FACT SHEET

Noront Resources' Ferrochrome Production Facility and the City of Greater Sudbury

In early 2018, the City of Greater Sudbury and the Greater Sudbury Development Corporation delivered a compelling bid to host the proposed Noront Resources' Ferrochrome Production Facility (FPF). The bid was developed with support from key community partners including Wahnapitae First Nation and Atikameksheng Anishnawbek, all local postsecondary institutions as well as our local MPs and MPPs.

Noront Resources is a Canadian-based mining firm that has the largest land position in the Ring of Fire. The company plans to mine nickel and copper initially and process these ores in Sudbury. Three to five years into its new operations, Noront plans to begin mining chromite, which will require a new facility if it is to be processed in Ontario.

Noront is planning to build its ferrochrome production facility in northern Ontario and shortlisted Sudbury, Sault Ste. Marie, Thunder Bay and Timmins as potential sites. Each community submitted its bid applications on February 2, 2018 to Noront outlining its competitive advantages, labour force information and expertise.

There are a number of benefits of being home to Noront Resources' Ferrochrome Production Facility, including:

- Approximately $1 billion in construction investment
- 350 permanent jobs
- 150 indirect jobs through Sudbury's Mining Supply and Services sector
- Growth of the supply and service sector in Sudbury
- Expanding Sudbury's global mining reach

Frequently Asked Questions

Why Sudbury?
Greater Sudbury is the mining capital of the world. We are a community that understands and embraces mining and mineral processing. Mining is in our roots, with more than 120 years of mining experience in Ontario's largest geographic municipality, it is not surprising that Greater Sudbury would be the ideal location to host Noront Resources proposed Ferrochrome Production Facility (FPF).

We have the talent. Our people have the expertise to ensure the smooth and efficient operations of the three global mining companies that call Greater Sudbury home – Glencore, KGHM, and, Vale. To prepare future generations of talent, our three postsecondary education institutions; Laurentian University, Cambrian College, and Collège Boréal, are producing the well-educated bilingual graduates that go on to work in the mining and mineral processing industry – locally and around the globe.

We are ideally located. Centrally located just 390 km north of Toronto, we are just a one hour flight or a four-hour drive. Sudbury is the only place in northern Ontario where the CNR and CPR main lines converge. This gives Sudbury a distinct advantage for the efficient and cost-effective transportation of chromite from the Ring of Fire to the Ferrochrome Production Facility and beyond.

We have the industrial base. In addition the mining and mineral processing industries based in Sudbury, our community is also home to the world's most diversified mining supply and services cluster. Our cluster consists of more than 300 mining supply firms employing more than 12,000 people. These firms offer all the products and services required to design, build, operate, and, maintain a smelter.

We are committed to environmental sustainability. Greater Sudbury is proud of our global reputation for environmental remediation and stewardship. Our community continues to work in collaboration with the mining industry, government, and, academia to heal the landscape through our regreening efforts.

What site was recommended to Noront?
City staff, in partnership with our local industry partners, identified and explored several appropriately-zoned sites that would meet and exceed Noront's criteria. With permission from Vale Canada Limited, the lands immediately south of the former Inco Coniston Smelter Site has been identified as the optimal location for Noront's' FPF. This site is zoned M3-Heavy Industrial, which would allow FPF development without any rezoning. The site is also situated strategically from a logistics and services perspective.

This brownfield site lies to the south of the Lopes-owned Coniston Industrial Park, and south of the former Inco smelter and stacks. It is adjacent to both the CN and CP Rail Lines and can be accessed by road both through the Town of Coniston and directly from Highway 17 via the Coniston Hydro Road.

Why was the former Coniston Smelter Site selected?

- The property is designated as General Industrial land in the City of Greater Sudbury's Official Plan. This designation allows a range of industrial activities, such as manufacturing and processing facilities.
- The proposed property is zoned M3-Heavy Industrial, which permits a variety of industrial uses, including smelting and related uses.
- The site is a designated brownfield site, which is one of the requirements from Noront Resources. Brownfields are places that have previously been used for commercial or industrial use, but now sit idle.
- The site is ideally located near the convergence of the CN and CP rail lines allowing for efficient transportation of chromite ore from the Ring of Fire and finished ferrochrome bound for the US.
- The site can be accessed either directly from Hwy 17 via Coniston Hydro Road or through the community of Coniston via 2nd Avenue to Government Road to Edward Avenue. We have recommended to Noront that large industrial vehicles use the Coniston Hydro Road to minimize traffic in the Coniston community.

Why was the Moose Mountain Site not recommended?
In 2012, Cliffs Natural Resources had selected the former Moose Mountain Mine site north of Capreol as the location for its proposed FPF. Cliffs had undertaken extensive baseline studies as part of its Environmental Assessment process and all of this information now belongs to Noront.

When Noront Resources initiated planning for its FPF project, the company indicated that it would prefer to be closer to the community and existing infrastructure. Noront has established new site selection criteria for its proposed project and the Moose Mountain location was no longer seen as the best recommendation

What is Noront planning to build?
Noront is proposing to develop a Ferrochrome Production Facility (FPF) in Northern Ontario, to process chromite ore from the Ring of Fire, located in the James Bay lowlands. This production facility will be a state of the art facility that will be designed, built and operated in accordance with all the required federal and provincial environmental regulations and will meet the standard for best practice for a facility of this type.

Source: Noront Ferrochrome Production Facility – Environmental Issues and Approach

What is a ferrochrome production facility?
A Ferrochrome Production Facility prepares and transforms chromite ore deposits into ferrochrome, which is then used to create stainless steel products.

What is ferrochrome?
Ferrochrome is created with iron, chrome and oxygen. The high-grade chromite ore to be taken from the Ring of Fire area is grinded and put through a processing plant that requires high levels of energy to melt the ore and add carbon to separate the oxygen from the iron and chrome. The completed iron and chrome product is called ferrochrome.

What are the next steps?

- It is expected that Noront Resources will select the city in which it will locate its FPF in summer 2018. The company has enlisted Hatch Ltd. to assist in the bid review and selection process.
- Once the site has been confirmed in one of the four cities (Sudbury, Timmins, Sault Ste. Marie or Thunder Bay), a thorough environmental assessment and community consultation process will take place.
- The comprehensive environmental assessment process is expected to take approximately 3 to 5 years to complete.
- The environmental assessment process ensures participation of government and the public as well as thorough communications and engagement with First Nations communities.
- If the environmental assessments and community consultations are successful, construction on the site would begin in approximately 5 years. The cost of construction is estimated at $1 billion dollars and would take several years to build. The production facility would create 350 jobs and 150 indirect jobs.

What is an environmental assessment and will Noront complete one?

Noront Resources is committed to environmental sustainability and has outlined its plans and strategy to mitigate any environmental concerns now and in the years to come.

The environmental assessment will ensure that environmental and health risks, issues and concerns are identified, managed and mitigated. Noront is committed to best practices in environmental protection and recognizes that a facility of this type does not exist in Ontario. Best practices from mature jurisdictions where ferrochrome facilities exist, such as Finland, will be benchmarked and appropriately integrated in the design and management of the facility.

Environmental Assessment (EA) is a planning and environmental management tool used to predict, analyze and interpret the potential effects of a project on the environment and to identify measures to avoid, reduce or lessen (mitigate) potential adverse effects, and to promote sustainability. The EA process involves the following key steps:

- Describe the existing environmental features of the land, water and air that would support the Project (baseline studies);
- Describe potential project interactions with the environment and likely adverse and beneficial effects of the project;
- Propose measures to mitigate the potential adverse effects; and
- Assess whether the project would cause significant adverse effects despite implementation of mitigation measures; effects remaining after mitigation measures are in place are known as "net effects" or "residual effects". Technical specialists carry out the process for a number of disciplines that are part of the physical, biological and human environments.

The process ensures participation of public and communications with Indigenous peoples in defining and reviewing the assessment. The company will also work closely with various levels of government throughout this process. The comprehensive environmental assessment process is expected to take approximately 3 to 5 years to complete. Noront Resources has publicly stated that it will complete an EA and will work closely with all levels of government, communities and First Nations communities just as they have done with its Eagle's Nest Project.

Why did Mayor Bigger Visit Finland?

In January 2018, Mayor Brian Bigger, in partnership with Wahnapitae First Nation Chief Ted Roque, led a delegation to Tornio, Finland to meet with mining industry leaders from Outokumpu, a world class ferrochrome production facility. The delegation also met with municipal, public health and economic development officials. The visit was an opportunity to learn from what is considered the best ferrochrome production facility in the world.

Finland and the European Union have worked closely with Outokumpu to develop innovative ways to create a facility that is environmentally responsible and sustainable. The delegation was pleased to learn about the company's commitment to environmental sustainability and the "Circular Economy", a principle wherein, they keep resources in use for as long as possible, extract the maximum value from them whilst in use, then recover and regenerate products and materials at the end of each service life. Of particular interest was the reuse of ferrochrome slag as an aggregate in construction and road building.

Quick Facts

About Ferrochrome and Ferrochrome Production Facilities
Ferrochrome is created with iron, chrome and oxygen. The high-grade chromite ore to be taken from the Ring of Fire area is grinded and put through a processing plant that requires high levels of energy to melt the ore and add carbon to separate the oxygen from the iron and chrome. The completed iron and chrome product is called ferrochrome.

About the Ring of Fire
The Ring of Fire is the name given to the emerging mining district in the James Bay Lowlands region, located 500 kilometers northeast of Thunder Bay in Northern Ontario. To date, deposits of chromite, nickel-copper-platinum-palladium and copper-zinc have been found including Noront's three advanced development projects. Dozens of other showings have been noted, including those rich in gold, titanium-vanadium and diamonds. Learn more

About Chromium VI (Source, Public Health Ontario)

- Chromium VI (also known as hexavalent chromium) is used to make pigments for dyeing textiles, tanning leather and colouring glass. Chromium is used widely for electroplating and for making alloys, including stainless steel. It also has uses in wood preservation and corrosion control.
- Chromium VI can be acutely toxic at oral chromate doses of around 50-70 mg/kg body weight which are vastly greater than would be expected in a properly controlled workplace.
- While health and safety risks are associated with exposures to Chromium VI and many other hazards in the mining and metal processing industries, considerable knowledge and experience exist from which to draw health-protective strategies and techniques.
- A comprehensive health and environmental impact assessment prior to the initiation of any chromite mining and processing can review discharges to the environment and potential pathways of exposure for workers and members of the public. Specific mitigation and control strategies can be then employed to ensure that objectives related to protection of human health and the environment are met.

Outokumpu – Tornio, Finland
- The processing facility is completely closed so that all off gases are captured and controlled. Slag production is also conducted in a manner that controls dust and the inert end product is turned into construction aggregate that is used to build roads and as a base for building foundations.
- The plant is close enough to the community that it is easily seen from the downtown and as many as a third of its employees are able to bike to work. The closest homes to the facility are less than 2 kms away.
- The complex is directly on the shore of the Gulf of Bothnia where the Tornio River, one of Lapland's most popular fishing streams, meets the sea.

Contact Us

You may have additional questions about Sudbury's bid submission or Noront's Ferrochrome Production Facility. We welcome you to visit investsudbury.ca or contact us at sudburyFPF@greatersudbury.ca.