible for the publication of the permit application on the Finnish side, according to articles 18 and 22 of the transboundary river agreement. The responsible authority in Finland for the Espoo Convention was until 31 December 2022 the Finnish Ministry of the Environment. In Sweden, the Swedish Environmental Protection Agency is the responsible authority for the Espoo Convention. In Finland, the NMT center and the Ministry of the Environment have coordinated the consultation on the permit application and the environmental consequences of the mining project. Publication of the application and environmental impact statement took place in Finland on 11 May 2022.

Opinions on the application have been received in Sweden from the county administrative board, the Swedish Transport Administration,

Region Norrbotten, State Geotechnical Institute, Geological Survey of Sweden,

The Sami Parliament, Gabna Sami village, Talma Sami village, Saarivuoma Sami village,

The Nature Conservation Society in Norrbotten County (Naturskyddsföreningen) and a number of individuals, e.g. property owner in the area of applied for activity. The Swedish Environmental Protection Agency and the Norwegian Sea and Water Authority have stated that they refrain from commenting.

The Swedish Armed Forces and the Norwegian Agency for Public Safety and Emergency Preparedness have announced that they have no recollection.

From Finland, opinions have been received from Finnish authorities and organisations; The Ministry of Environment, NMT-centralen, Fiskerimyndigheten vid Lapplands NMT-central (Fiskerimyndigheten i Finland nedan), Lapplands landskapsförbund, Miljönämnden i Rovaniemi stad som yttrat sig cumsmant med Ylitornio kommun (Rovaniemi miljönämnd nedan), Enontekiö kommun, Sodankylä kommun, Forststyrelsen, Naturresursinstitutet, Finlands Naturskyddsförbund i Lapplands krets (Finland's Naturskyddsförbund nedan), Renbeteslagsföreningen och Kukkola samfällighetsförening. Kajanalands NTM-central/Dammsäkerhetsmyndigheten, Säkerhets- och kemikaliverke (Gruvmyndigheten), Muonio kommun och finska Sametinget har i utstår anfört att de avstår från att yttra sig. Finsk-Svenska gränsälvscommissionen har i utstättat till sina förgätt utstättäon i samrådsprocessen innan kungörelse.

After comments on the announcement of the application and the environmental impact statement in Sweden have been received, the company has partly supplemented the application in certain parts and partly responded to the comments in writing. Following the company's response, the court has provided counterparties and referral bodies as well as other interested parties in Sweden with the opportunity to comment.

Statements have been received from the County Administrative Board, the State's Geotechnical Institute, the Nature Conservation Association, Gabna Sami Village and the Sami Parliament as well as a number of private individuals. In connection with the main hearing in the case, the Naturskyddsföreningen in Luleå has submitted an opinion and has joined the Naturskyddsföreningen's views.

After opinions from Finnish authorities and organizations have been received, the company has also received responses to Finnish opinions. The company's treatment has been communicated via the Environmental Protection Agency to the Ministry of the Environment in Finland. After the court consulted with the NMT center in Finland, the NMT center and the Ministry of the Environment

have continued to coordinate the cross-border consultation on the permit application and the environmental consequences of the mining project through further public disclosure in Finland. Publication in Finland has taken place again on November 2-30, 2022. The court has also directly notified all authorities and organizations in Finland that previously commented on the case about the continued processing of the case and that the review at the court includes both the application for permission and the question of completing the specific environmental assessment. The court has further made it clear in the notification that the applicant can respond to any additional points of view only at the main hearing and that the main hearing is a supplement to the court's written proceedings. Written comments have been received on the second announcement in Finland from the Ministry of the Environment, the NMT center,

The Finnish Fisheries Agency, the Lapland Regional Association, the Norwegian Forestry Agency, the Natural Resources Institute, the Finnish Nature Conservation Association, the Kukkola Community Association and the association Limitation of Mines in Lapland. The reindeer grazing association refrained from commenting on the additions. The Ministry of the Environment has requested continued consultation and the Swedish Environmental Protection Agency, in its capacity as the responsible authority for the Espoo Convention, has commented on the need for continued consultation.

On September 20, 2022, the Land and Environmental Court heard the case. The court has held the main hearing in the case for four weeks at the beginning of 2023. Summons to the hearing and the main hearing have been announced in Sweden by the court and in Finland by the NMT central. A Finnish interpreter has been available both at the hearing and at the main hearing. The company and the county board have been present throughout the main hearing. Gabna Sami village, Talma Sami village and Saarivuoma Sami village as well as the Nature Conservation Association and the Finnish Nature Conservation Union have been present during parts of the main hearing.

## **CLAIMS AND SETTLEMENT**

### **B THE CLAIMS OF THE COMPANY**

#### **Permission**

1. Talga has, as the company finally decided its claim, demanded that the Land and Environmental Court issue a permit according to the Environmental Code to mining operations (environmentally hazardous operations) at Nunasvaara Södra in Kiruna municipality including
  - a) mining and beneficiation of graphite ore up to an amount of 120,000 tons per year,

- b) storage of waste rock and enrichment sand and sludge (waste category 01 01 02 as well as 01 04 99 and 01 03 06) in a combined sand and waste rock warehouse next to an amount of 4,500,000 tons of waste rock, 1,000,000 tons of enrichment sand and 5,000 tons of sludge,
  - c) backfilling of waste rock as well as enrichment sand and sludge in excavated opencast mines,
  - d) building and operating the facilities and taking the measures in general that are needed for the planned activities.
2. Talga has also demanded that the Land and Environmental Court issue a permit according to the Environmental Code for water activities including
- a) removal of leaking water from the opencast mines and construction and maintenance of facilities for this,
  - b) installation of sedimentation and clarification basins,
  - c) removal of surface water from Hosiojärvi next to a total amount of 4,500 m<sup>3</sup>, as well as construction and maintenance of facilities for this,
  - d) filling of surface water for construction of a combined sand and waste rock reservoir, as well as
  - e) construction of ditches for the operation's water management.
3. Talga has further requested that the Land and Environmental Court issue a permit in accordance with ch. 7. Section 28 a of the Environmental Code to, within the framework of what the permit otherwise allows, conduct activities that can significantly affect the Natura 2000 area Torne and Kalix river system (SE0820430).

### **Exemption**

4. Talga has, as a reservation in case the Land and Environmental Court deems that an exemption is necessary, requested that the court issue an exemption from the prohibitions in §§ 4 and 9 of the Species Protection Ordinance for the greater woodpecker, lappis, three-toed woodpecker, lichen screech and pied crow, respectively reef loons, carpet loons and flat loons.

### **Working hours and enforcement orders, etc**

Talga has, as the suit was finally decided, requested that the Land and Environmental Court

- a) sets the time for starting the environmentally hazardous activity to ten years from the date of the final judgment,

- b) determines the working time for the water operations to ten years from the legally binding permit decision,
- c) determines the time for notification of claims for compensation for unforeseen damages of the water business to five years counted from the end of working hours,
- d) approves the environmental impact statement attached to the application, as well as
- e) decrees that the permit may be used without hindrance that the judgment has not gained legal force, so-called enforcement decree.

#### B COMPANY'S FINAL PROPOSAL OF TERMS

##### **Proposal for terms and conditions**

###### *General condition*

1. Unless otherwise stated in the conditions stated below, installations etc. must be carried out and the operations conducted in main accordance with what the company stated or undertook in the application documents and otherwise in the case.

###### *Explosions*

2. Blasting in the open pits may only be carried out on weekdays between 07.00 and 18.00. Nearby residents who wish to do so must be informed about times for blasting.
3. Blasting above ground may only take place at a predetermined time and after a clear audible warning signal.
4. Vibrations as a result of blasting in the open pits must not result in a higher oscillation speed in the vertical direction in the housing's supporting basic structure such as plinth or plinth than 5 mm/s in more than 5% of the blasting occasions per calendar year and never exceed 7 mm/s.

Control of ground vibrations must take place at each blasting occasion by measuring at a nearby residential building. Measurement must comply with SS 4604866:2011.

5. Air shock waves resulting from the blasts in the opencast mines must not exceed 100 pascal free field value in more than 5% of the blasting occasions per calendar year and must never exceed 200 pascal. Control of air shock waves must take place at each blasting occasion by measuring at a nearby residential building. Measurement must follow SS 02 52 10.

*Noise*

6. Noise from construction work other than particularly noisy construction work (such as drilling, rock knocking and piling) must not give rise to a higher equivalent noise level at homes than Daytime Monday-Friday (07:00-19:00) 60 dB(A)

Evening time (7pm-10pm) and 50 dB(A) daytime Saturday,  
Sunday and public holidays

Night time (22:07) 45 dB(A)

Particularly noisy construction work may only be carried out on weekdays at 07–19.

7. Noise from the activity must not give rise to a higher equivalent noise level at homes Daytime Monday—Friday (06:00-18:00) 50 dB(A)

Evening time (6-10 pm) and 45 dB(A) daytime Saturday, Sunday and  
public holidays

Night time (10 p.m. to 6 a.m.) 40 dB(A)

Work that can typically result in instantaneous noise levels above 55 dB(A) in residential areas must not be carried out at night.

Control must take place through immission measurements or through near-field measurements and calculations. An initial check must take place within three months from when all parts of the business that may cause noise have been put into operation. Inspections must then take place as soon as there have been changes in the operation that may lead to increased noise levels, but at least once a year.

*Chemicals and hazardous waste*

8. Storage of chemicals and liquid hazardous waste may only occur on an embanked and sealed surface equipped with rain protection. The embankment must contain the volume of the largest storage vessel and 10% of the total volume of other storage vessels. The storage must be protected against collision. Spills and leaks must be collected and taken care of immediately.

*Emissions to air and dust*

9. Measures must be taken to limit the spread of dust that may pose a nuisance to human health and the environment.

*Reindeer nutrition*

10. The company must annually carry out consultations with the Talma and Gabna Sami villages with the aim of minimizing the negative impact of the operation on the reindeer husbandry. No later than two months after the consultation has been completed, the company must submit an account of this to the supervisory authority.
11. During the period from December 1 to May 31 inclusive, the company may not carry out blasting or drilling for production in the open pits, transport of ore or waste rock from the open pits or primary crushing of ore.

*Release to water*

12. County retention water from the open pits, runoff from industrial areas and ore stockpiles, runoff from non-soil-covered parts of and leachate from the sand and tailings reservoir, as well as process water from the beneficiation plant, must undergo purification before it is allowed to overflow into Hosiojärvi. Purification of water must remain for at least five years after the operation has ceased. The supervisory authority may allow purification to cease before this for some or all partial flows.

*Facility*

13. Ditches, pump pits, basins and other plant parts that handle the water that is intended to undergo purification must be tight. The flow direction in the ditches and pump pits must be such that water that is intended to undergo purification is led to the water purification. Compliance with the condition must be checked by an independent technical expert to be appointed by the company after consultation with the supervisory authority. The company must submit the expert's report to the supervisory authority, together with the relevant relationship drawings, after the inspection has been carried out.
14. Breakaway masses of moraine and peat and such masses that are otherwise taken out of the business must be used in the business or stored to the extent required for the post-processing of the business and used for this purpose. The company must report to the supervisory authority the planned design of moraine storage before the construction of such moraine storage begins, and

must then annually report to the supervisory authority a balance of the amount of moraine stored and consumed.

15. The sand and gray rock reservoir must, with the exception of parts of the gray rock embankment, be constructed with a foundation consisting of a tight liner of the type specified in the target, which is connected to the collecting ditch. Drainage systems must be installed under the respective upper liners and with separation of the respective drainage water. The construction of the sand and gray rock reservoir can take place in stages. Compliance with the condition must, for each expansion of the bottom area of the magazine, be checked by an independent technical expert who must be appointed by the company after consultation with the supervisory authority. The company must submit the expert's report to the supervisory authority, together with the relevant relationship drawings, after the inspection has been carried out.

#### *Finishing*

16. The waste in the sand and waste rock storage must be covered with a qualified cover. Covering must begin within one year from when the surface, or part of it, is completed to its final form.
17. Backfilling in open pits that are above the equilibrium level for groundwater in the respective open pits must be covered with qualified coverage. Coverage must begin within one year of the completion of backfilling of an open pit.
18. The qualified cover must be designed and carried out with criteria to ensure that the oxygen transport rate through the cover in a normal year is limited to a maximum of  $0.5 \text{ mol/m}^2$  and year. The cover must be designed with a 0.5 m thick sealing layer of moraine mixed with bentonite, a 2 m thick protective layer of moraine and a 0.1 meter thick plant establishment layer that is vegetated, or another design that meets the design criteria. The company must develop a special control program that ensures and documents that the coverage meets the design criteria. The control program must be submitted to the supervisory authority before coverage begins.
19. Compliance with conditions (16) – (18) must be checked by an independent technical expert to be appointed by the company after consultation with the supervisory authority. The company must submit the expert's report to the supervisory authority, together with the relevant relationship drawings, after the inspection has been carried out.

20. An implementation description for final post-processing must be submitted to the supervisory authority no later than one year before the operation is planned to finally cease.

*Ecological compensation*

21. The company must carry out measures to compensate for the loss of natural values that arise through the operation. The compensation measures must correspond to at least 115% of the impact value, calculated according to the CLImB calculation model or a similar calculation model. The compensation area must be located within the municipality of Kiruna or, if the supervisory authority so allows, within the county of Norrbotten. The compensation plan must be drawn up in consultation with the supervisory authority and submitted for approval to the supervisory authority no later than one year from the permit having gained legal force and being used, or later if the supervisory authority so allows. The obligation to carry out compensatory measures applies under the condition that the company obtains land access and the necessary permits and exemptions.

*Species protection*

22. Felling within the area of operation may not take place during the period 1 May to 31 July inclusive.

*Financial security*

23. The company must provide financial security for costs for carrying out the restoration measures that the business may cause as follows
- a) Basic security must be provided with SEK 140 million (140,000,000). The security must be submitted to the Land and Environmental Court for review no later than three months after the legally binding permit judgment.
  - b) Security for post-treatment of the sand and gray rock reservoir must be set up in stages so that it finally covers a total of SEK 85 million (85,000,000) as follows
    - a security of SEK 30 million (30,000,000) must be submitted to the Land and Environmental Court for review no later than two years after the permit has been claimed,
    - security of SEK 25 million (25,000,000) must be submitted to the Land and Environmental Court for review no later than five years after the permit has been claimed,and

- security of SEK 30 million (30,000,000) must be submitted to the Land and Environmental Court for review no later than seven years after the permit has been claimed.

When the finishing measures regarding the sand and gray rock warehouse (not including long-term control) have been carried out, the security provided according to point b) must be returned to the company.

The company must notify the Land and Environmental Court and the supervisory authority when the permit is used.

In the event that the court issues an enforcement order regarding the entire operation, Talga has had no objection to the fact that the security according to point a) must be submitted to the Land and Environmental Court for examination at the latest in connection with the application for the permit.

#### *Control program*

24. A program for self-control regarding the construction phase of planned facilities must be drawn up and reported to the supervisory authority no later than one month before construction work is intended to begin. The control program must specify measurement methods, measurement frequency and evaluation method.
25. A program for self-control regarding the operation of the business must be reported to the supervisory authority no later than three months before the intended commencement of mining operations. The control program must specify measurement methods, measurement frequency and evaluation method.

#### **Proposal for a trial period**

##### *Release to water*

Talga has proposed that the Land and Environmental Court should, during a trial period, postpone the decision on which final conditions apply to releases to water of copper, nickel, zinc, lead, cadmium, uranium, nitrate nitrogen, arsenic, chromium, total phosphorus, mercury, sulfate and suspended substances from the business.

During the trial period, Talga has proposed that the following investigation be carried out

U1 The company must investigate the technical, environmental and economic conditions for limiting the operations' emissions to water of copper, nickel, zinc, lead, cadmium, uranium, nitrate nitrogen, arsenic, chromium, total phosphorus, mercury, sulfate and suspended substances. The results of the investigations must be submitted to the Land and Environmental Court no later than two years after the beneficiation plant has been put into operation. The company must notify the Land and Environmental Court and the supervisory authority when the beneficiation plant is put into operation.

Talga has further proposed that the following provisional regulation should *primarily* apply during the investigation period and until otherwise decided.

(P1) Until otherwise determined, the levels of copper, nickel and zinc in purified excess water discharged to the recipient must not exceed the following values. For pH, the value must be within the range 6.5-7.5 for 90% of the measurements and within the range 6.0-8.0 for every measurement.

<u>Parameter</u>	<u>Monthly average value</u>	<u>Maximum value</u>
Cu (µg/l)	17	
Ni (µg/l)	30	60
Zn (µg/l)	30	

Metals refer to dissolved levels (filtered samples 0.45 µm)

The monthly averages must be included for at least 10 out of 12 months during a calendar year. The maximum values must be included in each measurement. Control must take place every week during the periods when emissions occur.

Talga has *alternatively* proposed that the following provisional regulation shall apply during the investigation period and until otherwise decided.

(P1) Until otherwise determined, the levels in purified excess water released to the recipient must not exceed the following values. For pH, the value must be within the range 6.5-7.5 for 90% of the measurements and within the range 6.0-8.0 for every measurement.

<u>Parameter</u>	<u>Monthly average value</u>	<u>Maximum value</u>

Cu (µg/l)	17	
Ni (µg/l)	30	60
Zn (µg/l)	30	
Pb (µg/l)	14	26
Cd (µg/l)	0.5	2.8
U (µg/l)	0.35	16
NO <sub>3</sub> -N (µg/l)	4,600	20,000
As (µg/l)	1.1	14
Cr (µg/l)	6.6	
Total P (µg/l)	40	
Hg (µg/l)		0.13
SO <sub>4</sub> (mg/l)	1,200	
Susp. substances (mg/l)	10	15

Metals refer to dissolved levels (filtered samples 0.45 µm)

The monthly averages must be included for at least 10 out of 12 months during a calendar year. The maximum values must be included in each measurement. Control must take place every week during the periods when emissions occur.

#### *Emissions to air and dust*

Talga has proposed that the Land and Environmental Court should, during a trial period, postpone the decision on which final conditions apply to dust fallout. During the trial period, Talga has proposed that the following investigation be carried out

U2 The company must follow up and control dust fallout from the operations. The control must include sampling points at the border of the operational area, points of influence mainly in the prevailing wind direction and reference points. In light of the results, the company must further investigate the effects of precautionary measures taken to limit dusting from the operations in the impact points, as well as what additional measures can be taken, with the aim of limiting the dust fallout at such points to a maximum of 500 g/100 m<sup>2</sup> /30<sup>days</sup>. The result of the

investigation with proposed conditions must be submitted to the Land and Environmental Court no later than four years after the permit has gained legal force.

PRINCIPAL POSITION AND CLAIMS OF THE COUNTERPARTY AND OTHERS CONCERNED Below is the principled position and claims received from counterparties, referral bodies and other parties concerned . Under the heading opinions received and correspondence in the case, opinions received are reported in more detail.

### **Counterparties and affected parties in Sweden**

#### *The County Administrative Board's principled approach*

The County Administrative Board has approved the application on the condition that the operational area for the mining operation area and the area for sand and waste rock storage is established according to what the company has reported in the case and on the condition that the County Administrative Board's views on the need for conditions are taken into account. In summary, the County Administrative Board has considered that there is a need to prescribe conditions that protect the interests of the reindeer husbandry, conditions for the release of water from the operation in order to meet the requirements in ch. 5. Section 4 of the Environmental Code on environmental quality standards and to limit the impact on the affected water environments and conditions on compensation measures and conditions on financial security with an amount that can be considered reassuring in order to satisfy the requirement for post-treatment of the mining area.

The County Administrative Board has considered that the prohibitions in the Species Protection Ordinance are not updated for bird species and has otherwise considered that the prerequisites for an exemption from the Species Protection Ordinance exist.

#### *The County Administrative Board's proposal for conditions*

##### Noise

The County Administrative Board has requested that the following conditions regarding noise be prescribed instead of the company's condition proposal no. 6-7 regarding noise

- (6.) To protect the interests of reindeer husbandry in the area around mining operations, the equivalent noise level must not exceed 35 dB(A) in the following point:

N: 7525 375, E: 772 755

Coordinate system SWEREF99 TM

*The condition shall apply only during the time determined by the court for activities without drilling, blasting, etc. according to the company's proposal for condition no. 11.*

- (7.) Noise from the activity must not give rise to a higher equivalent noise level at homes
- |                                     |          |                           |
|-------------------------------------|----------|---------------------------|
| Daytime Monday-Friday (06:00-18:00) | 50 dB(A) | Evening ( 18:00-22:00)    |
| and daytime Saturday,               | 45 dB(A) | Sunday and public holiday |
| Night time (22:06-06)               | 40 dB(A) |                           |

Work that can typically result in instantaneous noise levels above 55 dB(A) in residential areas must not be carried out at night. Control must take place through immission measurements or through near-field measurements and calculations. An initial check must take place within three months from when all operational parts that can cause noise have been put into operation. *Control must also take place during periods of construction work before all parts of the business that can cause noise have been put into operation.* Inspections must then take place as soon as there have been changes in the operation that may lead to increased noise levels, but at least once a year

#### Release to water

The County Administrative Board has proposed that the following conditions should be prescribed regarding discharges to water instead of the company's proposal no. 12 and has emphasized that it is left to the court to assess whether the conditions below should be clarified in such a way that it is stated that it refers to polluted water.

- (12.) Water from the sand and gray rock reservoir as well as other contaminated water from ditches, open pits, etc. must undergo purification before it overflows into Hosiojärvi. Purification of water must remain after the end of operation until sufficient follow-up has been carried out by the function of the aftertreatment with reference to the action goals of the aftertreatment plan. The supervisory authority may both extend and shorten the time that cleaning must take place for all or parts of the operation.

With regard to discharges to water, the County Administrative Board has proposed *in the first place* that final conditions should be prescribed as below, instead of the matter being postponed for a trial period.

#### **Containment conditions for discharge to recipient, Hosiojärvi**

<b>Parameter</b>	<b>Monthly average µg/l</b>	<b>Maximum value µg/l</b>
Copper	6	12
Nickel	2.5	10
Zinc	20	30
Lead	0.82	0.9

Cadmium	0.02	0.04
Uranium	0.05	10
Nitrate nitrogen	1200	
Arsenic	0.5	7.9
Chromium	2	
Total phosphorus	20	
Quicksilver		0.07
pH	6.5-7.5	6.0-8.0
Sulfate mg/1	1200	
Suspended substances mg/1	10	15

Metals refer to dissolved levels (filtered samples 0.45 µm). For sulphate and suspended substances, the unit is mg/l.

#### **Holding conditions for location (measurement point SW9) in Östra bäcken before Torneälven**

<b>Parameter</b>	<b>Monthly average µg/1</b>	<b>Maximum value µg/1</b>
Copper	0.5 bioavailable	12
Nickel	1.5	4
Zinc	5.5 bioavailable	20
Lead	0.2	2
Cadmium	0.02	0.03
Uranium	0.17	8.6
Nitrate nitrogen	1000	11000
Arsenic	0.5	7.9
Ammonia-nitrogen	1.0	6.8
Sulfate mg/1	300	

Metals refer to dissolved levels (filtered samples 0.45 µm).

Monthly average value for copper and zinc refers to bioavailable levels (maximum level refers to dissolved level). For zinc, uranium and arsenic, natural background levels must be taken into account when assessing exceedances.

For total phosphorus, the county administrative board proposes that an annual average value of 12 µg/1 should apply at the receiving point.

The monthly average value for zinc and copper in the recipient must be contained for at least 10 out of 12 months during a calendar year. Control in the recipient must take place continuously, but with increased frequency in connection with periods when emissions occur. The county administrative board leaves the detailed formulation of conditions/regulations regarding follow-up and control to the Land and Environmental Court.

The holding conditions must be contained during post-treatment and 30 years after post-treatment is completed.

Alternatively, the county administrative board has accepted the company's proposal to postpone the issue of final conditions for discharges to water on the condition that the company's secondary proposal for provisional regulation (P1) for discharge to recipient Hosiojärvi is prescribed and the county administrative board's proposal for concentration conditions for Östra bäcken is prescribed as a provisional regulation (P2) instead of the company's proposal.

The County Administrative Board has further, as the court understood it, stressed that it may be appropriate to consider whether the probationary investigation should also cover other parameters/substances than what the company has proposed, for example silver, alternatively that the supervisory authority during the probationary period should have the opportunity to expand the investigation to include more parameters/topics.

#### Emissions to air

With regard to the company's proposal to postpone the issue of final conditions for emissions to air, the County Administrative Board has stated that a provisional regulation should be established during the investigation period. The County Administrative Board has not submitted any detailed proposal for a provisional regulation, but left it to the court to design it.

#### Facility

The County Administrative Board has proposed that the following conditions should be prescribed instead of the company's condition proposal 15.

- (15.) The sand and gray rock reservoir must be founded and otherwise designed in the manner stated in the case. An unbiased technical expertise must be present during the construction of the sand and waste rock reservoir, successively and in its entirety. The impartial technical expertise must be appointed by the company and approved by the supervisory authority. When the construction works have been completed completely or completed in stages, the inspector must together with the company inspect the trenches, foundation and final cover. Reports after completion of the construction phase and final report must be submitted to the supervisory authority with relationship drawings including a statement from the appointed impartial technical expertise.

#### Finishing

The County Administrative Board has proposed that the following conditions should be prescribed regarding conditions for construction instead of the company's proposal no. 16-19 and that it should be combined with the company's previous condition proposal 11.

The waste in the sand and waste rock storage must be covered in stages. The covering layer must meet the functional requirement of limiting the oxygen transport rate to a maximum of 0.5 mol/m<sup>2</sup> and year. The company must develop a special control program that continuously ensures and documents that the construction and the successive coverage meet the design requirement. Both the control program and the ongoing work must be reviewed by impartial technical expertise. The control program must be submitted to the supervisory authority before the work begins with a statement from appointed impartial technical expertise.

*The company's previous terms proposal 11:*

The sand and gray rock reservoir and backfilled open pits must be finished with a qualified cover consisting of a 0.5 m thick sealing layer of moraine with admixture of bentonite, a 2 m thick protective layer of moraine and a 0.1 meter thick plant establishment layer that is vegetated

### Ecological compensation

With regard to the company's proposal for condition 21 on compensatory measures, the County Administrative Board has considered that the time for submitting an investigation should not be tied to both the permit being used and having gained legal force and that the last sentence under which conditions the condition applies is not necessary. The County Administrative Board has proposed the following conditions instead of the company's proposal and then emphasized that in the proposal below it can also be stated that the supervisory authority can allow later submission of the compensation plan.

- (21) The company must carry out measures to compensate for the loss of natural values arising from the licensed activity. The compensation measures must refer to an area that has, or after restoration will have, similar natural values as the area affected by the licensed activity.

The compensation area must primarily be located within the municipality of Kiruna and secondarily in the county.

A compensation investigation with a delimitation of the selected area, a detailed description of the measures, an account of the additionality of the compensation, and how the area is to be managed and protected in the long term must be produced in consultation with the competent supervisory authority. The proposal must be submitted to the supervisory authority no later than one year after this judgment has gained legal force, which will examine whether the proposed compensation measures can be accepted.

### Financial security and possible enforcement

The County Administrative Board has demanded that the total amount for the financial security in the company's condition proposal 23 should amount to a total of SEK 413 million instead of SEK 225 million. The County Administrative Board has had no objection to the security being provided successively according to the applicant's proposal. With regard to point b) of conditional provision law 23, the county board has considered that the parentheses "(not including long-term control)" should be deleted and that the condition should instead be linked to ensuring the function of the landfill.

In the event that the court issues an enforcement order, the county administrative board has proposed that it should be ordered that the company may claim the permit after a basic financial security according to point a) in the amount of SEK 315 million has been approved by the court.

### *Other authorities*

The Swedish Environmental Protection Agency and the Norwegian Sea and Water Authority have, when announcing the application, refrained from commenting on the case.

The Authority for Community Protection and Preparedness and the Swedish Armed Forces have had no objections to the application.

Region Norrbotten has stated that the region believes that the requested activity will have large and positive socio-economic effects in Norrbotten and for Sweden as a whole.

The Swedish Transport Administration, the Norwegian Geotechnical Institute and the Geological Survey of Sweden have not given any principled approach to the application.

The Sámi Parliament has rejected the granting of a permit for the applied mining activity.

The Finnish-Swedish border river commission has not indicated a clear position on the application and has referred to previous consultation statements.

### *Associations and Sami villages*

The Nature Conservation Society, Talma Sameby and Gabna Sameby have considered that the application with the environmental impact statement has such flaws that it should be rejected in the

first place and that the application for a permit should be rejected in the second place. The Nature Conservation Society and Talma Samiby have objected to an enforcement order.

The Saarivuoma Sami village has opposed the granting of a permit.

*Single*

Mats Myhr, Sverker Forsén and Lennart Karlsson, property owners of Kiruna Vittangi 43:5, have endorsed the application.

Marita Sandmark, Lotta Lagermalm, Martin Baas, Bengt Henriksson, Barbro Eliasson, Åke Eliasson, Fredrik Linghall, Roger Rehnblom, Joakim Linghall, Ulrik Lidström, Anders Lidström and Johannes Fredriksson and Hanna Råman, Simon Holma, Tobias Daffeh, Gudrun Stålnacke, Helena Thyni, Kenneth Nilsson, Sonja Hansson, Jörgen Hansson, Johan Uvén, Annelie Uvén, Elisabeth Johansson Halldén, Kalle Nilsson, Boel Halldén, Johan Nilsson, Ulrika Sydberg, Ellinor Sydberg, Hålan Hansi and Ann-Katrin Lindblom as well as Urpo Taskinen, Jâvna Allas, Håkan Lundström, Johanna Ögren, Tarja Leinonen, Päivi Juuso, Per-Anders Nutti, John Tomas Påve, Simon Marianen, Beatrice Flöystad and Elin Belleza have opposed the permit for mining operations applied for.

Lars-Inge Lööv, Märta Lööv, Lars Jonas Lööv and Lena Fergman have, as can be understood, objected to permission being issued.

Jan Johansson, Anette Johansson and Eric Johansson have rejected permission for applied mining activities. They have further stated during the proceedings that they will request damages due to the impact on the cabin environment, but have not submitted any specified claim for compensation.

Erika Bjurholt and Per-Erik Bjurholt, property owners of Kiruna Vittangi 59:5, have in the first place rejected permission for applied mining operations and in the second place demanded that Talga AB should pay compensation to them for disturbance/reduction in market value of SEK 250,000.

Peter Pettersson, property owner of Kiruna Vittangi 4:11 and 15:2, has of course approved the application on the condition that he receives financial compensation for the impact and trespass on his properties. He has requested that a right of use agreement and an agreement on infringement

compensation be concluded between him and the company, in which he is to be awarded retroactive compensation for the years 2019-2022 with a total of SEK 70,200 and compensation for the period thereafter with a lump sum of a total of SEK 1,020,000 and annual compensation under 24 years with a total of SEK 60,300 (SEK 42,500 + SEK 18,300) with index calculation.

### **Counterparties and stakeholders in Finland**

Kajanaland's NTM Center (Dam Safety Authority), Safety and kemelikaverke (Mining Authority), Muonios Municipality and the Finnish Sami Parliament have declined to comment.

the Ministry of the Environment has stated that the material is deficient and that it does not cover cross-border environmental consequences in Finland, and that the Ministry assumes that the negotiations according to the Espoo Convention will continue.

The NMT Center and the Finnish Fisheries Agency have considered that the translated documentation is insufficient and have not issued a clear principled approach to the application. If a permit is granted, they have, as the court understood it, considered that final conditions on discharges to water must be determined and that conditions must be prescribed on monitoring discharges to water and that it must include more discharge points than what the applicant proposed.

The Lapland Regional Association has stated in its statement that the application and the environmental impact statement with additions are sufficient to assess the significant environmental impact on Finland and to make a decision on the project. As the court has understood it, the Lapland regional association has considered that monitoring conditions need to be prescribed in order to follow up the impact on the TorneMuonio river's water system while mining is in progress.

Rovaniemi Environmental Committee, Enontekios Municipality, Sodankylä Municipality, Kukkola Samfällighetsförening and the Reindeer Association have not given a clear principled stance on the application.

The Norwegian Forestry Agency has not issued a clear principled approach to the application. In the event that a permit is granted, the Norwegian Forestry Agency, as the court has understood it, has considered that final conditions for discharges to water must be determined, that conditions

must be prescribed for monitoring discharges to water and that the possibility of charging a fishing fee should be considered.

The Norwegian Natural Resources Institute has not issued a clear principled approach to the application, but has, in the event that a permit is granted, proposed that the permit should be combined with strict conditions on discharges to water, conditions on preparations for situations that deviate from planned activities in order to reduce environmental risks and conditions on the obligation to collect extensive monitoring data in the Torneälven watershed.

The Norwegian Forestry Agency has further emphasized that if the activity causes damage to the Torneälven watershed, leads to reduced recreational value or biological damage, a significant fishing fee must be paid.

The Finnish Nature Conservancy and the Association for the Limitation of Mines in Lapland have requested that the application be rejected or rejected. The association Limitation of Mines in Lapland has, if permission is granted, demanded that conditions be prescribed for monitoring the mine's impact on fish. The Finnish Nature Conservancy has demanded that a permit be combined with requirements for purification and that strict conditions for emission limits of all harmful substances, e.g. metals and chemicals and that permanent and impartial measuring points are ordered to measure all emissions.

#### ' POSITIONS AND CLAIMS

The company has accepted the county administrative board's request that the court determine the area of operation for the mining operations and the area for sand and waste rock storage in accordance with the map submitted at the main hearing, including coordinates of the area of operation (file attachment 409).

Talga has opposed the county board's request that final conditions be prescribed for concentrations in discharge of water to Hosiojärvi and has opposed both that final conditions or a provisional regulation be prescribed for concentrations in a sample point in Östra brook.

In the event that the Land and Environmental Court deems that such a provisional regulation must be prescribed for a test point in the Östra brook, Talga has requested that the following provisional regulation be prescribed.

(P2) Until otherwise determined, the company's operations must not give rise to concentrations in the recipient at the sample point in the Östra bücken before the Torneälven (SW4) that exceed the following values.

<u>Parameter</u>	<u>Monthly average value</u>	<u>Maximum value</u>
Cu (µg/l)	0.5 (bioavailable)	
Ni (µg/l)	4 (bioavailable)	34
Zn (µg/l, taken into account to natural background)	5.5 (bioavailable)	
Pb (µg/l)	1.2 (bioavailable)	14
Cd (µg/l)	0.15	0.9
U (µg/l, taken into account to natural background)	0.17	8.6
NO <sub>3</sub> -N (µg/l)	2,200	11,000
As (µg/l, taken into account to natural background)	0.5	7.9
NH <sub>3</sub> -N (µg/l)	1.0	6.8
SO <sub>4</sub> (mg/l)	300	
Tot-P (µg/l)	12	

Metals refer to dissolved levels (filtered samples 0.45 µm).

In the event that the Land and Environmental Court deems that final conditions regarding discharges to water must be prescribed, Talga has considered that reported provisional regulations (P1) and (P2) respectively must be prescribed as final conditions.

The company has otherwise maintained the application and proposed terms and conditions and has opposed the county board's proposed terms and conditions. The company has objected to compensation claims from Erika Bjurholt and Per-Erik Bjurholt and from Peter Petterson.

## **THE COMPANY'S APPLICATION AND ADDENDUMS**

During the processing of the case, Talga has adjusted a number of information provided in the original application. Below is a summary of what the applicant has stated in the application and in later additions *before* the application is announced. As far as possible, the revised version is

reproduced before the announcement of the application. Figures and maps presented below are overviews for ease of reading and not guaranteed to scale.

## INTRODUCTION \_

### **About Talga and the project**

Talga plans to mine up to 120,000 tonnes of graphite ore per year on the Kiruna Stenbrottet 2:1 property. Talga, which is a wholly owned subsidiary of Talga Resources Ltd, has been prospecting for minerals in Sweden since 2011 and has made major investments in mining, process and nanotechnology projects to build an integrated project from ore to finished product. The Nunasvaara Södra deposit is located about 10 km west of Vittangi in Kiruna municipality. The mining is planned to take place in an open pit and the extraction is estimated to last for approx. 24-25 years, followed by a period of post-processing and controls.

The Vittangi graphite project comprises several ore bodies: Nunasvaara Södra, Nunasvaara Norra, Niska Södra and Niska Norra. The orebodies are located within the same geological area but are in different stages of development and within two different exploration states. Since Talga acquired the project in 2012, extensive exploration activities have been carried out for the orebodies included in the Vittangi graphite project. In addition, extensive work has been done on environmental studies, project design and preparation for permit review at Nunasvaara Södra.

The planned graphite mine in Nunasvaara is an important step in the development of the project. The ore that is mined and the concentrate that is enriched on site is planned to be transported to Luleå for further processing and processing into mainly two product types: anodes for lithium-ion batteries and various types of graphene and micrographite products for different markets.

### **The graffiti and society**

#### *Society's need for the mineral*

Talga plans to produce anode material for lithium ion batteries in Norrbotten. Graphite for lithium-ion batteries is today mainly imported from China, where it is produced under less stringent environmental protection conditions than in the EU. The EU has assessed that natural graphite, together with a number of other raw materials, is of decisive importance for the EU's economy and sustainable development.

In Sweden, there is a political objective to have no emissions of greenhouse gases into the atmosphere by 2045. With the urgent need for transformation to a fossil fuel-free economy, energy storage solutions are required, i.e. batteries. Graphite from Nunasvaara can contribute significantly to the development of an electrified and fossil fuel-free future.

White tangi graphite is also an important source for the production of graphite and graphene. Graphene's properties as a superconductor and super-reinforcing material can contribute to improved energy storage systems as well as stronger composite materials for lighter vehicles and aircraft that thus consume less fuel. Graphene's improved barrier properties also make it possible to develop new coatings to replace toxic chemicals such as hexavalent chromium and phosphates as well as coatings for packaging materials, reducing the use of metals and making packaging materials fully recyclable.

This project is the result of several years of investment in the unique graphite deposits in Vittangi. Vittangi graphite is unique in that it offers significant environmental benefits compared to industry standard natural graphite. The advantages depend on its location and ore quality. Because it is located in northern Sweden, the electricity that will be used in the processing has an extremely low carbon footprint. The high quality of the white tangi graphite means that significantly less ore (approx. 3-8 times) needs to be mined to produce the same amount of graphite concentrate compared to other deposits globally. Extraction of the Nunasvaara Södra graphite deposits and the planned further processing into anode material for lithium-ion batteries can thus constitute an important contribution to the transition to greener technology and also to Swedish society and the economy.

#### *Local social and economic effects*

Talga's operations in Nunasvaara are estimated to create an additional 14-26 indirect jobs in addition to approx. 60 direct jobs. During the approx. 2 years when the mine is built up, significantly more work will be generated, which in turn would generate a significant economic stimulus and increased tax revenue. The operation would result in the prospects for a positive development of the surrounding Svappavaara-Vittangi area improving considerably.

Svappavaara and to some extent also Vittangi are sized for a larger population than they have now. Thus, there are opportunities to receive people moving in who work in the mining project and their families, and the need for new municipal investments will be small. Furthermore, there are no requirements/needs that any significant infrastructure investments must be implemented in order for the project to be realized. The major investments required fall entirely on the company. When it comes to housing for those moving in, however, this can be a challenge. Despite a long period of population decline, the availability of vacant housing is limited in the immediate area.

Work in Talga's operations will require access to a range of different skills, and forecasts show that there is a shortage of labor with the right background and education. However, the positive thing is that the business in Nunasvaara fits well into society and the local economy, as there is a well-established mining cluster in Kiruna and in the region. Thus, many of the services and goods required to run a mine are available locally. This in turn means that relatively large investments will be made within the region, which will benefit the local business community.

#### **Existing exploration and test mining permits**

The Nunasvaara Södra graphite deposit is covered by the Nunasvaara No. 2 exploration permit, which is 100 percent owned by Talga. The permit was announced on February 5, 2007, permit number 2007:35, and is valid until February 5, 2022.

Within this investigation permit, trial mining of 2,000 m<sup>3</sup> of graphite ore has previously been carried out in accordance with a permit issued on 27 March 2015 by the Environmental Assessment Delegation at the County Board in Norrbotten, diary number 551-13277-14. Finishing of the trial mining area was completed in 2017 and approved by the regulatory authority on October 1, 2017.

In parallel with this application for a permit according to the Environmental Code, Talga has also applied for a processing concession according to the Minerals Act. Processing of that application is ongoing at the State of Norway. Since Talga has submitted a request for a Natura 2000 permit to the Land and Environmental Court, the company assesses, taking into account the Norwegian State's current practice, that the processing concession will likely only be granted after the court has issued the requested permit in accordance with the Environmental Code.

Talga has also been granted a permit to test mine 25,000 tons of graphite ore within an adjacent exploration permit, Vittangi no. 2, by decision of the Environmental Assessment Delegation at the County Board in Norrbotten on February 18, 2020, diary no. 551-11289-2019.

### **Outline of the application**

The application consists of an application document with attachments. For a more detailed account of technical conditions, refer to the technical description ("TB"), Appendix A.

The company has had an environmental impact statement ("EIA") drawn up, Appendix B.

Environmental conditions as well as the environmental consequences of the planned activity and how the applied activity relates to applicable environmental goals and environmental quality standards etc. are described in more detail in the EIA. For a non-technical summary of the requested activity, refer to the introduction of the EIA. What is stated in these appendices, including sub-appendices, constitutes an integral part of the application. Appendix C contains such a waste management plan with waste characterization as required by regulation (2013:319) on disposal waste. A status report is attached.

### **The scope of the application and the scope of the examination**

The application includes a permit according to the Environmental Code for the mining and beneficiation of graphite ore at Nunasvaara Södra. The planned production, described as an average production during the entire life of the mine, amounts to approximately 100,000 tons of ore per year. Quarrying and beneficiation on this scale is estimated to give rise to an average of approx. 300,000 tonnes of waste rock and approx. 80,000 tonnes of enrichment sand per year. Production is planned to be gradually increased and it is considered economically possible to extract approx. 2.5 million tonnes of ore during the mine's lifespan of approx. 24-25 years with current knowledge of the ore's distribution. With regard to the reindeer husbandry, operations have been planned so that mining is limited to the period April-September, while enrichment is to be carried out all year round.

The permit application includes the construction and operation of the facilities needed to conduct the planned activities at Nunasvaara Södra according to what is reported in this application with attachments.

The planned environmentally hazardous activities mainly consist of the following measures.

- preparatory work with unveiling, construction of facilities, ore mining in six open pits,
- crushing and beneficiation of mined ore, storage of waste rock and enrichment sand in a
- combined sand and
- gråberg magazine,
- backfilling of waste rock and enrichment sand in excavated open pits, as well as transportation.
  
- This application also includes a permit for water activities, including removal of water from open
- pits, construction of sedimentation, clarification and process water basins, extraction of 4,500 m<sup>3</sup>
- of surface water from Hosiojärvi, as well as filling of a small surface water for construction of the
- sand and waste rock reservoir.
- 

The business is located within the catchment area for Torne river with tributaries which are part of the Natura 2000 area Torne and Kalix river system. The assessment is that no significant impact can

occur on the Natura 2000 area as a result of the activity and thus no permit is required according to ch. 7. Section 28 a of the Environmental Code. In order to accommodate the county board, a request for a Natura 2000 permit is made.

Conducted investigations have shown that the activity will not have a negative impact on the local or regional conservation status of any species covered by the species protection ordinance (2007:845). The application therefore does not include any application for exemption from the species protection ordinance.

The planned activity is not covered by the Act (1993:381) on measures to prevent and limit the consequences of serious chemical accidents (Sevesolagen).

### **Consultation**

The work with the EIA has been preceded by a consultation procedure according to ch. 6. the environmental code. What emerged during the consultations was taken into account when the activities were designed and the application was drawn up. For a more detailed account of the consultation and the comments received in their entirety, refer to the consultation report.

### **O ORIENTATION**

#### **Surroundings description**

##### *The business area*

The deposit is located on the property Kiruna Stenbrottet 2:1. The Nunasvaara Södra orebody is located approximately 600 meters west of Lake Hosiojärvi, 1 kilometer north of the Torne River and 3.5 kilometers southwest of the Vittangi River.

The industrial area is proposed to be located 500 meters northeast of Hosiojärvi. The sand and gravel reservoir is placed approx. 150 meters north of the lake.

Regionally, the area consists for the most part of lowlands where the heights vary between 350 and 450 meters above sea level with areas of marshland and small lakes between the heights. The landscape in Nunasvaara is hilly with two main peaks, Nunasvaara (approx. +390) and Hosiorinta (approx. +350), which rise 50-100 meters above the surroundings. The deposit is located on Hosiorinta's slope towards Hosiojärvi. To the south and east of the future open pit, lies the Torne river (approx. +255) and the lake Hosiojärvi (approx. +290). The surroundings around the planned mining area consist of forest terrain affected by forestry.

##### *Plan conditions*

The area in question has not yet been planned in detail. Talga will apply for planning permission and the detailed planning process will run parallel to the examination of the application for a processing concession and the application for a permit according to the Environmental Code. The requested activity will be compatible with the upcoming detailed plan.

Southwest of the planned mining area, along the Torne river at Rovasunto, there are three detailed planned areas with residential buildings. The detailed plans were decided by Kiruna municipality in 1977, 1981 and 1983 respectively. Two of the areas are on the north side of the river. The nearest built-up properties are located by the Torne River, roughly 500 meters south of Hosiorinta's southern

slope. To the south and west of the mining area there are also four built-up properties that are not within the detailed planning area.

Current master plan for Kiruna municipality was adopted by the municipal council on 11 December 2018. The area for the deposit is marked as a strategic land reserve for mineral deposits. The general plan shows that the area contains mineral deposits and that it is interesting for the mining of graphite. Furthermore, it appears that the reindeer industry has interests partly in, but mainly around, the area. General interests include forestry, outdoor recreation and land containing valuable minerals. Furthermore, it is stated that no measures that make it more difficult for mineral mining may take place within the area.

#### *Height system*

In this application, the height information regarding planned facilities refers to the height system RH2000.

#### *Areas of national interest, etc*

The planned area of activity lies within an area that is of national interest for valuable substances or materials (Chapter 3, Section 7 of the Environmental Code).

There are also a number of other areas of national interest nearby. The Torne river is located approx. 600 meters south of the operational area and is covered by national interest for nature conservation, outdoor recreation and professional fishing (Chapter 3, Section 6 of the Environmental Code). The Torne river and a couple of smaller watercourses in the vicinity of the planned activity area (called Östra and Västra bäckén in the application) are also included in the Natura 2000 area Torne and Kalix river system (chapter 7, section 27, first paragraph, 2 of the environmental code).

The planned operational area is within Talma Sami village's winter pastures. Migration routes and difficult passages of national interest for reindeer husbandry (Chapter 3, Section 5 of the Environmental Code) are designated west and south of the operational area for Talma Sami village and Gabna Sami village, and east of the Vittangi River for Saarivuoma Sami village. The area south of the Torne river is part of Gabna Sami village's reindeer herding area and the existing road for mining traffic between E45 and Nunasvaara passes through a core area that is of national interest for reindeer husbandry.

The railway (Råtsi-Svappavaara), road E45 and road E10 are of national interest for communication (Chapter 3, Section 8 of the Environmental Code). The area of operation is also affected by the national interest for total defense with special restrictions on freedom of obstruction (Chapter 3, Section 9 of the Environmental Code).

#### **The null option**

The alternative to the requested measures being carried out is that no activity takes place. This would mean that the environmental consequences due to the applied for activity would not occur. The zero alternative also means that the mineral resource in the area cannot be exploited. Since society has a continued need for minerals for the transition to a sustainable social model, this need will have to be met through increased imports from China, which would lead to higher emissions of greenhouse gases from a global perspective. Furthermore, the zero alternative means that the locality misses out on the jobs that can be created through mining operations.

## BUSINESS DESCRIPTION

**Overview**

The description below constitutes a summary of the activities to which the application relates. A more detailed description of the operation can be found in the TB.

The main business consists of the mining and beneficiation of graphite ore.

The planned extraction of the ore body is to take place via six open pit stages. The operations in this part will primarily consist of drilling and blasting, waste rock handling, beneficiation, handling of beneficiation sand and transport. Drilling, blasting and handling of ore and waste rock is planned to take place during the months of April-September and beneficiation, external transport and handling of beneficiation sand will take place all year round.



Overview map of planned open pit mining

**Ore mining**

The mining method will mainly consist of conventional open pit mining methods with usual work with a truck and bucket. In total, the operation is planned for the extraction and beneficiation of up to 120,000 tons of ore per year. The impact assessments reported in the supporting material for the application have been based on an average mining and beneficiation of 100,000 tonnes of ore per year. The assessments are conservative and cautious, i.e. worst-case scenario assessments using maximum production rates. Production may for certain years go up to a maximum of 120,000 tonnes. For years with a higher production, no significant differences in environmental consequences are expected compared to years when the production amounts to up to 100,000 tonnes. The commitments and proposed conditions that Talga has presented in the application also apply to years with a higher than average production.

Operations are planned to begin in open pit stages 1 and 2, which eventually grow together into a single larger open pit consisting of open pit stages 1-4. The remaining open pit stages, 5 and 6, are planned to be processed in sequence after mining 1-4.

When operations begin, land preparation will begin, where the topsoil (soil and moraine) will be removed from the main mining areas for stages 1 and 2 and, where possible, used for the construction of transport routes and other infrastructure. Leftover material and material from later stages will be placed on the edge east of stage 4 in the soil and moraine storage area. This material is used for future restoration of the area.

On average, six blasts per year are estimated to occur for ore production and 24 for waste rock extraction, but this may vary depending on the mining schedule. Blasting is planned to take place on scheduled weekdays between 07.00 and 18.00 and after a fixed warning signal. It may occasionally be necessary to carry out smaller blasts. Blast notifications will be provided initially to everyone affected, and then continuously if they sign up to receive ongoing notifications.

After blasting, the ore is transported for crushing in a mobile primary crusher located either in the industrial area or in the open pit. As primary crushing is part of the mining and extraction of ore from the open pits, this activity will not be carried out year-round.

A smaller proportion of ore will be mined with block mining if necessary. The process is relatively simple and begins with clearing with a bulldozer. Once the flat surface is prepared, sawing will begin to split sections longitudinally. When all longitudinal cuts are completed, the sawing equipment is turned 90 degrees and sawing continues, creating a grid pattern. When the grid has been finished sawing, a final horizontal undercut is made which frees the blocks. Once freed, the blocks are transported to a block sawing facility. The facility will take care of the graphite blocks extracted using the block mining method. The plant saws graphite blocks of different dimensions into smaller discs before packaging and transport to a processing plant.

### *Halter*

The graphite ore in Nunasvaara Södra has a very sharp geological contact with the bedwall and hanging wall lithologies (surrounding rocks). This means that it will be very easy to distinguish between ore and waste rock during operation. The hanging wall and the lying wall usually have a zone of 1-2 meters from the contact point where very low levels, less than 3 percent, of graphite can be found. The graphite content there is too low to be processed, which is why the material in this zone is classified as waste rock and is taken to the sand and waste rock warehouse or refilled in open pits. Due to the very short zone of graphite in the hangingwall and bedwall gray rock, no graphite will remain in the open pit, except at depth, as the graphite body extends below the depth of the proposed open pits.

The graphite contents in the ore body are predominantly extremely high, on average about 25 percent, and therefore it is estimated that the majority of the ore body will be mined and processed. However, it should be pointed out that within this average content there are variable contents of between 10-40 percent graphite.

Marginal ore, meaning ore with a graphite content in the lower end of the range of 10-40 percent graphite mentioned above, will be extracted from open pits throughout the life of the mine because it is unevenly distributed throughout the ore body. The marginal ore will be extracted and mixed with

other ore when appropriate to ensure a steady supply of ore of suitable grades to the concentrator. The marginal ore will be stored within the operational area on a hard surface with stormwater collection.

### **Waste management**

Gråberg will arise when ore is unloaded in the open pits. Gray rock, which is potentially acid-forming over time, is poor rock that must be mined to access the ore. Talga's approach is that potentially acid-forming gray rock should not be used in construction work or in local infrastructure. It will be transported up from the open pit and stored in a combined sand and waste rock storage together with the enrichment sand. Loading and hauling will be done with dozers, excavators, shoe loaders and dump trucks of the appropriate size. The sand and gray rock storage facility is planned to be in operation for 11 years. Gray rock and enrichment sand that arises afterwards will be refilled in the first three open pits.

### **Enrichment**

Through the beneficiation process, graphite is extracted and processed from the ore. The ore in Nunasvaara Södra contains high levels of graphite, silicate gray rock and smaller amounts of sulphide minerals. Ore crushed in the primary crushing plant will be stored in a storage facility for unsorted ore, from where it will be transported to a secondary crushing plant. The crushed ore then goes to a mill circuit, where it is slurried with recycled process water from the beneficiation and ground. Ground ore with the correct particle size then goes to the flotation circuit. Concentrate from primary flotation is fed to an ultrafine mill. Ultrafine grinding enables the release of graphite in several flotation steps. Sodium silicate (water glass) is added in the beneficiation steps to reduce the proportion of unrefined material. The product of the beneficiation process is the pure graphite concentrate.

When the concentrator is commissioned, 4,500 m<sup>3</sup> of water will be needed to fill the plant for the first time. The source of this water is primarily water collected on site, but if this is not enough, up to 4,500 m<sup>3</sup> of water will be drawn from Hosiojärvi at a rate of less than 1,000 m<sup>3</sup> per day. After this first filling, it has been calculated that no additional water needs to be drawn from Hosiojärvi for the entire life of the mine. However, the facility for diverting surface water will be left in place. Should there be a need to divert surface water in the future, Talga will inform the supervisory authority in accordance with § 19 § 10 p of the regulation (1998:1388) on water activities.

### **Handling of tailings sand**

Tailings from primary flotation and purification will be combined in a tank for dilution to slurry before being fed to a thickener. A combination of thickening and filtration will be used to dewater the tailings. After filtration, a moist filter cake will be produced. Filter cakes are collected by front-end loaders and loaded onto trucks for transport to the sand and waste rock storage facility at an average rate of less than one truck per hour throughout the year. The transport distance is relatively short, and the trucks will use a ramp from the concentrator to the east of the sand and waste rock storage facility. The tailings produced in the tailings plant is almost completely saturated with water when it is brought to the sand and waste rock storage. This effectively prevents oxidation of sulphide material present in the tailings sand.

### **Industrial area, infrastructure and other facilities** *Industrial area etc*

The concentrator and the storage facility for unsorted ore will be located on the industrial estate. The industrial area will mainly also include the following facilities.

- Asphalted surface for storage of incoming equipment
- Distribution facility and warehouse for incoming and outgoing goods
- Plant for block sawing
- Workshop and maintenance premises
- Plant for the unloading of chemicals
- Administration buildings
- Laboratory
- Parking with electric vehicle charging, engine heater outlet and lighting
- Security gate and guard house
- Plant with diesel generator or battery for back-up power supply
- Heating system
- Fuel depot

The location of facilities and infrastructure may be adjusted during detailed planning. Fencing will be installed around the entire operational area to prevent wild animals from entering the area. A higher security fence will be installed around the industrial area and other facilities outside the industrial area for noise reduction and safety.



Overview map planned area of operation

### Ways

At the junction of E45 and Nunasvaaravägen, E45 will be widened to accommodate an overtaking lane and safe exit from E45 to Nunasvaaravägen from the west. The single Nunasvaara road, which connects to the E45, is widened and upgraded.

A connection connecting Nunasvaaravägen with the industrial area must be built. The road must have a drivable width of 6.5 meters with ditches of 1.3 meters on both sides. It must also have a height of at least 1.2 metres, but a higher height may be required in sinks.

Within the operational area, roads will be built between the open pits, the sand and waste rock warehouse, the industrial area and other facilities. These roads will have a drivable width of 13 meters so that mining traffic in opposite directions can meet safely. The total width of these roads, including side slopes and ditches on either side, will typically be about 26 meters depending on the topography of the operational area.

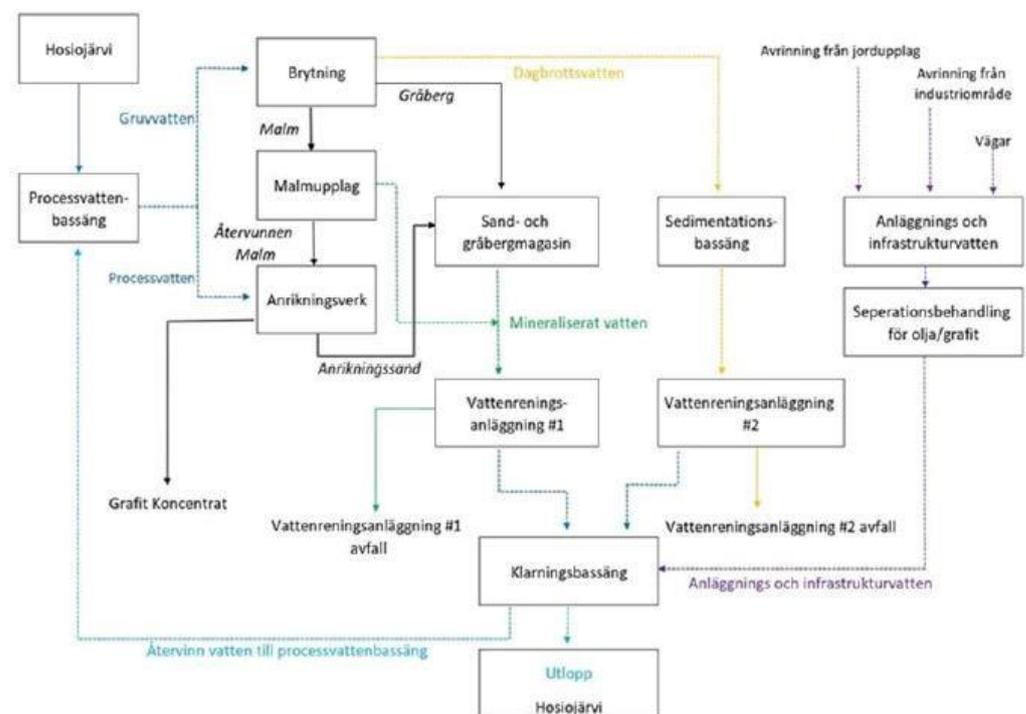
### Miscellaneous

Drinking water for the business will be provided by constructing a well. Sanitary water will be collected and treated in a sewage plant with sludge separation and infiltration bed.

## Water management

### Overview

Water management within the area aims to screen off clean water from the surroundings past the operational area, collect and purify all potentially contaminated water within the operational area, reuse water within the process when this is possible and release treated excess water. The operational area will handle water that comes from several different sources and goes to several different locations within the area.



Most of the water in the system comes from county management of the open pits.

Water balance calculations have been carried out for the production systems for years 0 (construction phase), 1, 2, 5, 10 and 20. The result shows that the water balance in the system varies during different production stages. However, the plant has a positive water balance throughout all production stages as a whole. In general, the water discharge increases over the years, with the maximum outflow being 530,000 m<sup>3</sup> in year 20, which corresponds to 1,452 m<sup>3</sup> per day. It should be emphasized that the assessments made regarding the water balance model and the facilities for

water treatment are based on a conservative scenario. It is possible that the facilities during detailed planning may be smaller than what these assessments have been based on.

The concentrator will recycle process water internally to minimize the consumption of water and reagents.

*Water treatment plant, handling of surface water and oil and graphite separation*

Two water treatment plants will be built to treat water from several sources within the area. Water from the industrial area and the sand and waste rock reservoir will be treated in water treatment plant 1, while water collected from the dewatering of the open pit stages will be treated in water treatment plant 2.

To be able to shield off uncontaminated water and collect contaminated water, ditches and ledges will be constructed around all infrastructure in the area. Ditches and ledges will be built on upward slopes to screen off water and thus prevent water from entering the open pits, sand and tailings storage, industrial area and other relevant infrastructure. Ditches and ledges will also be constructed on downward slopes so that contaminated water can be collected for treatment in the water treatment plant before it is used in the process or discharged.

Stormwater collected from the industrial area and ramps will be pumped to an oil and graphite separation facility that removes oil products and suspended graphitic and other sediments from the water. The process will consist of oil separation and sedimentation of suspended particles in water. Residual products from this facility will be collected and disposed of by an approved contractor at an approved facility.

*Sedimentation basin and county management of open pit mining*

The purpose of the sedimentation basin is to collect contaminated water from the open pits and to then separate suspended graphite and sediment particles from the water. The open pits have to be contained so that they are not flooded. The inflow to the open pits is estimated at full expansion to be in the order of 1,600 m<sup>3</sup>/day as an annual average during a normal year. The figure includes an estimated rainfall on the open pit surface of 100 m<sup>3</sup>/day. County maintenance will be done with pumps and pipes from the open pits, with outlet in the sedimentation basin. The capacity of the sedimentation basin will be approx. 10,500 m<sup>3</sup>, which is the capacity required to hold the maximum amount of water that will be pumped from the open pits in the year 24/25.

The calculated inflow is not an absolute limit but an assessment made based on what is known about the groundwater conditions. It cannot be ruled out that fracture zones or the like lead to a higher leakage. In that case, it is expected to occur for shorter periods of time when the mining is in progress in the deepest parts of the open pit and provided that the fracture zones currently indicated are water-bearing. Higher infiltration and thus the amount of water that needs to be diverted will of course occur during the snowmelt period, while lower diversion volumes are deemed to apply during the rest of the mining period. If a higher leakage were to occur, it must be possible to divert the water because otherwise mining operations would have to be suspended. If a fixed limit for how much water may be diverted away were to be specified in the permit, that figure would thus have to be so high that it is not relevant for assessing the groundwater impact that can most likely be expected from the activity. In practice, it is also impossible to determine what is groundwater and what is

surface water, for example in connection with abundant rainfall that quickly generates a lot of surface water.

Groundwater impact will be limited. Groundwater levels will be monitored as part of the control program.

#### *Clarification basin*

The purpose of the settling basin is to collect all the water from the water treatment plants. In the clarification basin, it is ensured that the water maintains a sufficiently good quality before it is discharged into Hosiojärvi or pumped to the process water basin for use in the enrichment process. The settling basin will be built with a capacity of approx. 12,000 m<sup>3</sup>, which is the maximum storage capacity needed to hold all the water that comes from the facilities that have their outlet there.

#### *Process water basin*

The purpose of the process water basin is to maintain a suitable water inflow to the concentrator, which requires a stable water source. The process water basin will be built with a capacity of approximately 1,000 m<sup>3</sup>, which is the maximum storage capacity required to maintain a stable inflow around the clock to the enrichment plant with a 20 percent buffer capacity.

#### *Pump pits*

Pump pits will be constructed to collect contaminated and uncontaminated water from various facilities in the area before the water is pumped to the relevant facility for treatment or storage.

### **Raw materials and chemicals**

Natural resources will be used in the business during construction and operation as well as during decommissioning and finishing. These natural resources consist, among other things, of materials for the construction of facilities and infrastructure, water, inputs for operation and energy. For the most part, moraine from the area will be usable for construction, but some types of material will need to be brought in from outside sources. The water required for the process will be recycled internally and taken from treated excess water.

Chemicals will be used in e.g. the enrichment process and water purification, i.a. sodium silicate, kerosene, MIBC (foam former) and flocculants. Explosives will be used for the mining in the mine. On average, it is estimated that around 120 tons of explosives are used per year. At any given time, however, less than 10 tonnes will occur in the business, which means that the business is not covered by the Seveso legislation.

### **Transportation**

Inbound and outbound traffic will use Nunasvaaravägen which connects to E45. Once operational, incoming transport will mainly consist of deliveries of fuel, reagents and consumables, but also personnel transport. Outbound shipments will consist of graphite concentrate to the processing plant. Internal transport will consist of i.a. truck transport of blasted ore, primary crushed ore, waste rock and enrichment sand around the operating area.

## Energy use

The business area has been designed to meet the highest standards regarding energy efficiency and minimal dependence on fossil fuels. The main energy sources used in operating the area are electricity and diesel fuel.

Talga will strive for the following:

- Use of best available technology (modern, high-efficiency, low-emission equipment) for site activities where possible.
- Use of alternatives to fossil fuels, such as biodiesel, to at least 25 percent of the total volume. If possible, a higher proportion of biofuels will be used.
- An effective mine planning, i.e. ensure that transport routes, movement of materials and extraction are carried out as efficiently as possible.
- A well-planned and efficient drilling and blasting routine, i.e. ensure that drilling and blasting is carried out in such a way that the blasted rock is of the correct size fraction for further processing

The energy use consists of electricity, above all for the operation of the enrichment plant, as well as diesel fuel for the operation of machines and vehicles. Electricity consumption is estimated to amount to approx. 40 GWh per year and diesel consumption to approx. 340 m<sup>3</sup> per year internally and approx. 120 m<sup>3</sup> per year for transporting the product to the planned processing plant in Luleå. The planned operation is currently limited by the existing electricity infrastructure provided by the local electricity grid. As there is no additional capacity from the local power grid, it is not possible to operate electric mining equipment until a new high voltage line is built. Talga plans to conduct a comprehensive study of the feasibility of establishing the required infrastructure and to understand the costs associated with building and operating a fully electrified mine and, in the meantime, strive to use other energy sources with low greenhouse gas emissions.

## Waste

### *Mining waste*

Extractive waste (industry-specific waste) that arises in the operation consists of waste rock, beneficiation sand and water treatment sludge. The waste rock and tailings sand have been characterized as potentially acid-forming and will be stored in a combined sand and waste rock reservoir with collection and treatment of leachate to prevent contamination from spreading to the recipient. The waste from the first eleven years of the mine's operation must be placed in the sand and waste rock warehouse. Gray rock and enrichment sand that arises afterwards will be refilled in the first three open pits. Waste management will take place according to the business's waste management plan, which will be kept up to date in accordance with § 29 of the ordinance (2013:319) on extraction waste.

### *Other waste*

During the operation of the business, non-industry-specific waste is also generated, for example sewage sludge, metals, combustible waste, plastic, corrugated cardboard and wooden packaging material. Hazardous waste that arises in the business consists of, among other things, of waste oil, oily sludge, oil filters, used rags and absorbent materials, etc. Such waste will be handled, stored and disposed of according to current regulations to prevent spills from causing the spread of contamination to ground and groundwater.

**Construction phase**

In case the required permits are in place at such a time that the construction phase can begin after the spring thaw, it is expected to last for approximately 12-18 months from the time land cultivation begins until enrichment can begin. In the event that the construction phase cannot begin shortly after the spring thaw, the construction phase is instead expected to last for approximately 18-24 months.

The transports relating to the construction phase are temporary and thus any disruptions will be temporary. Disruptions will be avoided through clear information and through consultation with affected Sami villages. The transports will also be planned for parts of the year when the impact on reindeer husbandry can be limited.

The construction work will generally involve the felling of trees, after which topsoil and some moraine are removed before the foundations of the facilities are laid. Earthworks and blasting, construction of buildings, trenching and pipe laying will also take place. Building materials will be collected on site and from local quarries located as close to the site as possible.

The construction time is difficult to fully estimate due to e.g. the following factors:

- Season; snow cover and winter conditions prevent certain actions during certain winter times (eg concrete pouring).
- Reindeer activities; Talga intends to limit as far as possible the effects that construction measures can have on reindeer husbandry in the area.
- Timing of required permits; the time of year that relevant permits are obtained and access to the site is enabled may limit what actions can be completed in the first year of construction.

Talga can undertake the following with regard to the construction phase:

- The seasonal nature of construction and operations will be similar.  
No blasting will take place at any other time than April-September.
- During a winter, ground work and construction will continue during the months of October-
- December. Talga undertakes to carry out special consultations with Talma Sami village and Gabna Sami village before this period, in addition to the annual consultation that the company proposed as a condition of the application.

Depending on what time of year the permit is issued, mining-related measures may take place in parallel with construction measures. The purpose of this is to obtain the necessary material for the construction of the sand and waste rock storage as well as to store graphite ore for use during the commissioning of the beneficiation plant.

S ESPECIALLY ABOUT THE WATER ACTIVITIES

**Affected properties and property owners**

Groundwater diversion and permit-required facilities affect Kiruna

The quarry 2:1. No sensitive objects have been identified within the area of influence for groundwater discharge. Surface water diversion from Hosiojärvi with facilities and filling of surface water within the combined sand and gray rock reservoir affects Kiruna Vittangi 21:2. Replenishment of surface water within the combined sand and gray rock reservoir also affects Kiruna Vittangi 43:5.

The water activities are deemed to only affect the properties where they are carried out. In addition to the property owners, Talma Sameby is the owner in the capacity of holder of a special right on the properties Kiruna Stenbrottet 2:1 and Kiruna Vittangi 21:2 and 43:5.

### **Resourcefulness**

Talga has water rights on the properties Kiruna Stenbrottet 2:1 and Kiruna Vittangi 21:2 and 43:5 by agreement. The right-of-use agreements that Talga has relied on in support of the right to water have a lease term of 50 years from May 18, 2020, May 19, 2020 and April 11, 2022. If the agreements are not terminated, the lease term will then be extended. Talga thus has the required water legal authority in the area for at least 50 years from May 18, 2020. The active water operations that the planned operation includes will end with the county management of the open pits ending. The county holding is estimated to last for approx

25 years, which means that availability with a margin exists during the period when Talga will conduct water operations. In the event that the Land and Environmental Court considers that the permit needs to be time-limited to the initial period of validity of the right-of-use agreements, i.e. until May 18, 2070, Talga has nothing against this.

### **Unforeseen damage**

Any damage as a result of the water activities now sought cannot be foreseen. Talga proposes that the time for reporting claims for compensation for unforeseen damage be set at 5 years from the end of working hours.

### V ILL CROSS DISCUSSION

### **Climate and emissions to air**

#### *Generally*

Air emissions from the planned activities in Nunasvaara Södra primarily consist of emissions from diesel-powered vehicles in the area, gas emissions from blasting and dusting. An assessment of the operations' anticipated emissions to air and impact on the climate has been carried out. The emissions from the operation are estimated to be small and will not contribute to any environmental quality standard being exceeded.

Tall gas emissions of greenhouse gases mean a marginal increase of approx. 0.2 percent of the mining industry's total contribution in Sweden. Machines that meet the requirements according to at least Euro Stage IV must be used in the business. In order to reduce the operation's impact on the climate, the possibility of using admixture of renewable fuel in addition to what is included in conventional fuel for machinery and transport is also being investigated.

#### *Dusting*

Dust is estimated to mainly arise from internal and external transport as the roads to and within the operational area are not planned to have any asphalt pavement. Dust can also arise when, for example, crushing rocks and when loading, unloading and handling waste rock, ore and enrichment sand. The transports of concentrate from the facility will take place in covered transports and are therefore deemed not to involve any source of dust. The risk of dusting increases in dry weather in combination with strong wind. In winter, there is no work in the open pits, and the area is covered in snow, which means that dusting is not expected to occur during this part of the year.

Monitoring of dusting is proposed to take place within the operation's control program.

To prevent dusting during transport on gravel roads in the local area, these can be watered and treated if dusting becomes troublesome in dry and windy weather. A preventive measure is regular maintenance and cleaning of dusty material from roads. Even during blasting and crushing in the open pit, water can be used to reduce dust. The enrichment process will take place indoors in premises that have particle separation installed. Talga proposes that the court prescribes a condition for the operation, and the company believes that the condition is sufficient to deal with the environmental consequences linked to dusting.

### *Smell*

Odors can occur when broken rock with high sulphide levels is stored in such a way that it can oxidize and weather. The risk of odor disturbances arising from stockpiles of ore and waste rock is considered to be very small. Any impact on surrounding interests, including nearby residents and outdoor activities, is therefore not expected to occur

### **Release to water**

Talga's planned operating area at Nunasvaara/Hosiorinta is drained towards Lake Hosiojärvi. The lake is drained via a smaller stream (East Stream) and west of Nunasvaara/Hosiorinta there is another smaller stream (West Stream). Both streams flow into the Torne river, which is part of the Natura 2000 area Torne and Kalix river system. Neither the streams nor the lake Hosiojärvi are bodies of water according to the water administration, but are referred to as so-called other water. These waters therefore have no decided environmental quality standards. Lake Hosiojärvi is not part of the Natura 2000 area.

Discharge of excess water from the operation will affect Hosiojärvi, Östra bäcken and Torne älv, but not Västra bäcken. Both streams will be affected hydrologically through lower flows due to groundwater drawdown caused by the county holding of open pit mining. In the Östra brook, the loss of flow will be compensated by the fact that the flows from Hosiojärvi's outlet to the Östra brook will increase through the release of excess water.

Talga will take protective measures to minimize the effects on surface water in order to ensure that the Torne River is protected and that the impact on other watercourses is limited. Important precautionary measures include designing the operational area so that all activities take place within a part of the catchment area and that all water from the operation, including drainage water from the sand and waste rock reservoir, is collected and treated before it is released. The activity is judged to have no impact on the Torne river with the protective measures taken. The applied mining activity does not pose any risk to the Vittangi drinking water source.

Calculations show that the discharge from the applied activity will lead to a change in water chemistry in Hosiojärvi and in the Östra bäck system. It is primarily the levels of low-toxic substances such as sulfate, calcium and chloride that are expected to increase, but also the levels of the nutrients phosphorus and nitrogen and several metals are expected to increase slightly. As expected, the increase will be highest in Hosiojärvi, at least for sulphate, calcium and chloride. In Östra bäcken, the increase in salinity will not be as great.

Due to this, Talga assesses that the risk of negative impact on aquatic organisms in Hosiojärvi cannot be ruled out. In Östra bäcken, on the other hand, despite relatively high sulfate levels, the assessment is that the changed water quality does not pose any significant risk to the aquatic organisms.

Based on the leachate samples carried out, in combination with assessment guidelines in HVMFS 2019: 25, Talga believes that the most relevant substances to limit and monitor are copper, nickel and zinc. During June 2021, Talga has had Sweco perform updated calculations for recipient impact. The calculations show that in the worst case (at full production in 25) there will be lower levels in the recipient of all substances except magnesium, nickel and zinc, compared to what has previously been reported. The levels of magnesium and nickel increase slightly, but the increase is small and does not affect the previously reported assessment regarding environmental risks. The zinc content may need to be monitored more closely in different flow scenarios, but is judged to be below HaV's assessment basis. Talga intends to monitor the water quality in the discharge and in the recipient and to continuously work on improvements to the treatment technology

Talga proposes that the question of which final conditions shall apply to releases to water of copper, nickel and zinc from the operation be postponed for a trial period during which Talga shall carry out an investigation and during the trial period it is proposed that a provisional regulation apply.

### **Impact on groundwater**

Talga has investigated the hydrogeology in a defined investigation area. There are no designated groundwater bodies in the study area and thus no environmental quality standards to take into account. There are also no designated groundwater bodies in the direct vicinity of the planned activity. The nearest groundwater body is on the south side of the Torne river.

The mining in open pits will involve blasting and excavation below the groundwater level and thus there will be an infiltration of groundwater into the open pit. In order to maintain the water level in the lake and the flow in Östra bäcken, purified surplus water from the operation will be released into Hosiojärvi.

In summary, the open pit will cause a temporary local lowering of the groundwater level in the area, but the water level in the lake and the flow in Östra bäcken will not be negatively affected as excess water is supplied to the stream and lake. Neither the designated groundwater body south of the Torne River nor a glacial deposit located east of Lake Hosiojärvi is expected to be affected by the operation. The consequences of the activity are assessed as small to moderate. No special condition is proposed in this part.

### **Reindeer nutrition**

The planned area of operation is located within an area that during the winter is a reindeer herding area for Talma Sami village. Migration routes and difficult passages of national interest for reindeer husbandry are designated to the west and south of the operational area of Talma Sami village and Gabna Sami village. The national interests for reindeer husbandry designated by the Sami Parliament are located approx. 200 meters south of the outer boundary of the operational area.

Talga's starting point is that the reindeer husbandry in Talma Sami village and Gabna Sami village should be able to continue and that damage to the reindeer husbandry should primarily be prevented and minimized. In order to minimize the impact and ensure close cooperation and exchange of

information between the company and the reindeer herders concerned, Talga proposes that the Land and Environmental Court announce conditions for the operation.

### **Cultural environment**

During investigations carried out in 2018, 18 new remains were found, two of which are ancient remains and the remaining 16 other cultural-historical remains. In 2019, a further twelve cultural-historical remains were found, but no ancient remains. The two ancient remains can be found along Nunasvaaravägen and consist of a hearth and a hut remains. The cultural-historical remains consist of three culturally marked trees (two bark pits and one inkwell), a smoking device, three house foundations and areas with mining remains from the early 20th century prospecting and trial mining.

The two antiquities, the hearth and the remains of the barn, will be preserved and protected during the works that will be carried out in the immediate area. Of the cultural-historical remains, all but seven will be able to be preserved. The remains that cannot be preserved are within the area that will be covered by the open pit and the planned sand and waste rock storage.

The environment and the remains are representative and describe historical functions and contexts for the activities that occurred in the area with reindeer herding and Sami activity in the area as well as later exploration and search for ore. Remains from these types of activities are common in the area and the value is therefore assessed as moderate. All but one of the other cultural-historical remains that are at risk of disappearing are remains from exploration and the new activity will be an additional layer in the area's cultural-historical context. The area's history of exploration and mining will continue to be traceable and visible through the presence of undisturbed remains. No ancient remains will be affected. The effect is therefore assessed as small. The value for the cultural environment in the area is assessed as moderate and the effect of the activity as small, the consequences for the cultural environment are therefore assessed as small.

No condition regarding the cultural environment is deemed necessary. If a permit for the planned activity is issued and activity begins in the area, Talga will send a list to the county administrative board of the remains that will be removed or affected by the activity. In case the need for permission according to the Cultural Environment Act (1988:950) arises, this will be sought according to a special procedure.

### **Natural environment**

Facilities and infrastructure will be placed so that areas of natural value are avoided as far as possible, above all areas of highest and high natural value have been avoided when locating the operational area. An assessment of the consequences for natural values in the area has been carried out. An area with high natural value (class 2) will be partially affected as this coincides with the deposit and thus the open pit. Part of an area with tangible and part of an area with certain natural value is also claimed by the operational area. The impact of groundwater lowering is insignificant for the objects of natural value that are within the area of influence, as these natural values are not sensitive to groundwater lowering. The impact on natural values at Hosiojärvi's shore will be insignificant as the water level is maintained. The impact on natural values in Östra bücken and Västra bücken is assessed as small.

Where possible, measures can be taken to increase the natural value of nearby areas with currently significant natural value. Examples of such measures are moving dead wood from the area that is

felled for the operation. Areas that have been taken up will, as far as possible, be gradually restored during the operating period. Consideration will be given to existing protected species when finishing the area. Overall, the consequences for natural values are assessed to be small to moderate. Talga does not consider that there is a need to prescribe any special conditions regarding the natural environment for the business.

### **Noise**

Carried out calculations of noise levels show that the guideline values in the Environmental Protection Agency's Guidance on industrial and other operational noise (Environmental Protection Agency, 2015) can be contained at the nearest residence with certain measures. The measures are required to be able to maintain a maximum of 40 dBA at night as an equivalent level at the nearest residence in the initial stage of the operation when the rock drill, primary crusher and loading are placed on the rock at ground level. The measures in question are partly a noise barrier with a height of at least 5 meters placed a maximum of 20 meters from the primary crusher and loading station, partly that drilling in the initial stage only takes place on weekdays (06-18) and evenings (18-22) and on Saturdays, Sundays and holiday (06-18). As the work progresses, the rock drill and primary crusher are moved down into the open pit, which provides a natural shielding and no measures are then required to meet the target values.

Transport's contribution to the noise level is small and the levels are low along Nunasvaaravägen to the E45. The consequences are therefore assessed as small and after about 5 years as insignificant. Talga proposes that the Land and Environmental Court prescribe conditions regarding noise for the operation.

The Torne river and a zone of approximately 1 km on each side of the river are of national interest for outdoor life. The southern part of the operating area is just north of the border of the national interest, but the majority of the outdoor activities in the national interest can be assumed to be conducted further south, mainly on the river and its banks where the leisure facilities are also located. A smaller part of the area of national interest may be affected by noise from the drilling rig when it is placed at ground level. This means that there is a risk of 40 dBA being exceeded in the area of national interest during the first year of work in each open pit, a total of three summers during the mine's lifetime. To limit the impact of noise, the following measures will be taken.

- Drilling will only take place during the day on weekdays during summer time.  
No work in the open pits will take place during the winter.
- Rock drills with noise reduction will be used, which will reduce the noise level at the source by about 10 dBA.
- A noise protection embankment with a height of at least three meters is planned to be built along the south-eastern edge of the open pits.

All in all, it can be stated that the mining activities, especially during the day in the initial stage, will involve a noise impact within approx. 0.06 percent of the total almost 95,000 ha area of national interest. The activity is not judged to have any negative impact on other values that have been identified as being in the national interest, such as salmon fishing, the river landscape and the cultural environment. The activity can also have positive effects such as increasing accessibility to the area even during winter and clarifying the cultural environment objects found during the archaeological inventories through, for example, signage, both of these are measures that are mentioned in the value description of the national interest.

**Vibrations, air shock waves and stone throwing**

An assessment of vibrations, air shock waves and stone throwing has been made in accordance with the current Swedish standard. The calculations show that both vibrations and air shocks are well below the applicable guideline values and that the holiday homes in the immediate area are well outside the recommended safety distance for stone throwing. In summary, the impact in the form of vibrations, air shock waves and stone throwing is assessed to be small. However, Talga intends to take protective measures to further reduce the impact. Talga suggests that the court prescribe a condition for the activity.

**Transportation**

Transport of materials and personnel to and from the mining area will take place via the existing Nunasvaaravägen, which connects the area to road E45. Inbound transport of consumables is planned to take place every day of the week all year round. The number of inbound shipments of consumables will be greater in the second and third quarters when mining is scheduled to take place (April–September). Internal transport in the operational area will primarily consist of truck transport of ore, crushed ore, waste rock and enrichment sand between different operating facilities within the area. The majority of the internal transports will take place during April to September when mining is in progress in the open pit.

To ensure that transport can take place all year round and in a safe manner, Nunasvaaravägen will be upgraded. The connection to the E45 will also be improved by widening the road and an exit lane for vehicles coming from the west on the E45. The consequence of the traffic to and from the mine is considered to be small given that there is a minor increase in traffic on a route that is currently relatively lightly trafficked. Improvements on Nunasvaaravägen will also have positive effects on traffic safety and accessibility. Talga does not consider that there is a need to prescribe any special conditions regarding transport for the business

**Energy management**

The planned operation is a new operation that will be designed and optimized, among other things, based on questions about energy use. Among other things the operating area has been designed to meet the highest standards regarding energy efficiency and minimal dependence on fossil fuels. No condition regarding energy management is required.

**Waste**

Talga proposes two conditions regarding post-treatment regarding the extraction waste. Regarding the handling of waste in general within the facility, Talga intends to handle this in accordance with current regulations and does not consider that it is called for under any special conditions.

**Risk and chemicals**

Chemicals will be used in e.g. the enrichment process and water purification. None of the chemicals planned to be used in the operation have been classified as environmentally hazardous. The company's self-monitoring program will include routines for chemical handling to minimize risks to human health and the environment. Only insignificant amounts of chemicals may remain in the water released to the recipient due to the substances' properties, handling and control. Chemical handling will take place according to current regulations and recommendations. Storage of chemicals and liquid hazardous waste will only occur on an embanked and sealed surface provided with rain

protection. The embankment must contain the volume of the largest storage vessel and 10 percent of the total volume of other storage vessels. The storage must also be protected against collision. Furthermore, spills and leaks must be immediately collected and taken care of.

Explosives will be used for mining in the mine. To reduce the risks when handling and storing explosives, emulsion explosives will be used as these are safer than other types of explosives. On average, it is estimated that around 120 tons of explosives are used per year. Other explosives, such as primers, lighters and boosters, etc. will be stored in special storage in accordance with current regulations. Talga does not consider that it is called for with any special conditions regarding explosives handling.

An action program and routines to prevent accident risks with, among other things, a. chemicals and explosives will be produced for the planned activity. There will also be contingency plans for operations should a serious accident occur. A system to warn the public in case of blasting will be established and blasting will only take place at predetermined times. As the risks of accidents in the business are small and there are no homes or other areas where the public generally stay in the immediate area, the consequences of a possible accident are assessed as small. Talga proposes that a condition on chemicals and hazardous waste be prescribed for the operation.

## **Finishing**

### *Quantity calculation moraine for finishing*

Talga has carried out a mass balance calculation based on moraine depth/amount in the area as shown by SGU's soil map, preliminary site surveys and knowledge of the area obtained from historical and new survey work. In the mass balance calculation, information from the preliminary study (PFS) was used, regarding details of the design of the infrastructure and industrial area.

It should be emphasized that Talga, based on the existing (PFS) level of design, site investigations and other site knowledge, assesses that no additional acquisition of moraine from locations outside the operational area will be required. During detailed planning of the business, additional site investigations will be carried out with, among other things, geotechnical drilling to verify moraine depth and quality.

When setting up the operation, it is estimated that approx. 750,000 m<sup>3</sup> of moraine will be generated through, for example, paving open pits and preparatory work for the sand and gray rock reservoir. Of this, approx. 250,000 m<sup>3</sup> will be used for construction, for example of roads and drainage systems. Thus, a surplus corresponding to approx. 500,000 m<sup>3</sup> of moraine is estimated to arise. During ongoing operations, an additional approx. 250,000 m<sup>3</sup> is estimated to be generated from the open pits, which will be used for ongoing post-processing measures, for example covering the slopes of the sand and waste rock reservoir, or stored until the need arises

Planned areas for storage of moraine and storage of organic top layer are included in the technical description and are considered sufficient to store the waste materials that will arise in the operation. The material in the editions will be used in the post-processing of the operational area.

The post-treatment plan contains information regarding the size of the area, depth of coverage and the total amount of moraine needed. The finishing of the operation is estimated to require around 1,000,000 m<sup>3</sup> of material, of which 750,000 m<sup>3</sup> according to what has been described above is

generated from work within the area. The information is based on the best possible information currently available, but Talga is aware that the full detailed knowledge is not available before a detailed design has been carried out.

#### *Post-treatment plan*

Talga has drawn up a post-processing plan that describes how the post-processing of the planned operations should take place. The plan describes how the business must ensure compliance with guidelines for e.g. environmental protection and land use in accordance with the regulation (2013:319) on extraction waste. The intention is that the mining area, to the greatest extent possible, should be able to return to previous land use and not pose any risk to people, wildlife or reindeer husbandry. The Mine Closure and Finishing Plan is intended to be dynamic, and will be reviewed and revised regularly based on data from the internal monitoring program, and also as new technologies and new processes become available in the industry.

To fulfill the purpose of mine closure and reworking, and to enable early detection of any problems, a robust monitoring program will be put in place. In order to fully understand and evaluate how effective the implemented recovery measures will be, it is also important to start monitoring when the business is operational. This shall be accomplished through an internal monitoring program. Through careful operational planning, the project design enables progressive finishing during the life of the mine.

Talga proposes that a general condition with respect to post-treatment be prescribed for the operation and a specific condition with regard to post-treatment of the sand and gray rock reservoir.

#### **Financial security**

For the completion of the restoration measures that follow from the remediation plan, Talga intends to provide a financial guarantee and Talga proposes that a condition be prescribed.

Part of the security is proposed to be provided successively according to a plan that meets the current need for security at all times (chapter 16, section 3, second paragraph of the Environmental Code). The need for financial security will gradually increase as extraction waste is taken to the sand and waste rock storage. When the sand and gray rock reservoir has been finished, the need for financial security in that part disappears. Talga therefore proposes that the security be provided partly in the form of a basic amount that shall apply throughout the period of operation, and partly in the form of an amount that is successively provided regarding the finishing of the sand and waste rock warehouse. When the sand and gray rock warehouse has been finished, the part of the security relating to the warehouse can be returned to Talga.

There are funds already allocated in the proposed post-treatment plan for the operation and maintenance of water treatment during a transition period. The post-treatment plan also contains proposals for self-inspection and control of performed post-treatment measures, etc. Funds are set aside for the procurement of these services and for the handling of future hydroxide sludge from the water treatment.

During finishing, no machine maintenance will be performed. Fixed equipment must be dismantled and will be sold as scrap or to other mines or operations. No transition period is planned. The finishing

measures are intended to be carried out by externally procured contractors and no own personnel costs are deemed to arise during this period.

The company's calculations show that there will be sufficient amounts of moraine in the area to cover the need for finishing. Thus, the moraine will not have to be procured externally. Any cost for this therefore does not need to be included in the financial security. The proposed financial security covers the post-processing cost at any time during the operation of the business. If the operation were to be terminated prematurely, the sand and gray rock reservoir will be able to be reprocessed according to the same method as is planned for the fully developed reservoir, but at a lower cost.

### **Control of the business**

Talga will carry out a self-inspection in accordance with the Environmental Code, the regulation (1998:901) on the operator's self-inspection and applicable regulations. Talga suggests that a condition be prescribed.

### T AUTHORIZATION ISSUES

#### **Admissibility according to ch. 2 the environmental code**

##### *The knowledge requirement (Chapter 2, Section 2 of the Environmental Code)*

Talga's staff has extensive experience in mining operations. When hiring contractors, verified competence is required for the task they are hired for. Through the consultation procedure and the preparation of the EIA, the company has also gained good knowledge and insights into the environmental impact of the applied for activity. The company therefore has access to very good knowledge of the business to which the application relates. Talga thus possesses the knowledge required to assess the environmental impact of the applied for activity.

##### *The precautionary principle, the principle of the best possible technology (Chapter 2, Section 3 of the Environmental Code)*

The EIA describes the protective measures, limitations and precautionary measures that Talga intends to take to prevent, prevent or counteract the applied activity causing damage or inconvenience to people or the environment. Talga will apply the best available technology in the design of the operation and in post-processing after the operation has been completed. The precautionary principle and the principle of the best possible technique are thus fulfilled.

##### *The product selection principle (Chapter 2, Section 4 of the Environmental Code)*

Chemicals will be used mainly for blasting, internal logistics and in mining equipment. In addition to explosives, chemicals will be used in the enrichment process and water treatment. Handling of chemicals will take place according to current recommendations and regulations. Talga will work for safe handling of fuels, oils, etc. from an environmental and health protection point of view. Searched business fulfills the product selection principle.

##### *The housekeeping and cycle principles (Chapter 2, Section 5 of the Environmental Code)*

Energy efficiency is constantly prioritized in Talga's projects. The business area has been designed to meet the highest standards regarding energy efficiency and minimal dependence on fossil fuels. The requested activity means that a deposit of national interest can be put to good use, which in itself constitutes good stewardship of natural resources. The classification of ore and waste that has been

made within the project and in the permit application implies good stewardship of natural resources and is therefore compatible with ch. 2. Section 5 of the Environmental Code.

Masses from the operational area will be used during construction and operation as well as during closure and finishing of the operations. This applies, among other things, to materials for the construction of facilities and infrastructure, water and inputs for operation. For the most part, the moraine from the area will be able to be used for construction, but some types of material will have to be taken from external sources. The water required for the process is recycled internally and taken from purified excess water. Talga therefore assesses that the housekeeping and cycle principles are met in the business.

*The localization principle (Chapter 2, Section 6 of the Environmental Code)*

The decisive factor for locating the open pits is the availability of minable minerals. Within the planned mining area there is mineral worth mining.

SGU has decided that the Nunasvaara Södra graphite deposit is of national interest (decision of 2 July 1997, dnr 41-58/93). SGU has decided that the Nunasvaara graphite deposit continues to meet the requirements as national interest for valuable substances or materials and that the deposit must be demarcated in detail. When designating and delimiting in detail a deposit as being of national interest for valuable substances or materials, extensive investigations and documentation of the deposit are required in order for SGU to be able to assess whether the deposit is of national interest. SGU has concluded that all criteria required to designate and delineate the deposit in detail are met (decision 8 June 2020, dnr 31-388-2019). Due to the fact that the deposit is located in a certain location, the location of the mining operations is also given based on prevailing geological conditions.

The business area and its facilities have been designed with the aim of achieving the purpose of the business with the least possible intrusion. The planned activities will be compatible with municipal planning. The chosen location is therefore suitable for the requested activity.

**Admissibility according to ch. 3 and 4 the environmental code**

*Good housekeeping*

The Nunasvaara deposit contains graphite which is listed as a critical material by EU. Nunasvaara contains today the highest known concentrations of graphite in the world. Graphite is included as an important component in batteries and is a substance that is necessary for society in an energy transition. Graphite is used in a number of different sectors, e.g. the automotive industry and battery manufacturing. Graphite is also produced from graphite, which is a material that will be of great importance in the future for applications in several different industrial sectors. Several other national interests are located in the vicinity of the planned operational area. Through the planned activity, a deposit of national interest can be utilized, while the activity can coexist with other national interests in the immediate area. Talga therefore considers that the planned activities constitute good management of land and water areas in accordance with ch. 3. Section 1 of the Environmental Code.

*The reindeer husbandry*

The planned operational area is located within Talma Sami village's winter pastures. Talma Sami village's reindeer herding area stretches from Vittangi in the east to Norway in the west. Migration

routes and difficult passages of national interest for reindeer husbandry are designated west and south of the operational area for Talma Sami village and Gabna Sami village, and east of the Vittangi River for Saarivuoma Sami village. The national interests for reindeer husbandry designated by the Sami Parliament are located approx. 200 meters south of the outer boundary of the operational area. Transport from the area goes along the Nunasvaaravägen through the Talma Sami village area and south of the Torne River via road E45 through the Gabna Sami village area. The road crosses migration routes that have been designated as national interests.

#### The reindeer husbandry in Talma Sami village

Possible consequences of the planned activities are mainly loss of grazing land and migration routes, disturbed grazing peace, avoidance effects (noise that spreads outside the area creates an avoidance zone), spread of herds, reindeer collisions and increased workload and costs for the Sami village. Reindeer farming is also affected by forestry, predators, tourism, space operations at Esrange, snowmobiling and hunting and outdoor activities. Together, these result in losses of winter pasture in Talma Sami village. Talga has also received permission for trial mining in Niska. However, the planned trial mining in Niska is expected to be completed when mining operations in Nunasvaara Södra begin.

Talma Sami village has opposed the establishment of a mine at Nunasvaara Södra. The Sámi village believes that the area in question is of crucial importance for reindeer husbandry within the Sámi village and it is the Sámi village's opinion that mining and reindeer herding cannot work together in the area. Talma Sámi village has pointed out that Sámi village considers both the key area in which the deposit is located and all movement routes in the area to be of national interest, even if the Sámi Parliament has not designated them as such. Key areas are defined by Talma Sami village in its reindeer husbandry plan as areas within core areas where the reindeer thrive best. Within these areas, there are usually the best pastures that the reindeer graze on for longer periods (Reindeer Analysis Talma, 2019).

Land and water areas that are important for reindeer husbandry must according to ch. 3. Section 5 of the Environmental Code be as far as possible protected against measures that can make it significantly more difficult for the industry to operate. In the expression "as far as possible" lies that the balance to be made between the protected interest and opposing interests must include consideration of the practical and financial consequences of the protection the section provides. Primarily, the intention is to give room in the individual case for socio-economic considerations, e.g. with regard to regional policy or employment policy interests. The consequences for the individual interests concerned must also be weighed. With the expression "significantly may complicate", trivial influence is excluded. Only such measures are intended which may have a permanent negative impact on the interest in question or which may temporarily have a very large negative impact on this (Prop. 1997/98:45 Part 2 p. 30 f.). Areas that are of national interest must be protected from such measures.

Talga assesses that the planned mining operation will not make reindeer husbandry significantly more difficult. Talga's starting point is that reindeer husbandry in the vicinity of the business should be able to continue and that damage to reindeer husbandry should primarily be prevented and limited. In cases where this is not possible, losses must be compensated. According to Section 3 of the Reindeer Husbandry Act (1971:437), reindeer herding may be carried out in winter pastures between 1 October and 30 April. In order to minimize the impact on reindeer husbandry, mining will only take place during the months of April–September, taking into account that the area of Talma Sami

village constitutes winter pastures. Through the planned precautionary measure, the activity as a whole will be less disruptive during the main period when reindeer graze in the vicinity of the planned activity area. This measure is judged to be the single most important measure to minimize the impact on reindeer husbandry.

The location and design of the industrial area has been carried out so that the areas of national interest designated by the Sami Parliament are avoided, so that the impact is as small as possible and so that the avoidance zone is as small as possible. Blasting and other noisy activities will be planned in time so that the disturbance in relation to the surroundings and the reindeer is minimized. The industrial area will have to be fenced off, but how this will happen in detail should be designed in consultation with Talma Sami village. The area will also be restored after the end of operation in consultation with Talma Sami village. During the life of the project, Talga will further work to promote close cooperation and exchange of information between the company and the Sami village.

Talga assesses that the possible consequences of the planned activities will decrease after the activities have been completed. In the longer term, the loss of grazing will decrease because the operational area will be reprocessed with a focus on creating values for reindeer husbandry and biodiversity. However, parts of the operational area will not be able to be restored, which will also mean a direct loss of pasture in the future, especially in open pit mining stages 4-6. With the precautionary measures and protective measures that are planned, the consequences of the company's operations are assessed as small. In summary, it is assessed that the planned activities cannot significantly hinder the conduct of reindeer husbandry. The extraction of the deposit at Nunasvaara is therefore compatible with the national interest in reindeer husbandry.

#### Reindeer farming in Gabna Sami village

Gabna Sameby (Gabna) has completed a Reindeer Nutrition Analysis for the proposed Nunasvaara Södra project on behalf of Talga. Gabna's task was to describe reindeer husbandry and the Sami village, as well as predict the proposed project's supposed consequences on reindeer husbandry, and further identify and recommend measures to primarily avoid and secondarily remedy any negative effects. Gabna produced its reindeer nutrition analysis in dialogue with Talga to such an extent that the company had the opportunity to read and comment on draft reports in two rounds.

In their reindeer nutrition analysis, Gabna concludes that the impact will be serious and further that they cannot identify any measures that could either avoid or remedy the predicted effects. In her study, Gabna further emphasizes that the Sami village is already experiencing very serious disturbances due to a number of factors ( mines, forestry, predators, infrastructure, etc.). Talga understands Gabna's concerns and realizes that the Sami village sees only risks and nothing to gain from the proposed project proceeding. Talga further appreciates the fact that the Sami village described its activities in detail and also showed the problems and challenges that reindeer herding and the Sami village face. After analyzing Gabna's reindeer husbandry analysis, however, Talga believes that the conclusions that are drawn to a significant extent represent exaggerated concerns about what the planned activities could mean for Gabna. Above all, Gabna expresses an exaggerated perception of the scope of Talga's project and thus of the disruption it will entail.

Talga's starting point is that the potential impact of the planned activities on reindeer husbandry must be prevented and minimized. This has been taken into account when designing the project, i.a. in the location and design of the industrial area and through the protective measures that have been

proposed. The planned activity is not judged to be able to significantly hinder reindeer husbandry in any nearby Sami village. Overall, the impact on Gabna is estimated to be minor.

#### National interest for the reindeer industry

The planned area of operation concerns areas of national interest that are used by Gabna and Talma Sami villages. Talga assesses that the state of knowledge resulting from available research leads to different conclusions than those reported by the Sami villages.

Talga believes that the large avoidance zones that have been described by the Sami villages are not supported by available research material. Based on available research, as well as the measures planned to minimize an avoidance zone around Nunasvaara Södra, it is estimated that the avoidance zone can extend in the order of one kilometer from the planned mining operations. This applies in winter when only enrichment is taking place and it is also in line with the modeling done in the noise investigation for the project. Modeled noise dispersion shows an equivalent sound level of approx. 40 dBA approx. 600 m from the operational area and approx. 35 dBA a few kilometers from the operational area

Talma's reindeer husbandry facilities are located approx. 7.5 km from the planned mining area and will thus not be affected by the planned operations. Furthermore, an avoidance zone around the enrichment plant will also not overlap with national interest in the reindeer husbandry around Lake Soitolasuanto. Migration routes classified as of national interest can be found directly south of the industrial area, one of which is a so-called difficult passage.

Gabna Sameby has stated in its reindeer husbandry analysis that the planned activity would mean that the lichen pasture at Soidulvårri could no longer be used and further that the area around Eaddjerovavvi - Mihkelroavvi would no longer be usable. However, Talga assesses that such consequences should not arise because these areas are located 6 km and 4.5 km respectively from the planned mine and studies from significantly larger mines in the same type of natural environment show significantly smaller avoidance zones than these distances. Furthermore, the above-mentioned areas are used today and the addition of truck transport from and to Nunasvaara Södra would, as mentioned, mean a negligible increase in heavy traffic on road E45, which runs through Gabna Sami village's area.

Based on existing research and the size and nature of the proposed operation, it can be stated that the operation will likely lead to little or no impact on reindeer husbandry. Furthermore, it is assessed as unlikely or extremely unlikely that the activity could lead to a small-moderate impact in the form of a minor loss of Talma's winter pasture, or alternatively a very difficult move to areas east of the activity. In the latter case, the impact could be mitigated through appropriate measures to facilitate relocation. Finally, it can be stated that the activity will not lead to an extensive impact on larger parts of Talma or neighboring Sami villages.

The cumulative consequences for reindeer husbandry within Gabna and Talma Sami villages that are linked to anthropogenic activities and structures are judged to be significantly less than those presented by the Sami villages. This is primarily due to the fact that the study that Talga commissioned is based on reviewed and published research material and an evaluation of the relevance of individual publications for the assessment of the impact on reindeer husbandry within Talma and Gabna. The contribution from the proposed project to cumulative consequences is assessed to be small, which is mainly due to the fact that the avoidance zone is assessed to be small

The planned activity is not judged to cause any impact in the form of odor disturbances. Since the planned operation is comparatively small and no traditional sand storage will be established, and since measures to reduce dust both during production and transport are taken, the dust from the operation is estimated to be very limited. This leads to the assessment that consequences for reindeer husbandry in Talma and Gabna related to dusting around the operational area will be very small.

The impact on reindeer husbandry that may occur during the construction phase is comparable to that expected during operation. The only difference is that during the construction phase there will be some increased traffic to and from the mining area during a winter season. Since the impact on reindeer husbandry during the construction phase is similar to that expected during operation, the protective measures that may be relevant are of the same nature.

In summary, Talga's assessment is that coexistence is possible if relevant protective measures are taken. This conclusion is partly based on the fact that coexistence between reindeer husbandry and mining works in several places, where the cumulative impact on reindeer husbandry from e.g. forestry, hydropower, industry, roads and communities are judged to be significantly larger than in the case of Talma Sami village

#### Balance of interests according to ch. 3 Section 10 of the Environmental Code

From the investigation reported by Talga, it appears that the impact on reindeer husbandry for Talma and Gabna Sami villages will be relatively small and that it can be mitigated further through relevant measures. The operations and the area of operation have been designed to minimize the impact on surrounding interests, including the national interest in reindeer husbandry. Talga's conditional proposal for consultation with the Sami villages means that appropriate precautions can be taken to limit the impact.

A balance according to ch. 3. Section 10 of the Environmental Code must only be done when an area is of national interest for several incompatible purposes. Talga has previously assessed that the requested activity, taking into account the described effects, mitigation measures and consequences, will not significantly hinder the conduct of reindeer husbandry (Chapter 3, Section 5 of the Environmental Code). Talga maintains this assessment. It is only when the impact of the requested activity reaches such a tangible aggravation that it can be said to be incompatible with the national interest. Since the mining activity will not significantly hinder the operation of the reindeer herding, the activity can coexist with the reindeer herding and it is not necessary to make any balance between national interests according to ch. 3. Section 10 of the Environmental Code. Since it has been requested by the County Administrative Board, the company reports a balance in the following.

The impact that may arise will be able to be mitigated through appropriate protective measures. Talga has proposed the following measures:

- Mining will only take place during the months of April–September. The operation as a whole will thus be less disruptive during the main period when reindeer graze in the vicinity of the planned operation area. This measure is judged to be the single most important measure to minimize the impact on reindeer husbandry.
- The location and design of the industrial area has been done in such a way that the areas of national interest designated by the Sami Parliament are avoided, with the aim that the impact will be as small as possible and that the avoidance zone will be as small as possible.

- Blasting and other noisy activities will be planned in time so that the disturbance in relation to the surroundings and the reindeer husbandry is minimized.
- The industrial area will have to be fenced off and how this will happen in detail is planned to be designed in consultation with Talma Sami village.
- Appropriate fauna crossings and/or other type of digital systems (e.g. GPS) are planned that will make it possible to know in real time when reindeer are close to the road and when traffic may need to slow down and/or stop to facilitate the reindeer crossing the road.
- If necessary, support is provided for increased monitoring and/or supplementary feeding.
- The area will be restored after the end of operation in consultation with Talma Sami village.
- During the life of the project, Talga will further work to promote close cooperation and exchange of information between the company and the Sami villages.

According to ch. 3 Section 10 of the Environmental Code, preference shall be given to the purpose or purposes which most appropriately promote good stewardship of the land, water and the physical environment in general.

The areas classified as national interest for valuable substances or materials and for reindeer husbandry do not overlap directly. The company's analysis shows that the following two areas of national interest for reindeer husbandry will be affected by being crossed by the road between Nunasvaara and road E45: Gabna's area named Duortnoseatnu — Bisåvåni; as well as for Talma national interest classified migration routes directly south of the industrial area, including a so-called difficult passage. The road between Nunasvaara and E45 is an existing road, so some impact on these areas classified as of national interest is already taking place, even if the planned activity will result in increased traffic on the road.

Talga believes that in this case there are weighty reasons why the national interest in valuable substances or materials should be given priority over the national interest in reindeer husbandry. Here, it is important to look at the consequences that arise if instead the national interest in reindeer husbandry is given priority. The consequence of such a balance is that the utilization of the national interest for valuable substances and minerals will be completely impossible. Of 3 ch. Section 1 of the Environmental Code states that priority must be given to such use which leads to good management of land and water areas from a general point of view. It is further clear from the legal reasons that when assessing the most appropriate use of an area, the possibility of simultaneously using an area for different activities, i.e. coexistence, is investigated.

In practice, it has been made clear that the possibility of reducing the impact on an opposing interest by taking protection and compensation measures is a central part of an assessment according to ch. 3. Section 10 of the Environmental Code. If the national interest for valuable substances or materials is given priority in this case, there will be a minor impact on two areas of national interest for the reindeer husbandry. Reindeer farming will be able to continue during the time when the mine is active and then reindeer husbandry can again use the area after mining and finishing operations have been completed.

An additional aspect that is central to consider when balancing according to ch. 3. Section 10 of the Environmental Code is the socio-economic significance of the applied for activity. The Nunasvaara deposit contains the highest known concentrations of graphite in the world.

If priority is given to the reindeer husbandry, the deposit of graphite, which is a substance deemed by the EU to be a critical raw material, will not be able to be extracted, which means that the national interest in valuable substances or materials would not be satisfied to any extent at all. If the deposit is allowed to be mined, however, reindeer husbandry will be able to continue to operate in the area during the mine's operating time and reclaim parts of the area after operations have ended. Overall, it is the company's assessment that, in the event that a balance according to ch. 3. Section 10 of the Environmental Code is updated, the national interest in valuable substances or materials must be given priority so that the deposit can be extracted.

### *Compatibility with other purposes*

#### National interest in nature conservation, outdoor life and professional fishing

The Torne river system is of national interest for outdoor life and for nature conservation. The Torne river is also of national interest for professional fishing. The river is located approximately 600 meters south of the operational area and the border to the protected area is south of the operational area.

The operational area for the planned mine is outside the designated national interest for nature conservation and outdoor recreation that follows the Torne river in the southern part of the area. No land within the area of national interest will be claimed for the operation. The planned activity will not affect the river's natural water regime, forestry or agricultural areas and does not involve any damming, water level regulation, water diversion, ditching or extensive clearing in the national interest. The discharge to the Torne river via Östra bäcken is not judged to have any impact on the river according to the calculations carried out to assess the impact on the Natura 2000 area.

Within the area of national interest, there are outdoor activities that are common in the region such as hunting, fishing, berry and mushroom picking, picnics, hiking, boating, snowmobiling and ski tours. The nearest snowmobile trail in the immediate area runs south of the Torne River. There are no designated hiking trails in the vicinity of the planned activity area. Through the planned activities, the part of the area of national interest that is closest to the area of operation may become less attractive for these activities. However, this concerns only a very small part of available land of a similar nature in the area of national interest and the impact will also only take place during the period the activity is in progress. Surrounding land use will be able to continue during the operating period. When mining in each open pit begins, the mining operations may cause a certain amount of noise within a part of the area of national interest. However, the impact is estimated to be limited to an area that corresponds to approx. 0.06 percent of the total area of national interest of almost 95,000 ha. The activity is not judged to have any negative impact on other values that have been identified as being in the national interest, such as salmon fishing, the river landscape and the cultural environment.

Accessibility to the area will also improve as Nunasvaaravägen will be open all year round. Snowmobile trails will not be affected. Protective measures and precautionary measures will be taken to minimize the impact of disturbances and thereby preserve the area's values for outdoor life. When mining ends, the area is reset and all effects cease. Overall, the planned activity is judged not to have any impact on the national interest and is therefore judged to be compatible with this.

#### National interest in valuable substances or materials

The mineral deposit is judged to extend far below the design shown in the technical description. Mining operations may therefore continue beyond the life expectancy currently described for the mine. The mine could be developed from an open pit to underground mining. Underground mining will be a possible method for future extraction of ore during the backfilled open pit stages. The remaining ore will continue to be accessible and it will therefore still be possible to exploit deposits that lie below the bottom of the open pit stages. The planned activity is therefore compatible with the national interest in valuable substances or materials.

#### National interest in communication

Road E45 and E10 as well as the railway "Malmbanan (Råtsi-Svappavaara)" are of national interest for communications. Furthermore, there is an MSA surface (Minimum Sector Altitude) for Kiruna Airport, Swedavia AB ("Kiruna Airport"). The planned activity is not judged to have any negative impact on the national interest in communications and the activity is therefore compatible with the national interest.

#### National interest for total defence

The planned area of operation is affected by national interest for total defense with special restrictions on freedom of obstruction. The planned activity is judged not to have any negative impact on the national interest for total defense and that the activity is therefore compatible with the national interest.

#### **Admissibility according to ch. 5 the environmental code**

The nearest surface water body is Torne river (SE0820430). Talga's investigations show that The Torne river will not be affected at all by the release of purified water that will take place to Hosiojärvi. There are no designated groundwater bodies in the area. The requested activity therefore does not entail any unauthorized deterioration of the water environment or that the possibility of achieving an environmental quality standard is jeopardized in the manner referred to in ch. 5. Section 4 of the Environmental Code.

#### **Admissibility according to ch. 7 the environmental code**

The Torne river and a couple of smaller watercourses in the vicinity of the planned operational area are included in the Natura 2000 area Torne and Kalix river system according to ch. 7. Section 27 first paragraph 2 of the Environmental Code. In addition to the Torne river, two smaller unnamed watercourses (called Östra and Västra bäcken in the application), which are part of the Natura 2000 area, are also affected by the planned activities. Both of these streams flow into the Torne river. Lake Hosiojärvi and the smaller bog lake east of Nunasvaaravägen are not included in the Natura 2000 area and the area drains towards the Östra brook.

The Natura 2000 area aims to protect the habitat types of oligo-mesotrophic lakes, dystrophic lakes and shallow waters, natural larger watercourses of the Fennoscandian type, alpine watercourses with herbaceous riparian vegetation and watercourses with floating-leaf vegetation or aquatic mosses, as well as the designated species of river pearl mussel, green river dragonfly, salmon, rockfish, otter and vein oat.

The operation will lead to a lowering of the groundwater at the mining area, which will reduce the inflow to Lake Hosiojärvi. Without protective measures, this is estimated to indirectly affect the

flows in the Östra brook. The annual average flow in the Östra brook could, without protective measures, at the end of the mine's life, be reduced by approx. 28 percent in its upper parts and by approx. 15 percent at its mouth in the Torne river. Even the Västra bäcken's flow can be affected by approx. 15-20 percent as its catchment area ends up within the area of influence of the open pit mine. With the design of the planned operation that Talga has chosen, the level in Hosiojärvi will be restored and the loss of flow in the Eastern stream will be compensated for by releasing purified excess water into Hosiojärvi.

However, the two smaller watercourses are not considered to contain the Natura 2000 nature type *3260 Smaller watercourses with floating leaf vegetation or aquatic mosses* (or any other nature type intended to be protected) because they lack the particular structure and function required to maintain a viable population of the species that are typical of the nature type. The activity cannot therefore be expected to affect the conditions for a favorable conservation of the natural type or the species.

On the other hand, the part of the Torne River that flows past the planned operational area is deemed to constitute the Natura 2000 nature type *3210 Large natural watercourses of the Fennoscandian type*. However, the requested activity does not cause any flow changes and its impact on the water quality in the Torne River is assessed as insignificant. The risk of impact on the natural type's typical species of benthic fauna and fish is assessed as non-existent. This also assesses negative consequences for the conservation status of the nature type *3210 Natural larger watercourses of the Fennoscandian type* absent. There is also no impact on designated species.

In summary, the operation is judged neither during operation nor after completion of post-treatment to cause any significant impact on the environment in the Natura 2000 area. The Östra brook, which is the recipient of the operation, is a very small part of the Natura 2000 area, and the operation's emissions cannot be considered to result in the environment in the area being affected in a significant way. The Torne River is not considered to be affected at all by the operation. In addition, the Östra brook is not considered to be one of the area's designated natural types. Talga has previously made the assessment that a Natura 2000 permit is not necessary for the planned activity in Nunasvaara Södra because it has been assessed that the applied activity cannot significantly affect the environment in the Natura 2000 area Torne and Kalix river system. Talga in and of itself stands by that assessment, but notes at the same time that the county administrative board has indicated that a Natura 2000 permit should be applied for. Talga complies with the county board's wishes and requests that a Natura 2000 permit be granted for the operation. Against the background of the assessment of the impact on the Natura 2000 area that is reported in the application with associated appendices and additions, the prerequisites according to ch. 7. Section 28 b of the Environmental Code to notify Natura 2000 conditions met. It is therefore assessed that the planned activity (1) cannot damage the habitat or habitats in the area that is intended to be protected, and (2) does not result in the species or species that are intended to be protected being exposed to a disturbance that in a significant way can make conservation in the area more difficult. This assessment applies both during construction and operation of the business and after completion of finishing.

#### **Admissibility according to ch. 8 the environmental code**

A species protection investigation has been carried out. The species found within or directly adjacent to the area of operation and which are protected by the species protection ordinance (2007:845) are all common in Norrbotten. The activity is assessed with planned precautionary measures and protective measures not to actualize any prohibition according to the species protection regulation. A red-listed species (Lappmes) was found within the area that will be covered by the open pit mine.

The requested activity is not considered to affect the conservation status of the patchwork locally. However, Talga undertakes to, as far as possible, move the hollow tree in which the lapwing has nested to a suitable location outside the area of operation. In summary, the planned activity does not mean that any exemptions or permits according to the provisions on protection of areas or protection of biological diversity need to be applied for.

### **Admissibility according to ch. 16 the environmental code**

The operating time is estimated to be approximately 24-25 years. The operation will be carried out until the deposit has been mined, after which finishing will be carried out. The business is limited by the amount of production requested and the commitments made in the target. Talga therefore does not believe that the permit needs to be time-limited.

### **Summary of admissibility**

The Environmental Code aims to drive societal development in a sustainable direction. It follows from what has been reported in this section that the requested activity is compatible with the purpose of the Environmental Code and meets the requirements that can be set according to the Environmental Code's admissibility rules. Permission for the requested activity must therefore be notified.

### **IMPLEMENTATION ORDER**

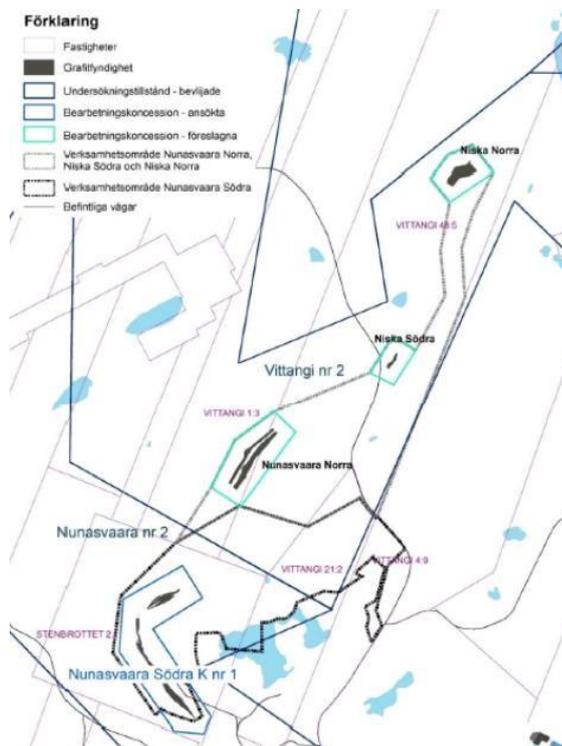
It is important for Talga to start the facility works for the planned operations as soon as possible after the permit has been issued. Therefore, the company has requested that the court order that the permit may be used immediately (enforcement order). There is an urgent need to change society to a fossil fuel-free economy. This requires energy storage solutions, i.e. batteries. Graphite from Nunasvaara can contribute significantly to the development of an electrified and fossil fuel-free future. The permit is also deemed to bring important positive socio-economic effects in the form of increased job opportunities. Through the protective measures described and planned for the business, the impact on opposing interests is judged to be limited. Overall, the company considers that there are grounds for an enforcement order.

### **THE AGREEMENT FOR SELF-SOVEREIGNTY AND THE ESPOO CONVENTION**

Talga assesses that the operation is not expected to give rise to any such significant harmful cross-border impact that could result in the Espoo Convention becoming applicable. The company also maintains its position and assessment that the operation is not expected to cause any impact on the water quality or the flow in the Torne river, not even at the river's lowest low flow, so there can be no fear of any transboundary effects on the status of the waters or their use which could lead to the transboundary river agreement becoming applicable. Due to the Land and Environmental Court's position that the border river agreement is applicable in the case, Talga has nevertheless, in consultation with

The Swedish Environmental Protection Agency, started consultations on 28 July 2021 according to the Espoo Convention with Finland regarding the planned activities. After the company translated the consultation documents into Finnish, they were sent to the Swedish Environmental Protection Agency on 16 August 2021, with a supplement on 1 September 2021. The Swedish Environmental Protection Agency in turn sent a notification according to Article 3 of the Espoo Convention to the responsible authority in Finland on 26 August 2021.

On August 25, 2021, Talga applied to the Mining State for a processing concession for three other deposits; Nunasvaara Norra, Niska Södra and Niska Norra ("Project Niska"). Against the background of the assessment made by the Environmental Protection Agency regarding the applicability of the Espoo Convention for the operations at Nunasvaara Södra, the company, in consultation with the Environmental Protection Agency, initiated an Espoo consultation also for the processing concessions in Project Niska. The consultation document for these was joint and was sent to the Environmental Protection Agency on 27 August 2021. The Environmental Protection Agency in turn sent a notification in accordance with Article 3 of the Espoo Convention to the responsible authority in Finland on 3 September 2021.



The location of each concession area is illustrated in the image above.

On 11 October 2021, the responsible authority for the Espoo consultation in Finland submitted its official response to the notification from the Swedish Environmental Protection Agency, indicating that Finland wanted continued participation in the process. In the letter, it was announced that the answer referred to both Project Niska and the mining operations at Nunasvaara Södra. In connection with its response, the consultation statements received from Finnish stakeholders were also attached.

Talga has had the consultation statements that have been received translated into Swedish and reviewed the views expressed to ensure that they have been taken into account when drawing up the application documents and additions. A compilation of the views that have been received and a reference to where in the application documents each point of view is dealt with, as well as Talga's comment on the point of view received, where applicable, have been produced. Talga assesses that the majority of comments received have been taken into account. In cases where the company intends to supplement the documentation due to a point of view, this will be done within the framework of the continued correspondence in the case.

Many of the views received within the framework of the Espoo consultation concern issues that clearly cannot be considered relevant with regard to transboundary impact, much less can they be

considered to have a significant harmful transboundary impact (for example dusting, waste characterization, mineral composition, waste management, land use, etc.). Despite this, the company has explained that many of the points of view were nevertheless handled within the framework of the preparation of the application and supporting documents. The company has therefore referred to where each point of view is dealt with in the supporting documents, and has thereby come to refer to basically all of the documents submitted in the case.

The Swedish Environmental Protection Agency is responsible for the consultation being carried out in accordance with the convention.

The company has ruled out the question of continuing the Espoo consultation with the Swedish Environmental Protection Agency, which announced that the Swedish Environmental Protection Agency intends to communicate relevant documentation to the responsible authority in Finland in connection with the Land and Environmental Court announcing the application. The material that is initially communicated will, according to a preliminary assessment, mainly consist of corresponding documents that the court has had translated in accordance with what follows from the cross-border agreement. The company considers that it is not reasonable that all the documents in the case should consequently be translated into Finnish and included as consultation documents for the Espoo consultation. The documents that have been translated are, according to the company, sufficient to meet the requirements of Article 3.5 of the convention, especially in view of what the company stated in point 4.

It is up to the Environmental Protection Agency, as the responsible authority, to ensure that the Espoo consultation is carried out correctly, and this includes that relevant documents are translated and communicated to the Finnish responsible authority. The need for translation of additional documents within the framework of the Espoo consultation will be agreed with the Environmental Protection Agency and, if necessary, additional documents will be translated and communicated within the framework of continued Espoo consultation.

## **OPINIONS RECEIVED AFTER ANNOUNCEMENT OF THE APPLICATION**

### INCOMING OPINIONS AND INTRODUCTORY SUMMARY OF VIEWS

#### **Opinions received**

In Sweden, the substantive opinion on the application after announcement has been received from the county administrative board, the Swedish Transport Administration, Region Norrbotten, the State Geotechnical Institute, the Geological Survey of Sweden, the Sami Parliament, Gabna Sami Village, Talma Sami Village, Saarivuoma Sami Village and the Nature Conservation Association. Furthermore, a number of individuals have submitted statements in the case upon publication in Sweden, of which some statements were shared by several people and the same person appears in more than one joint statement.

Individuals who submitted their own opinion are Marita Sandmark, Lotta Lagermalm and Peter Pettersson. Furthermore, Mats Myhr, Sverker Forsén and Lennart Karlsson have submitted a joint statement (Mats Myhr et al. below).

Jan Johansson, Martin Baas, Bengt Henriksson, Barbro Eliasson, Åke Eliasson, Fredrik Linghall, Roger Rehnblom, Joakim Linghall, Ander Lidström and Johannes Fredriksson have entered into a common opinion (Martin Baas et al. below).

Simon Holma, Tobias Daffeh, Gudrun Stålnacke, Helena Thyni, Sonja Hansson, Jörgen Hansson, Anders Lindström, Johan Uvén, Annelie Uvén, Elisabeth Johansson Halldén, Kalle Nilsson, Boel Halldén, Johan Nilsson, Håkan Hansi and Ann-Katrin Lindblom have entered into a common opinion (Simon Holma et al. below).

Urpo Taskinen, Jâvna Allas, Håkan Lundström, Johanna Ögren, Tarja Leinonen, Päivi Juuso, Per-Anders Nutti, John Tomas Påve, Simon Marianen, Beatrice Flöystad and Elin Belleza have entered into a common opinion (Urpo Taskinen et al. below).

Lars-Inge Lööv, Märta Lööv, Lars Jonas Lööv and Lena Fergman have entered into a joint opinion (Lars-Inge Lööv et al.).

Anette Johansson, Jan Johansson and Eric Johansson have entered into a common opinion (Anette Johansson et al.). Jan Johansson has even participated and commented on Martin Baas and others.

Ulrik Lidström participated in the interview with Martin Baas and others. från Simon Holma et al. och från Urpo Taskinen and others.

Ulrika Sydberg and Ellinor Sydberg have both been involved in the opinions of Simon Holma and others. and comments from Lars-Inge Lööv and others.

Hanna Råman and Kenneth Nilsson are both participants and opinions from Simon Holma and others. and opinions from Urpo Taskinen and others.

Per-Erik Bjurholt and Erika Bjurholt have submitted a joint statement of their own and they have also made a joint statement with Simon Holma et al.

When the application and the environmental impact statement were announced in Finland, substantive comments were received from the Ministry of the Environment and Finnish authorities and organizations; The NMT Centre, the Finnish Fisheries Agency, the Lapland Regional Association, the Rovaniemi Environmental Committee, Enontekiö Municipality, Sodankylä Municipality, the Norwegian Forestry Agency, the Natural Resources Institute, the Finnish Nature Conservancy, the Reindeer Association and the Kukkola Community Association.

### **Initial summary of received written comments**

Enskilda, the NMT Centre, the Finnish Fisheries Agency, the Natural Resources Institute, the Nature Conservation Society and Gabna Sami Village and the Finnish Nature Conservation Association have expressed opinions that the examination should include more projects than currently applied for and have considered that the delimitation entails serious deficiencies in the application documents, including the environmental impact statement, reporting on the consequences of the activity. The NMT Centre, the Finnish Fisheries Agency, the Natural Resources Institute and the Rovaniemi Environmental Committee have pointed out the importance of assessing cumulative effects, based on ongoing projects in both Sweden and Finland.

The Ministry of the Environment, the NMT Centre, the Finnish Fisheries Agency, the Norwegian Forestry Agency and

The Natural Resources Institute has objected to the consultation carried out in accordance with the Espoo Convention as well as other communication in the case with Finland and generally had views on the adequacy of the basis for assessing cross-border environmental consequences of the activity and the impact on the Natura 2000 area.

The County Administrative Board has generally considered that the company's application, together with the environmental impact statement and other attached documents, reports the requested activity and the consequences that can be assessed to arise. The County Administrative Board has considered that it is inevitable that disturbances of various kinds arise in connection with the construction and operation of a mining operation on the requested scale and that it is therefore important that relevant conditions are prescribed that limit the disturbances to acceptable levels. In order to specify the demarcation of the mine from the surroundings, the county administrative board considers, with reference to the provision in ch. 2 Section 6 of the Environmental Code, that the Land and Environmental Court, in the event that the applied for activity is judged to be permissible, must decide to determine the area of operation for the mining activity and the area for sand and waste rock storage according to what the company has reported in the case

Opinions on the area's importance for reindeer husbandry, the consequences for reindeer husbandry and the regulation of conditions to protect reindeer husbandry have been received from the county government, the Nature Conservation Association, the Sami Parliament and Sami villages (Gabna, Talma and Saarivuoma) as well as individuals. The County Administrative Board has mainly highlighted the need for the necessary conditions to protect the interests of the reindeer industry in the area of the proposed mining operation, and others have summarized that the environmental impact statement is deficient, that it has not highlighted or taken into account cumulative effects and that the consequences for reindeer husbandry are more far-reaching than the company has reported. The Reindeer Herding Association and the Rovaniemi Environmental Committee have provided opinions regarding the activity's impact on reindeer husbandry on the Finnish side.

The Nature Conservation Association and the County Administrative Board have provided views on the activity's impact on species and the possibility of granting a species protection dispensation.

Enskilda has, in summary, expressed a concern about the consequences the applied for activity may lead to during ongoing operations and after the completion of operations, also in a long-term perspective. Concerns have been expressed that the activity may entail consequences that entail risks for the environment and human health and safety. The views have mainly concerned impacts in the form of noise, dusting, odors and emissions to water. The County Administrative Board has mainly emphasized the need for relevant conditions to limit disturbances.

The County Administrative Board and all Finnish authorities and organizations have presented views on the activity's impact on water through discharges and the need for conditions and monitoring regarding discharges to water. Finnish authorities and organizations have also raised concerns about the impact on fish.

The state's geotechnical institute has provided comments on the proposed storage for gray rock and enrichment sand and, after the company's response, has stated that the authority has no further comment.

Sweden's Geological Survey has stated in summary in its opinion that the company should carry out a general verification of soil types and soil depth before construction work and more detailed planning of the area in order to rule out the presence of unsuitable soil layers and, if necessary, be able to adapt planning and constructions such as e.g. ponds and storage to local conditions.

Region Norrbotten has stated in summary that the requested activity will have large and positive socio-economic effects in Norrbotten and for Sweden as a whole. Individuals, however, have raised objections to the socio-economic effects of the operation locally in the region.

Both individuals and the county administrative board have submitted views on the need for long-term follow-up and post-treatment as well as the need for financial security.

Below, the court has summarized the received written comments in the case and the company's response to them. During the processing of the case, the company has waived the previously submitted request for permission for arrears, which is why statements in those parts are not reported below.

#### P SCOPE OF THE EXAMINATION

##### **Counterparties and others concerned**

Martin Baas et al. and Simon Holma et al. has expressed that it is strange that the company's entire mining project, including the planned mines in Niska, is not processed at the same time as this application.

Gabna Samiby and the Nature Conservation Society have summarized the following. There are serious flaws in the application, attributable above all to the fact that the company chose to divide its graphite project into different parts in the application process. This has resulted in it being unclear whether the dimensioning of various technical solutions to manage the mining operation and its waste is calculated to correspond to the needs of the entire Vittangi graphite project or whether additional sand and clarification warehouses will be needed. The same deficiency recurs in several parts of the application such as, for example, the impact on water management facilities, emissions to recipients, transport on the roads and climate impact. An overall assessment should be made with the aim of being able to assess the environmental consequences and assess the impact on Natura 2000 areas. It is unclear what the planning looks like if mining, underground and year-round, becomes actualized, as well as what consequences it may have and whether the facilities applied for are sized for further projects. The application should be rejected and the company should be asked to come back with an application for the entire Vittangi graphite project.

The NMT centre, the Finnish Fisheries Agency and the Natural Resources Institute as well as The Finnish Nature Conservancy has emphasized that the project can be much larger and that the environmental impact statement lacks an assessment of cumulative effects in the case of mining from three additional ore bodies, other mines that are built in the Torne River catchment area, other projects where the environmental impact statement procedure is ongoing and the possibility of building mines on the Finnish side.

##### **The company's treatment**

The present application concerns the extraction of up to 120,000 tonnes of ore in open pit mining during the months of April–September at the Nunasvaara Södra deposit. Underground mining or

year-round mining is not covered by the application. As these parts fall outside the examination framework, the environmental consequences of these prerequisites have consequently not been included in the environmental impact statement for the business either.

It follows from practice that cumulative effects in a permit review according to the Environmental Code must be assessed from the additional activities, ongoing land use and exploitations, completed but not post-processed activities and activities that have been licensed but not yet started (see MÖD 2019:5). The company's applied for processing concessions in Project Niska (the ore bodies Nunasvaara Norra, Niska Södra and Niska Norra) are not licensed activities and thus do not include cumulative effects that must be assessed within the framework of this application for a license according to the environmental code for Nunasvaara Södra. For the ore bodies covered by Project Niska, Talga has currently only applied for a processing concession with the Mining State. No permit according to the Environmental Code has been applied for any of the ore bodies covered by Project Niska.

Since only licensed operations are to be taken into account when assessing the cumulative effects from current operations, any future mining projects in Finland or Sweden shall not be taken into account in the present review.

However, in the event that the present permit has been granted at the time of any application regarding any of the deposits covered by Project Niska, that assessment must take into account the cumulative effects of Nunasvaara Södra.

#### G CROSS-BORDER IMPACT AND INTERNATIONAL AGREEMENTS

##### **Counterparties and others concerned**

The Ministry of the Environment, the NMT Centre, the Finnish Fisheries Agency, the Norwegian Forestry Agency and

The Natural Resources Institute has raised objections to the consultation carried out in accordance with the Espoo Convention and generally had views on the adequacy of the basis for assessing cross-border environmental consequences of the activity and the impact on the Natura 2000 area. Views have been expressed that only a small part of the environmental impact statement has been translated into Finnish and that appendices to the application have either been missing from the material sent to Finland or have only been available in summarized form. Some criticism has also been leveled against translations of documents.

##### **The company**

In summary, the company stated the following. Talga maintains its position that the activity will not have any transboundary effects and consequently that neither the transboundary river agreement nor the Espoo Convention are applicable in the case.

Since the court has judged that transboundary effects cannot be excluded, and that the transboundary river agreement must therefore be applied, the company can state that the only environmental effects that could theoretically entail transboundary effects are the company's impact through discharges to water, and the effects that could follow as an effect of this. Other environmental impacts from the company's operations (such as landscape, noise, vibrations, air blasts, transport, reindeer husbandry, cultural environment, outdoor life and recreation as well as waste, chemical handling, energy use and air emissions) are non-existent from a cross-border perspective. Against this background, the activity

cannot be considered to give rise to a *significant harmful* cross-border impact either. It is a significantly higher threshold than according to the Transboundary Rivers Agreement and a prerequisite for the Espoo Convention to become applicable.

According to art. 22 of the transboundary river agreement, summaries of the permit application and the application documents must be kept available in Finnish to the extent necessary. In accordance with Article 3.5 of the Espoo Convention, the information to be provided within the framework of the Espoo consultation shall refer to the activity's likely significant cross-border impact and its expected cross-border environmental effects. Other issues are outside of what should be included in an Espoo consultation.

All supporting documents in the case may not need to be provided in Finnish translation. The company and/or the court have provided, in Finnish translation, documentation presented in support of the fact that the operation will not have any impact on the water quality in the Torneälven, and allowed interested parties and authorities in Finland to comment on this. The company believes that it is not relevant or a requirement that submissions relating to impact assessments that could not even theoretically lead to cross-border effects be kept available in Finnish. Since it is only the impact from releases to water and related environmental consequences that could have a theoretical cross-border impact, it is only relevant to provide Finnish parties with the documentation that has been presented regarding the impact on water in a Finnish translation, which has also been done within the scope of the trial. The documents provided to Finnish authorities and stakeholders must be considered to meet the requirements set by the Espoo Convention and the Transboundary River Agreement.

The company notes the point of view about substandard translation, but unfortunately finds it difficult for itself to control the quality of the translation because the company itself is not Finnish-speaking, but must rely on the translation company translating the documents correctly. However, the company takes the point of view with it for future translations.

### **Ministry of the Environment**

The Ministry of the Environment has, after the company's completions in the fall of 2022 communicated with Finnish parties, once again emphasized that the consultation according to the Espoo Convention must continue and has summarized the following.

Based on the material provided, comments received in Finland and the Ministry of the Environment's own opinion, the Ministry of the Environment believes that the cross-border environmental impact assessment is still not sufficient to form an opinion about the project's likely negative impact in Finland. Finland believes that the cross-border consultations must continue and therefore calls on the Swedish government to organize a bilateral consultation meeting on the project without delay and to complete the cross-border assessment with reference to Article 5 of the Espoo Convention. Finland considers that the competent authority in Sweden cannot draw a reasoned conclusion about the project before the bilateral consultation has been completed. Sweden is also asked to analyze the feedback provided by Finland, submit a proposal to remedy shortcomings in the assessment of cross-border impacts and submit this proposal to Finland before the meeting. Finland once again points out to the Swedish government that the EIA material from Sweden seems to almost systematically lack information on transboundary impacts. It must be emphasized that the application of the Espoo Convention does not mean that the material is only produced from a national perspective and then translated. It appears that the Finnish government consults with the mining company and not with the State Convention or the EU member state. Despite the fact that Finland has requested that Sweden

take quick and concrete measures to improve the situation, there are no visible changes in practice.

To confirm the application of

The Espoo Convention and Article 7 of the EIA Directive, as well as the practical application of these provisions, Finland requests that the Swedish government organize a special meeting on the issue without delay.

### **The Swedish Environmental Protection Agency**

At the court's request, the Swedish Environmental Protection Agency, in its capacity as the responsible authority in Sweden for the Espoo Convention, commented on the Ministry of the Environment's request for continued consultation and stated the following in summary.

The Environmental Protection Agency notified Finland regarding Talga AB's planned application for mining activities etc. at Nunasvaara Södra, Kiruna municipality on 25 August 2021 in accordance with the Espoo Convention Article 3. After the agreed time period for consultation in accordance with Article 3, Finland submitted a response to the Environmental Protection Agency on 13 October 2021. In its response, Finland submitted comments received as well as requests for continued participation in the environmental assessment process and stated that they wanted to be given the opportunity to participate in consultations in accordance with Article 5. Finland's response to the notification was then forwarded to Talga AB for further processing.

On 4 May 2022, the consultation invitation was sent in accordance with Article 5 regarding the application and environmental impact statement. After agreement, Finland submitted a response to the consultation on 15 August 2022, which was forwarded to the Land and Environmental Court. Documentation for a supplementary consultation in accordance with Article 5 was sent to Finland on 24 October 2022 regarding Talga AB's response to opinions received from Finland as well as supplementary documentation. After agreement with Finland, a reply was received on 9 December 2022.

The Environmental Protection Agency considers that the consultation was planned and carried out in accordance with chapter 6 § 33 of the Environmental Code on consultation with other countries in the specific environmental assessment. The Swedish Environmental Protection Agency therefore considers that the authority has fulfilled its obligations in accordance with Article 5 of the Espoo Convention. The Environmental Protection Agency considers that the consultation with other countries has been carried out in accordance with § 21 of the environmental assessment regulation and that the obligations incumbent on the authority according to § 24 have been fulfilled. They do not intend to process the request for a bilateral consultative meeting in a different order.

It is up to the reviewing authority to assess whether the environmental impact statement meets the requirements in ch. 6. the Environmental Code (cf. ch. 6, §§ 42 and 43).

CLIMATE CHANGE

### **Counterparties and others concerned**

Mats Myhr et al. has stated in summary that the proposed mining activity contributes to the necessary climate change.

Lars-Inge Lööv and others and Urpo Taskinen et al. have stated the following in summary. Carbon dioxide emissions need to be reduced. The mineral industry causes large emissions of greenhouse

gases, which is due to the large amounts of energy used in the mining of ore, transport and the processes needed to enrich and process the ore into a finished product. They question whether a new mine is the right way to go as digging up more minerals from the earth risks extensive environmental destruction and large costs that can follow in its wake. Research into alternative raw materials for batteries has come a long way. Battery production accounts for 30 percent of the greenhouse gases linked to the manufacture of electric vehicles. Collection and recycling of batteries is an important part that needs to be developed.

the Nature Conservation Society has stated the following in its opinion. The requested activity does not contribute to a reduction in emissions, but these will instead increase. A more approachable and realistic path should be to globally pool resources for graphite mining that is already in progress and contribute to environmental and climate improvement measures as well as increased productivity.

### **The company**

In order to reach Sweden's goal of being fossil-free by 2045, the use of fossil fuels must be phased out in favor of fossil-free alternatives, not least in the automotive industry. The electrification of vehicles, both passenger cars and transport and industrial vehicles, is an important tool to enable this transition. At the same time, electrification means an increased need for electricity, which places high demands on efficient energy storage solutions, i.e. batteries.

Graphite is an important component in batteries and Vittangi graphite an important source for the production of graphite and graphene, whose properties can contribute to improved energy storage systems as well as stronger composite materials for vehicles and lead to less fuel consumption. Graphene also enables the development of new coatings to replace toxic chemicals, such as hexavalent chromium and phosphates, as well as coatings for packaging materials, which reduces the use of metals and makes packaging materials recyclable.

The graphite used in today's battery manufacturing is mostly synthetic, and is made from coke or crude oil in an energy-intensive manufacturing process, and the energy source used is often largely based on coal power. There are significant environmental benefits of the now applied for activity compared to ongoing graphite mining globally.

Graphite has been listed by the EU as a critical raw material. The white tangi graphite is unique in comparison to industry standard natural graphite. This contains the highest known concentrations of graphite in the world and has a very high ore quality. Due to the graphite content and ore quality, for a certain amount of graphite, only about 1/8 – 1/3 of the amount of ore required at other deposits globally is required in Vittangi.

By mining natural graphite with such a high graphite content and quality, enriching it on site and then sending it to a plant planned and applied for by Talga for the manufacture of battery anode material from graphite concentrate in Luleå, and by using renewable produced electricity, Talga will in an integrated and in several parts of the unique production process be able to manufacture anode material with significantly lower carbon dioxide emissions than conventionally produced anode material. The results from completed life cycle analyzes demonstrate a very large potential reduction in emissions per electric car produced. Through this, Talga will be able to contribute to reduced greenhouse gas emissions from a global perspective.

## M ENVIRONMENTAL CONSEQUENCES

**Noise, explosions, vibrations, air shock waves***Counterparties and others concerned*

Per-Erik and Erika Bjurholt, Martin Baas et al., Simon Holma et al. and Annette Johansson et al. have, in summary, raised concerns about disturbances in the form of, for example, explosions and noise.

The County Administrative Board has summarized the following in its opinion. The County Administrative Board considers that disturbances in the form of vibrations and air support waves above a certain level, individually or in combination, are such disturbances that need to be regulated by prescribing conditions. Following up the consequences of the effects of blasting afterwards is less appropriate. For this reason, the County Administrative Board finds it necessary for the Land and Environmental Court to prescribe conditions for vibrations and air shock waves in order to limit the impact caused by blasting. Since the company intends to place blasting in the period from April to September, when there are the most residents in the area (leisure development), it is particularly justified with such a condition. The County Administrative Board believes that it should be the risk of disturbances, the perceived disturbance, that should be guiding when prescribing conditions and determining the limiting value, which is deemed to be significantly lower than the values reported by the company.

*The company*

Noise level calculations have been carried out, which show that the guideline values in the Environmental Protection Agency's guidance on industrial and other operational noise (Environmental Protection Agency, 2015) can be contained with measures in the form of a noise barrier and a limitation of drilling in the initial stage. Transport's contribution to the noise level is small and the levels are low along Nunasvaaravägen to the E45.

Talga has had the risk of vibrations, air shock waves and stone throwing investigated in accordance with current Swedish standards. With regard to vibrations, the investigation shows that at the nearest building, vibration levels of 1.4 mm/s can be expected at most, and lower levels at greater distances. These levels are significantly lower than the levels, 8 mm/s, which pose a risk of technical damage to buildings. Furthermore, the investigation shows that vibrations from blasting are well below such values that should normally be acceptable from a disturbance point of view, and Talga therefore believes that as a starting point it is not necessary to prescribe any conditions regarding vibrations.

Regarding air shock waves, Talga's investigation shows that the maximum one can expect is levels of 70 Pa, reflection pressure, and lower levels at longer distances. Even these levels are far below the target value of 400 Pa which should apply to the applied activity in terms of damage to buildings. These levels may be considered low and consequently do not justify prescribing conditions in this part.

In order to minimize possible disturbances for nearby residents, Talga has drawn up a proposal for conditions for vibrations and air shock waves. It should be noted that measurements can also be regulated within the framework of the control program, and not only after complaints from nearby residents.

**Emissions to air, dusting and transport***Counterparties and others concerned*

Lotta Lagermalm has stated that emissions of gases such as hydrocarbons, carbon monoxide and particles can affect human and animal health. Martin Baas et al. and Simon Holma et al. have raised concerns that dusting could become a major problem. Per-Erik and Erika Bjurholt has raised concerns about smell and dust.

The County Administrative Board has summarized the following in its opinion. The County Administrative Board's experience with dust from mining operations is that the crushing and crushing operations are periodically strongly contributing sources to the spread of dust to surrounding environments. Encased crushing plants with dust extraction facilities that have dust treatment for outgoing air effectively reduce dust. In addition, the county administrative board finds that conditions regarding dust fallout, followed up through sampling and analysis at deployed NILU cans within the influence area of a mine, also have a clear impact on how the operators actively work with measures for dust control and follow-up of the effects of measures taken.

The County Administrative Board finds that the company's proposal for conditions regarding dusting is not appropriate to prescribe for the applied for business. The condition is too arbitrary as to what is to be achieved.

Problems with dust dispersion can be found, among other things, at crushing and sorting plants. Road transport within, to and from the mining industry area is also a source of dust. Known technology exists for the purification of dust where outgoing air can be regulated under conditions which are, in the opinion of the county administrative board, currently accepted. The County Administrative Board considers that a condition for falling dust, measured through NILU cans, for a number of measurement points in close proximity to the operational area should be prescribed. The company should propose a number of locations in close proximity to the operating area that take into account the main wind direction, nearby values and interests. Also, which amounts of falling dust that a proposal for conditions on dust fallout should cover, with reference to the standard that exists for follow-up, need to be specified.

In the event that the Land and Environmental Court intends to leave the question of final conditions for emissions to air on a trial period, the county administrative board proposes that a provisional regulation be decided in which a follow-up program is determined. In order for the company's proposal for an investigation of conditions to limit dust emissions to air to be meaningful to implement, the county administrative board believes that requirements for the containment of given amounts of dust fallout at certain designated locations need to be included in the investigation and established in a provisional regulation.

In addition, the county administrative board cannot rule out that a condition may need to be prescribed for the purification equipment required for operation of the crushing plant and/or a concentration limit for dust (condition) in outgoing air from the dust treatment plant.

*The company's treatment*

The company has carried out an assessment of the operations' anticipated emissions to air and the impact on the climate. It follows from this that the emissions are estimated to be small and are not

judged to contribute to any environmental quality standards being exceeded. The planned activity is not judged to entail consequences in the form of odor disturbances.

Dust from the operation can arise during transport as well as during rock crushing, loading, unloading and handling of waste rock, ore and enrichment sand. The risk of dusting increases in dry weather in combination with strong wind. Monitoring of dusting is proposed to take place within the operation's control program. The sand and waste rock reservoir will be designed to limit dust formation and dispersion. Since the enrichment sand has a certain water content when it is placed in the sand and waste rock warehouse or in the open pits, the risk of dusting is thereby reduced. As there is no work in the open pits during the winter time, dusting is not considered to occur during the winter time. However, dusting can occur during summer, especially in hot weather and wind. If dusting occurs, dust control of mine roads and open areas will take place continuously to minimize the spread. Both water and binders can be used for dust control. Falling dust will be measured at several points adjacent to the mine and transport route. Transports of graphite concentrate will take place in covered transports and are therefore deemed not to constitute a source of dust.

Talga does not oppose the principle that a condition regarding dust emissions with measurement through a NILU can be prescribed for the operation in case investigations show that this is required. However, since the business applied for is new, Talga believes that there are neither reasons nor conditions to prescribe such a final condition now. Instead, Talga believes that the need and possible levels of dust emissions must first be monitored and investigated during the actual operation of the business. Against this background, Talga proposes that the issue of conditions for dust emissions to air be postponed for a period of four years after the final judgment. In the meantime, Talga must check and follow up the emissions to air and, if deemed necessary, propose final conditions regarding emissions to air.

The company believes that during the time of the postponed matter, however, it is not required that the emissions to air be specifically regulated through a provisional regulation. During this time, it is sufficient that the court prescribes that measures must be taken to limit the spread of dust that may constitute a nuisance for human health and the environment, according to the wording that Talga has previously proposed.

It can be mentioned that the issue of dusting is also handled and regulated within the framework of the company's control program, which is why the company further sees no reason to provisionally regulate the issue in the environmental permit.

Talga does not see that there is any need to additionally prescribe a final condition regarding purification equipment for crushing plants and/or a concentration limit for dust in outgoing air from dust purification plants, and considers regardless that this cannot happen without more detailed information in this part, because it is now question about a new activity for which no actual data is therefore available before the activity has begun.

### **Outdoor life and recreational activities**

#### *Counterparties and others concerned*

Per-Erik and Erika Bjurholt, Martin Baas and others, and Simon Holma et al. in summary pointed out the area's untouched nature and brought forward the risk that the activity affects the possibilities for

e.g. berry picking, hunting and that leisure activities such as skiing and snowmobiling must be limited.

#### *The company*

Through the planned activity, the part of the area of national interest for outdoor life and nature conservation that is closest to the area of activity may become less attractive for that type of activity. However, this refers to only a very small part of available land of a similar nature in the national interest area as a whole. The impact is also limited to the period when the activity is in progress. Snowmobile trails will not be affected and accessibility to the area will also be improved as Nunasvaaravägen will be open all year round. Overall, the planned activities are judged not to have any impact on the national interest in outdoor life and nature conservation.

#### **Drinking water**

##### *Counterparties and others concerned*

Per-Erik and Erika Bjurholt, Martin Baas et al., Simon Holma et al. and Lars-Inge Lööv et al. Samt Urpo Taskinen and others. har säytä forvadt Oro för på på dricksvatten som tas direkt från älven.

##### *Companies*

The waterworks in Vittangi has approx. 900-1000 connected people. The intake of raw water from Torneälven is located approx. 9 km downstream of Talga's operational area and Östra bäcken's outlet to the river. The water is treated before it is sent out into the drinking water network for distribution to the customer. The requested activity is judged to result in no or very small changes to the Torneälven's water quality, both during normal operation and when the activity is completed, as well as in a situation where untreated excess water is released. When comparing the highest concentrations that are estimated to occur in the Torneälven with the Swedish Food Agency's limit values for drinking water, it can be stated that the limit values are undershot by a margin in all three scenarios. The only substance that is just below a limit value is iron, which, however, in the worst case scenario (discharge of impure water), only causes a very small increase compared to the background level of the river. The iron content in the Torneälven also naturally exceeds this limit value during certain periods, which means that the emissions of iron are not considered to pose a risk to the drinking water source. The company's operations are therefore deemed not to pose a risk to the Vittangi surface water source. Otherwise, there are no sources of drinking water, or groundwater bodies, in the vicinity of the business

#### **Release to water**

##### *Counterparties and others concerned*

Lotta Lagermalm, Lars-Inge Lööv and others. and Urpo Taskinen et al. have stated the following in summary. Calculations show that discharges to Hosiojärvi, after treatment, can change the water chemistry in the lake and also in Östra bäcken. Substances such as sulphate, calcium, chloride, phosphorus, uranium and ammoniacal nitrogen can mean an ecological change in the recipient which can affect the opportunities for, for example, fishing. The ore is sulphide-bearing and the side rock is acid-forming. The acidifying effect causes metals to leach from the material. There is an obvious risk that the activity will have an impact that could lead to a deterioration in the recipient's status.

The county board has summarized the following. For Torne River

(water body MS\_CD WA86174110) applies that the environmental quality standard is contained and that its status does not deteriorate for any of the parameters or quality factors. Other water, which does not meet the size criteria to constitute water bodies, is not covered by decided environmental quality standards, but is generally covered by the Framework Water Directive's goal of good ecological and chemical status (Östra bäcken and Hosiojärvi). However, the impact on such waters must not risk worsening or counteracting necessary improvements in the status of connecting water bodies. The County Administrative Board would like to mention that other waters are fully included in the authorities' environmental target and action work and are covered by the same basic protection according to the general consideration rules and housekeeping regulations in Chapters 2–4 of the Environmental Code.

This means that local impacts on smaller water areas and associated ecosystems also need to be taken into account, for example in terms of species and habitat. For Hosiojärvi and Östra bäcken, the water chemical condition will deteriorate for several substances, with a risk of impact on aquatic plants and animals. In order to satisfy the requirements that decisions on permits should not lead to such a deterioration or such an adventure regarding the status of the water body concerned and to limit the impact on Hosiojärvi and Östra bäcken, the county administrative board finds it neither possible nor justified to postpone the question of final conditions for the requested activity on probation.

Final conditions for discharges to water are deemed to be of importance in being able to establish that the applied for activity is compatible with the regulations in ch. 5. Section 4 of the Environmental Code and to ensure that the favorable conservation status of designated species and habitats in the affected Natura 2000 area is not jeopardized.

The County Administrative Board believes that proposals for conditions should cover the substances zinc, uranium, copper, nitrate nitrogen, sulfate, total phosphorus, suspended substances. Conditions need to be prescribed as monthly averages. Cadmium, nickel and lead are designated as priority substances according to the Water Framework Directive, which means that they are prioritized for action at Union level. Emissions of hazardous substances need to stop or be phased out at the source. These substances must also be covered by final emission conditions. Conditions for the recipient must be prescribed for ammonia nitrogen. Maximum permitted levels in the recipient should be prescribed for uranium, nitrate nitrogen and ammonia nitrogen (HVMFS 2019:25) as well as for copper and zinc. Even for prioritized substances, the maximum permitted levels should be stipulated in the recipient. Conditions may also include total amounts that may overflow into Hosiojärvi per year instead of concentrations (with the exception of suspended substances).

In case the court intends to leave the question of final conditions for discharges to water on trial, the court needs to take into account that the regulations established must ensure that the discharges do not endanger the status of Torneälven and do not affect Hosiojärvi and Östra bäcken in an unacceptable way. The proposed provisional regulation P1 contains only a few substances and the levels seem to be well measured compared to what the company states should be included in the investigation U1 and in overflowing purified water to Hosiojärvi. The County Administrative Board believes that the determination of a provisional regulation or final condition needs to take into account average and maximum levels for relevant subjects. Larger deviations from what is deemed to be achievable through purification need to be justified in particular with reference to ensuring a limited and acceptable environmental impact. The County Administrative Board also believes that the investigation in this part needs to include follow-up in a proposed point in the recipient.

The Rovaniemi environmental board has particularly emphasized that cumulative effects of emissions to water need to be investigated so that it does not affect the possibility of building mines on the Finnish side.

The Norwegian Forestry Agency has stated that the water to be released into the Natura 2000 area should be monitored extensively, with a frequency that reaches an acceptable level of monitoring and reliability, and that concentration limits and maximum annual load limits should be established for the discharge of water from the mine. This is also necessary to achieve good ecological status and biological status in the Gulf of Bothnia by 2027 at the latest. The Natural Resources Institute has also requested concentration limits for the release of harmful substances into the Torneälven and has questioned the applicant's proposal to postpone the issue of releases to water.

the NMT center has presented the following. Based on the calculations presented, the project would likely not have such an impact i

Finland that it has a negative impact on the ecological or chemical status of the Torneälven in Finland and thus also does not have any transboundary consequences. Overall, however, it is not possible to evaluate whether the assessment is sufficient in all respects based on the available data. In order to rule out possible transboundary effects, it is important to comprehensively monitor the load from the mine's discharge into the Torneälven. The monitoring sites proposed by the applicant are very limited in relation to the estimated area of influence and also do not take into account the presented wastewater interference zone. The control program should be submitted to the NTM center for an opinion before it is approved.

The Finnish Fisheries Agency has summarized the following. A permit should contain binding conditions for the maximum discharge to the watercourse to ensure the predictability of the activity and ensure that environmental consequences are prevented.

The quality of stormwater must be monitored and, if necessary, stormwater cleaned. The applicant's proposal that if two monitoring points is insufficient and water quality monitoring must extend beyond the immediate impact area.

The Lapland Landscape Association has emphasized the importance of following up on the impact on the TorneMuonio River's water system while mining is in progress.

The association Limitation of Mines in Lapland has considered the basis insufficient for the environmental consequences in question, especially regarding emissions to water.

#### *The company's treatment*

The company believes that, based on the material that has been provided within the framework of the transboundary river agreement and the Espoo consultation, it has been shown that it can be ruled out that the operation will have any negative impact on the Finnish part of the Torne River.

In the current examination, the court must examine whether the activity is permissible. Talga must comply partly with the requirement not to deteriorate the Torneälven's status, and partly with the obligation not to jeopardize the achievement of a good status for the Torneälven. Talga also has to show that the impact on other waters is not unacceptable. Questions that do not relate to the admissibility of the activity may be postponed during a trial period. Talga's investigations show that the impact from the release of purified water on the Torneälven is assessed to be very small, and for the substances covered by HaV's regulations, the impact is negligible. Talga has consequently shown

that the operation will not lead to an unauthorized deterioration of the water environment or that the possibility of achieving an environmental quality standard will be jeopardized in the manner referred to in ch. 5. Section 4 of the Environmental Code, and thus that this is permissible. Talga has also otherwise shown that the environmental impact as a result of emissions to water is acceptable. Protective measures are planned to minimize the effects on surface water in order to ensure that the Torneälven is protected and that the impact on other watercourses is limited

Considering that it is a new operation, where actual emissions into outgoing water cannot be evaluated in more detail before the operation is put into operation, there are currently no conditions to prescribe any final conditions regarding emissions to water.

Talga has consequently proposed that the issue of final conditions for releases to water of copper, nickel and zinc from the operation be postponed for a trial period during which Talga shall investigate the possibilities of limiting the releases of copper, nickel and zinc and a related provisional release levels for these substances.

The most relevant substances to limit are copper, nickel and zinc. The company has nevertheless intended to also follow up and control emissions for other substances. The company therefore has no objection to the postponed question being adjusted so that additional subjects are covered by it. The company has thus adjusted its proposal for terms and conditions regarding the postponed issue and the related investigative regulations. The substances that are relevant to limit through the provisional regulation are copper, nickel and zinc.

Talga objects to the control point being prescribed in the permit. The issue of control point is handled appropriately in consultation with the supervisory authority within the framework of the control program and not through a final, sanctioned condition in the permit.

In the case of storm water, water from the areas that may come into contact with the ore will be purified with the more extensive purification in one of the water treatment plants. Remaining water, for example from the industrial area, landfills and roads, is therefore not expected to contain any impurities that require treatment other than oil separation or particle separation, and therefore does not need to be led to any of the water treatment plants. The oil and particle separation will remove oil products and suspended graphitic substances and other sediments from the water. The process will consist of oil separation and sedimentation of suspended particles in water.

Approval of the control program is a matter for supervision and the supervisory authority. There is thus no obligation for the company to submit the control program to the NTM center for an opinion before approval, and no such obligation should be stipulated in the permit either. This does not prevent the supervisory authority from choosing to consult with the NTM center in connection with handling the issue of the control program

### **Impact on fish and fishing fee**

#### *Counterparties and others concerned*

Several Finnish authorities have highlighted the Torne River's economic and recreational value and highlighted risks of impact on fish.

Sodankylä municipality has pointed out the use of the Torne and Muonio rivers for recreational and professional fishing and that people must not be at risk of being exposed to foreign substances and impurities in surface water through fish. The municipality of Enontekiö has considered that the mining project must not jeopardize the rise of salmon fish to the upper reaches or the area's ecosystem in the long term.

The Norwegian Forestry Agency has emphasized that the Torne-Muonioälven is the most important natural reproduction and fry production area for salmon in the Baltic Sea, which is increasingly important for fishing and fishing tourism, as well as for recreation, and that the court should consider the possibility of levying a fishing fee.

The Natural Resources Institute has concentrated its opinion on the project's potential cross-border impact on the fishing economy and has highlighted the following in summary. Regarding the environmental impact during operation, it is estimated that the mining project has such a small impact on the concentration of metals and other harmful substances in the Torne river that they, in themselves, will not have any effect on the river's biota, but a small additional load can affect the river's total situation. Even if the project has no effects on the fish itself, the recreational value of the area may change, depending on whether people's perception changes and that it may take place more extensively in the water system downstream. The company should collect extensive monitoring data on changes in the recreational fishing of migratory fish and on changes in the attractiveness of fishing tourism in the water system. The company should compensate the business that suffers from any negative effects on the area's value as a recreational destination. If the activity causes damage to the reputation of Torneälven's watercourse area, leads to reduced recreational value or biological damage, a significant fishing fee must be paid.

The Finnish Fisheries Agency has summarized the following. Based on the assessments presented in the available application documents, it is unlikely that, under normal circumstances, the mining operations will have *significant negative* effects on waterways and fishing in the Finnish part of the Torne River. However, waste water can affect fishing and other recreation in the water system and also damage the reputation of the area in waterways downstream of the mining operations. In a possible permit, it needs to be ensured that negative effects on fish are prevented and, if necessary, monitoring should take place in terms of fisheries management. The preliminary monitoring of the mine should include fisheries economic investigations, e.g. concerning the presence of salmon fish and fry production areas in the area affected by discharges to the Torneälven. One can try to assess consequences on the fisheries economy on the basis of the results of watercourse observations and, if necessary, also with the help of fisheries economic observations.

The Kukkola community association has stated in summary that the mining project must not to any degree impair the water quality of the Torne River or the habitat for its migratory fish and that they require very good functioning and monitoring of the activity and immediate information about any accidents or disturbances that may affect the watercourse.

The Finnish Nature Conservancy has considered that the project poses a particular threat to the stocks of migratory fish and to the biological diversity in border watercourses and that it entails an impact on the most important salmon river in Europe.

The association Limitation of Mines in Lapland has summarized the following. The project burdens the border watercourse in an unauthorized way. If permission is granted, the impact on fish in the impact area must be monitored using stock processes to monitor the accumulation of heavy metals in the fish and its impact on the development of fish roe. The reference area for the monitoring should be an area outside the project's area of influence. If harmful levels of heavy metals are detected, measures must be taken by the person causing the damage to eliminate the harmful impact on the environment.

#### *The company*

The fish species mentioned, especially salmon, are economically important and an important resource for the two border countries. This applies to both commercial fishing and income from tourism in the area. There are deemed to be no risks for either salmon or sea trout from the applied activity - or for that matter any other fish species present in the river. This assessment concerns both direct risks for the fish in different life stages (toxicity), as well as indirect risks in the form of e.g. chemical barriers and avoidance behaviors. Heavy metals are also not expected to increase in e.g. fish as a consequence of the activity, which could otherwise affect the possibilities for consumption.

The control program for surface water will ensure that the environmental impact of the operation, including the impact on fish, is followed up. It is therefore not necessary to prescribe conditions for monitoring and investigation of the fish stock in the Torneälven.

As the applied activity is not judged to cause any negative effects on the area's value as a recreational area, compensation for any nearby business activities is also not actualised. Should negative effects still occur, with financial damage as a consequence, the issue of compensation claims must be handled separately as it falls outside the scope of the current permit review.

As there is no risk of damage to any fish species present in the river, it is not relevant to prescribe a fishing fee within the framework of the present review.

### **Natura 2000 area**

#### *Counterparties and others concerned*

The county board has summarized the following. The impact on the Natura 2000 area Torne and Kalix river systems mainly occurs through the release of substances to the watercourses downstream of the operation, Östra bäcken and then the Torne river.

The consequences for the nature types and species concerned, specified in the conservation plan for the Natura 2000 area, are assessed to be small. In order to limit the impact to an acceptable level, the county administrative board considers that final conditions for discharges to water should be determined. The County Administrative Board assesses that permission according to the company's request can be granted if final conditions for discharge to water are prescribed.

the Nature Conservation Society has stated in summary that the intended mining activity may affect the Natura 2000 areas in the neighborhood and that it is obvious that a Natura 2000 permit is required.

Urpo Taskinen and others has stated that there is an obvious risk that the activity will have a negative impact on Natura-2000 areas.

the NMT center, The Fisheries Agency of Finland, the Forestry Agency and Enontekiös municipality, the Finnish Nature Conservancy and the Association Limitation of Mines i Lapland has stated that the company should investigate the cumulative effects that the current project and other planned or ongoing mining projects may entail for the Natura 2000 areas Torne and Kalix river system and Torne-Muonio river water area and that it may be necessary to consider potential cumulative effects with other mining projects watercourse area. The Norwegian Forestry Agency, the Finnish Nature Conservancy and the association Limitation of Mines in Lapland have also emphasized that the mining project poses a major risk to the ecosystem of the Torne River. The Finnish Fisheries Agency has emphasized that, in exceptional cases, emissions can also affect the Finnish part of the Torne River and its Natura 2000 areas. The NMT center has, as can be understood, disputed that the application lacks a decision on a Natura 2000 permit.

#### *The company's treatment*

The company has investigated the impact within the scope of the target, and submitted extensive documentation in this regard. No impact on the conservation values identified in the conservation plan for the Torne and Kalix river systems is expected, neither locally in the Torne River nor further downstream where Finnish interests could be affected. Cumulative effects have been described for licensed activities. The current project does not prevent the achievement of the conservation goals that have been decided for the current Natura 2000 area, regardless of other existing or planned activities in the catchment area.

There are good conditions for growing fish in the area, but no spawning areas for salmon fish. This is confirmed by the fact that when catching fish in the area for the analysis of metals in muscle, only pike and grayling were caught. Talga therefore assesses that the area in question has a limited value as a spawning and rearing area for species such as trout and salmon, the latter of which is a designated species within the Natura 2000 area. In summary, Talga therefore believes that the

planned activity cannot damage the habitat or habitats in the area that is intended to be protected, and does not result in the species or species that are intended to be protected being exposed to a disturbance that could significantly hinder the conservation of the area . There are thus prerequisites for issuing a Natura 2000 permit.

### **More about species protection and exemptions**

#### *Counterparties and others concerned*

The county board has summarized the following. The County Administrative Board finds, with regard to what appears from 4 § 4 p of the species protection ordinance and the company's report in the case, that the ban is not actualized for the mentioned bird species in the area of Nunasvaara. There is a lack of information on the consequences of disturbances for e.g. the species golden eagle, red-tailed woodpecker, three-toed woodpecker, shrike and barnacle crow primarily through noise in the immediate area around and within the mining area, and it is therefore not possible to assess whether the prohibition in § 4 § 4p of the species protection ordinance is triggered and an exemption is required, or whether additional protective measures need to be taken.

The Nature Conservation Association has questioned the company's completed natural value inventory and questioned the assessment that the company did not consider it necessary to apply for a species protection dispensation.

The Finnish Nature Conservancy and the Association for the Limitation of Mines in Lapland have considered that the company has not sufficiently investigated the effects on the area's natural values.

#### *The company's treatment*

##### Inventories

The company has carried out extensive investigations of the natural environment in the area around the planned mine. This has, among other things, included natural value inventory and in-depth species inventory as well as surveys of water environments. Overall, the consequences for natural values are assessed to be small to moderate, and local, and it is therefore considered that there is no need to prescribe any special conditions regarding the natural environment for the activity. The company maintains that the basis for examination in the case is sufficient and that this should be used as a basis for the examination in this part.

##### Birds

From the new protection provision for wild birds, it is explicitly clear that the prohibition against intentional disturbance in § 4 § 4 p of the species protection regulation does not cover such disturbances that have no significance for maintaining or re-establishing the population of the bird species at a satisfactory level, especially based on ecological, scientific and cultural needs.

Scientific studies have shown that noise at a sound level above 45 dB can have negative effects on birds by affecting, among other things, population density, changed song and changed behavior. No negative impact of noise can be expected in the area where golden eagles seem to establish an alternative nest. The company thus believes that the prohibition in § 4 § 4 p of the species protection ordinance is not updated with regard to golden eagles.

Regarding the greater woodpecker, three-toed woodpecker, lichen screech and pied crow, Talga assesses that there is a theoretical risk of impact. In light of the fact that the type of disturbance that is now in question essentially constitutes a (small) theoretical risk for these species, the company believes that they have no significance for maintaining or establishing the population of the bird species at a satisfactory level. As for lapps, the impact is more difficult to assess because the species only occurs to a limited extent in the area and only in certain years, while there is also a lack of information on how noise can affect this particular species. Looking at the local and regional woodpecker population and the conditions for it in the immediate area, including the fact that it moves over large areas and is not directly tied to a certain place of residence or nesting site, however, any impact of noise disturbances (or other disturbances) on woodpecker is judged to be absent importance for maintaining or re-establishing the population of the bird species at a satisfactory level. The company thus assesses that the prohibition in Section 4, paragraph 4 p. is not actualized for the mentioned species.

In the event that the court does not share the company's assessment in this part, it is requested, *as a reservation*, that an exemption for lappis, greater woodpecker, three-toed woodpecker, common shrike and sparrow crow be granted in accordance with § 14 of the species protection ordinance.

Finally, the company states in this part that Talga has undertaken to ensure that construction work and felling takes place with consideration for birds in the area, and that this commitment through the general conditions is binding and can be followed up in the supervision of the operation. A condition in a permit according to the Environmental Code is, however, associated with criminal sanctions, and thus must be precise enough to be the basis for establishing that a violation has occurred. Prescribing consideration in the form of a final condition is therefore, in Talga's opinion, neither suitable nor necessary for reasons of legal certainty.

#### Lumber species

With regard to the impact on larch species (Section 9 of the Species Protection Ordinance), the County Administrative Board notes that certain species have been noted during inventories of the operational area, and that these may be affected. Since the purpose of an activity is clearly something other than removing or damaging a protected plant, there must be a risk of impact on the conservation status of the protected species in the area for the prohibitions in Section 9 of the Species Protection Ordinance to be updated. The applied activity is not judged to cause any impact that makes it difficult to maintain a favorable conservation status of any of the existing larch species at local, regional or national level. The company therefore maintains its assessment that the prohibitions in Section 9 of the Species Protection Ordinance do not apply to lupine species.

In the event that the Land and Environmental Court makes a different assessment than the company in this part, a species protection dispensation for larch species according to § 15 of the Species Protection Ordinance is requested *on a reservation basis*.

#### Exemption

The determining factor in locating a mine is the location where the deposit actually exists. The deposit is well identified and with a good margin mineable. Various alternatives regarding the design of the mining operations have been investigated, and the currently applied alternative has been judged to be the best based on a number of assessed aspects. No other designs could also mean that a possible impact does not occur. There is thus no other suitable solution.

The deciduous plants that are judged to occur within the planned area the area of operation, i.e. reef lumber, carpet lumber and flat lumber, are all widely distributed and commonly occurring, both in and outside the planned operational area. The species are also judged to be viable. Any impact on individual clones as a result of the planned activities is not considered to have any impact on the conservation status of the species.

Regarding the greater woodpecker, three-toed woodpecker, common woodpecker and common crow, based on the inventories that have been made, it has been assessed that the species did not use the planned activity area as a breeding ground or resting place. In light of the fact that noise at its height is also deemed to have little impact on the species, the exemption is not deemed to hinder the maintenance of a favorable conservation status for these.

With regard to lapps, nesting has been found in previous years outside, but close to, the planned area of operation. The inventories of later years have, however, been able to rule out that the immediate area of the planned activity contains areas that are resting places or breeding areas for lapps. Although it is consequently not possible to rule out that noise may affect lapps, the assessment is made that a potential disturbance regardless would not have any impact on the population as such. Against this background, a waiver of the waiver would not make it more difficult to maintain a favorable conservation status.

All in all, a dispensation is therefore not judged to make it more difficult to maintain a favorable conservation status for any of the species for which a dispensation has now been applied for on a reservation basis

The company claims that the mining of graphite at the Nunasvaara Södra deposit constitutes such a compelling reason that has an overriding public interest in the sense referred to in § 14 § 3 p. c of the species protection regulation and article 16.1 of the species and habitat directive. Prerequisites for exemption according to the species protection ordinance therefore exist.

#### LONG -TERM EFFECTS , AFTER-TREATMENT AND FINANCIAL SECURITY

##### **Counterparties and others concerned**

, Marita Sandmark has emphasized that the applied for activity may entail potential long-term health risks. Lotta Lagermalm, Lars-Inge Lööv and others. and Urpo Taskinen et al. has in summary pointed out the need for the area to be able to be restored after mining and that there must be sufficient financial security to ensure a restoration.

The county board has summarized the following. An important issue in the case is the method for finishing the sand and gray rock storage that must be decided to apply to the business. In order that unwanted environmental impact does not occur at any stage after the restoration of the sand and waste rock reservoir, the method in the condition for finishing needs to meet the requirement for the best possible technology. There is uncertainty about whether moraine of the right quality is available in sufficient quantities within the company's area of operation. The County Administrative Board cannot therefore rule out that there may be significant costs for the purchase of moraine.

A financial security with an amount that can be considered reassuring is a prerequisite for the state to be able to carry out all necessary restoration measures that may be required to prevent unwanted environmental impact on surrounding natural environments from occurring in the event that responsible operator is insolvent. The County Administrative Board finds that the amount that the company proposes for the financial security is calculated too low. The company has not supplemented the application with what the county administrative board has previously requested. An approved financial security with an amount that can be considered reassuring is of great importance so that the operation cannot cause an environmental impact beyond what has been described.

With reference to the company's request for enforcement and proposals for conditions regarding financial security, the county administrative board believes that the permit may be used only when a financial security for licensed activities has been approved.

### **The company**

Of ch. 16 Section 3, second paragraph of the Environmental Code follows that a financial security must be accepted if it is shown to be satisfactory for its purpose. The purpose of the security requirement is to protect society from having to answer for the costs of restoration if the operator is unable to carry out or pay for the restoration. A security should not be larger than necessary. Talga believes that the costs and measures proposed by the county board are either not relevant, or already form part of the company's current cost estimate. Regarding costs for possible purchases of moraine, Talga agrees that the financial security should be increased if the company cannot demonstrate that the area is suitable for extraction of moraine

### THE NUTRITION

#### **Counterparties and others concerned**

the Sámi Parliament has described the importance of the area for reindeer husbandry, the impact of the activity on the reindeer husbandry and highlighted Sweden's international commitments regarding Sámi rights, and has summarized the following. The Sami villages' assessment regarding the impact on the reindeer husbandry in their respective Sami village must be given priority over the company's assessment. The Sami Parliament assesses that the consequences for reindeer husbandry and reindeer herders are more far-reaching than what the company reported in its application and environmental impact statement. In their reindeer husbandry analyses, the Sámi villages have described expected effects arising from the reindeer husbandry of the planned activities. In order to be able to assess the cumulative effects, the effects need to be put in relation to each other, which the company has not done. The environmental impact statement is deficient and, among other things, has not highlighted and taken into account the cumulative effects or the social and cultural effects of the applied for activity sufficiently. There is also a lack of a description of the impact on the Saarivuoma Sami village. The effects of the damage mitigation and compensatory measures proposed by the company are difficult to assess and do not provide a guarantee that the affected Sami villages can continue to carry out traditional natural grazing-based reindeer husbandry. Overall, the Sami Parliament considers that reindeer herding in the area is the land use that most appropriately promotes long-term management of the land, water and the physical environment in general based on ecological, social and socioeconomic considerations. The effects arising from the applied for activity will be extensive for the Sami villages concerned and a balance between national interests should therefore be made.

Regarding the relocation of reindeer, the company's proposed terms and conditions may result in passage being made more difficult because the time for notification of relocation and closure of the

road has too short a time interval. The opportunities for the Sami village to move across the road can be limited because external conditions such as weather, other disturbances and unforeseen events can affect both the gathering and movement of reindeer herds. The number of occasions when the road can be closed should also not be limited to a too small number of occasions when the reindeer herd may have to be moved in batches due to scattered herds, after-gatherings, etc.

Talma Sami village has referred to a reindeer husbandry analysis and maintained that there are no damage prevention measures that lead to mining and reindeer herding being able to coexist in the area. Talma Samiby has further highlighted maps from the environmental impact assessment and the reindeer husbandry analysis of e.g. planned activities and the national interests of reindeer husbandry, migration routes, difficult passages, amenity land, gathering areas and resting pastures and disturbance zone according to Talma Sami village .

Gabna Sameby has referred to a reindeer nutrition analysis and added the following in summary. Reindeer farming is protected in both international conventions, the Swedish constitution and the Environmental Code. The mining operation would claim parts of the Sami village's land. This is because mining has a direct negative impact on the land through noise, seismic activity, impact on water, dusting, human activity, infrastructure and transport to such an extent that the land can no longer be used for reindeer husbandry. Thus, the land is claimed by the planned activity.

Transport is a secondary activity and it is a shortcoming that the applicant has not investigated alternative transport solutions. The land that the company wants to use for transport between the mining area and road E45 forms a necessary functional connection for reindeer herding between the Sami village's lands west and east of Vittangi. Obstacles in free roaming lead to direct and indirect loss of pasture. Fence around e.g. a mining area or along a road generally involves the majority of inconveniences. About 63 percent of the Sami village's pastures are affected by established and competing land uses. They are a matter of a significantly increased disturbance in areas designated as national interest for reindeer husbandry. In the Sámi village's view, the accompanying activities alone constitute a significant complication of reindeer husbandry. A balance between national interests will be necessary in case the application is examined.

The proposed condition of consultation is something that in practice already constitutes a practice and furthermore does not constitute any type of damage prevention or compensatory measure. The conditional proposal thus fulfills no specific function. The conditional proposal on the relocation of reindeer is ineffective and practically unenforceable. The damage prevention measures that the company proposes cannot, by a long shot, be considered to prevent the damage that the proposed activity would cause to the conduct of reindeer husbandry etc. within Gabna Sami village. And even if these damage prevention measures were taken, the Sami village's opinion is that it is likely that reindeer herding would still be significantly more difficult and that the measures could therefore still not be considered sufficient. Samebyn makes the same assessment regarding the measures of a more compensatory nature that the company touched on in its statements.

The Saarivuoma Sami village has summarized the following. Saarivuoma Sami village has winter pastures directly adjacent to the area of the planned mine and will suffer indirect consequences. Reindeer from the Talma Sami village will avoid the mining area and wander into Saarivuoma's pastures. There is a risk of confusion and a domino effect that reindeer will roam towards road E45, which will lead to increased reindeer collisions after this road. Southerly winds that will carry mining dust into the Saarivuoma pastures and affect grazing and water requirements. The Sami village's

national interests are affected. The planned mine will significantly complicate reindeer herding within the Saarivuoma Sami village, and the Sami village is of the opinion that there are no damage prevention measures that can remedy this.

The County Administrative Board has summarized the following in its opinion. The County Administrative Board can state that the planned mining operations have been designed to limit the impact on the surroundings and the interests of the reindeer husbandry in the area. Commitments regarding temporal limitations of parts of the mining operations and proposals for conditions have been submitted by the company with the aim of further limiting the impact.

Disturbances in the form of noise, dusting, transport movements and human activity in general in and around the mining area will affect reindeer husbandry in adjoining areas. Since reindeer husbandry in the area around the sought-after mine is mainly carried out periodically during the winter half of the year, restrictions on disturbing work elements during different parts of the year will reduce the total impact. Conditions aimed at limiting disturbances during periods when reindeer are present in the immediate area are deemed necessary to prescribe in order to reduce the impact to acceptable levels. The reindeer husbandry's need for protection against the impact on the reindeer's free roaming in and past the mining area also needs to be ensured by prescribing conditions for, among other things, limiting transport at times when reindeer move past the mining area and for noise.

In order to minimize disturbances to the reindeer husbandry's interests in the area to an acceptable level, the county administrative board believes that the land and environmental court needs to prescribe conditions that limit the operation of the noisiest parts of the business, from and including the month of October to and including the month of April . The County Administrative Board further considers that the proposed condition for noise needs to be adjusted in the sense that the locations for follow-up and control include the interests of reindeer husbandry in addition to housing. This can be done by adding and/or adjusting locations for monitoring noise in conditions and control programs

The County Administrative Board also assesses that interference from transport on the migration of reindeer, the free roaming of reindeer, needs to be limited. The County Administrative Board believes that the proposed condition is well narrowly designed with regard to the conditions for moving reindeer. The County Administrative Board assesses, with reference to the fact that reindeer herding and the movement of reindeer can be affected by factors beyond the reindeer herders' control, that the current design of the condition may, in some sense, work against the very purpose.

Regarding the company's proposal for conditions regarding the implementation of an annual consultation with the Sami village, the county administrative board believes that the company needs to clarify whether it should issue any delegation to the supervisory authority in order to announce additional regulations or conditions based on the results of the consultation.

The County Administrative Board finds that the interests of the reindeer industry in the individual case must be weighed both against other relevant interests and against the interests of society at large. The County Administrative Board assesses that neither national nor international law constitutes an obstacle to allowing the requested activity, taking into account the prescription of the necessary conditions for the protection of the interests of reindeer husbandry in the area of the requested mining activity.

the Nature Conservation Society has summarized the following. If the affected Sami villages do not give consent or, where appropriate, do not wish to sign an agreement, permission shall not be granted either.

The Rovaniemi Environmental Committee and the Reindeer Herding Association have stated that there is no assessment of the consequences for reindeer husbandry on the Finnish side.

The reindeer herding association has further summarized the following. It is not very likely that the reindeer of the reindeer herding team in the project area will move to Finland, but it is not completely ruled out because there are no fences on the border. Pollution of Torneälven's water or changes in the environment to a more extensive extent can have indirect effects on Finland and Finnish reindeer husbandry through a general deterioration of the environmental status. The risk is not likely under a normal operating situation. All effects on reindeer herding should be prevented and minimized in consultation and cooperation with the reindeer herding association in the area.

Lotta Lagermalm, Lars-Inge Lööv and others. and Urpo Taskinen et al. have stated the following in summary. Reindeer farming is a national interest in the area and an important part of Kiruna municipality's business life. The planned mining operation will affect the reindeer husbandry by taking up land in the winter grazing land and thus not be available, and that dust, noise and increased traffic along the Nunasvaaravägen will affect the reindeer husbandry. The oblong shape of the activity area forms a barrier and cuts off the southernmost part of Talma Sámi village for the reindeer. This means that the reindeer spread in different directions and will enter the area of nearby Sami villages, which creates a lot of extra work for the reindeer herders. The rapidly expanding mining industry poses a direct threat to reindeer husbandry and thus to the basis of Sami culture. It will be available.

Mats Myhr et al. have stated in summary that they believe it is possible to conduct mining operations without ending up in conflict with the reindeer industry.

### **The company**

#### *Impact on reindeer husbandry in the area*

In summary, the company stated the following. The operation is too far from the Finnish border for there to be any risk of direct or indirect impact on reindeer husbandry in Finland. This applies regardless of whether there is a clear-cut fence between Sweden and Finland or not. After carefully considering the views of Talma and Gabna Sami village, as well as the investigations from the consultants hired by Talga, Talga believes that the planned activities at Nunasvaara Södra will not significantly hinder the possibility of conducting reindeer husbandry in the area. Given that appropriate preventive and damage reduction measures are taken, Talga makes the assessment that it will be possible for Talma Sami village's reindeer husbandry to coexist with the planned activities. Furthermore, the planned activity will only have a small impact on the Gabna Sami village, and no direct impact on the Saarivuoma Sami village. The consequences for the Saarivuoma Sami village have not been specifically described in the environmental impact statement because the company has assessed that the Sami village is not particularly affected by the operation.

Since the impact on reindeer husbandry will be so limited, the company assesses that the social and cultural consequences for the Sami villages will also be limited. In addition, the company has stated that it is prepared to take appropriate measures to primarily avoid and secondarily mitigate social and cultural consequences for the Sami villages. This is one of the reasons for the proposed condition regarding annual consultation with the Sami villages.

In the event that the court should find that the international commitments referred to by the Sami Parliament should be given importance in the assessment of Talga's application for a permit for mining operations at Nunasvaara Södra, these do not, taken together, constitute an obstacle to a permit being granted.

How the fencing of the industrial area is to be designed in detail is to be decided in consultation with Talma and Gabna Sami villages. Aspects that will be particularly taken into account when designing the fence are partly to minimize fencing as far as possible to only be around important infrastructure and areas where activities take place, partly to choose the type of fence that is most suitable for keeping the reindeer away from dangerous areas. The company assesses that the planned activities will not likely mean that it will be necessary to supplement feeding to any greater extent than is happening today. In the event that any impact should occur, in the form of disturbed pasture peace, stress, and the need for supplemental feeding, this should be followed up within the framework of the annual consultation. Based on the results of these consultations, it may be necessary for the company to take further measures. Talga has previously reported that the company is aware that the operation may mean additional work for Talma and Gabna Sami villages in particular. The company does not believe that the Sami villages should have to bear these costs themselves, but has undertaken to help or compensate the Sami villages. With regard to the Saarivuoma Sami village, the company's opinion is that the planned activities will not cause any impact in the form of additional work for the Sami village. It is unlikely that reindeer from Talma Sami village would roam north to a greater extent and mix with Saarivuoma Sami village reindeer as a result of the planned activities. However, if this were to happen, the company is willing to take measures to minimize this impact and, if necessary, to compensate the Saarivuoma Sami village for any additional costs.

The transports from the planned activity on Nunasvaaravägen will constitute a significant part of the traffic on the road and can therefore be considered as a consequential activity within the scope of the application. When the transports leave Nunasvaaravägen and drive out onto road E45, however, Talgas' transports constitute a very limited part of the total truck transports, at most about five percent. The transports on road E45 cannot therefore be considered to constitute a secondary activity within the scope of the examination. Thus, the entire transport distance must not be included in the application as a subsequent activity. The company states that despite this the impact of the operations through transport has been described in the application with supporting documents.

Regarding alternative transport routes, the company states that Nunasvaaravägen is the only road in the local area that crosses the Torneälven to road E45. If this were not to be used by the company, the construction of a new forest road and a new bridge over the Torneälven would be required, and this would have a direct impact on the Natura 2000 area. Alternative means of transport have been investigated, but none of them were judged to be cost-feasible due to the low volume of product to be transported. Transport via Nunasvaaravägen is judged to be the most appropriate, and in practice the only reasonable, alternative under all circumstances.

The company maintains that it is not necessary to make a balance between national interests and that if the court deems it necessary, the national interest in valuable substances or materials shall be given priority.

*Condition regulation*

the company stated the following. The company has committed that mining will only take place during the months of April to September. This is also limited by the condition that blasting may only be carried out during these months. The operation as a whole will thus be less disruptive during the main period when reindeer graze in the vicinity of the planned the area of operation. This measure is judged to be the single most important measure to minimize the impact on reindeer husbandry.

Talga believes that the proposed conditions and commitments are sufficient to limit the impact of noise on reindeer husbandry.

The increasing traffic on Nunasvaaravägen means an increased risk of hitting reindeer. Talga intends to work with the road association to ensure that an appropriate speed limit can be introduced and that reindeer warning signs can be put up in relevant places. If possible, speeds should be further limited during periods of time when there are comparatively more reindeer in the immediate area. Talga will also investigate whether there is an opportunity to establish a digital system, e.g. through GPS, which makes it possible to know in real time when reindeer are near the road.

Talga has suggested that the court announce a condition regarding consultation. Talga's intention has been that the regulation of transport on the Nunasvaaravägen should also take place in consultation with the Sami villages concerned. However, Talga believes that in the event that there is an organized move of the majority of the reindeer herd, there is reason to stop traffic on Nunasvaaravägen during the time the move takes place, and to meet this need, a condition can be announced.

In addition to the proposed conditions, the company does not believe that there is any sufficiently defined area that would be appropriate to delegate to the county administrative board. In the event that the county administrative board considers that there is some specific and defined area of minor importance that should be appropriately delegated, the company is open to such a proposal.

#### D MUTUAL SAFETY

##### **Counterparties and others concerned**

Martin Baas et al., Simon Holma et al. and Urpo Taskinen et al. have pointed out that it is not uncommon for mine ponds to leak and expressed concern about this. Lars-Inge Lööv etc. has submitted in its opinion that it is required that the dam safety is sufficient, that it is not reliable to let the company manage this, but that the company can pay for control.

The Nature Conservation Society has requested a consequence investigation of a dam failure.

The Finnish Fisheries Agency and the Rovaniemi Environmental Committee have pointed out the need to be prepared for exceptional situations when it comes to the design of dams.

##### **The company**

The dikes for the sand and waste rock reservoir form dikes around a mainly dry and stable storage (co-deposition of filter-pressed enrichment sand and waste rock). These therefore do not constitute ponds in the conventional sense as they do not dam any free water or any groundwater surface in the deposited material (although there will certainly be pore water in the tailings that is not drained out). The sand and scree reservoir is therefore not intended to dam up or shut out water.

Construction and operation of the reservoir therefore do not constitute water activities and the reservoir does not constitute a water facility or dam. Dam safety classification according to ch. 11 Against this background, §§ 24-26 of the Environmental Code shall not be made regarding the sand and waste rock storage. Despite this, an assessment of dam safety class has been made to assess the risk of the facility.

With this design, a dam collapse, including a traditional dam break and tidal wave, is not possible because there is no dam, ie. no structure that stores water or other liquid material. The worst possible scenario in terms of failure is a landslide, or a break in the foundation of the structure. The risk of landslides and outflow of material is low. A conventional dam failure scenario is therefore not considered a likely scenario. Should an accident occur, e.g. a slip, the consequences would not cause any extensive material transport outside the immediate area. Thus, transport of material, and possibly a smaller amount of water (in connection with a high flow), will not be able to lead to any major environmental consequences outside the immediate area. Talga's preparedness for exceptional situations is built into all designs and possible consequences of the worst possible scenarios are limited to the operations, the industrial area and possibly lake Hosiojärvi.

#### S OCIOECONOMIC EFFECTS

##### **Counterparties**

Region Norrbotten has stated that the requested activity will have large and positive socio-economic effects in Norrbotten and for Sweden as a whole. Lotta Lagermalm, Lars-Inge Lööv and others. and Urpo Taskinen et al. has, however, stated that there is a labor shortage and a housing shortage and that the commuting of labor from another location results in lost tax revenue for the municipality in which the mining operations are conducted.

the company has stated in summary that even taking into account that it has become more difficult to recruit staff, the municipal tax revenues from the approximately 80 people who will be employed (directly or indirectly) in the now planned operations are estimated to generate annual municipal income in the order of SEK 10-11 million .

#### THE REQUEST FOR REFUND

Per-Erik Bjurholt and Erika Bjurholt have summarized the following. If the court chooses to grant an environmental permit, the property owners of Kiruna Vittangi 59:5 want compensation according to ch. 32. Section 1 of the Environmental Code for the environmental damage caused by the activity for e.g. their holiday property. Property values have risen in Kiruna municipality in recent decades thanks to the extensive housing shortage that prevails due to ongoing social transformation and urban migration. In addition to that, the value of leisure properties in the municipality, and in the country, has risen during the pandemic. Building rights in riverside areas are limited thanks to the beach protection, which makes leisure properties located within the planned area directly adjacent to the river even more attractive. In Rovasundo in 2017, a nearby property was sold to theirs for SEK 520,000. With their property's unique location on the headland, the good condition of the buildings and the general price increase, the market value for the Vittangi 59:5 property is estimated at approximately SEK 1 million. The reduction in market value as a result of a mine 1.3 km from the property is estimated to be at least 25 percent, given the extent and nature of the disturbance in the form of noise, light, smell and long time intervals. Compensation of SEK 250,000 should therefore be paid.

Anette Johansson and others have stated in their opinion that they will request damages due to the impact on the cottage environment. They have not submitted any specified claim for compensation.

Peter Pettersson has summarized the following. He is the property owner of Kiruna Vittangi 4:11 and 15:2 which border the area. He considers himself an owner and is affected by noise, blasting and use of the area. In the event of a decision on a mining permit, those affected in various ways must be compensated/reimbursed for the infringement and the possible negative impact that the activity entails. He believes that a right of use agreement and an agreement on infringement compensation should be concluded between him and the company, in which he is to be awarded retroactive compensation for the years 2019-2022 with a total of SEK 70,200 and compensation for the period thereafter with partly a lump sum of a total of SEK 1,020,000 and partly annual compensation during 24 years with a total of SEK 60,300 (SEK 42,500 + SEK 18,300) with index calculation.

The company has stated the following in its opinion. Talga would like to emphasize that its objective is that the operations should affect the surroundings and nearby residents as little as possible. With the precautionary measures and restrictions that the company has undertaken, it is deemed that no damage, as far as relevant, will occur to property owners. In the event that such damage does occur, Talga states that examination of claims for damages according to ch. 32 Section 1 of the Environmental Code shall not be tested in the present case. Any claims for damages due to the activity may in that case be tried after a lawsuit is filed in the competent order according to ch. 21. §§ 1 a and 2 of the Environmental Code.

## **THE COMPANY'S COMMITMENTS**

In addition to the company's final terms proposal, the company has made the following commitment in the case at the main hearing.

### **Emissions to air and dust**

- Machines and vehicles used in the business must at least meet Euro Stage IV.  
The company is primarily investigating the possibility of using fuel with an admixture of up to 19% hydrogenated vegetable oil (HVO) for internal and 25% for external transport. In case HVO becomes more available, the involvement of a larger proportion of HVO will be investigated.
- Routines must be established to prevent dusting.
- The enrichment must take place indoors with particle separation on outgoing air.
- Transports of graphite concentrate must take place in covered transports.
- Roads and open areas must be treated with water and/or binders.
- Asphalted surfaces will be regularly cleaned of dusty material. Larger blocks and gravel will be laid out in open areas in sand and waste rock reservoirs and excavated open pits to reduce dusting. The enrichment sand will be moist when laid out.
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### **Noise**

- A noise embankment will be constructed along the southwest side of the open pit mine.
- The primary crusher will be surrounded by a moraine embankment.
- The secondary crusher and concentrator will be built-in.
- A control program with measurements of noise levels as well as a process for handling any complaints is drawn up to ensure that future noise conditions are contained.
- Rock drilling will only take place during the day in the initial stage.

**Reindeer nutrition**

- The industrial area will be fenced off. The open pits will be marked out and fencing will be used where fall hazards or other risks are identified.
- Other parts of the operational area where risks are identified may be fenced off, then after consultation with Talma Sami village.
- If necessary, help or compensation will be given for increased monitoring, supplementary feeding and extra work.

**Risk and chemicals**

- In connection with the systematic work environment work, there will be action programs and routines to prevent accident risks with e.g. chemicals.
- The company's self-control program will contain routines for chemical handling. There will be contingency plans for actions should a serious accident occur.
- Tanks for diesel and other fuels will be walled off.
- After the end of the operating period, earth embankments will be placed around the open pits where there may be a risk of falling.
- The sand and gray rock reservoir as well as the settling basin will be protected against erosion and frost.
- Outside the collecting ditches, cut-off ditches are planned to limit the flow of (clean) water from the surroundings to the water treatment. Cut-off ditches are adapted for diversion to the surroundings.
- Vehicles used in the business will be equipped with fire extinguishers. Service on vehicles and mobile equipment will include fire protection equipment.
- A blast protection zone based on the specific blast parameters will be established. A system to warn the public in case of blasting will be established.
- Blasting will only take place at predetermined times. Procedures will be in place to minimize rockfall during blasting.
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- **Impact on ground and surface water**
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- Xanthats will not be used in the business.

**Natural environment and protected species**

- Soil masses will be stored and used in the re-establishment of vegetation in the post-treatment phase. Dead wood from felled forest land will be spread out into neighboring forest land areas to benefit evergreen species.

**Cultural environment**

- The two identified ancient remains will be protected.
- If ancient remains, which are not previously known, are found during the planned work, the work will be interrupted in the part that concerns the found ancient remains. Talga will immediately report the find to the county administrative board. • Talga will consult with the Sami villages on appropriate measures to avoid and mitigate effects on the Sami culture.

**REASON FOR JUDGMENT**

## INTRODUCTION \_

Talgas' application includes permission to conduct mining operations in part of the national interest, the Nunasvaara graphite deposit, the Nunasvaara Södra orebody, including open pit mining of up to 120,000 tons of graphite ore per year. The application also includes permission to build and operate the facilities and otherwise take the measures needed for the business, e.g. permit for storage of waste rock, enrichment sand and sludge as well as backfilling of waste in excavated open pit mines. The test also covers water activities consisting of, among other things, removal of seepage water from open pits and removal of surface water from Hosiojärvi. Talga has also applied for a so-called Natura 2000 permit and a reservation exemption from the species protection ordinance.

During the processing of the case, the application has been supplemented. The Land and Environmental Court has further assessed during the proceedings that the transboundary river agreement is applicable to the case, after which the company, in consultation with the Swedish Environmental Protection Agency, has started consultation in accordance with the Espoo Convention. Conflicting interests have emerged in the case to the applied for activity. The County Administrative Board and the Sami Parliament are the Swedish authorities that have been active in the case after the announcement. The County Administrative Board has approved the application but had comments on the terms and conditions. The Sámi Parliament, the three Sámi villages that brought the case in the case and the Nature Conservation Association have opposed the permit for the applied for activity. Individuals have expressed concern about the consequences the applied for activity may lead to during ongoing operations and after the operation has ended, also in a long-term perspective. The Ministry of the Environment and the Finnish parties have mainly considered that the basis in the case is deficient based on the cross-border environmental consequences that the activity may have for Finland and have submitted views on what consequences the applied for activity may entail.

The Land and Environmental Court will initially decide whether the specific environmental assessment can be completed and the environmental impact statement approved. It includes examining the consultation carried out, the scope of the application and delimitation and submitted views on shortcomings in the examination documents. The court will then decide on the admissibility of the applied for activity.

## M ENVIRONMENTAL ASSESSMENT

**The consultation process prior to the production of the environmental impact statement** The court can state that the environmental impact statement contains an account of the consultations that have

taken place prior to its production and what has emerged from them. Based on the consultation documents that have been submitted, the court assesses that the consultation may be considered to have had the content and orientation required according to the rules of the Environmental Code and the Environmental Assessment Ordinance (2017:966). With regard to the delimitation of the consultation and the form of the consultation, the court considers that the consultation carried out prior to the preparation of the environmental impact statement meets the existing requirements. There are therefore no deficiencies in the consultation carried out prior to the production of the environmental impact statement that prevent the application from being examined on its merits.

### **Cross-border consultation**

#### *International agreements*

The Environmental Code's scope of application is essentially limited to Swedish territory according to basic legal principles. In the case of certain environmentally hazardous activities and certain water activities, special regulations apply (Chapter 1 § 4 of the Environmental Code). For activities that may cause transboundary effects in Finland, the transboundary river agreement may be applicable.

The border self-determination agreement is limited to a certain geographical area (Article 1). It is applicable to the catchment areas of certain watercourses and lakes as well as certain coastal water areas. These form a Finnish-Swedish catchment area (catchment area). For activities or measures in the catchment area that may cause transboundary effects on the status of the waters or for their use, the provisions of the transboundary river agreement shall be applied. In those cases, transboundary effects other than those concerning the status or use of the waters must also be treated in the same order (Article 15). When the border agreement is applicable and a court examines a question of admissibility or permission for an activity, the effects that the activity or measure has or may have on the territory of the other party shall be taken into account in the same way as the corresponding effects in the own country (Article 16.1). Equal treatment is also required when it comes to the right to be the owner of a claim and the right to bring an action or express an opinion in the case (Article 16.).

The Border Self-Government Agreement also contains provisions on the monitoring of public interests (Article 17) and information on permit matters (Article 18) and means that each country must appoint a monitoring authority to monitor the public interests in matters of activities in accordance with Article 15. The monitoring authority has the right to for example request a supplementary investigation, be heard, file a lawsuit or appeal with the other party's court in the same manner as an authority in the other country

would have in a similar case. The court is obliged to notify the surveillance authority of the other country in connection with the actualization of a case according to Article 16.1 . It is the supervisory authority that is responsible for announcing and serving the application and summons in its own country. As explained earlier, it is the NMT center that is the Finnish surveillance authority.

In addition to the special provisions in the Transboundary River Agreement, there are also a number of international environmental conventions and international agreements. Provisions on environmental impact statements in a cross-border context and requirements for their content are found in the Espoo Convention. The Espoo Convention entails an obligation to inform other countries that can be assumed to be exposed to a significant harmful cross-border environmental impact. The EU has signed and ratified the convention and the EIA directive also <sup>1</sup>regulates cross-border environmental consequences. There is an obligation to inform other countries about projects that can be assumed to have a significant impact on the environment in another Member State or if a Member State that may be exposed to a significant degree requests it (Article 7 EIA Directive). In Swedish law, the obligation to inform other countries about cross-border consultations has been implemented through ch. 6. §§ 33 and 34 of the Environmental Code and §§ 21-25 of the Environmental Assessment Ordinance. The provision on consultation with other countries in ch. 6 Section 33 of the Environmental Code means that in Swedish national law there is a requirement for consultation with all countries that may be exposed to significant environmental impact from activities in Sweden and according to the preparatory work goes beyond the requirements found within the EU and the Espoo Convention (prop. 1997/98:45 part 1 p. 287). The statute is also not limited to consultation on the environmental impact statement, but also includes consultation regarding the permit application.

In Sweden, the Swedish Environmental Protection Agency is the responsible authority for consultation according to both the Espoo Convention and the EIA Directive. When consultation is to take place with another country, the Swedish Environmental Protection Agency must agree with the responsible authority in that country how the consultation is to be carried out so that the authorities and the public who can be assumed to be affected are given the opportunity to submit their views within a reasonable time, which must be at least 30 days (Chapter 6, Section 33 of the Environmental Code and Sections 21 and 23 of the Environmental Assessment Ordinance). The Swedish Environmental Protection Agency must also send and receive notifications, and otherwise fulfill the

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<sup>1</sup>Directive 2011/92/EU of the European Parliament and the Council of 13 December 2011 on the assessment of the impact on the environment of certain public and private projects in the wording according to the so-called amending directive Directive 2014/52/EU of the European Parliament and the Council.

obligations that a party has, according to Article 3 points 1-3 and 5-8, Article 4 point 2 and Article 5-7 of the Espoo Convention and fulfill the tasks that follow from Article 7 of the EIA Directive (Section 24 of the Environmental Assessment Ordinance). In order for the Environmental Protection Agency to be able to fulfill its mission, there is an obligation for other government authorities in Sweden to notify the Environmental Protection Agency of this if they become aware of an activity that can be assumed to cause a significant environmental impact in another country (Section 22 of the Environmental Assessment Ordinance).

*The consultation process with Finland in the target*

During the processing of the case, the Transboundary River Agreement and the Espoo Convention have been applied in parallel vis-à-vis Finland.

In the border river agreement there is a provision on the language of documents. It is stated that the court examining the permit must be responsible for ensuring that the application documents are available in Swedish and Finnish to the extent necessary and responsible for providing sufficient information in both languages during the processing. Furthermore, the court shall be responsible for ensuring that summaries of the permit application and judgment or decision are available in both languages (Article 22 Transboundary Agreement). There is no equivalent to the provision in either the Espoo Convention or the EIA Directive. Nor in the Environmental Code or the Environmental Assessment Ordinance are there any detailed regulations on the language of documents or requirements for the court to translate in cross-border consultations. The court has therefore, during the proceedings of the case, translated documents in accordance with the obligation under the border river agreement. The company has also assisted the court with the translation of certain documents during the processing of the case.

The court can state that according to the regulations on cross-border consultation, a country that can be assumed to be exposed to cross-border effects must be informed about the activity as early as possible and at the latest when the own public in the original country is informed (Article 3 of the Espoo Convention and Article 7 of the EIA Directive) . Finland has been informed, via the Environmental Protection Agency, about the application on 25 August 2021, i.e. before the application and environmental impact statement none were announced by the court in Sweden. The company has explained that on October 11, 2021, the Ministry of the Environment submitted its official response to the notification from the Swedish Environmental Protection Agency, implying that Finland wanted continued participation in the process. The Ministry of the Environment's

response, in addition to the now applied for mining operations at Nunasvaara Södra, also concerned the company's other Niska projects (the ore deposits at Nunasvaara Norra, Niska Södra and Niska Norra). The company has reported that they have taken note of the opinions received from Finnish stakeholders. In the spring of 2022, the company has, at the request of the court, submitted an account of the consultation that took place in accordance with the Espoo Convention and a compilation of the views received and where in the application the views have been taken into account.

Since Finland, in its response to the first notification from the Swedish Environmental Protection Agency, announced its wish to participate in continued consultation in accordance with Article 5 of the Espoo Convention, the court in the announcement of the application and the environmental impact statement in April 2022 stated that consultation with Finland would take place in the case (cf. ch. 6 § 40 Environmental Code).

The court has translated the announcement and essential parts of the application documents into Finnish. Translated documents have been sent to the NMT center on 26 April 2022 for publication in Finland. At the same time, the court has notified the Swedish Environmental Protection Agency of the announcement and sent translated documents. The Environmental Protection Agency has stated that the consultation invitation pursuant to Article 5 of the Espoo Convention regarding the application and environmental impact statement was sent to Finland on 4 May 2022. In Finland, the NMT center and the Ministry of the Environment have coordinated the consultation on the permit application and the environmental consequences of the mining project. Publication of the application and environmental impact statement was available to the public in Finland between 11 May and 27 June 2022. Finland's response to the Espoo consultation was received by the court on 15 August 2022 and the NMT center received on 23 August 2022 an opinion on the procedure that took place in Finland and comments on the application.

The Finnish comments on the application and the environmental impact statement, which were submitted to the court in August 2022, have been translated into Swedish by the company. The company has subsequently been given the opportunity to respond to comments received from Finland and the company's response has been translated into Finnish. Additional documents from the company have also been translated into Finnish. As Finland, in its reply on 15 August 2022, expressed wishes for continued consultation within the framework of the Espoo Convention, the consultation process continued.

In order to make it easier for Finnish parties, who wished to participate in continued consultation, not to have to distinguish between the different processing rules in the transboundary river agreement and the Espoo Convention, the court was in contact with the NMT central, which undertook to continue coordinating the collection of opinions with the Ministry of the Environment. On October 28, 2022, the court sent the company's response and additional material to the NMT center and to the Environmental Protection Agency. Furthermore, on November 3, 2022, the court sent all the authorities and organizations in Finland, which commented on the case in August 2022, a notification about the continued process in the case. The court then informed that in Sweden it is the land and environment court that has to examine both the application for a permit and the question of completing the specific environmental assessment (approval of the environmental impact statement) and that the NMT center and the Ministry of the Environment would continue to coordinate the collection of opinions on the treatment of the applicant. Furthermore, in the notification, the court indicated the then preliminary time for the main hearing and the court reminded that the main hearing is a supplement to the written proceedings and that the company could respond to any additional points of view in the case only at the main hearing. The announcement of the summons to the main hearing and the court's order of proceedings have been translated into Finnish and sent directly to Finnish parties on November 23, 2022. The NMT center has also notified the court that the summons to the main hearing has been announced in Finland on December 7 and 8, 2022.

Response from Finland to the continued consultation process was received by the court on 9 December 2022. The response shows that the additional material was available to the public in Finland between 2 and 30 November 2022. The Ministry of the Environment again objected that the consultation within the framework of the Espoo Convention needed to continue and urged also the Swedish government to organize a bilateral consultation meeting on the Nunasvaara Södra project to complete the transboundary assessment and the Ministry of the Environment referred to Article 5 of the Espoo Convention. In its statement to the court, the Swedish Environmental Protection Agency has explained the process that took place within the framework of the Espoo Convention. The Swedish Environmental Protection Agency has considered that the consultation was planned and carried out in accordance with ch. 6. Section 33 of the Environmental Code and Section 21 of the Environmental Assessment Ordinance and that the authority has fulfilled its obligations in accordance with Article 5 of the Espoo Convention and Section 24 of the Environmental Assessment Ordinance. The Swedish Environmental Protection Agency has further stated that the authority does not intend to handle the Ministry of the Environment's request for a bilateral consultation meeting in

a different order. The Swedish Environmental Protection Agency has also emphasized that it is up to the court as the reviewing authority to assess whether the environmental impact statement meets the requirements in ch. 6. the environmental code.

*The Land and Environment Court's assessment*

As the Land and Environmental Court has informed Finnish parties, at the beginning of November 2022, it is the court that has to examine both the application for permission and the question of completing the specific environmental assessment. This review takes place in Sweden as a general rule at the same time and means that the environmental assessment is only completed in connection with the judgment being announced in the case (Chapter 6 §§ 42-43 of the Environmental Code). Even the issue of a Natura 2000 permit can be examined by the court in the permit process in connection with a judgment being issued (chapter 7, section 29 b, second paragraph, Environmental Code).

It is clear in the Environmental Code and the Transboundary River Agreement that the court has to treat Finnish parties equally and thus also to consider the views that have been received in the case due to the procedure according to the Transboundary River Agreement. As far as the Espoo Convention is concerned, it is the Swedish Environmental Protection Agency that is mainly responsible for fulfilling the obligations a party has according to the convention (Chapter 6, Section 33 of the Environmental Code and Section 24 of the Environmental Assessment Ordinance).

Although the Swedish constitution does not explicitly state that in its review the court has to take into account the views submitted in connection with the Espoo consultation or to examine whether the consultation took place correctly in accordance with the Espoo Convention, the court can state that the EU has ratified the convention and that cross-border consultations are regulated in the EIA the directive (Articles 7-8). Article 8 of the EIA Directive stipulates that the court must also take into account the results of the consultation held with other states during the examination. It appears from the preparatory work that Article 7 of the EIA directive has been implemented through the statute in what is now ch. 6. Section 33 of the Environmental Code and Article 8 of the EIA Directive have been implemented through the statute in now ch. 6. Sections 42-43 of the Environmental Code (prop. 1997/98:45 pp. 287, 294, 698 and 702f. and prop. 2016/17:200 pp. 123f., 204f. and 210). The court's environmental assessment thus includes taking into account the cross-border consultation carried out. If there is a need for guidance in the matter of whether the consultation has been carried out in an acceptable manner, that examination may take place against both the EIA Directive and the Espoo Convention's intentions.

The Land and Environmental Court assesses that both the obligations that exist according to international agreements (the Transboundary River Agreement, the Espoo Convention and the EIA Directive) as well as within the framework of the Environmental Code have been fulfilled. During the written proceedings, the court has translated the essential parts of the application documents. Finnish authorities and organizations that had views on the case have had the opportunity to be present and present the case at both the hearing and the main hearing. The court has informed Finnish parties about the purpose of the main hearing, that it is a supplement to the written proceedings, and that views could be received by the company during the hearing. The main hearing in the case took place for four weeks and the court has informed the Finnish parties well in advance of the hearing and the order of the hearing, i.e. the agenda of which issues were to be dealt with and at what preliminary time. A court interpreter was present during the hearing and two court interpreters were present during the main hearing, even on the days when Finnish parties were not present. Furthermore, during the main negotiation, the company also ensured that a selection of draft presentations were available in Finnish translation. All in all, Finnish parties have been assured of the necessary information and documentation and there has been equal treatment of parties.

As the Swedish Environmental Protection Agency has emphasized, it is up to the court as the reviewing authority to assess whether the environmental impact statement meets the requirements in ch. 6. the environmental code. As the Land and Environmental Court explained above, the court must also take into account the results of the consultation held with other states, i.e. the views received on the application and the environmental impact statement in substance (Chapter 6 §§ 42-43 of the Environmental Code, Article 6 of the Espoo Convention and Article 8 of the EIA Directive and Article 17 of the Transboundary River Agreement). When the permit issue is settled, the court must announce this as soon as possible and it is incumbent

The Swedish Environmental Protection Agency that that information is also provided to Finland in this case (Chapter 6 §§ 44-45 of the Environmental Code). It is up to the court to inform the NMT center when the judgment in the case is announced and to translate summaries of the judgment into Finnish (Articles 18 and 22 of the Transboundary River Agreement).

Taking into account the above, the Land and Environmental Court considers that there are no shortcomings in the cross-border consultation carried out that prevent the application from being examined on the merits.

**Views on the delimitation of the application, etc**

In the case, it has been argued that Talga's application should be rejected on the basis that it only covers the mineral deposit in Nunasvaara Södra and that it does not describe cumulative effects of a mining operation at the company's other mineral deposits in Vittangi (the ore deposits at Nunasvaara Norra, Niska Södra and Niska Norra) that the company has applied for processing concession for August 2021. In summary, objections have been about the fact that the delineation of the application means that the overall environmental consequences of the projects cannot be assessed. Objections from the Sami villages and the Nature Conservation Association have been raised that it is contrary to the purpose of the legislation that a collective assessment of the project's environmental consequences must take place, especially when it comes to the impact on Natura 2000 areas. Finnish parties have particularly emphasized that the application with the environmental impact statement should be rejected because it generally does not describe cumulative effects with other projects, nationally and internationally, where consultations for the environmental impact statement are ongoing. In response, the company has stated in summary that only licensed operations should be taken into account when assessing the cumulative effects from current operations and that any future mining projects in Finland or Sweden should not be taken into account in the present review. The company has further emphasized that the application for a processing concession was made due to the fact that the validity period for the exploration permit, i.e. the exclusive right, was about to expire and that the company has no intention of applying for an environmental permit for other mineral deposits in Vittangi in the next few years.

Jurisprudence shows that it is the applicant who, through his application, specifies the framework for the review, but it is up to the court to decide whether it can form the basis for the review (cf. for example the legal cases MÖD 2006:6 and MÖD 2010:9). Furthermore, a division may not take place of a project that results in the purpose of the EIA Directive being circumvented in such a way that the division results in the operator circumventing the requirement to draw up an environmental impact statement (see, among other things, the legal cases in case C 72/95 Kraaijeveld et al. , C 392/96 Commission v Ireland, C 142/07 Ecologistas and MÖD 2007:50).

According to the Land and Environment Court's assessment, an operator should be able to choose to apply for an environmental permit with a Natura 2000 permit for the activity that is currently desirable from the operator's perspective. This is as long as there are conditions for a complete examination, where all the environmental effects for the applied business with subsidiary companies are included and that it can be ensured that there are conditions to prescribe conditions that are relevant from an environmental point of view (cf. the legal cases MÖD 2006:57, MÖD 2011:51 , MÖD 2020:48 and

NJA 2013 p. 613 and HFD 2022 note 20). The company's application in the current case covers the mining operations with related operations that are intended to be conducted at Nunasvaara Södra. The applicant has presented his entire mining operation and the application covers both mining, beneficiation, waste management, purification, necessary water operations and ancillary businesses in the form of transport of graphite. The project is not dependent on other projects or environmental permits (cf. the legal cases HFD 2016 ref. 21 and the Land and Environment Supreme Court's decision on 12 October 2017 in case M 8159-16) . The fact that other possible planned projects for which the company has applied for a processing concession have not been included has not meant that the company has gotten around the requirement to draw up an environmental impact statement. As regards the cumulative effects that an application and environmental impact statement must contain, practice shows that cumulative effects must be assessed from the additional activities, ongoing land use and development, completed but not post-processed activities and activities that have been granted permission but not yet started (see the judgment of the Land and Environmental Appeals Court in the legal case MÖD 2019:5). There has therefore been no reason for the company to describe, in the current examination, cumulative effects with other projects internally within the company where processing concessions have been applied for or with other operators' projects where procedures for environmental impact assessment are ongoing. Neither the EIA Directive nor the practice of the European Court of Justice gives reason for a different assessment.

The Land and Environment Court considers that the basis in the case is sufficient to assess and test the activity's impact on the affected Natura 2000 area and that the delimitation of the application is such that it does not prevent it from being the basis for an examination of the merits of the case. The claim of the Sami villages, individuals and Finnish authorities and organizations that the application should be rejected on that basis must therefore be rejected.

### **Opinions on shortcomings in the examination documents**

Gabna Sameby, Talma Sameby and the Nature Conservation Association have submitted that the company has not reported the effects that the operations may have on reindeer husbandry in a sufficiently detailed manner and that there are such shortcomings that the basis cannot be the basis for a position on the impact of the operations on the reindeer husbandry. The Sámi Parliament has considered the environmental impact statement to be deficient, that it i.a. not highlighted and taken into account the cumulative, social and cultural effects of the applied for activity and there is a lack of a description of the impact on the Saarivuoma Sami village. The Nature Conservation Society has further presented views on completed nature value inventories and that both the application, environmental impact

statement and sub-appendices to the application have been changed, added and corrected during the processing of the case.

The court can initially state that the application, the environmental impact statement and other supporting documents have been completed by the company following both the court's and the Swedish authorities' request for completion. For the most part, the additions have been received before the announcement was made in the case. After the announcement, the company has supplemented the documentation based on the views received from counterparties and other interested parties. In the court's opinion, it is obviously desirable that an application and environmental impact statement be so clear and unambiguous that no additions need to be made to the case after an application has been submitted to the court. Based on the investigation obligation that the court has, however, and that opposing parties and the public need to be given the opportunity to be heard in the process, it goes without saying that additions and adjustments to the application can take place during the processing of the case. Certain activities are also such in nature that it can be expected that opinions and supplemental requirements will be put forward. Furthermore, it needs to be possible to make later additions if there are conditions that only then become relevant in the case or which are connected with new findings (cf. the court case NJA 2009 p. 321). The court considers that the company in the current case has in a necessary and sufficient manner described and answered the views that the opposing parties have submitted in the case.

With regard to the company's reports in the case regarding the impact on the reindeer husbandry, the court considers that the Sami Parliament, Talma Samiby and Gabna Samiby's objections to the environmental impact statement and the company's method for analyzing the impact on the reindeer husbandry most immediately aim at the company's final assessments regarding the environmental consequences arising for the reindeer husbandry. In the court's opinion, the objections are essentially about the Sámi Parliament and the Sámi villages making a different assessment than the one the company has made regarding the environmental consequences. The court considers that these objections are important for examining the application on its merits and do not mean that they are circumstances that constitute obstacles to the process. The court returns in more detail to the Sami villages' objections about the company's method and analysis below when assessing the operation's impact on reindeer husbandry.

All in all, the court considers that the environmental impact statement with the additions submitted in this part as well can be considered sufficient to form the basis for an examination on the merits.

**Summary of environmental assessment**

The Land and Environment Court has assessed above that the consultation documents are sufficiently comprehensive and that they have been taken into account in the development of the environmental impact statement. Finnish parties have been assured of the necessary information, documentation and there has been equal treatment of parties and the court has assessed that the cross-border consultation meets the requirements set by the Environmental Code, the Espoo Convention and the EIA Directive. The application covers all the mining activities with related activities that are intended to be carried out at Nunasvaara Södra and the project is not dependent on other projects or environmental permits. Overall, the court has therefore assessed that the delimitation of the application is such that it does not prevent it from being the basis for an examination of the merits of the case. The fact that additions have taken place after announcement has not been considered by the court to mean that there are deficiencies in the examination documents. Other objections to the company's description of the impact on the reindeer husbandry, the court has judged to be aimed at the company's final assessments regarding the environmental consequences that arise. In these parts, the environmental impact statement is sufficient to form the basis of the examination in the case. Overall, the court assesses that the environmental impact statement with additions that have been submitted meets the requirements in ch. 6. the requirements set out in the Environmental Code and constitute a sufficiently comprehensive and reliable basis for assessing and testing the impact of the activity on the affected Natura 2000 area and the other collective environmental effects of the application. The environmental impact statement can therefore be approved and the specific environmental assessment can be completed.

**T ADMISSION AND PERMISSION****Introduction**

Since the court above has judged that the specific environmental assessment can be completed, the court has to decide on the permissibility of the applied for activity.

For an activity or measure that takes up an area of land or water, a site must be chosen that is suitable with regard to the fact that the purpose can be achieved with minimal intrusion and inconvenience to human health and the environment (Chapter 2, Section 6 of the Environmental Code). When examining the merits, the general starting point is that it is the operator who has to show that the consideration rules in ch. 2. the environmental code is observed (chapter 2, section 1 of the environmental code). The business operator is also obliged to carry out the protective measures and

take the precautionary measures in general that are necessary to prevent, prevent or counter that the business or the measure causes damage or inconvenience to human health or the environment (Chapter 2, Section 3 of the Environmental Code). This obligation begins as soon as there is reason to assume that the activity or action may cause damage or inconvenience. The requirement for localization applies to the extent that it cannot be considered unreasonable to fulfill it. In this assessment, special consideration must be given to the benefits of protective measures and other precautionary measures compared to the costs of such measures (chapter 2, section 7, first paragraph of the Environmental Code).

In most cases, the question of examination of land use is dealt with according to ch. 3 and 4. the environmental code for mining operations by the State of Norway in connection with the granting of a processing concession according to the Minerals Act (1991:45). In this case, there is no processing concession for the Nunasvaara Södra ore deposit. The company has applied to the State of Norway for a concession for the area, which is needed for the requested activity. Bergsstaten has notified the court that the authority will not take a position on the application pending the Land and Environment Court's examination of the Natura 2000 permit in the case. This means that the court in this case also has to examine the permissibility of the activity based on the housekeeping regulations in ch. 3 and 4. the environmental code. Preference must be given to such use which entails good housekeeping from a general point of view (Chapter 3, Section 1 of the Environmental Code). The basic management regulations also contain certain general regulations on the management of land and water areas which prescribe a certain protection for area n which is important for various industries and interests.

In summary, objections have been raised in the case regarding the environmental effects the applied for activities may lead to during ongoing activities and after the activities have been completed, also in a long-term perspective. Concerns have been expressed that the operation may entail consequences that entail risks for the environment and human health and safety. The views have mainly concerned the impact in the form of noise, dust and smell.

There have been conflicting interests in the applied business. The reindeer husbandry is an opposing interest in the target that is affected. Areas that are important for reindeer husbandry must be protected as far as possible from tangible impact (Chapter 3, Section 5 of the Environmental Code).

Furthermore, the Nature Conservation Association and the county administrative board have provided views on the activity's impact on species and the possibility of granting a species protection

dispensation. The Species Protection Ordinance (2007:845) is to be seen as a specification of what can follow from the general rules of consideration regarding the protection of species (see for example the court case MÖD 2013:13). This means that the court, applying the relevant conservation provisions in the species protection ordinance, has to assess how the protected species are affected by the planned activity.

Furthermore, views have been given on the impact of the operation through discharges to water and whether the operation may conflict with the EU's framework water directive (<sup>2</sup>the water directive) as well as the impact that may occur on the Natura 2000 area Torne and Kalix river system. If the activity can significantly affect Natura 2000 areas, a special permit is required, which may only be granted under certain conditions (Chapter 4, Section 8 and Chapter 7, Section 28 a of the Environmental Code).

Individuals as well as the county administrative board have, if permission is given, submitted their views on the need for long-term follow-up and post-treatment as well as the need for financial security.

When examining the case, the court has, with regard to the above, to examine the location of the applied mining activity and the impact on opposing interests, i.a. human health, reindeer husbandry, species and Natura 2000 areas. This also includes testing which precautionary measures and protective measures are needed for the localization to be suitable. A balance needs to be made against the conflicting interests present in the case to the establishment of mining operations.

### **Basic prerequisites**

#### *Availability for water operations*

It is a procedural requirement that Talga has control over the water in the area where the measures covered by the application are to be taken (cf. the legal cases NJA 1993 p. 331 and NJA 2012 p. 362).

The company has applied for a permit for water operations in the form of the removal of infiltrating groundwater from open pits and the maintenance of facilities for this, the construction of sedimentation and clarification basins, the removal of surface water from Hosiojärvi adjacent to a total amount of 4,500 m<sup>3</sup> and the construction and maintenance of facilities for this, filling in surface water for the construction of a combined sand and waste rock reservoir as well as the construction of ditches for the

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<sup>2</sup>European Parliament and Council Directive 2000/60/EC of 23 October 2000 establishing a framework for Community action in the field of water policy

business's water management. The water operations are to be conducted on the properties Kiruna Stenbrottet 2:1 and Kiruna Vittangi 21:2 and 43:5 with the owners of which the company has signed long-term right of use agreements and lease agreements. According to the Land and Environment Court, through the agreements, the company has the discretion necessary to apply for a permit for and conduct water operations.

#### *Plan conditions*

According to ch. 2 Section 6, third paragraph of the Environmental Code, a permit may not be granted in violation of a detailed plan or area regulations according to the Planning and Building Act (2010:900). However, small deviations that do not conflict with the purpose of the plan may be made. An overview plan for Kiruna municipality was adopted in 2018. In the overview plan, the area around Nunasvaara is identified as a mineral deposit and an area of interest for mining graphite. The reindeer industry is stated to have interests partly in, but mainly around, the area. The area is not covered by any detailed plan. There are no area regulations according to the Planning and Building Act for the area either. There is no direct obstacle to the permissibility of the activity as a result of planning conditions.

#### **Location**

The Land and Environmental Court notes that the location of mines is governed by where the mineable deposits are located and that the possibility of finding alternative locations in that regard is therefore very limited. Thus, an unconditional alternative assessment is not possible.

Regarding the location of the extraction waste facility, a location outside the planned area of operation has been investigated, but it has finally been considered better to place the extraction waste facility in the same catchment area as the mining, as you thereby limit potential environmental risks to one location instead of spreading them over several. For other parts of the business, i.e. industrial area with concentrators, water treatment plants and storage areas, various locations of the operations in connection with the planned open pits have been evaluated. The investigation in the case shows that the plant parts, within the final operational area, have been placed in such a way that the least possible impact on other interests such as natural values and reindeer husbandry is achieved. In the area where the sand and gray rock reservoir is to be placed, there is a smaller water area that will be filled again. A location investigation has been carried out which shows that the chosen location is the best for locating the sand and waste rock reservoir.

Against this background, the Land and Environmental Court assesses that the proposed localization constitutes the least intrusion into and inconvenience to human health and the environment (chapter 2, section 6, first paragraph of the Environmental Code). When it comes to assessing the issue from a land management perspective, this needs to be assessed against the competing land use interests in the area, which is dealt with below (cf. ch. 3, § 1-2 of the Environmental Code).

**Impact on health and environment** *Noise and vibrations etc*

The operation gives rise to disturbances and risks through noise, ground vibrations, air shock waves and stone throwing. The court can state that the area's topography with height differences provides a natural noise shielding function and that the noise barriers the company intends to build before mining in open pits affect the extent of noise disturbances. When mining takes place further down in open pits, noise propagation decreases. Blasting leads to ground vibrations and air shock waves as well as stone throwing, but the company's investigations support the fact that it will not entail a risk of damage to homes or unacceptable inconveniences to people's health. The court considers that the company has shown that it is possible to take reasonable precautionary measures and that it is possible to prescribe conditions so that obstacles to admissibility do not exist for that reason.

*Emissions to air, dust and odor*

The emissions to air from the operation consist of emissions from vehicles within the area of operation, so-called explosive gases, dust from crushing and diffuse dusting from e.g. roads and open spaces. Talga has assessed that the emissions will be small and that they will not contribute to any environmental quality standard being exceeded. The County Administrative Board has pointed out that there are often problems with dust spreading, e.g. at crushing and sorting plants and dusting during transport on roads within and to and from mining industrial areas.

With regard to dust dispersion during crushing, the company has undertaken that the enrichment, which will take place indoors, must have particle separation from outgoing air. The primary crusher will be located down in the open pit and the secondary crusher will be built closer to the industrial area and built in. Diffuse dusting will be limited by the fact that transports of graphite concentrate will be covered, roads and open surfaces will be treated with water and/or binders, asphalted surfaces will be regularly cleaned and that blocks and gravel will be placed in open surfaces sand and waste rock storage and broken open pits to reduce mining.

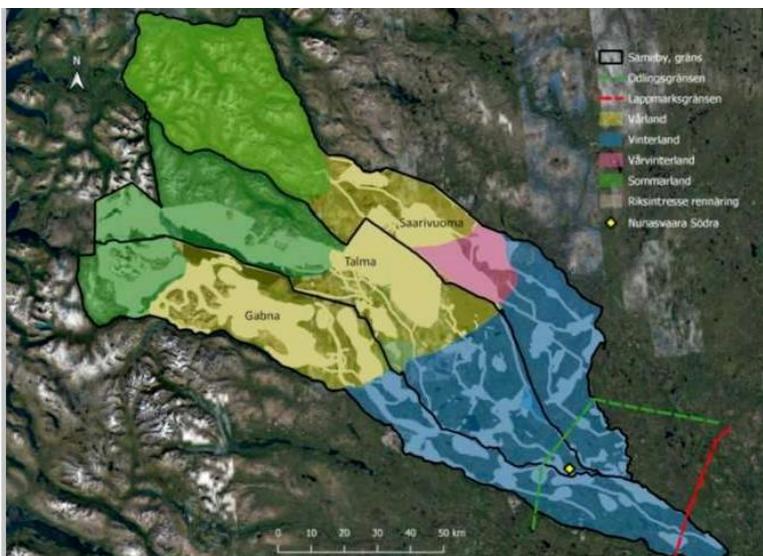
The Land and Environmental Court shares the company's assessment that the operation will not contribute to any environmental quality standard regarding air being exceeded. The court assesses that the reported measures will limit the spread of dust and dust fallout from the operation and that the control of this can take place by checking the dust fallout in the manner proposed by the company. Nor will the operation cause disturbances in the form of odors. Overall, the operation will not, according to the court's assessment, pose any risk to people or animals. There are therefore no obstacles to the admissibility due to smell, dusting and emissions to air.

### **Conflicting land use interests**

#### *Reindeer nutrition*

#### The test in the target and basis for assessing the impact

The operational area for the applied mining activity is within the lands of Talma Sami village. Adjacent to the operational area, to the south, Gabna Sami village has its lands and to the east Saarivuoma Sami village.



The company's map of the Sami villages' lands with the area of operation marked in a yellow box.

Since the company lacks a processing concession, the permissibility of the activity in relation to the reindeer husbandry is up for review within the framework of this goal. As the Land and Environment Supreme Court has determined, the rules of the Environmental Code satisfy the commitment Sweden has according to the international convention on civil and political rights (the Land and Environment Supreme Court's judgments on November 23, 2011 in case M 847-11 and in case M 824-11).

The company has argued that the applied mining activity can coexist with reindeer husbandry in the area. The company's reindeer husbandry analyzes cover Gabna Sami village and Talma Sami village and have been produced by the respective Sami villages but financed by the company. In addition to reindeer husbandry analyses, the company has produced data on how consequences on reindeer husbandry can be prevented and/or reduced. The documentation shows that Talma Sami village has initially been invited to comment on the company's proposal for prevention and damage reduction measures and that Sami village has maintained that there are none. The company has also produced documentation on how to respond to the reindeer husbandry analysis produced by Gabna Sameby based on the fact that the company has drawn other conclusions regarding the impact and the possibility of damage reduction measures. The company has further, during the processing of the case, supplemented the application with additional documentation on the assessment of consequences and impact on reindeer husbandry. The basis that the company produced is based on the reindeer nutrition analyzes and from sources such as e.g. literature studies and GIS data from various authorities.

Gabna Sameby and Talma Sameby have considered that there are flaws in the company's method for analyzing the impact on the reindeer herding and have objected to the company's conclusions about the impact on the reindeer herding and have emphasized that the basis for making the assessments the company has made is largely lacking. At the main hearing, criticism was also made against the company's failure to agree on supplementary documents with the Sami villages. With regard to the criticism that the company has not agreed to supplementary documentation with the Sami villages, the court can state that the Sami villages have been given the opportunity, during the proceedings of the case in court, to comment on the supplementary documentation that the company has submitted. Gabna Sameby has submitted a statement when the application was announced and a statement about the company's treatment of the reindeer husbandry. When announcing the application, Talma Sami village has only referred to a previously carried out reindeer nutrition analysis and has first the main hearing commented on what shortcomings the Sámi village considers to be in the company's documents. In addition to the Sámi villages, the county administrative board and the Sámi Parliament have presented views regarding the impact on reindeer husbandry.

The court considers that the evidence in the case is sufficient for an examination and that it is possible to assess the impact on the reindeer husbandry as an individual and public interest, as well as what conditions may be needed in the event of a possible permit. As previously emphasized, the court considers that the objections that the Sami villages put forward against the documentation are essentially about the Sami villages making a different assessment than the one the company has made

regarding the environmental consequences and that the Sami villages draw different conclusions from, among other things, the literature studies that exist. The court considers the same applies to the Sami Parliament's objections to the fact that the investigation does not sufficiently describe the cumulative, social and cultural effects of the application. During the main hearing, both Gabna Sami village and Talma Sami village have responded in detail to the company's investigations and explained what conclusions the Sami villagers believe can be drawn from, for example, the literature studies that exist and what impact they consider the mining operations to have on reindeer husbandry. The Saarivuoma Sami village has also submitted its views in writing during the proceedings and orally during the main hearing regarding the impact on reindeer husbandry. The basis of the case does not therefore prevent an examination on the merits.

#### The importance of the area for reindeer husbandry

Talma Sami village has emphasized that they have used and are using the land within and outside the area of operation to conduct reindeer husbandry all year round and in particular in such a way that individual litters can remain in the area during the summer. Gabna Sámi village has also emphasized that individual litters may remain during summer and they have also emphasized that they use the land during winter, the years Talma Sámi village does not have its reindeer in the area. The Land and Environment Court does not dispute this description. However, the permit process according to the Environmental Code does not deal with the civil law disposal of the land. When it comes to the assessment of whether the applied for activity can make reindeer husbandry significantly more difficult, the balance for the Sami villages must be based on the fact that the lands within and directly outside the area of operation according to the Reindeer Husbandry Act are so-called winter pastures for the Sami villages and that individual litters can remain in the area for the rest of the time.

Talma Sámi village's winter grazing area is divided into different areas, Bátnecielgi, Duortnuseatnu and Lulde. The Lulde area is an area east of Esrangevägen towards Vittangi.



Map from reindeer nutrition analysis drawn up by Talma Sámi village of the Lulde grazing area circled in black

The planned mining operation is located in the eastern part of the Lulde grazing area. Within the applied area of activity, there are no national interests for reindeer husbandry designated by the Sami Parliament. The Sámi Parliament has classified the second northernmost migration route and two more southerly migration routes, as well as a difficult passage in the south, as being of national interest for the reindeer industry.

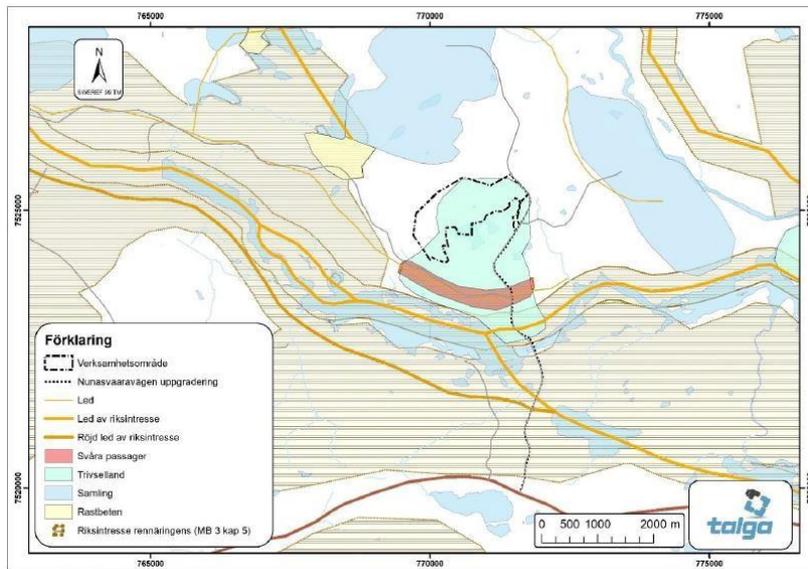


Figure from the company's EIA, map with planned activities and national interests for reindeer husbandry designated by the Sami Parliament, as well as indication of migration routes, difficult passages, amenity areas, gathering areas and resting pastures

Talma Sámi village has emphasized that, in the first place, the entire grazing area of Lulde should be classified as a national interest for reindeer husbandry, and in the second place, the areas designated by the Sámi Parliament together with key areas according to the reindeer husbandry plan. Key areas are those which on the above map are partly marked as gathering areas (blue colour) and partly pleasure land (light green colour). The Sámi village has particularly emphasized that the area of operation is located directly within one of the Sámi village's key areas for grazing, both for gathering and amenity land.

The protection for reindeer husbandry is covered by the basic housekeeping regulations in ch. 3. Section 5 first paragraph of the Environmental Code. These intend to provide basic protection for e.g. the reindeer husbandry against measures in community building and in other activities that involve irreversible interventions in the intended land or water areas or that in other respects make the business of the industry significantly more difficult. The fact that areas that are important to reindeer husbandry must be protected as far as possible means that a balance must be made between this

interest and opposing interests. The balance must include consideration of the practical and financial consequences of the protection that the section provides. In order to maintain the conditions for reindeer husbandry, the most important areas from a national point of view, national interests, within each Sami village must be given special protection according to the second paragraph of the provision. Such areas must be protected. The importance of different land areas within the reindeer husbandry area varies greatly. When assessing which areas are to be considered to be of national interest, according to the preliminary work, the industry's need for contiguous grazing areas and access to alternative grazing areas within the different seasonal fields as well as alternative migration routes must be taken into account. The special importance of winter pastures for reindeer husbandry should be taken into account. According to the preparatory work, the protection must aim at such areas which, with regard to different aspects of the practice of reindeer herding in different Sami villages, it is particularly important to protect, and it is stated that such areas can include e.g. migration routes, calving grounds and certain areas with particularly good grazing conditions (prop. 1985/86:3 with proposal for an act on the management of natural resources, etc., p. 161.)

The Land and Environmental Court considers that no information has emerged in the case that suggests that the entire Lulde grazing area constitutes such an important area that the entire area should have special national protection. With regard to the key areas designated by the Talma Sami village, it appears from the Sami villages' information and the company's investigation in the case that the area is mainly used by the Talma Sami village for winter grazing as well as for moving and free roaming. Based on the basis in the case, however, it has not emerged that the areas are such areas that it is particularly important to protect so that they are covered by the protection of national interests according to ch. 3. Section 5 Second Opinion Environmental Code. The court finds no reason to question the need for special protection for the migration routes designated by the Sami Parliament as being of national interest, taking into account the reindeer husbandry's need for contiguous areas. The court therefore assumes in its examination that it is the areas designated by the Sami Parliament that are covered by special protection and that must be protected against measures that can significantly hinder the operation of reindeer husbandry.

#### The operation's impact on the reindeer industry

Most of the industrial area lies within a grazing area (key area) that is important for the Talma Sami village. The Land and Environmental Court assesses that the proposed mining operation will therefore obviously affect reindeer husbandry. Although it is important that permission can be granted to extract the graphite in the deposit, it cannot be done in a way that endangers the conditions for the Talma Sami

village, nor for the Gabna Sami village and the Saarivuoma Sami village's continued pursuit of an economically viable reindeer husbandry .

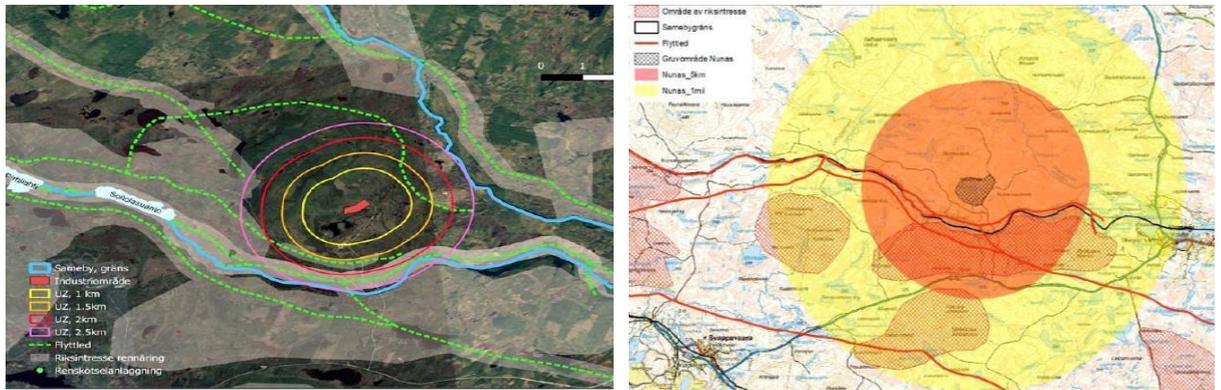
One of the basic prerequisites for reindeer husbandry as a public interest is that the husbandry is practiced in the Sami's traditional way, where the reindeer are fed by natural grazing on large contiguous lands. The starting point for the Land and Environmental Court's examination should therefore be that the Sami villages should continue to be able to carry out reindeer herding in the Sami's traditional way. In balancing the interests between the opposing interests of graphite extraction and reindeer husbandry, the Land and Environmental Court's assessment is based on the principle of firstly avoiding damage, then reducing the risk of damage and finally compensating for damage that has occurred.

The operating time for the mine has been stated by the applicant to be approximately 25 years and the direct claim of land to 1.5 km<sup>2</sup> . As the court explained above during localization, the company has adapted the business's facilities as far as possible to reduce the impact on natural values and also the impact on reindeer husbandry. The three open pits to be filled with water would constitute a permanent loss of area even after the mine's finishing. In addition to the direct impact on the reindeer husbandry through the claim of the land, there is an impact on the reindeer husbandry due to disturbances occurring next to and outside the industrial area and to some extent through the consequent activities in the form of transport both during the construction phase and during the operation phase, even if the impact during the construction phase is temporary.

In the case, there has been extensive discussion about what disturbances occur to the reindeer husbandry next to and outside the industrial area as a result of the mining activities and to what extent outside the industrial area the disturbance occurs. With regard to the extent to which disturbances can occur, there was a discussion at the main hearing about whether there is any difference between the concepts of disturbance zone and avoidance zone, and whether a disturbance zone can possibly be perceived as a wider area than the avoidance zone. Regardless of how the area of disturbance is named, in the court's opinion it is clear that an impact occurs for reindeer husbandry as a result of the mining activity, in addition to the direct claim of land.

The company has claimed that the avoidance zone amounts to 1 km. Talma Sámi village has considered that the disturbance zone amounts to at least 5 km, while Gabna Sámi village in the

reindeer husbandry analysis and during the main hearing reported a disturbance zone of 5 km and 10 km respectively.



The company's map and Gabna Samiby's map. The company's shows the spread of disturbances 1-2.5 km with migration routes and the Sámi Parliament designated national interests for reindeer husbandry as excellent, and Gabna has indicated in orange disturbances up to 5 km and in yellow up to 10 km.

In the court's opinion, the disturbance effect is dynamic in nature and that there are many variables that can affect and the conditions differ between different places where reindeer herding is carried out. What impact does mining have, i.e. the extent of the disruption to industrial operations depends on the circumstances of the individual case. For current operations, the disruption is greatest in direct connection to the industrial area, with a gradual phasing out from the area. Disturbances that occur cannot automatically be said to occur circularly from the center of the industrial area. As the court explained above, the topography of the area with height differences provides a natural noise shielding function and the noise barriers the company intends to build before mining in open pits affect the extent of noise disturbances. In addition, prevailing wind directions are important for both noise propagation and dusting. Other circumstances that may influence the disturbances that may occur are that the area around the industrial area has been emphasized as having good grazing resources and that there are no major barrier effects beyond road E45.

The court notes that the three Sámi villages that have brought proceedings in the case are affected to varying extents by the applied for activity. The consequences that arise for the Talma Sami village are, among other things, loss of pasture, disturbed grazing peace and other disturbances in the form of noisy activities, dusting and more transport movements in the area, especially along Nunasvaaravägen. Since the applied for activity is located in the eastern part of Talma Sami village's lands, the mining operation does not mean that Talma Sami village's winter pastures are cut off, nor does it seem to contribute to creating difficult passages between the lands. For Gabna Samiby, the activity does not involve any direct claim of land, but the impact arises through a certain increase in

transport movements after Nunasvaaravägen and dust and noise. Saarivuoma Sami village may be indirectly affected through a certain increased risk of mixing reindeer. The court does not consider this to significantly hinder the Saarivuoma Sami village's ability to run an economically viable reindeer husbandry. Some disturbance may occur on the transport route classified as of national interest to the south of the operational area.

The company has committed to only mining for six months of the year to minimize the impact on the Talma Sami village in particular. At the main negotiation, the company has, following comments from the Sami villages, adjusted its proposed condition regarding the time of year that no open pit mining may take place and also clarified which related activities may not be conducted. The period has been specified as 1 December to 31 May inclusive (proposed condition 11). In the court's opinion, this is a comprehensive protective measure on the part of the company to minimize the impact on reindeer husbandry. The protective measure reduces both noise and dust as well as personal transport and reduces disruptions that may occur on the migration route in the south, which is classified as national interest. Migration routes are important to protect based on reindeer husbandry's need for the possibility of collective migration and in order not to break the functional connection between land areas. Although moving in the autumn may have to take place when the mining operations are in full swing, the court can state that the company has adjusted the time period for when mining should take place based on the wishes of the Sami villagers presented at the main hearing.

When it comes to the transports to and from the business, it constitutes a subsidiary company that must be taken into account (Chapter 16, Section 7 of the Environmental Code). Gabna Samiby has claimed that the transports following Nunasvaaravägen out to E45 and further up to the connection to road E10 at Svappavaara, a distance of around 15 km, should be considered to constitute subsidiary companies. The company has objected to this and emphasized that it is only transport along the Nunasvaaravägen that can be considered to constitute ancillary activities. The Land and Environmental Court considers that when granting a permit, a delimitation needs to be made as to which part of the transports can be considered to constitute a subsidiary company. The starting point is that they should only be taken into account to the extent that they can be considered to have an immediate connection with the applied for activity (cf. prop. 1997/98:45, part 2 p. 208). The question of where the limit is must be decided by a balance of circumstances such as the nature and scope of the transports, where the transports are in relation to the business and inconveniences from the transports in relation to the inconveniences from other traffic and business (cf. the court case NJA 2004 p. 421).

The Land and Environmental Court assesses that it is quite clear that the transports along Nunasvaaravägen constitute a consequential activity. As regards the further transports on road E45, it appears from the company's investigations that the transports will only form a marginal part of the total traffic and the inconveniences caused by it. Also based on Gabna Samiby's description at the main hearing, it can be stated that road E45 already today means a strong barrier effect with extensive and, among other things, heavy duty vehicles from Kaunis Iron's existing operations at Tapuli, Sahaavaara and Palotieva, which was most recently authorized by the Land and Environmental Court in the judgment of December 1, 2022 in case M 2090-19 (the judgment has not yet gained legal force). On route E45, the court considers that the company's share of the transports cannot be considered so significant that they should be included in the subsequent activities that must be taken into account in the assessment. The examination of the subsequent activities that can take place therefore only covers the environmental effects of the transports along the Nunasvaaravägen. In an overall assessment, neither the general nor the individual interest in reindeer husbandry can be considered to be affected in such a way that the transport along the Nunasvaaravägen would constitute an obstacle to the permissibility of the activity.

The court considers that the minor impact that may occur on the transport route classified as national interest through disturbances (even disturbances from the consequent activities in the form of transport) does not reach the level that it is necessary to make a balance between national interests in accordance with ch. 3. Section 10 of the Environmental Code.

The Rovaniemi Environmental Committee and the Reindeer Herding Association have stated during the proceedings that there is no assessment of the consequences for reindeer husbandry on the Finnish side. Based on the distance from the mining operations to Finland and taking into account the court's assessment regarding the impact on the Torne and Kalix river water systems, the court considers that it can be ruled out that the operations have any impact on reindeer herding on the Finnish side.

#### Summary assessment reindeer husbandry

The company's proposal to regulate in conditions that the operation of the mining operation for the six months during the year when the Sami villages do not use the area is a comprehensive damage mitigation measure that reduces the impact on reindeer husbandry. The Land and Environment Court's assessment is that reindeer herding will continue to be able to be carried out both during operation and

after the termination and restoration of the mining operations, despite the disturbances that the requested operation will obviously entail. The permanent area loss, which three out of six open pits entail, is limited and must be accepted. Overall, the Land and Environmental Court considers that the reindeer husbandry and the applied for activity can coexist in the manner indicated by the company and that there is no obstacle to admissibility in the parts that are now being tested in this regard.

*Other land use interests and national interests in the area*

The location of the applied for business is in an area designated as a national interest for *valuable substances and minerals* due to the deposits of graphite found in the area. The area has been demarcated in detail by SGU. The requested operation does not prevent mining of deeper-lying ore in the future, and the planned operation is therefore compatible with the national interest in valuable substances and minerals (Chapter 3, Section 7 of the Environmental Code).

The roads E10 and E45 and the railway between Råtsi and Svappavaara are designated as being of national interest for *communication*. The location of the operation is within the MSA area for Kiruna Airport, but Swedavia has had no objections to the operation during the consultation. Based on what emerged in the case, it is judged that the requested activity does not significantly hinder the utilization of these facilities (Chapter 3, Section 8 of the Environmental Code).

The area has been designated as being of national interest for *total defense* in that it is a low-flying area and of national interest for military weather service (weather radar). The armed forces have had no recollection of the operation. The requested activity is therefore not judged to significantly oppose the interests of the total defense force (Chapter 3, Section 9 of the Environmental Code).

Torneälven is a watercourse of national interest for *commercial fishing*. As the court below has assessed partly that the activity will not involve a change in the water quality in Torneälven and partly assessed that Östra bäcken does not constitute a spawning and rearing area for salmon, the court also makes the assessment that commercial fishing will not be significantly affected (Chapter 3, Section 5 of the Environmental Code).

Torneälven is also designated as national interest for *nature conservation and outdoor life*. The operation is not located in the immediate vicinity of the river and it is therefore the court's assessment that these national interests will not be significantly affected by the operation (Chapter 3, Section 6 of the Environmental Code).

The company has had a cultural environment analysis and an archaeological investigation carried out in the area. No ancient remains were found in the operational area. Seven other cultural-historical remains will likely disappear as they are located where the open pits and the sand and gray rock warehouses are located. Six of these cultural-historical remains consist of remains from prospecting and one remains consists of a smoking device in the form of a stone-shod immersion with a rusty tin barrel. The Land and Environment Court assesses that the activity will have small consequences in terms of *the cultural environment* (cf. Chapter 3, Section 6 of the Environmental Code).

According to the Land and Environmental Court's overall assessment, the applied for activity, with the protective measures and precautionary measures that are possible to take, does not conflict with any of the conflicting land use interests currently being dealt with, and the activity is therefore permissible from that aspect.

#### *Summary assessment opposing land use interests*

The opposing land use interest that will mainly be affected by the operation is the reindeer husbandry. The court has judged above that the business can coexist with reindeer husbandry. The requested activity has not been judged to reach the level that it can be said to be incompatible with opposing interests. A balance between national interests according to ch. 3. Section 10 of the Environmental Code is therefore not necessary in the case. In summary, the Land and Environmental Court assesses that there are no conflicting land interests that prevent the operation's permissibility. Even taking into account the location from a housekeeping perspective, the location therefore appears to be appropriate (cf. ch. 2 § 6 and ch. 3 §§ 1-2 of the Environmental Code).

#### **Impact on surface and groundwater**

The applied area of activity is located next to Lake Hosiojärvi and encloses the lake on its western and northern sides. The lake's outlet connects to the Östra bäcken named in the case. To the west of the operational area is another smaller stream, named Västra bäcken in the case. Both streams flow into Torneälven. Östra brook flows into Torneälven about 1.5 km downstream of the bridge over which Nunasvaaravägen crosses the river. Västra- and Östra bäcken and Torneälven are part of the Natura 2000 area Torne- and Kalix river system (SE0820430) (see more below under the heading Natura 2000).

There are no designated groundwater bodies in the direct vicinity of the planned activity. The nearest groundwater body is on the south side of the Torne River.

The Torneälven is listed as a water body and has established environmental quality standards. The section that flows past the mining area at Nunasvaara is 104 km long and stretches from Luspajärvi to the inflow of the Lainoälven (SE752023-175459). The ecological status of the river is good, while the chemical status (excluding mercury and PBDEs) is not classified. The environmental quality standard is good ecological and chemical status. Hosiojärvi and Västra and Östra bäcken do not constitute water bodies, but are referred to as so-called other water, and thus lack established environmental quality standards.

The question of the impact of mining operations on surface water, and to some extent the impact on groundwater, has been discussed both during the exchange of letters and during the main hearing. Especially if and in that case how the water body Torneälven may be affected as a result of emissions and if the impact leads to transboundary consequences. In the event of an impact on the Torneälven, the applied activity must not contravene the water directive's non-deterioration requirements and prohibition of endangerment, which in 2019 was incorporated into Swedish law through the regulations in ch. 5. Section 4 of the Environmental Code. According to the provision, a review authority may not allow an activity or a measure to be started or changed if it gives rise to such increased pollution or disturbance which means that the water environment deteriorates in an unauthorized way or which is of such importance that it endangers the possibility of achieving that status or potential that the water must have according to the environmental quality standard. When examining for a new permit and when re-examining a permit, the provisions and conditions must be decided which are necessary for the activity not to cause such a deterioration or such an adventure as specified in the statute. With regard to the impact on the waters that are not surface water bodies, Hosiojärvi and the unnamed streams, Västra and Östra, the environmental code's general requirement that the environmental impact must not be unacceptable applies.

The company's application shows that the release of excess water from the operation will affect Hosiojärvi, Östra bäcken and Torneälven, but not Västra bäcken. However, both streams will be affected hydrologically through lower flows due to groundwater lowering caused by the county holding of open pits.

The company has stated that county retention water from the open pits, runoff from industrial areas and ore stockpiles, runoff from non-soil-covered parts of and leachate from the sand and waste rock

reservoir, as well as process water from the beneficiation plant, must undergo purification before it is allowed to overflow into Lake Hosiojärvi. The purification consists of conventional processes in the form of lime treatment, precipitation and sedimentation. From the two treatment plants to be built, the water will be led via a clarification basin to Hosiojärvi. Ditches, pump pits, basins and other plant parts that handle the water that is intended to undergo purification must be tight. The company has had trials carried out to assess the efficiency of planned treatment plants in terms of cleaning the collected water. The results have been calculated for full production (year 25). They show that the environmental quality standards for the water body Torneälven will not be exceeded and that there will be no noticeable impact. As for Hosiojärvi and Östra bäcken, there may be moderate or small changes in terms of water quality.

The company has given an account of how investigations and calculations have been carried out. According to the court, the basis and calculations reported by the company are based on accepted methodology. The court has not perceived that there would be a lack of input or that uncertainties and assumptions could be of such a magnitude that the results cannot be considered reliable. The court considers that the investigation in the case shows that as long as water is purified by constructing proposed purification facilities, the operation will be able to be carried out without risk of an unacceptable environmental impact on Hosiojärvi and Östra bäcken. With regard to Torneälven, into which Östra bäcken empties, the court agrees with the company's assessment that there is no risk of the water environment deteriorating in an impermissible way or that it endangers the possibility of achieving the status or potential that the water should have according to environmental quality standards.

In the case, it was also a question of whether the Vittangi drinking water source, which has its water intake in the Torneälven approx. 9 km downstream of the outlet of Östra bäcken, could be negatively affected by discharges to water from the operation. The company has shown that planned operations, both during operation, at the end of operations and in a hypothetical case when the operation is operated without treatment facilities, result in very small changes to Torneälven's water quality. The Swedish Food Agency's regulations (SLVFS 2001:30) will be able to be contained. The Land and Environmental Court therefore shares the company's assessment that there is no risk of the Vittangi drinking water source being negatively affected as a result of the operation.

The county maintenance of the open pits is estimated to lead to a lowering of the groundwater within an area approx. 600 meters from the center of the open pits. The flow of water in Torneälven will not

be affected by this. The flow in Hosiojärvi, Östra- and Västra bäcken will decrease slightly. In Hosiojärvi and Östra bäcken, the reduced flow will be compensated by increased inflow in the form of breakwater. Overall, it is the court's assessment that the assessed flow changes are relatively small and that the groundwater diversion is therefore not an obstacle to the admissibility.

Based on the evidence available in the case in June 2021, the Land and Environmental Court judged that it could not be ruled out that the applied for activity could cause cross-border effects. Taking into account the evidence that is now in the case, the Land and Environmental Court, as stated above, has assessed that the applied for activity will not have any impact on the water quality or flow in the Torneälven downstream of the outlet of Östra bäcken. It follows from this that the court now also assesses that it can be ruled out that the activity will have any cross-border consequences in this regard.

In the case, opposing parties have stated that it is necessary for the court to establish final conditions for discharges to water in order for the activity to be considered permissible. In the court's opinion, it is the influence from the activity that concerns the admissibility itself. It is therefore not decisive in the case for admissibility if the court orders final conditions for discharges to water or postpones the issue during a trial period (cf. as well as in MÖD 2021:5). In summary, the court assesses that the activity's impact on surface and groundwater does not constitute an obstacle to the permissibility of the activity. It will be possible to limit emissions through conditions to the extent that the impact on the water environments becomes acceptable. Any obstacle to the admissibility of the activity in light of the requirements according to ch. 5. Section 4 of the Environmental Code does not exist.

### **Nature 2000**

Talga AB has applied for permission according to ch. 7. Section 28 a of the Environmental Code to, within the framework of what the permit otherwise allows, conduct activities that can significantly affect the Natura 2000 area Torne and Kalix river system. The County Administrative Board has assessed that, according to the company's request, a so-called Natura 2000 permit can be granted if final conditions are prescribed for relevant substances in overflow water and the recipient.

The surface waters that are part of the Natura 2000 area and are affected by the requested activity are partly the Torneälven and partly two smaller watercourses, Östra and Västra bäcken. The application covers a mine that will have relatively limited operations (only during the months of June through November) compared to other mines in the county and can most closely be described as a relatively common quarry in terms of the extent of mining. The operation will also include a beneficiation plant

year-round, an extraction waste facility in the form of a sand and waste rock warehouse. Overall, the court makes the assessment that the planned activity can typically affect the environment within the affected Natura 2000 area Torne and the Kalix river system through discharge to water, which is why a permit is required for the planned activity. As the court has previously explained, it is deemed possible to limit discharges to the recipient through conditions so that the impact resulting from discharges to water becomes acceptable and that the issue of final conditions or a probation order in this case is not in itself decisive for admissibility.

According to the conservation plan for the Torne and Kalix river system, the overall purpose of the area's conservation is that it should contribute to the conservation of biological diversity by maintaining or restoring favorable conservation status for the included habitat types and species at the biogeographical level, that is, for the entire Natura 2000 network. The purpose of the individual Natura 2000 area is also to locally preserve or recreate a favorable conservation status for the nature types and species that have been designated.

The company has carried out inventories of water environments, carried out a recipient investigation and an investigation into the impact on the Natura 2000 area. Of the nature types designated for the Torne and Kalix river systems, the Torne river is judged to constitute a "natural watercourse of the Fennoscandian type" (3210). According to the investigation, the Eastern and Western streams as a whole are assessed not to constitute the nature type "Small watercourses with floating leaf vegetation or aquatic mosses" (3260) because the watercourses naturally lack the structure and function required to maintain a viable population of the typical species of trout and grayling . Of the designated species, salmon have been encountered during the company's investigations in the area. Reproduction of salmon occurs in Torneälven. The Västra brook is not salmon-bearing, while the lowest part of the brook (about 50 m upstream of the mouth of Torneälven) is a possible spawning area for salmon. The Eastern stream, however, has a hiking barrier about 30 m from the mouth. Otters are also considered to be present in the area, however no observations have been made.

The Land and Environmental Court shares the assessments made in the investigations and finds, like the company, that the operation is not judged to harm the habitats in the area that is intended to be protected. This applies even if it is found that Östra and Västra bäcken constitute a protected nature type because there are no occurrences of typical or designated species in the streams, which is why the activity cannot affect the conditions for a favorable conservation of the nature type or the species. Even with regard to the designated species, the court makes the same assessment as the company, i.e.

that the activity does not result in the designated species being exposed to a disturbance that could significantly hinder conservation in the area. There are therefore prerequisites according to ch. 7. Section 28 b of the Environmental Code to grant a Natura 2000 permit.

Overall, the Land and Environment Court finds that planned activities cannot damage the habitats that are intended to be protected or cause the species that are intended to be protected to be exposed to a disturbance that can significantly hinder the conservation of the species in the area. Provisions na on Natura 2000 thus do not constitute an obstacle to the admissibility.

### **Species protection**

The wording of Section 4 of the Species Protection Ordinance (2007:845) was amended on 1 October 2022 and lacks transitional provisions. This means that the new wording must be applied when the Land and Environment Court examines the current case. According to the current wording of section 4, first paragraph 4, it is forbidden to intentionally disturb wild birds, especially during their breeding and breeding period, unless the disturbance has no significance for (a) maintaining the population of the bird species at a satisfactory level, especially based on ecological, scientific and cultural needs, or (b) restore the population to that level.

The company has had inventories carried out in the years 2015 through 2019.

The results of these are reported in "Natural value inventory 2015–2019 Hosiorinta (Nunasvaara), Kiruna Municipality, 2019". This was later supplemented with an "Inventory of raptor nests at Hosiorinta (Nunasvaara), Kiruna municipality, 2020" and "Inventory of birds at Nunasvaara Södra, Kiruna municipality, 2020-2021". During the main negotiation, certain additions made during the year 2022 were also reported.

Regarding birds, about 60 species were observed within the inventory area, of which about 50 species were judged to belong to a more or less permanent breeding bird fauna. All birds are protected according to Section 4 of the Species Protection Ordinance. During the inventory of vascular plants, just over 100 species were noted. Some of these are protected, orchids (Section 8 of the Species Protection Ordinance) and fleabane, carpet beech, flat-faced and reef beech (Section 9 of the Species Protection Ordinance). However, the orchids did not occur within the operational area, while the lupine species, apart from flat lupine, occurred within and adjacent to the operational area. The species common frog, viper and forest lizard (Section 6 of the Species Protection Ordinance) were found in the form of

animals or tracks, but not within the area of operation. Some mosses and lichens were also found but these are not protected.

The Nature Conservation Association has made a comparison between the number of nature conservation species in the company's presented natural value inventories and what the association found during visits, forest walks and inventory in conceivable areas with natural values during June and September 2022. The association has particularly pointed out that the association found more mushroom species than what was found in the company's inventories . However, none of these species are protected.

The company has proposed conditions that felling within the area of operation may not take place during the period from May 1 to July 31 inclusive. Furthermore, the company has undertaken that dead wood from felled forest land will be spread out in neighboring forest land areas to benefit well-living species. With regard to birds, the company assesses that the possible impact on birds that may occur, with the proposed conditions regarding when felling may take place, has no significance for the maintenance of the populations of the species concerned at a satisfactory level both locally, regionally and nationally. The company therefore assesses that the prohibition in section 4 first paragraph 4 of the species protection ordinance does not apply to birds.

Regarding the impact on larch species, the company believes that, since the purpose of the activity is clearly different from removing or damaging a protected plant, there must be a risk of impact on the conservation status of the protected species in the area. The applied activity is not judged to cause any impact that makes it difficult to maintain a favorable conservation status of any of the existing larch species at local, regional or national level. The company therefore believes that the prohibitions in Section 9 of the Species Protection Ordinance do not apply to lupine species.

In the event that the court does not share the company's assessment, the company has requested, as a reservation, that an exemption from the prohibitions in Section 4 of the Species Protection Ordinance be granted in accordance with Section 14 of the same regulation for lappis, greater woodpecker, three-toed woodpecker, common screech and pied crow. Furthermore, the company has requested, as a reservation, that an exemption from the prohibitions in section 9 be granted for lupine species in accordance with section 15 of the species protection ordinance.

Administrative Board has stated, with regard to what appears in Section 4 first paragraph 4 of the Species Protection Ordinance and the company's report, that the ban will not be updated for the mentioned bird species in the area of Nunasvaara. With regard to the impact on larch species within the area of operation, the county administrative board has considered that there are conditions for issuing a dispensation.

The Land and Environmental Court shares the county board's opinion that the prohibition in section 4, first paragraph, 4 of the species protection ordinance is not actualized for lappis, greater woodpecker, three-toed woodpecker, shrike and pied crow in the area of Nunasvaara. Nor are the prohibitions in section 4 of the same regulation updated. This is on the condition that no logging takes place within the area of operation during the period from 1 May to 31 July in accordance with the company's terms and conditions proposal.

According to Section 15 of the Species Protection Ordinance, an exemption from Section 9 may be granted if there is no other suitable solution and the exemption does not hinder the maintenance of a favorable conservation status of the species' population in its natural distribution area. The company has stated that there is no other suitable solution. The determining factor in locating a mine is the location where the deposit actually exists. The deposit is well identified and with a good margin mineable. Various alternatives concerning the design of the mining operations have been made, and the now applied alternative has been judged to be the best based on a number of assessed aspects. No other designs could also mean that a possible impact does not occur.

The Land and Environmental Court shares the company's assessment regarding the possibility of another suitable solution and that a dispensation does not hinder the maintenance of a favorable conservation status of the species' population in its natural distribution area. Dispensation can thus be granted for the mentioned species of lupine. The prohibition in Section 9 of the Species Protection Ordinance therefore does not constitute an obstacle to admissibility.

### **Waste and finishing**

According to section 64 of the Ordinance (2013:319) on extractive waste (extractive waste ordinance), an activity that is covered by the same and applies for a permit according to ch. 9 or ch. 11 the environmental code, inform the licensing authority about who is to conduct the activity, the location of the activity, the content of the required waste management plan, the security required in relation to an extraction facility and how it is otherwise ensured that the regulations in the regulation are followed.

The company's application for a permit for the operation contained a waste management plan, with appendices on waste characterization and a status report. During the processing, the company revised the waste management plan. In an appendix to the waste management plan, the company has presented a separate aftertreatment plan with characterization and classification of extraction waste. The gray rock and the enrichment sand have been judged to be potentially acid-forming and contain elevated levels of metals. Hydroxide sludge from the water treatment has been characterized as non-hazardous waste and must be deposited separately in a cell in the combined sand and waste rock reservoir. None of these wastes are to be regarded as inert waste according to the Extractive Waste Ordinance. The post-treatment of the area will be carried out so that the risk of the occurrence of acidic leachate, mobilization and spread of metals is minimised.

At the main hearing, the company has reported, in contrast to what was stated in the documents, that the bottom surface of the sand and waste rock reservoir may be built in stages and that the dewatering of the hydroxide sludge from the water treatment will take place in geotubes on site in a separate cell in the combined sand and the Gråberg magazine.



The company's figure as presented at the main hearing.

The Land and Environmental Court assesses that the company, with submitted documents and accounting at the main hearing, has fulfilled its obligation to provide information according to the Extractive Waste Ordinance. The court also shares the company's assessment that the sand and gray rock storage facility is not a risk facility according to Section 10 of the Extractive Waste Ordinance, which is why it is not covered by the requirements for a strategy to prevent serious accidents, safety management system and internal emergency plan according to Sections 57-63 of the Extractive Waste

Ordinance. The Land and Environmental Court therefore assesses that the waste management plan meets the requirements of the regulation. Thus, in this regard, there is no bar to admissibility.

### **Summary assessment of admissibility and permission**

According to the Land and Environmental Court's overall assessment, the application covers a mine that will have relatively limited operations compared to other mines in the county and that, with regard to the extent of the mining, it can be compared to a relatively ordinary rock quarry. The court has judged above that the requested localization is suitable according to ch. 2. Section 6 of the Environmental Code. The activities with the land areas that are taken into use cannot, in light of the need for long-term management and efficient resource utilization, not in a tangible way harm the relevant national interests and the activities can coexist with the opposing interest, reindeer husbandry. The investigation in the case has shown that as long as potentially contaminated water is cleaned, the operation will be able to be carried out without risk of unacceptable environmental impact on lake Hosiojärvi and Östra bäcken. In the case of Torneälven, into which Östra bäcken flows, the activity does not conflict with the water directive's non-deterioration requirements and prohibition of endangerment (cf. chapter 5, section 4 of the environmental code). The court has found that Natura 2000 permits can be issued and that the species protection ordinance does not prevent admissibility. Obstacles against permission according to the housekeeping regulations in ch. 3 and 4. the environmental code does not exist. Taking into account the evidence now available in the case, the court considers that it can be ruled out that the operation will lead to any cross-border environmental impact in Finland. In a final assessment of the rules of consideration, the Land and Environmental Court's assessment is that the activity will not give rise to damage or inconvenience of significant importance to people and the environment, which means that the activity cannot be permitted. The activity is therefore permissible and Talga can be granted a permit in accordance with what appears from the judgment. The permission should be combined with an obligation for the company to carry out compensation measures for the loss of natural values and otherwise with the conditions stated below.

### **LIMITATION OF PERMIT**

The right-of-use agreements and lease agreements that the company has entered into due to i.a. applied for water activities are time-limited to 50 years. It is true that the agreements can be extended and aim for the company to acquire the properties, but whether any acquisition or extension of the agreements will take place is of course not completely decided. Permission for water activities can only be granted if the applicant has control over the water within the area where the activity is to be

conducted. The company has declared that it has no objection to a 50-year time limit on the permit. As the company's availability is limited in time, a permit for the operation cannot be granted for more than 50 years, counted from the oldest lease agreement dated May 18, 2020. The time limit applies to the entire permit.

#### ART PROTECTION DISPENSATION

The Land and Environment Court has assessed above that the conditions for granting a species protection dispensation from the prohibitions in § 9 of the Species Protection Ordinance are present for carpet larch, flat larch and reef larch. Species protection dispensation must therefore be notified.

#### COMPENSATION MEASURES

Of ch. 16 Section 9 of the Environmental Code states that permits or dispensations and revocation of permits or dispensations may be combined with an obligation to carry out or pay for, among other things, special measures to compensate for the intrusion into public interests that the activity entails.

At an early stage during the processing, the County Administrative Board has submitted that the company must submit a proposal for a compensation plan in which appropriate compensation measures must be reported for the requested activity and its impact on the described natural environments. The company has reported at the main hearing that it has carried out quantitative calculations

of the biological diversity in the planned operational area. The calculation has been carried out with a model, CLImB (Changing Land use Impact on Biodiversity), which is under development and has been adapted to Swedish conditions and is based on input data from nature value inventories. The model makes it possible to calculate an area's present value in the form of biodiversity points, loss of biodiversity points as a result of exploitation or other activity and the possibility of improving and/or creating conditions for biodiversity, both within the operational area and compensation areas, and thereby created biodiversity points.

The company has undertaken to compensate the estimated loss of natural values plus 15% of the impact value, which has been estimated at 189 so-called biodiversity points. As no agreement has yet been signed with property owners, according to the company, it is currently not possible to say with certainty which areas will be included in the ecological compensation. The plan with the compensation is to, to the greatest extent possible, compensate the natural environments that are lost through investments in similar natural environments within the municipality of Kiruna. At the main

negotiation , the company has undertaken to also include water environments in the further investigation into ecological compensation.

The company and the county board have each proposed a condition for ecological compensation. The company's proposal for conditions contains a provision about how far-reaching the compensation measures must be and that they must be taken within the municipality of Kiruna or within Norrbotten County, while the county board's proposal states that the measures must refer to an area that has or will receive similar natural values as the area affected by the operation .

With regard to the company's proposal for compensatory measures, the County Administrative Board has considered that the time for submitting an investigation should not be tied to both that the permit has been used and that it has gained legal force and that the last sentence under which conditions the condition applies is not necessary. The County Administrative Board has emphasized that it can also be stated that the supervisory authority can allow later submission of the compensation plan.

The Land and Environmental Court assesses that the company's proposal for how the natural values should be assessed is clearer than the county board's proposal, which is why the company's formulation of the condition in this part must be notified. On the other hand, the county board's proposal that the measures should primarily be taken within Kiruna municipality and secondarily within Norrbotten County is better than the company's proposal. There is then no need for a regulation that the supervisory authority must approve the area in which the compensation is to take place.

A compensation plan must be drawn up in consultation with the supervisory authority and submitted to the supervisory authority no later than one year from the permit becoming legally binding and being used, or later if the supervisory authority so allows. The court does not consider it necessary for the supervisory authority to approve the compensation plan, on the other hand, the supervisory authority must be delegated to later decide on which compensation measures are to be taken. The supervisory authority should also be delegated the possibility to extend the time for when the report on compensation measures must be submitted at the latest.

With regard to the company's proposal that the obligation to carry out compensation measures should only apply under the condition that the company obtains land access as well as the required permits and exemptions, the court makes the following assessment. By the fact that the compensation

measures can be carried out within the entire county of Norrbotten and that the supervisory authority can allow later accounting, the court judges that it will be possible to find a suitable and accessible place where the necessary permits and exemptions can be granted. Should this not be the case, the company may use the opportunities available and request a change to the condition (see chapter 24, section 13 of the Environmental Code).

In summary, the Land and Environmental Court finds that a condition must be announced with the obligation to carry out compensatory measures and that the condition must be designed in a manner that appears from the judgment (condition 20).

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### **Introduction**

In the application, the applicant has submitted proposals for conditions and deferred issues. The applicant's proposal has also been adjusted and supplemented during the main hearing following comments from other parties. In some parts, the applicant's proposal differs from the terms that the other parties have preferred. The Land and Environmental Court comments below on the conditions that the court finds reason to formulate in a different way than what the applicant proposed, as well as any other circumstances that cause comments on the part of the court. The reasons for the terms and conditions have in some cases been touched on previously by the court, which is also evident in the extent indicated below. The numbering below refers to the conditions stipulated in the judgment.

### **Conditions and deferred matters**

#### *General condition (condition 1)*

The company has proposed a general condition and it is also the court's assessment that the permit should be combined with such a condition. However, the court considers that a different wording than the one proposed by the company should be chosen where it is made clear that it also covers the execution of the works and that it applies on the condition that nothing else appears from this judgment. The condition must therefore be designed in the manner shown in the judgment (condition 1).

#### *Blast (Conditions 2-4)*

The company has proposed a condition regarding when blasting may be carried out and that nearby residents who wish to be informed about times for blasting (proposed condition 2). The company originally proposed that the condition should also regulate the time of year blasting may take place in

order to limit, among other things, impact on the interests of reindeer husbandry. Following comments from Sami villages, the company has adjusted the current proposed conditions at the main hearing and instead proposed a new condition regarding when in the year various works may take place, to protect mainly reindeer husbandry (see below under the heading reindeer husbandry). The company has further proposed a condition that a time for blasting must be determined in advance and that, in accordance with practice, it must take place after a clear audible warning signal (proposed condition 3). No objections have been raised against the company's proposed terms. The court considers that the company's final proposed conditions on how and when blasting may take place and that nearby residents who wish to receive information are appropriate. However, the court considers that this should be regulated in a common condition. The condition must therefore be designed in a way that appears from the judgment (condition 2 of the judgment).

The company has, following comments from the county administrative board on the need to regulate vibrations and air shock waves, submitted final proposals for conditions (proposals for conditions 4-5). No objections have been raised against the company's proposal for regulation of air shock waves. The conditional proposal appears appropriate and expedient and must therefore be prescribed (condition 4 of the judgment).

In regard to the regulation of vibrations as a result of blasting, the county administrative board has emphasized that it must be the risk of disturbances, the perceived disturbance, which must be the guiding principle when prescribing conditions and determining limiting values. The County Administrative Board has emphasized that blasting will occur when the holiday homes are mainly used and that it should be considered whether the company's proposed levels for vibrations are reasonable and that, based on a comparison with other businesses, it can be considered whether level n should be set to 3 mm/si instead of 5 mm/s and 5 mm/si instead of 7 mm/s.

The levels that the company has proposed are common in permits for mining operations, while lower levels are normally prescribed in mining permits. When designing conditions, it must be taken into account that the operator can never have full control over the properties of the rock. With regard to which levels should be prescribed, the court can state that to ensure that a vibration value is contained, the individual blast needs to be adjusted with margins to the limit value. Low limit values can indeed mean that smaller salvos are detonated, but it can also lead to the need for significantly more detonations, which in turn can be associated with a greater disturbance. Furthermore, the period of activity allowed for mining is limited to only six months per year (see below under the heading

reindeer husbandry). The Land and Environmental Court considers, with regard to the above and the company's accounts in the case, that there is no reason to deviate from the company's proposal for levels, why this should be prescribed. The levels may be perceived as disturbing, but there is no risk of damage to nearby buildings. The court further agrees with the company's assessment that the risk of perceived disturbance is reduced by informing nearby residents before blasting in the manner prescribed in condition 2. However, the Land and Environmental Court considers that a general protective measure should also be prescribed in the condition that the company must carry out the blasting so that vibrations in the nearest homes are minimized. Conditions for vibrations as a result of blasting in open pits must therefore be designed in a manner that appears from the judgment (condition 2).

*Noise (conditions 5-6)*

The main sources of noise from the operations will be drilling, crushing and loading. In order to limit noise disturbances, the company has undertaken a number of noise reduction measures; noise barrier along the south-west side of the open pit, primary crusher surrounded by moraine, secondary crusher and concentrator built in and a limitation of rock drilling to daytime in the open pit during the initial stage.

The company has proposed two conditions regarding noise, one that applies to the construction phase and one that applies to the operation of the business itself. With regard to noise during the construction works, the company has proposed a condition with noise levels in accordance with the Swedish Environmental Protection Agency's general advice on noise from construction sites (NFS 2004:15), except for the noise level for evening hours Saturday, Sunday and holidays where a 5 dBA higher value is proposed. Furthermore, the company proposes that particularly noisy construction work (such as drilling, rock knocking and piling) should be exempted with regard to noise levels. For these works, a restriction must instead apply that they may only be carried out on weekdays during the day (07:00-19:00). The condition regarding the operation of the business complies with the guidelines that the Swedish Environmental Protection Agency specifies shall be the starting point and guidance for the assessment according to the environmental code's rules of consideration that must be made at each individual case.

The County Administrative Board has mainly objected that the noise levels during the construction work should be lower than what the company has proposed and that a condition is needed to protect reindeer

husbandry, similar to the condition announced to protect certain bird populations in the court's partial judgment on 1 December 2022 regarding Kaunis Irons AB :s operations in Pajala municipality (M 2090-19). The issue of noise conditions to protect reindeer husbandry is dealt with below under the heading reindeer husbandry.

The Land and Environment Court finds no reason to deviate from the noise levels reported in the Swedish Environmental Protection Agency's general advice on construction noise. The company has not given sufficient reasons why higher levels than the general advice should be accepted in the evening (19–22) Saturday, Sunday and public holidays. The noise level at these times must be set at 45 dBA. With regard to particularly noisy construction works, the court considers that the company's proposal to limit that they may only be carried out on weekdays can be accepted. Conditions regarding noise for the construction phase must therefore be designed in a manner that appears from the judgment (condition 5)

Regarding the company's proposal for sound levels in the noise condition for the operation, no objections have been raised against it. The proposal appears to be suitable and expedient and must therefore be prescribed (condition 6).

*Chemicals and hazardous waste (condition 7)*

The company has proposed a condition regarding chemicals and hazardous waste (proposed condition 8). No objections have been raised against the proposal. The company's proposed conditions appear to the Land and Environmental Court to be justified and appropriate and must therefore be prescribed (condition 7).

*Dusting (condition 8) and air emissions of dust (investigation regulation U2)* The company has proposed a general condition regarding dusting (proposed condition 9). Even if the condition is general, as stated by the county administrative board, the company's condition proposal appears to the land and environment court as appropriate and must therefore be prescribed (condition 8 in the decision).

The company has proposed a condition that measures should be taken to limit the spread of dust and that the issue of conditions for dust fall should be postponed and investigated for four years. In order to gain experience with the business's dust dispersion and to obtain a basis for announcing a final condition in this part, the issue of emissions to air of dust should be postponed for a trial period. The

Court thus considers that the deferred issue should not be limited to dust fallout. It should cover emissions to air of dust so that all measures that can reduce dust emissions are covered by the deferred issue.

During the investigation period, it is not necessary to order a provisional regulation, as the county administrative board emphasized, but the court considers that it is sufficient with the direction, in order to limit the dust fallout, which the company's proposed investigation regulation allows. The court considers, in contrast to the company, that it is most reasonable to link the investigation time to the fact that the permit has been used. Taking into account the above, the investigation regulations must be designed in a way that appears in the judgment (see investigation regulations U2).

*Reindeer nutrition (conditions 9-10)*

As the court stated under the heading reindeer husbandry, the company's commitment to only operate the mining operations for the six months during the year when the Sami villages do not use the area is a comprehensive damage mitigation measure that reduces the impact on the reindeer husbandry. The court, like the company, believes that this should be regulated in terms and conditions. The company has, following comments from the Sami villages at the main hearing, clarified which specific activities should not be carried out during this period. With regard to the period during which mining may not be carried out, the company has also adapted it based on the views that the Sami villages have given at the main hearing, and the court therefore finds no reason to depart from the proposed time period. The company's proposed conditions must therefore be prescribed in accordance with the judgment (condition 10).

With regard to the company's proposal for conditions for consultation, the Sami villages have admittedly emphasized at the main hearing that there are no conditions that allow reindeer herding in the area to continue, but they have also had no objections to the company's proposed conditions, but have emphasized that they are conditions that normally prescribed. The company has also proposed that, after the consultation has been completed, a report on the consultation should be submitted to the supervisory authority. The County Administrative Board has questioned what the purpose of the report should be and whether it should be combined with a delegation to the County Administrative Board to announce conditions. Furthermore, it has been emphasized that only information about consultation can take place in the company's environmental report. In the court's opinion, it appears necessary and expedient to prescribe a condition that the company must carry out consultations in order to minimize the negative impact of the operation on reindeer husbandry. Since the report on the

consultation is most urgently aimed at informing the county administrative board that a consultation has been carried out, the court considers that such information is appropriately given in the environmental report instead of in a separate report on the carried out consultation.

The condition must therefore be designed in a way that appears from the judgment (condition 9).

The County Administrative Board has requested that, in order to protect the interests of the reindeer husbandry, a condition should also be prescribed regarding limit values for noise during the time of year when quarrying in the open pits with related activities takes place. The County Administrative Board has considered that the limit value should be set at 35 dBA and at a given point about 1 km east of the industrial area. Gabna Sameby has emphasized at the main hearing that the level should be 25 dBA based on recreational areas as soon as possible. The company has opposed the county board's proposal.

When it comes to noise, there are extensive investigations into how people are affected by noise and which levels are perceived as disturbing and which levels are harmful to health. The court does not consider that there is reason to specifically regulate the noise emissions to protect the reindeer herding. Unlike other cases, where noise has been regulated in special conditions in addition to general noise conditions for the activity, it has been a matter of nature reserves or to protect nesting birds (cf. judgment of 24 June 2021 in case M 3771-19 and the Land and Environment Supreme Court's judgment of 14 October 2014 in case M 10231-13). The Land and Environment Court states that the condition in the partial judgment regarding Kaunis Irons AB's operations is primarily intended to protect a single species (sedge goose) in order to be able to issue a species protection dispensation and that there was evidence in the case that showed when population disturbance can be expected to occur. In the present case, it is not a question of a condition for species protection, but the condition is proposed to limit the impact on reindeer husbandry. With regard to reindeer, the company has presented certain scientific investigations which state that reindeer generally have a high hearing threshold and seem to hear worse than humans. However, how the reindeer perceive sound and which noise levels are disturbing to the reindeer has not been investigated in more detail. Announcing a noise condition to protect the reindeer herding is, according to the court's assessment, not appropriate when there is no basis regarding noise level to relate to. Furthermore, the operation of the mining operation will take place during the six months of the year when reindeer husbandry does not use the area. The court considers that the interests of the reindeer industry are sufficiently taken into account in the case. The County Administrative Board's proposal for conditions on noise to protect reindeer husbandry should therefore not be prescribed.

*Release to water (Condition 11 and Provisional Regulation P1)*Purification

Both the company and the county board have submitted proposals for final conditions that potentially contaminated water should be cleaned. A condition for a permit is that potentially contaminated water undergoes purification, which is why a final condition on this must be prescribed. With regard to the design of the condition, the company's final proposal for conditions has been formulated in such a way that the types of water that must undergo purification are enumerated (proposed condition 12). The court, like the company, believes that it is important to state clearly in the condition which water streams are to be cleaned, and the company's proposal is considered by the court to be more precise in that respect than the county board's proposal. During the processing of the case, it has emerged that water from the cell for depositing hydroxide sludge must also be purified, which is why this should also be included in the condition.

With regard to how long purification should last, the company and the county administrative board have had different views. According to the company's proposal, the treatment plant must be operated for at least five years after the operation has ended, which the county administrative board has objected to as they believe that that time is too short. The County Administrative Board has considered that purification should continue as long as there is a need, and that the supervisory authority should therefore be able to both extend and shorten the time that purification takes place. The Land and Environmental Court believes that it is too early to decide how long the treatment plant will be in operation, although it is reasonable to assume that it will be at least five years. The Court notes that there is a provision in the Extractive Waste Ordinance which states that an extractive waste facility may be considered closed only when the remedial measures and other measures needed to close the facility have been inspected and approved by the regulatory authority. Furthermore, there are regulations on the responsibility of the operator after the extraction waste facility has been closed (Sections 71-76). The court considers that it is therefore not appropriate to regulate in more detail how long purification must last after the activity has ceased.

The condition regarding the purification of potentially contaminated water must, with regard to the above, be designed in the manner shown in the judgment (condition 11).

Final conditions or order on trial period for release to water

With regard to the question of the content of the water that is released, the company has primarily proposed that the question of which final conditions shall apply to releases to water be postponed for

a trial period, during which the technical, environmental and economic conditions to limit the release of a number of substances in water from the operation must be investigated. The County Administrative Board has primarily proposed that final conditions for discharges to water should be prescribed instead of postponing the issue during a trial period. Alternatively, the county administrative board has accepted that the issue be postponed on the condition that a provisional regulation for the water quality in Östra bäcken is prescribed according to the county administrative board's proposal. The majority of Finnish parties have, as the court understood it, considered that final conditions for discharges to water must be determined.

When the effects of the activity cannot be predicted with sufficient certainty when issuing a permit, the Land and Environmental Court may postpone the question of conditions until its experience has been gained from the impact of the activity (Chapter 22, Section 27 of the Environmental Code).

In the current case, it is a question of a new establishment of a business. As explained earlier, the court considers that the company has shown that the operation, through the construction of the proposed treatment plants, can be conducted without any unauthorized deterioration of the water environment or that the possibility of achieving an environmental quality standard is jeopardized. The County Administrative Board's proposal for final conditions is based on the results the company has obtained from calculations and laboratory tests. The company has stated during the main hearing that they are currently investigating other possible techniques with the aim of further reducing emissions and then mentioned i.a. reverse osmosis and ion exchange technology. Against this background, the court considers that in the present case it is appropriate to postpone the issue of discharges to water for a trial period instead of now making a decision on final conditions and ordering provisional regulations during the investigation period.

The County Administrative Board has emphasized at the main hearing that the probationary period may cover other subjects than what the company proposed so that the investigation, as it can be understood, will be expanded gradually. If the court, in connection with the granting of a permit to an activity, orders a probationary period according to ch. 22 Section 27 of the Environmental Code, it is only the question that has been postponed that can then be taken up for assessment when the probationary period procedure ends (cf. the legal cases the Land and Environment Supreme Court's judgment on 27 October 2016 in case M 10214-15 and MÖD 2004:4). That as the county board wishes, i.e. It is therefore not possible to expand the scope of the investigation during the probationary period. It should therefore be clearly stated in the deferred matter which subjects are

covered by the deferred matter in accordance with the company's proposal. The deferred question must therefore be formulated in a manner that follows from the judgment (deferred question 1).

Although it may appear natural to measure the flow of water discharged from the settling basin during the investigation, in order to e.g. be able to calculate the total burden on the recipient, the court believes that this should also be stated in the investigation regulations. Furthermore, it should be made clear in the investigation regulations that, in addition to reporting investigations, the company must also submit proposals for final conditions. In its proposal for investigation regulations, the company has stated that the company must notify the Land and Environmental Court and the supervisory authority about when the beneficiation plant is put into operation because it governs when reporting according to the investigation regulations must be done to the court. The court considers that it is clearer if all notification obligations that exist for the company appear under their own heading in the judgment. The investigation regulation (U1) must, with regard to the above, be designed in a way that appears from the judgment.

#### Provisional regulation for discharge to Hosiojärvi

The company has *primarily* requested that the provisional regulation cover pH and the dissolved contents of copper, nickel and zinc. During the main hearing, it emerged that, *in the alternative*, the provisional regulation should cover more substances according to the same model as proposed by the county administrative board, but with different concentrations. The County Administrative Board has proposed a provisional regulation that covers the same topics as the company's secondary application. The County Administrative Board has stated that, when drafting the proposal for a provisional regulation, they have based it on the investigations and laboratory tests carried out by the company. The company, for its part, has, when formulating both sides' proposals, calculated the levels that must be contained in order for the environmental quality standards to be met in Hosiojärvi, under the assumption that it would be a body of water. This has resulted in the levels that the company and the county administration propose for the majority of parameters being very different from each other.

The court has decided that the question of which final condition shall apply to discharges to water shall be postponed for a trial period and has assessed that the business as presented can be operated without impermissible damage to the water environment occurring. During that time, having a sanctioned probationary period regulation that specifies restrictions that in some cases are below the levels that the company's investigations have shown, in the way that the county administrative board proposes, does not appear to be expedient.

When establishing a provisional regulation, it may be possible, as the company has done, to "count backwards" from what the recipient can tolerate without an environmental quality standard being exceeded (cf. the Land and Environment Court's decision on 28 November 2019 in M 5798-18 , p. 30). However, it appears to the court that the company's proposal for a provisional regulation contains content levels that are in several cases unreasonably high, especially compared to the results of the laboratory tests carried out. This is not compatible with the intentions of the environmental code as this risks leading to the best technology not being used. In the court's opinion, it is reasonable that the provisional regulations have a margin in relation to the calculated emission levels of the order of 2 times for most parameters. Regarding monthly average values for zinc and sulfate, the company's proposal can be accepted. As regards total phosphorus and nitrate nitrogen, the county board's proposal is accepted.

The company's proposal for maximum values is generally higher than the county board's proposal. During the investigation period, the company must investigate various purification techniques and fine-tune the operation of the planned facility. According to the court, it is reasonable that individual values, for a shorter period of time, can become relatively high. The fact that the court has otherwise prescribed monthly average values also means that it is only on rare occasions that an individual value can be at the level of a maximum value because otherwise there is a risk that the monthly average value cannot be contained. The court therefore considers that the company's proposal for maximum values can be accepted.

With regard to the above, the provisional regulation must be designed in the manner that appears from the judgment (provisional regulation P1).

#### Provisional regulation for Östra bäcken

The County Administrative Board has accepted that the issue of discharges to water be postponed on the condition that a provisional regulation for the water quality in Östra Bäcken is prescribed according to a proposal submitted by the County Administrative Board. The purpose of this is to control the load of diffuse leakage from the operation together with the impact from flooding. The company has objected to this and, in case the court deems such a provisional regulation necessary, has submitted its own proposal for a provisional condition.

The volume of the overflow from the operation's clarification basin to Hosiojärvi is estimated, according to the information contained in the target, in the first few years to be in the order of 10% of the water that leaves the Östra bäcken's mouth at Torneälven.

With regard to the risk of diffuse leakage from the plant, in accordance with condition 12 prescribed in this judgment, trenches, pump pits, basins and other plant parts intended to undergo purification must be tight. The court therefore assesses that it is not likely that there will be diffuse leakage to such an extent that, in addition to the emissions that will occur from the clarification basin, they will have a measurable effect in the outlet of Östra bäcken, especially not already during the current investigation period. A limit value must normally refer to the point where the discharge leaves the facility, without regard to possible dilution (section 11 b of the ordinance [1998:899] on environmentally hazardous activities). According to the Land and Environmental Court, there is no reason to depart from what is stated in that provision. No provisional regulation shall therefore be prescribed at the outlet of Östra bäcken in Torneälven. Although no provisional regulation is announced, the company has emphasized that the control program will include sampling at sampling point SW4. It will thus still be possible to follow up any impact on the water quality in Östra bäcken.

*Facility (conditions 12-14)*

The company has, following comments from the county administrative board, submitted final proposals for conditions regarding the construction phase at the main hearing. The conditions include how construction of sand and gray rock reservoirs (proposition of conditions 15), construction of moraine storage (proposition of conditions 14) and how parts of the facility that handle water that must undergo purification should be constructed (including ditches) (proposition of conditions 13). The County Administrative Board has submitted its own proposal for the design of conditions for the construction of the sand and gray rock warehouse instead of the company's condition proposal 15.

The company's proposal for moraine storage, which the county administrative board accepted, considers the land and court ensures that there is material for finishing and that before the storage begins, it is made clear to the supervisory authority where the storage is to be built. The company's formulation of the condition also appears to be appropriate and must therefore be prescribed in accordance with it (condition 13 of the judgment).

With regard to the design of the sand and gray rock reservoir, the Land and Environmental Court states initially that there are good reasons to announce a condition if, among other things, for it to be there in perpetuity and for it to be an extractive waste facility that will contain potentially acid-

forming material. Likewise, there are good reasons to prescribe conditions on how plant parts that handle water that must undergo purification must be constructed. However, there is reason to examine in more detail how the conditions in these parts should be designed.

With regard to the submitted condition proposals for the sand and gray rock reservoir, both contain a description of the method for the installation. Both the company and the county board have considered that an independent person should be appointed to review the design of the sand and gray rock storage. In contrast to the county administrative board, the company has also stated in its proposed conditions that the independent person must check compliance with the conditions. In a similar way, the company's proposal for conditions on the construction of plant parts that handle water that must undergo purification (ditches, etc.) contains a statement that compliance with the condition must be checked by an independent person.

With regard to the proposal that compliance with conditions should be checked by an independent person, the Land and Environment Court makes the following assessment. It is the operator's responsibility that the permit and the conditions in the permit are followed, even when hiring a contractor. The operator of an extraction waste facility is also responsible for ensuring that the design of the waste facility meets the requirements of the Extraction Waste Ordinance and must ensure that disposal of the extraction tailings does not begin before the supervisory authority has checked that the facility meets the requirements set out in accordance with the current permit, published regulations and decided orders (55 and Section 65 of the Mining Waste Ordinance). The supervisory authority is responsible for checking that the regulations and conditions in the permit are met. In the present case, there are also provisions in the extractive waste ordinance that the county administrative board must check that the facility meets set requirements before the disposal of the extractive waste can begin (Section 66 of the extractive waste ordinance). The supervisory authority has the possibility to subpoena the operator of the information and documents needed for the supervision (Chapter 26, Section 21 of the Environmental Code). Whoever conducts an activity that may cause inconvenience to human health or the environment is further obliged to carry out such investigations of the activity and its effects as are necessary for supervision. The supervisory authority may, if it is more appropriate, instead decide that such an investigation must be carried out by someone else and appoint someone to do the investigation (Chapter 26, Section 22 of the Environmental Code)

In some cases, it may be appropriate to have an independent (external) inspector who inspects, documents and reports on the design of facilities. This can facilitate both the operator's self-control

and the supervisory authority's control. The court considers that the use of an independent inspector may be particularly appropriate at, for example, critical moments in the construction of an extractive waste facility. An independent review can be a way for the company to obtain documentation showing that the facility complies with the permit and for the county administrative board to obtain documentation prior to the notification that the disposal may begin.

Overall, with regard to the above, the court considers that it is appropriate to order that an independent (external) inspector inspect the construction of the sand and waste rock storage when construction work has been completed in full or in stages. On the other hand, it is not appropriate to, as the company proposed, state in a condition that the independent auditor must review compliance with a condition, but in that part the county board's proposal on the scope of the independent auditor's mission is more appropriate. The court considers that it is sufficient that the independent controller is consulted and that it is not necessary for the person to also be approved by the supervisory authority. The independent auditor's reports must be submitted to the supervisory authority and it is appropriate that reports are followed by relevant relationship drawings. These should be submitted to the supervisory authority at the times determined together with the supervisory authority.

With regard to the detailed design of the condition for the construction of sand and gray rock storage, the county board's proposal can to some extent be said to be designed with a reference to what was stated in the case, while the company's proposal contains more specific requirements which in and of themselves do not differ from what as stated in the target except that the construction of the sand and gray rock reservoir can take place in stages.

The court considers that there is no point in referring in a special condition to what was stated in the case in the way that both the company and the county administrative board proposed because it is already clear from the general condition. For example, the information that the company has stated that the tight liner to be used is Bituminous Geomembrane Liner (BGL). The condition regarding the sand and gray rock reservoir should therefore contain the more specific proposal for the method proposed by the company.

Taking into account what has been stated above, the condition must be designed in a way that appears from the judgment (condition 14).

With regard to the condition on how plant parts that handle water that must undergo purification must be constructed (ditches, etc.), the court considers, as stated above, that it is not appropriate to state in

a condition that compliance must be checked by an independent person. Furthermore, the construction of ditches, pump pits and basins etc. does not involve such critical elements that could mean that there is reason to order an independent inspection under penalty-sanctioned conditions. On the other hand, the court considers that it may be appropriate to state in terms that the company must report relationship drawings to the supervisory authority at a time determined in consultation with the supervisory authority. The Land and Environmental Court considers that it is not necessary to also regulate the direction of flow in this condition because the court in condition 11 has regulated that the water must undergo purification. The water therefore does not need to be led to the treatment plant in order for condition 11 to be fulfilled. With regard to the above, the condition must be designed in a way that appears from the judgment (condition 12).

*Finishing (conditions 15-18)*

The company has explained that the sand and gray rock reservoir will be covered with a so-called qualified cover with 0.5 m of compacted bentonite-mixed moraine (approx. 5% by weight), a protective layer consisting of 2 m of unspecified moraine with a 0.1 m layer of plant establishment on top. The Gråbergsvallen, which contains enrichment sand and deposited gray rock, will be re-treated successively (years 6–10 after the start of operations). Open pits 1-3 will be filled with waste rock and enrichment sand. Depending on how high the waste rock and enrichment sand end up, qualified coverage will also be applied to these. Other open pits will be filled with water naturally.

Pools (cleared before refilling) and ditches are refilled when they no longer have any function, buried pump lines are emptied and plugged or alternatively removed and roads are removed, after inspection is completed, soil is prepared and moraine applied with subsequent plant establishment. Buildings within the industrial area are dismantled and any contamination is removed and 0.2–1 m of moraine is applied to the ground, which is then planted.

Both in writing and at the main hearing, the County Administrative Board has emphasized the need for clear conditions for post-processing of the business. The County Administrative Board has particularly emphasized that the method for post-treatment needs to meet the requirement for the best possible technology in order to avoid unwanted environmental impact at any stage and that for efficient and effective supervision there is a need for clear conditions. During the main negotiation, both the company and the county administrative board submitted different proposals for conditions for post-processing which were subject to discussion and resulted in different proposed conditions from the company and the county administrative board respectively.

Both the company and the county administrative board have proposed that the method of post-processing should be regulated in conditions. The company has submitted four proposals for terms and conditions for how the method for post-treatment of the operational area is to be regulated (proposed conditions 16–18) and one condition (proposal terms 19) for how compliance with the conditions is to be checked. The County Administrative Board has proposed two other conditions instead of the company's proposed conditions 16-19.

The county board's proposal for conditions means that an independent technical inspector must review the work and issue a statement on the inspection, while the company's proposal means that the independent inspector must check compliance with the conditions. As the court emphasized above under the heading establishment, it is not appropriate to state, as the company proposed, in a condition that an independent auditor must review compliance with the condition. If an independent auditor is to be appointed, it is more appropriate that that person's tasks be limited in the way suggested by the county board, i.e. that it is more about inspecting and giving a statement about an inspection.

Furthermore, as the court stated above under the heading construction, the Land and Environment Court considers that the times when it may be appropriate to order an independent review in conditions are when the condition covers critical elements. For example, in the construction of an extraction waste facility or a landfill with hazardous waste where it is of great importance to secure the design of the bottom structure. In regard to the method of post-processing, the court considers that it does not refer to such critical elements that there is reason to state in the condition that an independent inspector shall review the work. The court considers that it is instead sufficient to regulate the method of post-processing and when post-processing must start at the latest.

Regarding the method of post-processing and the need for a control program for these parts, the company's and the county board's proposed conditions are essentially consistent with each other and it appears to be expedient and appropriate to regulate this condition. The Land and Environmental Court assesses that it is essentially the company's proposal that must be announced as conditions with certain adjustments. In terms of how the qualified coverage should be designed, it is, in the court's opinion, clearer if it is stated that the design must meet the corresponding oxygen transport rate instead of the design criteria.

Regarding the special control program regarding post-processing, the court considers that it should be prescribed as a separate condition for control. It should also be stipulated that the company must submit relevant relationship drawings of implemented remedial measures to the supervisory authority. The conditions regarding the method for post-processing and control of the method shall, with regard to the above, be designed in a manner that appears from the judgment (conditions 15-17 and 22).

The court further considers that there are advantages in the person conducting a business at an early stage considering how a future winding down of the business should be carried out. The company has, following comments from the county administrative board at the main hearing, submitted a final condition proposal 20 that an implementation description for final post-processing must be submitted to the supervisory authority no later than one year before the operation is planned to finally cease. No comments have been made against the final terms proposal. The conditional proposal appears to the Land and Environmental Court as justified and expedient and must therefore be prescribed (condition 18 of the decision).

*Ecological compensation (condition 19)*

The court's reasons for the condition have been touched upon earlier in the judgment reasons under the heading compensatory measures.

*Species protection (condition 20)*

In order for the prohibitions in § 4 of the species protection ordinance not to be actualized for lappis, greater woodpecker, three-toed woodpecker, common screech and pied crow in the area of Nunasvaara, the company's proposal for conditions that felling within the area of operation may not take place during the period from 1 May to 31 July prescribed (condition 20 of the judgment).

*Financial security (condition 21)*

The company has calculated the total post-processing cost at SEK 225 million in 2020 monetary value and designed its proposal for financial security based on this and proposed that the financial security, as far as post-processing of the sand and gray rock reservoir is concerned, should be provided through successive construction. The County Administrative Board has had no objection to the security being provided successively, but has calculated the total cost of post-processing to be SEK 413 million and that the security must thus total this amount.

The County Administrative Board has started from the company's estimated cost of SEK 225 million and then added 20% for uncertainty in procurement plus 30% as the County Administrative Board deems the company's unit costs too low. Finally, SEK 62 million has been added for operation and maintenance before, during and after the restoration work has been carried out.

The company has assumed location-specific conditions when calculating the unit costs. The moraine is assumed to be accessible within the operational area. The company has then started from the actual transport distances. With regard to uncertainties in procurement, it can be stated that the company used the experience regarding unit costs for qualified coverage gained during the government's procurement and finishing of the so-called Svärträsk mine. The transport distance for moraine at that mine was 8 km.

The Land and Environmental Court notes that the cost of the qualified coverage accounts for the majority of the total remediation cost. The court makes the assessment that the estimated cost of a qualified waterproofing layer of SEK 350/m<sup>2</sup> is reasonable. This is against the background that it is based on experience from another mine and that the transport distance there was longer. Other unit costs appear reasonable. The financial security must not be used to continue running a business after a bankruptcy, but it must be used for costs for remedying an environmental damage and the other restoration work that the business may cause (Chapter 16, Section 3 of the Environmental Code). The court thus agrees with the company's estimated post-processing cost of SEK 225 million in 2020 monetary value.

No objections have been raised against the model with a gradual build-up of financial security. Nor does the court have anything to object to this because it meets the current need for security at all times. However, the court believes that it is clearer if all notification obligations that exist for the company appear under their own heading in the judgment.

The company has stated in the post-processing plan that the financial security for future provisions, in order to take cost increases into account, should be calculated using the contracting index.

The court states that the contracting index comprises almost 200 different index series, divided into main, sub- and base groups. The company has not stated which index series they consider to be used. In addition, the court has learned that during the autumn of 2022 Statistics Norway made a policy

decision with the implication that they should wind down their index tasks and prioritize tasks related to official statistics.

The Land and Environmental Court is also of the opinion that the security provided, in order to compensate for the price development, should be calculated over time because it must meet the current need for security at all times (chapter 16, section 3, second paragraph of the Environmental Code). That the enumeration takes place in connection with the security, in accordance with the prescribed condition, being provided as a result of increased deposition in the sand and gray rock reservoir, is deemed to be sufficient.

In order for an index to be available over time, according to the court's judgment, it is appropriate that it is an index covered by the regulation (2001:100) on official statistics. It then appears that the consumer price index (CPI) is the most appropriate to use.

The company has stated in the documents that the 2020 unit prices have been used when calculating the financial security. As these unit prices were first reported in calculations dated March 28, 2020, the court assumes that the unit prices are from the beginning of 2020. Overall, this means that the court considers that the financial security (basic amount plus later staged amounts) must be calculated against the consumer price index at each time as prescribed in condition 21. January 2020 shall be the base month and calculation shall be made against the latest valid consumer price index as of the day the security is submitted to the court.

The company has proposed that in the condition it should be regulated when the successively pledged security is to be returned to the company. The County Administrative Board has had views on how such a condition regulation should be designed. The Land and Environmental Court can state that the court in the case has to decide whether a security must be provided, the size of the security and whether the security can be provided successively (Chapter 16, Section 3 of the Environmental Code). In the court's opinion, it is not possible to determine already now when it may be appropriate to return a security because such an order could risk that the security is not sufficient at some point. Even if the company cannot make use of the review provision in ch. 24 Section 5, first paragraph, 12 of the Environmental Code, if the security should at any time be greater than what is needed, the company has the option of applying for a change of conditions in accordance with ch. 24. Section 13 of the Environmental Code. If the company judges that the security at any time is greater than what is

needed, the company may therefore use that opportunity to have the size of the security tested again (cf. the Supreme Court's decision in NJA 2011 p. 296 and prop. 2021/22:219, p .53f.).

Conditions regarding financial security must, with regard to the above, be designed in a way that appears from the judgment (condition 21).

*Control (conditions 22-23)*

As the Land and Environment Court stated above, a separate condition on the control program for the post-treatment must be notified (condition 22).

The company has, after comments from the county administrative board, submitted final proposals for conditions regarding the control program for the construction phase and the operational phase.

Regarding the NMT central's request that control programs be submitted to

The NMT center for opinion before the program is approved, there is no support for such handling in national law or in the border river agreement. The conditions proposed by the company therefore appear, according to the Land and Environmental Court, to be justified and expedient and must be prescribed (conditions 23-24 in the decision).

**Delegations**

According to ch. 22, the Land and Environmental Court may Section 25, third paragraph, of the Environmental Code leaves it to a supervisory authority to decide on conditions of minor importance.

The company has not submitted any proposals that the supervisory authority should be allowed to decide on conditions in any respect.

In terms of compensatory measures, the court has stated that the supervisory authority may decide on compensatory measures (condition 19). It is appropriate that the county administrative board is also given a clear delegation to announce the detailed conditions that may be needed within the framework of this (D1).

IN START-UP TIME M . M. \_

**Start-up time and working hours**

The company has proposed that the start-up time for the environmentally hazardous activities be set to ten years and the working time for the water activities set to ten years from the time the permit decision has gained legal force. No objection has been raised to this and the Land and Environment

Court finds that the proposed times are appropriate. With the support of ch. 22 § 25 paragraph two of the Environmental Code must therefore be decreed that the environmentally hazardous activity must have been started no later than ten years from the permit gaining legal force and that work relating to water activities must be carried out within ten years from the partial judgment gaining legal force.

### **Unforeseen damage as a result of water activities**

The company has proposed that the time for notification of compensation claims due to unforeseen damage as a result of water operations should be set at five years from the end of working hours. No objection has been raised to this and the Land and Environment Court finds that the proposed time is appropriate. The Land and Environmental Court therefore stipulates that the time for reporting unforeseen damage is set at five years from the end of working hours.

### **Execution**

The company has requested that the permit be used even if the judgment has not gained legal force. The company has justified its request with essentially the following. It is important for Talga to start construction work for the planned operation as soon as possible after permission has been issued. There is an urgent need to change society to a fossil fuel-free economy. This requires energy storage solutions, i.e. batteries. Graphite from Nunasvaara can contribute significantly to the development of an electrified and fossil fuel-free future. The permit is also deemed to bring important positive socio-economic effects in the form of increased job opportunities. Through the protective measures described and planned for the business, the impact on opposing interests is judged to be limited. It is possible that a restoration can take place, i.e. actions are reversible. Overall, the company considers that there are grounds for an enforcement order.

The County Administrative Board has confirmed that so-called enforcement orders are issued on the condition that there is an approved financial security. The Nature Protection Association and Talma Sami village have opposed the requested enforcement order and stated in summary that it is not appropriate because the activity involves a major intervention in nature that affects Sami villages, that there are different opinions about the basis for the application and that there are important questions of principle in the case that need to be final decided in court before an activity begins.

According to the Land and Environment Court's assessment, the company has given strong reasons for an enforcement order, in particular the need to change society to a fossil fuel-free future. However, objections have been raised against the applied for activity and both the Nature Conservation

Association, Sami villages and individuals have opposed the application, which in itself speaks against an enforcement order. In contrast to the company, the court further considers that the operation, already during an initial stage, can bring about changes to the environment and the landscape that are long-lasting and, based on the interests of reindeer husbandry, take a long time to restore. The Land and Environmental Court assesses that the company's reasons for enforcement do not outweigh the reasons for the main rule to be applied in this case, i.e. that a permit must gain legal force before it may be used (cf. NJA 2012 p. 623). The court therefore rejects the company's request for an enforcement order.

#### TO CORRECT

The financial security according to condition 21 must be set up in stages a certain time after the permit has been claimed and the investigation time period for investigation regulation U2 has been determined based on the same time. The company must therefore notify the court that the permit has been used. The supervisory authority must also be informed accordingly.

The investigation period for investigation regulation U1 has been determined based on when the enrichment plant has been put into operation. In order for the court to be informed that the enrichment facility has been put into operation and that the investigation period is therefore running, the company must be ordered to inform the court about this.

#### Ö REVERSE REQUESTS

##### **Compensation claims**

Within the scope of the case, Erika Bjurholt and Per-Erik Bjurholt and Peter Petterson have submitted claims for compensation. Jan Johansson, Anette Johansson and Eric Johansson have stated that they intend to request compensation, but have not specified their compensation claim in more detail during the processing of the case.

The company has objected to all claims for compensation and stated that the claimed compensation refers to the part of the company's operations that constitute environmentally hazardous operations according to ch. 9. the Environmental Code and that compensation as a result of such activities shall not be raised within the framework of an application for a permit for such activities and that if parties wish to pursue such compensation claims, they are referred to bring a separate action according to ch. 32. the environmental code.

The Land and Environmental Court shares the company's assessment that the claims for compensation that have been made relate to the impact of environmentally hazardous activities and that they therefore cannot be tried within the context of the current case. The claims must therefore be rejected.

**Fishing fee**

The Norwegian Forestry Agency and the Natural Resources Institute have emphasized that, in the case of a permit, consideration should be given to whether a fishing fee should be charged. The County Administrative Board has emphasized that a fishing fee can be seen as compensation for the impact that occurs on aquatic environments. The company has objected to a fishing fee being paid and has stated that it is not relevant because there is no risk of damage to any fish species occurring in the Torne and Kalix river systems. With regard to the county administrative board's remark, the company has undertaken at the main hearing to also include water environments in the continued investigation on ecological compensation.

The court does not consider that the activity has such an impact on fishing interests that there is reason for a special fishing fee according to ch. 6. Section 5 of the Act with special provisions on water activities. Planned measures also do not constitute grounds for determining a general fishing fee according to ch. 6. Section 6 of the Act with special provisions on water activities.

**Other claims**

To the extent that claims made by opposing parties and referral bodies have not been met or specifically dealt with by what the Land and Environmental Court has decided or the applicant has otherwise conceded, the court does not find that there are grounds to approve these claims.

**K COSTS****Trial fee**

The Land and Environmental Court decided in a decision on 3 June 2020 that the applicant would pay a review fee of SEK 61,000 in accordance with the regulation on fees for review and supervision according to the Environmental Code. The company has stated at the main hearing that the trial fee that has been decided and paid is correctly calculated. The court finds no reason to change previous decisions on examination fees. The fee must therefore be finally determined at the same amount.

**Legal costs**

Gabna Sameby has requested compensation for court costs of SEK 126,602, of which own work SEK 64,000 (16 working days at SEK 4,000), attendance at main hearing three people for four days SEK 48,000, travel to main hearing SEK 4,802 (SEK 35 per mile ) and accommodation SEK 9,800. Gabna Sameby has indicated that the costs are partly caused by the applied water activity.

Talma Sami village has requested compensation for court costs totaling SEK 1,748,264, of which SEK 1,296,000 attorney's fee, SEK 145,800 for time wasted, SEK 88,584 attorney's expenses, SEK 177,000 lost income for the Sami village deputy and SEK 40,880 accommodation, travel and allowances for the Sami village's deputy. Talma Sami village has stated that the reindeer husbandry issues have a natural connection with the sought-after water activities that affect, among other things, lake Hosiojärvi, Västra- and Östra bäcken and surrounding marshes and that it risks affecting reindeer husbandry in the Sámi village in ways described during the main hearing. Talma Sami village has emphasized that the company has confirmed during the negotiation that the investigation regarding the water operations has been taken into account in the company's assessment of the impact on the reindeer husbandry and that the presence of representatives and representatives of the Sami village at the negotiation has been required in order to safeguard the Sami village's rights.

The company has opposed the legal costs claimed by the Sami villages. In summary, the company has objected that no part of the costs can be linked to the Sami villages being affected by current water activities, especially in the case of Gabna Sami village, which has pastures south of the operational area and is only affected in these parts. The company has emphasized that the applied water activities are very limited and only include a small withdrawal of surface water from Hosiojärvi, diverting groundwater from open pits and other parts that involve building over water. The company has emphasized that the damage that the Talma Sámi village may be exposed to is theoretical or completely insignificant and that the changed flows that are expected to occur in the Östra and Västra bäcken will have nothing more than an insignificant impact on the Sámi village and the reindeer husbandry. The company has also stated that what the Sámi villages have raised in the exchange of letters and during the main negotiation has concerned the environmentally hazardous activities and that if there is a right to compensation in any part, a strong reduction and division of claimed costs must take place. The company has not whitelisted any amounts as reasonable in and of themselves.

The case concerns both the issue of permits for environmentally hazardous activities and water activities, and the starting point for the assessment is that the right to compensation for legal costs only relates to the part of the case that pertains to water activities (Chapter 25 §§ 1-2 of the Environmental Code and the legal case MÖD 2010:39). A cost, to the extent that it is not admitted by the other party, can further only be reimbursed if it is considered reasonable with regard to what it refers to (chapter 18, section 8 of the Code of Procedure).

The Supreme Court has found in the legal case NJA 2004 p. 590 that the plaintiff in an application case for a permit for water activities means any person who may be harmed or exposed to other inconvenience through the activity for which a permit is sought, if the risk of damage or inconvenience relates to one of the legal order protected interest and is not merely theoretical or completely insignificant.

The Land and Environmental Court states that the water activities in the case include diversion of leaking groundwater in open pits, diversion of surface water from Hosiojärvi, filling of minor surface water, construction of ditches and sedimentation and clarification basins. Talma Sami village has its winter pastures where the industrial area is to be built and the water operations are carried out. Gabna Sami village has its lands outside the area where the water operations are to be conducted. In the court's opinion, the inconveniences and the impact that may occur on the reindeer husbandry are attributable to the environmentally hazardous activities and the impact from the applied water activities is so limited that, according to current practice, it does not mean that the Sami villages are entitled to compensation. Gabna Sameby's and Talma Sameby's respective claims for compensation for legal costs must therefore be rejected.

**HOW TO APPEAL** , see Appendix 2 (MMD-01)

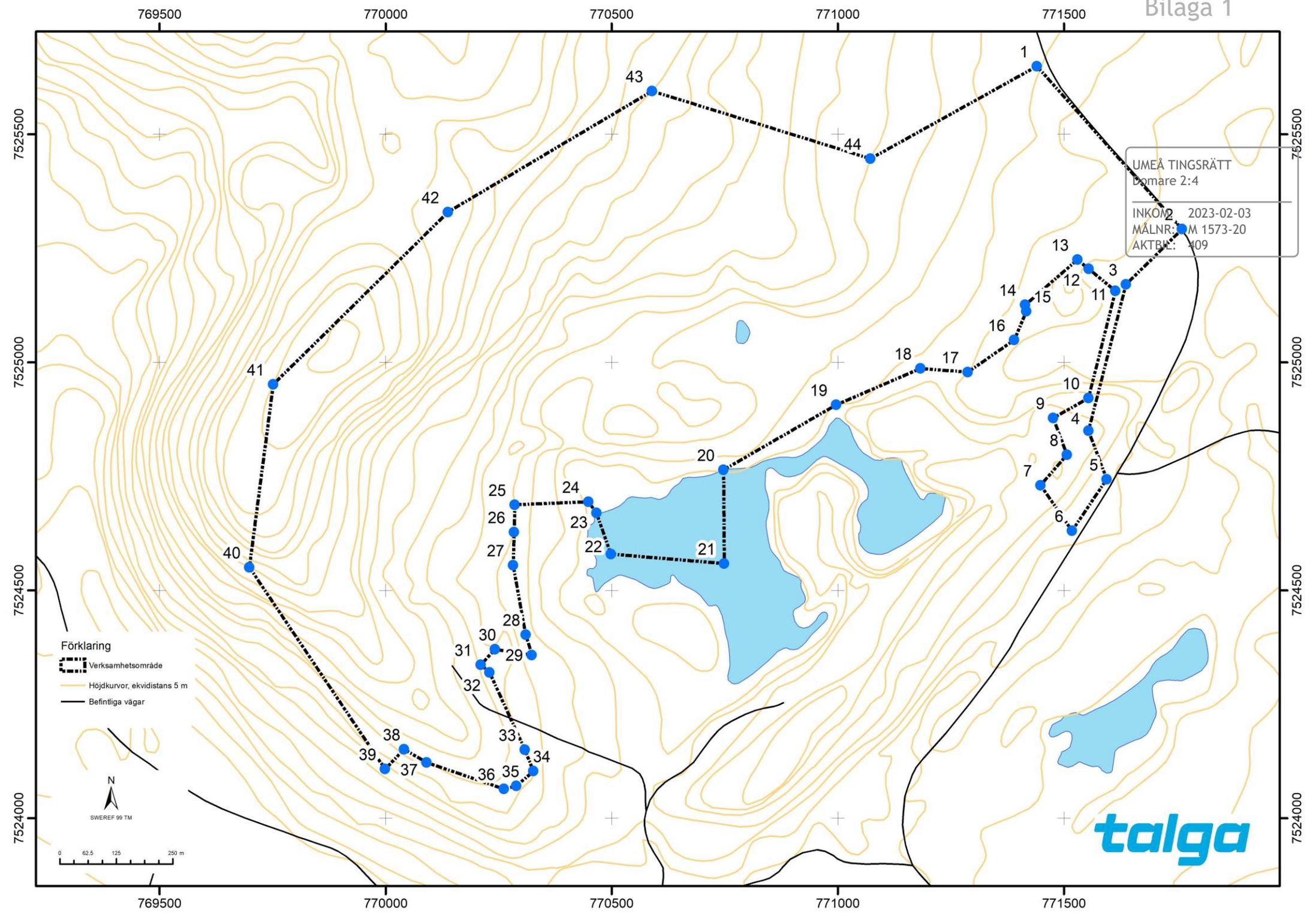
Appeal no later than April 26, 2023.

Anna Svedjevik

Per Lagervall Lena Nilsson

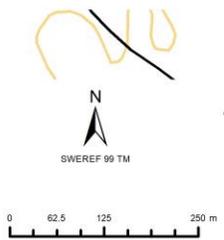
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Councilor Anna Svedjevik, technical councilors Per Lagervall and Lena Nilsson and special members Fred Mellberg and Lennart Mattsson participated in the court's decision.



UMEÅ TINGSRÄTT  
Domare 2:4  
INKOM: 2023-02-03  
MÅLNR: M 1573-20  
AKTBL: 409

Förklaring  
- - - Verksamhetsområde  
— Höjdkurvor, ekvidistans 5 m  
— Befintliga vägar



## Coordinates area of operation

<b>Id</b>	<b>E-coordinate</b>	<b>N coordinate</b>
1	771440	7525649
2	771761	7525292
3	771637	7525171
4	771554	7524850
5	771594	7524744
6	771518	7524630
7	771448	7524730
8	771507	7524797
9	771476	7524878
10	771554	7524922
11	771614	7525157
12	771555	7525205
13	771530	7525225
14	771414	7525126
15	771417	7525112
16	771390	7525049
17	771287	7524978
18	771183	7524986
19	770996	7524907
20	770747	7524764

21	770749	7524559
22	770498	7524579
<b>Id</b>	<b>E-coordinate</b>	<b>N-coordinate</b>
23	770466	7524670
24	770448	7524694
25	770286	7524688
26	770284	7524627
27	770282	7524555
28	770310	7524403
29	770323	7524358
30	770242	7524370
31	770210	7524336
32	770230	7524320
33	770308	7524150
34	770327	7524103
35	770289	7524071
36	770261	7524064
37	770090	7524122
38	770041	7524151
39	769998	7524108
40	769699	7524550
41	769751	7524951
42	770138	7525330
43	770589	7525595
44	771072	7525447



## **How to appeal**

Judgment in the Land and Environmental Court as first instance

MMD-01

If you want the judgment to be changed in any part, you can appeal. Here you will find out how it is done.

### **Appeal in writing within 3 weeks**

Your appeal must have reached the court within 3 weeks of the date of the judgment. The last date for appeals can be found on the last page of the judgment.

### **Appeal after the opposing party appeals**

If one party has appealed in due time, the other party also has the right to appeal even if the time has expired. It's called a connection appeal.

A party may appeal for accession within an additional week from the expiry of the appeal period. A connection appeal must therefore be received within 4 weeks from the date of the judgment.

A follow-on appeal ceases to apply if the first appeal is withdrawn or for some other reason does not proceed.

### **How to use**

1. Write the Land and Environment Court's name and case number.
2. Explain why you think the sentence should be changed. Talk about what change you want and why you think the Land and Environment Court of Appeal should take up your appeal (read more about leave to appeal further down).
3. Talk about what evidence you want to refer to. Explain what you want to show with each piece of evidence. Submit written evidence that is not already in the case.
4. Provide your name and current and complete details of where the court can reach you: postal addresses, e-mail addresses and telephone numbers.  
If you have an agent, also provide the agent's contact details.
5. Sign the appeal yourself or have your representative do it.
6. Send or submit the appeal to the Land and Environment Court. You will find the address in the judgment.

### **What happens next?**

The Land and Environment Court checks that the appeal has been received in time. If it is received too late, the court rejects the appeal. This means that the judgment applies.

If the appeal is received in time, the Land and Environment Court forwards the appeal and all documents in the case to the Land and Environment Court of Appeal.

If you have previously received letters through simplified service, the Land and Environment Court can also send letters in this way.

### **Trial permission in the Land and Environment Court of Appeal**

When the appeal reaches the Land and Environment Court of Appeal, the court first decides whether the case should be taken up for consideration.

The Land and Environment Court of Appeal grants leave to appeal in four different cases.

- The court considers that there is reason to doubt that the land and environment court ruled correctly.
- The court considers that it is not possible to assess whether the land and environmental court has ruled correctly without taking up the case.
- The court needs to take up the case to give other courts guidance in the application of the law.
- The court considers that there are special reasons to take up the case for some other reason.

If you *do not* receive leave to appeal, the appealed judgment applies. Therefore, it is important to include everything you want to bring forward in the appeal.

### **Do you want to know more?**

Contact the Land and Environment Court if you have questions. Address and phone number are on the first page of the judgment.

More information is available at [www.domstol.se](http://www.domstol.se).