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Paved Trails and Rollerski Course
Project Description and Update
Aug. 28, 2023
Trails Director, Phil Mullins

You may recall recent announcements and news items about CNSC's success with a large provincial grant to fund a paved rollerski trail at CNSC. We wanted to share more information about this project with the members at this early stage. As you know, CNSC is dedicated to becoming a year-round world-class facility for Nordic and compatible outdoor recreation activities. Roller skiing is an activity that happens in spring, summer, and fall as a way to participate in and extend Nordic activities, events, and training.

What is rollerskiing?
Rollerskis are short wheeled skis that are used on pavement for fun and training when snow isn't available. Cross-Country British Columbia (CCBC) describes "roller skiing is an integral part of the sport of cross-country skiing, providing one of the most specific forms of ski training that can be practiced without snow" (CCBC roller ski policy) and they note the significant safety issues for roller skiers given the equipment, setting (hard pavement), and public road use (traffic etc.). Club athletes and coaches (~30 skiers) — and a number of members (also ~30ish) — already roller ski on local roads with traffic (adding further risk), and they visit other rollerski facilities when travelling. Recreational and competitive rollerski activities, camps, and events (like roller biathlon and parasports) are growing in popularity. In addition to many courses in Europe, North American rollerski trails are located in Whistler (BC), Canmore (AB), Valcartier (QC), Mt Saint Anne (QC), Jericho (VT), Ariens Nordic Cernter (WI), and Soldier Hollow Nordic Center (UT). There is also a North America Biathlon circuit for rollerski, which CNSC could join. Increasingly, rollerskiing and paved trails provide an adaptation to the changing seasonality and predictability of snow that accompany climate change, providing alternative forms of Nordic recreation. Facilitating rollerskiing requires a trail that is paved, and CNSC currently has none. Paved trails have the benefit of opening additional opportunities for recreation and greater accessibility for members with mobility challenges, opportunities which are enhanced when the network expands into more forgiving terrain in future phases.

Background
An idea to pave around 4 to 6 km of trails for rollerskiing has been around since the facilities development prior to the 2015 Canada Winter Games. This year, CNSC was successful in its application for a grant worth 1 million dollars from the Destination Development Fund run by the Province of BC's Ministry of Tourism, Arts, Culture and Sport. The call for applications appeared on relatively short notice and was specific to supporting tourism destination and infrastructure development. CNSC primarily participates in sport tourism by hosting competitions and training camps, as well as attracting folks to use our trail networks. The paved trails concept was best suited to adding new tourism capacity to CNSC in ways that align with the goals of the club, the grant opportunity, and directly benefiting club members. The grant money will fully fund the first phase of trail planning and development, which will not rely on membership dues. Although the course will be competition-focused and challenging, it will be unique to Otway and one of only a handful of such courses in North America, attracting top-level athletes, events, tour stops, and enabling exceptional skier development opportunities in Prince George for CNSC members.

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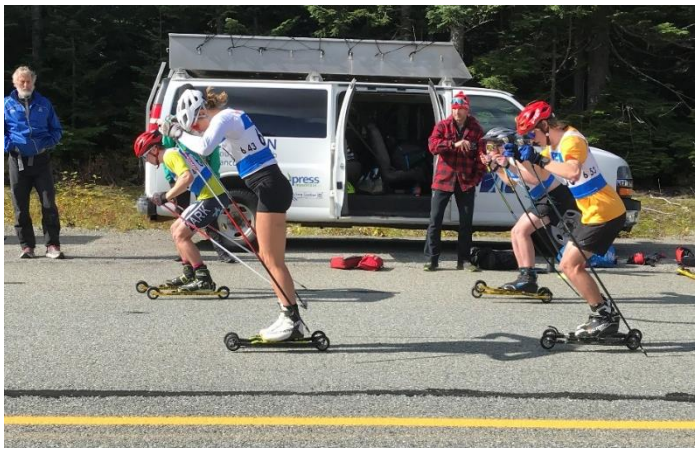
Having the racecourse and grant success as an anchor, we hope to attain further funding for phases two and three, which would add more-accessible loops to a paved trail network. These later phases would add less-challenging skiing and enable increased multi-use recreation and activities beyond rollerskiing (e.g. wheelchair access, perhaps roller speed skating, …).

CNSC Rollerskiers



Note. Caledonia Nordic skiers rollerskiing on local roads and participating in training camps. Photos courtesy of Tony Fiala.

The Project

The trail design and paving project is being led by Kevin Pettersen (head of competitions) who authored the successful grant application and has strong connections in the FIS (Federation of International Skiing) through his work on competitions and past infrastructure development. The grant is for two years; 2023 for planning and course lay-out, and 2024 for paving. To accomplish this timeline, specific trail planning is now well on its way (see Map 1, Phase One for current trail plan). This spring, Kevin has been working on course design and options with knowledgeable members, visiting national athletes, and—in particular—Mr. John Aalberg who was Olympic Venue Manage in Utah, and has exceptional design experience including with ski and rollerski courses at the Olympic

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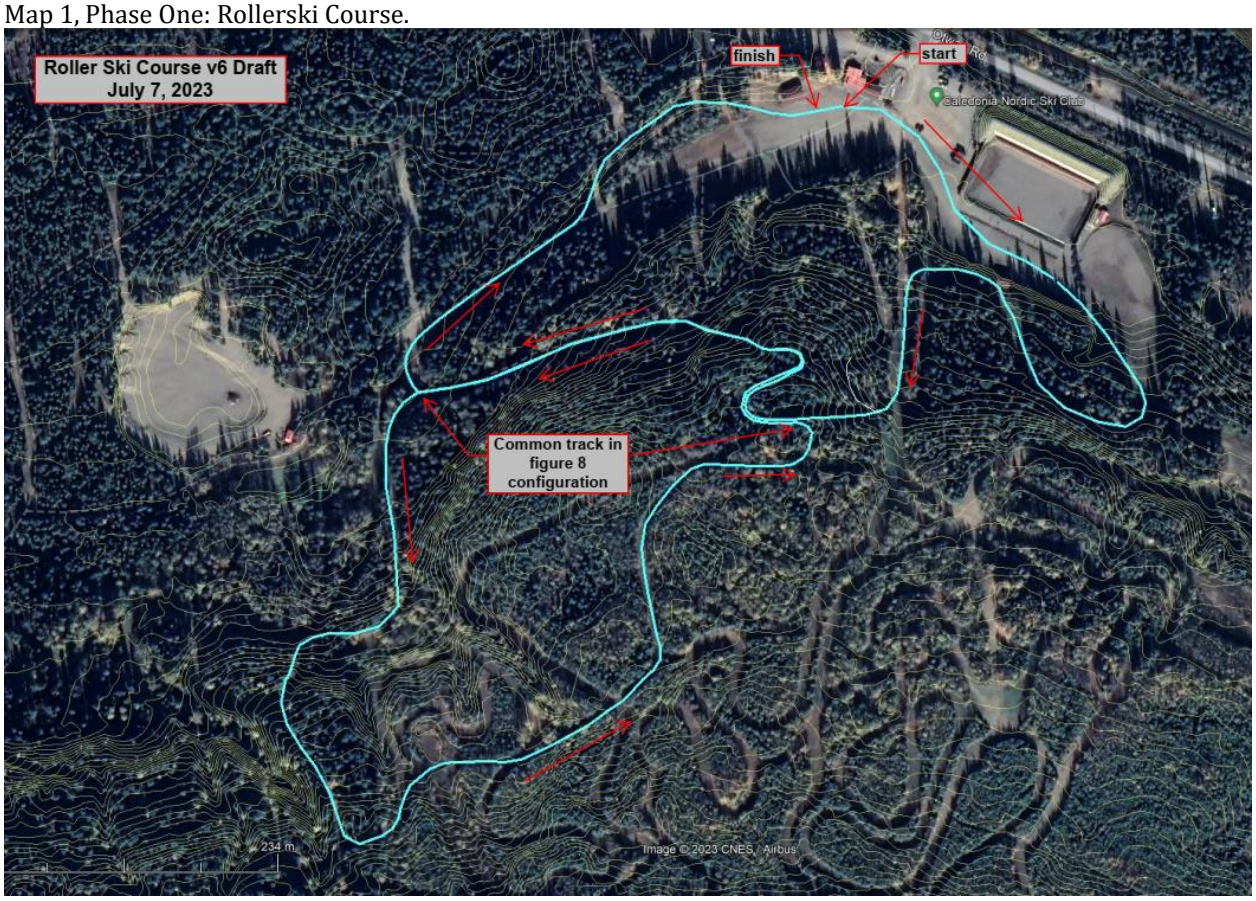
and Paralympic venues at Soldier Hollow (2002) and Whistler Olympic Park (2010). This first phase connects the biathlon range and enables training, new events, and hosting of competitions and training camps.

Map 1, Phase One: Rollerski Course.



Note. Current draft of the rollerski course. Note that the paving would include the apron for the shooting range as well as the penalty loop. Image courtesy of Jim Burbee.

The trail will augment rollerski safety and enjoyment for club members and athletes who currently rollerski and run using public roads. Portions of the course will be able to be used for skill instruction and development. The route planned is 3 km in paved length in a figure-eight pattern that enables diverse training options, and a 5 km ski course (or multiples) staying relatively close to the lodge and incorporating the needed types of terrain and elements (see FIS Phase One Profile). Kevin presented initial drafts to the CNSC Trails Committee at a Spring meeting, and has continued to refine the route for phase one, the competition trail. The Trails Committee is also reviewing this document. The directionality and design is deliberate with skier safety on the hills in mind, providing steeper and sustained climbs and longer more-controlled descents. Banking the trail can also be used where needed on descents, and the paved trail is intended to be 6 m wide. The rollerski course will use existing Nordic trail corridors, with minimal new trail clearing needed (estimated at 200 m). Once

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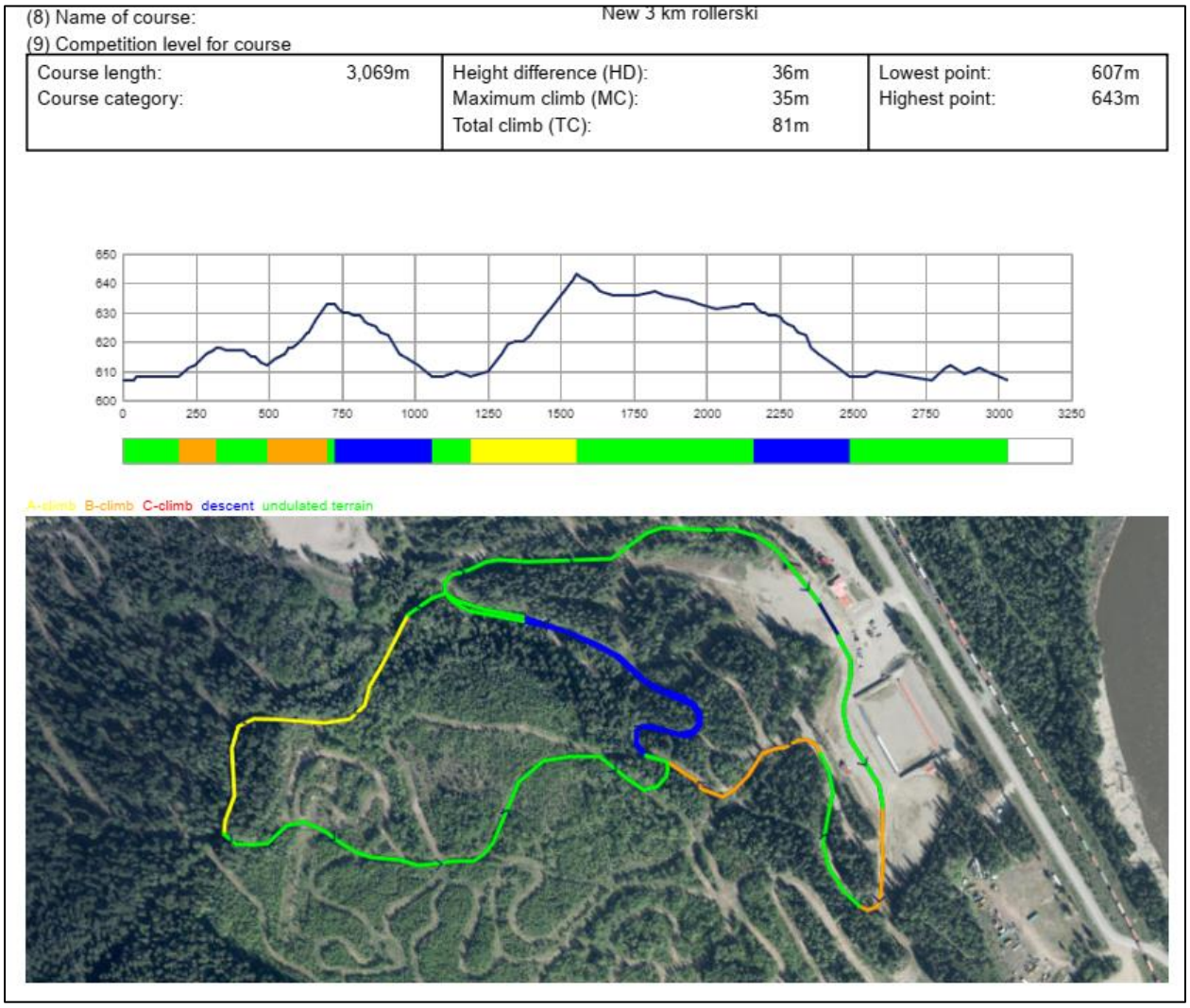
open, management of this competition trail will be very important. Portions of the trail could be dangerous without training or if used improperly, so we will have to manage access to maintain safety.

FIS Phase One Profile



Note. Course profile mocked-up using FIS software, it shows course elements and the elevation profile. Image courtesy of John Aalberg.

Future phases (See Map 2, Phases 2 and 3) will provide more accessible and diverse recreation and nature experiences for club members, families, and people living with disabilities. These multiple factors can help CNSC find significant additional funding to further build out a paved trail network. Finally, Map 3, Nordic Trails shows the paving phases on the winter ski trail map.

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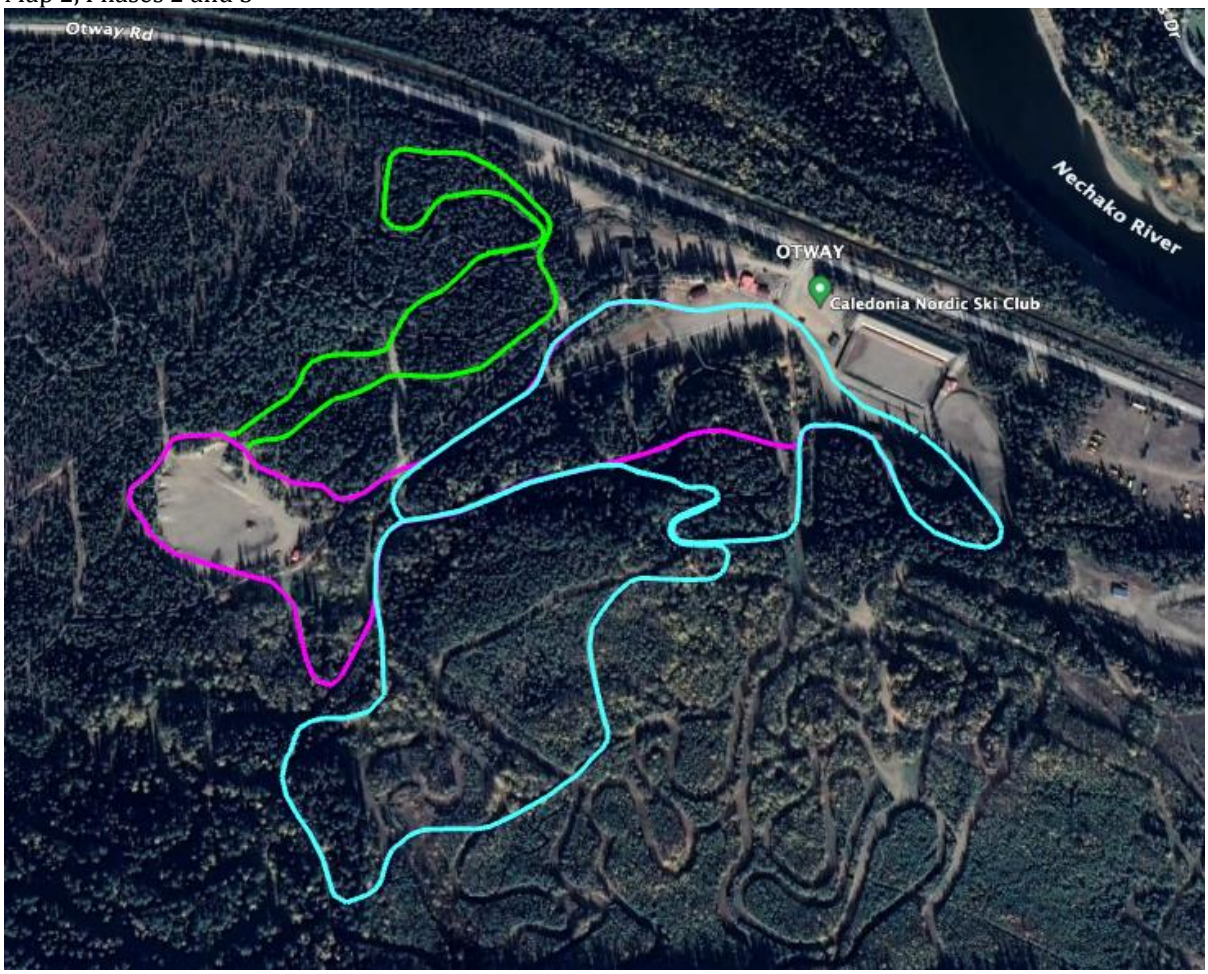
Map 2, Phases 2 and 3



Note. These are preliminary trail ideas, they have not been refined. Understanding the intent helps us plan current projects, identify and develop funding applications, and coordinate other club activities.

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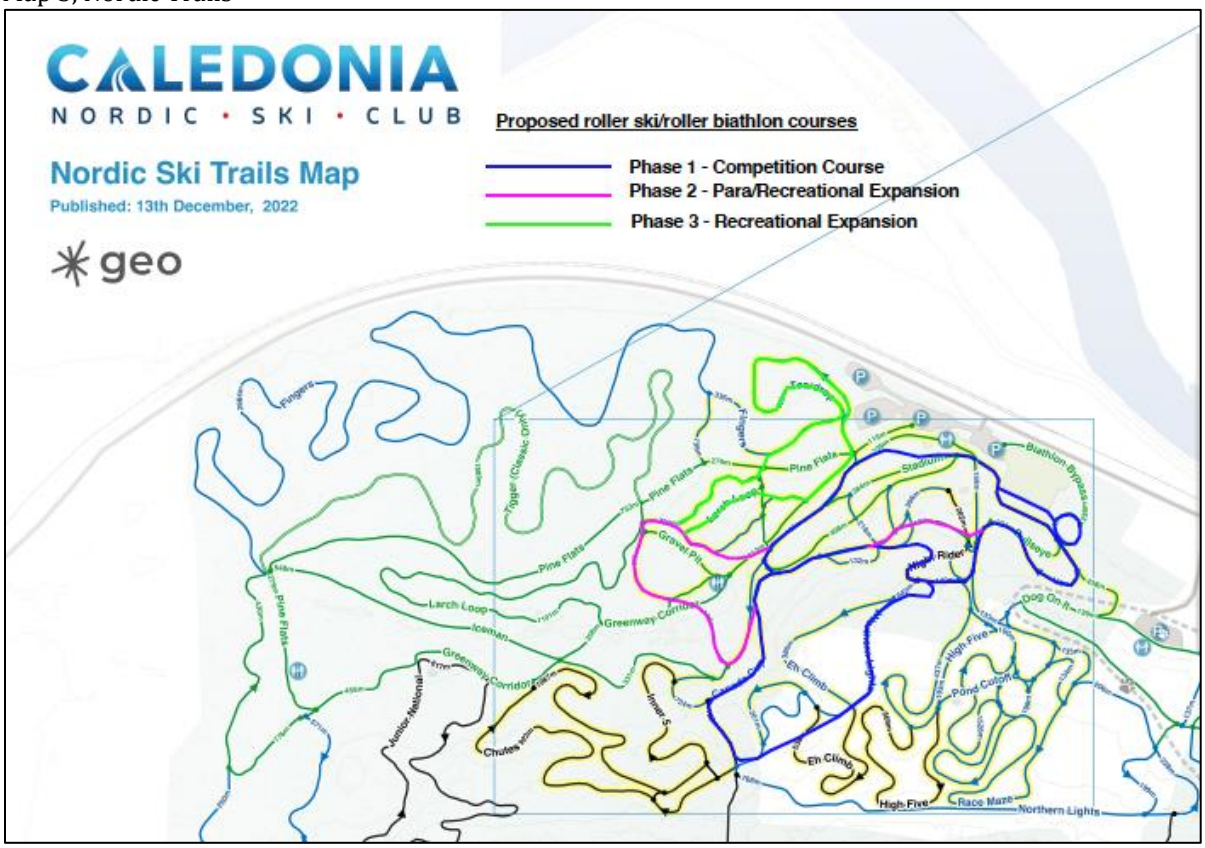
Map 3, Nordic Trails



Note. This map shows the phases of paved trail development over CNSC's typical Nordic ski trail map.

Current Timeline for Phase One

Summer-Fall 2023

Planning: the course is scoped, mapped and refined, with multiple options explored. We have shared drafts with the trails committee, and now a more refined version with wider membership to receive comments and feedback, and identify any issues we may have missed.

September:

- We will be flagging the route to enable walk throughs, and the needed geotechnical assessment and the geotechnical work that needs to be completed before the winter.
- Walk through for all those interested: **Date and time to be determined**. Possibilities: Sept. 2 and 23rd.
- Recommendation of the trails committee, and the paving/construction project would come to the Board of Directors for approval prior to geotechnical work beginning.

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Sept-Oct:

- Clearing small sections of new trail corridor where needed.
- Geotechnical work in advance of paving next year.

Spring-Fall 2024:

- Paving work to complete the trails.
- Developing signage and management strategies, communicate these to members/users.
- Developing roller ski training, instruction, and recreational programming.

Budget

Phase one of this project is fully funded through the Destination Development Fund, and project management must adhere to the requirements and envelope provided by the Fund. Under the Destination Development Fund, we have been awarded a total of $1million. The majority of the funding is for the paving the trails (subbase and asphalt), and the other parts of the funding are for sub grade preparation, project design, geotechnical assessment (and mitigation of any issues), and project management.

Management

As we proceed with Phase One, we are trying to attend to possibilities for future expansion, as well as the different trail networks and uses at the club. Some of this is significantly mitigated by using existing trails (not creating addition trail crossings). We are trying to maximize tail longevity by getting advice from geotechnical engineers and experienced professionals, and will build the trail to avoid water and ensure long-lasting use. The paved trails will require periodic sweeping, and we intend to invest in a small multi-purpose machine and equipment for this and other uses at the club, which will generally help with maintenance and facilities upkeep. We can use our current grant as matching funds to apply for further grants to assist with this purchase. Enabling safe skiing, multi-use recreation, and user safety will require user management. We have not yet decided on management approaches, but measures could include restricting activities on the paved trail (as we already do on other trails at Otway); scheduling and posting use times (e.g., to expect racers, families); designating trail portions for certain uses; and collecting fees from teams and visitors for trail use. We can look to approaches used at other such facilities, and find what works well for our situation and intended outcomes.