1.Sport

1.1.
Ice hockey:
history and culture

Index:

Hockey emerges in Norway

When did ice hockey come to Norway? From 1880 until 1920, Bandy was called hockey or ice hockey. Ice hockey as we know it today from the 1900s used to be called Canadian ice hockey. When bandy is referred as ice hockey in earlier newspapers and books it is not exactly defined when these two sports were separated.

The transition from ice hokey (bandy) with 7 and 11 players with ball to ice hockey (bandy) with disc took place in the winter of 1901 / 02. It is thought that a clear distinction between bandy and ice hockey took place in the late 1920s.
.

Fig. 1
Hockeyklubben and Skøyteklubben. At Froger, Oslo, 1905.
The teams refereated in the paperarticle.

Hockey=Match.

Det er først i de sidste 2 Aar, at man her i Byen har befattet sig med Ishockey. Denne ganske morsomme og kvikke Sport, som vi har lært af Svenskerne, bestaar i, at man ligesom ved Football deler sig i to jævnstærke Partier. Men istedetfor Footballen har man en liden flad Skive, der ved Koller skal drives mod Maalet. Begge Partier maa nu, samtidig som de stræber mod sit eget Maal, hindre Modparten i at naa sit, og herunder udkræves baade Hurtighed, Udholdenhed og Snarraadighed. Igaar kjæmpet Hockeyklubben og Skøiteklubbens Hockeylag mod hinanden. De førstnævnte havde langt mer Øvelse, og de seirede derfor helt igjennem med 5 mod 0 Goals. Skøiteklubbens Folk viste dog gode Anlæg, og de kommer nok efter.

Fig. 2
Newspaper note from 1905. Hockeymatch.
Dagbladet Morning edition 9 January 1905.

Hockey=match

It is first in the last 2 years that it have been played ice hockey here in town. This quite fun and fast sport that we have learn form the Sweeds. As football the players are divided into two similar teams. But instead of playing with a ball, you play with a little flat disc that you move with a hockeystick towards a goal. At the same time that both teams stibes to get a goal, they have to prevent the peer to get one. And this need speed, perseverance and quick-wittedness to manage. Yesterday the Hockeyclub and the hockeyteam of the Ice Skatingclub fought againt eachother. The first mentioned team have had far more practice and they won 5 against 0. The members of the Ice skatingclub showed some good skills and they will manage to follow up.

Translation of newspaper note from 1905

New form of ice hockey

The idea of the new form of ice hockey appeared in Norway autumn 1932. There were two former Trygg members who was in front to grow this sport in the country. These were Ludvig Christiansen and the bandy association's former president Rolf Gjertsen. Trygg decided to form a separate ice hockey department, organized with its own board and independent economy.
On 18 September 1934 the Norwegian Ice Hockey Association (NIHF) was founded, and on 18 January 1935 Norway was admitted as a member of the International Ice Hockey Federation (Ligue Internationale de Hockey sur Glace, LIHG)

In February 1933, the Ice Skating World Championships were held in Trondheim. During the breaks, an ice hockey match was played. There were as many as 12,000 spectators present with his majesty King Haakon in front. But they barely came to watch the first regular ice hockey game. But it was the first game between two cities. The team from Oslo won over the team from Trondheim.

In the autumn of 1933, indoor training was attempted. The team Trygg rented one of the gymnasiums at Akershus fortress. It was played with wooden pucks and gymnastics shoes.

The lack of ice surface

A new hockey season began in 1933/34. Hockey had now got attention in Norway. The press photographers regularly showed up at the training sessions and the publicity made the audience curious. But there where lack of ice surface in both Oslo and Trondheim. The ice hockey players made their demands to the City of Oslo, but faced fierce opposition from the bandy club. In Oslo, a space for ice hockey was allocated at Dælengen. The municipality provided a usable lighting system. Dælengen is located in the part of Oslo called Grunerløkka. Today there is a facility here named Grunerhallen. And it is the training arena of Gruner ice hockey team.

Osloklubben Strong was the reigning Oslo champion in bandy with 7 players. And the members had an interest in the new sport. Strong was spectators at one of the training sessions at Dælengen. They were gripped by what they saw. They had to have a executive board meeting on whether they could take up the new branch of hockey. But they did not have time to wait. So they quickly formed the Oslo Ice Hockey Club. The quickest tactic to recrut players to ice hockey was to persuad current bandyplayers.

Outside Oslo there were also starting teams that switched from one sport to the other. Holmen Sports association in Asker and Furuset Sports association gathered teams. Everything laid in place for it arranging a small series between these four teams.

Trygg, Oslo Ice Hockey Club, Holmen and Furuset.

Fig.3
Hasle goalkeeper in modern equipment in the 1930s.

The first national ice hockey team in Norway

At the end of January 1937, the first natinoal ice hockey team was set. In February, the Norwegian ice hockey team was invited to the World Championships in Newcastle, England. There were 11 countries particpating. On 17 February, the Norwegian team played its first national ice hockey match. It was Czechoslovakia who was Norway's first opponent at Wembley Stadium. There were as many as 12,000 spectators in the crowded hall. Norway lost the match against Czechoslovakia. They also lost the match against Switzerland the next day. Norway's World Cup matches were over. But this was the first time Norway had participated internationally in ice hockey. The 1936/37 season can be considered the first major year for Norwegian ice hockey.

Fig. 4
The first Norwegian ice hockey team on board the ship Venus en route to The United Kingdom to participate in the 1937 Ice Hockey World Cup. From left: Rolf Gjertsen (President of the Norwegian Ice Hockey Association), Per Dahl, Bjarne By, Eugen Skalleberg, Gustav Edvardsen, Knut Bøgh, Ernst Henriksen, Sverre Fjeldstad, Johan Narvestad, Olav Brodahl, Hans Møllegård and Ivar Luytkis. The player Karl Agheim was not present in the picture due to seasickness.

UTE-SPILLERNE var ikke like godt skodd på sjøisen. Legg merke til de korte vantene.

Fig.5
Hockey match on the Oslo fjord

Played in secret

Ice hockey was strongly hit when the Second World War stroke Norway. It put an end to all sports. The Norwegian Ice Hockey Association had to suspend its activities just as the sport was facing its breakthrough. But that did not prevent it from being run in secret and these games became popular and better game-wise throughout the last years of the war. Although ice hockey was played illegally the administrative and active sports practice was completely paralyzed. Many memorable matches were played on the waters in the forest surrounding Oslo and at the ice on the fjord outside the city. Several of the players how played in secret got their first feel with the game and became part of the ground stone of the sport after the war.

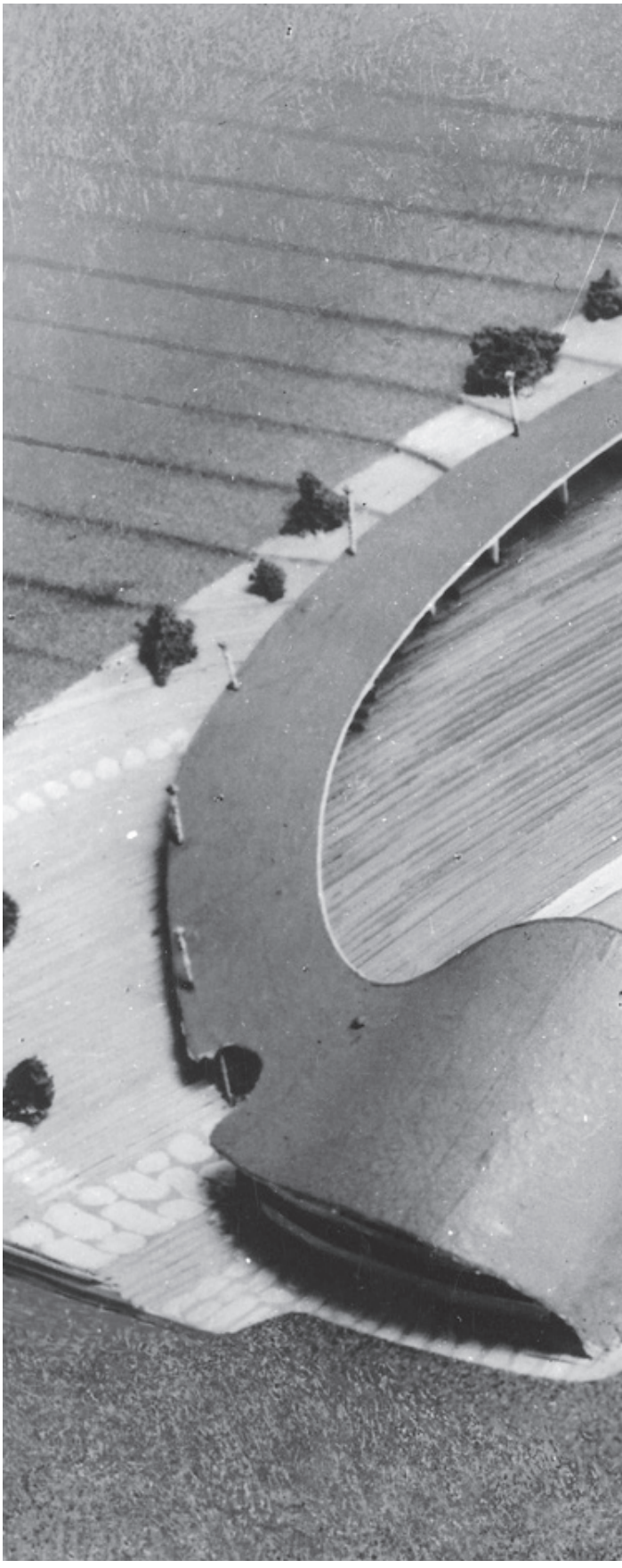
Olympic Games in Oslo, 1952

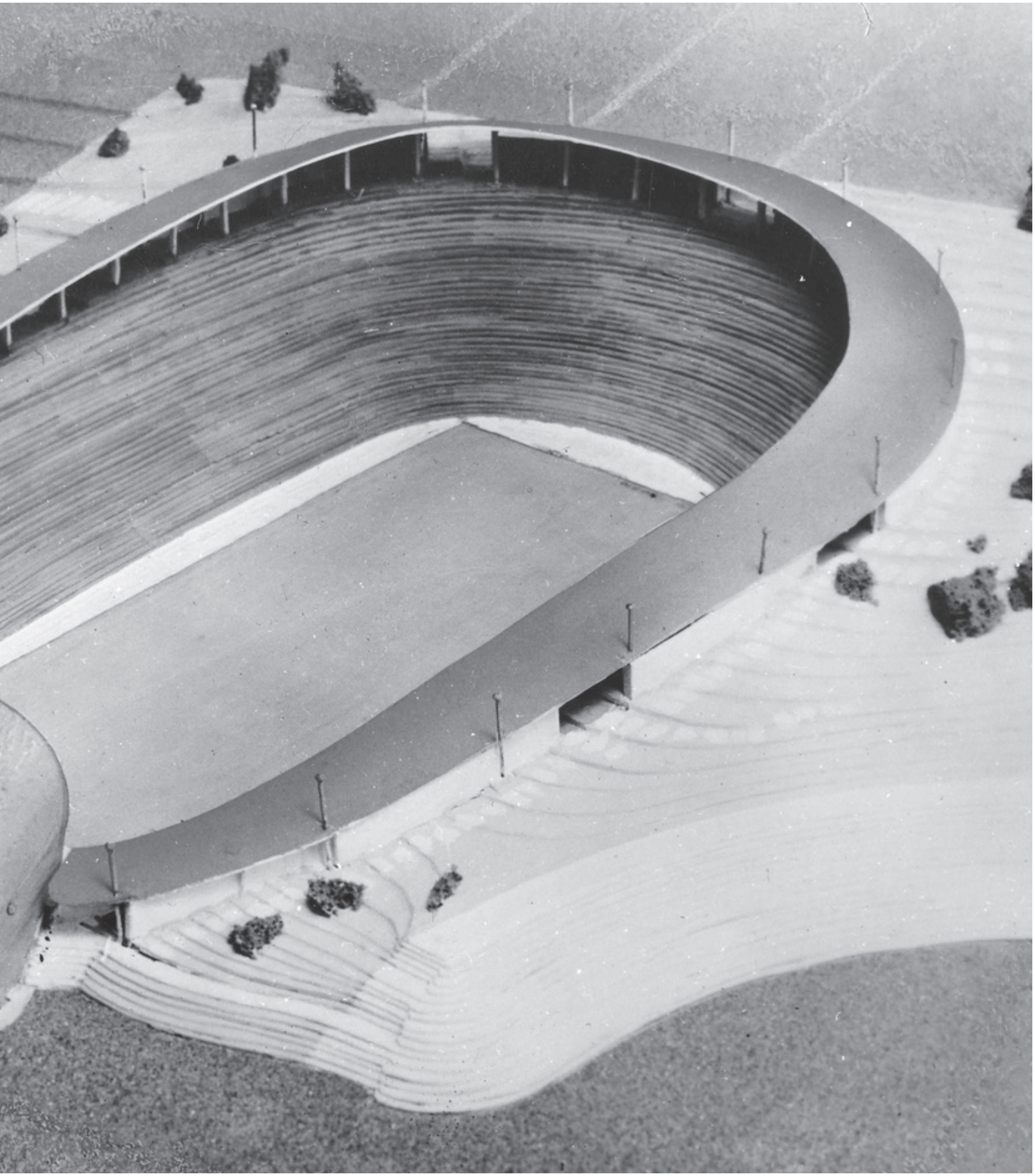
In 1934, the year the Norwegian Ice Hockey Association was founded, the Oslo municipality got a sketch of a large central sports facility on their table. The site proposal was in the slope at Kampen in East of the town. A hockey facility was located, precisely where the Hockey arene Jordal Amfi is situated today. In 1947, the City of Oslo applied to host the 1952 Winter Olympics. The application guaranteed that the city of Oslo would have the facilities that were necessary. Oslo was granted to arrange the Olympic Games they applied for.
The difficulty one encountered in the planning of Jordal Amfi was the fact that it had no references to lean on. Our Swedish neighbors had no experience that could help us. British and Canadian experiences were significantly built on the indoor track and the result was a combination of Czech experience and Norwegian innovation.

The facility was drawn by the architects Rinnan &Tveten. It was built deep into the terrain, giving the facility an asymmetric shape and a particularly intimate atmosphere. The original attendance that could watch a game was 11,000.
Event-wise, the Olympic ice hockey tournament became a Norwegian success. And the new facility and the ice hockey sport became more popular and reached out to a wider public. At the time the whole city rode on a wave of sports interest.

After Jordal Amfi was built for the 1952 Olympic Games in Oslo, this was for many years the most modern and most used home ground when the Norwegian national team played domestic matches. In other way, this was also one of the venues at the 1958 Ice Hockey World Cup, the B World Championships 1989, the 1999 Ice Hockey World Cup, the 2004 Ice Hockey World Cup (Division I) and the final qualifying tournament for the 2010 Winter Olympics.

Fig. 6
Photo of arciteckual model of the old Jordal Amfi





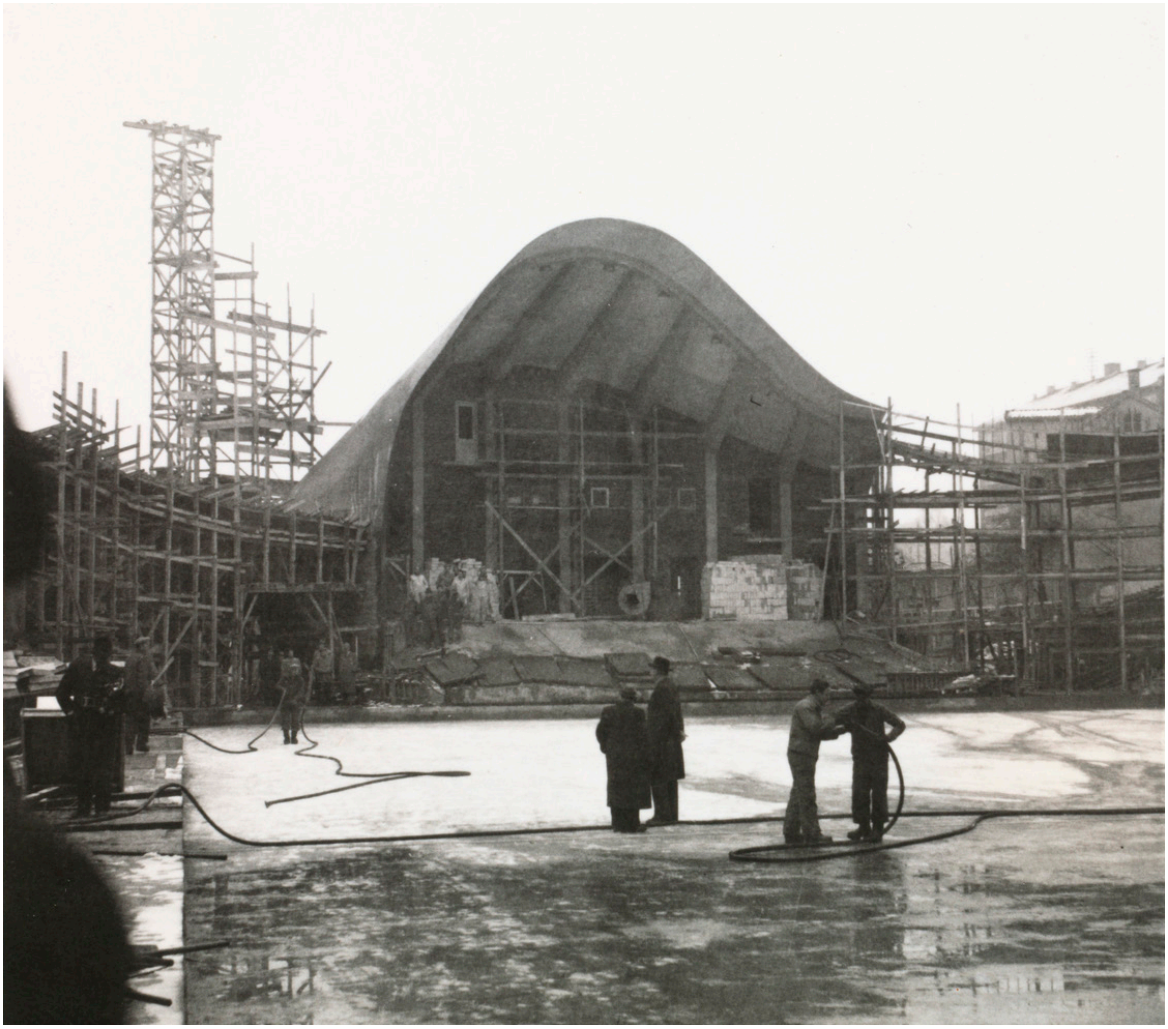


Fig. 7
Photo of the building process of Jordal Amfi.
In november 1951

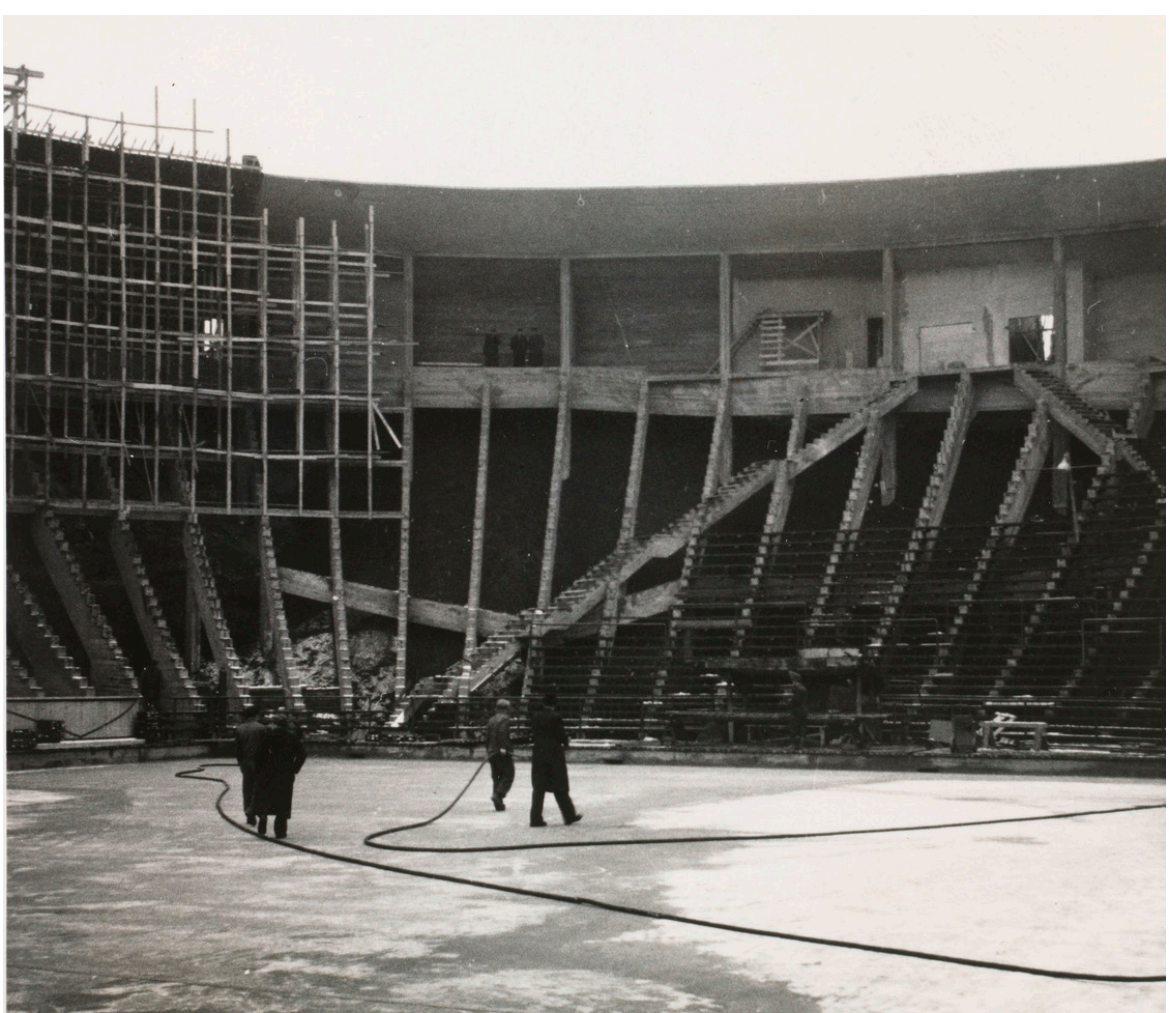


Fig. 8
Photo of the building process of Jordal Amfi.
In november 1951

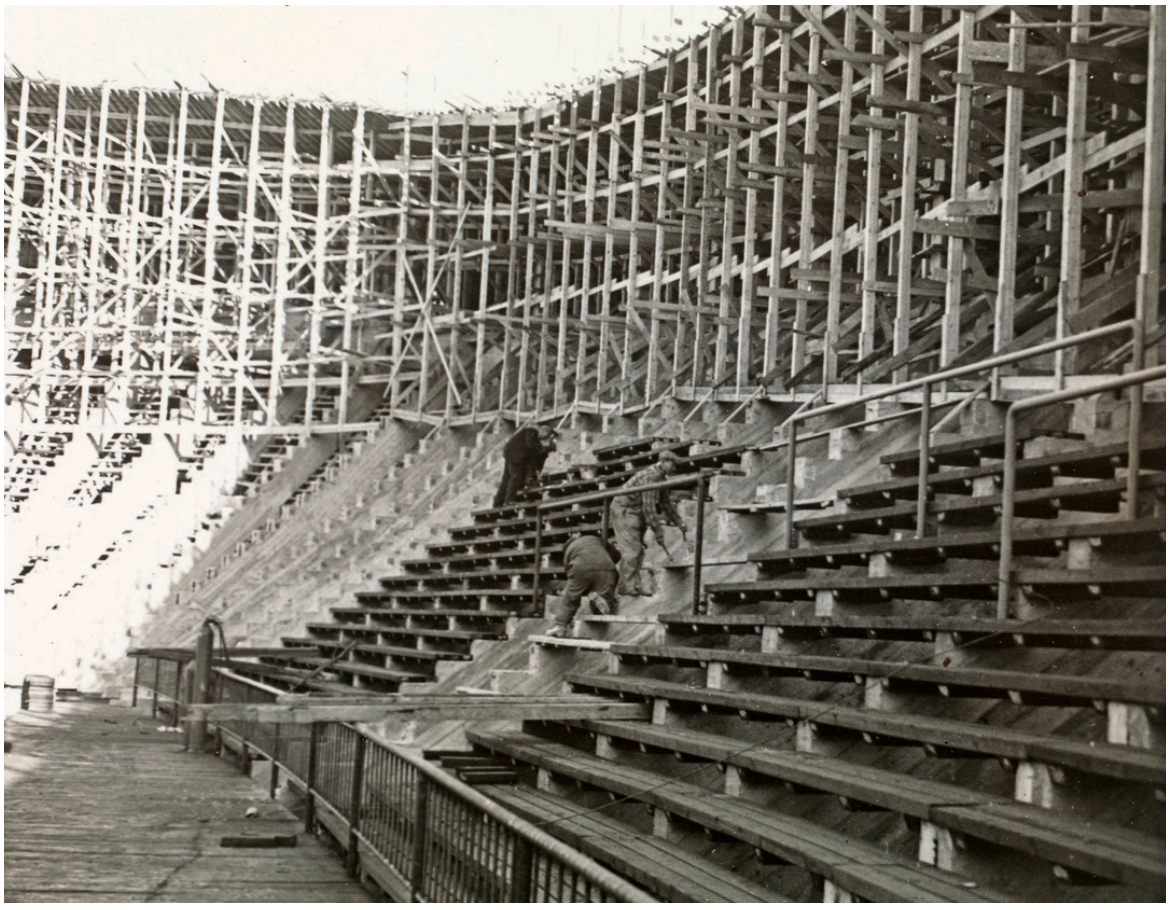


Fig. 9
Photo of the building process of Jordal Amfi.
In november 1951

Fig. 10
Photo of Jordal Amfi, spring 1952.

Fig. 11
Photo of Jordal Amfi, 1958.

Fig. 12
Photo of the Olympic Games at the ice hokey facility
Jordal Amfi. 1952

The road ahead

Sportingly, we hung on very well when we went into the 50s. The period 1950 to 1960, has been described as the golden age of Norwegian ice hockey. This period left a great mark. After the 1952 Winter Olympics, Jordal Amfi was considered a magnificent arena. This was Norway's first artificial ice surface. And we had come up to speed with the Swedes and their ice arena in Stockholm. Swedish players queued up to play in Norway. The artificial ice had a huge impact on Norwegian hockey. Quickly the capacity was filled up. And Norwegian hockey was in the wind like never before with several different players that drew the crowd to the games.

They had a new type of player in the national team. The ball talents flowed to Vålerenga (a ice hockey club in Oslo) like never before. Suddenly we had ice hockey national team players who also represented Norway in bandy, handball and on the football field. But the hockey community here at home wasn't huge. It was a small family. The one artificial surface we had on Jordal Amfi had incredible consequences. But it was on the pitches in the neighborhoods that the foundation was laid. After Vålerenga decided to cut out bandy and bet on ice hockey, things got going. The club became dominating in Norwegian ice hockey.

Vålerenga was a class of its own and their home arena (Jordal Amfi) became increasingly important. Internationally, more and more ice halls appeared. Until the mid-1960s, we also hung on well internationally when we were able to play evenly with both Sweden and Finland. After 1965 we became a b-nation. It was not because hockey at home had lost its appeal. But that we were lagging on the ice arenas.

As a winter sports nation Norway had lost their advantage they previously had.

Artificial ice didn't fit in Norway. Instead, politicians wanted to invest in swimming pools and indoor sports halls. What impact this had on swimming and handball is evident today. After years of fighting to win the municipal politicians' understanding of the importance of more artificial ice , norwegian ice hockey finally got an upturn. In 1964, Sparta Amfi could be inaugurated in Sarpsborg, which was the country's first ice hall.

Then Norway got ice halls in Stavanger, Bergen, Asker, Fredrikstad and Furuset in Oslo. Norway now had a total of seven ice halls. It was at least something to build on, even though they have been bypassed from our former competitors a long time ago.

During the 1970s, audiences doubled. For the first time, more and more spectators flocked to the games. Which also led to the media paying more and more attention.

The highest Ice Hockey league in Norway is the Fjordkraftligaen, where the playoff winner is awarded the Norwegian Champion and is awarded the King's Cup,

Ice Hockey Regions:

Inland and Romerike
Middle
North
Oslo and east Viken
Southwest
West Viken

Ice hockey clubs in Oslo and East Viken

Aker Ishockeyklubb
Borg Ishockeyklubb
Bøler Ishockeyklubb
Comet Halden
Comet Halden Elite
Driv Idrettslag
Forward SPK
Furuset Ishockey IF
Gamle Oslo Ishockeyklubb
Grüner Ishockey IL
Hasle-Løren Elite
Hasle-Løren IL
Jordal Ishockeyklubb
Kråkene Moss
Lambertseter Ishockeyklubb
Manglerud Star
Manglerud Star Elite
Mølla Inline Hockeyklubb
Nedre Glomma Ishockeyklubb
Nordstrand Ishockeyklubb
Progress IF
Rosenhoff IL
Sarpsborg Ishockeyklubb
Ski IL
Sparta Elite
Sparta Sarpsborg IHK
Stjernen Hockey
Stjernen Hockey Elite
Varteig Ishockeyklubb
Vålerenga Ishockey
Vålerenga Ishockey Elite

The main Rules and Structure of the game
Hockey at its core is a very simple game. You skate, you pass, you shoot and you score.

Objectiv
The objective is to score more goals than the opposing team.
A goal counts as one on the score-board (just like football/soccer**).** A goal is scored when a puck is shot from behind the net from an attacking team, which is usually defended by a goalie.

Players
There are 6 players per team on the ice at one time (including the goalie).
The game allows unlimited substitutions from the bench during stoppages and play.There are 6 different positions:

Goalie - Their job is to prevent the ice hockey puck from entering their net.

Defence players (left &amp right) - They are tasked with stopping the opposing forwards when their team does not have possession of the puck, and providing offensive support when the team does have possession.

Forward – centre - Responsible for taking faceoffs (the way play starts and restarts after a goal) to regain possession and covering the centre of the ice at both ends of the rink.

Forward – left &amp right wing - The wingers are responsible for play along the sides of the rink. They have some defensive responsibilities, but are primarily relied upon as goal scorers.

A goal can be scored by anyone on the ice, including the goalkeeper.

The Basic Rules
Offside - Play is declared 'offside' when an attacking player enters into the offensive zone before the puck does. Both skates over the blue line would count as 'entering'.

Icing - When a team shoots the puck from their own side of the centre red line and across the opposition's goal line. There is one exception though - when a team is short-handed due to a penalty, icing is legal.

Faceoffs - Each play begins with a faceoff and ends when a goal is scored, or the referee blows the whistle.

Penalties
Penalties are how players get in trouble with their sticks and bodies. Players will serve their penalties in the penalty box (sin bin).

A minor penalty is two minutes in length. Major penalties and misconducts are for more serious offences and can be for 5 minutes, 10 minutes or a full match.

Whilst a penalty is being served, the opposing team receives a man advantage called a 'power play'. A power play lasts for the duration of the penalty. In the case of minor penalties, the power play will end early if the team with the man advantage scores a goal.

Penalties can be for stick fouls such as, high sticking, hooking and tripping. Penalties are also for body fouls, including holding and roughing.

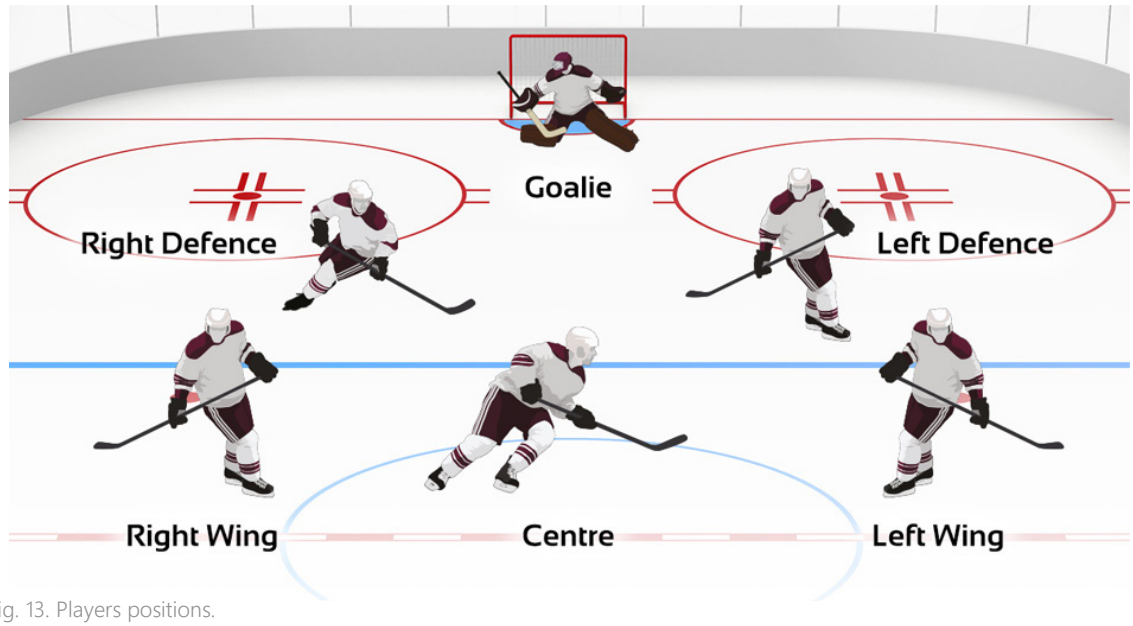


Fig. 13. Players positions.

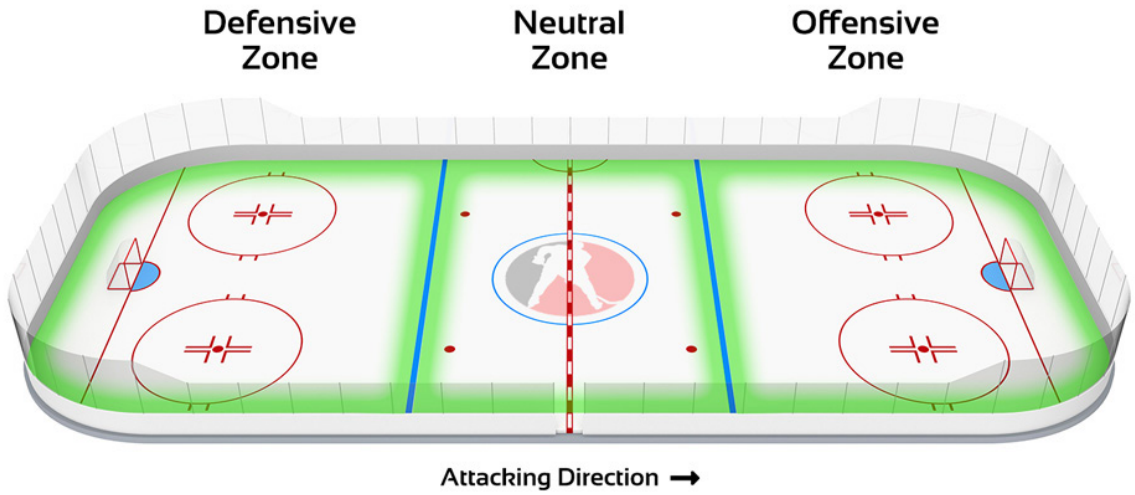


Fig. 14. Ice rink sectioning.

Penalties to avoid:

Roughing – striking an opponent with a hand or fist.

Hooking – obstructing progressive play by 'hooking' an opposing player with your stick.

High sticking – laying with your stick above shoulder height or the goal cross bar.

Tripping – using body parts or your stick to cause an opposing player to fall over.

Interference – obstructing a player not in possession of the puck.

Spearing – stabbing at an opponent with your stick (regardless whether this makes contact or not).

Charging – jumping or taking over three strides to violently hit a player and separate them from the puck.

Holding – grabbing an opponent to hold them back.

Fighting – partaking in a physical altercation. Often when punches are thrown.

The Equipment

Ice hockey equipment is mandatory to play, as it protects players against injury from falls, bumps and bruises. Ice hockey also requires many player equipment to protect them from injury during play. As the goal is defended by the goalie, he also wears certain protective equipment for protection and safety, because the goalie has the responsibility of keeping the ball out of the net.

Making sure the kit fits properly is crucial. Equipment that fits correctly is not only more protective, it is also more comfortable and allows to perform better.

A lot of equipment is needed. And there are some distinctions of the equipment of a player and to the goalkeeper:

Goalie -
- Skates
- Stick
- Mask
- Chest protector
- Neck guard/throat protector
- Goalie jock
- Knee pads/thigh guards
- Leg pads
- Blocker
- Catching glove
- Shorts

Fig. 15.
Photo of Hasle / Løren Ice Hockey Elite goalkeeper
Photo: Hasle / Løren Ice Hockey Elite facebook page.

Player -
- Skates
- Helmet
- Stick
- Gum shield/mouth guard
- Neck guard
- Shoulder pads
- Elbow pads
- Shin guards
- Shorts
- Gloves
- Jock

Fig. 16.
Photo of Hasle / Løren Ice Hockey Elite player
Photo: Hasle / Løren Ice Hockey Elite facebook page.

Wardrobe culture

The locker room binds the players together. Turn the sport into something more than just training. In the dressing room walls sits the story. Culture. No one knows Norwegian sport better than an old wardrobe wall. No one understands the basic values of sport better than the same wall.

The music in the wardrobe is deafening. The A-team captain has turned up the volume. The music is pounding. The youngsters are sitting with big eyes. The old boys, the locker room teachers, show how it's danced. It's straight from the liver.It's honest. Open. And real.

You will get a "fine" unless the wardrobe or equipment is properly arranged. The regulations hang on the door.

No remarks or warnings are operated here. The executioner is brutal. The learning effect is formidable. Culture.

The steam from the shower looks out into the locker room. You hear a scream after a random pick has been given a whip with a towel in there. Probably undeserved. Yet completely accepted. It's the locker room. It's the room at the very heart of the club. It's the room in the hall that brings together a team. Every single day. Every night. Year after year. Season after season. It's the symbol of the community. The symbol of unity.

Fig. 17.
Photo of Hasle / Løren Ice Hockey Elite warderobe
Photo: Hasle / Løren Ice Hockey Elite facebook page.

Literature list:

Books.

Langholm D. (1984).*Norsk ishockey gjennom 50 år : Norges ishockeyforbund 18-9-1934.* A.S. Reistad Offset.

Andersen, P. Chr. (1952).*De olympiske vinterleker : Oslo 1952.* Dreyer.

Ditlev-Simonsen, Halfdan. (1924). *Ishockey.* Aschehoug

Webpage:

URL: htttp//www.hockey.no

https://puckstop.com/pages/ice-hockey-guide

Figure list:

Fig.1 :Ditlev-Simonsen, Halfdan. (1924). *Ishockey.* Aschehoug. p. 6,7.

Fig.2: Dagbladet Morning edition 9 January 1905. p.2. NB.no

Fig.3: Langholm D. (1984).*Norsk ishockey gjennom 50 år : Norges ishockeyforbund 18-9-1934.* A.S. Reistad Offset. p. 42

Fig.4: Langholm D. (1984).*Norsk ishockey gjennom 50 år : Norges ishockeyforbund 18-9-1934.* A.S. Reistad Offset. p. 58

Fig.5: Langholm D. (1984).*Norsk ishockey gjennom 50 år : Norges ishockeyforbund 18-9-1934.* A.S. Reistad Offset. p. 45

Fig.6: *Arkitektumodell av Jordal Amfi,* 1952. Photonr: OB.F23546. www.oslobilder.no/OMU/OB.F23546

Fig.7: *Fra byggingen av Jordal Amfi.* 1951. Photnr: AAB-106534 www.oslobilder.no/ARB/AAB-106534

Fig.8: *Byggingen av Jordal Amfi, oktober 1951*. Photonr: AAB-106544. www.oslobilder.no/ARB/AAB-106544

Fig.9: *Fra byggingen av Jordal Amfi.* 1951. Photnr: AAB-106536 www.oslobilder.no/ARB/AAB-106536

Fig.10: *Jordal Amfi,* 1952. Photonr: A-20027/Ua/0010/032. www.oslobilder.no/BAR/A-20027/Ua/0010/032

Fig.11: https://urn.nb.no/URN:NBN:no-nb_digifoto_20190923_00104_NB_HS_58_00097

Fig.12: https://urn.nb.no/URN:NBN:no-nb_digifoto_20191002_0001

Fig.13: www.puckctop.com

Fig.14: www.puckctop.com

Fig.15: Photographer, Sofie Alexandra Kitterød, 2020. www.facebook.com/rislerasle

Fig.16: Photographer, Sofie Alexandra Kitterød, 2019. www.facebook.com/rislerasle

Fig.17: 2016. www.facebook.com/rislerasle

1.2.
Hasle / Løren IL
History

Index:

Facts
Hasle-Løren Idrettslag (Hasle-Løren IL) are a club that offers organized sports in several branches for kids and adults. They have around 1900 members and has a nice growth that they expect to continue with everything that happens in the local area. Hasle-Løren IL offer football, ice hockey, skiing, indoor bandy, handball, cycling and multisport. They are located at Løren Idrettspark in the east of Oslo, Spireaveien 3.

Values, vision, goals and ideas
Hasle-Løren Idrettslag bases its activity on values for Norwegian sports: Sports enjoyment, community, health and honesty. The club is run according to the organisational values of sport: volunteerism, democracy, loyalty and equality.

Hasle-Løren has a vision to become Groruddalen's most important arena.

One of their long-term goals is that they want the club to be a natural meeting place for those who want to engage in activity.

And a point in their business idea is that they want to facilitate a good club environment and create healthy attitudes that make Hasle-Løren IL perceived as a good contributor to the local community.

Hasle / Løren IL History
Hasle-Løren was originally founded in 1911, and have a long and rich history. An important stimulus for Norwegian sport was the dissolution of the union with Sweden in 1905. The national feeling was strengthened. The country needed something that could help create a stronger national identity. Norwegian nature and outdoor activities were important factors in this process. The great heroes were polar Hjalmar Johansen and Roald Amundsen, skier Lauritz Bergendahl and ice skater Oscar Mathisen. From England came impulses that brought sports such as football and tennis to the country.

They were probably affected by this development, the thirteen boys who on a summer's day in 1911 at the intersection of Økernveien and Ulvenveien founded Hasle Fotballklub. The date was July 1.

The "solemnity" is how Erling Østedal described this moment. He had a huge impact for the club over several decades. The club found its place in what was then called Norges Riksforbund for Idræt, later Norges Landsforbund for Idrett (now Norges Idrettsforbund), which at the time was the only umbrella organization for sports in the country.

Ten years after Hasle Fotballklub was established, some young men met in Rosengren's market garden on Økernveien and founded Økern Sport- og Atletklub. At this time, Norwegian sport was organized in Landsforbundet. Inspired by the strong rise of the labor movement in Norway, the Arbeidernes Idrettsforbund (AIF) was established in 1923. Hasle was a member of Landsforbundet,

Økern – which later changed its name to Løren Sportsklub – joined the AIF. The club played football from the beginning, and from 1914 also skis. Later, bandy, handball and ice hockey appeared on the program. Hasle Ski- og Fotballklubb co-founded the Norwegian Bandy Association (in 1920) and the Norwegian Ice Hockey Association (in 1934).

The idea of an ice hockey rink
Hasle Fotballklub moved from place to place, in a field at Økernkrysset and a field next to Økernveien, until the club in 1921 gained entry into a potato field at Hasle, in the area between Frydenbergveien, Hasleveien and Seljeveien. This was part of the property of AS Per Kure, Norwegian motor and dynamo factory.

The story of the Hasle course began as a summer activity. From the start, it was all about football. When the club recorded ice hockey on the program in 1934, the idea of an ice hockey rink arose in the area.

The aids were simple. A hose was laid from the factory building that one could spray an ice surface. There were stable winters at this time, and ice laying could begin as early as October. The lighting conditions were not much to boast about compared to today's requirements. 2 posts on one long side each with a 250 watt lamp. The grandstand on the track was made of discarded railroad sleepers.

Fig.1.
Ice hockey match at Haslebanen when it was newly opened in 1946.

New location
When the war of 1940-45 ended, the two sports federations were merged into an organization – Norges Idrettsforbund. In places where there were two clubs of the same name, the youngest had to change the club's name. Hasle AIL then became Løren Sportsklubb.

After the war, both clubs lost their courts. One went for regulatory purposes and the other went to the expansion of the nearby factory. During the war, the Norwegian Trotting Company had acquired Refstad gård.

This trade, like many others, became victims of concession processing. Because of the sport's attitude during the war, they got free land. The sport would get 2.47 acers (10,000 sqm.) by Refstad Gård. They were supposed to get a plot of land on the downside of Løren School. However, due to the wholesale trade being moved from Grøland to Økern, the sport did not get this plot. The plot was moved to where Løren Idrettsanlegg is today.

In 1963, the two clubs were merged into one – Hasle-Løren Idrettslag.

Hasle / Løren Ice Hockey
Hasle-Løren is one of the oldest ice hockey clubs in Norway dating back to 1935 under the hub "Hasle". Hasle played their first Norwegian Championship in ice hockey in 1940 against Grane. The club had its great period in the mid-1970s when the club took three king's trophies and became league winners three times, in 72, 74 and 76. Ice hockey has been the club's pride. The club created several legends such as "Hesten", "Bjerka", and "Kræsj", and was almost invincible throughout the 70s.

In 1986, a new ice hall at Løren was opened, Lørenhallen, with a spectator capacity of 1500. The new hall did not provide any immediate success for the A-team, and Hasle-Løren was relegated in 1987. The club remained in the elite league from 1990 to 1992 and was promoted to the top division before the 1996–97 season. Hasle-Løren was back in division one from 1997, where the club is also today. Since the 2000s, the A-Team has been in the 1st Division and in recent years established itself in the top half of the division with ambitions of getting to the " Kvalikk" of the Get-Ligaen.

The women's team became Norwegian champions for the first time in the club's history on 27 March 2022 in Grünerhallen, after beating league champion and big favourite Stavanger Oilers 4-1.

Then came Hasle-Løren Ice Hockey Elite. In 2016, the requirement from the Norwegian Ice Hockey Association was that all ice hockey teams in the performance part of the Norway had to be established as separate organisations. This requirement came so that senior teams in the top divisions will not draw the width department of the club with them if they themselves are to have financial problems. On 11 April 2016, Hasle-Løren Ishockey Elite was therefore founded and established as an alliance sports team with Hasle-Løren Idrettslag.

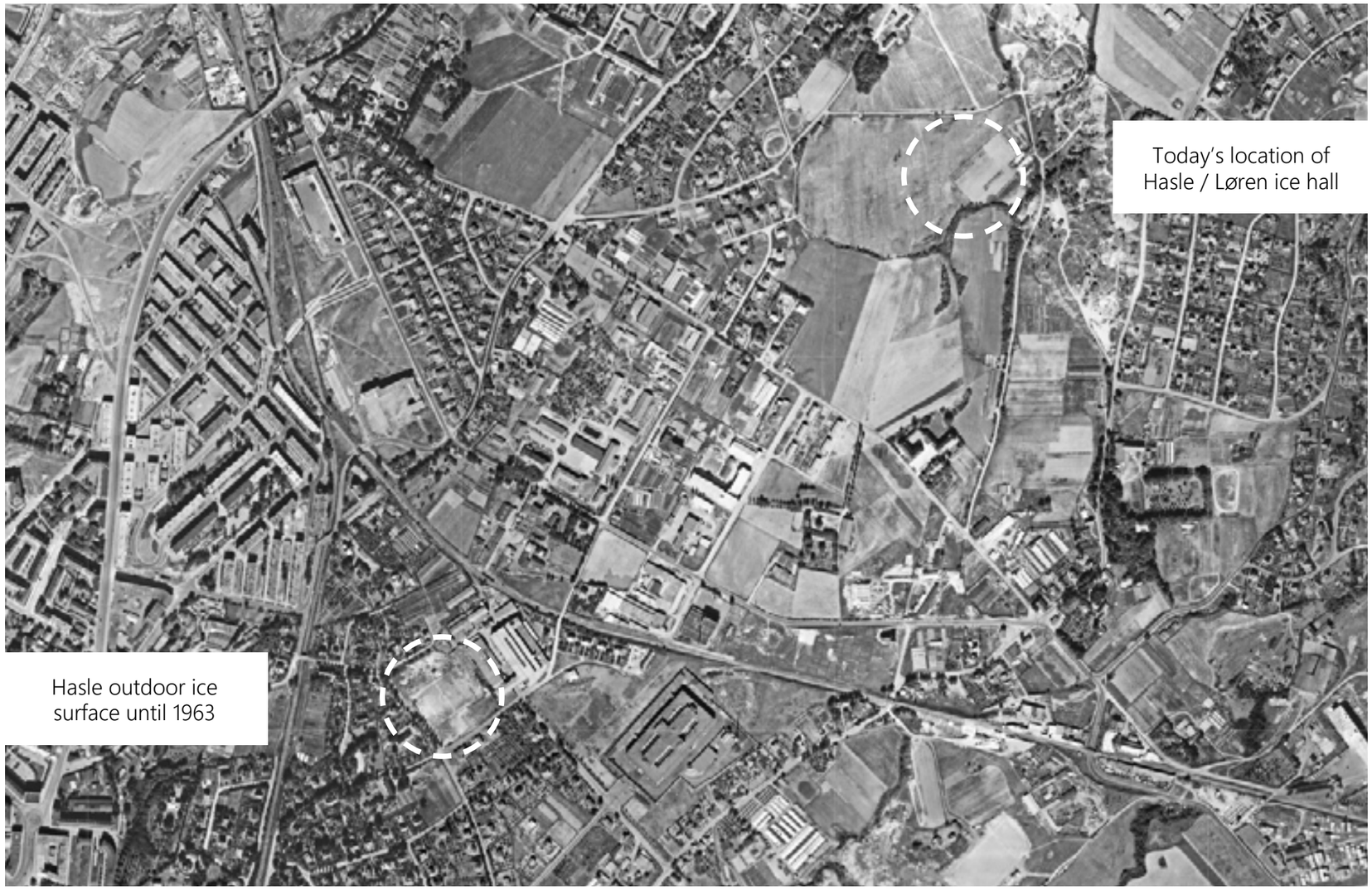


Fig.2.
Orthophoto from 1948

Published by:
VG. E-paper. URL:
https://www.vg.no/sport/ishockey/i/p6jjBW/da-hasle-loeren-var-konger-av-hockey-norge

DA HASLE/LØREN VAR KONGER AV HOCKEY-NORGE

Det er veldig lenge siden: Hasle-Løren vant tre kongepokaler på 1970-tallet med stjernespillere som alle bar kule kallenavn. Mats «Zucca» Zuccarello (31) tok som fireåring sine første skøyteskjær i klubbens da fem år gamle ishall på Løren.

Av ØYSTEIN JARLSBO
Oppdatert 21. januar 2019

STJERNELAG: Hasle-Lørens mesterlag for 44 år siden, med stjernespillere og trenere som Tore Falck Nilsen, Roar Øvstedal, Tom Røymark, keeper Øystein Mellerud, Jan Kinder, Terje Thon, Svein Pedersen, Egil Bjerklund og Terje Nyhaug. Foto: PRIVAT/HASLE-LØREN

– Nei, det er akkurat litt for lenge siden. Men gamlegutta er på kampene våre, og de er blant dem som er mest interessert. Jeg tror de møtes fast en gang i uken og organiserer dugnader og forskjellige ting, svarer Magnus Færøy på spørsmål om spillerne på Hasle-Lørens seniorlag i dag ofte blir påminnet storhetstiden fra over 40 år tilbake.

Magnus Færøy er styreleder i Hasle-Løren Elite, reservekeeper på klubbens A-lag i 1. divisjon og gikk i sommer i bresjen da garderobene i Lørenhallen skulle pusses opp og males.

Ifølge kaptein Christian Thinn er Magnus Færøy lagets eneste ekte Hasle-gutt: «Mister Hasle». Han er utdannet bygningsingeniør og sa ja til vervet som styreleder for Oslo-klubbens elitesatsing da Norges Ishockeyforbund for to år sine krevde at seniorlagets virksomhet måtte skilles fra klubbenes bredde og ungdomsvirksomhet.

«Hesten», «Failer'n», «Bjerka», «Kjella», «Kræsj»,»Hågen», «Peder», «Bobbo» og «Daffy» – det var Hasle-Løren-helter som vant NM-tittelen og seriemesterskapet tre ganger på 1970-tallet.

Og så Geir Myhre, selvsagt: «En helt spesiell mann»

Nå består Hasle-Lørens A-lag av ukjente navn med bakgrunn fra Vålerenga, Manglerud Star, Furuset og Lørenskog. Klubbens trener de siste tre årene, Philippe Juell, har tidligere spilt for Grüner, Jar, Lørenskog og Holmen.

Magnus Færøy og Christian Thinn, som har Getliga-erfaring fra Vålerenga, Furuset, Manglerud Star og Frisk Asker, gir klart uttrykk for at A-laget ikke umiddelbart sikter mot gode, gamle høyder.

– Vi prøver alltid å ta oss til «kvalik» (kvalifisering mot bunnlagene fra GET-ligaen). Men opprykk er det nok ingen planer om, sier Christian Thinn.

Han er inne i sin fjerde sesong på rad, den femte totalt, for Hasle-Løren. Han jobber i bank og karakteriserer Hasle-Lørens A-lag som en kompisgjeng som elsker hockey.

Forrige sesong endte de på 5. plass i 1. divisjon.

Magnus Færøy vedgår at klubben ikke har hatt god nok vekst når det gjelder spillere i alderen 16 til 18 år. Derfor har de måttet «titte rundt» i andre klubber etter spillere som sultne på å spille i GET-ligaen og vil – helst må – bruke 1. divisjon som mellomstasjon og springbrett.


VG SPORT

„HESTEN" SOM
ingen kan temme

Strømsnes

Strid

Satset

Mange verv

Hasle-Lørens Terje «Hesten» Nyhaug ble for 46 år siden omtalt som «Norgs mest omdiskuterte spiller gjennom tidene» i VG. Foto: Faksimile VG/Privat

Hasle-Lørens A-lagsbudsjett er ifølge Færøy 1,1 til 1,2 millioner for sesongen 2018/19. Halvparten av pengene kommer fra klubbens egen drift i form av kommunale midler og leieinntekter fra ishallen som sto ferdig i 1986.

Magnus Færøy og Christian Thinn, sønn av tidligere landslagsspiller og måltyv Sigurd Thinn som spilte for Furuset, Bergen Djerv og Vålerenga, mener Comet fra Halden, Narvik, Nidaros fra Trondheim og Hasle-Løren vil kjempe i toppen av 1. divisjon denne sesongen.

Publisert: 15.01.19 kl. 14:12
Oppdatert: 21.01.19 kl. 15:20

Literature list:

Books.

Wellberg, F. (2011).*Fra gutteklubber til samfunnsinstitusjon.* Hasle / Løren 100år.

Webpage:

VG. E-paper. URL: https://www.vg.no/sport/ishockey/i/p6jjBW/da-hasle-loeren-var-konger-av-hockey-norge

https://www.hasle-loren.no/om_hasle-loren/visjon-og-verdier/

Figure list:

1.3.
Progam criteria
and halltype

Index:

Ice Facility

In Norway there are currently 49 indoor ice surfaces in daily use, with great interest from all over the country there is a need for even more in the time to come. Ice halls are very costly, and there are therefore often time-consuming processes from idea to the realization of a project.

Ice Rink size:
The ice rinks in Norway can be the size (according to the rule book):

Width: 26 – 30 metres.
Length: 60 metres.

Energy:
Ice halls are facilities require a lot of energy, and there is a strong focus on reducing energy costs in this type of project.

Height under the ceiling:
There should always be my 5.5 meters free height all over the course (the simplest training halls without spectator spaces can have 5 m free headroom). In larger audience halls, the ceiling height should otherwise be min 7.5 meters (but e.g. cube can be placed down to 5.5 meters). Sufficient consideration must be given to sight lines for the public.

Universal design:
All ice halls must meet universal design requirement

Grandstands:
All halls should have grandstands. Simple gyms (preferably hall no. 2) should accommodate 200 spectators. Halls for games up to the 1st division should have a capacity for 1,000 spectators.

Wardrobe size: min 40 sqm + shower/ toilet.

Wardrobes:
At least 6 ordinary changing rooms will be required in each hall if gambling funds are to be sought.
Wardrobe size: min 40 sqm + shower/ toilet.

Judge wardrobes: 2 including shower/ toilet. These must accommodate at least 5 people with a bench space.

Since girls' hockey is rapidly growing in many places, it requires better wardrobe capacity. This must be taken into account when planning the number of wardrobes for new facilities, or if facilities are to be rehabilitated.
Access to the changing rooms should be from a time when you can wear outdoor shoes. From the changing rooms to the ice, you should not go through areas where you wear outdoor shoes. In other words, you must separate clean and dirty zones to/from wardrobes.

HALLTYPER/-KATEGORIER NORGE mai 2020

	elitearena		publikumshall	treningshall
	Eventarena A	Eventarena B	Konkurransehall	Treningshall
	A	B	C	D
Publikumsplasser	min 4000	min 2500	min 800	min 200
Siktlinje sitte-/ståplass til bane <4m	X	X	X	
VIP losjer, utsikt	X			
VIP rom		min 5o m²		
Rullestolplasser	X	X	X	X
Teknikkbro	X			
Foaje/vestibyle	X	X	X	
Restaurant	X			
Kafeteria		X		
Kiosk(er)	X	X	X	
Oppvarmet hall for publikum/kamper	min 15 gr C	min 15 gr C	X	
Vrimleareal publikum	X	X	X	
Publikumstoaletter	X	X	X	X
HC toaletter publikum	X	X	X	X
Billettsystem via internett	x	x		
TV kamra plasser	X	X	X	X
TV-/radio kommentatorplasser	X	X		
Presseplasser	X	X	X	
Presserom	X	X		
Oppholdsrom presse	X			
Trådløst nettverk presse	1 lukket	1 lukket	1 lukket	
Trådløst nettverk publikum	Åpent	Åpent	Åpnet	
Nettverk for serkretariat	X	X	X	X
Banestørrelse (26-30x60)	X	X	X	X
Flexible vant med acrylglass eller tilsvarende	X	X	X	X
Høyde til belysning (laveste punkt over is)	7M	7M	5M	5M
Belysning (lux), jevn belysning på hele banen	min 1200	min 1200	min 800	min 600
Flexpeg (til mål)	X	X	X	
Sikkerhetsnett, 4 m fra mållinjen	X	X	X	X
Spillerbåser	X	X	X	X
Sekretariat	X	X	X	X
Sikret område for spillere inn på banen	X	X		
Matchklokke	mediakube	mediakube	Min to tavler	X
Lydanlegg	X	X	X	X
Videodommerrom	X	X		
Garderober	2stx50m² + 4stx40m	2stx50m² + 4stx40m	6stx40m²	stx40m²
Dommergarderober	2 store og 1 liten	2 store og 1 liten	2st	2st
Lagrom	X	X	X	X
Trenerrom	X	X		
Massasjerom	X	X		
legerom	X	X		
Dopingkontrollrom	X	X	X	
Klubblager	X	X	X	
Vaskerom/vaskemaskin	X	X	X	
Tørkerom/tørketrummel	X	X	X	
Arrangementskontor	X	X	x	
Sliperom	X	X	X	X
Seriesystemets krav til arenatype	**Get-liga**	**Get-liga**	**1-2. divisjon Damer Elite U20/U18 elite**	**Andre serier**

Fig.1. Hall types / categories of ice Hockey facilities by NIHF. Program needs

IIHF - hall type: Small Size
Practice Arena with one ice Surface

A relatively low-investment solution to bring an ice rink to a smaller community, or to add to the ice time needs in a larger community, with existing ice rinks already in place. It should be centrally located within easy reach of all the population it serves.

This facility is still primarily designed for practice, although of course games and scrimmages are possible.

Seating Capacity -	Less than 200
Purpose -	Practice and some scrimmages
Features -	One ice surface, ideally full-size (30 m X 60 m)
Land needed -	2.9 acres (ca 12 mål)

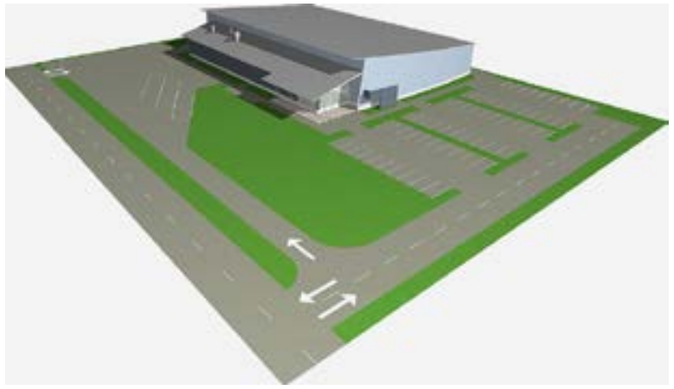


Fig.2.
IIHF - hall type: Small Size. 3D illustration.

1. Practice Rink
2. Main entrance
3. Players entrance
4. Maintenance Yard
5. Parking
6. Players parking
7. Staff parking
8. Bus parking
9. Storage
10. Bicycle parking

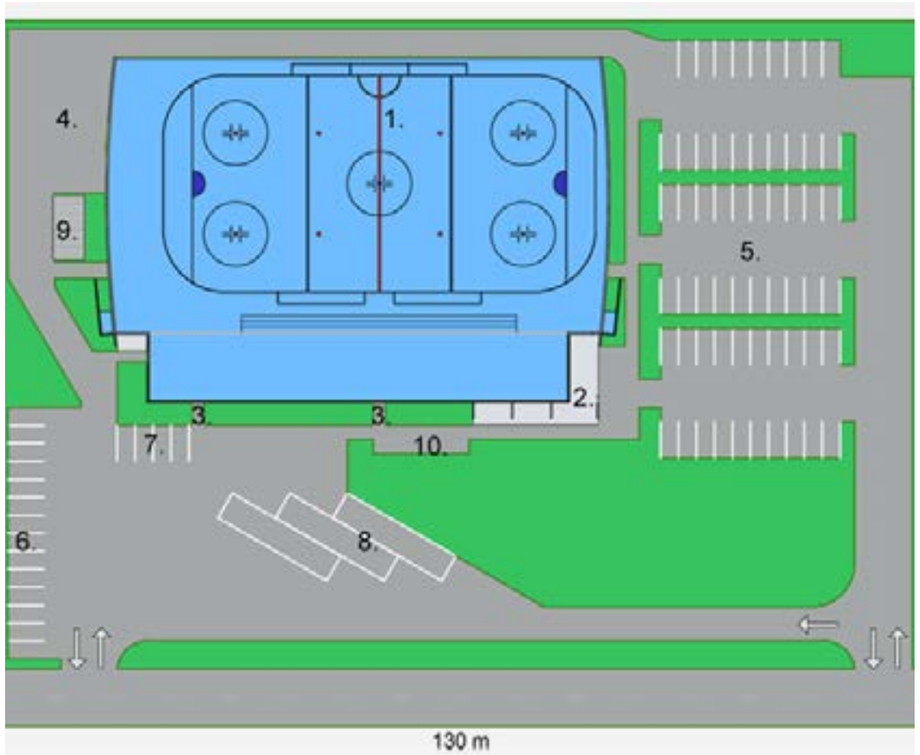


Fig.3.
IIHF - hall type: Small Size.

Fig.4.
IIHF - hall type: Small Size. Section

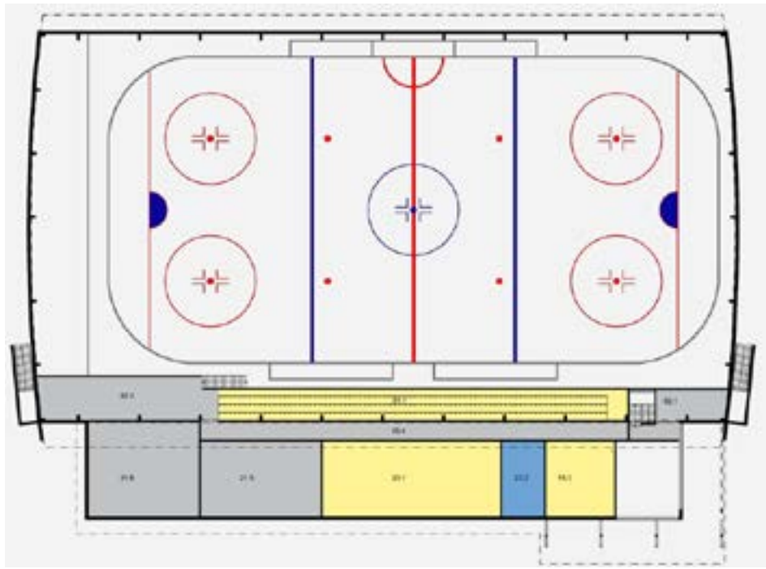


Fig.5.
IIHF - hall type: Small Size. 2 floor.

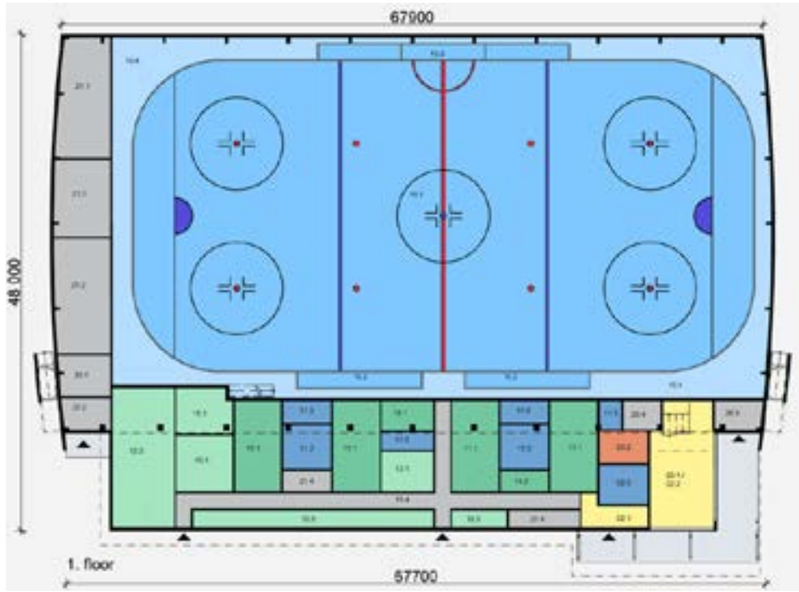


Fig.6.
IIHF - hall type: Small Size. 1 floor.

IIHF - hall type: Medium Size
Practice Arena with two ice Surfaces

This is still a fairly economical solution to fulfill the ice-time needs of a larger community or of several larger neighborhoods. It should be centrally located within easy reach of all the population it serves. This facility is still primarily designed for practice, although of course games and scrimmages are possible.

The two ice surfaces in this facility also allow for more public skating hours, as well as giving a possibility to set one rink up for figure skating or short-track.

Seating Capacity -	Less than 200
Purpose -	Practice and some scrimmages
Features -	Two ice surfaces, at least one should be full-size 30m X 60m, the other could be smaller
Land needed -	5.2 acres (ca 20.2 mål)

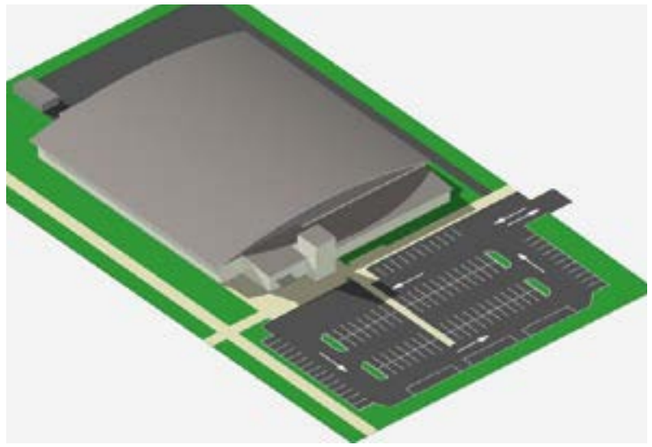


Fig.7.
IIHF - hall type: Medium Size. 3D illustration.

1. Practice Rink
2. Main entrance
3. Players entrance
4. Maintenance Yard
5. Parking
6. Players parking
7. Staff parking
8. Bus parking
9. Storage
10. Bicycle parking

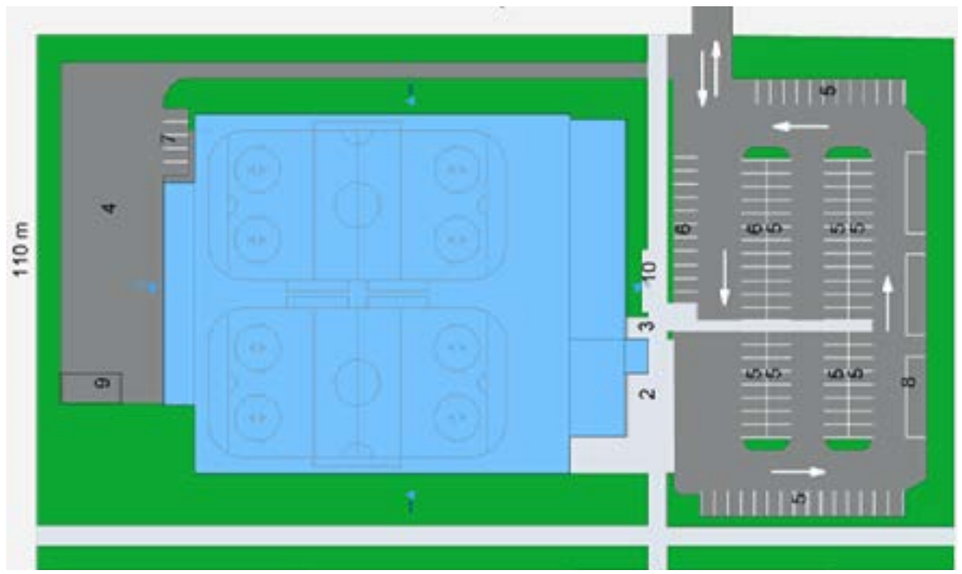


Fig.8.
IIHF - hall type: Medium Size.

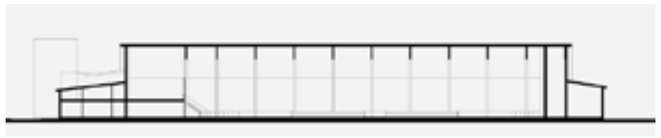


Fig.9.
IIHF - hall type: Medium Size. Sections.

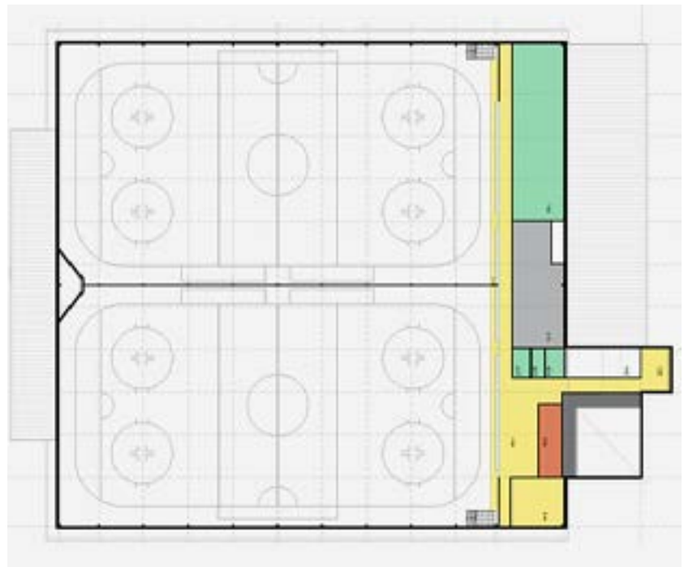


Fig.10.
IIHF - hall type: Medium Size. 2 floor.

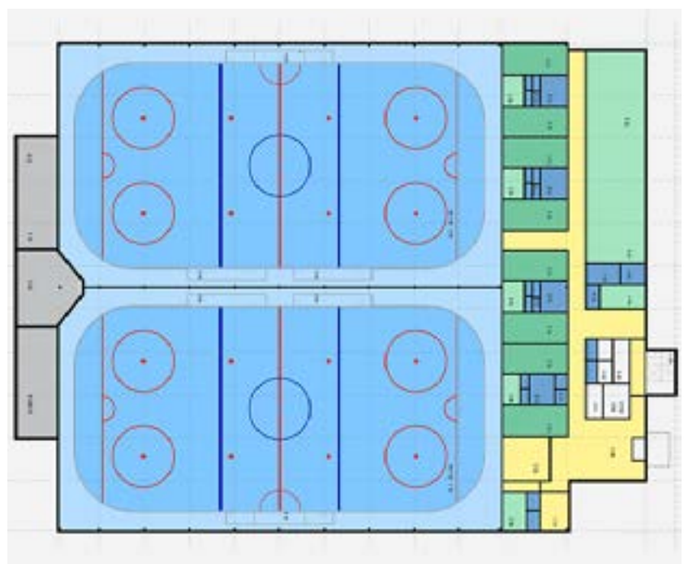


Fig.11.
IIHF - hall type: Medium Size. 1 floor.

IIHF - hall type: Large Size
Small Competition Arena with Practice Rink

Competition Rink for junior or lower league games, could also be used for senior team scrimmages or friendly games. Can also be
used for Division II and III IIHF events, provided enough temporary team facilities (changing rooms etc.) can be installed. The
facility's separate practice surface allows for more ice time for various purposes for the local community.

Seating Capacity -	Less than 1500
Purpose -	Lower league and Junior games, Senior scrimmages, plus an additional practice rink for the community
Features -	Two ice surfaces, one is full-size 30m x 60m with tribunes and service facilities, with full scoreboard, PA System, etc. The practice rink can be a smaller surface with more minimal infrastructure.
Land needed -	6.1 acres (ca 24,3 mål)

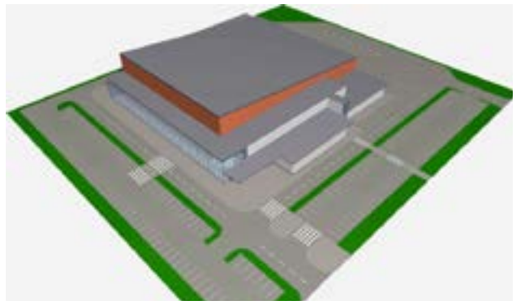


Fig.12.
IIHF - hall type: Large Size. 3D illustration.

1. Practice Rink
2. Main entrance
3. Players entrance
4. Maintenance Yard
5. Parking
6. Players parking
7. Staff parking
8. Bus parking
9. Storage
10. Bicycle parking

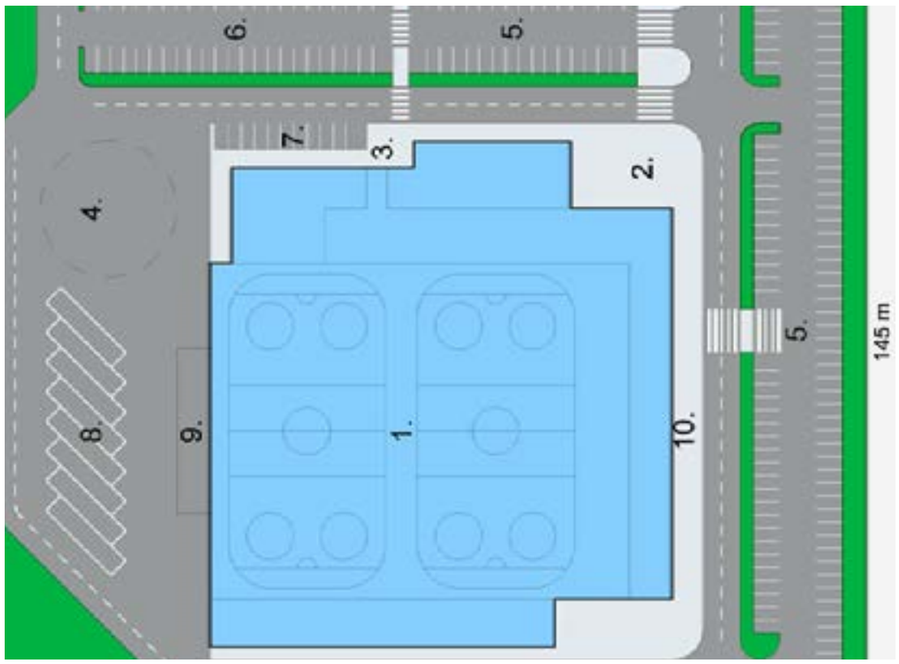


Fig.13.
IIHF - hall type: Large Size.

Fig.14.
IIHF - hall type: Large Size. Sections.

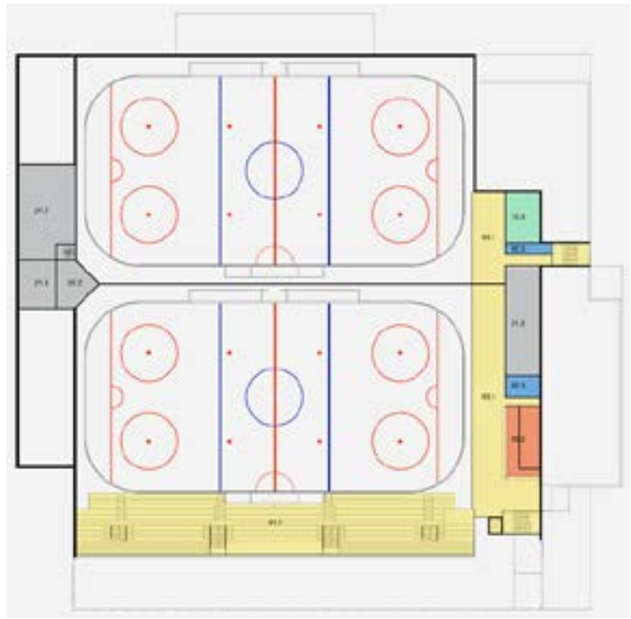


Fig.15.
IIHF - hall type: Large Size. 2 floor.

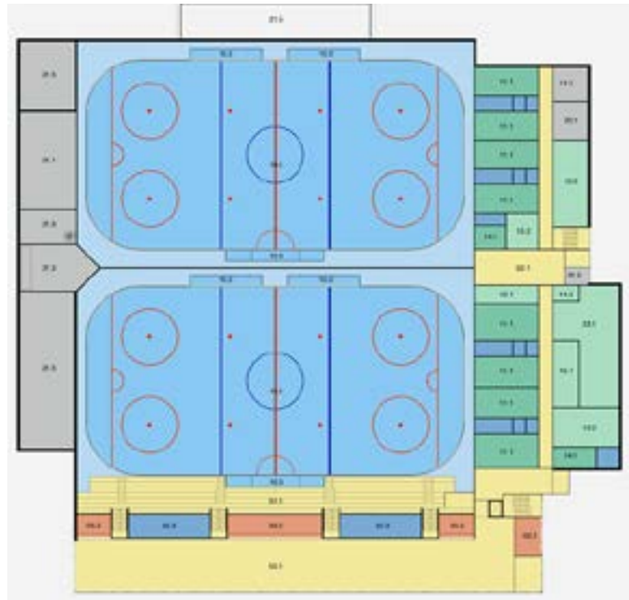


Fig.16.
IIHF - hall type: Large Size. 1 floor.

IIHF - hall type: Xlarge Size
Full Competition Arena with One Practice Rink

Competition Rink for any league games and senior competitions. Can also be used for Division I, II, or III IIHF events, provided enough team facilities are available or can be installed temporarily. The facility's separate practice surface allows for more ice time for various purposes for the local community.

Seating Capacity -	Approximately 3000 - 6000
Purpose -	All League and Junior games, Senior games, Division I, II, or III IIHF championships, plus an additional practice rink for the community
Features -	Two ice surfaces, one is full-size 30m x 60m with tribunes and service facilities, with full score-board, PA System, etc. The practice rink can be a smaller surface with more minimal infrastructure.
Land needed -	8.0 acres (ca 32,3 mål)

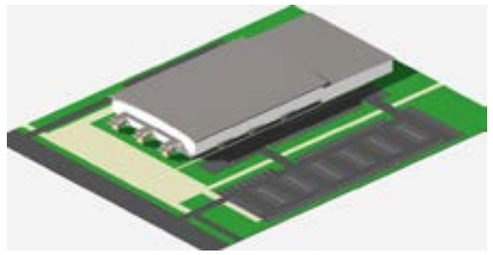
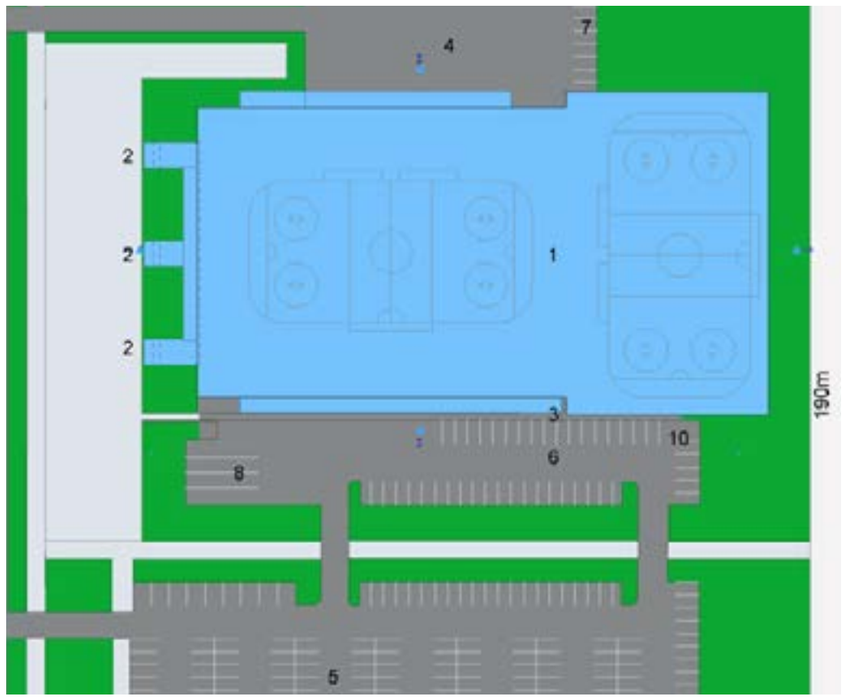


Fig.17.
IIHF - hall type: XLarge Size. 3D illustration.



1. Practice Rink
2. Main entrance
3. Players entrance
4. Maintenance Yard
5. Parking
6. Players parking
7. Staff parking
8. Bus parking
9. Storage
10. Bicycle parking

Fig.18.
IIHF - hall type: XLarge Size.

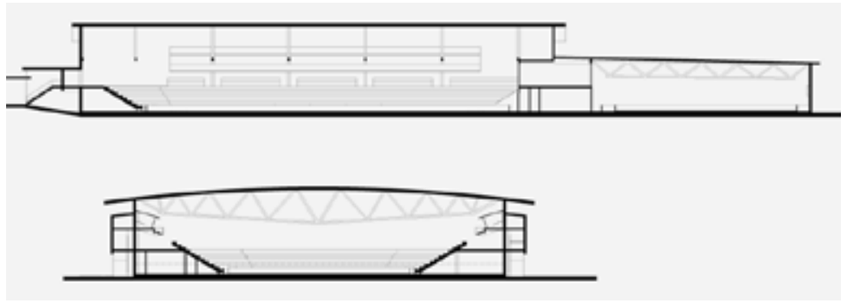


Fig.19.
IIHF - hall type: XLarge Size. Sections.

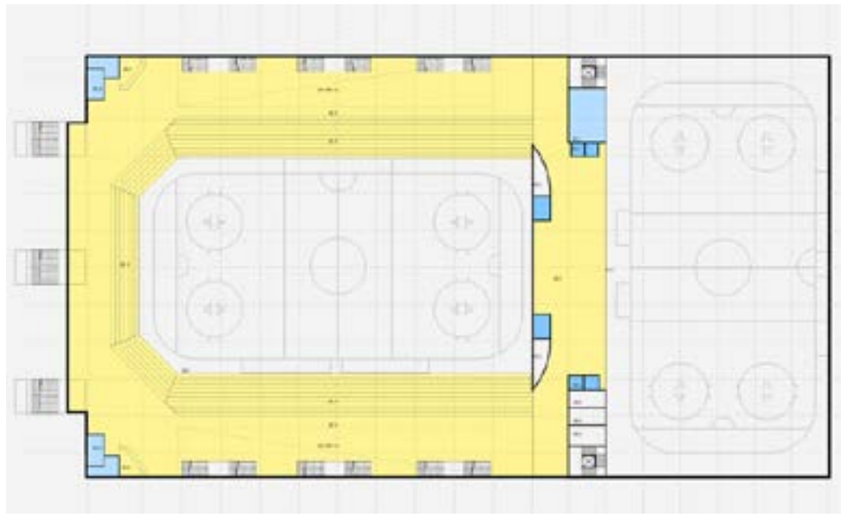


Fig.20.
IIHF - hall type: XLarge Size. 2 floor.

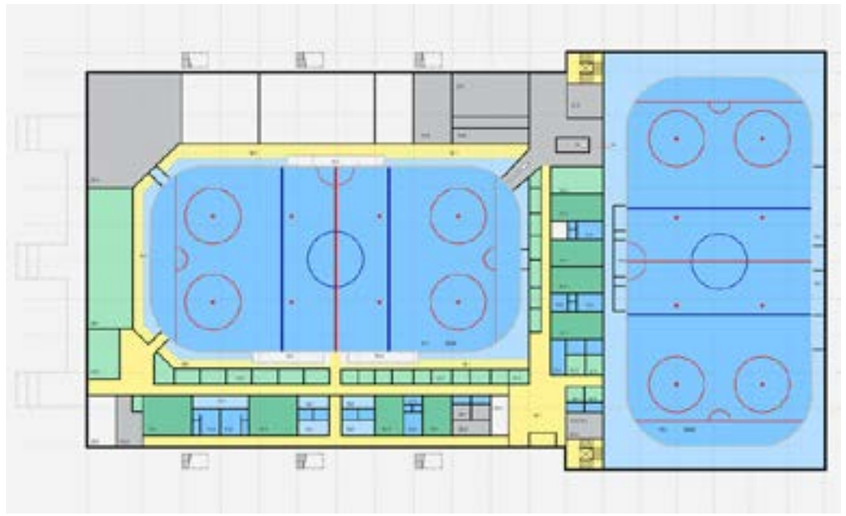


Fig.21.
IIHF - hall type: XLarge Size. 1 floor.

Literature list:

.

Webpage:
https://www.hockey.no/
forbundet/anlegg/diverse/

Figure list:

1.4.
Interviews
and articles
(in Norwegian)

Index:

Har Oslo kommune glemt barna?

Må bygges flere idrettshaller, etterspørselen større enn tilbudet

NHL-stjerna og lørengutt Zucca med råd til byrådet: - Gi unga på Løren to ishaller!

Oslo kommune bygger vekk barn og unges oppvekst på Økern, Refstad og Løren

Det er håpløst

Skuffet over byrådets prioritering. – Må ha hall nå!

Frykter dødsdom for klubben

Byråden vil busse hockey-spillerne til andre haller

URL: https://www.hasle-loren.no/2022/06/08/ikke-glem-barna/

Ikke glem barna!

RSS Feed 8. juni 2022

Vi aksjonerer for bedre oppvekstvilkår for barna våre

Hasle-Løren idrettslag ber nå kommunen om flater og arenaer som bidrar til vennskap og trygghet for barn og unge i området vårt. Alle barn og unge trenger et sted å være når de ikke er hjemme – et sted å henge hvor det er andre unge og voksne. Vi ser at organisert idrett også er en viktig arena for de som ikke er organiserte!

Idrettslaget vårt opplever en eksplosiv vekst, men vi får ikke større plass – bare mindre. Vi får stadig flere medlemmer, fra nærområdet – men også fra andre områder i byen; Vestli, Furuset, Gamle Oslo, Linderud, Veitvet og Grünerløkka.

Vi vil gjerne være klubben for alle. Vi har et godt klubbhjerte, ildsjeler og ivrige foreldre til å ta dugnaden, men:

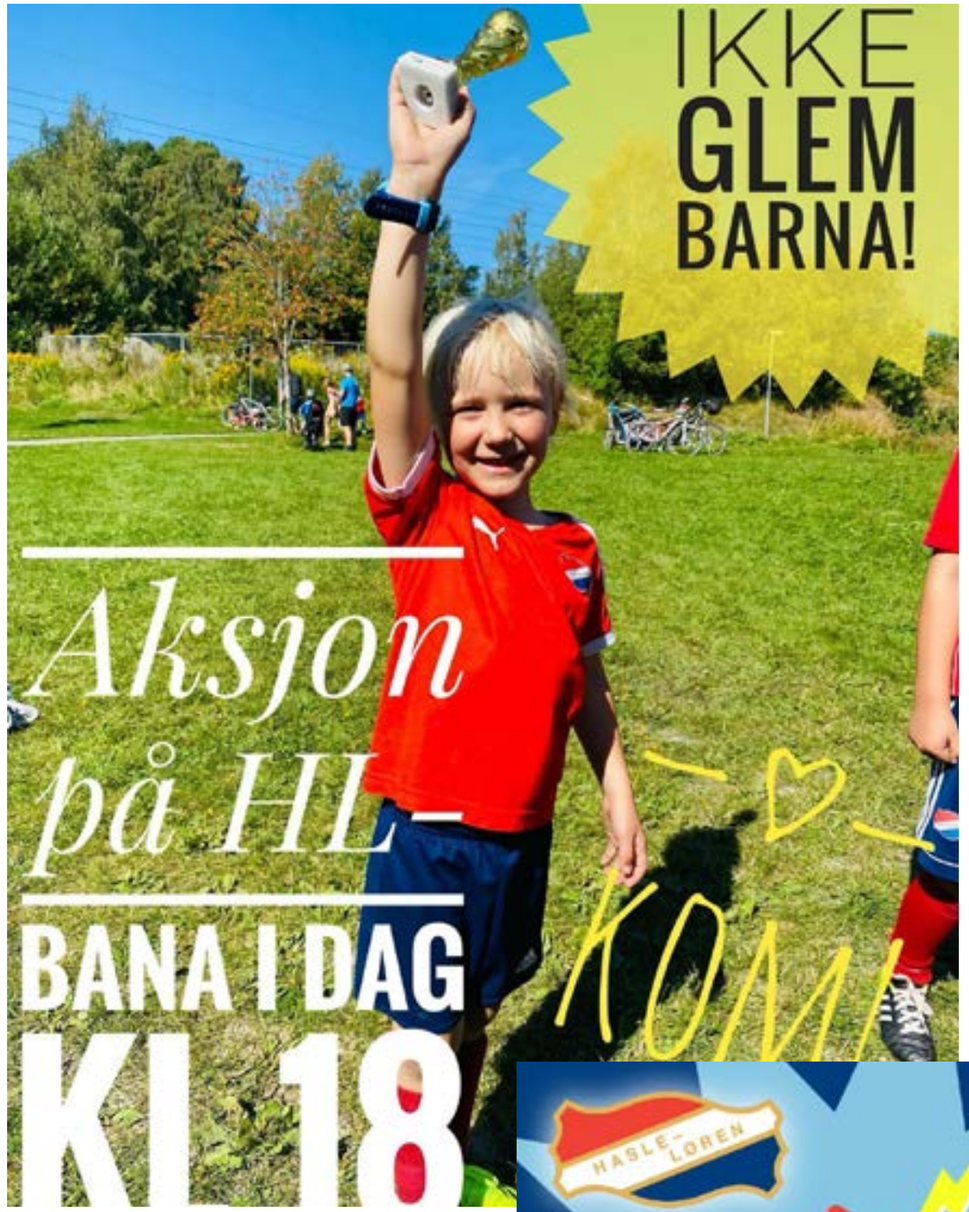
Vi mangler flater og anlegg til å ta imot alle barn og unge som ønsker å være aktive hos oss!

Tirsdag 14.juni kl 18.00 samler vi medlemmer og naboer til aksjon på idrettsanlegget, journalister og politikere er invitert. KOMMER DU?

Status for idrettsanlegg for Hasle-Løren

- Midt på Økern skulle det nå stått en skole, en flerbrukshall, en barnehage, en park og leilighetsbygg. Ikke noe av dette er klart.
- Det skal bygges 1000 leiligheter på Økern Torg. Men det er ikke planlagt for en eneste ballbinge, ingen basketbane eller håndballbane.
- Flerbrukshallen i Løren Idrettspark skulle stått ferdig i 2018, den er utsatt til 2026. Tidligst. Reguleringen er ikke ferdig.
- Det er planlagt en flerbrukshall tilknyttet den nye ungdomsskolen som skal bygges på Økern Torg. Men området er fortsatt ikke ferdigregulert.
- Den gamle ishallen til Hasle-Løren-Løren skal rives og bygges opp igjen. Men kommunen vil ikke sette opp en midlertidig hall. Dette setter Hasle-Løren ishockey eksistens i fare.

> *Hasle-Løren Idrettslag ønsker at du stiller på aksjonen for bedre oppvekstvilkår for barn og unge i bydelen vår, som vi holder på Hasle-Løren idrettsanlegg tirsdag 14.juni kl 18.*



URL: https://www.okernloren.no/2021/09/22/stort-behov-for-flere-idrettsanlegg-pa-okern-og-loren/

Stort behov for flere idrettsanlegg på Økern og Løren

SEPTEMBER 22, 2021 1408 7 Min Read

Den offentlige høringsperioden for Økern Torg er nå over. Det har kommet inn mange innspill fra dere beboere om større park og mindre boliger. Det er også blitt bedt om å få en egen plan for ungdomsskolen slik at denne kan bygges så raskt som mulig. Nå har idrettslaget Hasle-Løren og Norges Idrettsforbund ved Oslo Idrettskrets også kommet med sine innspill der de peker på at det er et meget stort behov for flere idrettsflater allerede i dag. Med den utviklingen vi ser i dag og fremover vil ikke behovet bli noe mindre når flere 1000 nye boliger blir bygd i nærmeste område.

Oslo Idrettskrets

Her er utdrag fra innspillet til Oslo Idrettskrets.

Det er positivt at det planlegges for en fleridrettshall i skolen. Dette er etablert som standard i Oslo når det bygges nye skoler. Utover dette kan vi ikke se at planen legger til rette for utvikling i tråd med kommunes målsettinger for anleggsutvikling. Med 1000 nye boenheter i dette delområdet alene legges ytterligere press på de eksisterende anleggene. Vi er ikke kjent med andre planer som kompenserer anleggsbehovet i området. Som resultat av denne planen vil idrettsanleggsituasjonen i området forverres.

Behovsplanen for idrett svikter som planverktøy

Det vises til behovsplanen for idrett, og at det ikke er angitt planer om andre idrettsanlegg i området, utover fleridrettshallen ved skolen. Oslo Idrettskrets er svært kritisk til en slik anvendelse av behovsplanen for idrett, da planen ikke er utformet som et verktøy for arealplanlegging. Behovsplanens funksjon i dagens form er som en investeringsplan, og inneholder ikke behovsvurderinger for fremtidig idrettsareal. Oslo Idrettskrets mener at man ved å konkludere med at det ikke er behov for flere idrettsanlegg i dette området (utover fleridrettshall) har kommet til en alvorlig feilslutning.

Selv om det ikke ligger flere anlegg i handlingsplanen (investeringsplanen) er behovsplanen tydelig på behovet for flere idrettsanlegg i det aktuelle området. Fra omtale av kunstgressbaner: «I Bydel Bjerke er det ventet en stor befolkningsvekst de neste årene, spesielt gjelder dette Løren det er forventet stor tilflytting av barnefamilier, og med dette en sterk tilvekst av barn og unge. Løren idrettspark er allerede presset på aktivitet og i planarbeidet for området er det arbeidet med å sikre opprettholdelse og økt kapasitet for kunstgress». Denne beskrivelsen stemmer med lokalidrettens opplevelse av anleggssituasjonen som allerede opplever at det er stor underkapasitet, særlig på fotballbanene. De lokale idrettslagene må avvise barn som ønsker å delta i aktivitet fordi det ikke er plass til flere. I behovsplanens brukerundersøkelse kommer det frem at bydel Bjerke, sammen med Grünerløkka og Gamle Oslos har lavest score på spørsmål om man er fornøyd med idrettsanleggene i bydelen.

Forslag til nye idrettsanlegg – oppfølging av behovsplanens målsettinger

Behovet for idrettsanlegg følger samme logikk som behovet for barnehager og skoler. Dagens kapasitet må sees opp mot framskriving av befolkningsutviklingen i området, og i relasjon til eventuelle andre planer innenfor området. Behovsplanen, vedtatt i bystyret i desember 2020, har som mål at «Anleggsdekningen på prioriterte idrettsanlegg skal minimum følge veksten av barn og unge». De prioriterte anleggstypene hvor anleggsdekningen skal forbedres er flerbrukshaller, basishaller (turn), badeanlegg, anlegg for kampsport/dans, kunstisanlegg og friidrettsanlegg. For kunstgressbaner skal anleggsdekningen følge befolkningsutviklingen. Oslo Idrettskrets mener behovet for flere idrettsanlegg i Lørenområdet er stort – og at behovsplanen for idrett og friluftsliv i Oslo også dokumenterer dette. Som følge av dette må det avsettes areal til flere idrettsanlegg i planområdet. Det bør som et minimum avsettes areal til en 9er kunstgressbane, friplass for friidrett, samt anlegg for kampsport og dans. I tråd med kommunens flerbruksstrategi bør anleggene planlegges integrert i skoleplanene slik at anleggene kan utnyttes maksimalt.

Vi trenger flere flater til idrett, aktivitet og sosiale treffpunkt!

Rett sør for idrettsanlegget vårt ligger altså BAMA-tomta. Stor nok til å romme minst 10 fotballbaner. Eller minst dobbelt så mange flerbrukshaller, eller kunstisbaner, eller skateparker, eller volleyballbaner. Eller alt dette på en gang! Og barna og ungdommen i vår del av byen trenger ALT DETTE PÅ EN GANG. Vi krever at kommunen lar alvoret sige inn, og ser sammenhengen mellom mulighet for aktivitet og samvær med det at bydelen blir et godt sted å være for våre neste generasjoner.

Organisert aktivitet og uorganisert aktivitet går hånd i hånd.

Som idrettslag opplever vi at aktiveten på flatene våre tiltrekker seg andre barn og unge enn de som står som medlemmer hos oss. Og det er vi glade for! Arenaen vår er en stabil møteplass for barn og unge, og den eneste møteplassen for nabolagene rundt. Klubbhuset vårt er et populært forsamlingslokale, vi leier ut til naboer og andre venner av idrettslaget, til bursdager, konfirmasjoner og nabotreff. Den nye Tufteparken som ble satt opp i hjørnet ved 7-banen i 2019, fylles opp av folk fra nabolaget fra morgen til seint på kveld. Vi ønsker å være et samlingspunkt for nabolagene og bydelen, og ser også at vi blir brukt som det. Vi er glade for at anlegget vårt oppleves som velkomment og et sted for alle. Så ser vi også nytten av at uorganisert aktivitet kan foregå på våre områder: Vi holder disse områdene ved like, da oppleves det velkomment og trygt for flere. Dette gir gode synergieffekter mellom organisert idrett og uorganisert samvær for barn og unge.

Vi oppfordrer EBY til å planlegge for områder med uorganisert aktivitet i flukt med områder med organisert aktivitet (fotballbane, flerbrukshall) på BAMA-tomta. Vi ser at dette sammen utgjør viktige treffpunkt for barn og unge.

Vi oppfordrer kommunen, ved EBY og Oslobygg, til å trekke flerbrukshall, ungdomsskole, samt andre flater til aktivitet for barn og unge og tilhørende friarealer – ut av den store arealplanleggingen, og kjøre en egen og raskere prosess. Vi trenger alt dette nå, så raskt som overhodet mulig – ikke om 7 eller 10 år!

Published by:
Groruddalen E-paper.
URL: https://grorud-dalen.no/sport/zucca-slo-et-slag-for-gam-leklubben/19.30256

«Zucca» slo et slag for gamleklubben:

Må bygges flere idrettshaller, etterspørselen større enn tilbudet

Hasle-Løren IL har ikke nok anlegg til å gi et godt tilbud til barn og ungdom. Boliger og arbeidsplasser er på plass, men ikke idrettshaller og fotballbaner. Det skal bygges ny ishall og ny flerbrukshall, men det er ingen planer om å sette opp midlertidige haller. Selv når de nye hallene er på plass vil det være for lite anlegg nederst i Groruddalen. Det får Mats «Zucca» Zuccarello til å reagere.

Publisert: 15.06.2022 kl 00:35

SAMME MULIGHETER:«Zucca» tok sine første hockeysteg i ishallen på Løren. Nå står hundrevis av potensielle unge hockeyspillere i fare for å ikke ha et tilbud i det hele tatt i flere år. Det mener «Zucca» er en forferdelig situasjon. Han vil at unge i området skal få samme mulighet som han hadde som barn. Foto: Rolf E. Wulff

Det kan føre til at det i flere år ikke vil bli noe hockeytilbud i nærområde for de yngste.

- Hockeyhallen skal rives og det skal bygges ny, men det vil ikke komme en midlertidig hall under byggeperioden. Katastrofe for hockeyavdelingen hvis vi blir stående uten ishall i to år. Vi vil miste rekrutteringen og inntekter. Står i fare for å miste store deler av vår hockeygruppe. Tenk om dette hadde skjedd den gang «Zucca» tok sine første skøytesteg på hockeyskolen i hallen til Hasle-Løren, undres styreleder i Hasle Løren IL, Viggo Antonsen.

Gammel idrettsgrunn

Da det ble aksjonert på Lørenbanen for å vise at de står samlet bak kravet til politikerne i Bydel Bjerke, byrådet og bystyret til å satse på idrettsanlegg i deres område, var det nettopp NHL-stjernen «Zucca» som dukket opp på gammel idrettsgrunn, for tiden hjemme på ferie etter endt NHL-sesong.

> - Jeg engasjerer meg i denne saken fordi jeg vil at dagens barn skal ha de samme mulighetene som jeg hadde her som liten gutt. Det er så viktig med tilbud.

– Etterspørselen er stor i lokalmiljøet. Nå er det utrolig mange nye leiligheter og barnefamilier rundt om kring. Da synes jeg at det skal tilrettelegges for å ta i mot nye barn som vil drive med idrett, sier «Zucca».

- Det er kun én isflate her. Fantastisk at det skal komme en ny ishall, men det burde bli minst to nye haller. Og det må komme en midlertid mens nye bygges ut. Det er mangel på istimer for barn og unge og det er det man trenger. Glem forresten store flotte nye haller for breddeidretten, man trenger flere mindre, legger hockeystjernen til.

Treningstider

- Det er helt krise i området her. Det er en 11-manns og 7-mannsbane her på Løren. Det dekker knapt nok den organiserte breddeidretten. Det er umulig å bruke banen til uorganisert fotball og lek - den gode gamle «løkkefotball». De blir jaget vekk, sier Morten Berre som vokste opp og fremdeles bor kun få meter fra Lørenbanen.

Den tidligere Skeid- og Vålerenga-spilleren har nå tre barn som trener i Hasle-Løren og han er selv trener for et av lagene.

- Dette er også barn og ungdom som spiller aktivt, men som vil møtes utenom treningstider og bare spille sammen. I tillegg kommer de som ikke er med i klubben, men som gjerne vil spille fotball sammen, men ikke har noe sted å spille på, sier Morten.

ER BEKYMRET:Morten Berre (t v) og Mustafa «Mos» Abdellaoue synes situasjonen er uholdbar. De mener at det må tas umiddelbare grep, hvis ikke kan Hasle-Løren stå uten noe idrettslig tilbud i flere år når det gjelder hockey og håndball. Dessuten er det ikke for tiden et bra nok tilbud når det gjelder fotball og baner å spille på. Det må komme flere baner for å ta i mot den store økningen av en ny generasjon spillere i området. *Foto: Rolf E. Wulff*

Flere fotballbaner

Mustafa «Mos» Abdellaoue spilte hockey for Hasle-Løren. Den tidligere Skeid, VIF, FC København, Tromsø, Strømsgodset og Sarpsborg 08-spilleren vokste opp på Refstad sammen med sin yngre bror Mohammed «Moa» Abdellaoue som spilte fotball for Hasle- Løren før han fortsatte i klubber som Skeid, VIF, Hannover 96 og Stuttgart.

> - Flere baner og flater er så viktig for barn og ungdom. Ikke bare når det gjelder idrett men også å møtes i et godt fellesskap og drive fysisk aktivitet.

– Jeg ser ikke minst på dette gjennom mine lærerøyne, påpeker «Mos», som siden januar i år har vært ansatt som miljøarbeider ved Bjerke videregående skole i Oslo. Samme stilling som bror «Moa» har på Apalløkka skole.

Ikke planlagt

Hasle Løren IL mener kommunen glemmer idrettsanlegg når de tillater tusenvis av nye leiligheter på Økern, Refstad og Løren. De mener det går ut over barn og ungdoms oppvekst i området. Plan- og bygningsetaten anslår at området Løren, Refstad, Økern, Ulven vil øke antall innbyggere fra 40.000 til 100.000 fram til 2030. Det er like mange som bor i Drammen.

Det bygges tusenvis av leiligheter, men det er ikke planlagt en eneste fotballbane i området. Det må allerede takkes nei til barn som vil spille fotball og håndball i klubben. De trenger flere fotballbaner, ny håndballhall og ishockeyhall. Og de trenger det nå, ikke når barna har blitt voksne. Hasle-Løren idrettslag ber kommunen om arenaer som bidrar til vennskap og trygghet for barn og unge. Ikke bare for de som driver aktivt med idrett, men alle barn og unge som trenger et sted å være.

Ikke ferdigregulert

På Økern skulle det nå stått en skole, en flerbrukshall, en barnehage, en park og leilighetsbygg. Ikke noe av dette er klart. Det skal bygges 1000 leiligheter på Økern Torg. Men det er ikke planlagt for en eneste ballbinge, ingen basketbane eller håndballbane. Flerbrukshallen i Løren Idrettspark skulle stått ferdig i 2018, men den er utsatt til tidligst 2026. Reguleringen er ikke ferdig.

Det er planlagt en flerbrukshall tilknyttet den nye ungdomsskolen som skal bygges på Økern Torg. Men området er fortsatt ikke ferdigregulert. Den gamle ishallen til Hasle-Løren-Løren skal rives og bygges opp igjen. Men kommunen vil ikke sette opp en midlertidig hall.

SAMLET FOLKET. Styreleder i Hasle-Løren IL, Viggo Anthonsen gledet seg over det store oppmøte på Lørenbanen hvor det ble aksjonert for flere fotballbaner og idrettshaller som må til for at de i det hele tatt skal kunne ta imot nye barn og ungdommer som vil drive sportslig aktivitet nederst i Groruddalen. *Foto: Rolf E. Wulff*

Ikke ferdigregulert

Dette setter Hasle-Løren ishockeys eksistens i fare. Det er også fare for at klubben og området også vil bli stående uten flerbrukshall i den perioden den gamle rives og en ny er kommet på plass. Det vil spesielt ramme klubbens håndballaktiviteter.

- Det kan ganske enkelt ende opp med at klubben vil bli stående, først uten ishockeyhall i to år, og senere uten flerbrukshall i to år - kanskje enda lengre. Det hele i et område i Oslo hvor det vil flytte inn flere barnefamilier enn andre steder i hovedstaden. Det må bare ikke skje. Nå kan vi ikke lenger bare stå og se på at Oslo kommune bygger vekk barnas oppvekst på Økern, Refstad og Løren, sier styreleder i Hasle-Løren IL, Viggo Anthonsen.

Published by: Groruddalen E-paper.URL: https://groruddalen.no/sport/fotball-pa-okern-torg/19.30265

Hasle-Løren foreslår: Fotball på Økern torg

I tillegg til at Hasle Løren står i fare for å stå uten midlertidig ishockeyhall og flerbrukshall når de rives for å bygge nytt, trenger klubben også flere baner det kan spilles fotball på.

Publisert: 16.06.2022 kl 20:25

PERFEKT STED: BU-leder i Bydel Bjerke, Lars Erik Fuglesang, og Elin Ruhlin Gjuvsland i Hasle-Lørens arbeidsutvalg, ønsker en ny fotballbane på gamle Økern Torg. Hasle Løren klarer ikke lenger å gi et skikkelig tilbud til barn og unge fordi de ikke har banekapasitet nok. Problemet forsterkes hele tiden ved at fler og fler barnefamilier flytter inn i området nederst i Groruddalen.

Kapasiteten på dagens to baner på klubbens idrettsanlegg, et for 11-manns fotball og et for 7-manns fotball, er allerede sprengt. Klubben står i fare for ikke å kunne ta imot flere unger som vil spille fotball. Da snakker vi om dem som allerede bor nederst i Groruddalen.

Innflyttingen av nye barnefamilier på Løren, Refstad, Økern og Ulven øker kraftig, hvilket vil gjøre situasjonen enda mer prekær. Muligheten for å spille «løkkefotball» på banene er uaktuelt. Ungene «jages bort» mot klubbens vilje fordi de først og fremst må prioritere klubbens egne treningstider.

Større parkanlgg

Det er et område som helt klart peker seg ut hvor det kan anlegges ny fotballbane. Det ligger få meter unna, på andre siden av Spireaveien fra dagens Løren-bane – Økern torg.

– Det er så logisk som det kan få blitt at det må komme en bane der. Men i Plan- og bygningsetatens reguleringsplan for Økern torg er det foreløpig ikke tegnet inn en fotballbane. Her er det helt klart plass, sier BU-leder i Bydel Bjerke, Lars Erik Fuglesang (Ap) og fortsetter:

– Boliger og ny ungdomsskole er flott, og fint at det kommer grøntområder innimellom. Men det er også planer om et større parkanlegg. Da er det mye viktigere med en fotballbane. At det skal bygges enda flere boliger med enda flere barn øker jo behovet enda mer.

To innspill

– I vårt tilsvar fra bydelen vil bydelsutvalget foreslå at det tegnes inn en fotballbane i reguleringsplanen. Vi har SV med på laget, så vi er sikret flertall på dette synspunktet, legger Fuglesang til.

Han har for lengst kontaktet gruppeleder i Oslo Ap, Andreas Halse, når det gjelder fotballbaneproblematikken og midlertidige haller. Hasle-Løren på sin side har kommet med to innspill overfor byråd for byutvikling, Hanna Marcussen (MDG), når det gjelder å få på plass en fotballbane til.

– Vi har sendt inn høringsuttalelse og også hatt møte med byråd for kultur, idrett og frivillighet, Omar Samy Gamal (SV), sier Elin Ruhlin Gjuvsland i Hasle-Lørens arbeidsutvalg. Tilbakemeldingen vi har fått så langt fra Gamal i forbindelse med midlertidig ishall er at det blir for dyrt, påpeker Fuglesang.

Men begge to er uansett optimister. De regner med at situasjonen nå er så prekær at det ikke lenger kan overses. Det må bare skje noe.

NB! – I 2016 overrakte Ellen S. de Vibe, den gang direktør i Plan- og bygningsetaten i Oslo kommune, den strategiske planen for nedre del av Groruddalen til byråd for byutvikling, Hanna E. Marcussen (MDG). I den sammenheng sa hun følgende:

«Til sammen vil de parkene som planlegges dekke et område som tilsvarer Olaf Ryes plass på Grünerløkka cirka 100 ganger – eller 100 fotballbaner».

Når det gjaldt Økern torg kom hun med følgende uttalelse:

«Her kommer det en park som blir like stor som tre fotballbaner».

I etterkant kan man trygt si at sammenligningen den gang er så ironisk den kan få blitt i dag.

Published by:
Groruddalen
E-paper. URL:
https://groruddalen.no/byraden-vil-busse-hockey-spillerne-til-andre-haller/19.30064

Støtter Hasle-Løren IL i ishall-kamp:

Byråden vil busse hockey-spillerne til andre haller

Hasle-Løren IL skal få ny ishall, noe som har vært etterlengtet. Det som derimot er et større problem er at det ikke planlegges for en alternativ hall. I stedet skal spillerne sendes på busser til andre haller i Oslo. Det setter BU-leder Lars Erik Fuglesang (Ap) spørsmål ved.

Publisert: 03.05.2022 kl 19:00

HVOR SKAL DE?: Byrådet har bestemt at spillerne i Hasle-Løren skal busses til andre ishaller under byggingen av ny hall. Lars Erik Fuglesang (Ap) setter spørsmålstegn ved hvilke haller som faktisk har plass til dem og etterspør nøyaktige detaljer fra byråden. Foto: Caroline Hammer

– Har vi virkelig så mange ishaller med såpass god kapasitet at det er mulig? spør Fuglesang ironisk.

De nærmeste ishallene, blant annet Jordal Amfi, har alle sprengt kapasitet. Da stiller Fuglesang, sammen med leder Usman Asif i Bjerke Arbeiderparti, spørsmål om hvorfor byrådet ikke er villige til å bruke penger på en midlertidig hall.

– De bruker hvem vet hvor mange millioner på en midlertidig svømmehall fordi Tøyenbadet, som ikke engang ligger i bydelen, skal pusses opp, men når det er snakk om en ishall så er de ikke villige til å sette opp noe midlertidig, sier Fuglesang frustrert.

Han kaller det hele for en forskjellsbehandling, og er kritisk til byrådets prioritering. Spesielt i lys av at byrådet har vært tydelige på at de ønsker å prioritere barn og unge.

Mangel på kapasitet

Ishallen på Løren er absolutt moden for riving og nybygg. Fuglesang understreker at han er glad for at det skal gjøres, men han frykter konsekvensene dersom det ikke settes opp et fullgodt alternativ.

– Jeg utfordrer byråden til å peke ut hvilke ishaller som i dag har så god kapasitet at de har rom for alle dem som i dag spiller ishockey i Hasle-Løren. Hvis han ikke klarer det, burde han kanskje sette seg ned og revurdere denne planen.

I lys av at byrådet satte av penger og plass til det midlertidige Økernbadet, spiller Fuglesang inn et alternativ: bygg en midlertidig ishall på en av de ledige tomtene.

– Det er ganske lenge til det vil være byggeaktivitet her, så hvorfor ikke bruke en av tomtene her? Det trenger jo heller ikke å koste like mye som badet.

– Det er ganske lenge til det vil være byggeaktivitet her, så hvorfor ikke bruke en av tomtene her? Det trenger jo heller ikke å koste like mye som badet.

Om spillerne blir avhengige av å busses til treninger, frykter både idrettslaget og Fuglesang at spillere vil falle fra. Det kan også gi et dårligere tilbud dersom de må bruke ulike haller, alle med sprengt kapasitet.

– Spillerne har allerede mistet to år med trening og kamper. Her er det snakk om mange flere år der de ikke får trene i nærområdet sitt. Det bekymrer meg, sier Asif.

Representanter fra Hasle-Løren IL vil delta på åpen halvtime i møtet til Bjerke bydelsutvalg torsdag.

Ikke landet på løsning

Byråd for idrett, Omar Samy Gamal (SV), sier til avisa at de foreløpig ikke har landet på en beslutning om hva som vil skje når ishallen er stengt.

– Jeg har startet opp en dialog med idrettslaget om hvordan vi best kan ivareta den lokale idretten mens den flotte nye hallen bygges. Budskapet mitt har da vært at her må vi jobbe tett sammen, for det er idretten lokalt som kjenner behovet best. Derfor vil kommunen og idrettskretsen fortsette konstruktiv dialog med idrettslaget om hvordan vi løser det, både når det gjelder bruk av andre haller og transport dit, og andre ting som kan bidra til at denne perioden går så bra som mulig. Foreløpig er ikke de konkrete løsningene landet, for dem må vi finne sammen, sier Gamal.

Det er økonomiske begrensninger som er grunnen til at et midlertidig anlegg foreløpig ikke har blitt vurdert høyest, og Gamal sier at byrådet de neste fire årene vil bruke 5,5 milliarder kroner på å bygge anlegg.

– Det er en enorm satsing. Likevel går det ikke fort nok, fordi behovet er så stort. I den situasjonen mener jeg at vi ikke har råd til å bruke store summer på midlertidige anlegg. Det er et prioriteringsspørsmål. Når vi først bruker millioner av fellesskapets penger skal det være på ting som skal stå over tid, sier han.

Gamal uttrykker forståelse for den lokale bekymringen, men sier at han vil ha fortsatt dialog med idretten for å finne løsninger som vil fungere godt gjennom byggetida.

Published by:
Groruddalen
E-paper. URL:
https://groruddalen.no/nyheter/ma-leve-med-bar-bak-ke/19.30298

Naboene skriker etter park:

Må leve med bar bakke

Økern torgvei har blitt et sårt punkt for naboene på Økern. Byggingen av nye skoler, flerbrukshall og park er langt unna, og området har forblitt industri.

– Ungdommene her har ingen steder å oppholde seg. Å gi dem et tilbud er helt avgjørende, sier Sandven, som påpeker at ungdomskriminalitet faller når det finnes lokale aktivitetstilbud. Han setter spørsmålstegn ved at kommunen ikke prioriterer aktivitetstilbud til alle de nye beboerne.

– Er leieinntekter fra industrien verdt mer enn beboernes vel? spør Sandven.

TOMTA BØR TAS I BRUK: Bydelspolitiker Jon Werner Sandven (R, f.v.), Silje Bystrøm Elvaker og Siv Mari Sæther mener at tomta på Økern Torgvei bør tas i bruk fram til byggearbeidene starter. De peker blant annet på mangel på aktivitet og at plassen i dag føles utrygg. Foto: Caroline Hammer

CAROLINE HAMMER

Publisert: 23.06.2022 kl 20:00

– Hvorfor kan de ikke sette opp en midlertidig park der i stedet for å leie ut til industrien? spør Siv Mari Sæther, styremedlem i Spirea park 1 sameie.

Hun er en av mange naboer som i dag ser ned på den tomme og inngjerdede tomta som etter planen skal bygges ut. Problemet er at det inntil den tid ikke kommer nabolaget til gode. Etter at siste leietaker forsvant for noen måneder siden, har tomta fortsatt å være sperret av for beboerne. Til tross for stort behov for grønne fellesområder, er det ikke lagt opp til noe midlertidig parkområde.

– Den parken som skal komme, frykter vi også at blir altfor liten, sier Silje Bystrøm Elvaker, styreleder i Torgveien borettslag.

Leieinntekter mot trivsel

De to naboene opplever at Oslo kommune og Eiendoms- og byfornyelsesetaten (EBY) virker mer opptatt av å få inn leieinntekter på tomta enn å øke trivselen. Det får de støtte av fra bydelspolitiker Jon Werner Sandven (R).

– EBY synes alt er greit her. Samtidig bekymrer forholdene naboene, sier han.

Foreløpig er det et midlertidig flyktningmottak på tomta. Det er varslet avviklet 22. juli grunnet mindre behov for akuttinnkvartering. Til høsten skal det settes opp et telt for resirkulering av byggematerialer.

– Vi er livredde for at det skal komme ny industri, sier Sæther.

Og frykten er ikke uten grunn. For ett år siden hadde Sæther og andre naboer i sameiene rundt byggetomta sendt inn flere hundre klager til alt fra bydelen til EBY og Bymiljøetaten på grønn av støy. Svar kunne de telle på én hånd. Støy fra lastebiler, busser på tomgang og annen tungtransport preget området fra tidlig om morgenen til sent på kvelden. Når leietakerne nå endelig er borte, tør de ikke senke skuldrene.

Hvorfor ikke?

Etter planen skal Økern Torgvei bli hjem til nye Refstad skole, som er under bygging, Økern ungdomsskole som skal stå ferdig i 2026, og senere kommer ny flerbrukshall og en park. Foreløpig er det kun Refstad skole som er under bygging, men byråd for byutvikling, Hanna Marcussen (MDG), lovte 11. januar i år at planene skal være vedtatt innen neste sommer.

– De kunne ha brukt denne tomta på en bedre måte som gagner oss som bor her, sier Elvaker.

Naboene peker også på det midlertidige flyktningmottaket på tomta. Da de møtte avisa var det fortsatt usikkert hvor lenge det skal være der. Kun dager senere ble det altså besluttet at det skal legges ned.

– De fortjener langt bedre enn den lille gressflekken de har nå. Det er uverdig, mener Sæther.

Nå etterspør de at tomten åpnes for bruk av beboerne. Et par benker, noen basketkurver og noen enkle grep er alt som trengs.

For lite, for sent

De fleste sameiene og borettslagene på Økern og Ulven har i dag ikke egne lekeplasser, blant annet fordi utbyggerne ikke ønsker dyrere forsikring. I stedet legges det opp til at lekeplassene som tilhører barnehagene i området skal brukes i helger og på ettermiddagene.

– Problemet er at privateide barnehager, som det er flere av her, er sommeråpne. Da kan de ikke brukes, forklarer Elvaker.

Den foreslåtte parken som blant annet skal kompensere for manglende uteområde på Løren skole, tror de blir for liten. I tillegg kommer den midlertidige nedleggelsen av ishallen. Som avisa tidligere har skrevet vil ikke byrådet sette opp en midlertidig ishall når det skal bygges nytt.

– Sønnen min spiller ikke hockey selv, men det er det mange andre som gjør. Hockeymiljøet er kjempestort her, så det blir et enormt tap, sier Elvaker.

Samtidig som tomta rett nedenfor blir stående tom inntil byggearbeidene påbegynnes, fortsetter nye høyhus med boliger å bygges. Der kommer det blant annet unge par i etableringsfasen.

– Hva skjer når de om to-tre år begynner å få barn?

Kravet fra naboene er klart: gi tomta tilbake til dem som bor her fram til byggearbeidene faktisk begynner.

Published by:
Groruddalen
E-paper. URL:
https://groruddalen.no/stor-stotte-til-hasle-lorens-halldilemma/19.30080

Bjerke bydelsutvalg:

Stor støtte til Hasle-Lørens halldilemma

Under åpen halvtime i Bjerke BU torsdag, var beskjeden fra ledelsen i Hasle-Løren IL at hele klubben kan forsvinne dersom lokaltilbudet flyttes vekk. Det fikk de god gehør for blant bydelsutvalgets medlemmer.

Publisert: 07.05.2022 kl 18:00

– Vi er oppriktig redd for klubbens eksistens dersom vi ikke har en lokal ishall her på Løren.

BEKYMRET FOR KLUBBEN: Tommy Iversen Lund er svært bekymret for de langvarige konsekvensene av en buss-løsning for hockeylagene.
Foto: Skjermdump

Klas Birkedal, nestleder i Hasle-Løren, Fredrick Kyrre Teisbo, styreleder, og Tommy Iversen Lund i sportslig utvalg representerte idrettslaget under åpen halvtime. Deres beskjed var enkel, men alvorlig:

– Vi er oppriktig redd for klubbens eksistens dersom vi ikke har en lokal ishall her på Løren.

Iversen Lund trekker fram flyttingen av Furuset IL for 24 år siden, når Furuset Forum sto klar. Da gikk klubben fra å være Norges største, til å knapt klare å rekruttere nye spillere.

– Det sliter de fortsatt med, poengterer han, til nikk fra bydelsutvalgets politikere.

HVOR SKAL DE TRENE: NM-mesterne i Hasle-Løren vil i en periode måtte trene hos «konkurrentene».

Mister en møteplass

Planen for Lørenhallen er at den skal rives og ny hall skal bygges på samme tomt. Dermed vil Hasle-Løren i to år måtte bruke andre ishaller for å trene og spille kamper. Byråd Omar Samy Gamal (SV) har skissert en løsning der spillerne busses til andre ishaller. Det har lederne i Hasle-Løren IL lite til over for.

– Ungene her mangler møteplasser. I dag brukes Løren ishall av Løren skole, AKS og barnehager. Hva skjer med det tilbudet når hallen blir stengt? sier Iversen Lund.

I tillegg forsvinner rekrutteringsarenaen. Ledelsen i idrettslaget frykter at konsekvensen av at de ikke lenger får lokal hall, blir at barna i nabolaget heller går for andre idretter. Da mister klubben mange potensielle spillere.

Foreslår alternativer

Lederne i klubben har skissert tre alternativer for å sikre at de både får en ny, etterlengtet hall, og samtidig beholder interessen lokalt.

– I en ideell verden ville vi beholdt ishallen fram til en ny er bygd. Da måtte de ha funnet en annen tomt, så det er ikke helt realistisk, anerkjenner Iversen Lund.

Når det blir bygd ny hall, skal det også etableres en utendørs bane. Til byråden har de spilt inn muligheten for å etablere utebanen først, slik at det kan settes opp et telt over og noen brakker til garderobe. Men de har også undersøkt hvor mye det vil koste å etablere en skikkelig midlertidig hall.

– Byråden har sagt til oss at det koster for mye å bygge en midlertidig hall. Han mener det vil koste mellom 30 og 50 millioner kroner. Vi har gjort noen undersøkelser, og Isbaneteknikk kan sette opp en midlertidig hall for 12 millioner. Det gjorde de for Kråkene i Moss. Da trenger vi bare en tomt som kan brukes i to år, sier Iversen Lund, som er tydelig på at dette er det alternativet de ønsker.

Hasle-Løren ber nå bydelspolitikerne om å legge press på sine partier på Rådhuset for å se om byråden er villig til å snu. Om ikke, kan den pressede kapasiteten på de resterende ishallene i Oslo få store konsekvenser, advarer idrettslaget.

Published by:
TV2 Sport. URL:
https://www.tv2.
no/a/14866399/

Zuccarello: – Det er håpløst

Tirsdag var Norges største ishockeystjerne tilbake der det hele startet. Denne gang med et stort ønske om å kunne hjelpe til å løse en situasjon han beskriver som «håpløs».

Erlend Borren Kristoffersen

14. jun 2022 21:01 | Sist oppdatert 16.06.2022.

De frykter for sin eksistens. Hundrevis møtte t
hørt. Blant de mange som kom, var flere idrett

Flere titalls barn flokket seg rundt Mats Zucca
Bonsaksen da de kom gående ut på Lørenbar

Ishockeystjernene har selv vokst opp i områd
tilbake til gamle trakter i håp om å kunne hjelp
glade i.

– Hva hadde du gjort nå om du ikke var ishoc
representant fra idrettslaget.

– Jeg hadde vel spilt på Manchester United, s
smil, til latter fra de fremmøtte.

Han hadde neppe spilt i Premier League, men Zuccarello tror han kunne endt med å slutte med ishockey om han hadde opplevd det samme som barna i hans barndomsklubb nå frykter at de må gjennom.

TILBAKE: Mats Zuccarello mener barndomsklubbens situasjon er alvorlig. Tirsdag var han tilbake på gamle trakter for å hjelpe til. Foto: Alf Simensen / TV 2

Frykter for sin eksistens

Stadig flere medlemmer, men mindre og mindre plass er med å gjøre det utfordrende for idrettslaget Hasle-Løren.

Endelig skal de få ny ishall, men når den bygges kan de få en utfordring. Idrettslaget ønsker å få satt opp en midlertidig hall. Det ser foreløpig ut som at de ikke vil bli hørt.

Det kan ende med at barna må busses til andre ishaller for å få trent. Det frykter Hasle-Løren at vil føre til at mange gir seg, og er det i det hele tatt noen ishaller i Oslo som har kapasitet til å ta imot barna?

Den tradisjonsrike ishockeyklubben frykter nå for sin eksistens.

Idrettslagets kapasitet er sprengt. Samtidig bygges det tusenvis av boliger i området.

En flerbrukshall skulle stått ferdig på Løren Idrettspark, men vil trolig ikke være klar før i 2026.

Tirsdagens aksjon ble gjennomført for å vise hvor stort behovet er for flere baner og et midlertidig hockeytilbud.

– Håpløst

– Jeg er her for å støtte en sak jeg og spesielt mange i nabolaget brenner for. Jeg har vokst opp borti gata her og gikk mine første skøyteskjær i hallen bak her. Nå er etterspørselen enda større en den var da jeg var ung. Vi må få opp tilbudene til barn og unge, sier han til TV 2.

Det er tydelig at idrettslaget betyr mye for Norges største ishockeystjerne. Han mener at man ikke skal undervurdere viktigheten av bydelsklubber.

STILTE OPP: Da barndomsklubben inviterte til aksjon, møtte Mats Zuccarello opp. Foto: Erlend Borren Kristoffersen

– Jeg tror klubben betyr mye for mange. Man er avhengig av nabolagsklubber. Det er det som skaper talenter. Man kan ikke bare ha storklubber. Vi er blitt en såpass stor by av vi er avhengige av klubber i nabolagene for å ha nok treningsmuligheter for barn og unge, sier den mangeårige NHL-spilleren.

– Hva tror du det hadde gjort med din motivasjon som barn om du måtte bli kjørt rundt med buss til treninger og kamper?

– Den tror jeg hadde vært lavere enn noen gang. Da tror jeg kanskje at jeg hadde funnet noe annet å drive med. Å skulle kjøre buss rundt omkring i Oslo tar på for foreldre og ikke minst barna. Det tar mye unødvendig tid. Jeg synes det er håpløst, svarer Zuccarello.

Han håper at han og de andre som møtte opp tirsdag blir hørt av politikerne.

Tror mange slutter

Zuccarellos kamerat, Alexander Bonsaksen, mener situasjonen for bydelens ishockeyspillere er trist.

– Bare se deg rundt hvor mange som har kommet. Det er mange barn og unge som vokser opp her og trenger et tilbud og et sted å ha tilhørighet, rett og slett en plass å være. Det er veldig trist om det ikke kommer en midlertidig hall, sier han.

Ishockeyspilleren tror det kan ende med at mange mister motivasjonen til å drive med idrett.

– Jeg vil anta at del faller av om man skal bli kjørt rundt i buss og sitte med utstyret på der, kanskje til en plass man ikke er så trygg på. Dessverre tror jeg en del slutter og at noen bytter lag for å slippe å bli kjørt med buss til treninger og kamper. Det er veldig tøft for Hasle-Løren å miste hallen sin, sier Bonsaksen.

STILTE OPP: Kameratene Alexander Bonsaksen og Mats Zuccarello stilte opp da Hasle-Løren inviterte til aksjon. Foto: Erlend Sørbø / TV 2

– Tror du at dere vil bli hørt?

– Det er mange som har møtt opp her. Jeg håper det viser at det er mange som er avhengige av et tilbud, sier han til TV 2.

Jeg håper jo det, det er jo litt derfor vi er her. Vi håper det skal være mulig å løse. Det er tragisk at det virker som at det ikke er tenkt på. Vi har vært gjennom en pandemi hvor mange barn og unge ble hardt "straffet" og ikke hadde en plass å gå til. Hvis dette også skjer, vil det bli en dobbel effekt som det virker som de som bestemmer ikke har tenkt på, svarer Frisk Asker-spilleren.

Frustrert far

Hamik Sevan har bodd på Løren siden 2012. I ti år har han fulgt bydelens utvikling. Han stortrives i området, men synes det er kjedelig å måtte vente i kø på ulike tilbud.

– Du merker det først om du får barn. Det er stor pågang på barnehager, skoler og kulturelle tilbud. Det er tydelig at folk savner aktivitetstilbud for de små, sier han.

I bakgrunnen leker hans eneste barn med en ball og koser seg i kveldssola på Lørenbanen.

– Jeg har foreløpig en sønn. Så får vi se, hvis tilbudene blir bedre er vi kanskje villige til å vurdere antallet, sier Sevan og gliser.

AVVENTER AVGJØRELSE: Hamik Shevan vil se hva politikerne bestemmer seg for før han eventuelt får flere barn. Foto: Erlend Borren Kristoffersen / TV 2

Published by:
Vårt Oslo. E-paper
URL:
https://vartoslo.no/alexander-bonsasen-bydel-bjerke-hasle-loren/nhl-stjerna-og-lorengutt-zucca-med-rad-til-byradet-gi-unga-pa-loren-to-ishaller/382887

Siden debuten for New York Rangers i 2011 har lørengutten og NHL-spilleren **Mats Zuccarello Aasen** (34) fortsatt ikke vunnet Stanley Cup-sluttspillet. Men han er likevel superstjerne i NHL.

Etter å ha blitt slått ut med sin nåværende NHL-klubb, **Minnesota Wild**, ble det tidlig sommerferie hjemme i Oslo for lørengutten.

Hockeyprofilene Alexander Bonsaksen (t.v) og Mats Zuccarello Aasen mener det må bygges en erstatningshall for Lørenhallen i nærmiljøet. Foto: Christian Boger

NHL-stjerna og lørengutt Zucca med råd til byrådet: – Gi unga på Løren to ishaller!

I to år kan hockeyspillerne i Hasle-Løren måtte busses byen rundt for å få trent. Byrådet sier nei til erstatningshall mens Lørenhallen rehabiliteres. Nå får hockeyklubben støtte fra en superstjerne i NHL - lørengutten Zucca.

Christian Boger
JOURNALIST

PUBLISERT **Onsdag 15. juni 2022 - 07:31**

Zucca fronter aksjon for erstatningshall

Her kaster han seg inn i en annen viktig kamp: Kampen for en erstatningshall for moderklubben **Hasle-Løren ishockey**, når Lørenhallen nå stenges i to år på grunn av rehabilitering.

— Det er veldig viktig for rekrutteringa lokalt at ungene har et treningstilbud i nærmiljøet, sier Zucca.

— Jeg frykter det kan bli få unge som velger å satse på hockey når de må busses rundt i byen for å trene, sier superstjerna til VårtOslo.

Akkurat som klubben mener han en erstatningshall bør være på plass i anleggsperioden. Men han legger også lista litt høyere når det gjelder framtiden for hockeytalentene i nedre del av Groruddalen.

— Det har jo lenge vært snakket om å lage en utendørs isflate ved siden av den nåværende ishallen. Hvorfor ikke bare kline til å sørge for at det blir to ishaller her på Løren, undrer Zuccarello, som en "våt drøm" til byrådet.

På gressletta ved siden av dagens hall mener "Zucca" det bør bygges en ishall numer to. Foto: Christian Boger

Selv er han ikke i tvil om at de trygge treningsforholdene han fikk som ung, i nærmiljøet på Løren, har en stor del av æren for at han i dag er Norges beste hockeyspiller gjennom tidene.

— Hadde det ikke vært for hockeyen og de mulighetene de ga meg som ung, hadde jeg nok endt opp opp som fotballlspiller i Manchester United, sier han smilende med enorm selvtillit.

— Krise for oslohockeyen

Med seg på laget tirsdag hadde Zuccarello også profiler som Skeids hjelpetrener og lokalpatriot **Morten Berre**, og hjemvendt hockeyproff **Alexander Bonsaksen**.

Ingen av disse var i tvil om at det nå er på tide at byrådet snur i saken.

— Får vi ikke en erstatningshall kan det være helt krise for rekrutteringa av talenter til oslohockeyen. Vi så hvordan **Furuset** slet med hallproblemer for noen år siden, og nå frykter jeg vi kan få den samme historien én gang til , sier Bonsaksen.

Han mener det vil slå uheldig ut å busse unge hockeyspillere byen rundt for at de skal få trent.

— Det ungene trenger for å engasjere seg i idretten er et godt og trygt treningstilbud i nærmiljøet, mener den tidligere Vålerenga-spilleren.

Ungdommen vil ha det lokalt

Viktigheten av å ha gode treningstilbud lokalt deles også av den oppvoksende generasjonen i Hasle-Løren.

15-åringen Isak Breke Sjøblom og styreleder Viggo Anthonsen vil ha et treningstilbud i nærmiljøet på Løren. Foto: Christian Boger

Selv om han rett før nyttår meldte overgang til Skeid har landslagspiller for Norges U-16-landslag i fotball, **Isak Brekke Sjøblom** (15), tilbrakt hele elleve år av sitt liv på Lørenbanen vegg-i-vegg med ishallen.

Han er klar på hvor viktig det er med et treningstilbud i nærmiljøet

— Hadde det ikke vært for fotballen vet jeg ikke hva jeg skulle ha gjort. Jeg kunne aldri tenkt meg å reist byen rundt for å trene,

sier 15-åringen.

Bør se på BAMA-tomta

I sitt svar til Venstres bystyrerepresentant **Marit Kristina Vea** i saken, peker idrettsbyråd **Omar Samy Gamal** (SV) i hovedsak på to årsaker til at byrådet mener det ikke er tilrådelig å oppføre en erstatningshall.

Den ene er at kostnadene vil bli høye, og den andre er at det ikke finnes aktuelle tomter i nærmiljøet på Økern eller Løren som kan huse en slik hall.

Dette er noe Hasle-Løren mener ikke stemmer med virkeligheten.

— Vi mener det finnes mist et par aktuelle tomter. Ikke minst bør byrådet se på BAMA-tomta på Økern som står tom, sier klubbleder **Viggo Anthonsen.**

Heller ikke byrådets kostnadskalkyle vil styrelderen gå for etter å ha vært i kontakt med firmaet som satte opp den midertidige ishallen på Jordal under byggingen av nye Jordal Amfi.

Det ble mye autografskriving på Mats Zuccarello da han returnerte til barndmmens trakter tirsdag ettermiddag. Foto: Christian Boger

Published by:
Vårt Oslo. E-paper
URL:
https://vartoslo.no/bydel-bjerke-hasleloren-ishall/haslelorens-barn-og-unge-mister-ishallen-sin-i-to-ar-kommunen-sier-nei-til-midlertidig-losning-mens-ny-hall-bygges/378997

Hasle/Lørens barn og unge mister ishallen sin i to år. Kommunen sier nei til midlertidig løsning mens ny hall bygges

Den gamle ishallen på Løren skal rives og bygges opp igjen. En midlertidig hall, som kan brukes av Hasle/Løren under byggeperioden, er uaktuelt, sier kommunen. — Dette setter klubbens eksistens i fare, frykter Hasle/Lørens styreleder.

Petter Terning
JOURNALIST

PUBLISERT Mandag 30. mai 2022 - 23:07

Styreleder Kyrre Teisbo med deler av laget Hasle/Lørens gutter 2012-lag. Nå lurer ishockeylaget på hvor de skal spille i to år uten ishall.. Foto: Kyrre Teisbo

Frykter barn vil gi opp idretten

Bygging av ny ishall vil ta omtrent to år. Sammen med foreldre, FAU og lokale idrettslag har Hasle/Lørens styreleder for yngres hockeyavdeling, **Kyrre Teisbo**, møtt lokalpolitikerne i bydel Bjerke for å fortelle dem hvor viktig det er med en midlertidig ishall.

Beskjeden om en ny ishall for **Hasle/Løren** var en gladnyhet for mange brukere av Lørenhallen.

Den gamle hallen har stått på Løren siden 1980-tallet, og de fleste som bruker den er enige i at den må oppgraderes.

Driftsleder for Hasle/Løren idrettslag Torbjørn Elfsøy er fornøyd med det lokale engasjementet blant foreldrene, fordi det er en sak som angår barn og unge. — A-laget vårt får lettere spilt andre steder, så dette går mest utover barna, sier han. Foto: Kyrre Teisbo

— For lite is i Oslo

Sammen med andre brukere av hallen har han kommet med forslag til steder der en midlertidig ishall kan stå. Dette er blant annet på et eget område bak den gamle hallen og ved Bjerkebanen.

Torbjørn Elfsøy har vært driftsleder for Lørenhallen i ni år, og er redd for at en eventuell midlertidig hall også vil bli for liten.

— Vi må ikke bare kjempe om å få en hall, men også om å få en som er stor nok. Det er for lite is i Oslo, og mye hockey vil ryke hvis vi ikke får is på to år, sier han.

Styreleder Kyrre Teisbo fortsetter å møte lokalpolitikere for å overbevise dem, og får stor støtte blant foreldrene.

— Vi trenger en ny hall vi kan bruke i mellomtiden, ellers faller klubben sammen. Akkurat nå er ikke det gitt at det blir noe av, forteller han.

— Det må bevilges penger til bygging av ny, midlertidig hall, sier Teisbo til VårtOslo.

Slik situasjonen nå blir, der klubben står uten ishall i to år, mener han det hadde vært bedre å bare beholde den gamle hallen.

— Vi er redde for at vi vil miste rekrutteringen i de to årene. Vi er redd barn og unge heller velger andre fritidsaktiviteter, der de slipper å reise langt til andre ishaller, sier styrelederen.

Teisbo forteller også at det heller ikke er fristende for foreldre å kjøre langt til andre steder i byen.

Det er begrenset med parkeringsplasser, ikke alle foreldre har førerkort og uka etter er treningen kanskje i en annen hall.

— Hva som skjer videre nå er opp til politikerne, forteller styrelederen for Hasle/Lørens yngreavdeling ishockey.

Published by: Groruddalen E-paper. URL: https://groruddalen.no/har-oslo-kommune-glemt-barna/19.30362

Groruddalsdebatt:

Har Oslo kommune glemt barna?

Oslo kommune bygger vekk barn og unges oppvekst på Økern, Refstad og Løren. Det bygges tusenvis av leiligheter, men det er ikke planlagt en eneste fotballbane i nærområdet vårt. Og hvor blir det av idrettsanleggene og hallene vi er blitt lovet? Der hvor barna skal trene, ha gym, spille ball, og ha det gøy sammen?

Publisert: 11.07.2022 kl 18:35

Styreleder i Hasle-Løren IL, Viggo Anthonsen, på Lørenbanen i midten av juni da det ble aksjonert for flere fotballbaner og idrettshall nederst i Groruddalen. Foto: Rolf E. Wulff

Vi har ikke tid til å vente på ytterligere utsettelser av reguleringsplaner. Vi har ikke samvittighet til å se at barna også denne gangen blir bortprioritert.

For kapsasiteten er sprengt. Vi må snart takke nei til nye barn som vil spille fotball og håndball hos oss. Vi trenger flere fotballbaner, ny håndballhall og ishockeyhall. Vi trenger lovnader om at barna har et sted å trene når nye haller skal bygges. Og vi trenger det nå, ikke når barna har blitt voksne.

I over 100 år har Hasle-Løren IL skapt samhold, trygghet og idrettsglede for barn, unge og foreldre nederst i Groruddalen. I dag kommer barn fra hele dalen for å være med i klubben vår. Nærskolene bruker anlegget vårt i gymtimer og til aktivitetsskoler.

Dugnadsånden er stor. Fordi foreldrene vet hvor mye det betyr at barna deres kan drive med organisert fysisk aktivitet heller enn å sitte alene hjemme bak en skjerm. Her spilles det håndball, ishockey, innebandy og fotball, her går barna på ski om vinteren og sykler om sommeren. De siste årene har den foreldredrevne breddeklubben Hasle-Løren hatt en voldsom vekst. Vi er nå bydelens største klubb. Bare fotballskolen for de minste barna fra fem til syv år har 300 påmeldte barn i år. For fire år siden var det 200 barn, og og noen år før det var det rundt 100.
Hvor mange flere skal det bli?

Rundt oss ser vi en by og en bydel i endring. Løren er snart ferdig utbygd. Økern, Bjerke og Ulven står for tur. Bare i disse tre prosjektene snakker vi om henholdsvis 900 boliger på Økern Torg, 1500 boliger på Bjerke og 3000 boliger på Ulven.

Totalt i Hovinbyen skal det bo 40.000 mennesker. Et tall som vil øke til 100.000 fram til 2030, anslår Plan- og bygningsetaten. Det er like mange som bor i hele Drammen, Norges sjette største by.
Forleden samlet hundrevis av barn, unge og foreldre seg på Lørenbanen for å markere hvor mye idrettsanlegget og klubben betyr for dem, Ishockeystjernene Mats Zuccarello og Alexander Bonsaksen og den tidligere elitespilleren Mustafa «Mos» Abdellaoue, som alle startet sin karriere i Hasle-Løren, kom for å fortelle politikerne hvor viktig nærklubben og idrettsanlegget var for dem, for deres tilhørighet, samhold og utvikling av idrettsglede i oppveksten.

Hvor viktig det var å ha et sted de kunne komme utenom faste treningstider for å trene, eller bare henge på løkka med kompiser og spille ball.

Det kan man ikke på Hasle-Løren i dag.

Vi ønsker å være klubben med det gode hjertet, klubben der de som vil - kan komme til oss. Men snart blir vi nødt til å si nei. Daglig må vi vise bort barn som spiller uorganisert fotball, fordi det rett og slett ikke er plass.

Fotballen har en 11-bane og en 7-bane som skal fordeles på 75 lag. Vi må dele banene opp i små frimerker for å gi spillerne treningstid. Mange av ungdommene har vært i klubben i årevis, men har aldri fått trent på 11-spill. Fordi de alltid må dele banen med andre. Mange må ty til andre baner i Groruddalen for å få trent tre ganger i uken. I tillegg skal vi avvikle daglige seriekamper for Oslo fotballkrets.

Løren idrettspark skulle sett annerledes ut enn den gjør i dag. Her skulle det stått en ferdig, ny flerbrukshall. Her skulle vi hatt en ute-isbane. Vi kunne også ha fått på plass to mindre fotballbaner.

Idrettsparken har vært under regulering siden 2016, men den er fortsatt ikke ferdig regulert. Den nye flerbrukshallen hadde for inntil noen uker siden planlagt ferdigstillelse i 2024, nå er den forsinket til 2026. Hvor skal håndballspillerne våre trene i mellomtiden?

Og hva skjer når klubbhuset og kiosken rives og klubben vil miste verdifulle inntekter?

Den samme usikkerheten råder for ishockeylagene. Ny ishall er planlagt, men vi kan komme til å stå uten ishall i to år, og står i fare for å miste hockeymiljøet vårt.

For heller ikke ishockeyspillerne har et sted å trene i de to-tre årene mens hallen rives og bygges.

Hasle Løren ønsker at det settes opp en ny midlertidig hall på tomten ved siden av. Det vil ikke byråd Omar Samy Gama (SV) for kultur, idrett og frivillighet, som sier det er for dyrt. Idrettsbyråden foreslår heller å busse 340 barn med hver sin 15-20 kilos bag rundt til andre ishaller i Oslo. Flere ganger i uken i to år.

Det vil være en katastrofe for ishockeylagets fremtid. Ishockeyen er redd barna vil miste motivasjon, de vil miste klubbtilhørighet, og hvem skal knyte ishockeyskøytene til barna? Bussjåføren?

Ishallen brukes i dag av skoler, aktivitetsskoler og ulike aktører. Den er ikke bare en trenings- og kamparena, men et samlingspunkt for mange etter skoleslutt. Når hallen blir borte, mister også ishockeyen en viktig rekrutteringsarena for nye spillere.

Risikoen for at barna slutter og heller finner på mindre sunne aktiviteter er stor. Vi har sett det før. Furuset har aldri klart å bygge seg opp igjen til den klubben de var da de måtte kjøres rundt til andre haller for å trene under bygging av ny hall.

Og er det egentlig riktig som byråden sier, at det er dyrere å sett opp en midlertidig hall enn det er å busse 340 barn og unge rundt?

Byråden sier at det koster 50 millioner å sette opp en midlertidig ishall. I Moss har Kråkene ishockeylag satt opp en midlertidig hall til 12,5 millioner. En ringerunde til
busselskaper anslår en prislapp på 10 millioner for bussing flere ganger i uken i et par år.

Vi ser ingen tegn til at idretten prioriteres av Oslo kommune, vi ser ingen nye planlagte flater av vesentlig karakter. Og det til tross for at vi i årevis har hatt en tom tomt liggende i hjertet av nærområdet vårt: Gamle Økern Torg, også kalt Bama-tomta. Den har vært under regulering siden 2016.
Nå i sommer er det siste høringsrunde før den skal endelig reguleres ferdig neste sommer. Dette vinduet må politikerne bruke til å se barna, og sikre deres fremtid.

Her er det plass, men boliger prioriteres: 900 leiligheter. Det bygges en park, og park er bra. Men parken har ingen funksjonelle områder for organisert eller uorganisert idrett. Ingen større områder der barn og unge kan utfolde seg og være sammen.

Vi krever at kommunen får fortgang på planene, sånn at medlemmene våre og naboene våre ikke står uten anlegg.

Vi har nådd bristepunktet, tålmodigheten vår er brukt opp. Nå hever vi stemmen og ber dere: Ikke glem barna!

På vegne av Hasle-Løren idrettslag,
Viggo Anthonsen, leder

Published by:
Aftenposten. E-pape
URL:
https://www.aften-
posten.no/sport/i/
lVdlVG/frykter-doed
dom-for-klubben

Frykter dødsdom for klubben

Hasle-Løren ishockey er redde for at barn og unge i nærområdet kan miste et viktig tilbud.

Pål Strande Gamlemoen *Journalist*
Olav Olsen *Fotograf*

12. juli 2022 22:00 | Sist oppdatert i dag 10:34

Det er mange lovende hockeyspillere i Hasle-Løren. *Foto: Olav Olsen / Aftenposten*

Bassen fra en musikkspiller vibrerer mellom veggene i Løren ishall, men ropene fra de unge hockeyspillerne overdøver tonene.

På den ene banehalvdelen løfter Hasle-Lørens kvinnelag tunge vekter. På den andre drives det hockeytrening for litt over ti spillere i 12-årsklassen, selv om isen er borte for sommeren.

Ungdommene som er i hallen denne dagen, utgjør bare en liten del av de rundt 340 spillerne i Hasle-Løren ishockey. Allerede fra syvårsalderen er hallen et viktig samlingssted for dem.

I løpet av de neste årene skal hallen rives og en ny bygges på samme sted. Da den nyheten kom, tok det ikke lang tid før anropene fra foreldrene begynte å tikke inn på styreleder Frederick Kyrre Teisbos mobil. Ett spørsmål gjentok seg:

«Må vi bytte klubb nå?»

Mener bussing blir vanskelig

En hall er nemlig ikke bygd over natten. Planlagt byggetid for den nye er to år.

- Denne hallen er fra 1986. Den er eldst i Oslo og har litt stusslige kår, selv om vi fortsatt er glade i den og isen fin. Det blir kjempebra med ny hall når den tid kommer. Den vil gi bedre grunnlag for sponsorer og slike ting, forteller styreleder Teisbo.

Da nye Jordal Amfi ble bygget for noen år siden, ble det satt opp en enklere, midlertidig hall like i nærheten. Foreløpig er det ikke planlagt noen slik korttidsløsning for Løren-hallen.

- Vi har brukt 4,7 milliarder og skal de neste fire årene bruke 5,5 milliarder kroner på å bygge anlegg. Det er en enorm satsing. Likevel går det ikke fort nok, fordi behovet er så stort. Det er et prioriteringsspørsmål. Når vi først bruker millioner av fellesskapets penger, skal det være på ting som skal stå over tid, sier idrettsbyråd Omar Samy Gamal (SV).

Derav klubbens og foreldrenes bekymringer. For om det ikke kommer noen midlertidig hall, må de unge spillerne busses rundt på trening og kamper i Oslo.

I et brev til flere politikere og byråder betegner hockeyklubben det som en «katastrofe». Istedenfor at barna i området kan gå 10-15 minutter til trening, hente utstyret i skapet sitt og begynne aktiviteten i et miljø de kjenner de fleste, vil de måtte få med seg en utstyrsbag på rundt 15 kg på en buss. De får heller ikke hjelp til å ta på utstyret, knyting av lisser og den type ting.

- Det med utstyret er én ting, men i hockeyen er det mange kamper, og treningstider og oppsett endrer seg veldig fort, forklarer Teisbo.

Kapasiteten i norske ishaller er allerede svært presset. Om et yngre lag fra for eksempel Stavanger skal spille en runde på Østlandet, blir de fort der en hel helg for å få spilt flere kamper når de først er i området. Det påvirker igjen treningstidene til andre lag. Barne- og ungdomslag kan ha trening onsdag, torsdag og fredag én uke, for så å ha helt andre tidspunkter den neste. Det er bare sånn norsk ishockey er bygget opp.

- Å planlegge bussing etter slike forutsetninger blir håpløst, mener Teisbo.

Frederick Kyrre Teisbo er takknemlig for at det blir ny ishall for Hasle-Løren. Men han er redd for hva som kan skje i mellomtiden. *Foto: Olav Olsen / Aftenposten*

Vil være avhengige av mer foreldrehjelp

Løren ishall drives av idrettslaget, men eies av Oslo kommune.

I den trenes det fra 08.00 til 22.30 syv dager i uken. Før klubblagene trener på ettermiddagen, brukes hallen av skoler i nærmiljøet. Da får blant andre barn med aktivitetsutfordringer prøve seg. Skolene Frydenberg, Wang, Løren, Refstad og Bjerke vgs. har alle bedt om at byrådet i Oslo prioriterer en ny hall.

Simen Torkildsrud Engelstad, William Theodor Birkedal og Ellinor Nyhus Myhre er tre av mange som ofte trener i Løren ishall.

Det er ventet stor befolkningsvekst i området når det bygges flere boliger de neste årene.

I Hasle-Løren ishockey trekker de paralleller til da Furuset skulle få ny hall på slutten av 90-tallet. De fikk ingen midlertidig løsning. Klubben gikk fra å være blant Norges største til å miste mange spillere.

Hasle-Løren-leder Teisbo mener dette i ytterste konsekvens kan handle om klubbens eksistens og dermed hvilket tilbud de kan gi de lokale ungdommene. Han mener man er avhengig av foreldre som kan kjøre, dersom spillerne må til den andre siden av byen for å trene. Da kan arbeidssituasjon og tilgang på bil avgjøre hvem som henger med og ikke. I slike tilfeller forsvinner de minst ivrige først, sier Teisbo.

- Da går de mest engasjerte til andre klubber fordi tilbudet vårt ikke er godt nok. Det kan ende med at hele lag kollapser og må trekkes. De mest engasjerte vil klare seg i nye klubber, men hvordan skal vi sørge for at en hel gruppe er i idretten lengst mulig?

De ivrige spillerne Ellinor Nyhus Myhre (11), William Theodor Birkedal (12) og Simen Torkildsrud Engelstad (11) er i hvert fall skeptiske til å fly frem og tilbake på tvers av Oslo for å trene. De håper på en midlertidig hall.

- Det trenger ikke være så stort, bare det er et sted der vi har nok plass til å trene, sier Engelstad.

Har andre prioriteringer

Antatt byggestart er en gang i løpet av 2023 eller 2024.

Hasle-Løren beregner prisen på en midlertidig hall til 12,5 millioner kroner, blant annet ut ifra et lignende prosjekt i Moss.

Den midlertidige hallen på Jordal kostet 30 millioner. Idrettsbyråd Gamal mener det eksempelet er det som ligner mest på Løren-hallen.

- Siden den gang har det vært generell høy prisvekst, så man kan anta at kostnaden vil være høyere i dag. I tillegg vil årlige driftsutgifter ligge på 4-5 millioner kroner.

Han har forståelse for at klubben opplever det hele som utfordrende. Heller ikke han ønsker at miljøet forsvinner under byggeperioden.

- Så forstår jeg at de har ønsket å fokusere på en midlertidig hall, men jeg håper vi fremover kan komme videre i dialogen om hvilke andre løsninger som kan avhjelpe situasjonen. Det er i samråd med klubben, som vet hvor skoen trykker, at vi kan finne de beste løsningene.

Hasle-Løren har løftet flere tomter i nærheten som alternativer til sted for en korttidshall.

- Det er først og fremst av hensyn til de store uløste oppgavene i byen på idrettsfeltet og den høye kostnaden ved midlertidige anlegg, at byrådet ikke vil prioritere å bygge midlertidig ishall. Derfor er det ikke nærmere utredet aktuelle steder for plassering av midlertidig hall, sier Gamal.

Hasle-Løren vurderer å starte en underskriftskampanje for å få saken løftet i bystyret.

Published by: Aftenposten. E-paper URL: https://www.aften-posten.no/meninger/debatt/i/mrJVe4/oslo-kommune-bygger-vekk-barn-og-unges-oppvekst-paa-oekern-refstad-og-loeren

Oslo kommune bygger vekk barn og unges oppvekst på Økern, Refstad og Løren

Viggo Anthonsen
Leder, Hasle-Løren idrettslag

Har politikerne glemt barna?

Det bygges tusenvis av leiligheter, men det er ikke planlagt en eneste fotballbane i nærområdet vårt. Og hvor blir det av idrettsanleggene og hallene som vi er blitt lovet i årevis, der hvor barna skal spille ball, leke og ha det gøy sammen?

Hvorfor gir Oslo kommune barna nederst i Groruddalen så dårlige oppvekstvilkår? spør Viggo Anthonsen. Han er leder for Hasle-Løren idrettslag. *Foto: Privat*

Vi trenger anlegg og flere nye aktivitetsområder nå, ikke når barna er blitt voksne.

Vi ser ingen tegn til at barn og unge prioriteres av Oslo kommune, vi ser ingen planer om nye flater. Og det til tross for at vi i årevis har hatt en stor, ledig tomt liggende i hjerte av nærområdet vårt: Gamle Økern Torg, også kalt Bama-tomten. Den har vært under regulering siden 2016, og nå i sommer er det siste høringsrunde.

Dette vinduet må politikerne bruke til å se barna og sikre deres fremtid.

Idrettsstjerner engasjerer seg

Sist uke samlet hundrevis av barn, unge og foreldre seg på Lørenbanen for å markere hvor mye idrettsanlegget betyr for dem.

Ishockeystjernen Mats Zuccarello og eks-fotballspilleren Mustafa «Mos» Abdellaoue startet begge karrieren sin i Hasle-Løren. De kom for å fortelle politikerne hvor viktig idrettsanlegget var for dem, for tilhørighet, samhold og utvikling av idrettsglede i oppveksten. Lørenbanen var et sted de kunne spille løkkefotball på eller bare henge med kompiser.

Rundt oss ser vi en by og en bydel i endring. Løren er snart ferdig utbygget, Økern, Bjerke og Ulven står for tur. Bare i disse tre prosjektene snakker vi om henholdsvis 900 boliger på Økern Torg, 1500 boliger på Bjerke og 3000 boliger på Ulven.

Totalt i Hovinbyen skal det snart bo 40.000 mennesker. Et tall som vil øke til 100.000 frem til 2030, ifølge Plan- og bygningsetaten. Det er like mange som bor i hele Drammen, Norges sjette største by.

Klubben merker godt utbyggingen: Antall barn på fotballskolen for de minste er blitt tredoblet de siste ni årene. Hvor mange flere skal det bli?

Viser finger'n til barna

Snart blir vi nødt til å si nei til nye medlemmer. For her på Hasle-Løren har vi én 11-bane! Vi har én plasthall og én ishall - og begge hallene rives snart.

Samtidig, på Bama-tomten ved siden av, tegnes det inn store, nye leilighetskomplekser og en park som kun passer til å vise frem i brosjyrer, ikke til å spille ball og leke i.

Kommunen planlegger ikke for flater der barn og unge kan treffes etter skoletid og gjøre det de synes er gøy sammen. Det er å vise finger'n til barna, som titter over til den store tomten og må konstatere at heller ikke i denne runden blir de prioritert.

Bama-tomten ligger også rett i nærheten av den utskjelte utbyggingen på Løren, som har fått massiv kritikk for å være for tettbygd og uten områder for aktivitet.

Vi forstår også at byen trenger flere leiligheter. Men kommunen må ikke gjøre det på en måte som bygger vekk folks liv.

Hvorfor gir kommunen barna nederst i Groruddalen så dårlige oppvekstvilkår?

Vi krever at kommunen prioriterer bedre. Få fortgang på planene, sånn at barn og unge i nærområdet vårt ikke står uten tilbud. Vi er nådd bristepunktet, tålmodigheten er brukt opp. Nå hever vi stemmen: Ikke glem barna!

Slik så Lørenveien 64 ut i november 2021. Området er i utvikling. *Foto: Hans O. Torgersen*

Published by: Groruddalen. E-paper URL: https://groruddalen.no/nyheter/skuffet-over-byradets-prioritering-ma-ha-hall-na/19.30454

Skuffet over byrådets prioritering. – Må ha hall nå!

Rødt Oslo-leder Siavash Mobasheri mener at byrådets midlertidige løsning under bygging av ny ishall på Løren er langt fra god nok. Han er svært kritisk til at byråd Omar Samy Gamal (SV) ikke vil vurdere etablering av midlertidig hall.

Publisert: 10.08.2022 kl 16:00

– Det er snakk om prioritering, sier Siavash Mobasheri (R).

Han står med ryggen til ishallen som det er bestemt at skal rives og ser ut over grøntområdet rett ved siden av. Det er et av områdene som Hasle-Løren IL mener at kunne ha blitt brukt til en midlertidig ishall under byggingen av ny hall og utebane. Dette er et forslag som byråden ikke er med på, selv om idrettslaget får støtte fra bydelspolitikerne. Byrådet vil heller sette inn busser for å kjøre ishockey-lagene til andre ishaller i byen.

PRIORITER BARN OG UNGE: Siavash Mobasheri (R) reagerer på at byråden skylder på kostnadene når det ikke settes opp midlertidig ishall på Løren, på tross av at det er svært få ishaller i Oslo. Foto: Caroline Hammer

Et kostnadsspørsmål

Byrådet anslår at en midlertidig hall vil koste mellom 30 og 40 millioner å få satt opp. Hasle-Løren IL presenterte for Bjerke BU et prisestimat fra et selskap i Sarpsborg der kostnaden vil ligge på 12-13 millioner. Samtidig går Oslo kommune godt.

– Økonomien i kommunen går så det griner. De har aldri hatt mer overskudd. Dette handler ikke om penger, det handler om prioritering, slår Mobasheri fast.

Ettersom det allerede er vedtatt at den gamle ishallen skal rives og erstattes med ny hall og utebane, må et midlertidig tilbud komme på plass raskt. Byrådets bussplan er ikke god nok, mener Rødt-politikeren.

– Uten fritidstilbud som denne hallen, så får vi ikke bygd et fellesskap i nabolaget. Det ser vi igjen og igjen i disse nye delbydelene; boligutbyggingen prioriteres, og det lages ikke nok tilbud til barn og unge.

Han understreker at det ikke er bare dagens byråd som har skyld i at det er mangel på aktivitetstilbud. Problemet går 30-40 år tilbake i tid og har resultert i at det er for få flerbrukshaller, svømmehaller og andre samlingssteder i hele byen.

– Byrådet må prioritere barn og unge, sier Mobasheri, som lover at opposisjonen i bystyret skal fortsette å se på løsninger for Hasle-Løren.

– Så må heller ikke det lokale engasjementet stoppe opp.

Siavash Mobasheri (R) stilte før sommeren flere spørsmål til byråd Omar Samy Gamal (SV). Relevante svar fra spørsmålene er gjengitt under:

«Det er alltid utfordrende for idrettslag når anlegg må rehabiliteres eller rives og bygges på nytt og det blir nedetid. Jeg har forståelse for at det kan bli utfordrende for Hasle-Løren IL i byggeperioden, og har bedt Bymiljøetaten og Oslo Idrettskrets ha dialog med klubben om eventuelle andre avbøtende tiltak. Ishallen er foreløpig i en forprosjektfase, så det er fortsatt tid til å prøve å finne gode løsninger for å opprettholde aktiviteten i klubben.»

«Det er ikke lagt opp til at det skal bygges en midlertidig ishall, og av denne grunn er det ikke utredet aktuelle steder for plassering av midlertidig hall. Jeg gjør oppmerksom på at utredning på at et slikt prosjekt kan forsinke Løren ishall-prosjektet.»

2.1.
State report of
ice hockey hall

Index:

Fig. 1.
Situation drawing of ice hall. Drawing from 1985.

Legend:

1	main entrance
2	players' entrance
3	driving gate
4	ice surface
5	secretariat
6	player bench
7	changing room
8	toilet
9	grinding room
10	technical area
11	gym
12	office
13	grandstand
14	training area
15	mechanical room
16	ice machine room
17	storage
18	café
19	vip room
20	kitchen

Program

Løren Ice Hall is located in Lørens Idrettspark.The ice hall is located in the south - east of the park. The hockey part of the entire sports complex consists of two structures, the hall itself and a smaller single-standing building. The smaller building consists of changing rooms, offices and is in conjunction with the cooling system for the hall. Between these volumes, space is set aside for parking. On the west side of the hall is snow/ice depot. This is where the ice maker drives out excess ice.

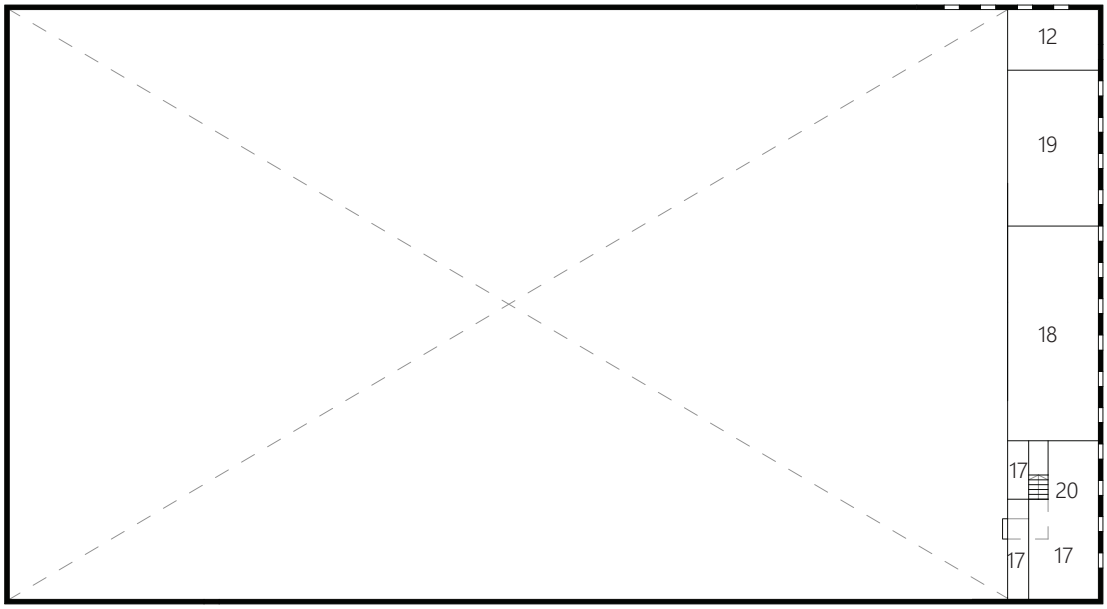


Fig. 2.
Program, 2 floor.

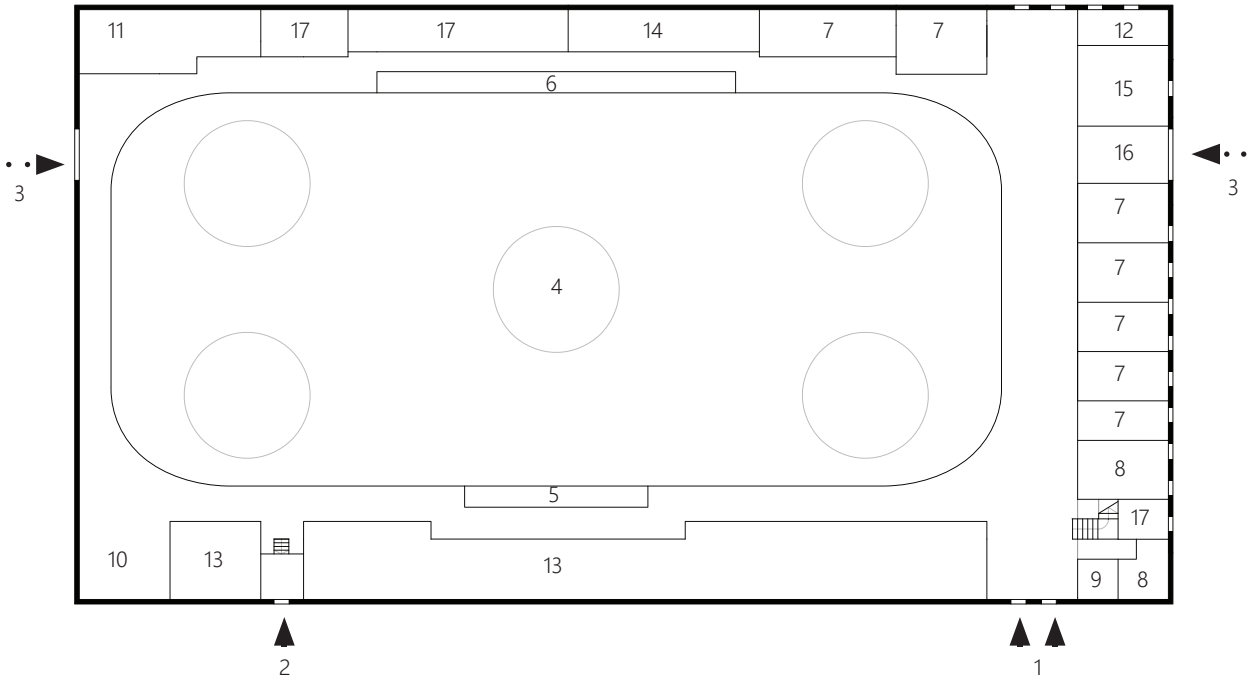


Fig. 3.
Program, 1 floor.

Fig. 4.
Photo: Facade, west and north.

Fig. 5.
Photo: Interior, ice rink and grandstands.

Fig. 6.
Photo: Facade, East and north.

Fig. 7.
Photo: Interior, ice rink and ice maker.

Rooms and spaces:
The hall room (consisting of ice surface and grandstands), wardrobes, gym, storage rooms (hockey equipment, optional equipment for training), toilets, grinding room, meeting room, café room, kiosk, kitchen, practice shot area, technical room, ice machine room....

In the hall room itself, it is the ice surface that naturally occupies most of the space. In the same room there are placed concrete stands with some places has plastic seats. The stands are concrete elements of various lengths that are fastened together.

The underside of the stand is used as storage rooms and technical installations. Here, the different age levels have some opportunity to store equipment such as combat suits.

There are a total of seven wardrobes in the facility. Four wardrobes are located on the west side of the hall. The remaining three are in the smaller free-standing building located north of the ice hall.

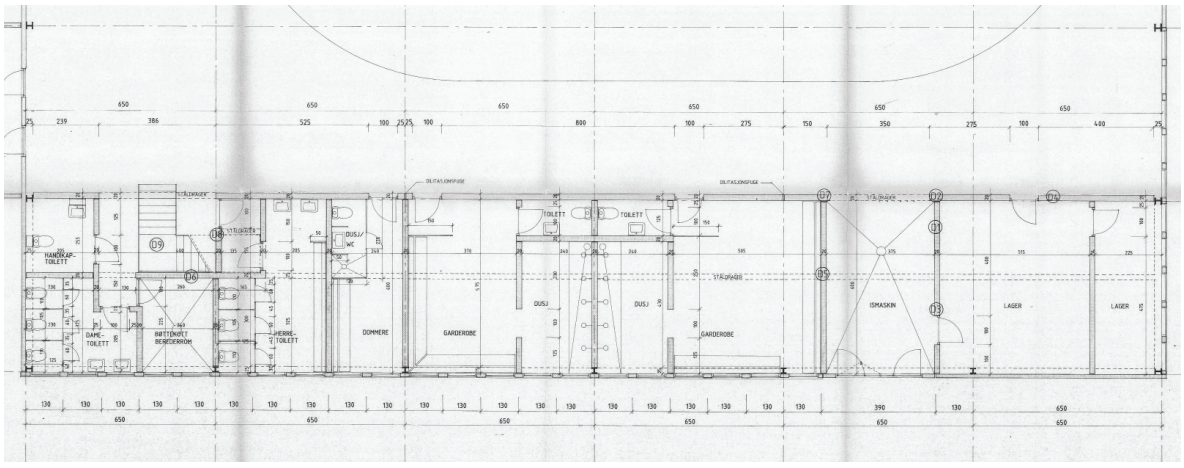


Fig. 8.
Original plandrawing, room layout in the west side of the hall.

Structure:

The hall's outer dimensions are approx. 72m x 40m. And has an area of about 2880m2. The long sides have a height of 7.2 m. Gable height is 11m.

The ice hockey hall has a steel construction with the support of a base made of concrete. The base is about 3m high and act as a fundament for the load-bearing structure. On the inside of the base" is the steel skeleton structure attached. There are HEA-Steel pillars with a center distance of 6m on the long sides of the hall. On the short sides the center dimension is 6,5m

In some places diagonals are inserted into the system. The framework takes vertical loads and shear forces. Beams are fixed on the top of the pillars and span between the two-long sides of the hall. The beams consist of several steel parts with different dimensions that are assembled. On the top edge, the beam has a shape resembling a gable roof. And it has a hanging framework. On the upper end side of the spanning beams other beams are mounted horizontally, connecting the frames together and stabilizing the entire structure.

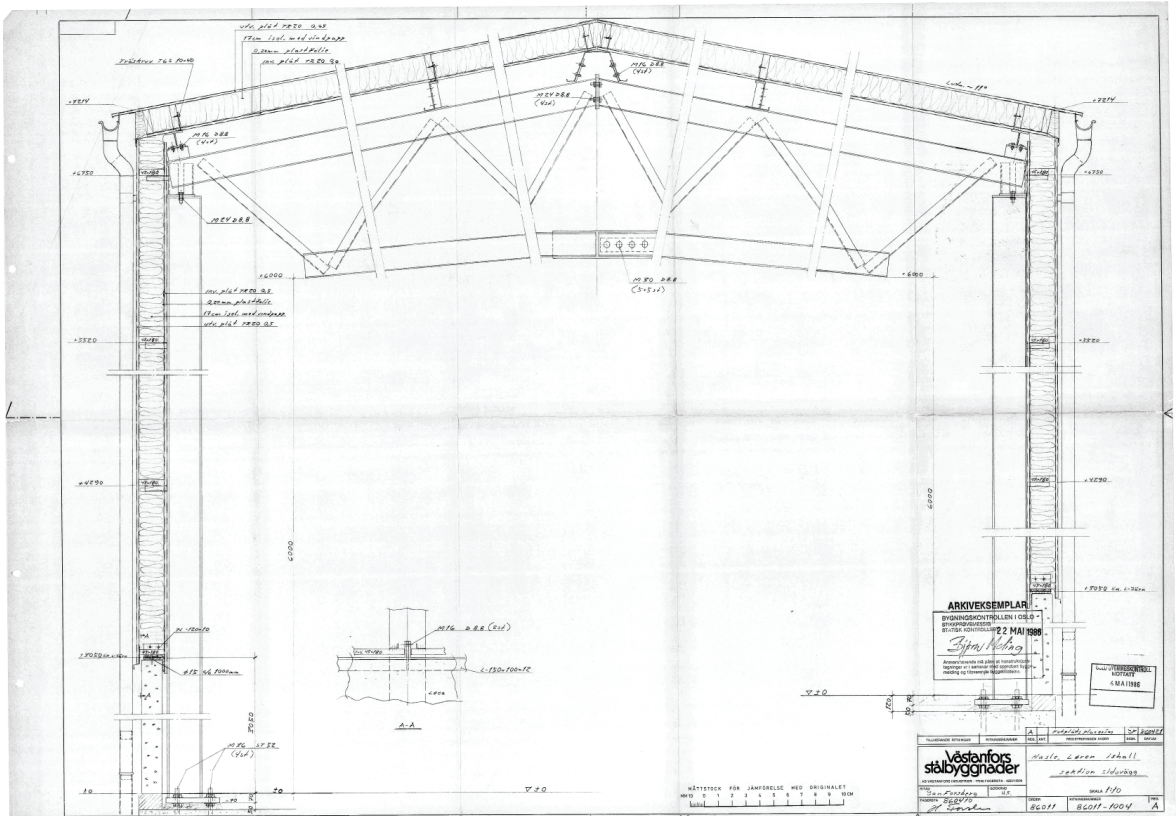


Fig. 9.
Original drawing, section with structure.

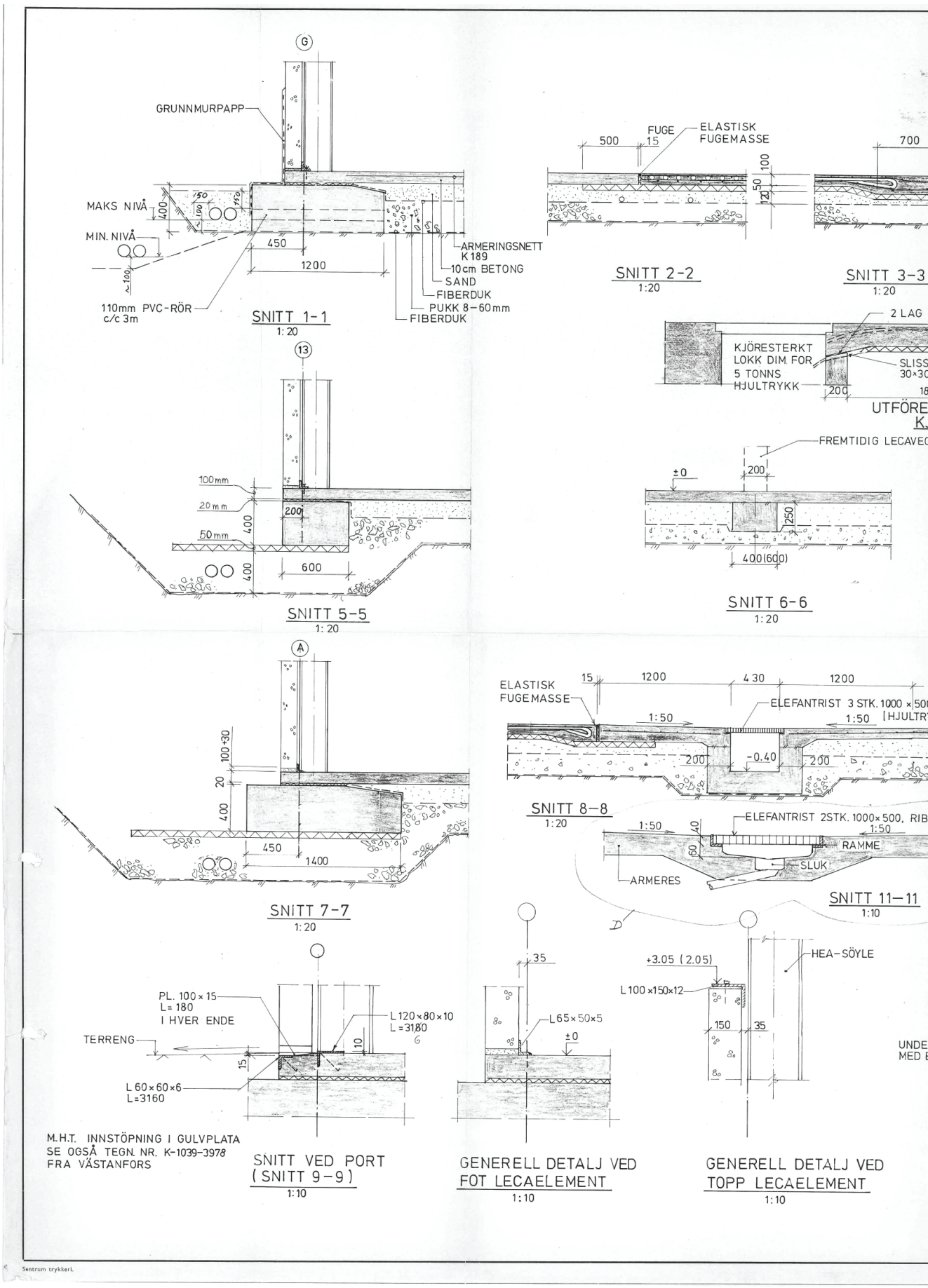
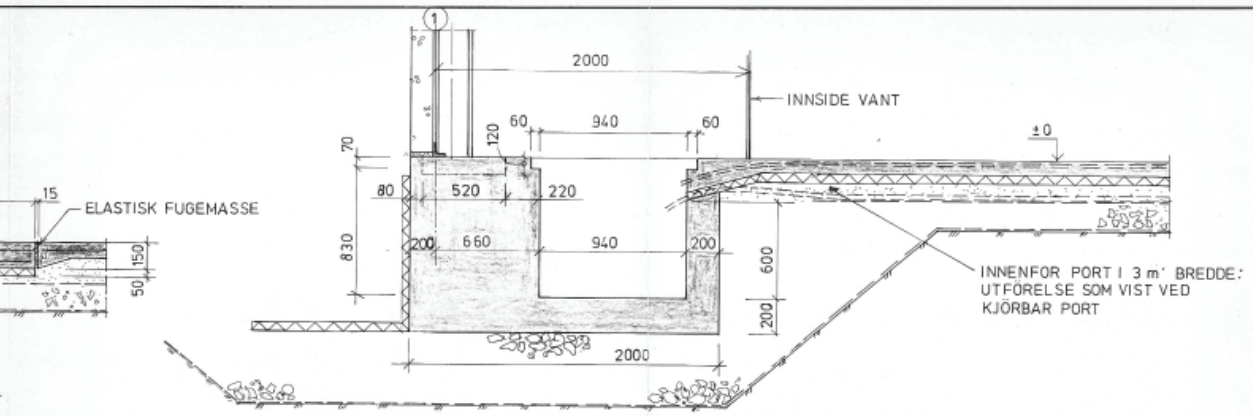
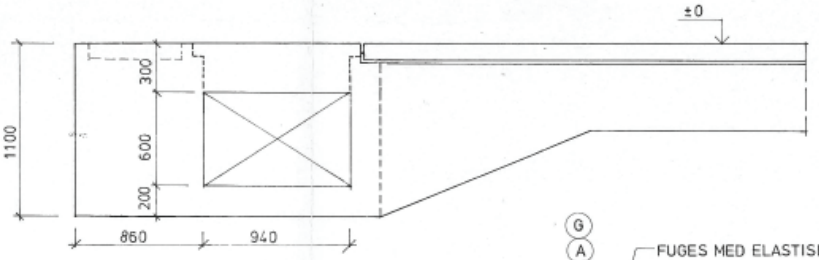


Fig. 10.
Original drawing.

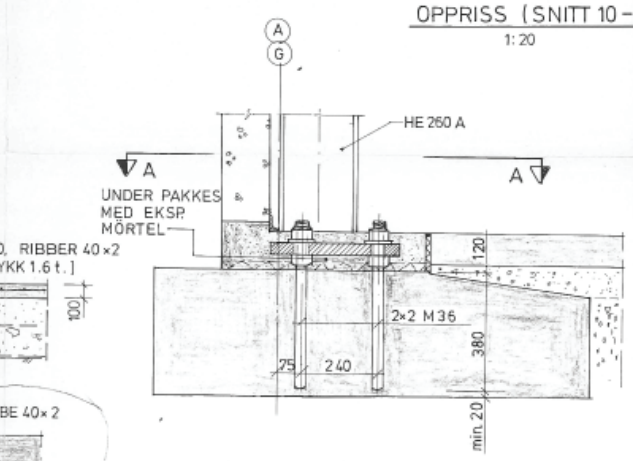


SNITT 4–4
1:20

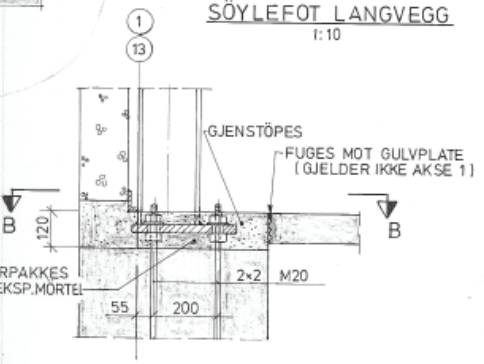
0.2 mm PLASTFOLIE
200
FOR UNDERVARME-RØR
mm, c/c 600 mm
00
500
LSE AV BETONGPLATE VED
JØRBAR PORT
G



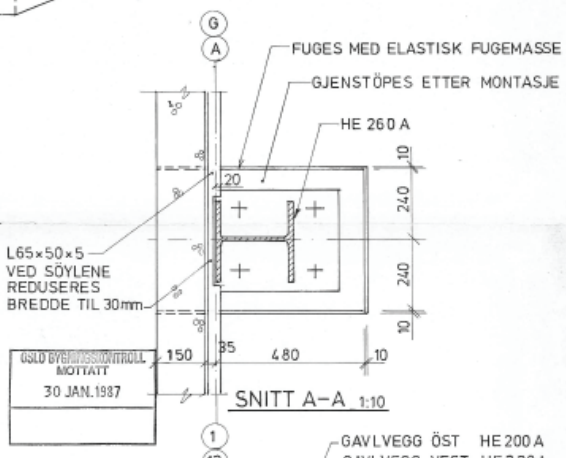
OPPRISS (SNITT 10–10)
1:20



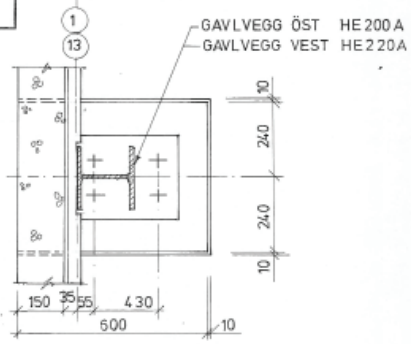
SÖYLEFOT LANGVEGG
1:10



SÖYLEFOT GAVLVEGG
1:10



SNITT A–A 1:10



SNITT B–B 1:10

REV.	RETTELSE	DATO	TEGNET	KONTR.
D	Snitt ekstra rissforsk.	09.05.86	JB	
C	Snitt ved kjørbar port	05.05.86	JB	
B	Div. mål	22.04.86	JB	
A	Div. supplement	18.04.86	JB	

NORMAL KONTROLL
BETONGKVALITET
ARMERING
NYTTELAST
MÅL I MM

SELMER – FURUHOLMEN

HASLE/LÖREN ISHALL
SNITT OG DETALJER

TEGNET SnO
KONTROLLERT
DATO 09.04.86
MÅLESTOKK 1:20 1:10

SAK NR. – BL.NR. 7740D
TEGN.NR 77937 D

INGENIØRENE BONDE & CO
RÅDGIVENDE INGENIØRER I BYGGETEKNIKK
TRESCHOWSGATE 2b, OSLO 4. – TELEFON (02) 15 20 10
BONDE & CO

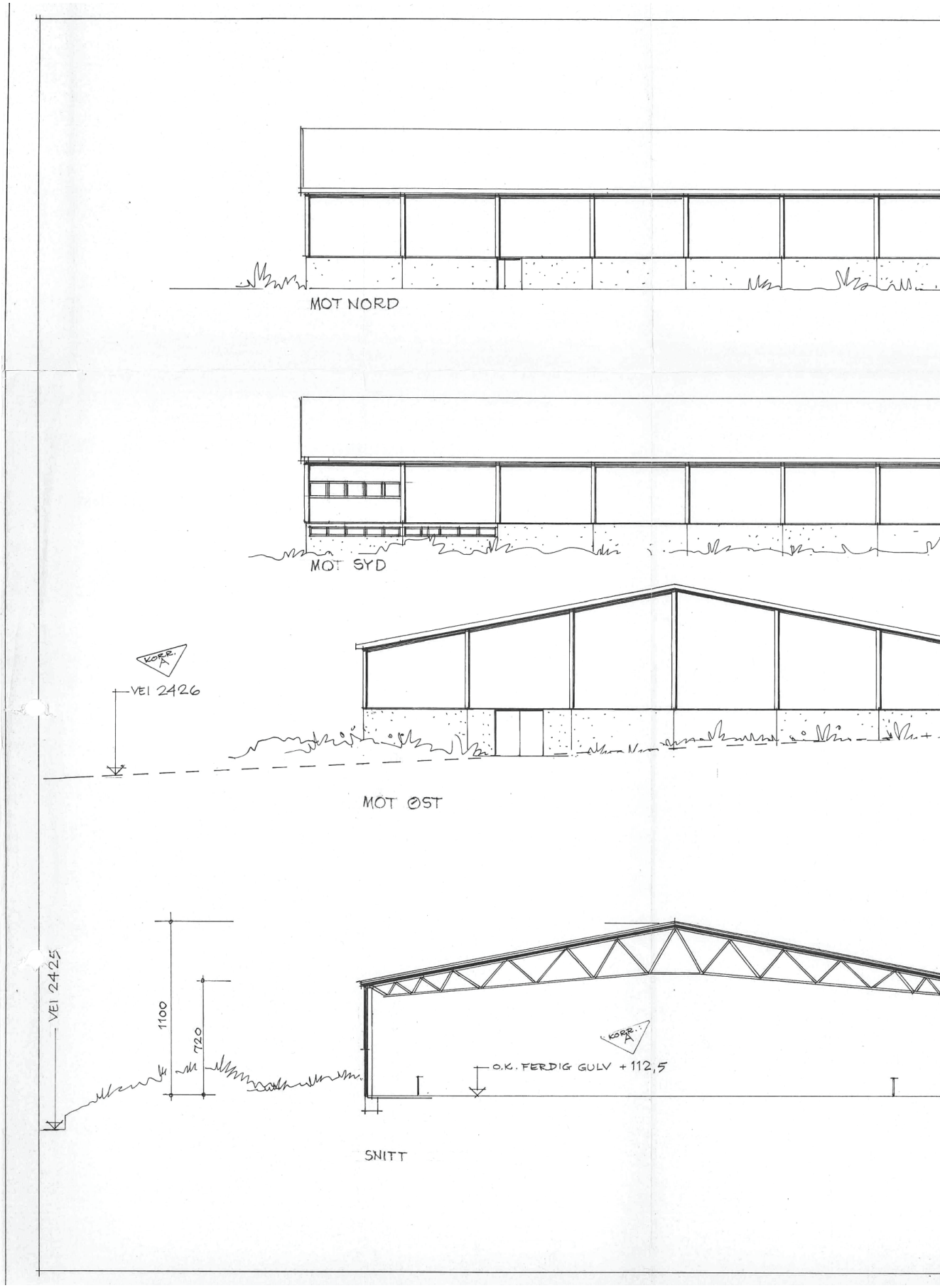
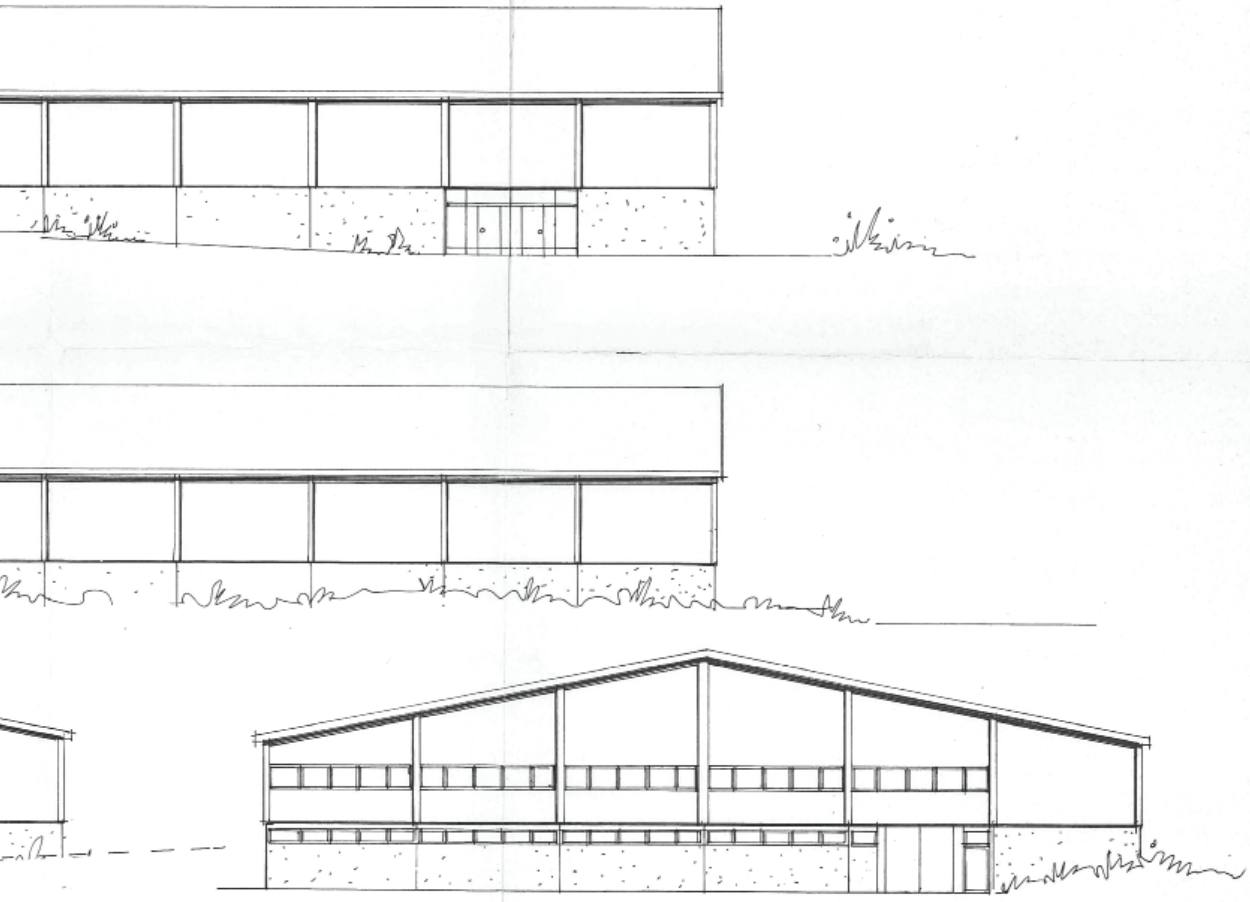


Fig. 11.
Original drawing. Sections and facades.



MOT VEST

4

REV.	RETTELSE	DATO	TEGNET	KONTR.
A	KORRIGERT BYGGEMELDING	08.04.86	LS.	

HASLE/LØREN ISHALL

SNITT OG FASADER

TEGNET L. STORLI MNAL

KONTROLLERT

DATO 18.09.85

MÅLESTOKK

SAK NR. — BL.NR.

TEGN.NR. 76346

INGENIØRENE BONDE & CO
RÅDGIVENDE INGENIØRER I BYGGETEKNIKK
TRESCHOWSGATE 2b, OSLO 4. – TELEFON: (02)15 2010

BONDE & CO

Materials:
In the structure is used concrete and steel. The concrete base is exposed and has a light grey expression on both inside and outside. The steel pillars are exposed on the inside and are treated with a blue fire retardant paint. The façade is divided into two parts. Exterior cladding is corrugated iron sheets that are surface treated in two different colors. A shade of blue and grey. Inside are also metal plates, these have a white appearance. Externally, the roof is also covered with corrugated iron sheets. The grandstands are individual concrete elements that are attached to a frame. In profile, these have a "V" shape. Other basic materials are white painted leca, aluminum cover that hides the interior roof structure and the concrete floor.

Qualities
The relationship that is between the game and the spectators is a good quality. The grandstand is located close to the game surface. This causes the spectators to have a close relationship with the active game. Here you can stand close to the ice surface if desired. Another good feature of the hall is where the café is located. This public café room is positioned so that it occurs a good relationship with the ice surface. In this group you have a good overview of the game. If it is a very cold winter day, it can be quite cold to sit in the hall room. Then it is good to have the opportunity to buy a cup of cocoa or coffee and still have the opportunity to watch the training or the game from this area.

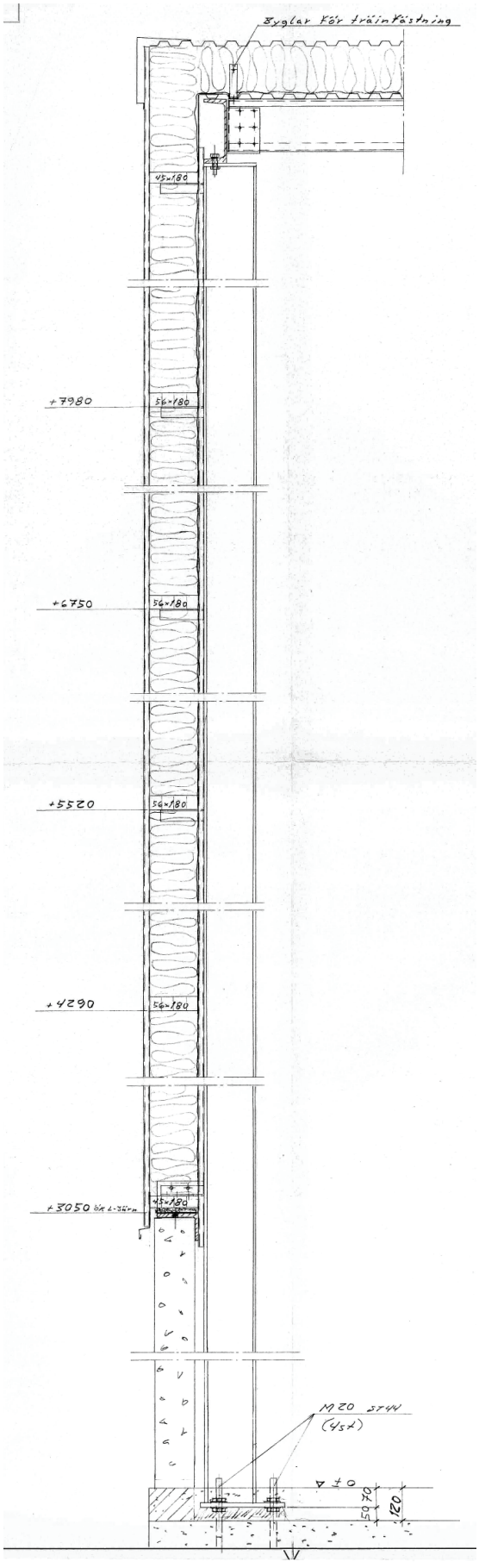


Fig. 12.
Original drawing. Section, wall segment.

USE:
Hasle / Løren ice hall is widely used. It is the training arena for many age groups.
From the age of 4, you can start at the ice hockey school. From the age of 7 they begin with teamplay. U7 – U18. The A- team, Hasle/ Løren Elite consists of players with aged from 18. Most boys play hockey. But in hocky school it is well mixed between boys and girls. When the kids start with teamplay, there is a minority of girls. But in recent years there have been more and more girls who want to continue. Hasle / Løren does not have clean boys' and girls' teams at the youngest age levels. But from years?..... the genders are separate. In some periods it is also possible for the general public to use the ice surface. With a period of approx. 2 hours.
The ice must be primed by the ice maker between each training session. It drives onto the track from the west side. Here it spray water over the path while scraping away excess ice.

Time spent:
As a hockey player, you spend a lot of time in the hall. Usual there are between 2-3 trainings per week. It is difficult to predict exactly what days the trainings fall on, as both time and day can vary from week to week. Everything from 08 on the morning to 20 in the evening, Monday – Sunday. There are many training teams that need to book the ice surface due the week. And it can be difficult to combine training, matches and cups throughout the season. In the higher age stages, the exercises setion usual are longer. No longer ice time, but where pri workout or exercises with appliances are on the program.
On the second floor there is a kiosk. This is almost open every day. A lot of time is spent here. Here parents sit and talk, meetings and seasion endings is arranged. And the children at the ice hockey and other sports in Hasle / Løren IL stay at the kiosk. This area is a focal point for the entire club.
The season lasts from about September to April. Hasle / Løren hall does not have "summer ice". The ice is removed during the summer months. During this period, the ice surface is widely used for indoor bandy training.

Published by:
Vårt Oslo. E-paper.
URL:
https://vartoslo.no/andr-kjernsli-gamle-oslo-haakon-berg-jensen/lorenhallen-stengt-pa-grunn-av-fukt-og-soppdannelse-70-barn-ma-pa-hockey-camp-i-andre-ishaller/212409

Lørenhallen stengt på fukt og soppdannelse på hockey-camp i an

— Varmt og fuktig vær gjennom sommeren gjør det vanskelig å hold godt nok nivå, sier Haakon Berg Jensen i kommunale Kultur- og idret

André Kjernsli

PUBLISERT Mandag 12. august 2019 - 23:53

Det fuktige og våte sommerværet i Oslo gjorde at kommunen ikke så annen løsning enn å stenge Lørenhallen fredag 2. august.

Dermed er den populære ishockey-campen for barn denne uken avlyst. 70 unge ishockeyspillere må fordeles rundt til andre haller og klubber.

— Hallen må stenges på grunn av at banedekket og isen har løftet seg opp mot 15 cm i den ene kortenden og vantene er skjeve, skriver arrangørklubben Hasle/Løren på sin hjemmeside.

Det blir ikke noe ishockey i Lørenhallen de

å grunn av
e. 70 barn må
dre ishaller

le ventilasjon og avfukting i Lørenhallen på et
ttsbygg.

nærmeste ukene. Foto: Kultur- og idrettsbygg Oslo KF

Får hjelp fra andre hockeyklubber

Selv om det kommunale foretaket Kultur- og idrettsbygg umiddelbart startet utbedring av Lørenhallen, vil ikke ishockey-anlegget stå klart før i andre uke av september.

— Vi har meldt inn alle våre lagenheter som har krav på istid til Oslo Ishockeykrets. De vil gå gjennom og fordele istid i andre haller, sier ansvarlig for isfordeling i Hasle/Løren, **Kyrre Teisbo**.

— Kultur- og idrettsbygg vil arbeide så raskt vi kan for å få hallen klar til bruk i sesongen 2019/2020, sier Haakon Berg Jensen. Foto: Kultur- og idrettsbygg Oslo KF

— Vi har ordnet slik at alle spillerne får plass på andre hockey-camper i byen. Takk til Furuset, Vålerenga og Jar som kan ta imot alle de 70 påmeldte barna, sier styreleder i Hasle-Løren ishockey bredde, **Harald Lone**.

Soppdannelse i hallen

— Løren ishall ble stengt fredag 2. august på grunn av tekniske utfordringer. Det er i hovedsak to forhold som gjør at anlegget måtte stenges. Grunnet det varme og fuktige været som har vært gjennom sommeren, har det vist seg vanskelig å holde ventilasjon og avfukting i hallen på et godt nok nivå, sier kommunikasjonssjef **Haakon Berg Jensen** i Kultur- og idrettsbygg.

— Dette har igjen ført til soppdannelser inne i hallen, sier Jensen, som legger til at det nå er planlagt utskifting av ventilasjonsanlegget i Lørenhallen iløpet av høsten 2019.

— Kultur- og idrettsbygg vil arbeide så raskt vi kan for å få hallen klar til bruk i sesongen 2019/2020, avslutter kommunikasjonssjefen.

Literature list:

Webpage:
URL: https://innsyn.pbe.oslo.kom
mune.no/saksinnsyn/casedet.'
asp?caseno=198504155

https://vartoslo.no/andr-kjern
sli-gamle-oslo-haakon-berg-
jensen/lorenhallen-stengt-pa-
grunn-av-fukt-og-soppdannelse-
70-barn-ma-pa-hockey-camp-i-
andre-ishaller/212409

Figurelist:

Fig. 1: Situation drawing, 1986.
pbe.no. (Saksnr: 198504155)
Fig 2-3:: Diagram, 1 and 2 floor program. Made by:
Pia Kristine Tveit
Fig. 4-7: Photos: Facades and interior,
Potographer: Pia Kristine Tveit, 2022.
Fig. 8 - 12: Original drawings: Sections, structure, facades, 1986.
pbe.no. (Saksnr: 198504155)

2.2.
Sustainability

Index:

Strengthening public programmes
The development of Hovinbyen with a large proportion of dwellings provides a need for a number of new local functions. A fully developed Hovinby will have 27,000- 40,000 new homes. Hovinbyen must follow up the large population growth with adequate and good buildings and areas for public purposes, important for health, well-being and an active life. To be on the current average for Oslo, 6-11 new multipurpose halls must be built in addition to those that exist and are planned today.

Social sustainability
Social sustainability includes equal access to important common benefits such as public spaces, public transport, schools and kindergartens. These are qualities that are essential for people to stay in the area for a long time and through several phases of life. Access to parks and green spaces also has an impact on public health. In addition to the basic functions, it is crucial to strengthen cultural, sports and leisure facilities as part of urban development. These are qualities that cause residents to actively participate in the local community, which is an important factor for housing quality and social conditions. The population needs good meeting places for both organized and disorganized activity.

Co-use
Through deliberate localisation and good co-use solutions, facilities can be used for several activities at different times of the day. Through co-location, different purposes can benefit from each other and thus contribute to efficient land utilisation and efficient use of the municipality's investments, without compromising on quality and land use. For example, a multipurpose hall in connection with a school can meet both the gym needs and provide better coverage for indoor sports surfaces in the urban area.Coordination of school, sports and outdoor activities facilitates more activity during school hours and more efficient land use through several user hours.

Published by:
Inhabitat, E-paper.
URL: https://inhabitat.com/ice-rink-alternatives-and-their-environmental-impact/

Ice rinks are an important fixture of winter sports, whether for ice hockey, speed skating, curling, ice dancing or figure skating. But with growing concerns about **global warming**, **water scarcity** and our planet's **climate crisis**, even the International Olympic Committee (IOC), the International Ice Hockey Federation (IIHF) and the National Hockey League (NHL) have been considering the environmental issues related to coordinating ice sports events and ensuring energy consumption and rink-operating costs are feasible. As a result, there is now a movement towards utilizing synthetic ice on ice rinks.

The first historical mention of a skating club's founding was in 1642 in Edinburgh, Scotland. As skating clubs grew, they inspired inventors to create artificial **ice** surfaces, so the rink would not be at the whim of the weather. By 1843, a *Punch* magazine article featured the first artificial ice rink, "not of frozen water but of a slush of chemicals including hog's lard and melted sulphur, which smelled abominably." That was followed by the growing popularity of ice hockey from the 1880s onward, which increased the demand for more rink construction. When the 1890s rolled around, the rush to patent ice rink surfaces began and has not abated since.

Rinks have long required both ice-making technical equipment and ice maintenance measures. Unfortunately, contemporary ice-making and maintenance technologies consume large amounts of **energy** and produce refrigerant gases that cause **pollution**, making them environmentally harmful. During the most recent determination of the NHL's total **carbon footprint**, it was estimated to emit 530,000 metric tons of **greenhouse gases**, an amount rivaling the yearly emissions from 110,000 cars, says the Environmental Protection Agency (EPA).

Which refrigerant gases are linked to present-day ice rinks? The main refrigerants associated with most ice-making equipment include chlorofluorocarbons (CFCs), hydrochlorofluorocarbons (HCFCs), hydrofluorocarbons (HFCs), hydrocarbons, ammonia and carbon dioxide. CFCs and HCFCs are synthetic gases attributed to **ozone layer** destruction. HFCs heighten the greenhouse effect, while **carbon dioxide** similarly intensifies global warming. Plus, ammonia, when inhaled, aggressively causes irreversible respiratory damage. And hydrocarbons, like propane and isobutane, are highly combustible, often exacerbating **smog** formation. Hence, each of these gases adversely affects the environment.

Of course, as ice rink technology advances, many refrigerants are under a phase-out schedule, especially in Canada, due to the **Montreal Protocol** terms. Additionally, *Canadian Consulting Engineer* magazine reported: "Since 2010, no new HCFCs equipment have been manufactured in Canada or imported," though extant ones are still in use today.

Even with ammonia and carbon dioxide as the main refrigerants of choice for the majority of today's ice rinks, they still have their attendant issues as well. For example, whereas ammonia may be a primary refrigerant, it is often utilized concurrently with brine to keep the rinks cold. The brine entails that this secondary fluid is high in salinity, having had salt added to boost its cooling properties. This highly saline secondary fluid, if leaked, can pose serious environmental damage.

Meanwhile, despite "some rinks add[ing] ordinary salt to the water to keep them from freezing," **Wondergy** documents, "most modern rinks now add ethylene glycol." Ethylene glycol is a type of antifreeze, and it is highly **toxic**. Again, its leakage would be harmful to the environment, poisoning living organisms, their habitats and **ecosystems**.

Other negative impacts of ice rinks include greenhouse gas emissions of carbon dioxide. For instance, *CO2Meter* reported that to shift away from coolants like HFCs and other fluorinated gases, some ice rinks have been using carbon dioxide-based refrigeration systems as their primary refrigerant. Carbon dioxide is a better alternative, though its use still contributes to global warming.

Likewise, the Environmental Protection Agency (EPA) has cataloged that other noxious emissions, such as high nitrogen dioxide levels and carbon monoxide, are being released by indoor ice rinks due to ice resurfacers, such as Zamboni rink vehicles. The EPA **website** states, "In enclosed ice arenas, a primary source of indoor air concerns is the release of combustion pollutants such as carbon monoxide (CO), nitrogen dioxide (NO2) and particulate matter (PM) into the indoor air from the exhaust of fuel-fired ice resurfacers."

This assertion is supported by an Environmental Defense Fund (EDF) **study**, which shares that "nearly 40% of the rinks surveyed worldwide could be exceeding the World Health Organization's 1-hour exposure guideline value for nitrogen dioxide in indoor air, with higher percentages of rinks exceeding this value in the US (55%) and Canada (46%). High nitrogen dioxide levels have been associated with respiratory problems such as severe coughs, chest pain and pulmonary edema."

Additionally, the same EDF study addresses carbon monoxide risks from ice rinks, citing that "High carbon monoxide levels can cause headaches, dizziness, nausea and impaired performance. At the levels of carbon monoxide typically found in indoor rinks, fast breathing from skating or hockey can produce adverse health effects."

The combination of ice-making, ice-maintenance and ice-resurfacing factors pose harmful **health** consequences for those who frequent ice arenas and rinks. For these reasons, ice arenas and rinks are turning to synthetic ice as an alternative.

Xtraice, a company known for building and distributing synthetic ice for rinks, says that synthetic ice's significant advantages are that it doesn't use **water** and thus doesn't waste energy on ice-making or ice-maintenance. Rather, it eliminates the cost of water and electricity that traditional ice rinks contend with. Besides, a synthetic ice rink can be used 24/7 without having to be re-surfaced in the same way real ice does. Xtraice explains further that synthetic ice rinks "are cleaner and do not require big noisy generators and best of all, they do not emit CO2 into the atmosphere."

What's the catch? Synthetic ice is mainly composed of high-density polyethylene panels. Polyethylene is the most common **plastic** on the market.

Critics of plastic ice worry about the environmental implications of the **microplastics** that could be released as skates erode the synthetic ice surface and create shavings and abrasions, which, when brushed or cleaned off of the rink, would likely be dumped in the refuse bin. From there, they could find their way into waterways and **oceans**, polluting the environment.

Accordingly, ice rinks can be viewed as a sustainability conundrum, at least for the time being. Traditional ice rinks have noise, energy waste and pollution costs. And their alternative, the synthetic ice rink, while resolving those issues, still generate other environmental concerns surrounding microplastic and plastic detriments. Only time will tell how the ice rink will evolve to become more eco-friendly.

Via **Xtraice** and **New York Times**

*Images via **Jimmy Chan**, **Suzy Hazelwood**, **Pixabay**, and **Lina Kivaka***

Published by:
Athletic buisiness,
E-paper.
URL: https://www.athleticbusiness.com/facilities/stadium-arena/article/15152011/sustainable-design-and-operations-for-ice-rinks

FACILITIES | STADIUM & ARENA

Sustainable Design and Operations for Ice Rinks

AB Staff
Dec 5, 2017

By their very nature, ice arenas are energy consumers, often due to the competing interests of intense refrigeration and heating for occupant comfort. Owners want an efficient building envelope, rink managers want lower operational costs, participants want ice at the proper temperature for their respective sports, and spectators want to be able to watch without shivering in their seats.

Randy Lieberg is a project architect within the athletics and ice design studio at JLG Architects in Grand Forks, N.D.

The good news is, sustainability and ice arenas do not have to be mutually exclusive. In fact, there are now a variety of tools and options to meet everyone's needs. Because of their nature and use, ice facilities' sustainability efforts tend to focus heavily on energy reduction as the primary facet of control. While it is true that ice arenas are energy hogs, that does not mean that sustainable practices cannot be utilized in their design and operation.

When planning a new facility, several relatively simple strategies can be employed to maximize sustainability. These include solar orientation of the building, ultra-efficient building envelope construction, partial earth sheltering, and a reduction in overall building footprint. However, operational energy savings undoubtedly has the greatest impact on sustainability for arenas.

A 2009 survey of Quebec ice arenas showed the least efficient community rinks used upwards of 2.4 million kWh per year, while the most efficient rinks used vastly less energy at around 800,000 kWh per year. By using just some of the energy-saving methods with relatively low payback periods, operators can expect energy savings in the range of 40 percent.

Resurfacing and refrigeration

Beginning with the ice surface itself, designers have many ways to ensure the stage is set for maximizing operational savings.

Let's assume that the rink floor in question is a poured-concrete slab, though operators of sand floor facilities can generally apply the same principles with a few exceptions and achieve similar results. The flatter the floor, the easier it is for operators to maintain an optimally thin ice surface. An ultra-flat floor can result in as much as a 6 to 8 percent reduction in compressor energy use. Similarly, if the density of a concrete slab is increased, it can transfer temperature much more efficiently, adding to the percentage of energy savings in compressor operations. If rink operators carefully monitor ice thickness and perform necessary ice maintenance, they will keep the ice surface as thin as possible and keep costs down.

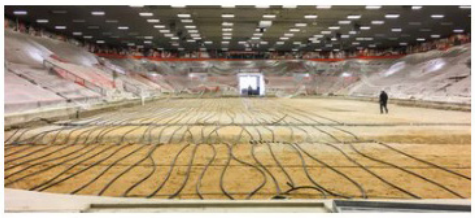
Today's ice systems designers have many options to choose from, and the design of an ice plant involves several combinations of compressor types and controls systems intended to streamline operations. These systems can minimize run times, quickly achieve needed changes in ice temperatures, and even be self-diagnostic.

Optimizing compressors is a science in and of itself, with factors such as compressor sequencing (phasing), floating head pressure, variable-flow or dual-drive brine pumps, variable-frequency drives on evaporators, high-efficiency motors, and soft-start controllers. It would not be unusual to see as much as a 3 percent bump in operational savings through the optimization of compressors. Some manufacturers have even developed proprietary systems that are continually seeking to exceed these savings.

Waste heat capture in refrigeration is not a new concept. It is used in all facets of commercial refrigeration and is even used in situations where waste heat is captured from non-refrigeration equipment to run separate refrigeration equipment. Most mechanical engineers and virtually all ice systems designers should be able to adequately design waste heat capture in an arena, especially for new construction. Long gone are the days when waste heat was simply let go as part of an arena's refrigeration operation. Rink designers should strive for 100 percent capture and use within the facility.

In addition to using energy that might otherwise be wasted, savings from compressor design and sizing are becoming more common. If careful consideration is taken during system design, and facility operators can maintain predicted loads, compressor sizing may be reduced. For instance, if a single ice sheet requires 40 tons of cooling, that same ice slab might be combined with one or more other ice sheets and reduce the individual cooling load to a more

efficient 25 tons. This is a 60 percent reduction in needed compressor capacity. However, if unintended loads are applied by either excessive rink use or by underutilizing the facility, the compressors will not operate at full efficiency, which can result in higher operating costs, overworked equipment, shorter compressor lifespans, and even failure.



Ice replacement projects, such as this one at Bowling Green State University, should always keep sustainability in mind. [Photo courtesy of JLG]

Building envelope and materials

Due to the immense amount of humidity that can be produced within an ice arena, any opportunity to use airtight insulation in the walls and roof of the main arena volume should be taken. Batt fiberglass insulation will eventually collect water vapor and sag, lose its effectiveness, or worse — grow mold. A great solution are insulated sandwich panels, which feature a closed-cell middle insulation layer held between the inner and outer finish surface of a metal panel — usually galvanized steel or aluminum.

While these panels do use expanded closed-cell insulation, they provide such a thermally secure building shell that they more than make up for it over the lifespan of the building. By designing an ultra-airtight building envelope, rink designers can significantly reduce the total tonnage of refrigeration needed to cool the ice.

Low-emissivity ceilings are a very effective tool for reducing the heating load on the ice surface — and consequently, the refrigeration systems. The "emissivity" refers to any material's natural tendency to reflect (or "emit") radiant energy, which travels through the air without affecting the air temperature itself, but strikes and warms surfaces. Since radiant heat flows from warmer objects to cooler objects, this means small amounts of energy are constantly transfered from ceiling to ice.

Therefore, if the ceiling structure and decking of a metal ice arena have standard paint coatings, their emissivity means that they give off radiant energy and direct it toward the ice, heating the ice surface and making the refrigeration system work a little harder. Low-e materials simply have a far lower emissivity than standard materials (like metal arena ceilings), which means less energy transferred from ceiling to ice — reducing the heat load on the ice by as much as 30 percent.

Low-e ceilings are typically white or shiny/reflective, and a common misconception is that a shiny surface "reflects" heat. In fact, it doesn't collect and therefore doesn't emit as much energy. The shiny part is simply a bonus, because the high degree of visual reflectivity makes light sources appear much brighter, usually allowing a reduction in the number of light fixtures over the ice surface, which in turn reduces heat load on the ice and electrical load on the facility.

Lighting

Older rinks utilized individual high-pressure sodium or metal halide lights spaced evenly across the rink surface to provide intense spots of light. These are heavy energy users and bulb replacement is quite expensive, and in order to avoid empty spots on the ice surface, more fixtures are used than are necessary for light levels.

LED fixtures are getting more affordable, and provide even greater operational cost savings than fluorescent. If they can fit within initial or retrofit budgets for new construction, LEDs are a great option, and they are often eligible for considerable rebates from utility providers and/or government agencies.

Munn Ice Arena at Michigan State University was one of the first ice rinks in the United States to be equipped with LED lights. [Photo by MSU Today]

Dehumidification and ventilation

Dehumidification for ice rinks is necessary for a variety of reasons that go beyond removing humidity from the air itself. Besides controlling indoor fog in warmer seasons and improving indoor air quality, a dehumidification system will provide a level of building efficiency.

High humidity within the arena volume can lead to humid air condensing on the ice surface, which increases the ice thickness over time. Thicker ice means a harder-working ice plant. Additionally, humid air can cause newly resurfaced ice to freeze more slowly. Ultimately, dehumidification of indoor air will result in lower energy usage.

If the only reason for dehumidification were ice-related issues, the equipment and its operating cost might not be worth it. Fortunately, dehumidification has other primary benefits in an ice arena. It also helps prevent moisture vapor from damaging steel building structure, equipment and non-moisture-resistive building materials, and from permeating fiberglass batt insulation. The lower

the odds for mold growth within the rink, the better it is for air quality and occupant health.

It is important to note that this article separates arena HVAC as being for spectator comfort, with the understanding that where combustion ice resurfacers are used, some ventilation is required to meet clean air standards. Modern building code and energy requirements have changed design thinking. Not only are air exchanges within the box necessary, spectators demand some form of comfort control or heating at least over the seating areas. The advent of waste heat capture usually provides the necessary heating for locker rooms and the other rink-related support spaces, as well as for heated water.

A centralized HVAC system is typical for other occupied spaces such as lobbies, restrooms, pro shops, concessions areas and viewing rooms. Cooling capacities for these spaces are not uncommon for summer usage, and certainly for arenas in southern areas of the country.

Ways to incorporate sustainable practices as they apply to occupant comfort include:

• Radiant heating for spectator areas is much more effective at keeping spectators comfortable because it doesn't heat the air but rather the spectators below it. That said, radiant heat only heats objects in its direct radiant zone, which means other areas of the arena are going to feel much colder. Therefore, spectators moving between heated seating areas and other spaces within the arena bowl are not going to experience a consistent comfort level, and it is not as effective in larger-spectator-capacity situations.

• Forced air in the arena bowl may not be the best choice in smaller arenas, as it is highly inefficient for spectator areas within the large-volume arena space. The cool, humid air within the box draws a large amount of heat from the forced air as it leaves the duct system and travels to the spectators.

Introducing forced heated air into the rink volume increases how hard other building systems must work. For instance, the warmer air can mix with cooler air and cause moisture vapor, which the building's dehumidification must then work harder to remove. Ambient air temperatures increasing within the arena will also naturally create more work by the refrigeration system to keep ice at the correct temperatures.

Green thinking equals great ice

These are only a handful of sustainable options that can be applied to ice rinks, and not every rink can harness all sustainable design strategies. However, if rink owners and operators understand the options available, they may be able to apply them no matter what stage of arena operation they're in. Whether planning a new facility, expanding an existing one, retrofitting lighting, changing refrigeration, or simply implementing scheduled deferred maintenance, every step is an opportunity to implement sustainable practices.

This article originally appeared in the November|December 2017 issue of Athletic Business *with the title "Putting a freeze on energy waste in ice arenas."*

Published by:
Minicipal World,
Podcast.
URL: https://www.municipalworld.com/podcasts/rink-sustainability/

MUNICIPAL WORLD PRESENTS

The future of sustainability for our ice rinks - Tim McRae & Ian Storey

Show Notes for this Episode

MW Presents: Thanks for joining us for this special episode of MW Presents, sponsored by Chemours Canada. Our guests today are Tim McRae, the technical support and development leader for Chemours Canada, working in their thermal and specialized solutions business area. And Ian Storey, president of IB Storey Incorporated, the official rink engineering consultant of the NHL, which has more than 20 years of experience in refrigeration systems for the recreational, industrial, and commercial sectors.

Today, we are discussing best practices for rink owners, operators, and municipalities on what to consider when attempting to achieve a sustainable rink system. Welcome, Tim. Welcome, Ian. Glad to have you guys here. Can you tell us a bit more about what's happening in the ice rink industry when it comes to sustainability?

Tim McRae: The ice rink industry is certainly increasing its focus on sustainability. An example of this is the NHL has initiated a program called the Green Rinks Initiative, which is really designed to help provide information on industry best practices, which are both financially and environmentally sustainable. There is a trend in the industry really to look at ice rinks sustainability in a more holistic way. And by this, I mean looking at the whole thing, at safety, cost, and the environment. And as there's been many instances over the recent history, over the last few years with ammonia ice rinks, there is an increased focus on safety part of sustainability. And then an example of this is the announcement with new requirements by Safety BC. So the focus on sustainability is causing a shift away from ammonia.

MW Presents: That's very interesting. How would you describe what is a sustainable rink solution?

Ian Storey: A sustainable rink solution is one that balances both environmental and financial factors. That's not to say one should be prioritized over the other, more than that the greatest benefits and the greatest positive impact will be realized when considering both. While intuitively obvious, there is a safety element which governs any activity, especially in places of public assembly embedded in the midst of our communities, i.e. our rinks. Though these three pillars need to be evaluated in unison as the outcome will form the best option for the facility going forward.

MW Presents: In regard to refrigerate options, and there must be so many considerations around those, what's going on in the refrigerant industry today?

Tim McRae: I think I can take that one. So as we know, many of the rinks in North America are at or near end of life. But what we're seeing is, is Opteon family of refrigerants becoming a leader in solutions for these rinks. Many rink owners, including private ones, municipally owned rinks, and some NHL facilities, are choosing to replace their ice plants with ones using Opteon refrigerants. In fact, all of the recent NHL upgrades have been to ice plants using Opteon refrigerants, and that would include the Colorado Avalanche and the San Jose Sharks. And there's more on the way. Ice plants with Opteon, these new ice facilities, are being used to replace not only old end of life Freon plants, but also ammonia ice plants. So these new owners are looking at the whole picture, considering safety, financial impact, and regulations.

These Opteon refrigerants have a great balance of properties that are meeting owner's needs today and into the future. The Opteon refrigerants being used in ice rinks have low toxicity, non-flammable, operate at low pressures, and have low environmental impact. Energy efficiency is also excellent and their properties are enabling some new energy efficiency technologies that cannot even be applied to ammonia or CO2. Maintenance costs are low, as systems are simple and familiar to service technicians. This means that many service companies can service systems and in many cases, the equipment does not require costly maintenance procedures like compressor overhauls. So part of this is there's more choices with service guys, so more choices means lower cost. From a cost perspective, these Opteon ice plants are the lowest capital and overall operating costs. These Opteon refrigerants are the best options for new facilities or when replacing an existing ice plant.

MW Presents: There's been a lot of talk about natural refrigerants, such as CO2, ammonia. What are the disadvantages to natural refrigerants? Intuitively, you have to think that something natural is better, but that isn't necessarily the case, is it?

Tim McRae: I think I can take that one again, Ian. These natural refrigerants, they're so-called naturals, they're really industrial chemicals. That's how when they're used back in the early days in refrigerants; they are industrial chemicals and they're produced in chemical plants. An example is production of ammonia. How do they make ammonia? So production of ammonia starts with fracking for natural gas or mining of coal, the process too consumes large amounts of energy and generates high greenhouse gas emissions. So I would not fall into the trap that because something is coined natural, it is automatically the best.

MW Presents: Right. Bit of a misnomer.

Tim McRae: Yeah. A bit of a misnomer. Now, you also had mentioned what are some of the disadvantages and there certainly are some disadvantages with ammonia and CO2. So the first thing of course is safety.

And we all look at safety first. So there is much greater safety risk. Ammonia, as we know, is toxic and, and leaks from even these low charge ammonia systems can be very dangerous, especially for the

technician in the mechanical room. CO2 on the other hand, operates at very high pressures, over 1,000 PSI. What happens if there's a failure of something over 1,000 PSI? Another disadvantage of costs and we all look at that as is capital costs. Installing a CO2 systems, these CO2 systems are very expensive to install. Then we jump to maintenance, another disadvantage with CO2 and ammonia, these supposed naturals, is maintenance. This equipment is very specialized. There's a very limited number of engineering or technicians that can service this equipment.

We also find that with ammonia CO2 systems, quite often, the design requires costly compressor rebuilds at some frequency. And with the safety issue with ammonia too, is that many municipalities are starting to require on-staff engineering folks to be there while the system is running. So that certainly is a disadvantage from a cost perspective and ammonia with the safety requirements, there are additional efforts, additional time required to invest in managing that safety. So, there's some of the disadvantages, but just because something is marked as being natural, it may not be the best choice. And when looked at holistically, these ice plants with Opteon and many of these rink owners are determining this, that it's a good choice when you look at things holistically using Opteon, versus some of the supposed naturals.

MW Presents: You brought up a lot of points for people to think about, and there's certainly a lot of products out there as well. So is there a recommended way to evaluate refrigerant options when people are looking into these things?

Ian Storey: I spend most of my time client facing, and this question comes up often. So as with any evaluation, making informed decisions is the difference between satisfaction and regret. Ultimately, there's a lot of confusion being generated in the industry by the overuse of buzzwords, like net zero, out of any relevant context. That means the application of due diligence, not soundbite decision-making, is needed now. And so the process is, as Tim mentioned, a holistic impact review, prioritizing safety and balancing fiscal responsibility with environmental stewardship. Ultimately what's important is reducing the impact of each specific rink, well, the inside and outside of the meter, not simply the belief of that achievement.

MW Presents: That makes sense. You guys both know a lot of people in this field, looking at these systems on a constant basis. One of the owners found to be the best starting approach when you're looking at that sustainable rink refrigeration system? Where do people need to begin?

Ian Storey: Owners that have started their evaluation by identifying priorities and current gaps, which they used to form the basis of their plan and found this to be the most effective and informed starting point. The emerging trend is towards leveraging Opteon refrigerants with the latest technologies, which enables unlocking of a rinks reduction credential. As the industry moves towards zero energy rinks, commonly referred to as net zero rinks, using a holistic and balanced approach is the consistent choice of ownership and stakeholder groups. That is as it has the greatest positive impact per unit of available capital.

Moisture handling mechanisms in ice rinks

Juris Pomerancevs[1,*], *Jörgen* Rogstam[2], and *Agnese* Līckrastiņa[3]

[1]EKA Baltic SIA, Gustava Zemgala gatve 74, LV-1039 Riga, Latvia
[2]Energi & Kylanalys AB, Prästgårdsgränd 4, 125 44 Älvsjö, Sweden
[3]Riga Technical University, Kaļķu iela 1, LV-1658 Riga, Latvia

Abstract. The paper addresses the moisture handling function in ice rinks. Dehumidification has an important role in ice rinks to avoid structural damages and maintain a sustainable indoor environment. Field measurement analysis in a number of ice rinks in Sweden is performed, showing the indoor climate dependency on the ambient conditions. Indoor temperatures vary between +5°C to +10°C and humidity ratio between 2.5 to 6.0 gH2O/kg of air. [1] Moisture source evaluation shows that the most critical load is imposed by air leakages, while internal loads such as people can generate peaks but have a short-term nature. Control strategy of the dehumidification equipment has a significant impact on the appropriate humidity level and moreover poor controls can easily lead to a 30% energy penalty. [2] [3] In ice rinks it is concluded that the acceptable setpoint is in the range of 0°C to 2°C dewpoint temperature.

1 Introduction

Ice arenas are a special type of sports facilities where ice is of the central interest, maintained by a refrigeration system. In modern ice rinks there are several requirements to provide a safe and satisfactory experience for the users, and it involves at least five major technical systems to provide that. These systems are:

- Refrigeration
- Space and hot water heating
- Ventilation
- Lighting
- Dehumidification

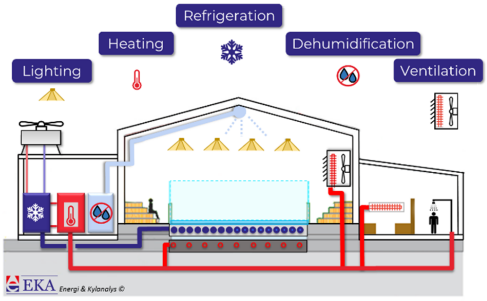


Fig. 1. The ”big five” energy systems in a typical ice rink.

The importance of these systems is not only explained by the provided functionality but they also represent more than 90% of the total energy usage. [4]

This paper focuses on moisture handling in ice rink application with the aim to investigate the importance of dehumidification function. Most of the results are derived from a research project with the name NERIS, which is an abbreviation based on Nordicbuilt: Evaluation and Renovation of Ice halls and Swimming halls – NERIS, the project aim was building a knowledge bank related to moisture handling in ice rinks and swimming halls. The authors[1,2] took active part in the project which was finished in 2019.

1.1 Moisture related issues

A season of an ice rink is typically between August to March, but some arenas run year-round. In modern arenas dehumidification is a must in order to control the quality of the indoor air, keeping it at acceptable level and avoiding problems due to the presence of moisture.

Air moisture mishandling can cause long-term problems such as degradation of structure materials, corrosion of metal, rotting of the wooden structures and development of fungi and bacteria.

Fig. 2. Mould growth on the ice rink structure.

*Corresponding author: juris.pomerancevs@ekanalys.se

Arenas are challenged to keep a safe and good sheet of ice when the indoor humidity level or dew point increases to a point that is well above freezing, because the rate at which frost builds up on the ice also increases. To keep the ice from being too soft, operators are forced to run the ice plant at very low temperatures, resulting in the easy build up ruts and heavy snow accumulation from skaters. Typically these periods that require colder ice are the same periods when the outdoor temperatures are elevated; which negatively impacts the ice plant's efficiency and the total hours of operation. [5]

Fig. 3. Fog in an ice rink.

Inadequate moisture removal can lead to dissatisfaction of skaters and spectators because of processes like ice surface softening, drippings from beams, condensation on the protective glass and even fog.

1.2 Energy usage

Apart of functional challenges, dehumidification in ice rinks is still a very delicate subject in terms of energy usage concerning these buildings, according to an extensive statistical investigation dehumidification represents about 6% of the total energy in a typical ice rink. [4]

Dehumidification energy usage data per season in several ice rinks is plotted in Fig. 4. The variations that can be observed between the ice rinks may be dependent on factors such as the moisture load, the control strategy or the season length. By only analyzing this plot it is not possible to conclude what is the influence of each factor. However, these ice rinks are of similar size and made for similar purpose, with insulation, which indicates that the before-mentioned factors can significantly affect the energy-efficiency of an ice rink since the total dehumidification energy usage ranges between 55 to 158 MWh.

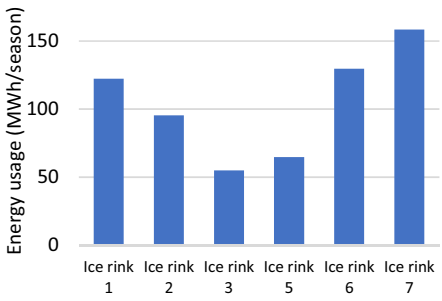


Fig. 4. Dehumidification system energy usage in 7 ice rinks.

2 Indoor climate Field measurements

An important part of the project was analysis of the field measurements. Available indoor climate data from 8 ice rinks near Stockholm was used for the season 2015/16 (around 8 months). Resolution of the data is 5 minutes, therefore the results include the dynamic effects. The sensors are permanent and measure temperature as well as relative humidity and are placed by the wall at about 2m height. [1]

2.1 Indoor temperature

Fig. 5 shows the indoor temperature profiles averaged for a month. In the beginning of the season it is normal that the temperature level is up to 12°C, which obviously leads to high thermal load at the start-up. Once the refrigeration system has started to cool the rink floor, the temperature drops in the arena room. There is, however, a considerable thermal mass to work with when rink floor, building, etc. are at "summer temperatures". Most smaller ice halls, where the climate is controlled, keep controlled air temperatures in the range of 5 to 10°C during normal operation. In some cases where the ice halls are uninsulated, the temperature in winter can drop significantly.

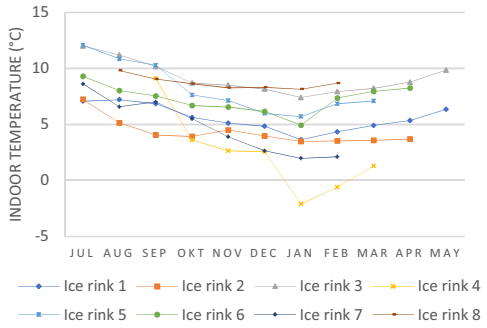


Fig. 5. Monthly average indoor air temperature.

The indoor temperature trend is similar for all ice rinks studied. It is only in ice rink 4, where the temperature

drops much more during the cold period, which is due to an uninsulated building. Interestingly enough, this is the warmest ice rink in the beginning of the season and among the coldest in the end, which illustrates challenges with uninsulated ice rinks without climate control, i.e. influence of the ambient climate is much more significant.

2.2 Relative humidity

In Fig. 6 the monthly average relative humidity (RH) inside each ice rink is illustrated. By obtaining an additional information about the installations it can be tied to the graph that some ice rinks have RH-control, like ice rinks 1 and 2, where RH is around 70% all season long.

For most ice rinks the RH value is decreasing until October after that levelling out, like in ice rink 3, 6, 7 and 8. This is associated with the fact that the dehumidifier is running full capacity at the start of the season and as the load is decreasing with the ambient temperature and the associated humidity load the indoor RH decreases. Rink 5 stands out, having a completely different pattern than the others, which is due to the control strategy being based on humidity ratio, rather than RH-value. Control strategies will be further discussed later in the paper.

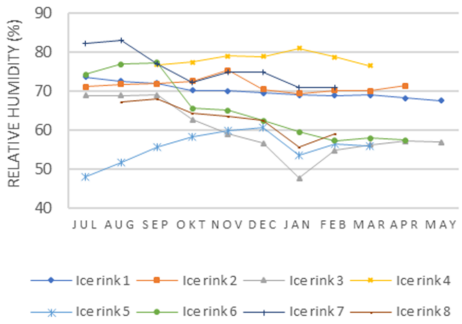


Fig. 6. Monthly average relative humidity.

2.3 Humidity ratio

With indoor temperature changing over the season but RH staying flat the absolute moisture content is going to vary. By using the temperature and relative humidity data from above, the water content per kilogram of wet air has been calculated according to the following equation:

$$\omega = \frac{M_w}{M_{air}} \cdot \frac{P_{sat} \cdot RH}{P_{atm} - P_{sat} \cdot RH} \quad (1)$$

In a typical ice rink to avoid excessive condensation on ice and surfaces, the recommended upper limit of humidity ratio is 4.3 g H2O per kg of air (2°C dewpoint). While it is not required to perform an active dehumidification if the humidity ratio is below 3.7 g H2O per kg of air (0°C dewpoint) because this would cause additional evaporation of water during ice maintenance (resurfacing).

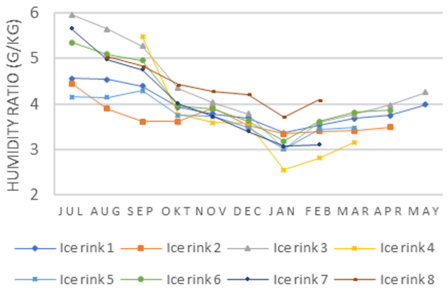


Fig. 7. Monthly average humidity ratio.

As can be observed in Fig. 7, in the beginning of the season most arenas have moisture levels well above the upper limit 4.3 g H_2O/kg of air, that is explained by insufficient dehumidification capacity or poor controls.

Later in the season, indoor air in all arenas becomes drier following the trend of outdoor conditions, which gives a clear indication that indoor climate in real ice rink installations has a high dependency on the ambient climate.

3 Moisture load

Understanding where moisture load is generated is crucial for sizing dehumidification function appropriately, and this research addressed this matter with several methods, and for the most relevant moisture sources.

3.1 Infiltration

The temperature difference between indoor and outdoor climates and the height of the building can cause a significant air pressure differentials across the building envelope of an ice rink, so-called “stack effect”. [6] Leaks through the building envelope allow warm and moist air to infiltrate continuously in the summer, e.g., conditions when temperature indoors +8°C and outdoors +25°C

A practically convenient and accurate method to evaluate the air leakage is based on CO_2 concentration in air. By doing measurements for a certain period of time, occupation periods can be easily tracked. In Fig. 8 data from one of the ice rinks can be seen. Concentration peak represents the end of occupancy after which air in the hall is exchanged gradually by air leakages and it happens during the night in this case. This decrease without other impacting factors can be used for calculations. The equation is as follows:

$$ACH = -\frac{3600}{t} \cdot \ln\left(\frac{C(t) - C_{ext}}{C_0 - C_{ext}}\right) \quad (2)$$

Where:
ACH – Air change per hour [h^{-1}]
t – Time interval [s]
C(t) - CO_2 concentration in the end of interval [ppm]
C_0 - CO_2 concentration in the beginning of interval [ppm]
C_{ext} - outside CO_2 concentration during the interval [ppm]

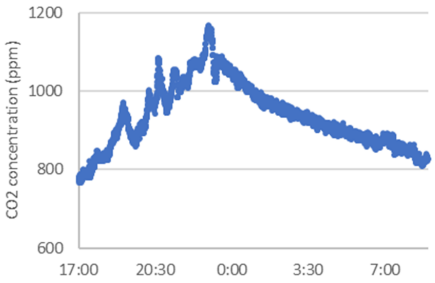


Fig. 8. Example of a CO_2 concentration measurement.

The estimated ACH for this ice rink is 0.13 h-1. Assuming arena volume 23 000 m^3, the fresh air brought in by air leakage is 3000 m^3/h. [3]

A number of other reference measurements suggest typical ACH in the range between 0.05 to 0.15 h-1.

3.2 Internal sources

Ice rinks are public buildings and occasionally there are events which attract a large number of spectators who are watching sportsmen in action. Reasoning about the moisture load from people presence should be done, to understand its potential magnitude in the moisture balance.

Fig. 9. Spectators in a normal size ice rink.

Water vapor from a human body is released by sweating and breathing. Large part of the sweat is absorbed by clothing, and in ice rinks either the spectators and players normally have clothing that covers most of the body. Due to this reason sweating as a moisture source may be neglected. Breathing on the other hand releases water vapor directly to the air. A method to evaluate the moisture generated by the respiratory process is suggested in the Chapter 9.4 of ASHRAE Fundamentals handbook, where the activity has the major significance. Using an example of a typical size ice rink in Sweden, it can be assumed that the number of spectators is 500, watching an ice hockey game, with around 40 players in having an activity with high intensity. The total resulting moisture release by spectators is 3.9 kg per hour and by players 1.5 kg per hour, and in total 5.4 kg H_2O per hour.

The impact is considerable, however it is important to understand whether the load would potentially cause moisture related problems. The nature of such source is relatively short-term, because events with large amount of people are not as frequent and not happening one after another. This means it might be possible to encounter peaks of the indoor humidity ratio during the day for a couple of hours. Once the rink is empty, the air will start to dry out to the level which is set by all the other moisture sources.

During conditions when ambient air is more wet than the indoor it is not possible to track the internally generated moisture load, because the magnitude of it is much lower than infiltration caused moisture influx. A practical way of analyzing the internal moisture load is to look into a shorter period like in where two dry days are chosen for this particular matter. At these conditions the only considerable source apparently is the activity of people, as can be seen on 12th of January between 18 and 21 the indoor humidity ratio rises slightly, although the ambient air is drier. The logical reason for this might be an event in the ice rink, like an ice hockey game with many spectators. This rise in the 3 hour span was used and the estimated results show a moisture generation of around 3.1 kg of water per hour, which is close to what was calculated using the theoretical assumptions.

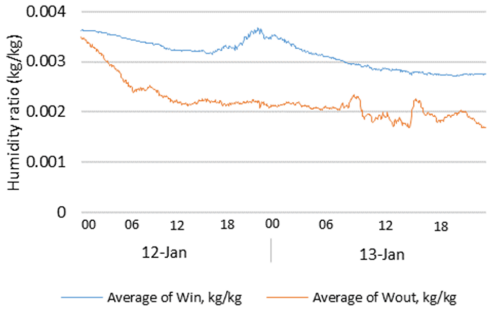


Fig. 10. Humidity ratio indoors and outdoors for two day period.

Although this is not a very accurate assumption, because the exfiltration removes moisture during this period. A more credible results would be achieved if a period with similar air humidity ratio on both sides of the envelope would be chosen, however occasional peaks were not observed during such conditions.

Although often mentioned as a potential internal humidity load, the resurfacing flood water turns out to be a negligible internal source. This is due to the fact that the water, regardless of temperature, is cooled down to the freezing point instantly. [7] During the freezing process it may only evaporate if the dewpoint in the arena room is below 0°C. This is one of the reasons that the control humidity level is suggested to always be above 0°C.

3.3 Diffusion

Diffusion through the building envelope is another mechanism of moisture transport. The water vapor in air moves from higher water vapor content towards lower by the partial water vapor pressure gradients. This happens

in parallel to water vapor migration with air leakages and is considered as a separate process. Here the pores and cracks in the building material or gaps between the joints give the opportunity for vapor to migrate.

As compared to the air leakages, diffusion through the building envelope in ice rinks is a much slower process, which is why the moisture displacement magnitude is lower. Using the results from a study, where different wall types for ice rinks were compared, the impact of the diffusion through wall on the indoor humidity ratio is estimated to be insignificant. For air conditions in august, when there is the highest water vapor difference, the diffusion through the wall is evaluated to be a moisture source with a rate of 135 g of water per hour. This result gives a strong argument that it is not essential to consider water vapor diffusion through a wall in the moisture balance. [8].

More severe effect might be on the building structures on the other hand. If unproperly designed or built at the given climate, the vapor may condense with concentration in particular spots or layers. By the time it will deteriorate the thermal insulation properties (increase heat conductivity), create favorable conditions for mold growth or in the worst-case lead to structural failures. To avoid condensation within the wall structure, first the direction of diffusion process should be considered, subsequently the layers in the wall can be chosen in such a way that material can naturally ventilate. Analysis can be made for a whole year performance, taking into account the weather data and indoor air conditions. As a result mold growth potential is assessed. Even if the condensation happens at certain conditions, it might not be for a long period and further changes in the weather along a year might be favorable for the wall to dry out.

Three representative locations were analysed from the humidity ratio perspective. The locations were chosen in such a way that the ambient air conditions represent the northern part (Kiruna), mid part (Stockholm) and southern part (Malmö) of Sweden. An evident trend was observed, monthly average humidity ratio range for a normal year is around 1.0 to 6.3, 2.5 to 9, 3.5 to 9.6 g H_2O per kg of dry air in the north, mid and south respectively. This difference implies that the direction of the diffusion depending on the location will affect the wall design.

3.4 Total

To summarize the analysis that is done with respect to loads Fig. 11 is shown. This is to put the contributions in relation to each other, which comes from the fact that in literature and in practice there are very different assumptions about the magnitude of the different parts. The source of the variations comes from very different assumptions, especially regarding air leaks and internal loads. This study has attempted in a nuanced way to analyze the loads theoretically and then to put them in relation to the field measurements performed to verify the calculations.

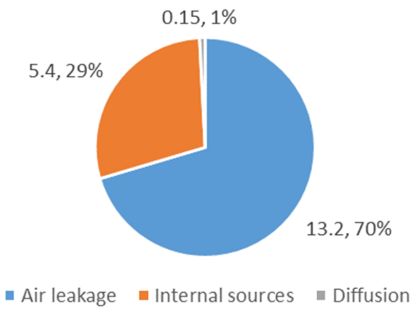


Fig. 11. Moisture loads at maximum internal loads and otherwise nominal conditions an ice rink.

In this case, it has been assumed that the indoor/outdoor temperature is 7/15 ° C, the air leakage is 13% which contributes to the external load and that 500 spectators and 40 players are responsible for the internal loads. As previously noted, diffusion through walls and ceilings accounts for a vanishingly small proportion, but it is included to put it into perspective. As can be noted, the total loads amount to just under 20 kg/hour and then the internal loads are at their highest level. During most of the ice rink service life, the internal loads are basically 0, which means that the load is the air leakage, which in this case would mean about 13 kg/hour.

If, for the same plant, the worst case was assumed when there is the highest possible humidity in the outdoor air, i.e., 12 g H2O per kg of air, then the contribution of the air leakage part would rise to close to 30 kg/hour. The design internal loads are the same, ie about 5 kg/hour, which gives a total contribution of about 35 kg/hour. Now these levels of load are short-lived in such a plant, which is why it is normally not necessary to design for these levels.

4 Moisture removal

The humidity mass balance involves several moisture “sinks” and ice rinks require controlled moisture removal to avoid problems associated with it.

4.1 Ice surface

When the humid air in the rink space “meets” with the cold ice surface it condenses and subsequently frost is formed on the ice. In this way a part of vapor in air inside the rink space change its phase to ice and mass of it is transferred. For this to happen ice temperature must be lower than the dew point of the air, which is the case most of the time normally, especially during warm part of the season, when condensation rates are the highest.

This has a cost nevertheless, because the condensation adds a heat load to the refrigeration system, as well the quality of ice deteriorates due to excessive condensation rates. Since it is practically not beneficial to decrease the dew point of air below 0°C, condensation is inevitable (as the ice temperature is below 0°C). Therefore, the goal is

not to eliminate it, but to take care that the condensation rate does not add too high cooling load or has a negative impact to the ice quality.

To estimate the amount of water that is transferred from the air to the ice surface, several calculation methods are applicable. As the physical process behind the diffusion of water vapor involves heat and mass transfer, it is key when aiming to predict the rate of the transported mass of water. Fig. 12 shows results of the study, where two different analogies were used to estimate water that is condensed to the ice, with a typical area of 1800 m^2. [9] Different air velocities above the ice surface were assumed, higher velocity leads to a higher heat and mass flux, at the same time lower ice temperatures intensify the process.

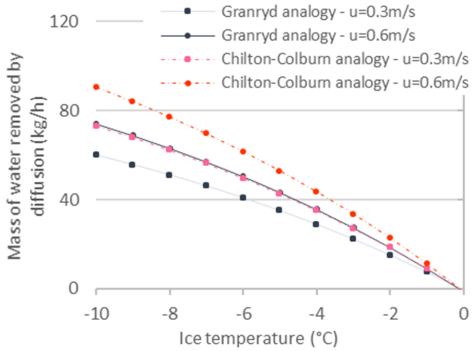


Fig. 12. Mass of water transferred from air to ice. [9]

There has been found a high sensitivity to the ice temperature, as an example if values at -3°C and -6°C ice temperature are compared, using the velocity of 0.5 m/s and Granryd analogy, the difference in magnitude is almost twice.

To estimate the amount of water that diffuses to the ice in a certain ice rink, the design indoor conditions and ice temperature should be known. The given figures are based on an assumption that the air above the ice slab has a dew point of around -0.1°C. The more humid the air the more mass of water will be transferred from the air to the ice. The latent and sensible heat flux that is added to the refrigeration load due to diffusion, means that the intentional dehumidification by the ice slab is not for free, it impacts the refrigeration system size and the energy use, not to mention the ice quality worsening.

4.2 Dehumidification

Available set of data – temperature, RH indoor and outdoor, electrical and heating capacity of the sorption dehumidifier for the whole season allowed to do a performance analysis. The datasheet of the particular dehumidifier model gives an information of the expected water removal capacity at certain process air property state, which can be seen in Fig. 13. Interpolations between the corresponding lines are done in order to get a better precision of the expected capacity – at each 0.1 degree Celsius and 1% relative humidity step.

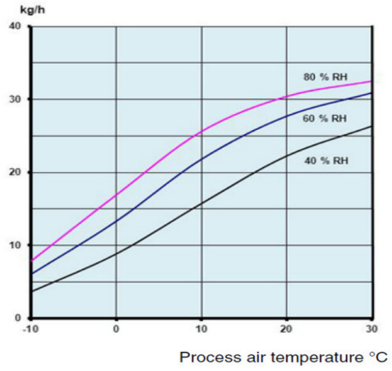


Fig. 13. Dehumidification performance of the analysed unit.

However, the given datasheet above assumes full electrical/heating power, which is not always the case. Thus, proportion of the actual power meter measurement and rated power corresponds to the actual water removal rate. Note that in the given performance curve, the water removal capacity will decrease if the process air is drier, even if the same heating capacity is supplied to the sorption wheel.

In **Fig. 14** water removal capacity for the whole season in two studied ice rinks is shown, on a daily average basis. A good indicator for the load, is the outdoor temperature, hence it is used as a reference. In the ice rink 1 the dehumidifier is set to indoor dew point of around 0.4°C or humidity ratio of 3.9 g/kg, thus no moisture removal happens during low ambient temperature. The capacity reaches almost 20 kg of water removed per hour. With this capacity the setpoint at the warm and wet part of the season is not fully met, and this happens at certain days between the end of July until the end of September. The highest experienced indoor air dewpoint is around 4.5°C or 5.2 g/kg humidity ratio.

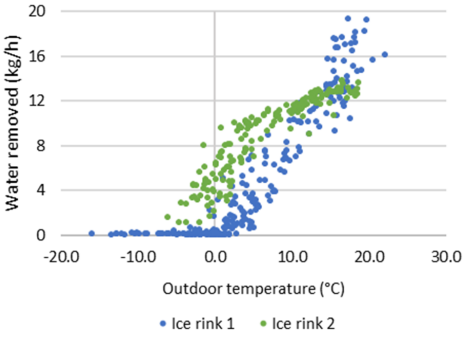


Fig. 14. Dehumidification capacity of units in studied ice rinks.

4.3 Total moisture removal

The two main moisture sinks are the ice surface and the dehumidifier. The ice surface is a bigger "dehumidifier"

than one might think. The laws of physic provide that the capacity can be several 10's of kg's per hour - depending on the moisture content of the air and the temperature of the ice. The greater the difference in saturation state between the ice surface, i.e., its temperature and the moisture content of the air - the greater the mass transport from the air to the ice surface. The calculations made are quite sensitive because they depend on the conditions that prevail in terms of air velocities, air temperature, moisture content, etc. These quantities, in addition to the air velocity, which is not measured but only assumed, have been measured in the "bulk volume" of the ice rink, i.e., at a great distance from the ice surface. Consequently, the conditions can be quite different, which of course strongly affects the calculation. This area is interesting to continue investigating in the future as it potentially accounts for a relatively large proportion of moisture transport.

Of course, the second and perhaps most interesting part of the moisture management is the dehumidifier, and it was found that capacities of the order of 20 kg/hour are required for operation during the hottest part of the season. The point loads in a training hall can be up to 30-35 kg/hour at the highest possible moisture content in the outdoor air in combination with the maximum number of spectators. It is now relatively unlikely that these two maximums coincide, which is why this study estimates that sizing the dehumidifier capacities up to about 20 kg/hour is usually sufficient.

5 Moisture control in ice rinks

Goal of a dehumidification system is to have an indoor environment that is maintained at acceptable conditions. For it to happen the dehumidification function must be control accordingly.

5.1 Energy signature

The building envelope separates climate zones with different air properties from each other, but these are never ideally isolated. The main driving force of air movement is the temperature difference. A handy and accountable parameter that is used in this paper is the humidity ratio which also happens to be proportional to the temperature of air, meaning that the direction of moisture flow is towards the lowest humidity ratio. This can be called the humidity ratio difference and is calculated as follows:

$$\Delta W = W_{out} - W_{in} \quad (3)$$

It is worth to mention here also that relative humidity cannot be used for this purpose. In residential buildings, offices or other typical indoor climate buildings, the moisture flow direction is usually from the inside to the outside, while in ice rinks for most of the season the flow is from the more humid outdoor air to the less humid indoor air.

Available data from ice rinks is used to calculate their respective humidity ratio differences, which in Fig. 15 are put into relation to the dehumidification energy usage of each ice rink. The linear trendlines show a similar pattern, where a higher humidity ratio difference leads to an increase in the need for dehumidification. Again, this suggests that outdoor air adds a significant moisture load. [2]

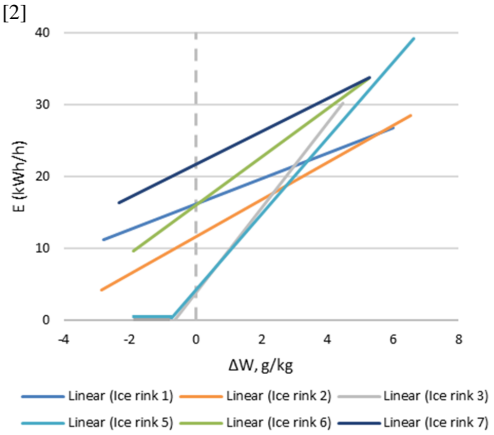


Fig. 15. Dehumidification energy signatures.

Theoretically, when the humidity ratio difference is zero the outdoor air has a humidity ratio that is acceptable for the indoor environment since there is no major moisture exchange between the indoor and outdoor air. Because there is no influence from the ambient air at a zero-infiltration rate, the moisture to be removed from the indoor air should only emerge from internal sources like spectators or the resurfacing process. If the outdoor air becomes drier than indoor air the difference becomes negative and the moisture exchange between indoor and outdoor air changes direction, consequently dehumidifying the indoor air partly through a natural process. In Fig. 15 it can be observed that in ice rinks 1, 2, 6 and 7 the energy usage while there is a negative infiltration rate is still between 5 and 22 kWh/h, which is a significant load suggesting that it is either the internal load and/or suboptimal control strategy that still keeps the dehumidifier going. Ice rinks 3 and 5 show a much lower dehumidification activity in the negative range and after a certain point the dehumidifier is not operating at all. This implies that internally generated moisture is removed through air leaking out, which is a natural process and does not require any dehumidifier assistance. In ice rink 5 the dehumidifier is controlled according to humidity ratio, avoiding the risk of "over drying" which significantly reduces the electricity bill.

5.2 Improved control strategy

Correct control of humidity level is important to achieve good ice quality and healthy indoor climate in the most energy efficient manner. The field measurements suggest a 30+ percent energy reduction when changing the control strategy from the typical relative humidity to dew point. The dehumidifier should be controlled to maintain a dew point between 0°C and ca 2°C in typical ice rinks, where indoor temperatures move between 5-10°C. If it's lower than 0°C it intensifies the moisture loads and if it is higher

than 2°C there is an increased risk of problems related to condensation. Fig. 16 shows over time how energy is saved by applying a control strategy based on dew point instead of the traditional relative humidity, where the latter especially tends to "over dry" the arena room when there actually is no dehumidification demand.

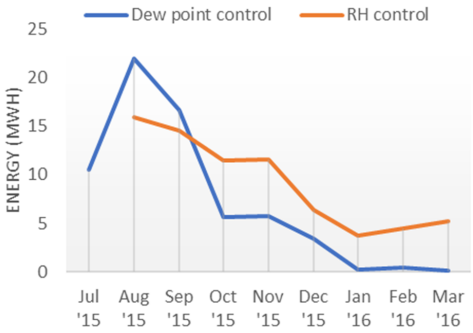


Fig. 16. Comparison of energy use between control strategies based on relative humidity and dewpoint/humidity ratio in two ice rinks.

Once again, the pattern is verified that the dehumidifier that is controlled to humidity ratioor dew point will stop operating when the demand decreases whereas the RH controlled often continues to operate. The reason being the lower air temperature in the ice rinks at the colder period which still generates a "high" RH although the dew point (and moisture content) is low.

Based on the results and discussion above it seems that the best option is to control the humidity to the humidity ratio or the dew point. It is much a more precise control, especially when the indoor temperature changes along the season. Even if the relative humidity control is done according to recommended values at the temperature range, it requires continuous manual change in settings, which is not a modern approach and is not as precise.

6 Summary

This paper addresses the importance of dehumidification function in indoor ice rinks with controlled environment. The project has had access to numerous measurements carried out in ice rinks, and "actual operating conditions" in facilities of this type are presented. The bulk of data shows that expected temperature is within the range +5°C to +10°C, humidity ratio can vary between 2.5 to 6.0 gH_2O/kg of air.:

The moisture sources in an ice rink can be divided into two groups: External and Internal. Air leakage turns out to be the biggest moisture source by far, which is not only in theory but also supported by the field measurement data trends.

The moisture removal happens through two main processes. Firstly, via water vapor condensation on ice, which needs to be limited but is unavoidable. Secondly, by active dehumidification which absorbs the excess moisture and is the primary tool for controlling the indoor environment.

For appropriate moisture handling approach in ice rinks, the humidity levels should be discussed by using absolute terms such as "dewpoint" or "humidity ratio". This report shows that the dewpoint in an ice rink should be maintained between 0°C and ca 2°C in order to secure a sustainable indoor climate, good ice quality and best economy of operation.

A case study shows that by changing controls from RH to absolute humidity or dewpoint, about 30% of the energy for the dehumidifier can be saved.

The authors would like to acknowledge the NERIS project initiated and managed by the department of Civil Engineering at the KTH, Royal Institute of Technology.

References

1. J. Rogstam, J. Pomerancevs, S. Bolteau, and C. Grönqvist, "NERIS del 1: Fuktproblematiken i ishallar - en introduktion," Stockholm, 2017.
2. J. Rogstam, J. Pomerancevs, S. Bolteau, and C. Grönqvist, "NERIS del 2: Metoder och energianvändning för avfuktning i ishallar," Stockholm, 2017.
3. J. Rogstam, J. Pomerancevs, S. Bolteau, and C. Grönqvist, "NERIS del 3: Fukttransport i ishallar – mekanismer och fysik," Stockholm, 2018.
4. J. Rogstam, C. Beaini, and J. Hjert, "Stoppsladd: Energianvändning i svenska ishallar," Stockholm, 2014.
5. ORFA, "Understanding the Impact of Humidity in an Ice Rink," 2014.
6. J. T. Lin and Y. K. Chuah, "Prediction of infiltration rate and the effect on energy use for ice rinks in hot and humid climates," *Build. Environ.*, vol. 45, no. 1, pp. 189–196, 2010.
7. R. Kaya, "Energy usage in ice rink resurfacing," Royal Institute of Technology, Stockholm, 2017.
8. S. Yousif and A. Douglah, "Hur skall en ishallsvägg byggas?," KTH, Byggteknik och design, Stockholm, 2017.
9. J. Rogstam and W. Mazotti, "Ice rink dehumidification systems energy usage and saving measures," in *11th IEA Heat Pump Conference 2014*, 2014.

Literature list:

Webpage:
URL: https://www.oslo.kommune.no/slik-bygger-vi-oslo/hovinbyen/

(*Strategisk plan for Hovinbyen. Saksnummer: 201312256*)
https://innsyn.pbe.oslo.kommune.no/saksinnsyn/showfile.asp?jno=2020010672&fileid=9127592

Minicipal World, Podcast.
https://www.municipalworld.com/podcasts/rink-sustainability/

Athletic buisiness, E-paper.
https://www.athleticbusiness.com/facilities/stadium-arena/article/15152011/sustainable-design-and-operations-for-ice-rinks

Inhabitat, E-paper.
https://inhabitat.com/ice-rink-alternatives-and-their-environmental-impact/

3. Area and Site

3.1 Area -
history and
development

3.2 Site -
history, development
and analysis

3.1.
Area
history and development

Index:

Økern – a large farm in Aker

Aker consisted largely of farmland and forest areas right up until the merging with Oslo in 1948. Agriculture and farms are thus an important part of Akers and Oslo's history. Økern is one of the farms in Aker that has a history that illustrates the fate of several of the Aker farms, where farming and farm buildings slow but surely, had to give up for the city's eternal need for land.

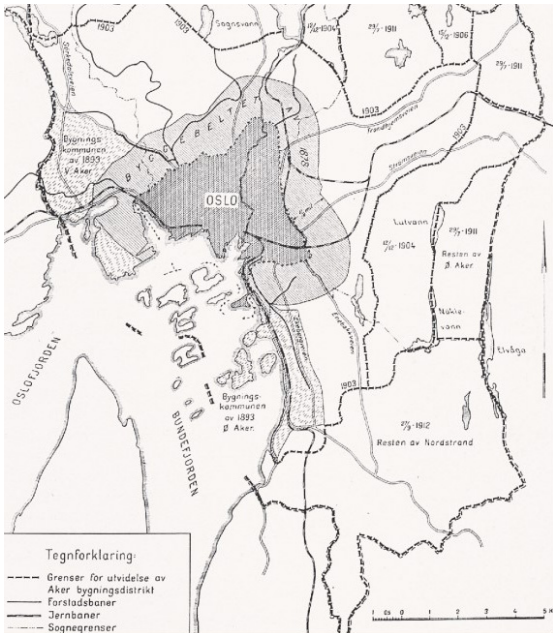


Fig.1.
The map shows Christiania with the characteristic triangular shape from 1878.The construction belt enclosed the city. Christiania applied building regulations within this area.

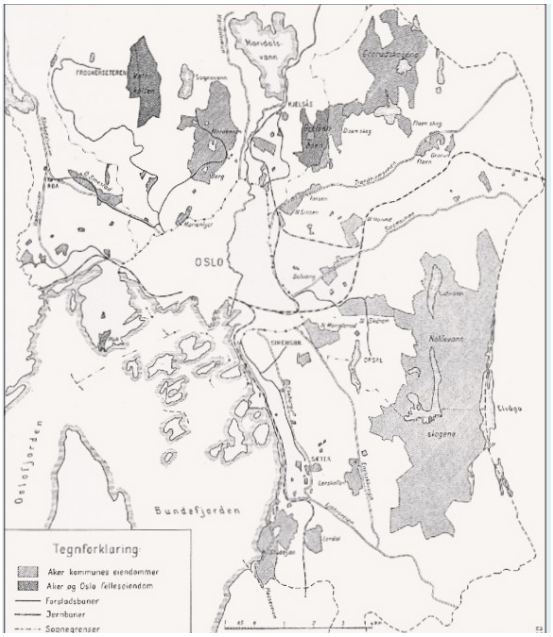
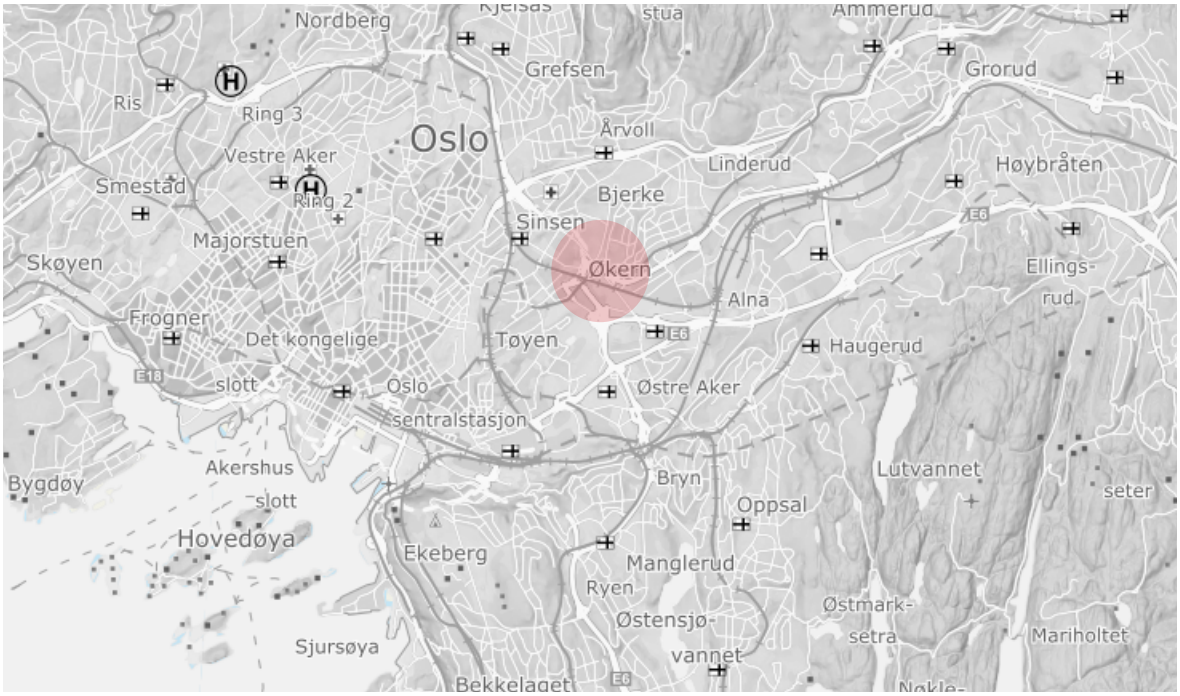


Fig.2.
Aker's outer boundaries were not changed in the period 1837 to 1937, and the borders with Bærum, Norderhov, Jevnaker, Nittedal, Skedsmo, Enebakk, Kråkstad and Nesodden were stable. The map shows Oslo and Aker Municipality Properties



Oslo Map. 1:100000

Area - Økern

Fig.3

A historical overview

Økern is originally an older place name and comes from Old Norse Øykrin, which is composed of oak and wine (Old Norse for plain/natural meadow). Økern is mentioned for the first time in written sources in 1279. During the Middle Ages, there were several known owners of Økern and the farm were later divided into several Parsells .In 1679 Økern was transferred to Governor-General Ulrik F. Gyldenløve. From then on økern was privately owned until Oslo municipality bought the farm in 1938. Økern was not a family farm and had several owners during this period.

Fig.4.
Painting of Økern from 1821 by Mathias W. Eckhof.

Fig.5.
Photo towards the plateau where Økern farm was located.

The division of Økern

Økern farm was gradually divided up throughout the 19th century and shrunk more and more in. Several uses were separated as independent use, including Økernlund, Økernbråten, Økernly and Risløkka. The parsellation of Økern occurred rapidly between 1909 and 1913. There was a lack of housing in the city, and land was separated in several places in Aker at the time. small plots where offered on Økern and Risløkka payment solution. This gave people with poor advice the opportunity to buy land. At first, most people set up cabins for use in Summer. Later it was built more permanent housing and this forms the starting point for the residential area located at Økern and Risløkka today..

The Fire and Økern Nursing Home

On 23 January 1932, a fire broke out in the main building at Økern farm. Only one end wall was left.The fire meant the finale nails in the coffin of Økern as a farm.

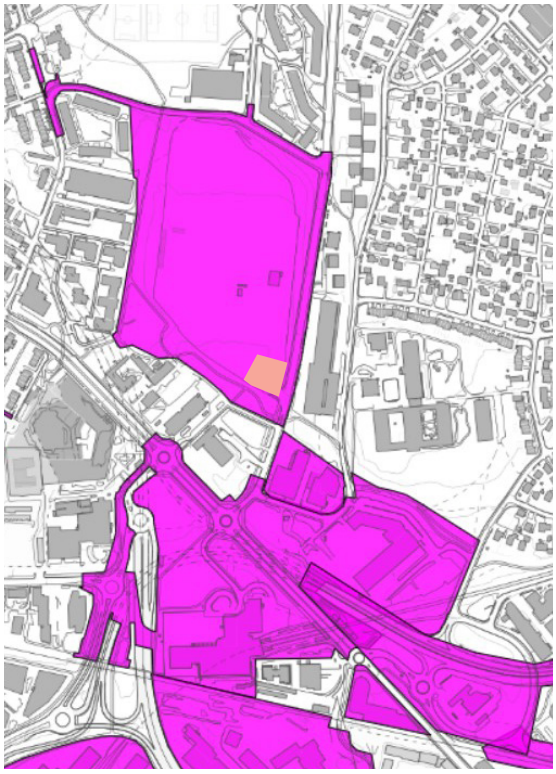


Fig. 6.
Ongoing plans, 2022

Agriculture continued for a few years, but it was now a vacant and very attractive plot at Økern.Oslo municipality was struggling with chronic lack of space and had already acquired several Plots in Aker.Oslo Municipality bought Økern farm in 1938, A nursing home was built on the plot in 1955. It was designed by the architects Sverre Fehn and Geir Grung.

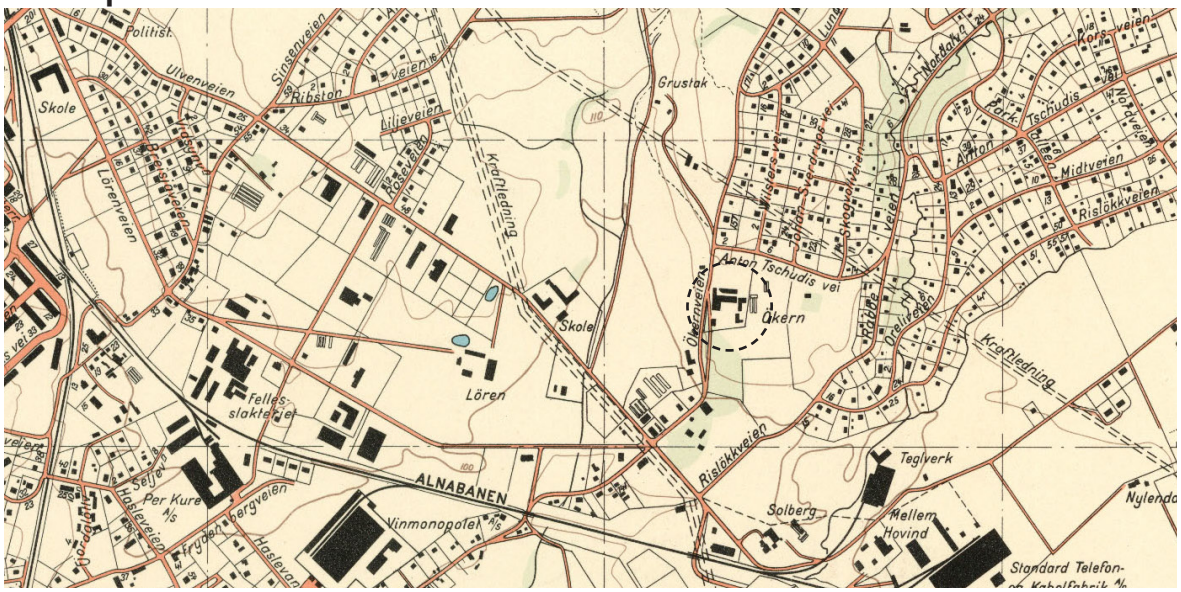
Fig. 11.
Økern Nursing Home

Økern today

Developments at Økern over the past 200 years have been enormous and can be summed up by comparing Eckhoff's painting from 1821 with the same perspective today. The plateou where Økern farm laid, and the trees in the alley is still visible. The rural idyll and the farm is gone and has been lost to roads, warehouses and nursing homes.

Økern stands out as a trafficked area where several of the city's most important veins meet. The role of a possible new commerce site and urban development at the entrance to Groruddalen has raised expectations of a crucial transformation area for the city. Due to its location between what has been referred to as "barriers" in terms of traffic and topography, the area has long been seen as an opportunity to define a new form of urbanity. The place has emerged as paradoxical where it has been isolated, as the Oslo region's most accessible place.

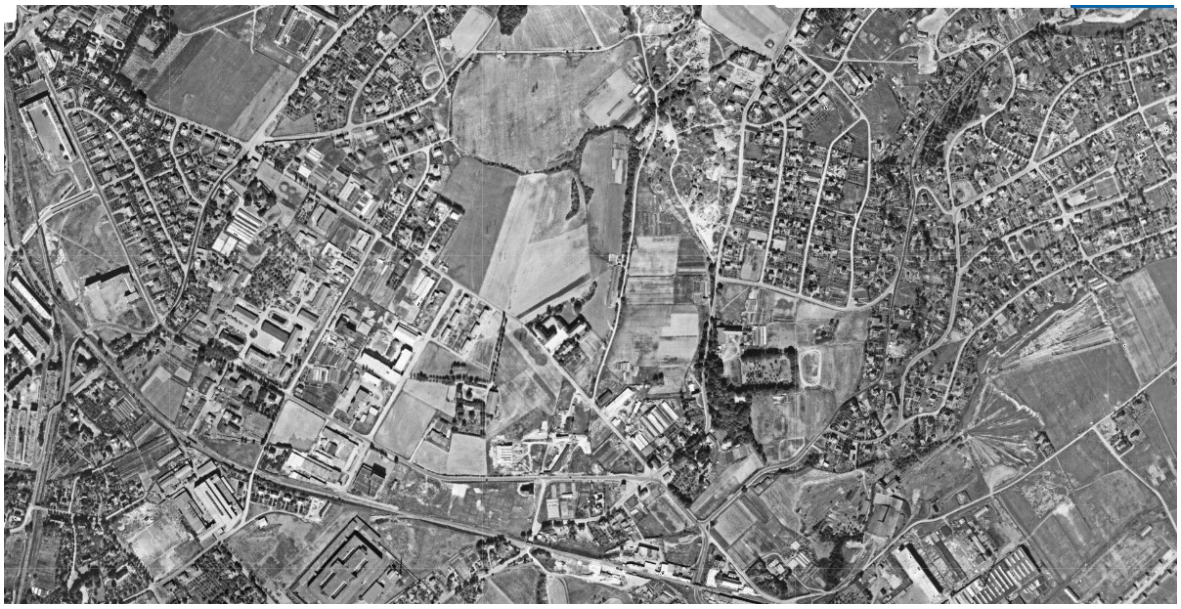
Timelaps



Location of Økern Farm

200m.

Fig.12. 1937, Map

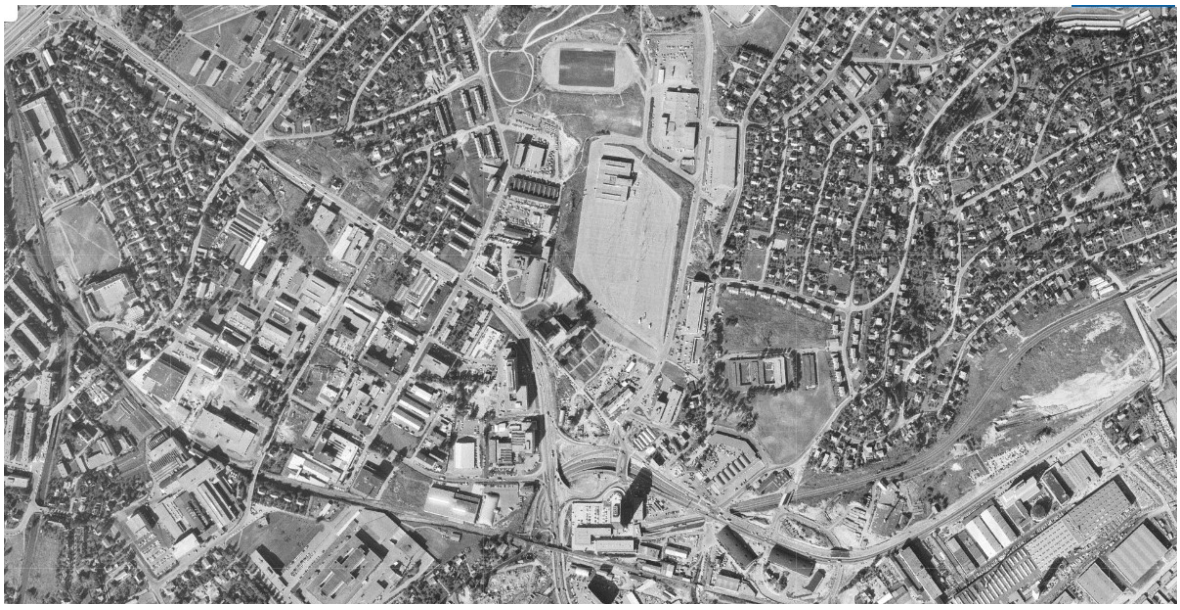


200m.

Fig.13. 1947, Orthophoto

200m.

Fig.14. 1956, Orthophoto



200m.

Fig.15. 1971, Orthophoto

200m.

Fig.16. 1984, Orthophoto

200m.

Fig.17. 1997, Orthophoto

200m.

Fig.18. 2008, Orthophoto

200m.

Fig.19 2015, Orthophoto

200m.

Fig.20. 2021, Orthophoto

Hovinbyen

Hovinbyen is about 11 km², which corresponds to the size of the inner city within Ring2. The proximity to the inner city means that Hovinbyen will become an extension of the dense City.

Hovinbyen has been designated as one of the most important area development and priority areas in the Municipal Plan 2015 "Oslo towards 2030", due to high commercial- and housing development potential and due to strategic location of the the boundary zone of the inner city.

Hovinbyen consists of of several subsites with different identities, role and transformation potential. Public transport hubs Økern, Helsfyr, Bryn and Breivoll are located in Hovinbyen and are important regional public transport hubs for Oslo.

Fig.21.
Hovinbyen's location in relation to what is referred to as the dense part of Oslo city.

The green ring in Hovinbyen.

The goal of the green ring is for the different parts of Hovinbyen to be connected and have a better connection to the rest of the city. To strengthen this grip, it is conceivable that a walking/cycling networks make it more attractive and efficient to move through the area by bike and walk. green corridor composed of independent parts with different functions and architectural characteristics.

The green ring around Økern will together with Alna Environmental Park, forms the backbone of Hovinbyen's green structure. The parks along the green
ring and as part of it has different sizes and content and follows a park hierarchy. Hovinparken is linked
to Løren through the Green Ring past Løren School, across Dag Hammarskjöld's vei and on towards Løren activity park.

Fig.22.
Diagram of the green structure in relation with Økern

Project Area

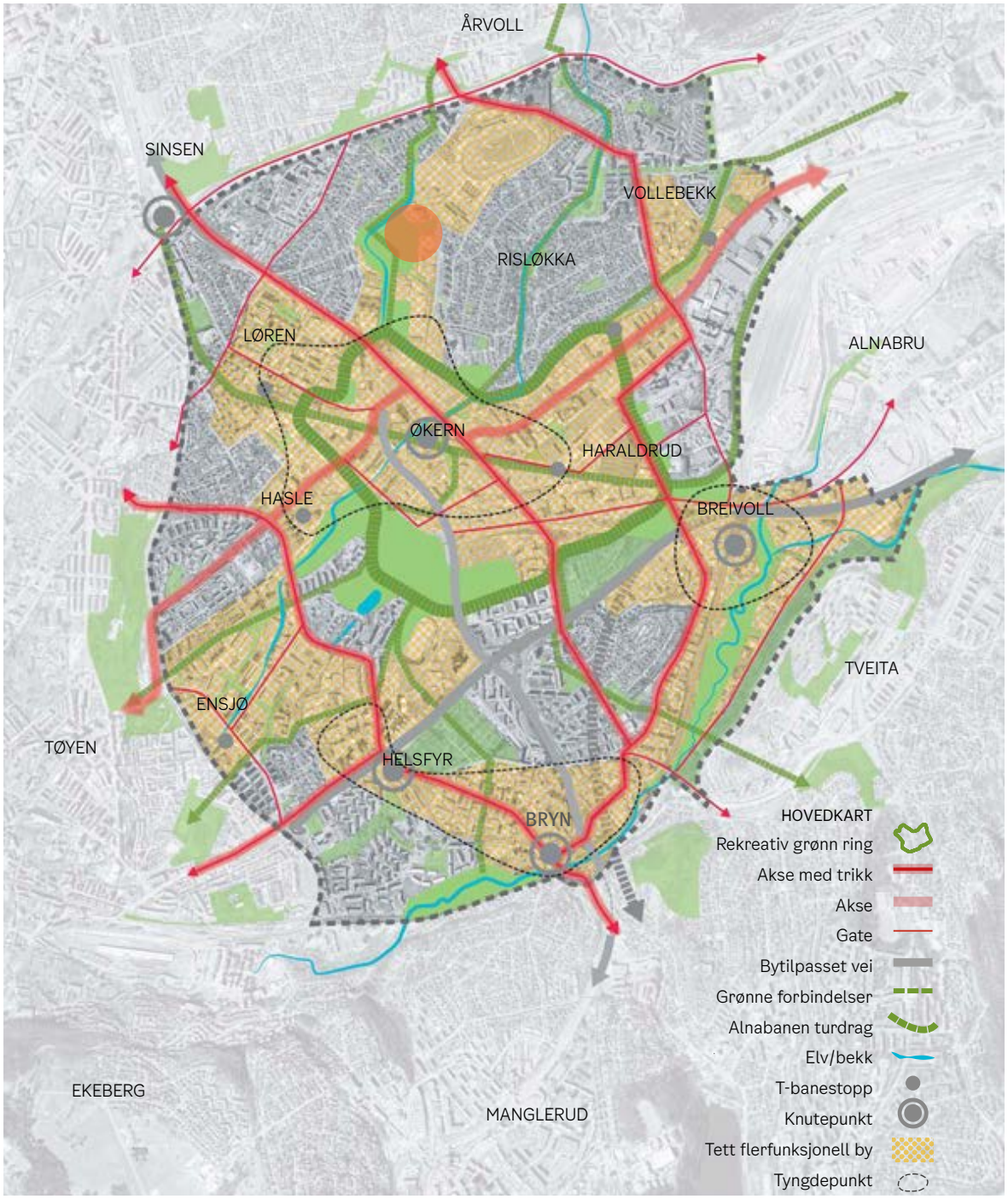


Fig.23.
Strategic plan over Hovinbyen.

Project Area

The hub of Hovinbyen

A total of more than 12 000 dwellings have already been planned within walking distance of Økern Sentrum. With Ulven, Økern S, Hasle Linje, Gregers Kvartal, Økern Torg, Kabelgata and Økern Sentrum, over 7 000 homes with about 15 000 people are planned. Økern becomes the center of all these, in addition to a area of 783 000 inhabitants that Økern already has due to its location.

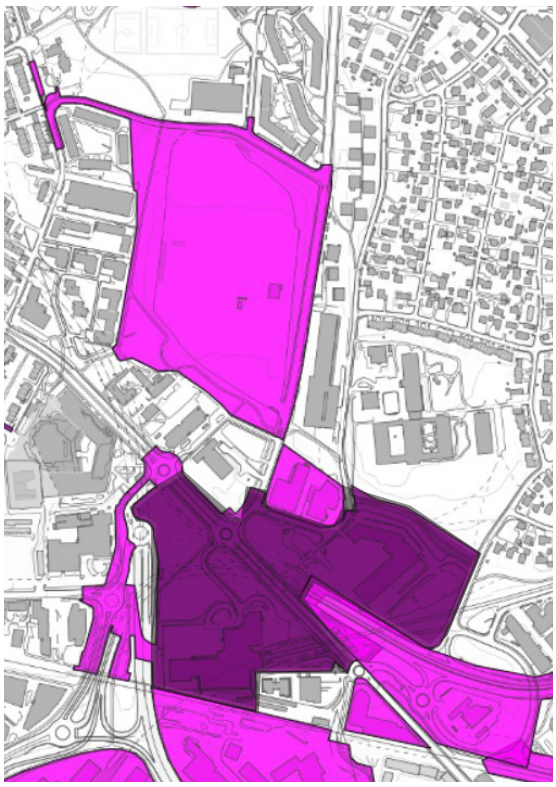
Fig.24.
Diagram with the green ring around Økern

Project Area

Fig. 25.
3D illustration

Økern Sentrum, The new city center in the east of Oslo

Skøyen, Majorstua and Nydalen are clear centres on their side of the city. Økern will be the same in Oslo east, at the entrance to Groruddalen.



Økern Senter

200m.

Fig. 7.
Ongoing plans, 2022

Økern is already one of Oslo's busiest public transport hubs, and this is before the development of Økern Sentrum has started. Økern Sentrum will be the heart, and the city centre, in Oslo's largest and most important urban development project – Hovinbyen. The goal is to build a district and a city centre created where you can dwell, live and work.

Økern Sentrum will be a climate-friendly and future-oriented urban development. Økern Center ANS. is owned by Steen & Strøm and Storebrand. And A-Lab are the architects in this huge project.

The wish is to create a multifunctional city centre with a high proportion of dwellings and complex offer of trade, industry, culture, activity and expe-riences. The plot is Approx. 70,000 m2.And will be completed Approx. in 10 years.

Fig. 26.
3D illustration

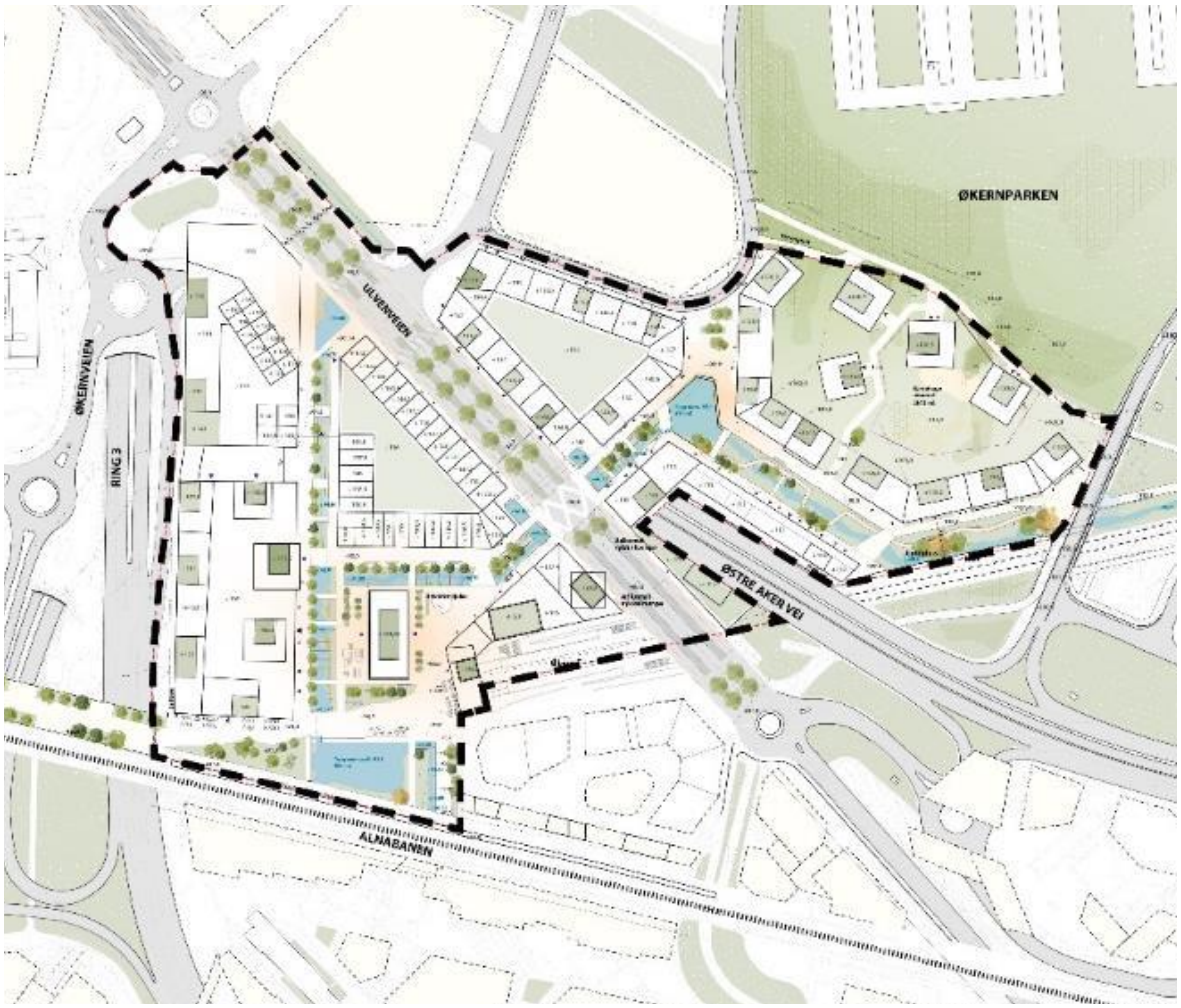
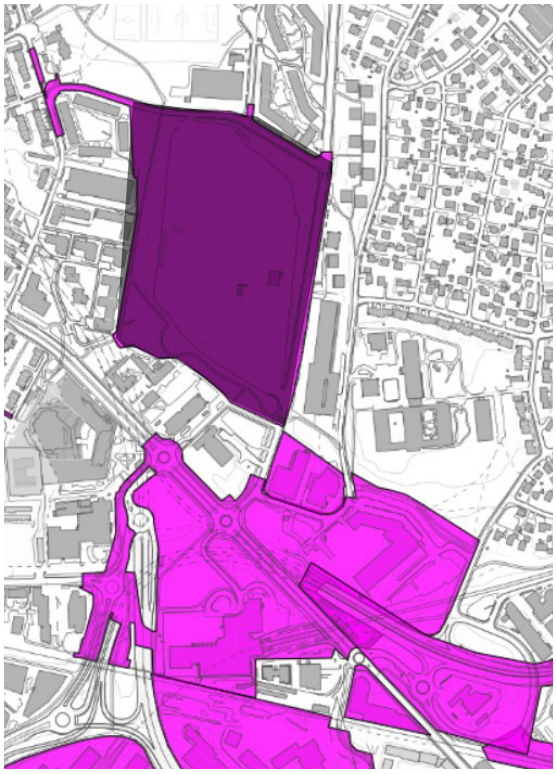


Fig. 27.
Sketch of future
urban cityplan

Fig. 28.
Situationsplan

Økern Torg

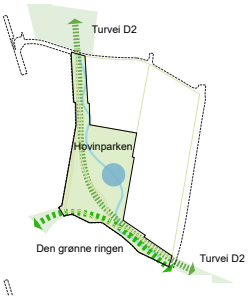
Eiendoms- og byfornyelsesbyrået (EBY) is the City of Oslo's central property developer. EBY conducted an open architectural competition to investigate the possibilities of transformation of the site. Ghilardi+Hellsten Architects won this competition and is engaged with the purpose of preparing a final regulationplan. EBY aims to develop the Økern Torg area with the main objectives of housing, school with multipurpose hall, kindergarten and green structure.



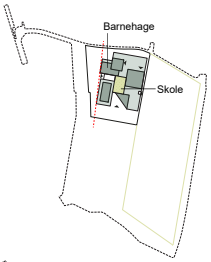
Økern Torg

200m.

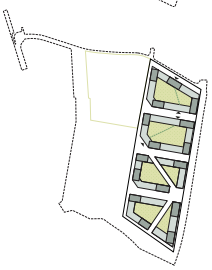
Fig. 8.
Ongoing plans, 2022



Green structure.
The green structure connects hiking route D2 and the green ring in Hovinparken.



School and kindergarten facilities
The school is designed with a base structure with small freestanding building above which forms is sheltered schoolyard. The facility should appear as low, horizontal structures in the greenery with no back or front.



Residential buildings
Residential buildings are designed as a quarterly structure with sheltered courtyards that are fully or partially enclosed. The buildings are designed with a square and tower typology.

Fig. 29.
Diagram.Three main functions

Fig. 30.
South west,
illustration

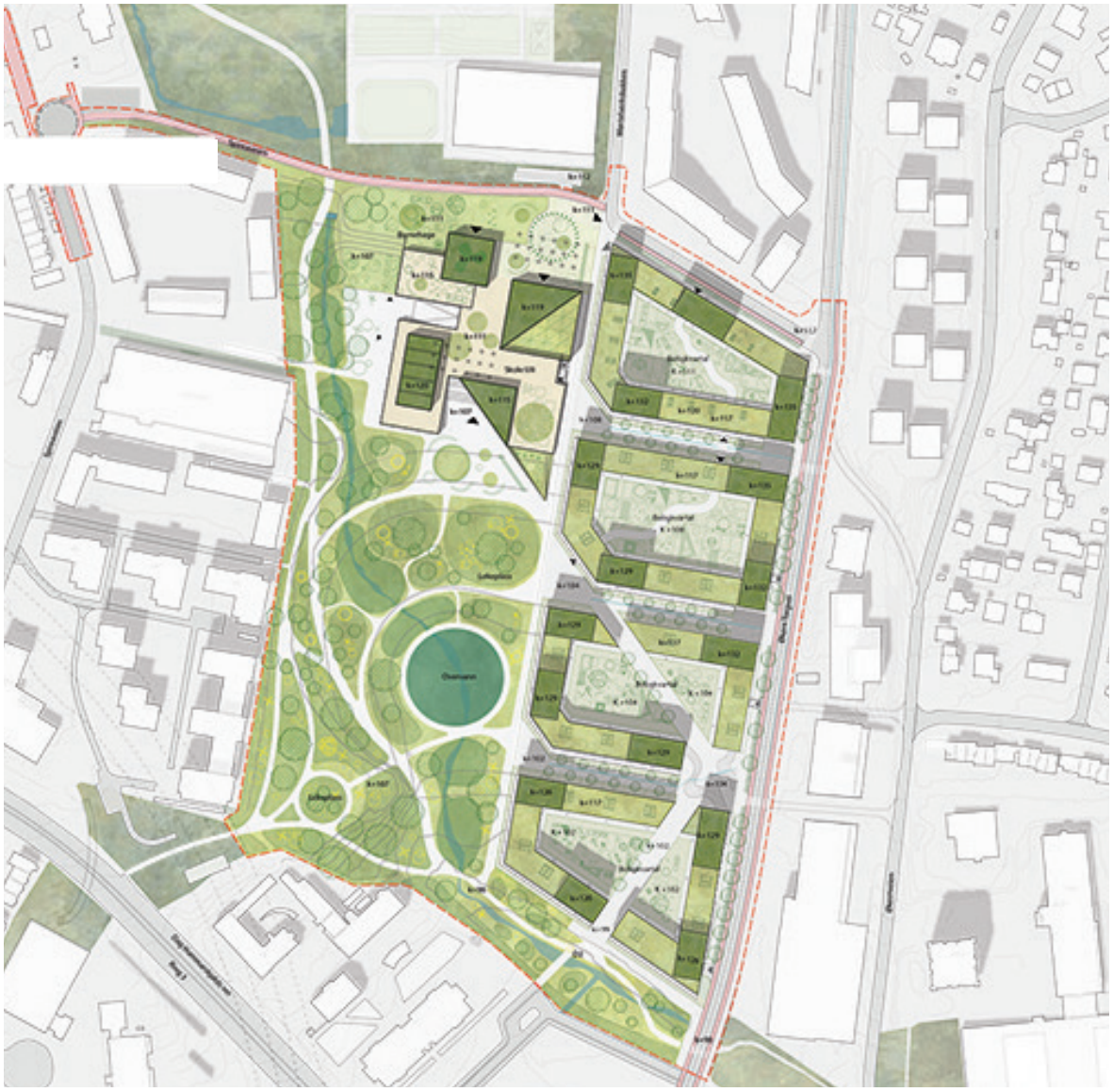


Fig. 31.
Situationsplan

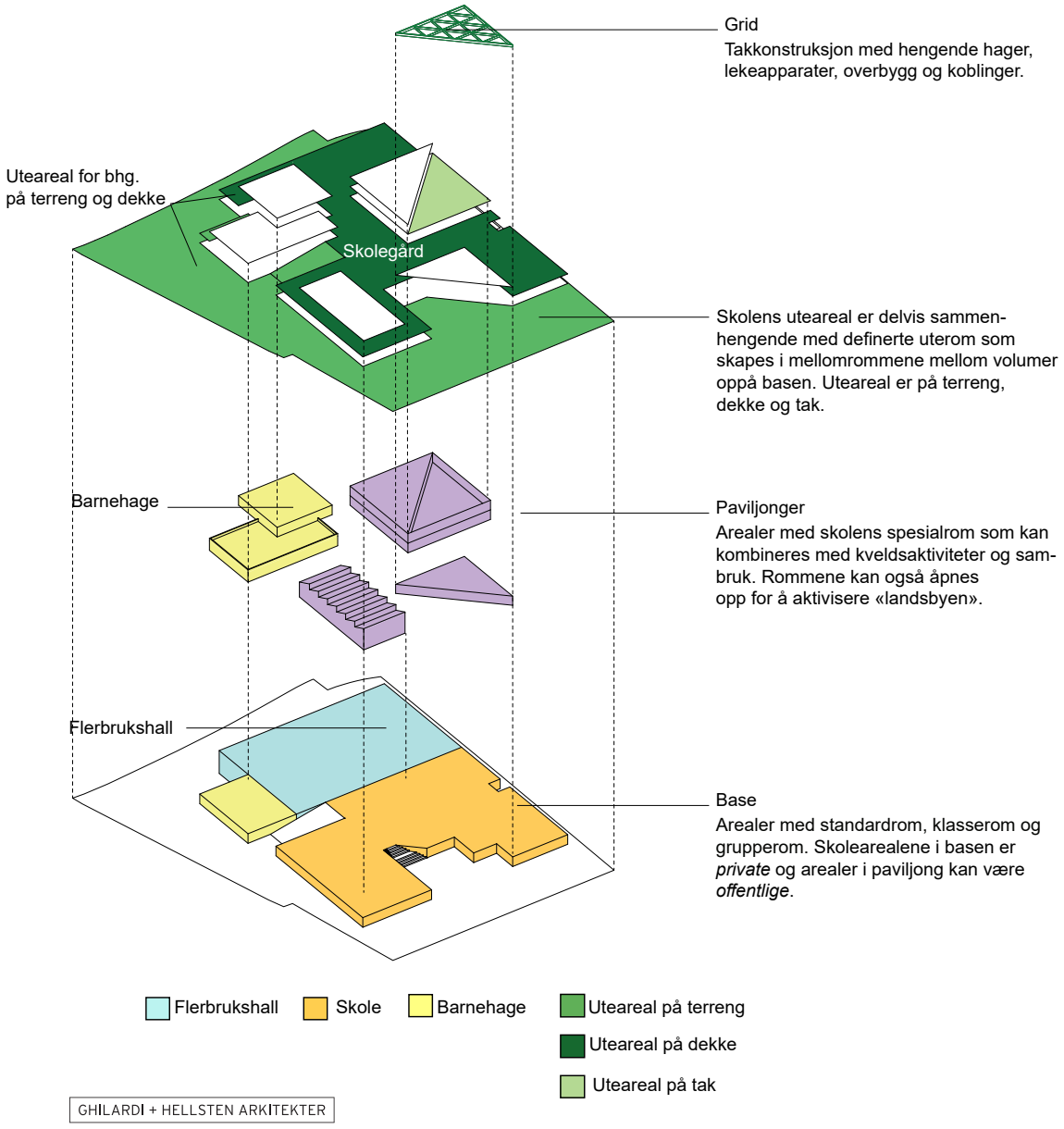


Fig. 32.
Function diagram, multipurpose hall, school, kindergarten

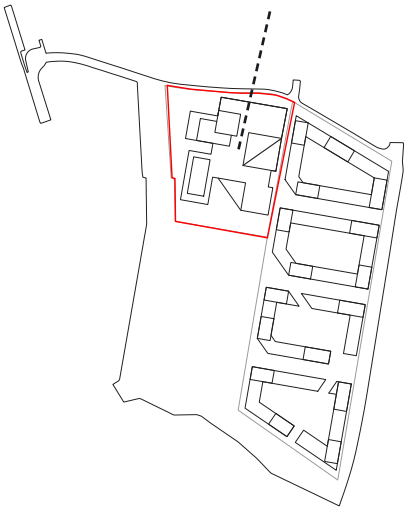


Fig. 33.
Keyplan, area and sectionline

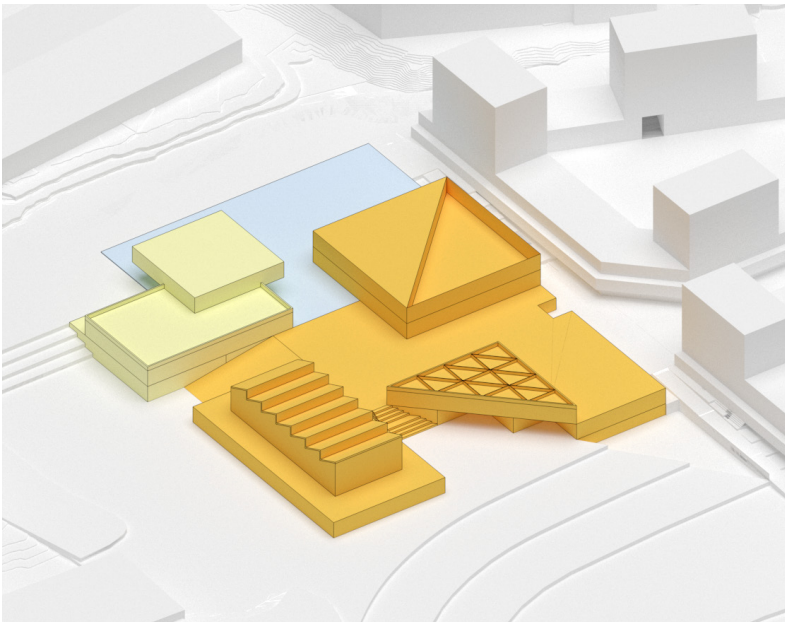


Fig. 34.
Volume study axonometric

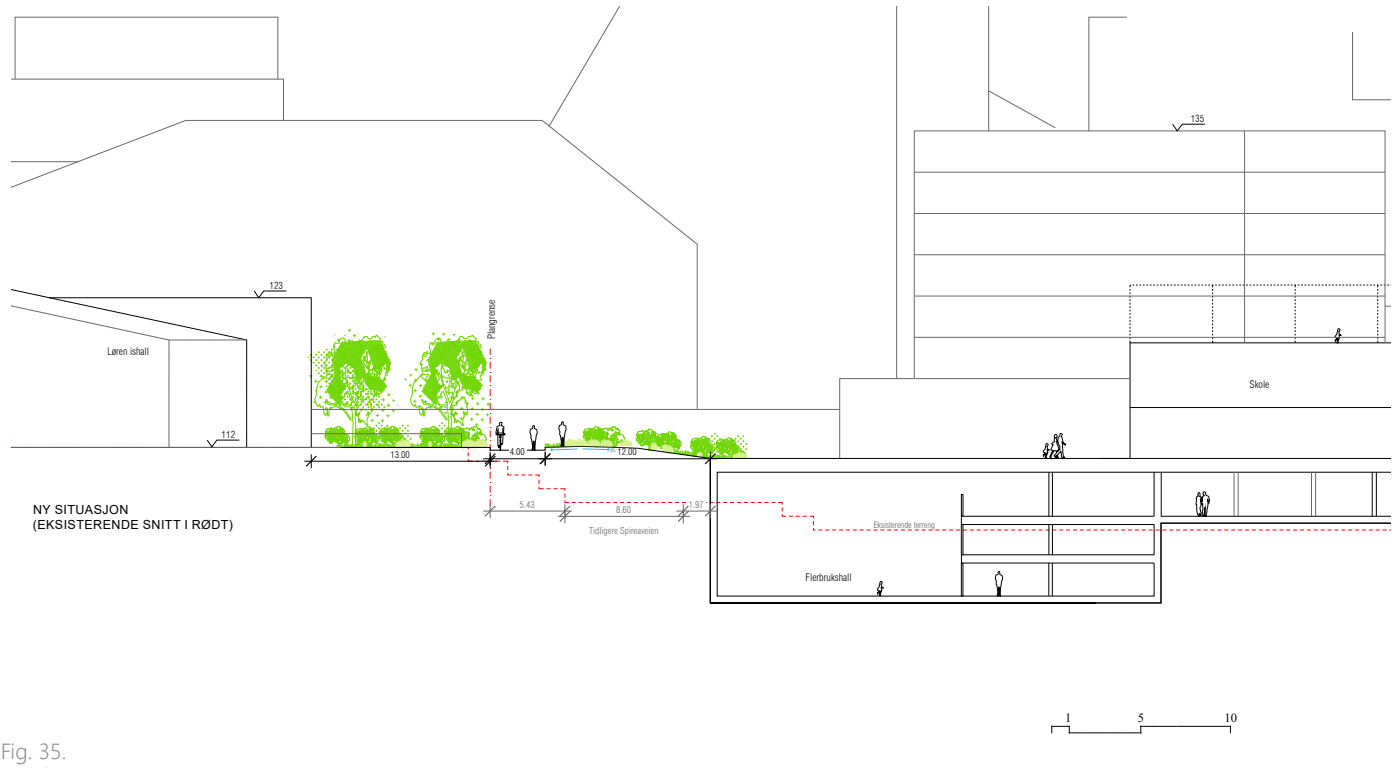


Fig. 35.
Road section F-F, Spireaveien , new situation

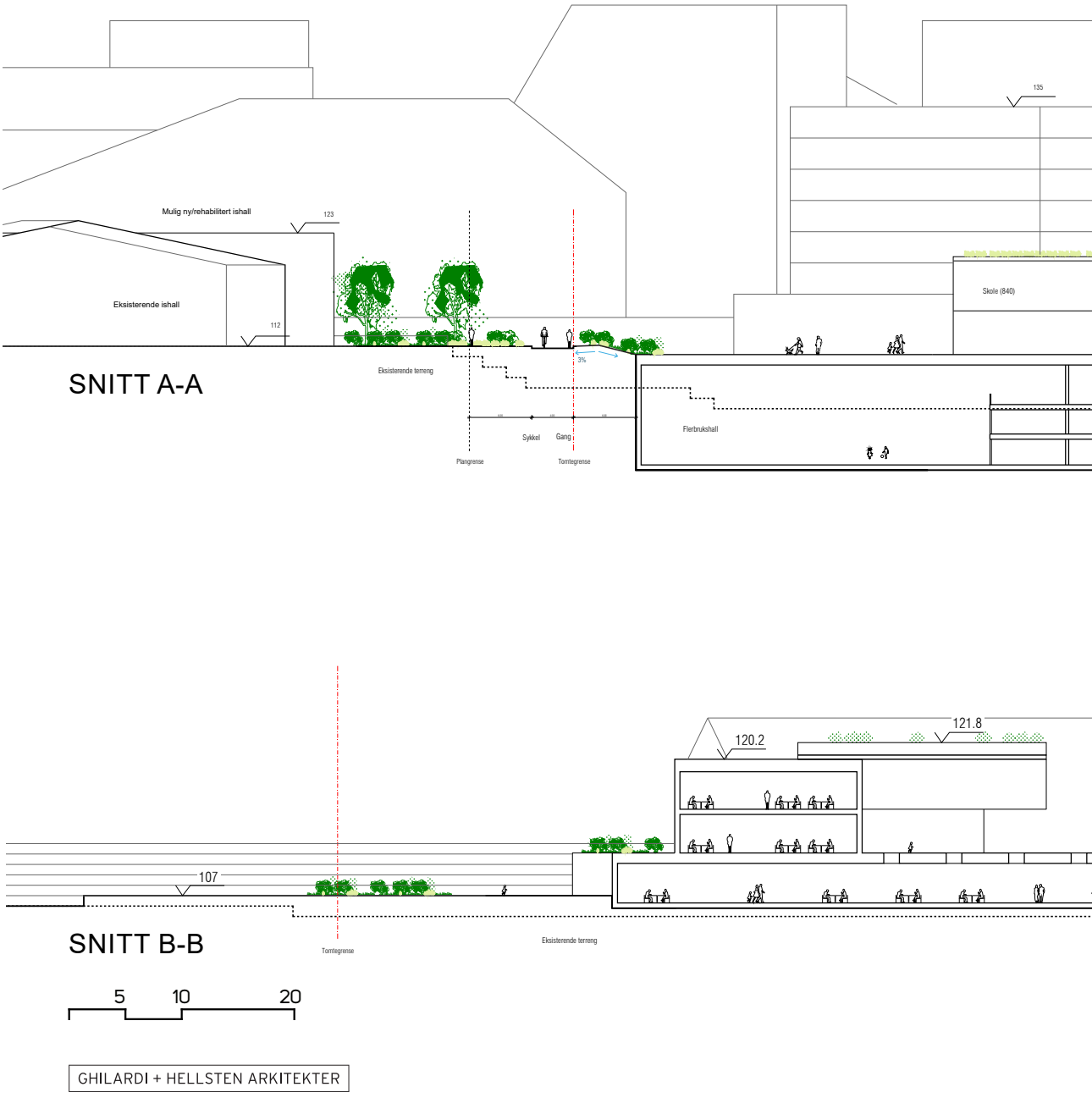
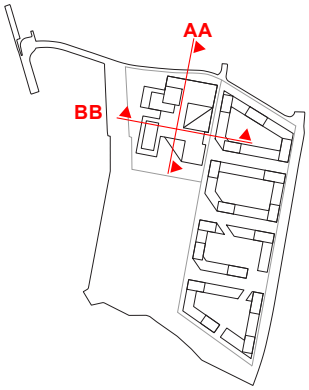
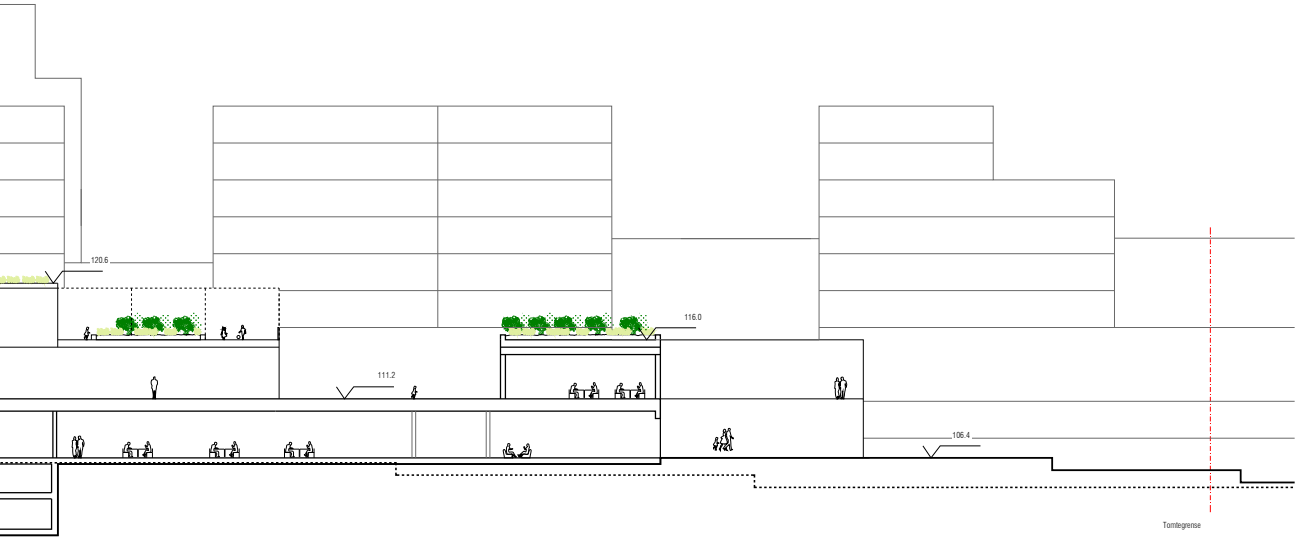
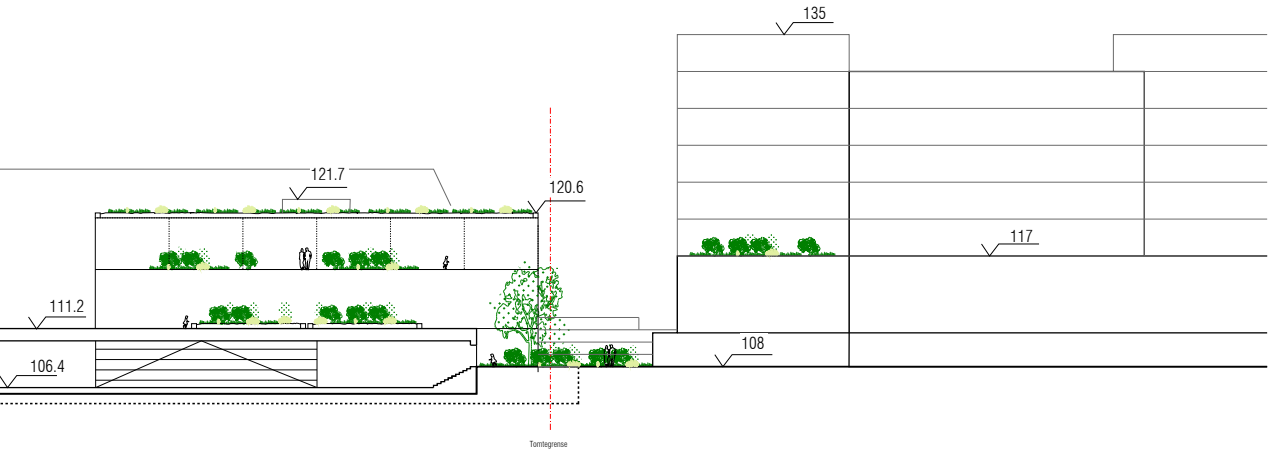


Fig. 36.
Section A-A and B-B


AA
BB


120.6
116.0
111.2
106.4
Tomtegrense


135
121.7
120.6
117
111.2
108
106.4
Tomtegrense

SIRKULÆR RESSURSSENTRAL

Et konkret tiltak for å innfri Norges og Oslos klima- og miljøambisjoner

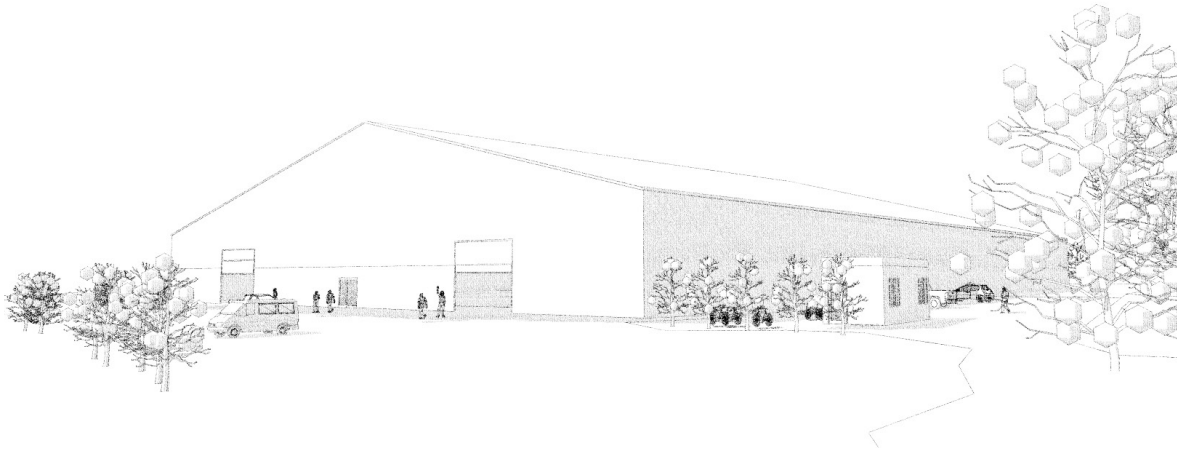


Fig. 37.
Sirkulær Ressurssentral, illustrationl

Fig. 38.
Sirkulær Ressurssentral, illustrationl

Sirkulær Ressurssentral has been given the green light to set up what will probably be Europe's largest reuse centre for building materials at Økern Torg. The goal is to increase the reuse of materials that can be reused and to offer the industry an efficient solution for intermediate storage and to provide easier access to used products and materials for everyone.

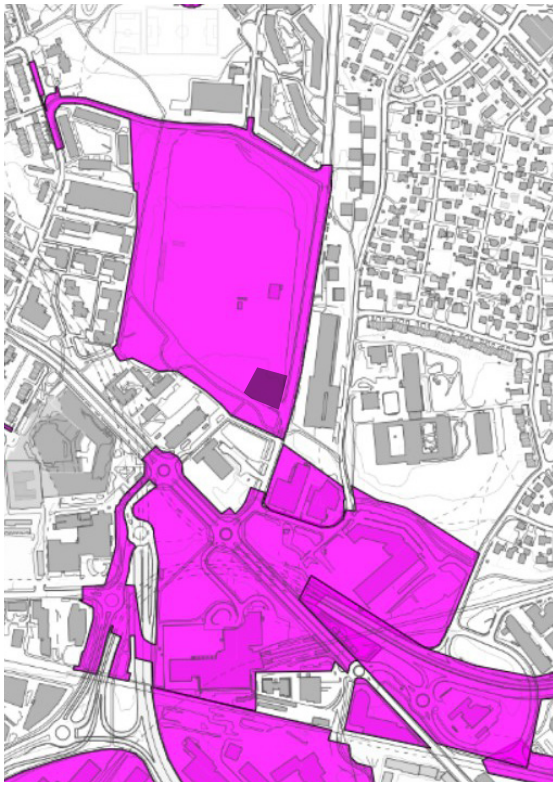


Fig. 9.
Ongoing plans, 2022

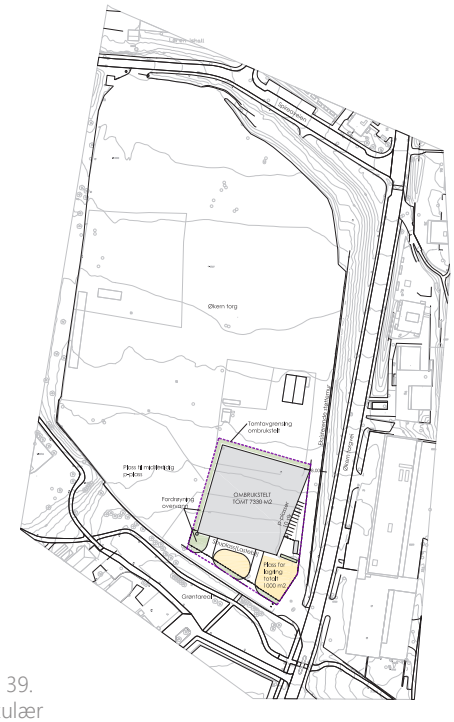


Fig. 39.
Sirkulær Ressurssentral, situationsplan

Fig. 40.
Eikenga project,
illustration

Eikenga.

Eikenga is a residential and commercial project for Bonum and Fram Eiendom. The architectural proposal has been designed by Lund+Slaatto Architects. The property that makes up the planning area is Økern Torgvei 1 and Økernveien 148 - 150.

It is a total of 8500 sqm. And has a central location on Økern. The program on the ground floor will be for public use with dwelling on the upper floors.

Fig.41.
Eikenga project, illustrationplan

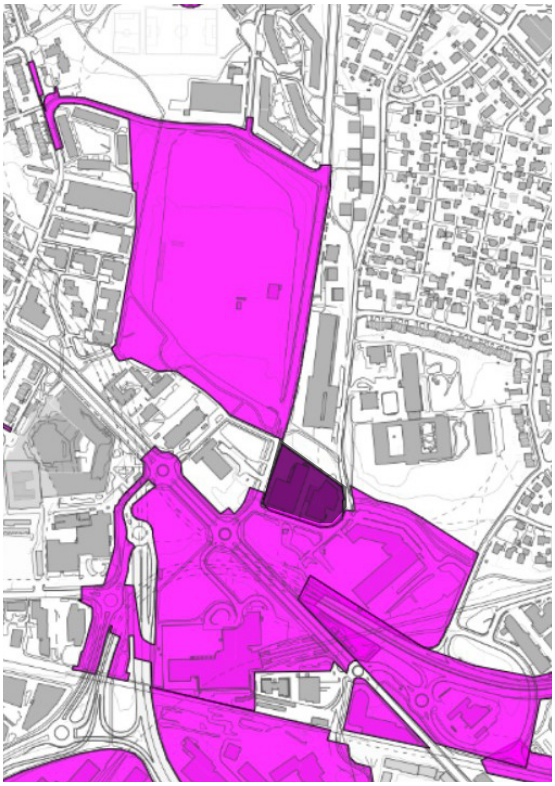


Fig.10.
Ongoing plans, 2022

Published by:
Norske Arkitekters Landsforbund.
URL: www.arkitekt-nytt.nonyhetereuro-pas-storste-ombruks-sentral-til-okern

Arkitektnytt

Nyhet

Største ombrukssentral i Europa

Innen 2022 kan Europas største ombrukssentral være faktum på Økern i Oslo. - Dette blir byggenæringens svar på Fretex, sier daglig leder.

Redaksjonen • 13. juni 2022

Sirkulær ressursentral har fått grønt lys til å sette opp det som blir trolig Europas største ombrukssentral for byggevarer på Økern. Målet er øke ombruket av materialer som kan brukes på nytt og å kunne by bransjen på en effektiv løsning for mellomlagring og å gi enklere tilgang til brukte produkter og materialer for alle.

- Dette blir byggenæringens svar på Fretex. Etableringen av Sirkulær Ressurssentral er et viktig skritt på veien til å gjøre byggebransjen avfallsfri og helsirkulær. Godkjenningen fra Plan- og bygningsetaten gjør at vi nå kan forvente oppstart innen utgangen av 2022. Dette blir en storskala pilot fram til utgangen av 2025, som skal bidra til å gjøre brukte byggevarer like attraktive som nye, og gi umiddelbare kutt av CO2 utslipp fra byggebransjen, sier Håkon Iversen, daglig leder i Sirkulær Ressurssentral, i en pressemelding.

I RASK VEKST

Sirkulær ressursentral er et samarbeid mellom ombrukspesialisten Resirqel, foreningen Pådriv, Statsbygg og Oslo kommune. Pådriv har som eier vært en motor i prosessen med å få på plass samarbeidspartnere, finansiering og tomteplass. Resirqel er spesialist på ombruk av byggevarer, og skal bygge opp og drive mellomlager- og videreformidlingsløsninger for brukte byggematerialer i ressurssentralen, heter det i meldingen.

- Ambisjonen vår er et effektivt, trygt og kundevennlig tilbud. Vi skal understøtte en ombruksbransje i rask vekst, og ombrukssentralen vil sannsynligvis være den største av sitt slag i Europa. Vi skal etablere attraktive mellomlagrings- og videreformidlingstjenester for ombruksmaterialer, sier Martin S. Eid, gründer og ombruksrådgiver i Resirqel.

FJERNE HINDER

Ombruksteltet skal ligge på en industritomt på Økern midt i Hovinbyen, Oslos største utviklingsområde, der mye byggemateriale vil bli frigjort de nærmeste årene. Håpet er at disse kan brukes i nye bygg. Teltet på 4500 kvm er selv en ombruksgjenstand fra Statsbyggs byggeprosjekt i Regjeringskvartalet.

På Økern i Oslo er det nå gitt tillatelse til å sette opp Europas største ombrukssentral. - Driften av sentralen skal gjennomføres med fokus på å minimere støy og kun ha åpningstider i kontortid på hverdager med begrenset lastebil-trafikk, presiserer daglig leder, Håkon Iversen.
Illustrasjon: FuthArk arkitekter

- Det kan gå lang tid fra en bygning rives til materialene i det kan brukes om igjen et nytt bygg, og frem til nå har det ikke vært sted å lagre dem i mellomtiden. Da blir materialene ofte kastet, og man kjøper nytt i stedet. Denne sentralen fjerner et betydelig hinder, og vil føre til langt mer ombruk fremover, sier direktør Anders Fylling i Statsbyggs faglige ressurssenter, som ser at viljen i byggenæringen til å bruke materialer om igjen er stor, men at tilgjengeligheten har vært for liten.

ALLE TIL GODE

En rekke tunge aktører i bransjen stiller seg nå bak ombrukssentralen på Økern. Statsbygg, Obos, Mustad Eiendom og Oslobygg er strategiske partnere, og ressursentralen er også en FutureBuilt innovasjonspilot.

Håpet er å gå foran med tiltak som kan komme hele næringen til gode og at ressurssentralen vil føre til nye samarbeid, kompetanseheving og at andre byer i landet kan inspireres til å finne lignende løsninger, heter det i pressemeldingen.

– Vel så viktig blir det som et kunnskapssenter, hvor bransjen, myndighetene, akademia og privatpersoner, kan involveres i å skape og dele kunnskap, sier daglig leder Håkon Iversen.

Literature list:

Paper:

Tobias,(2018).*Aker Kommunen som forsvant*. Oslo byarkiv.

Byggekunst, *The Norwegian review of architecture*. 1956 Vol. 38 Nr. 4.

Arkitektnytt, *Europas største ombruks sentral,* 2022. https://www.arkitektnytt.no/nyheter/europas-storste-ombrukssentral-til-okern

Webpage:

URL: https://www.oslo.kommune.no/slik-bygger-vi-oslo/hovinbyen/

https://innsyn.pbe.oslo.kommune.no/saksinnsyn/showfile.asp?jno=2020010672&fileid=9127592
(***Strategisk plan for Hovinbyen. Saksnummer: 201312256***)

https://www.oslo.kommune.no/slik-bygger-vi-oslo/okern-torg/

https://www.okernsentrum.no

https://innsyn.pbe.oslo.kommune.no/saksinnsyn/casedet.asp?direct=Y&mode=&caseno=202006656

Figurelist:

Fig. 1 - 2: Map of Christiania and Aker's outer bounderies. *Økern – en storgård i Aker*, Tobias 2018/Oslo byarkiv. p.8

Fig.3: Map of Oslo, 1:100000. Norgeskart.no

Fig.4: Painting of Økern, 1821. Photonr: OB.F23546. https://digitaltmuseum.no/021047880998/1824-okeren-gouache

Fig.5: Photo towards the plateau where Økern farm was located. *Økern – en storgård i Aker*, Tobias 2018/Oslo byarkiv

Fig. 6-10: Diagrams, Ongoing plans. Pbe.no

Fig.11: Økern Nursing Home. Byggekunst, *The Norwegian review of architecture*. 1956 Vol. 38 Nr. 4

Fig.12: Map from 1938. http://www.oslo.kommune.no/OBA/Kart/1938/index.html

Fig. 13-20: Orthophotos of Økern. 1881.no

Fig. 21-24: Diagrams of plans in Hovinbyen. (***Strategisk plan for Hovinbyen.*** Saksnr.: 201312256). Pbe.no

Fig. 25-27: Økern sentrum, illustrations, ALab Arkiteker. Pbe.no (Saksnr.: 201908559).

Fig. 28-31: Økern torg, Ghilardi+Hellsten Arkitekter AS, Tegmark (illustrations). Pbe.no (saksnr.: 201607804)

Fig. 32-34: Sirkulær Ressurssentral. FuthArk arkitekter , illustrations. pbe.no (saksnr.: 202117349)

Fig. 35-36: Eikenga, illustrations, Lund+Slaatto Arkitekter AS. Pbe.no. (saksnr.: 202006656)

3.2.
Site
History, development and analysis

Index:

Location

Oslo Map. 1:100000

Project Area

Fig.1

Oslo Map. 1:25000

Project Area

Fig.2

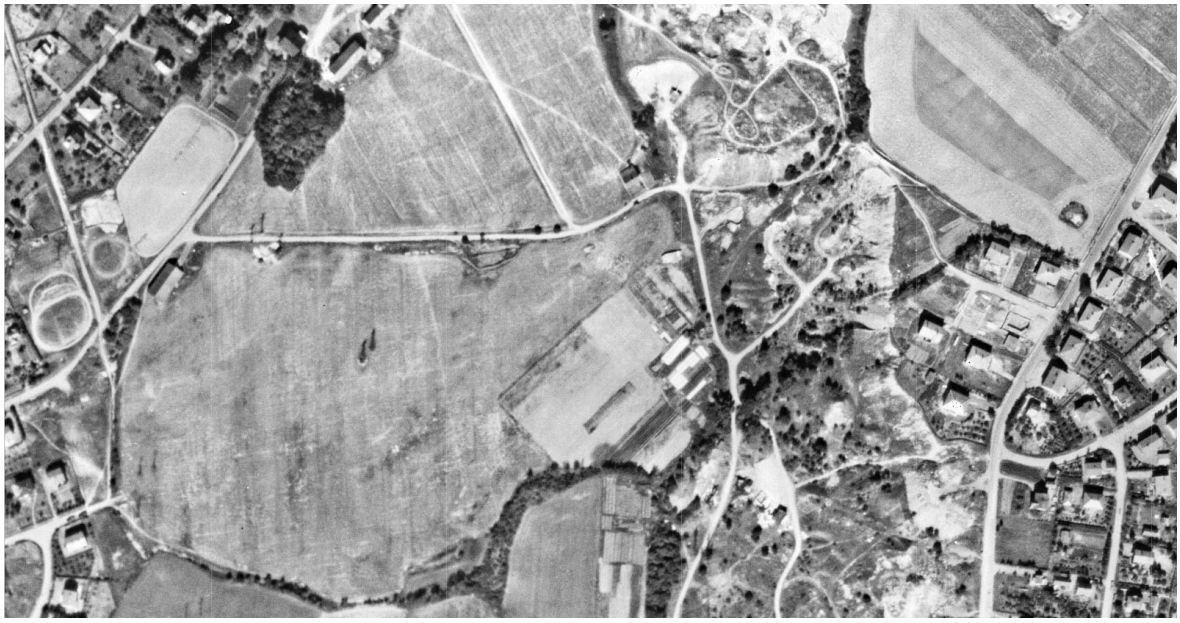
Fig. 3.
Panorama photo. Sinsen to the left, Aker hospital further up, Bjerke hourstrack in the back, Risløkka and Økern to the right, Marka and agriculture in Groruddalen in the back. 1952.

Fig.4
Oslo East - Økern. Løren skole, Bjerke, Løren idrettsplass, Økern Torg,1958.

Timelaps

50m.

Fig. 5. 1937, Orthophoto

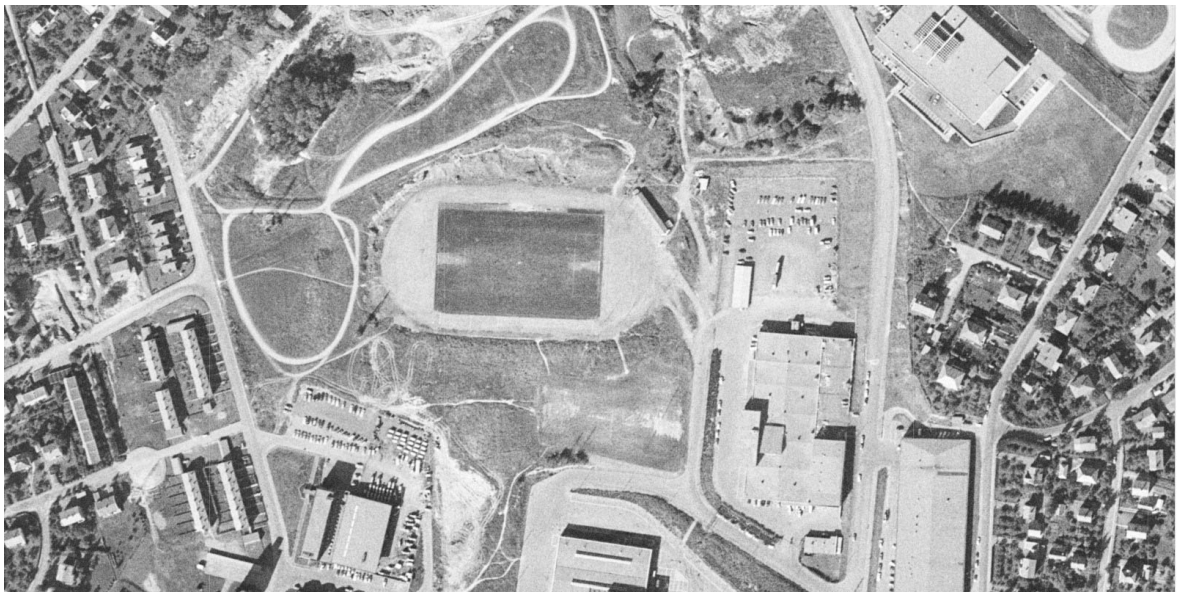


50m.

Fig. 6. 1947, Orthophoto

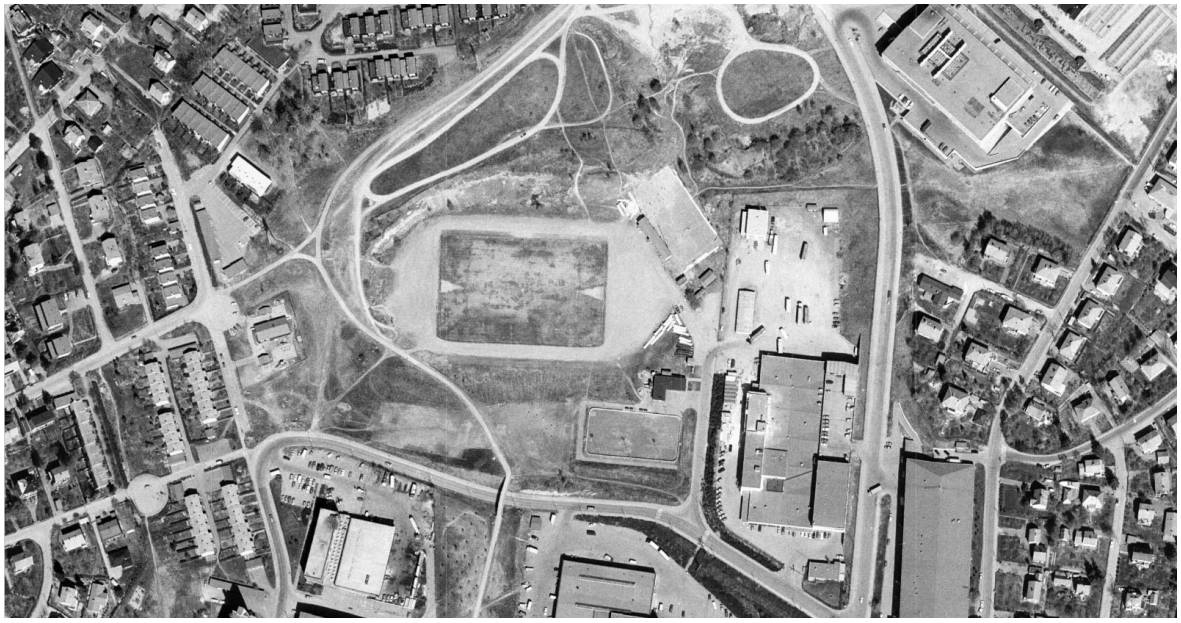
50m.

Fig. 7. 1956, Orthophoto



50m.

Fig. 8. 1971, Orthophoto



50m.

Fig. 9. 1984, Orthophoto

50m.

Fig.10. 1997, Orthophoto

50m.

Fig.11. 2003, Orthophoto

50m.

Fig.12. 2005, Orthophoto

50m.

Fig.13. 2008, Orthophoto

50m.

Fig.14. 2013, Orthophoto

50m.

Fig.15. 2018, Orthophoto

50m.

Fig.16. 2021, Orthophoto

Development of the plot.
The first step consisted of building a football field and running track for athletics and a paved handball court that was used for ice hockey in the winter. In 1963, a grass pitch of good standard was ready for use . The club gained access to some barracks from the war, which were dismantled and converted into changing rooms.

There were many plans for the sports facility. Already in 1976, a project was drawn up that included plans for the artificial ice hockey rink, a hall for handball, a football pitch, a 3-kilometer long exercise course around the facility, completion of the track deck for athletics, tennis courts and playground.

In the nineteen-nineties, an even more extensive project was designed, which in addition to what was previously planned included mini golf course, under chilled ski trail, multipurpose hall, wardrobe and business, dorm building, swimming pool with health club and accommodation options.

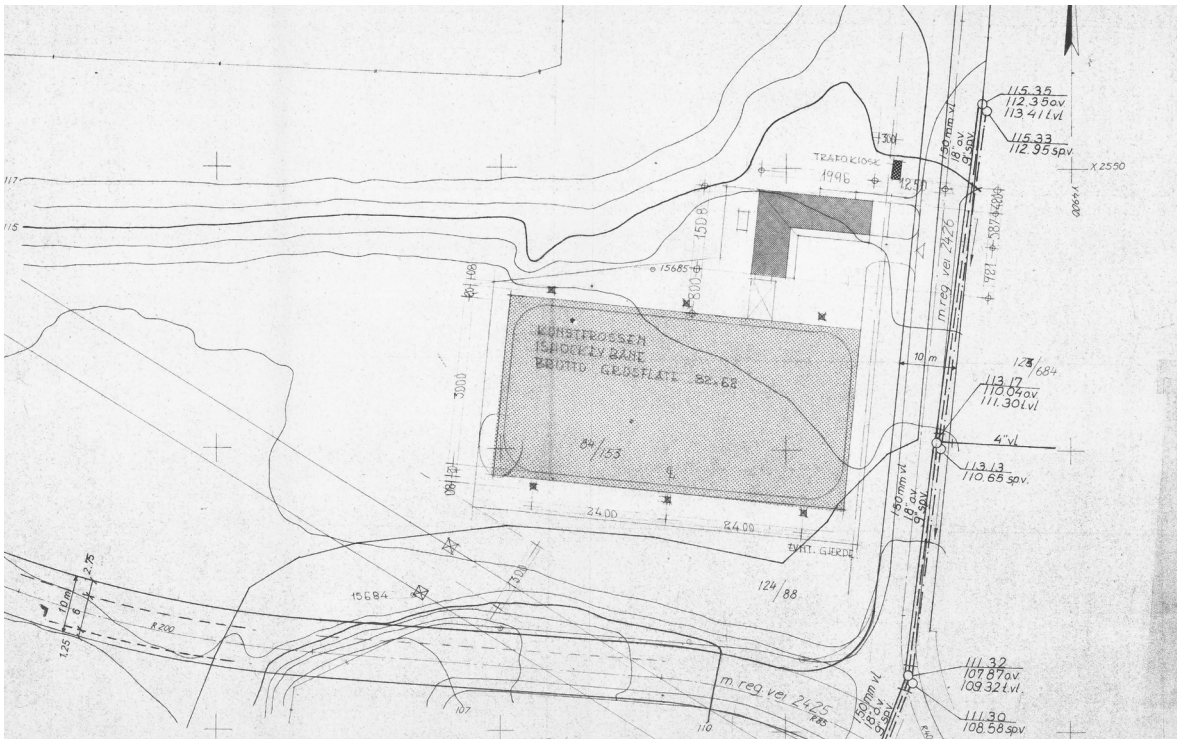


Fig.17.
Situation drawing of outdoor ice surface. Drawing from 1976

There were obstacles in the way. In the mid-1980s, plans were launched for a large stadium in the Løren area. The football clubs on Oslo's eastern edge, with Vålerenga at the front, wanted a proper football arena with a large spectator capacity in their own district. There was a lot of newspaper policing on the issue.

Artificial ice

The first step on the road to today's facility was an artificial ice hockey rink. It was ready for use in 1977, but still in the open air. The pipes were laid in gravel. Periodically, the ice could be quite uneven, shaped by the location of the pipes and variations in temperature. The official opening was on 17 January 1977. Even then, one thought of the next step, a ice hall. The outdoor facility was half good solution. The dream of an ice hall lived and was realized 10 years later.

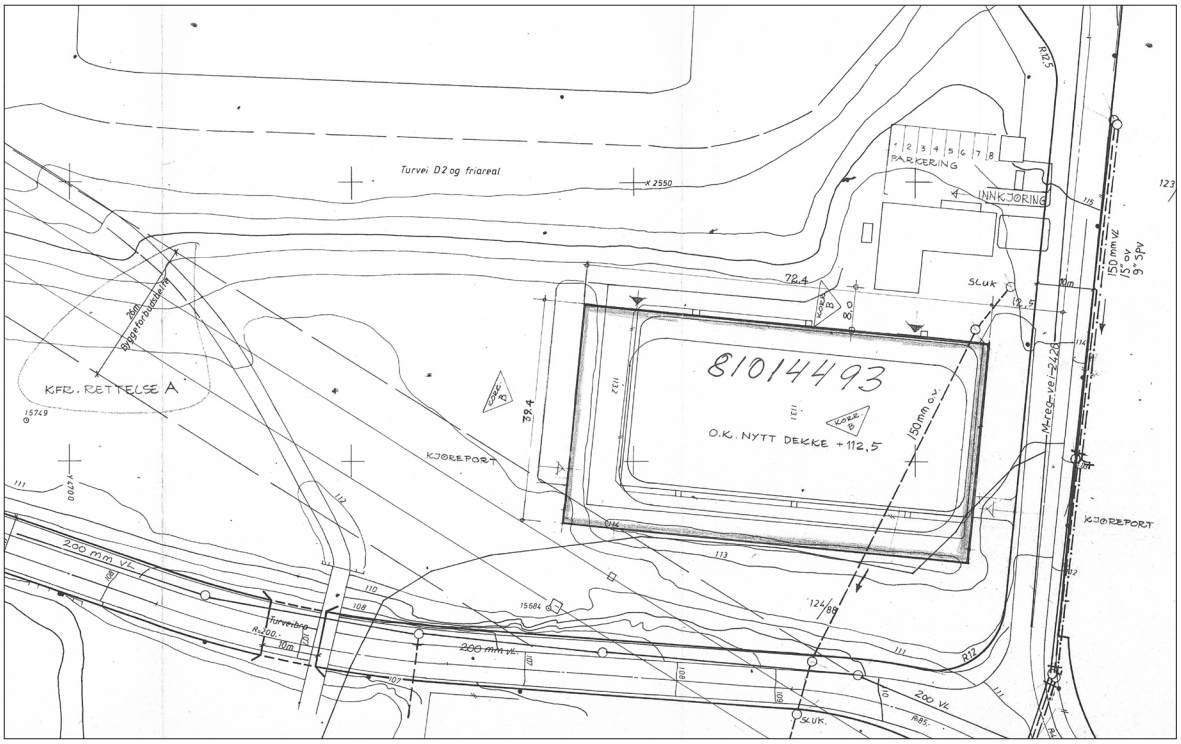


Fig.18.
Situation drawing of ice hall.
Drawing from 1986

Published by:
Aftenposten.
E-paper. URL:
https://eavis.
aftenposten.no/
aftenposten/57919/
1/?gatoken=dXNlc-
l9pZD0xMDM5Mz-
Q1JnVzZXJfaWRfd-
HlwZT1jdXN0b20-
%3D&query=%-
C3%B8kern

se bane ved Økern-torget. Løren skoles guttekorps spiller like før pucken droppes. Til høyre det nye
(Foto: Terje H. T. Andersen)

Økerns kunstis ble åpnet igår

Økern-distriktet hadde igår en av sine største festdager. Til faner og klingende spill fra Løren Skoles guttek orps ble innvielsen av den nye kunstfrosne banen foretatt av Oslo bys ordfører Albert Nordengen, som i sin korte tale utfrykte sin store beundring for det veldige dugnadsarbeidet som medlemmene av Refstad IL og Hasle/Loren IL hadde nedlagt. Det ble skissert til ca. 800 000 kroner, mens stat og kommune hadde bidratt med 1 680 000 kroner i tillegg til vanter og ismaskin.

Dugnaden har vært helt imponerende med en enestående tilslutning fra yngste avdelinger i de to klubbene. Det var derfor veldig populært at ordfører Nordengen understrekket sin takk til klubbenes egeninnsats ved å overrekke et armbåndsur til den flittigste «dugnads-gutten», 19 år gamle Olav Nesbakken. Det herer med til historien at Olav Nesbakken blir Hasle-Lorens neste stormspiller. Etter å ha gjort sine lekre ryska hun hver dag flere timers arbeid på banen, forsøkte å skjøte sin trening med puck og kølle så godt at han allerede er Hasle Lørens desidert raskeste spiller. I en treningskamp mellom sammensatte lag fra H L's yngste gruppe av ishockey-spillere, fikk vi allerede igår syn for hvilke forutsetninger Olav Nesbakken hadde på isen.

Og ved vantet stod den mest garvede ishockeyspilleren av alle, forbundsformannen og landslagsspilleren Johan Nørvestad som den sikkert gladeste av alle på en så stor dag for ishockeysporten i det distriktet hvor han sammen med Hasle-spillerne har nedlagt så mange år av sitt liv. De nestenkapteinene både «Nørvest», «Bjerka», Roy Svendsen, Finn Wellberg og Bjørn Davidsen, men så var det også et stort øyeblikk å overvære åpningen av dette millionanlegget. Og likevel er det bare en begynnelse på den fine og allsidige idrettsparken som vi komme i de nærmeste årene. Dugnadsinnsatsen har fått kommunens representanter til å åpne både øyne og ører for hva driftig og målbevisst ungdom kan klare. Og da blir det nesten en ren forpliktelse å være med på fullføreisen. Omtrent slik var det kommunalrådm. Odd Wivegh uttrykte det i en av de mange talene som ble holdt ved det enkle, men koselige festbordet i klubbhuset etter den offisielle åpningen.

Byggekomiteens formann Bjørn Riegel gav alle orienteringer om hvorledes man hadde klart dette storslagene eventyret, og han delte ut store blomster-buketter til hver av de mange talene som ble holdt ved det enkle, men koselige festbordet i klubbhuset etter den offisielle åpningen.

Byggekomiteens formann Bjørn Riegel gav alle orienteringer om hvorledes man hadde klart dette storslagene eventyret, og han delte ut store blomster-buketter til hver av de mange talene som ble holdt ved det enkle, men koselige festbordet i klubbhuset etter den offisielle åpningen.

Medlemmer som ikke hadde tid til å plete dugnaden slik de helst ville, hadde bedt om å forestå bevertningen til de 70 innbudte som var tilstede i klubblokalet etter åpningen. Mer helstøpt kunne det ikke lages!

Og nu er diskusjonen for neste etappe allerede i gang: Skal man tenke på tak over isflaten først? Eller skal man følge planen om å bygge en håndballhall?

Det er foreløbig ikke klart, men klart var det i alle fall at den første matchen på den nye kunstfrosne skulle spilles igår kveld mellom Hasle-Løren og Nesodden. Og med blant andre smågutteue til hede Jan Kinder og Tore Falck Nielsen med på laget. Begge disse smårollingene har fem år igjen som «lilleputter». Det forteller noe om fremtid på alle fronter for de driftige kretse i Hasle-Løren og Refstad IL.

Lkn

Ordfører Albert Nordengen overrekker den flittigste «dugnadsgutten» Olav Nesbakken et armbåndsur som takk for stor innsats for sin klubb og sin idrett — og for Oslo kommune.
(Foto: Terje H. T. Andersen)

Idag

BANDY: 2. div. vest Bakkelaget—Skjold, Beggelaget kl. 19. Drammens BK—Sogene, Berskaug kl. 18.30. Pors—Orevoll, Tveten kl. 19, Njård—Brevik, Volle Hovin kl. 19.30. 2. div. øst Bjarta—Hovik, Brageroen kl. 18.30. Ullern—Ready, Ullern'o. kl. 19. 2. runde NM for junior: Frem—Gjøvik, Haslumb. kl. 19. Ros—Mjondalen, Ruab. kl. 19. Solberg—Ullevål, Solbergh. kl. 19. Stabæk—Skeid, Stabekkb. kl. 19. 2. runde NM for smågutter: Drafn—Haslum, Marienlyst kl. 18. Mjondalen—Ready, Mjondalen kl. 16.30. Ullern—Stabæk, Ullern'o. kl. 16.

ISHOCKEY: Sluttspill mesterskapsputjen: Frisk—Furuset, Askerhallen kl. 20. Vålerengen—Hasle Løren, Jordal Amfi kl. 19.30.

MØTER: Oslo Skyttersamlags ombudsmøte, Mercantile Klubb, Oreasgt. 57 kl. 18.30.

MELDINGER: Volle Hovin kunstisbane er åpen for publikum kl. 10—19. (Efter kl. 15 bare indre bane.) Skistua, Frognerseteren er åpen kl. 16—20.

TRENING: IL Hemings alpingavd. Rødkleiva, 10 år og yngre kl. 17—18.15, 11—12 år kl. 18.15—19.30, sen.—ejr.—yjr. og 13 år kl. 19.30—21. Njårds håndballavd., Njårdhallen: Lillepiker og lillegutter kl. 18—19, smågutter og damer kl. 19—20, damer kl. 20—21. Lufthobla: Gutter kl. 17—18, herrer ros. og herrer jr. kl. 18—19, piker kl. 19—20. IF Ormulfs brytere fra kl. 18 i Sondaker-sentret, Vogtgt. 67, nordre inngang. Vika IF, Torvenhadet kl. 18—21. Sp.09's brytere på Karlsrud skole, gutter kl. 18—19.30, voksne kl. 19.30—21.45. Oslo Badminton Klubb, Skøyenhallen, Drammensvn. 147, kl. 17—23.

Fig. 19.
Newspaper clippings from the official opening of the artificial ice rink, 17 January 1977.

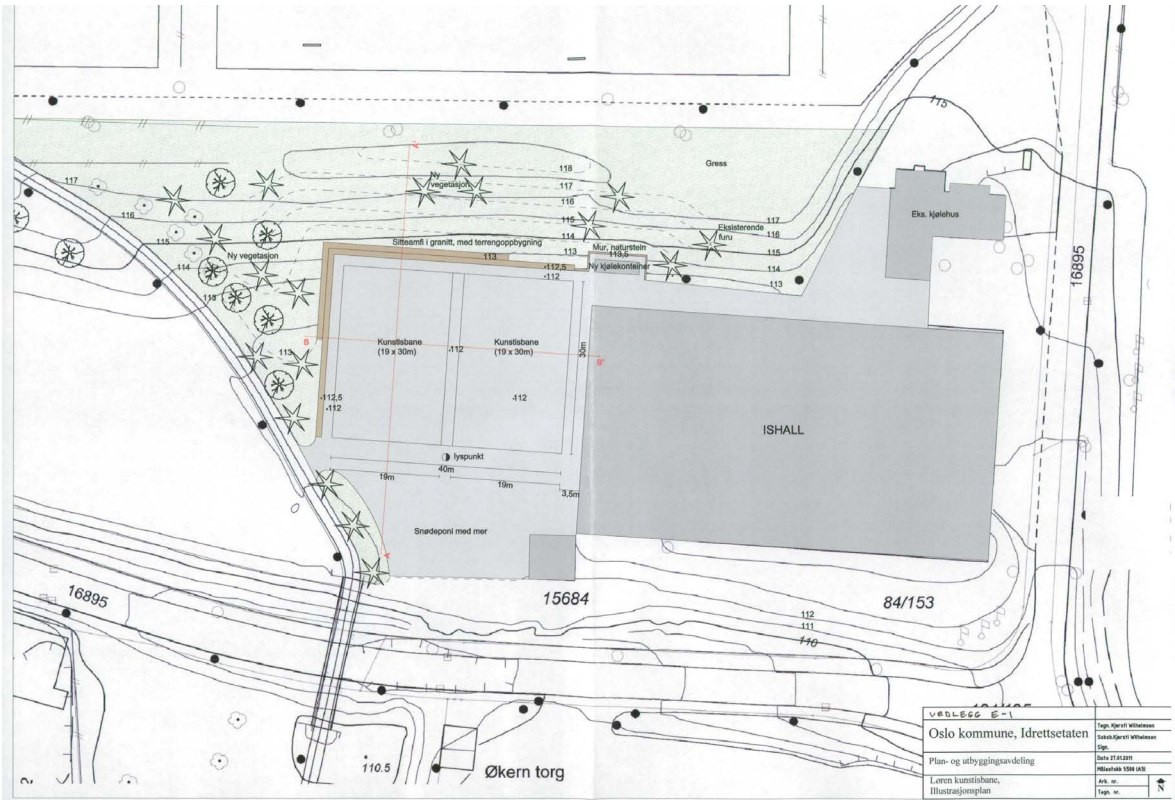


Fig. 20.
Proposal, 2011

Previous proposal

In 2011, a proposal was drawn out by the Sports Department. Two smaller outdoor ice surfaces would be placed on the west side of the existing ice hall. The proposal clearly didn't get further than on the drawing board.

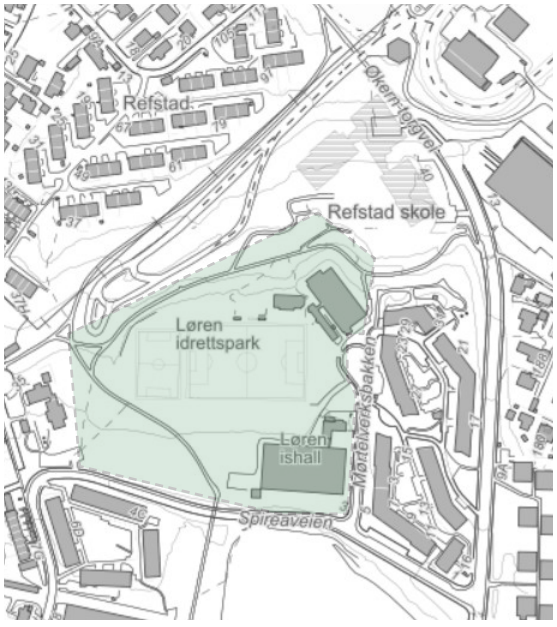


Fig. 21.
Ongoing plans, 2022

Fig. 22.
Alternative 1.

Fig. 23.
Alternative 2.

Re-regulation of Løren Idrettspark
Undervisningsbygg (UBF) has been commissioned by Utdanningsetaten (UDE) to build Refstad Multipurpose Hall. The proposal has been prepared by: Futhark Arkitekter AS.

Undervisningsbygg Oslo KF proposes to re-regulate Løren Idrettspark from a traffic artery and technical infrastructure – sidewalks/ hiking trail / ski trail to sports facilities, meeting places and recreational areas.

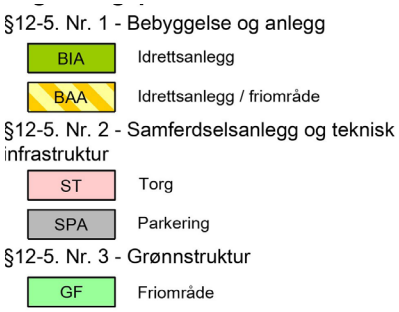
The purpose of the proposal is to facilitate a new multipurpose hall and ice hall, more outdoor courts and that Refstad creek can be opened through the area. Proposer proposes two alternatives where the difference between the options is the placement of a new multipurpose hall. The proposed plan is shown with two options for the placement of the multipurpose hall. Option 2 - west is located 42 m further to the west than option 1 - east. I n option 2, the multipurpose hall is virtually in the middle of the largest of the football fields. In this option there will be room for a sand handball court east for the multipurpose hall.

Degree of exploitation:
The drawn proposals suggest max. BRA equal to 3500 m2 / 3550 m2 for multipurpose hall option 1 and option 2 (incl. parking and covered bicycle parking), max BRA equal to 6000 m 2 for ice hall (incl. parking and covered bicycle parking) and max BRA equal to 100 m2 for operating garage / warehouse for outdoor sports.

Fig. 24.
Program 1.

Fig. 25.
Program 2.

Fig. 26.
Legend:



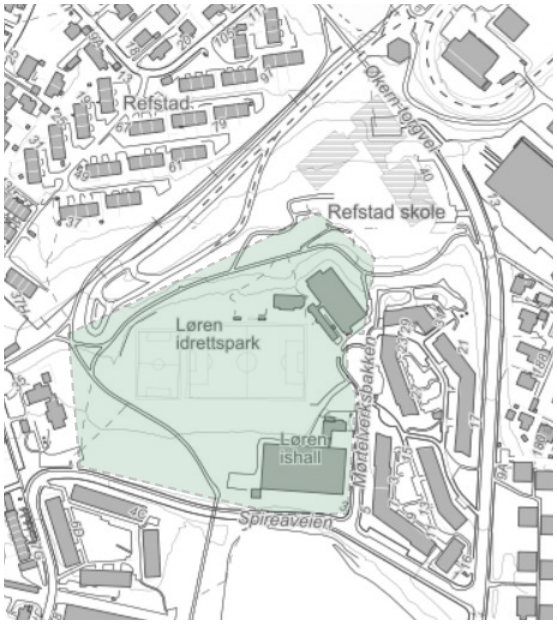


Fig. 21.
Ongoing plans, 2022

Use:
Plan proposal facilitates a multipurpose hall; a "normal hall" with 20 mx40 m playing surface with the possibility of dividing into three separate and equally large hall surfaces with associated wardrobe sets, as well as clubhouse facilities for Hasle-Løren IL. This includes several meeting rooms, 2 sets of wardrobes for outdoor sports, kitchen and kiosk as well as office for the general manager. The multipurpose hall will have an audience capacity of 200 spectators An operating garage shall be established for the storage of equipment for maintenance of the sports fields and any other equipment necessary for the use and operation of the sports park.

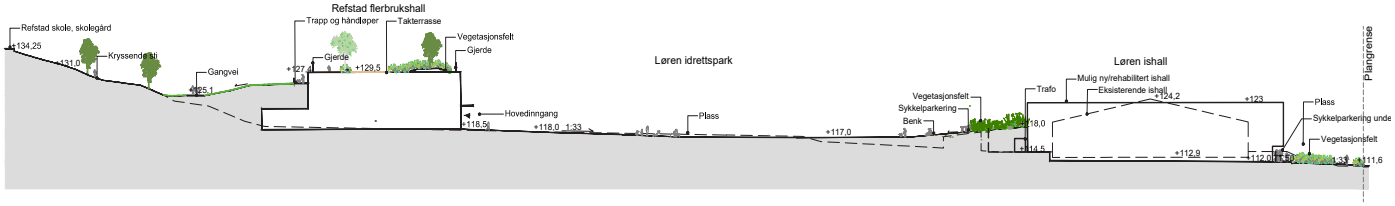
Arrangements are made for a new ice hall – possibly expansion of the existing ice hall. It is assumed that the ice hall will have a course size of 60mx30m and a capacity of up to 1000 spectators.

Design:
Multipurpose halls and ice halls will be built with high architectural quality with the use of sustainable materials. The buildings must not have back sides. Refstad multipurpose hall will be built into the slope below Refstad school with direct access to the roof from terrain. The roofs are designed as an integral part of the landscape. The roof landscape will be designed as an activity area with high quality, natural materials and a high proportion of vegetation. Multipurpose hall and ice hall will open to the surroundings with large windows in the facades with entrances facing squares and meeting places to the south and east. This will provide access to the activities and public areas as well as views. The main entrance of the multipurpose hall is located at the southeast corner of the building, and is aimed at the square, which connects pedestrian connections and access road. The hall also has an entrance on the second floor at the northeast corner adjacent to overhead pedestrian connections and Refstad school. The multipurpose hall will be used by the school's students for the gym, and the upper entrance will be a natural entrance for the students. The upper entrance is on the same floor as the meeting room and kiosk/café that can be used for events in the multipurpose hall and/or sports park. The ice hall entrance is drawn towards the southwest corner of the hall to provide the opportunity to connect the access to a future space in the south, while connecting the parking facility closer to the intersection spireaveien x Mørtelverksbakken. The intention is that the plan should not be an obstacle to closing Spirea road to general driving and establishing it as a walkway. The ice hall will have large windows adjacent to the entrance hall in the southwest as well as in connection with the entrance to the north and the common space between the two sports buildings. The ice hall will also have sections with an open façade to the west for visual contact between the exterior isrink / park and public functions inside the hall. In order to create variation in the façade of the ice hall, plant fields are established along the walls of the ice hall. Façade materials will be used that bind the ice hall and the multipurpose hall together into one facility. In the case of future rehabilitation / new construction of ice hall, an entrance to the ice hall will be established from the square in the north so that both sports halls contribute and address the square. It is proposed to establish a garage for snow removal and maintenance equipment for the sports park west of the multipurpose hall, as integrated as possible into the

terrain so that the slope is preserved as much as possible. The exposed façades of the operating garage must be made of materials that connect it to the multipurpose hall/ice hall. The roof of the operating garage will be a natural viewing platform / grandstand for the sports fields. An area is also set aside in the ice hall for a shared garage, so that the detached garage can be removed and the terrain restored.

Design of ice rink
The ice hall will be designed with high architectural quality and the same façade materials as the multipurpose hall. Façade materials on the ice hall will be used to break down the scale of the building.

The ice hall must have open facades to the southeast, to the west, as well as to the north with window surfaces of at least 10% of the façade to the south, at least 5% to the east and west and at least 15% of the façade to the north. The ice hall will have vegetation cover on the roof as part of local stormwater management. Facades facing east and west must have climbing planting along at least 40% of the wall's length. The main entrance should be from the southwest. There should also be an entrance from squares in the north. The operating garage must have vegetation cover, drainage layers and anchorage for sports equipment and play installations on the roof.



Snitt B, flerbrukshall øst

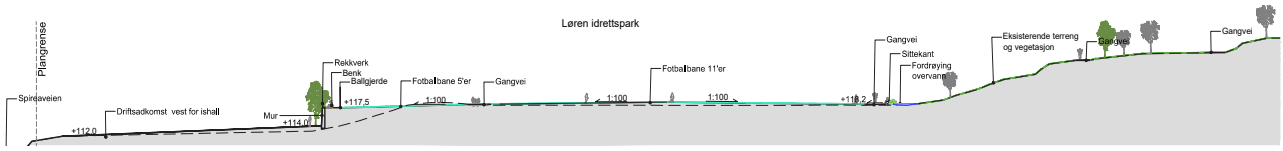
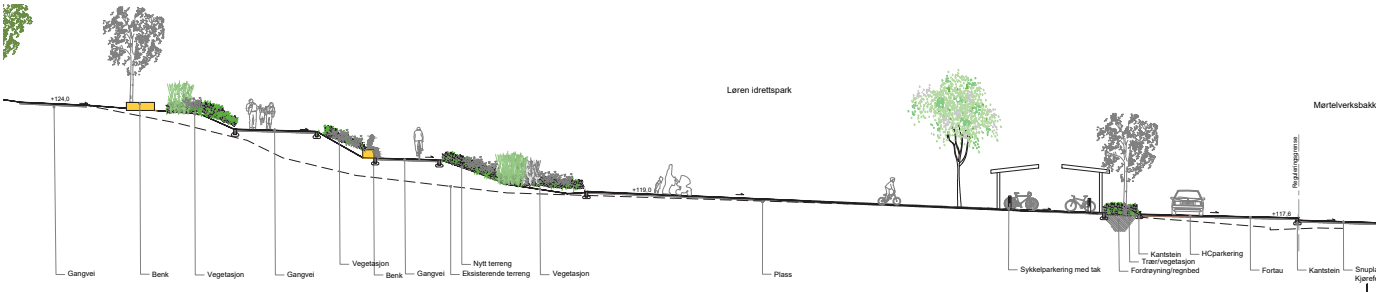
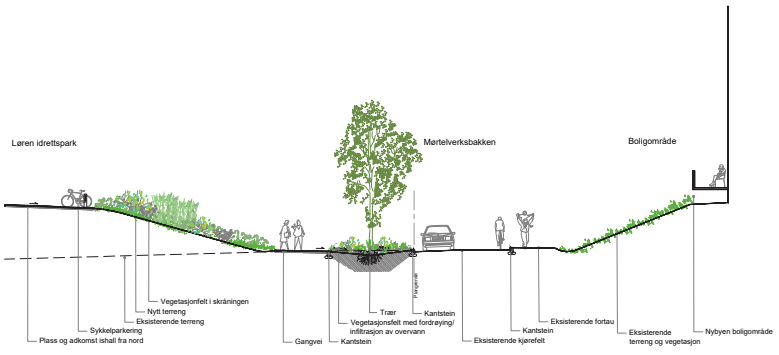


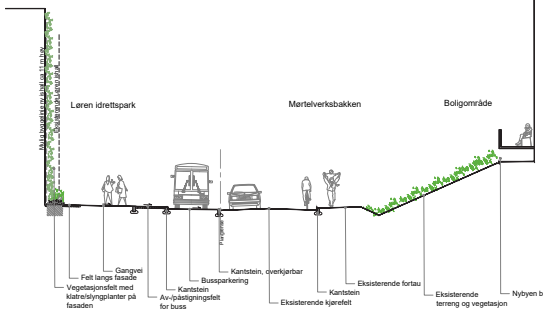
Fig. 27.
Section B, Alternativ 1.



Snitt D, alternativ øst

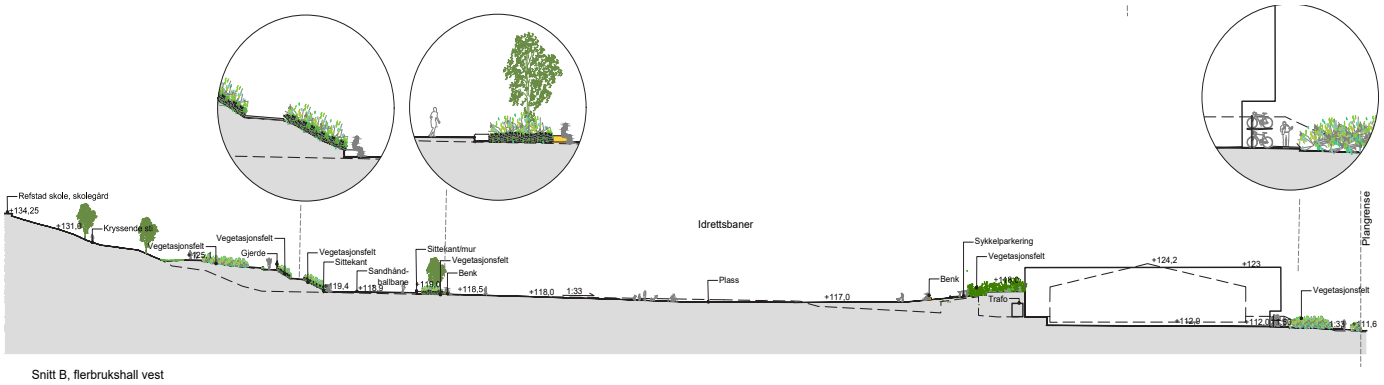


Snitt E



Snitt F

Fig. 29.
Section D, Alternativ 1. And Section E.



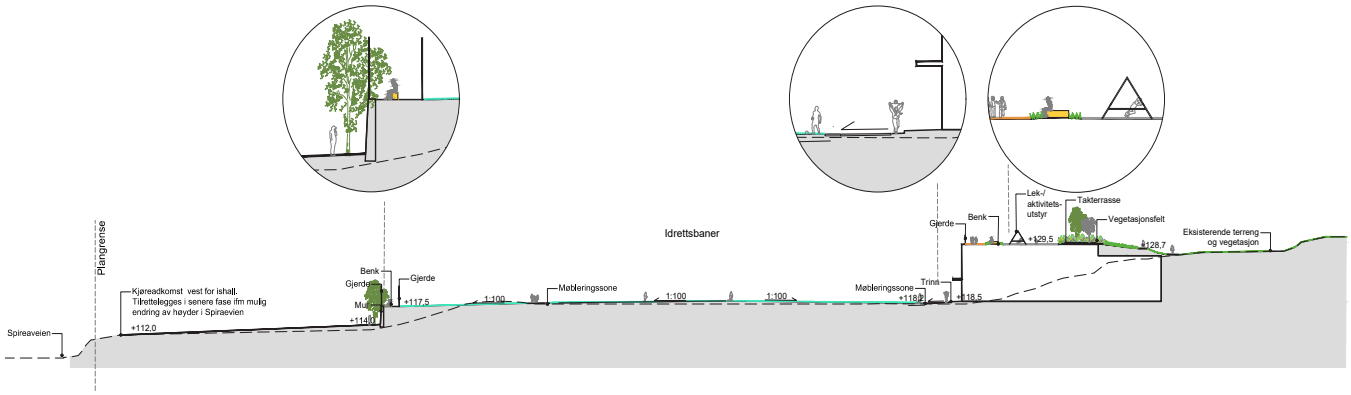


Fig. 28.
Section B, Alternativ 2.

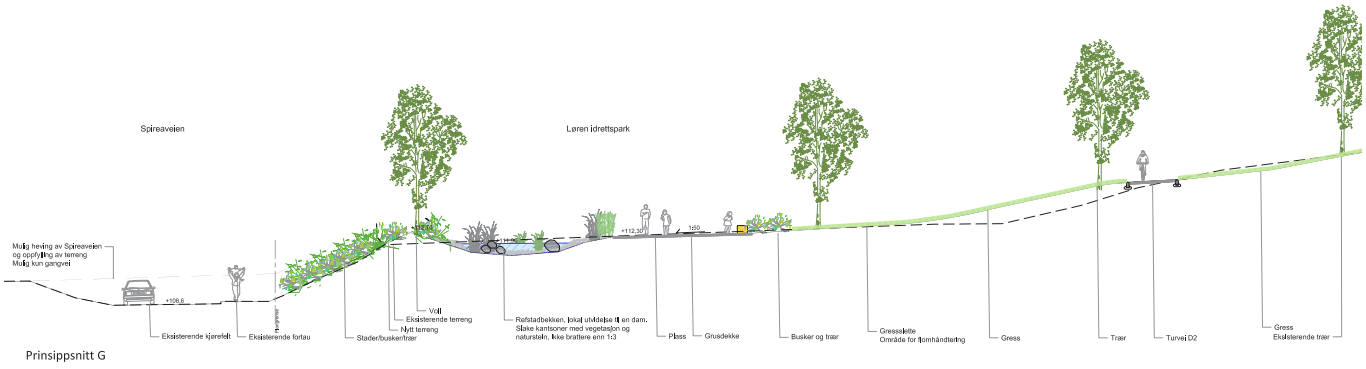


Fig. 30.
Section G.

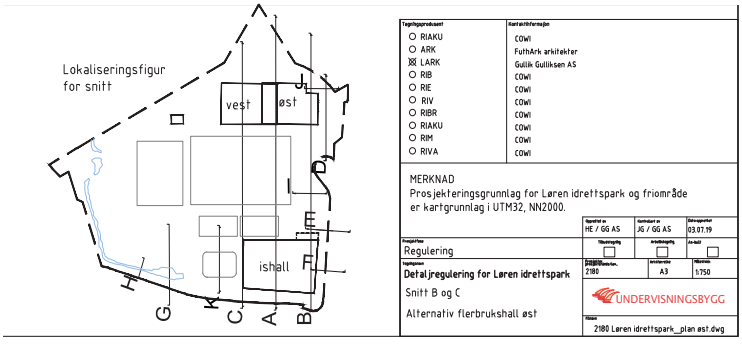


Fig. 31.
Keyplan, sections

Fig. 32.
Overview photo, structure presentation

Site description.
The sports park consist today of 5 structures and fields. One plastic hall, football fields; an 11'er field, a 7'er field and an ice hall. There are also changing rooms and a clubhouse. It is Hasle-Løren IL that uses these facilities.

- – – Area, sport park
1. Ice hall
2. Hanball hall
3. Football field
4. Warderobes
5. Clubhouse

Topography and landscape
Løren Idrettspark is located in an area with terrain variations, trees and shrubs. A green park section extends from the southwest upwards to the north. This area has inviting paths and trail surrounded with grass and trees. An important hiking route, D2 is within this part of the park. This is important to maintain as it is well used for pedestrians, cyclists and for training. D2 will be a continuation of the Green Ring planned in Hovinbyen. The park is used as a recreation area for residents in the surrounding area. But also used for fun and games all year round.

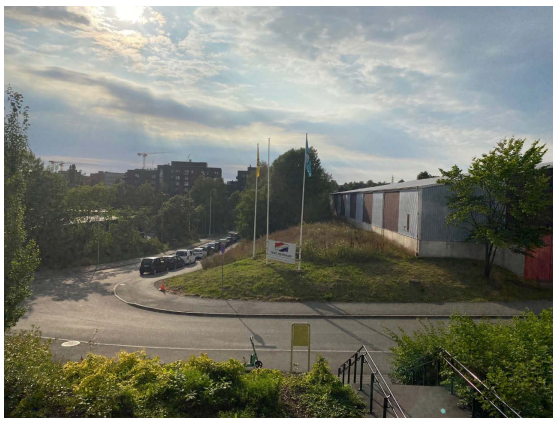
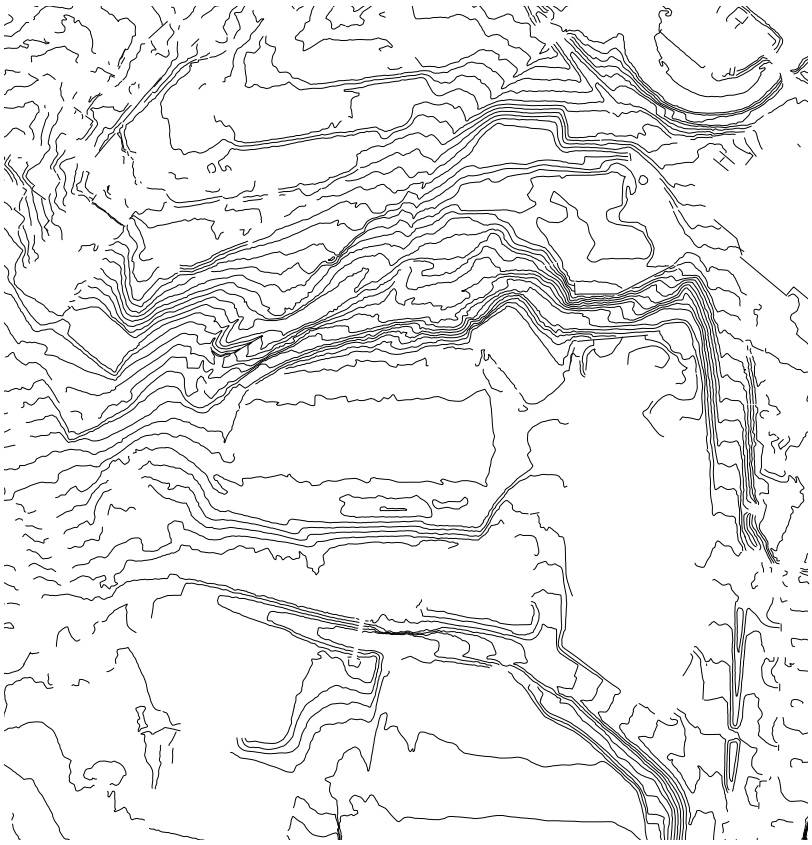







Fig. 33.
Site Photos, 2022.

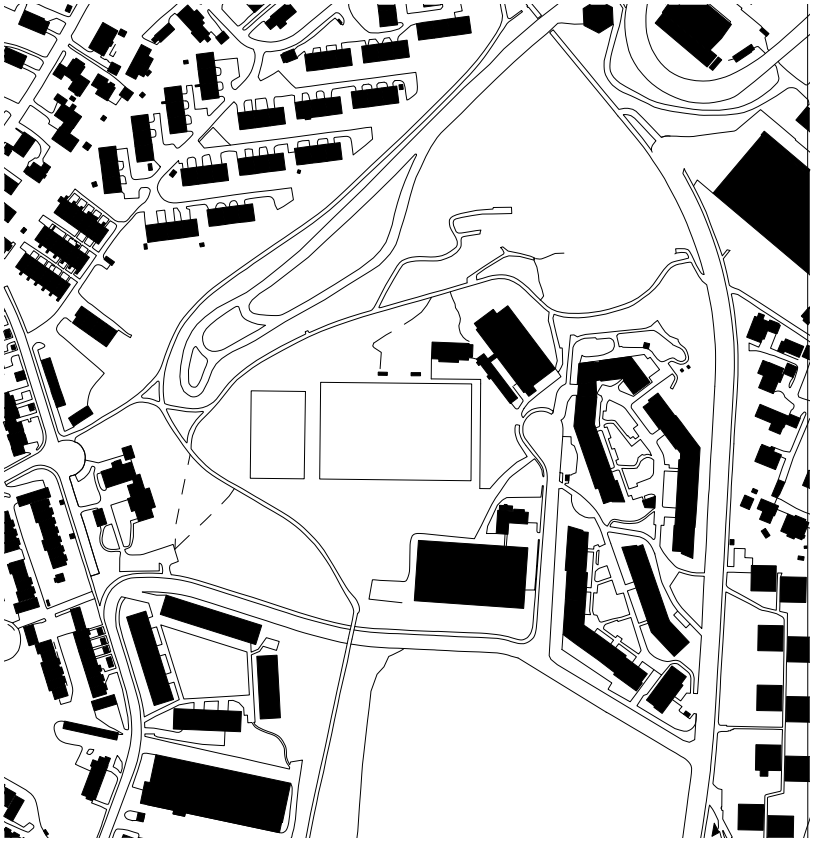
Analysis: diagrams



Terrain lines, 1m.

100m.

Fig. 34..
Topography



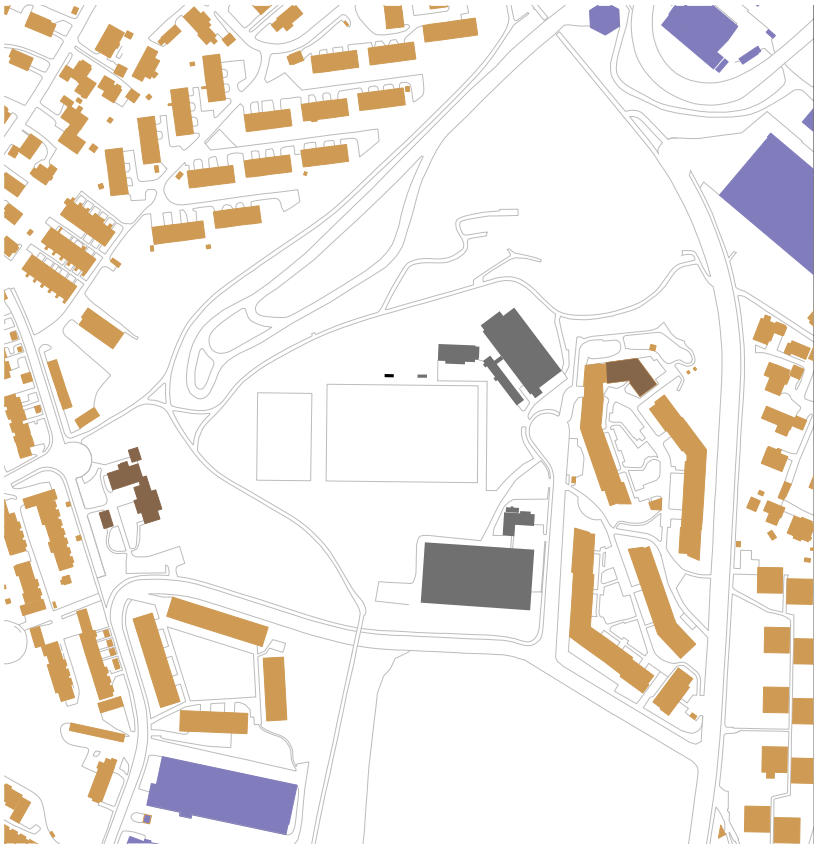
Trails

Roads and paths

Structures

100m.

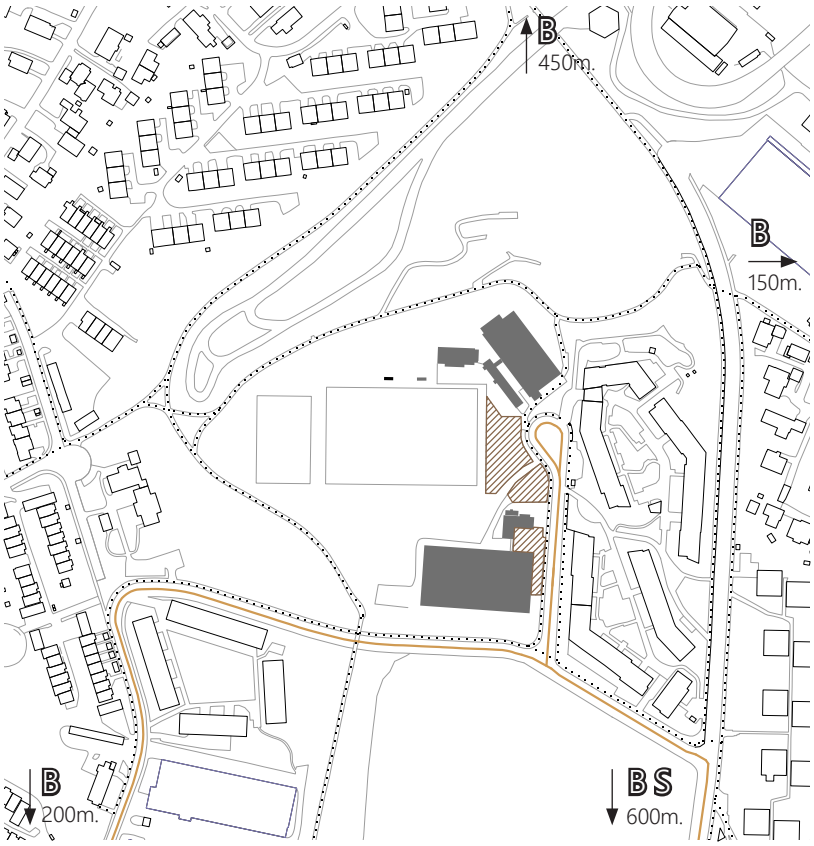
Fig. 35.
Volume and roads



Dwelling
Kindergarten
Commercial
Sports facilities

100m.

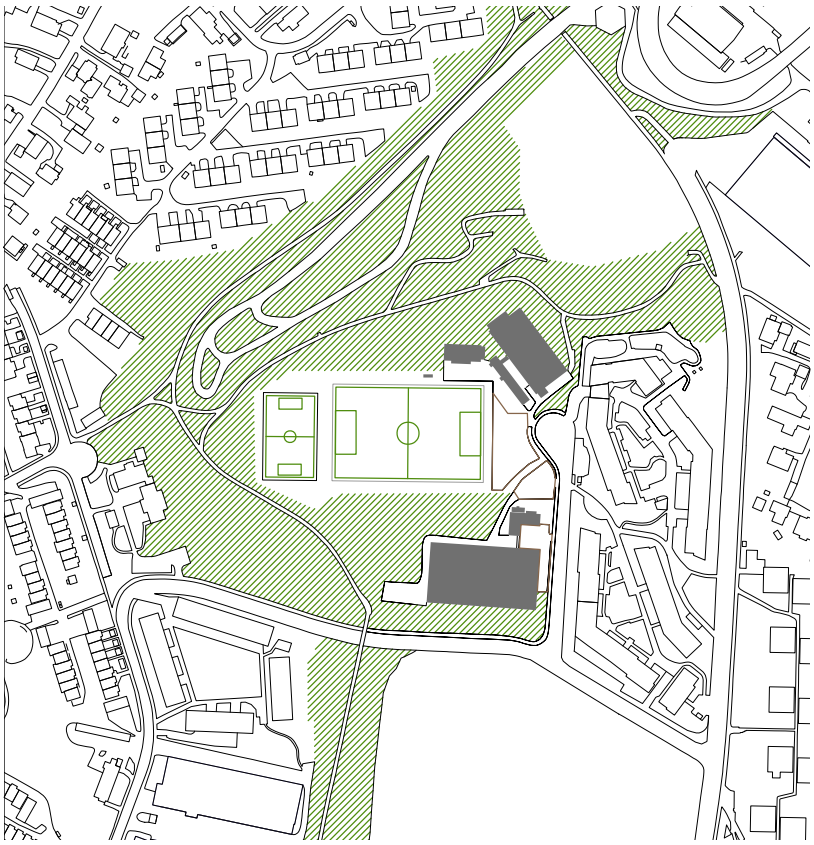
Fig. 36.
Use



B Bus
S Subway
Hiking and bike
Carparking
Car
Sports facilities

100m.

Fig. 37.
Public transport , bike and hiking paths, carparking

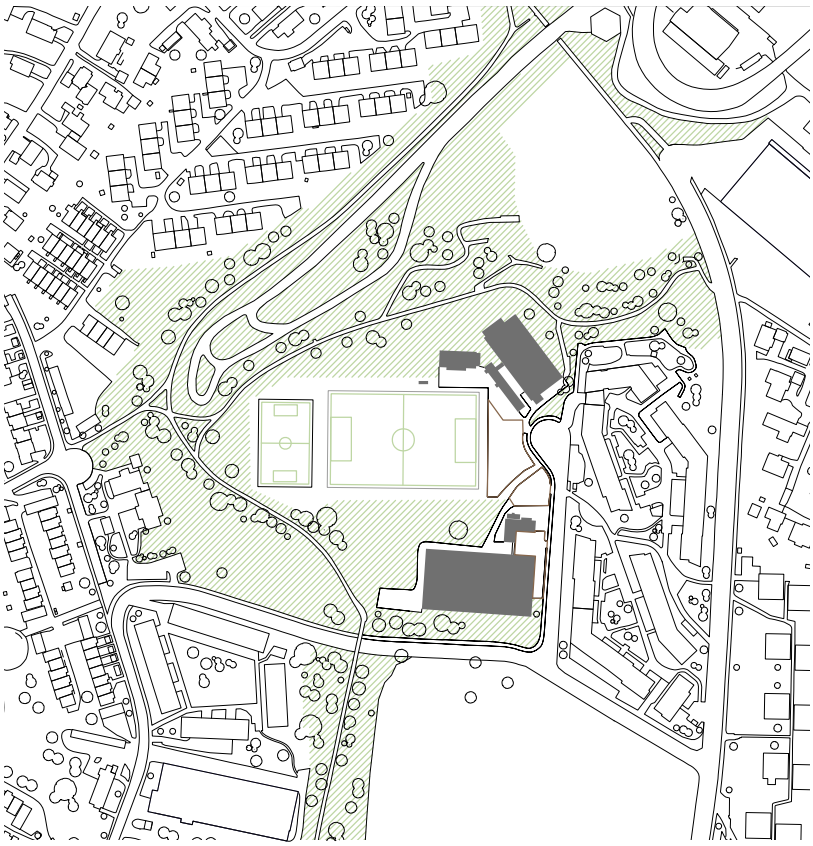


Green area

Sport Facilities

100m.

Fig. 38.
Green area



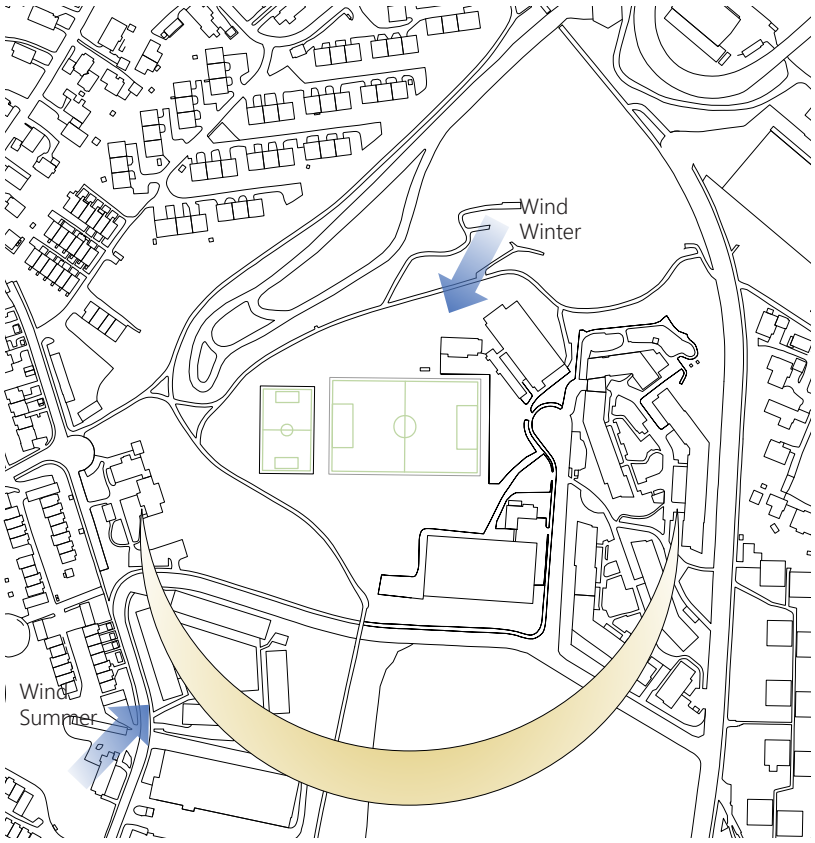
Trees

Green area

Sport Facilities

100m.

Fig. 39.
Trees and green area

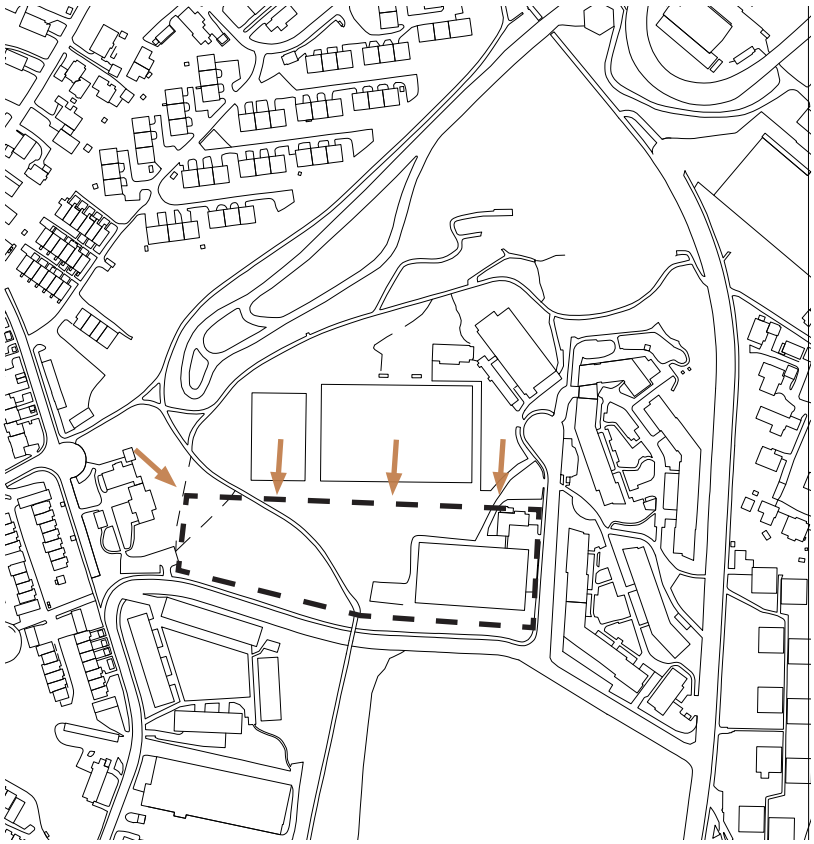


Wind direction

Sun path

100m.

Fig. 40.
Wind direction
and sun path

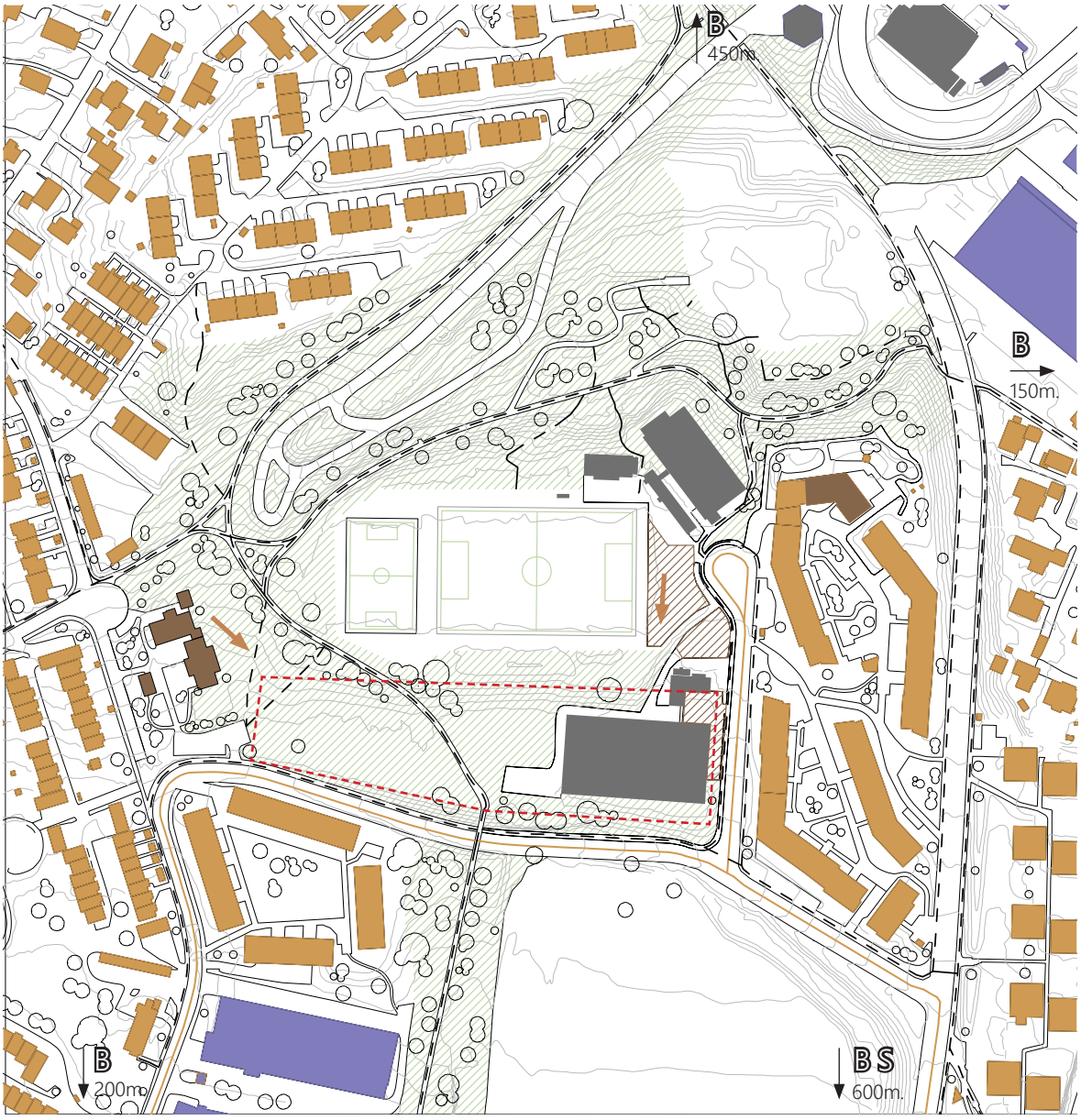


Terrain fall
towards site

Project site

100m.

Fig. 41.
Volume and roads



Terrain
Dwelling
Kindergarten
Commercial
Sports facilities

Bus
Subway
Hiking and bike
Carparking
Car

Trees
Green area
Terrain fall towards site
Project site

100m.
200m.

Fig. 42.
Use

Literature list:

Books.
Wellberg, F. (2011).*Fra gutteklubber til samfunnsinstitusjon.* Hasle / Løren 100år.

Webpage:
URL: https://innsyn.pbe.oslo.kommune.no/saksinnsyn/casedet.asp?caseno=201101615

https://innsyn.pbe.oslo.kommune.no/saksinnsyn/showfile.asp?jno=2019114670&-fileid=9086643
(Løren Idrettspark, Planforslag til offentlig ettersyn. Detaljregulering)

Figurelist:

Fig. 1 - 2: Map of Oslo, Norgeskart.no
Fig.3: Panorama photo. 1952. Potographer: Widerøe. oslobilder.no. Photonr.: A-10002/Ua/0020/017
Fig.4: Oslo øst - Økern,1958. Photographer: Widerøes/ J. Kruse. oslobilder.no. Photonr.: A-20027/Ua/0001/075
Fig. 5 - 16: Orthophotos of site. 1881.no
Fig.17: Situation drawing, 1976. pbe.no. (Saksnr: 197502548)
Fig.18: Situation drawing, 1986. pbe.no. (Saksnr: 198504155)
Fig.19: Newspaper clippings from the official opening of the artificial ice rink, 17 January 1977, Aftenposten.
Fig.20: Proposal, 2011
Fig.21: Pbe.no (Saksnr: 201101615) Diagram, Løren Idrettspark, Pbe.no
Fig. 22-26: Alternativ/ program 1 and 2. Pbe.no (Saksnr: 201610267-44)
Fig. 27-31: Sections. Pbe.no (Saksnr: 201610267-44)
Fig.32: Overview photo, structure presentation. Google.com.
Fig.33: Site photos, 2022. Potographer: Pia Kristine Tveit
Fig. 34-42: Site diagrams. By: Pia Kristine Tveit

4.1.
Process

References

https://www.archdaily.com/975472/wukesong-ice-sports-center-biad-zxd-architects?ad_source=search&ad_medium=projects_tab?ad_source=myarchdaily&ad_medium=bookmark-show&ad_content=current-user

Fig. xx.

Ski Center, Beijing, China

Architects: BIAD-ZXD Architects
Area: 38960m², Year: 2021

The Wukesong Ice Sports Center is the Ice Hockey Training Center for the 2022 Winter Olympic Games. The project consists of two levels above the ground and two levels underground. Functions underground are designed as the ice arena with a capacity of 1900 audiences and related functions surrounding the arena.

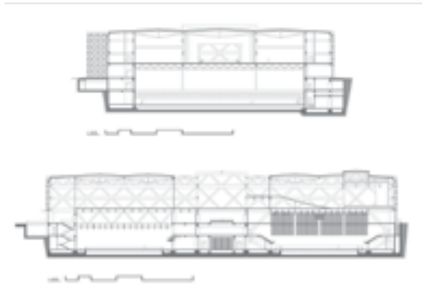


Fig. xx.

The plan shows 2 ice rinks that are located below ground level. The stair cores are positioned relative to the playing surface. Here they act as structural elements extending from the second lower floor to the first floor. They make up 8 cores that are located in the corners of the two rinks. The Zamboni location is interesting. Here, the two tracks can divide one by allowing it to travel back and forth between the two ice tracks.

Fig. xx.

Core (stair and eletator)

Zamboni area

Zamboni possibilities of movement

https://www.archdaily.com/771427/vtb-ice-palace-speech-architectural-office?ad_source=search&ad_medium=projects_tab?ad_source=myarchdaily&ad_medium=bookmark-show&ad_content=current-user

VTB Ice Palace, Moskva, Russia

Architects: SPEECH
Area: 70300 m², Year: 2015

The sports complex has three ice arenas under one roof: a large arena designed for 12,100 seats, a small arena with 3,500 seats, and a training arena with 500 seats. At the same time the two main arenas include the possibility of transformation – in a short amount of time, they can be prepared to conduct not only hockey matches, but also other sports competitions, as well as concert shows.

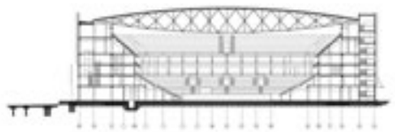


Fig. xx.

It consists of two rectangular volumes, visually combined into one as a result of the main facade's design, which was rendered as a kind of icy mantle polished to a gloss like the surface of a rink.

3 ice rinks share the same garage for the Zamoni machines. Here you have the opportunity to drive out on all the tracks

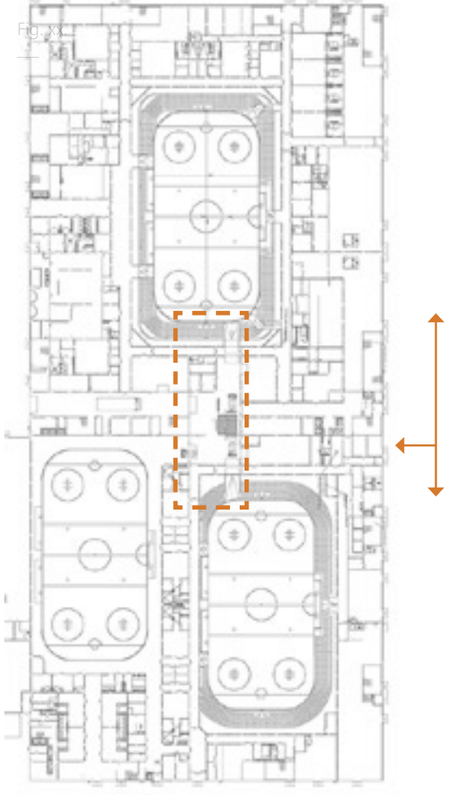


Fig. xx.

Zamboni area

Zamboni possibilities of movement

https://www.baunetz.de/meldungen/Meldungen-Eishockey-Arena_von_Caruso_St_John_8056809.html

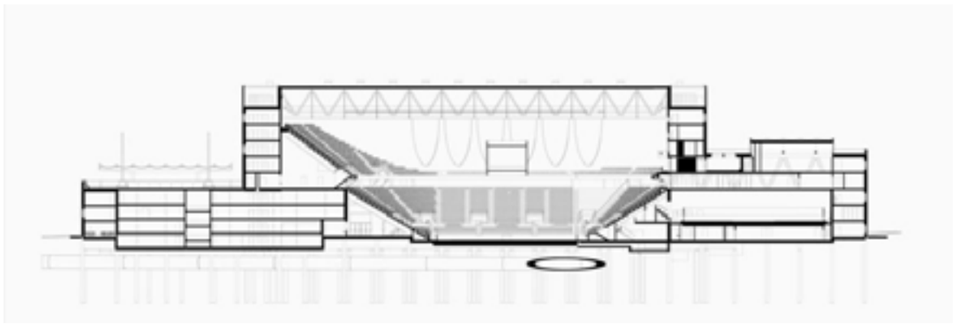
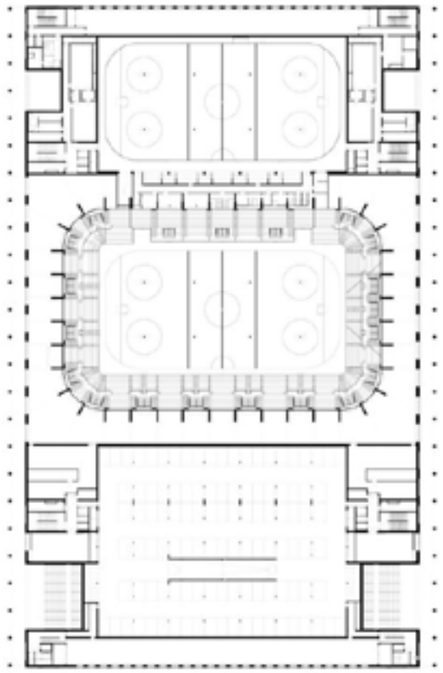


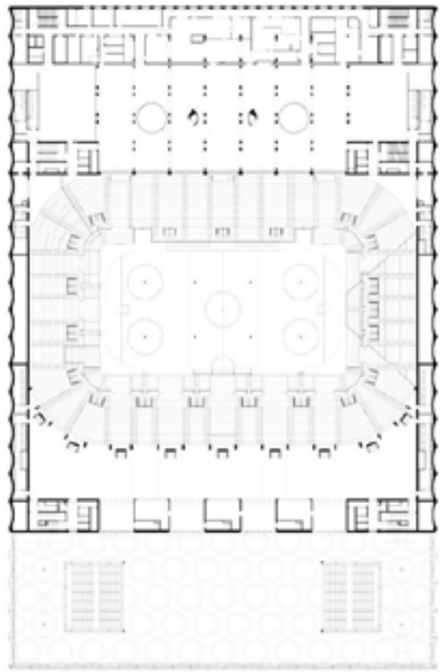
Fig. xx.

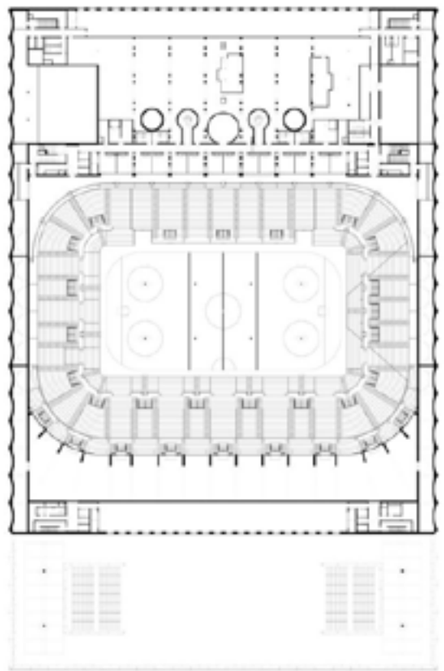
Architects: BIAD-ZXD Architects
Area: 38960m², Year: 2021

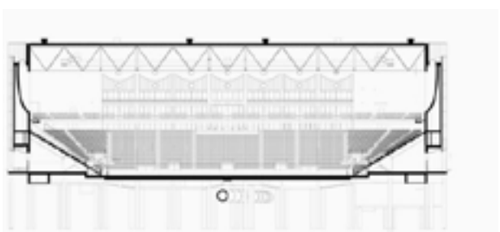
The Wukesong Ice Sports Center is the Ice Hockey Training Center for the 2022 Winter Olympic Games. The project consists of two levels above the ground and two levels underground. Functions underground are designed as the ice arena with a capacity of 1900 audiences and related functions surrounding the arena.

It is interesting that the two ice rinks are at different levels. And how the underside of the grandstand lays the foundation for the character of the room in the circulation area around the main arena. The stairs into the seating area act as structural objects that hold the grandstand up.









Core (stair and eletator)

Zamboni area

Zamboni possibilities of movement

Formations
Formations of how two ice rinks can relate to each other

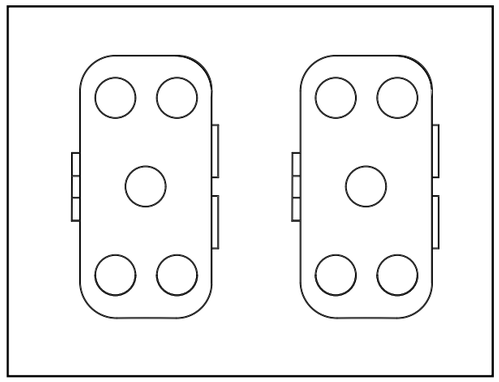


Fig. xx. Formation 1

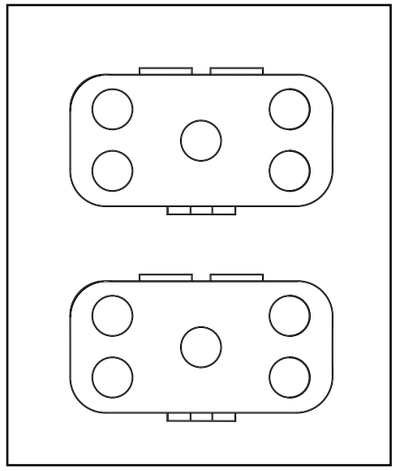


Fig. xx. Formation 2

In relation to the propoosions of the plot, there are two formations that can fit the program. (formation 3 and 4).

The proposal allows for a main arena with the possibility of many spectators and another ice rink suitable for training and which has the possibility of fewer spectators.

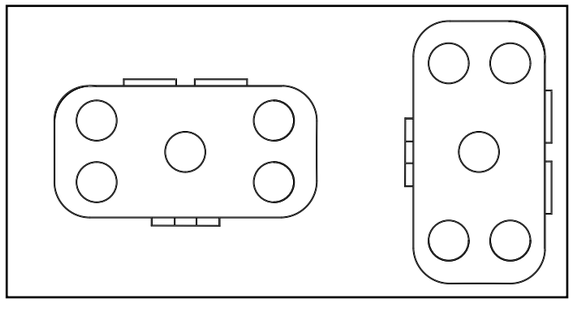


Fig. xx. Formation 3

The proposal could be two equal ice halls. With the possibility of an equal number of spectators.

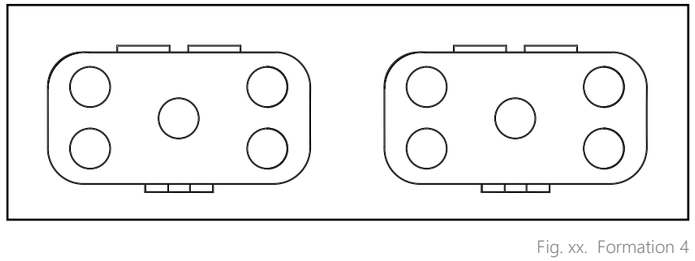


Fig. xx. Formation 4

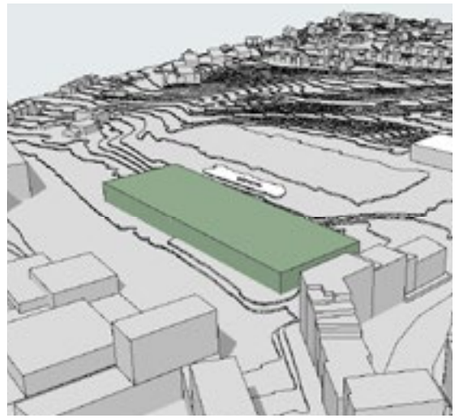
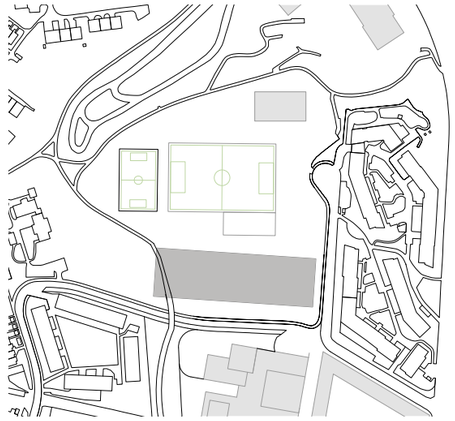


Fig. xx. Volume study



Added volume

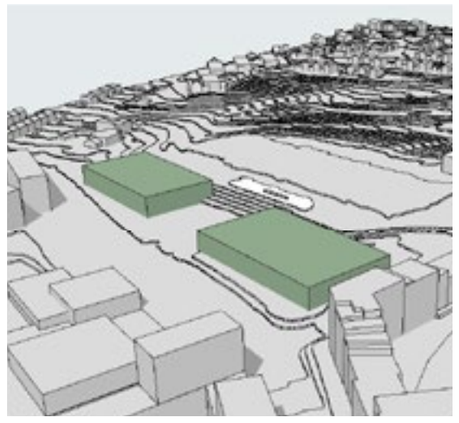
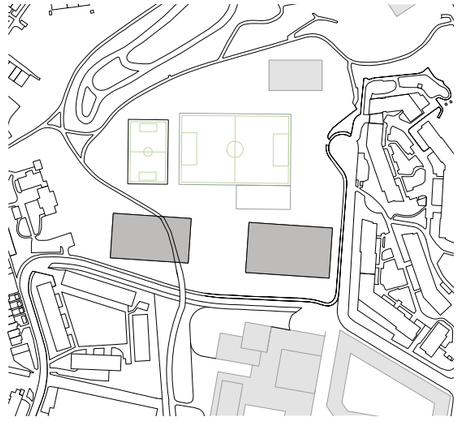
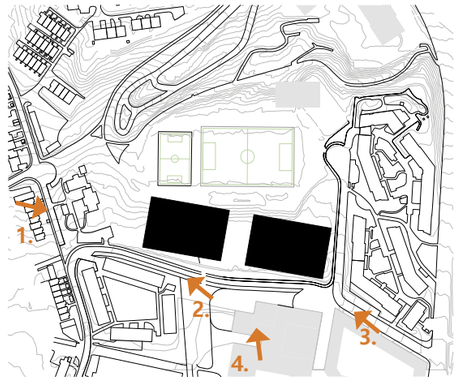
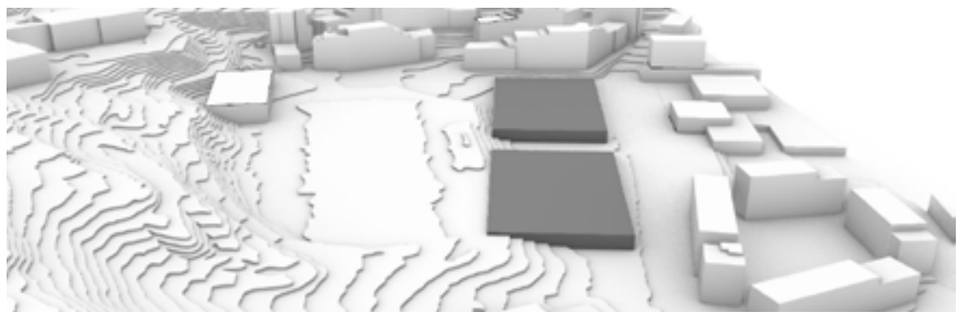


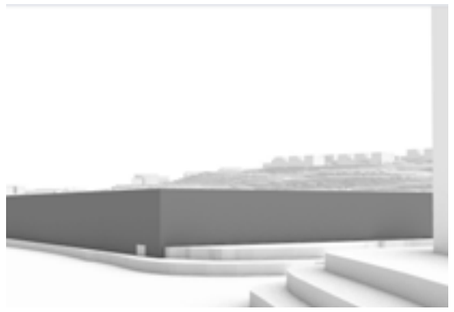
Fig. xx. Volume study

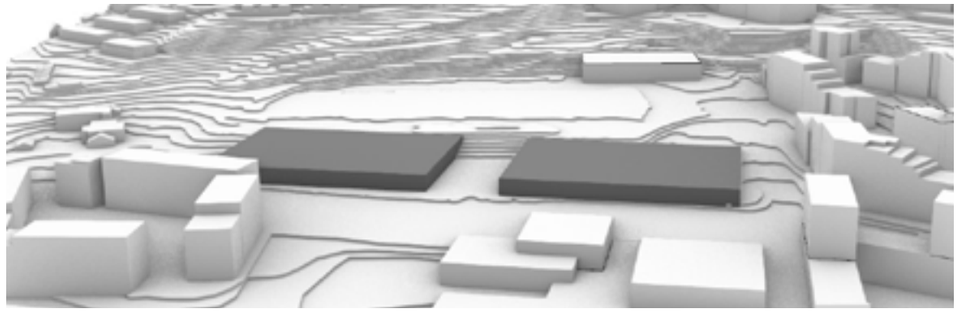


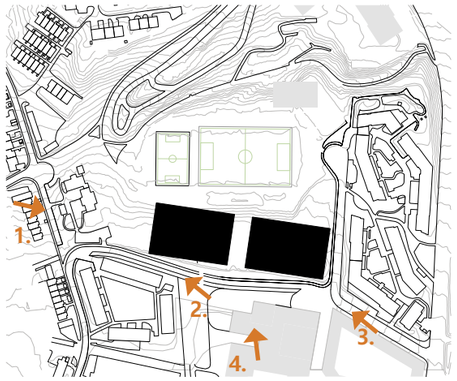
Added volume

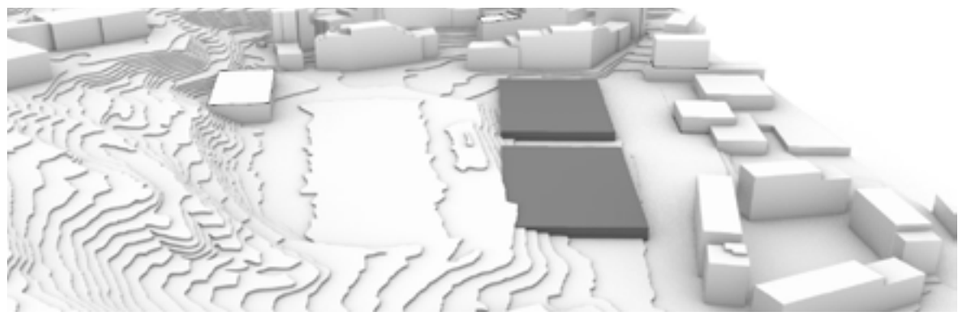

1.
2.
3.
4.

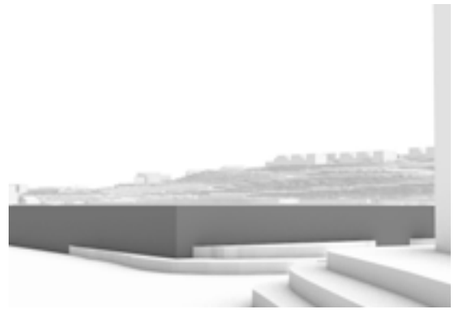


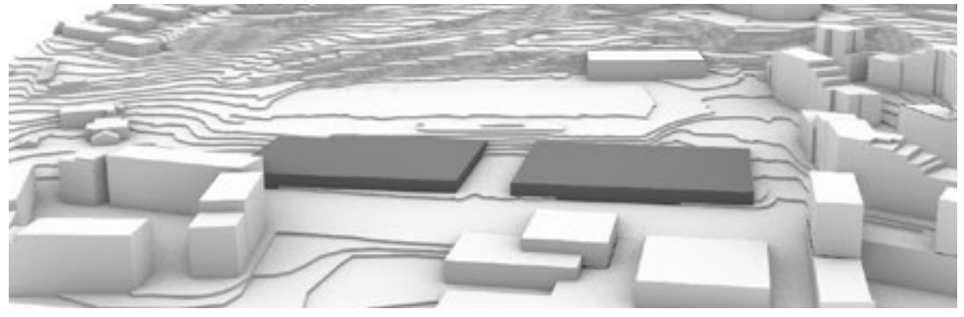


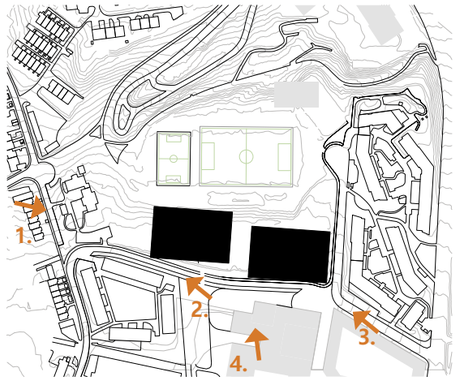


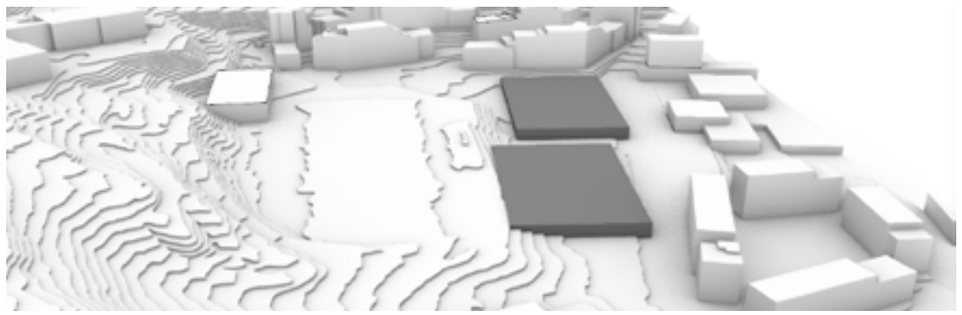

1.
2.
3.
4.

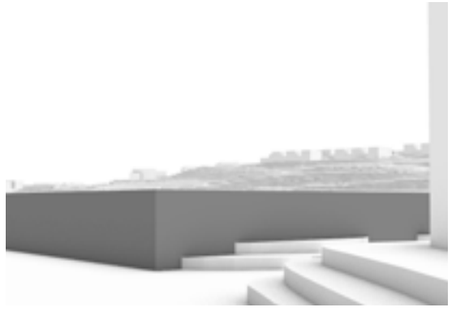


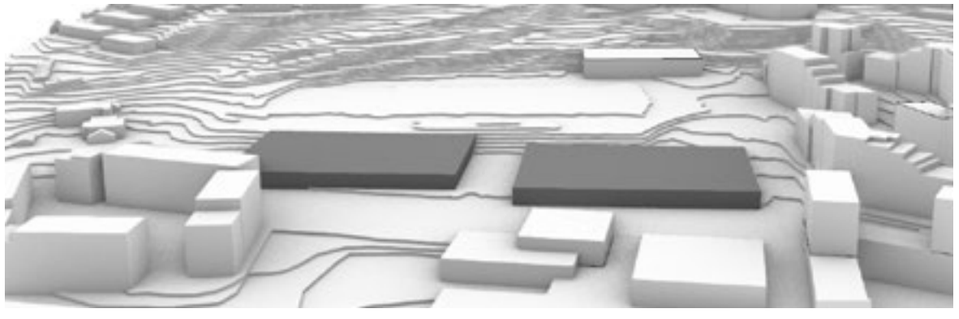


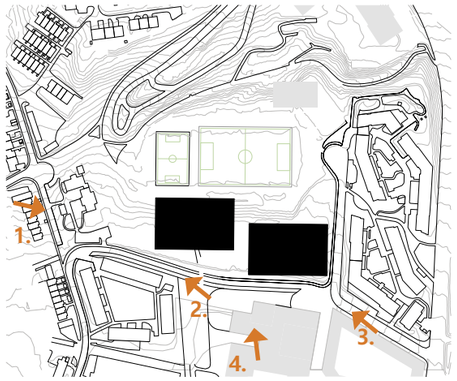


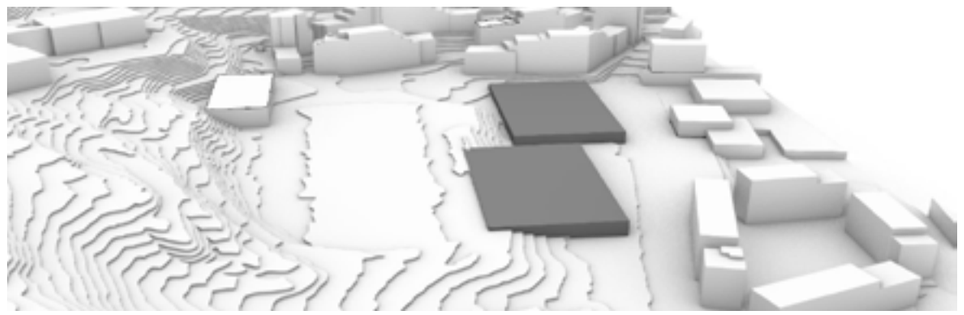

1.
2.
3.
4.

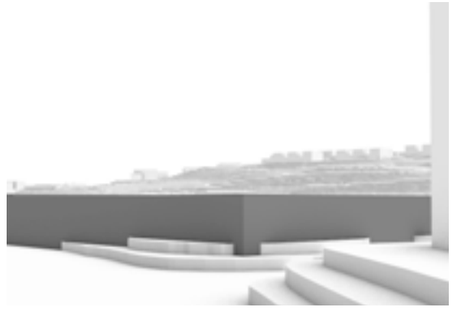


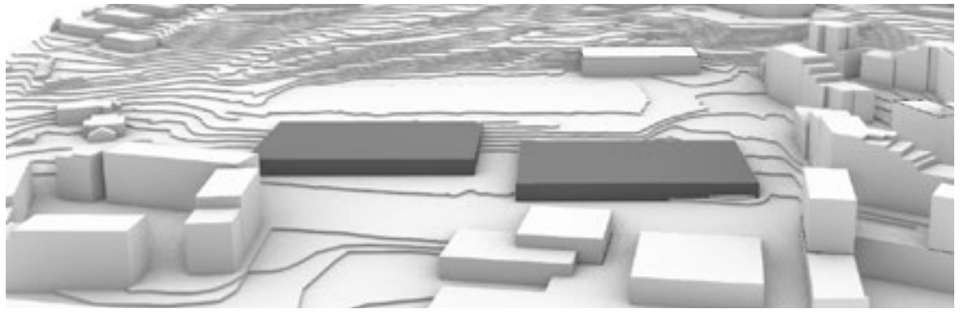


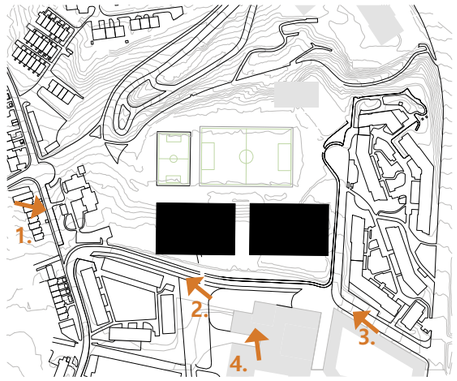


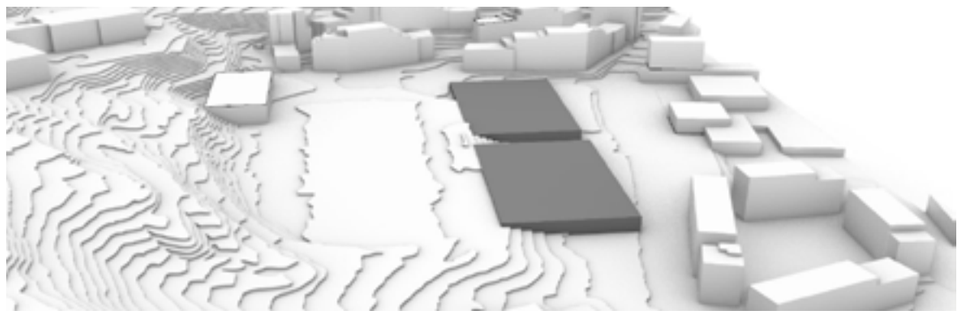

1.
2.
3.
4.

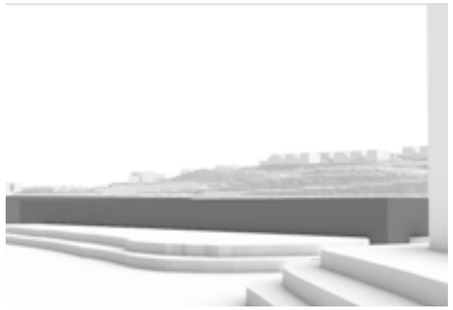


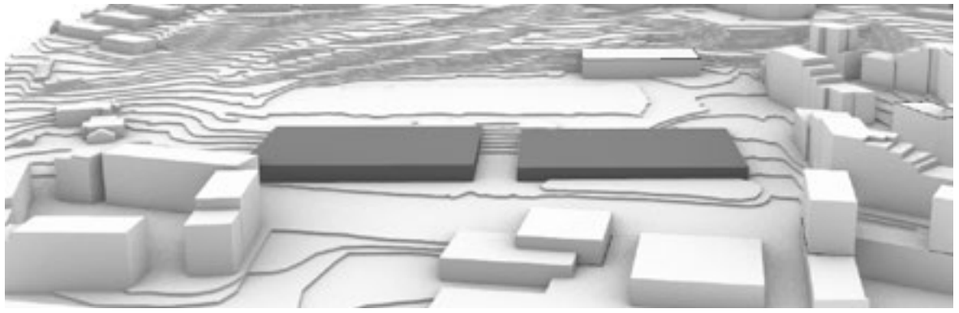


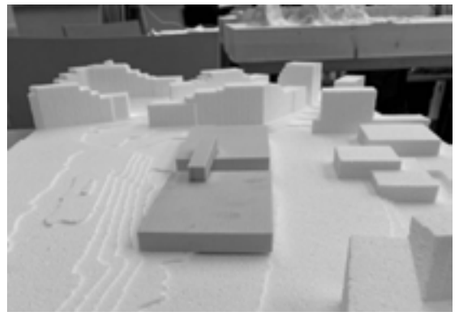


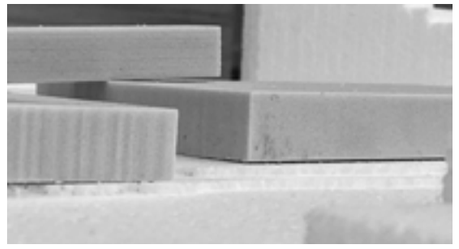

1.
2.
3.
4.

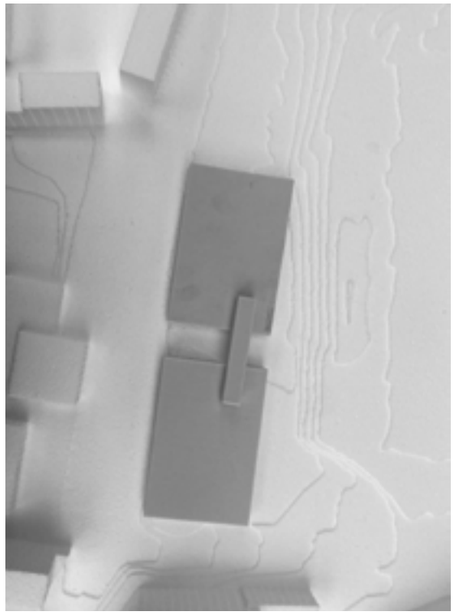


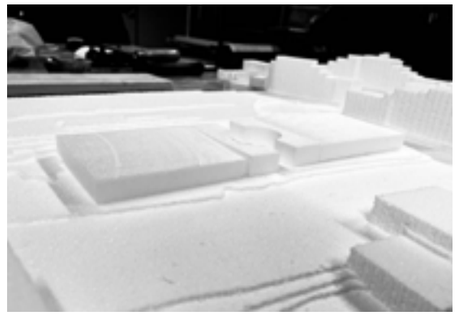


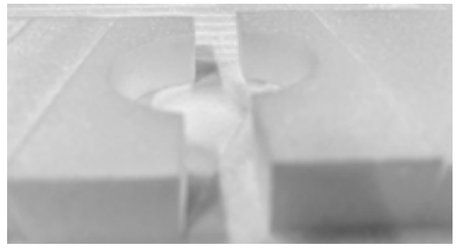


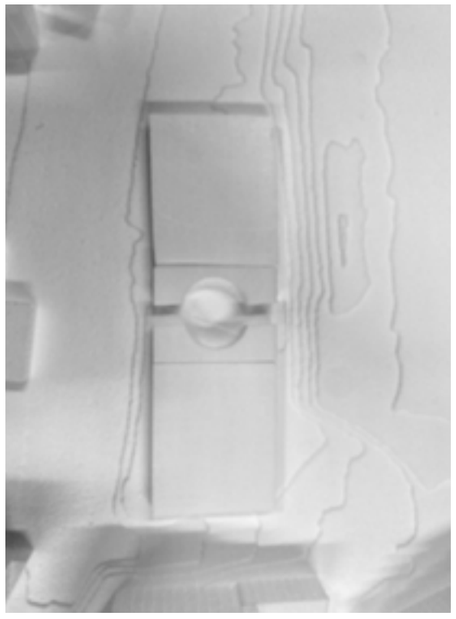




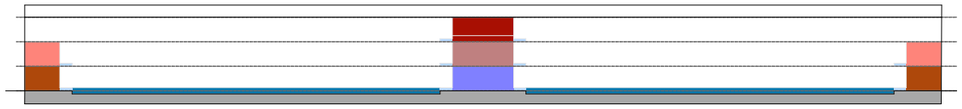


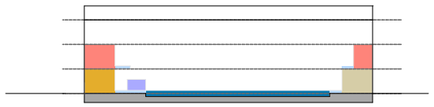




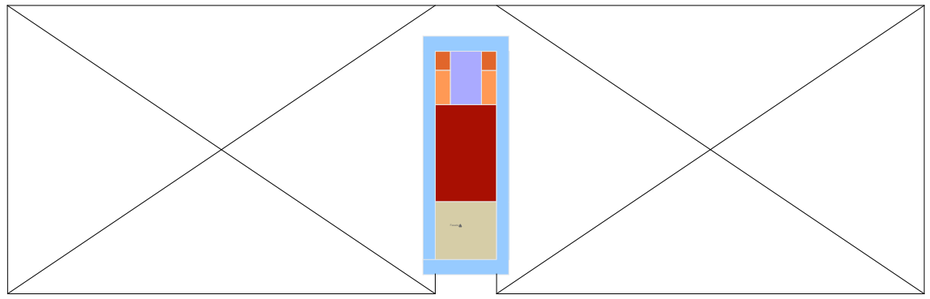


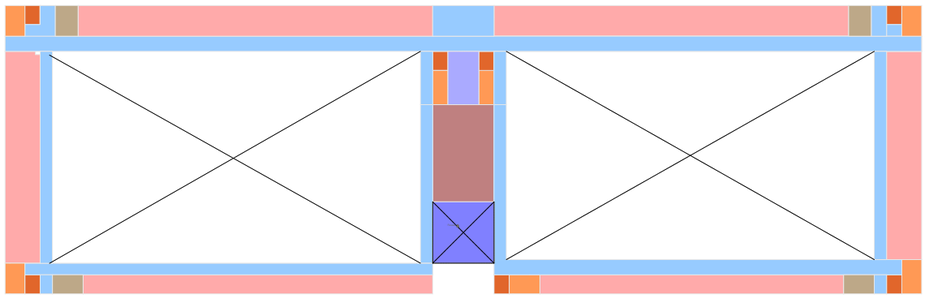
Programming attempt

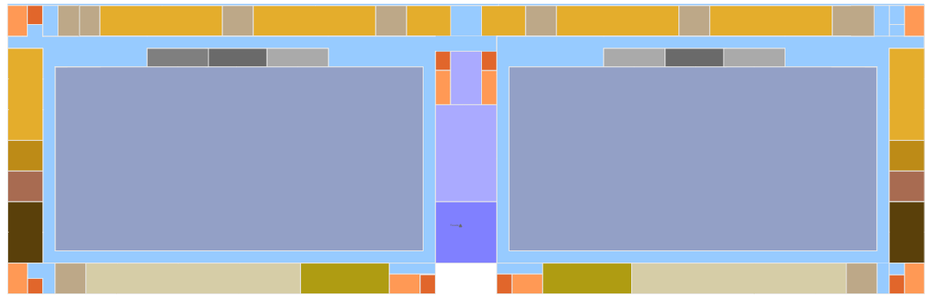


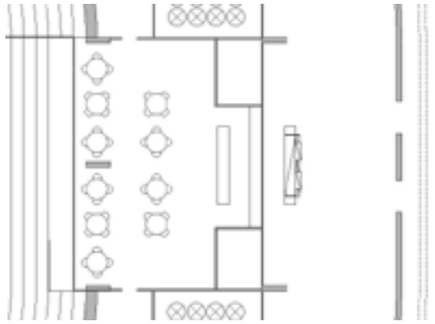


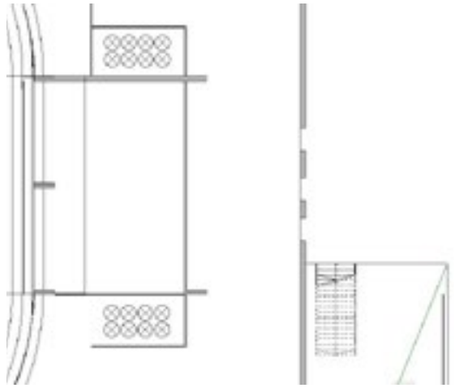
- Dusj / wc
- Garderobe (2stk. 50m2 + 4stk 40m2) x 2
- Dommergraderobe (2stk. L + 1stk, S) x 2 ?
- Transportåre
- Isflate
- Lager
- Gym
- Kafe
- Vip (Min. 50m2)
- Tekniskrom
- Ismaskin garasje
- Vestibyle
- Vrimleareal publikum
- Presserom
- Spillerbåser
- Sekretariat
- Lagrom
- Trenerrom
- Massasjerom
- Legerom
- Vaskerom
- Kontor
- Sliperom
- Trapp
- Heis
- Tribune
- Ventilasjonsrom

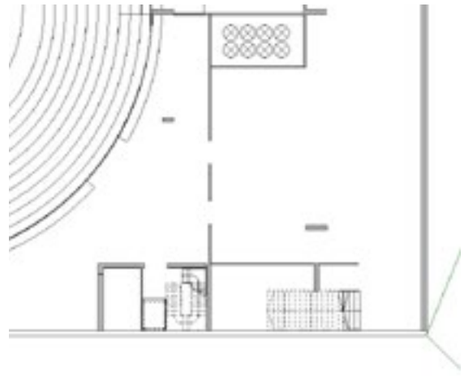


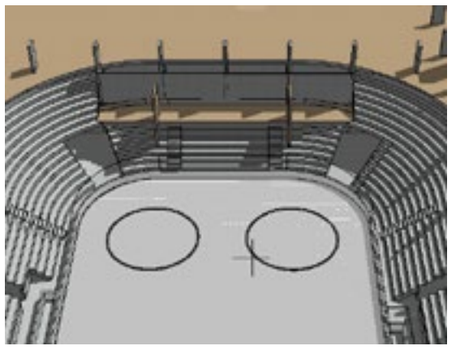


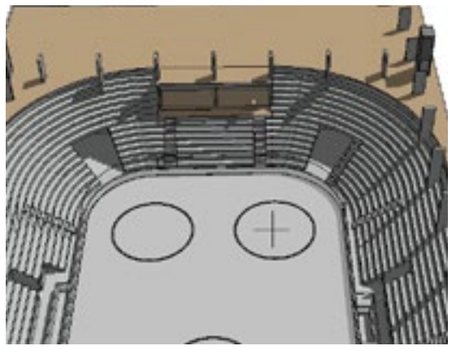


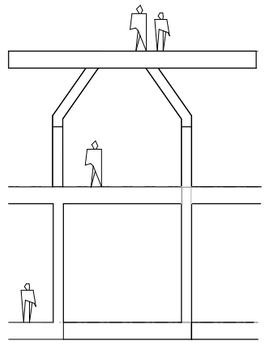


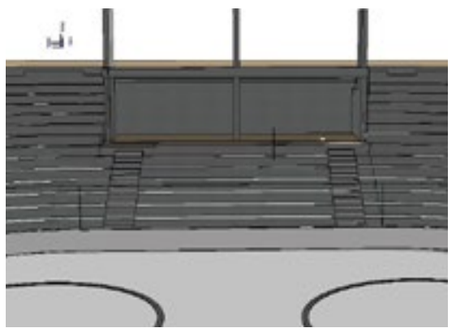




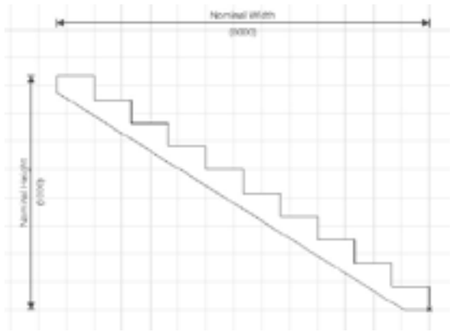


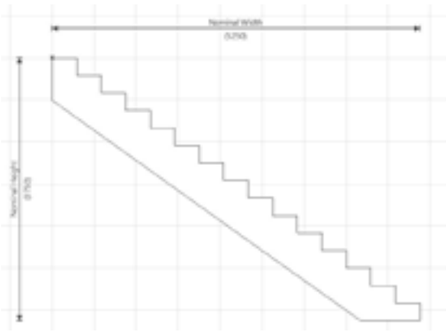


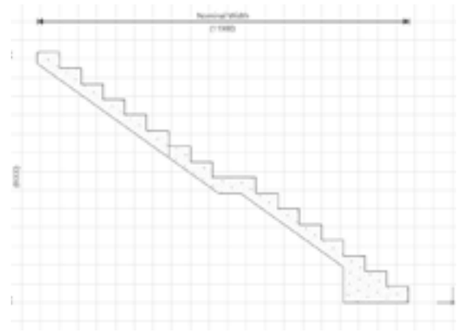


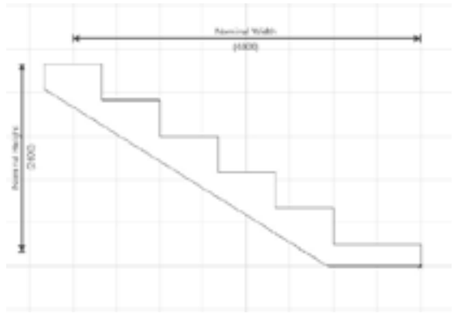


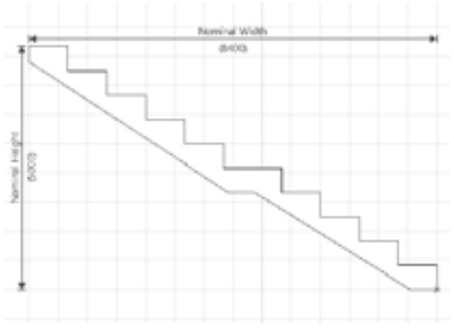
Grandstand - profile

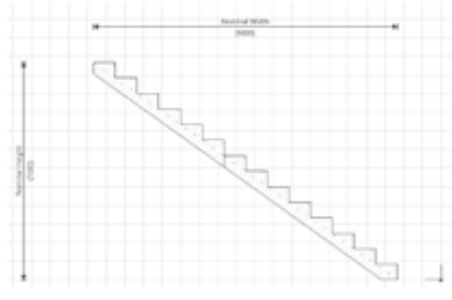


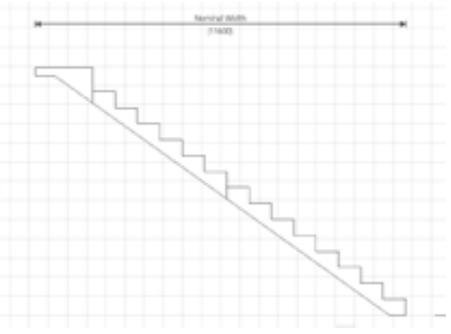


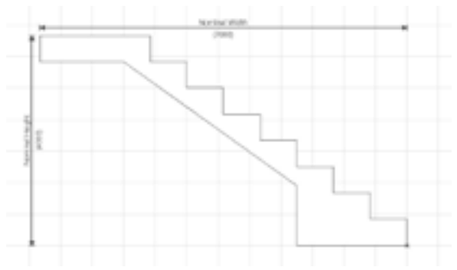


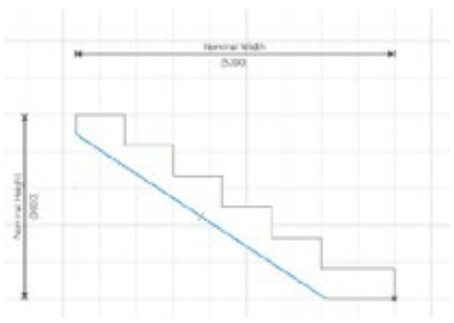


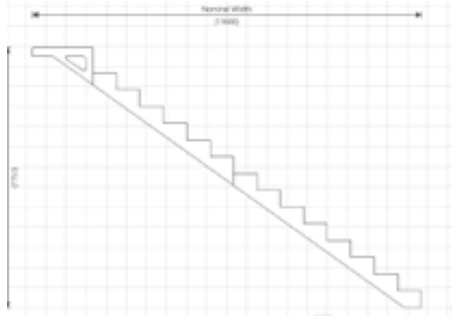


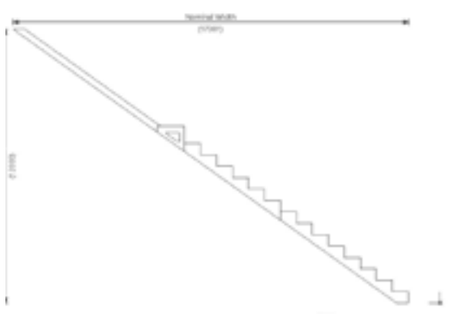


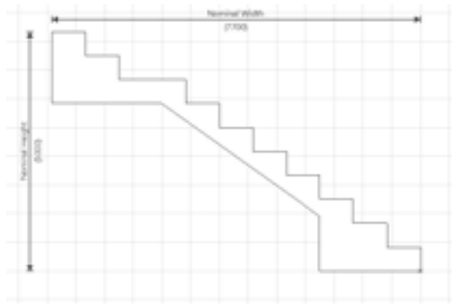


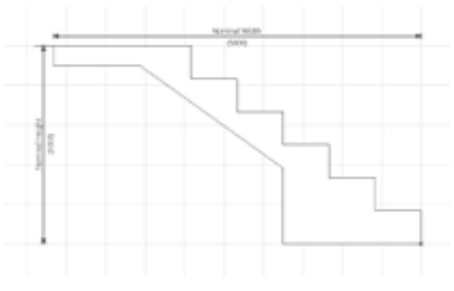


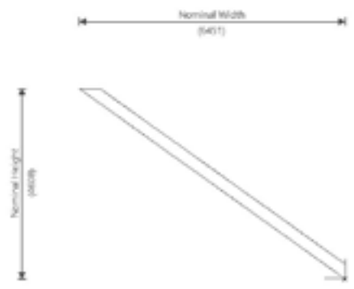


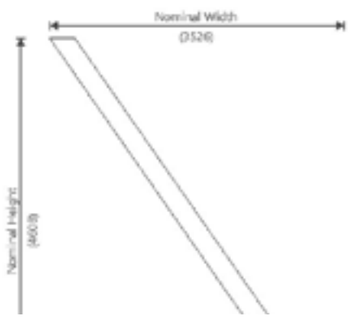




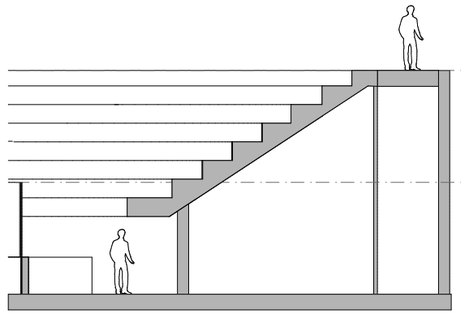


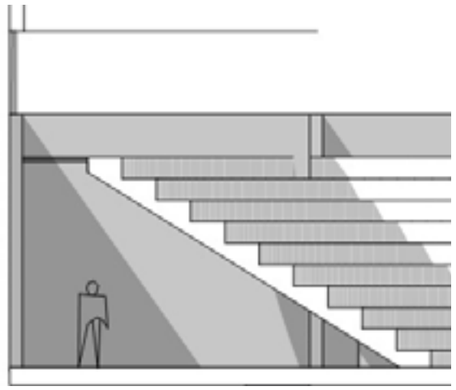




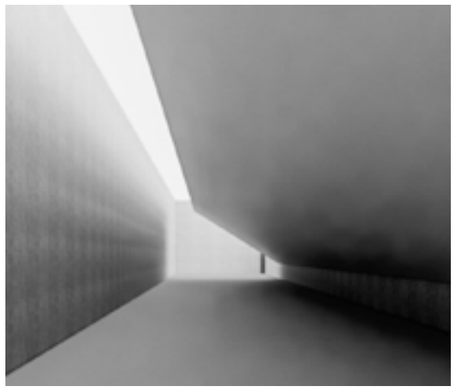


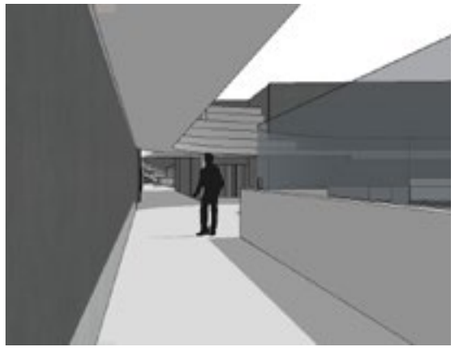
Interior - section

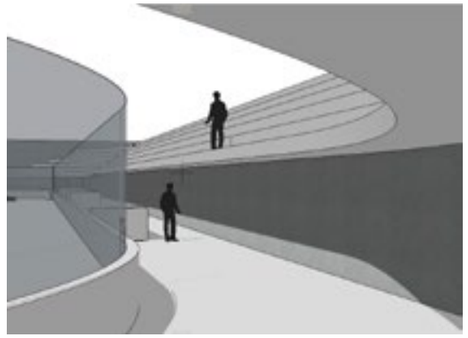


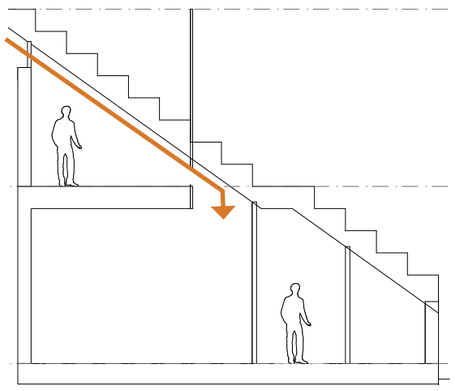


4000mm.

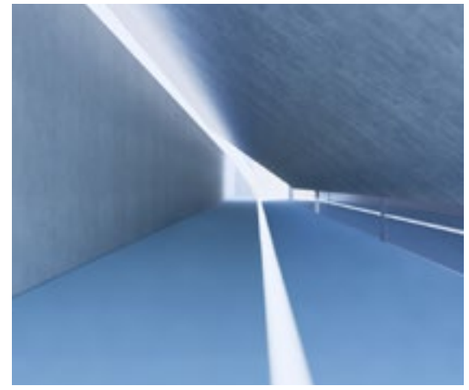


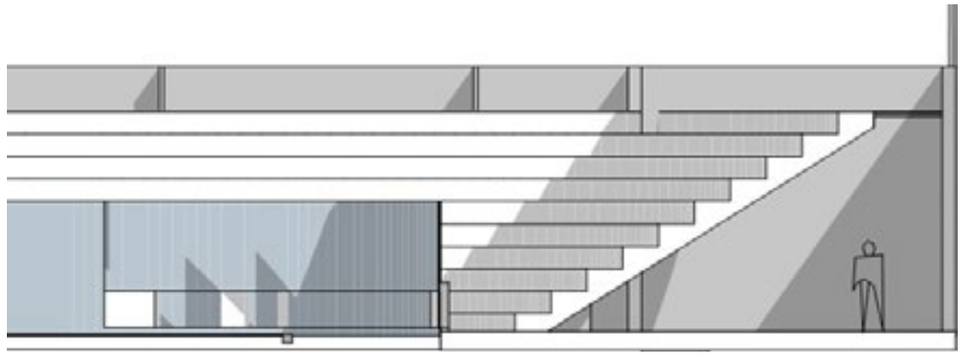


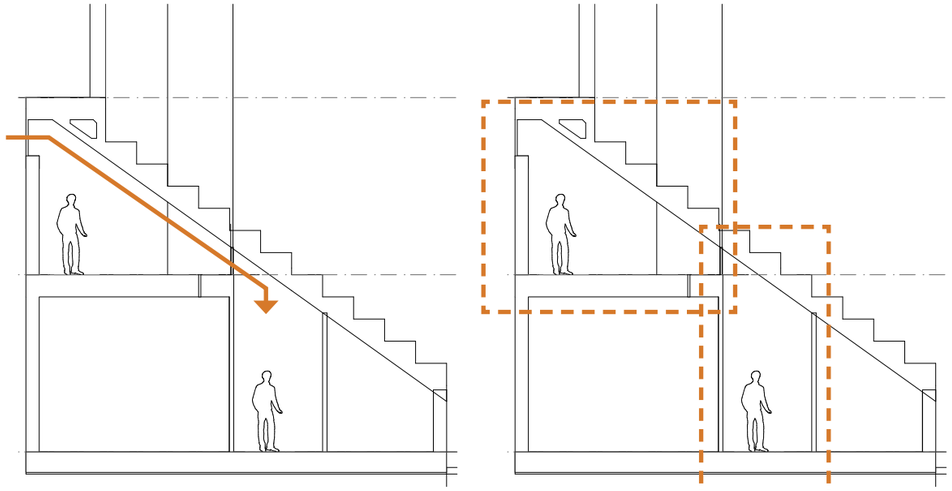




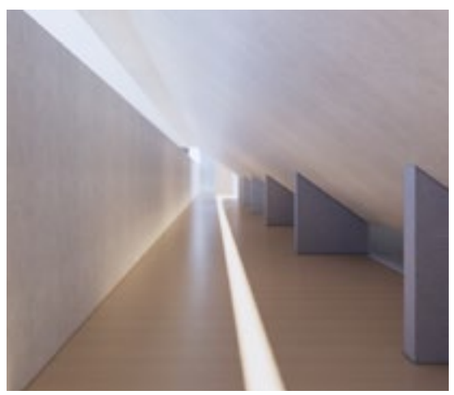
4000mm.

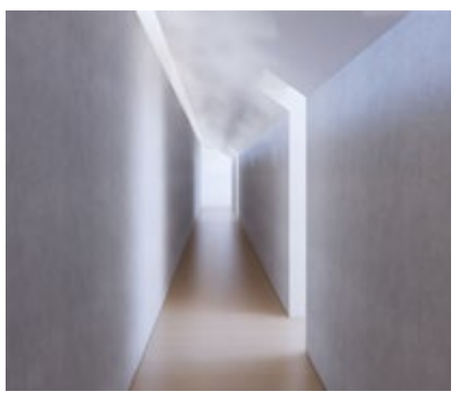


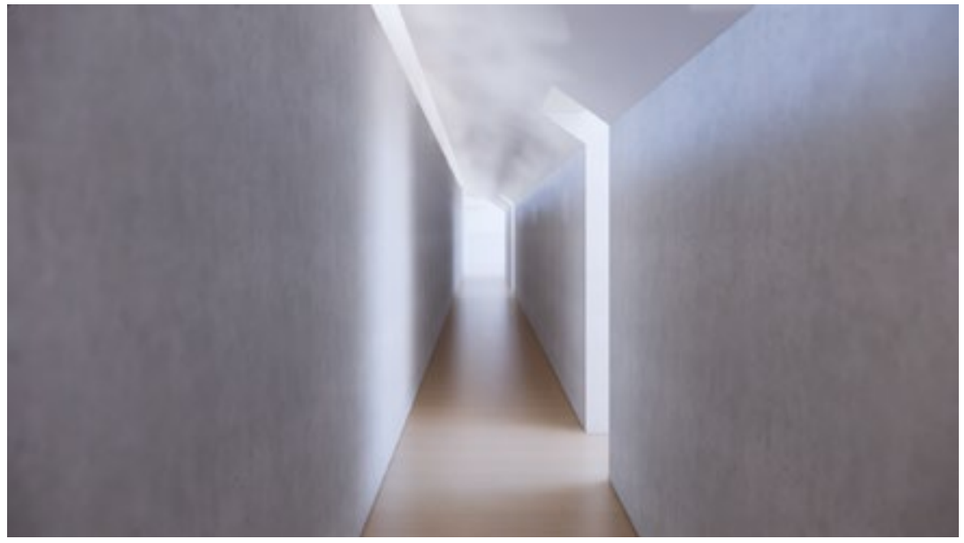


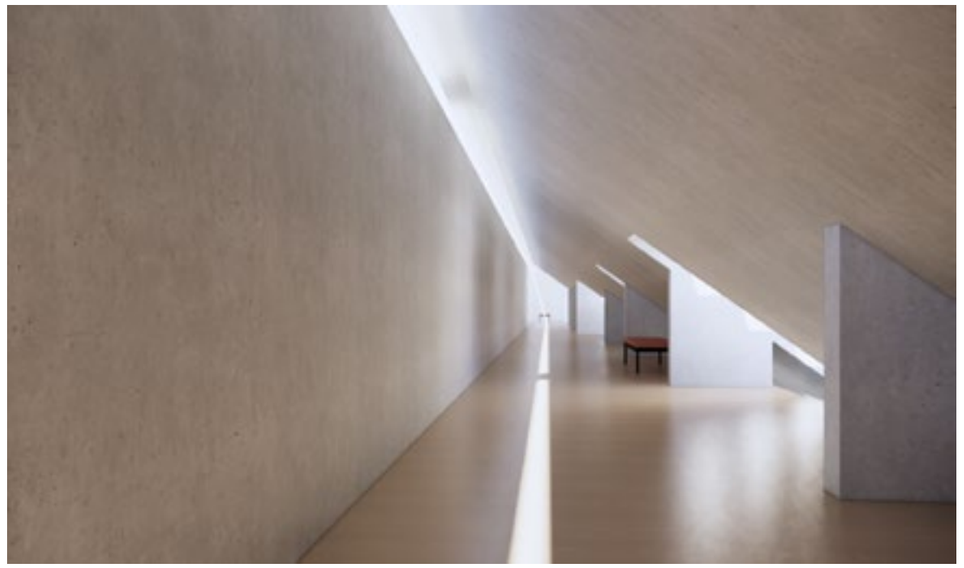


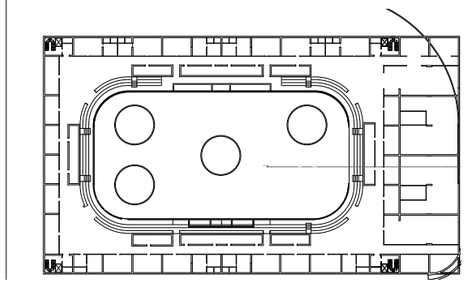
4000mm.

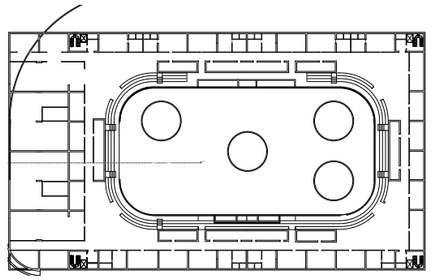


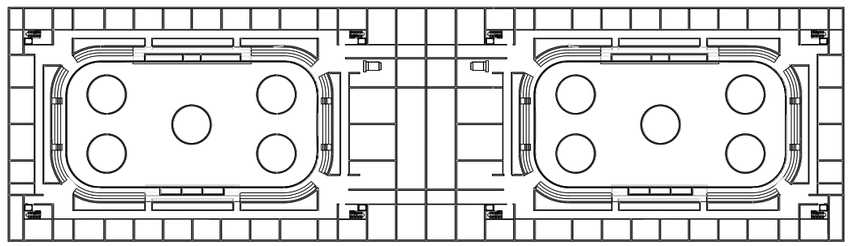


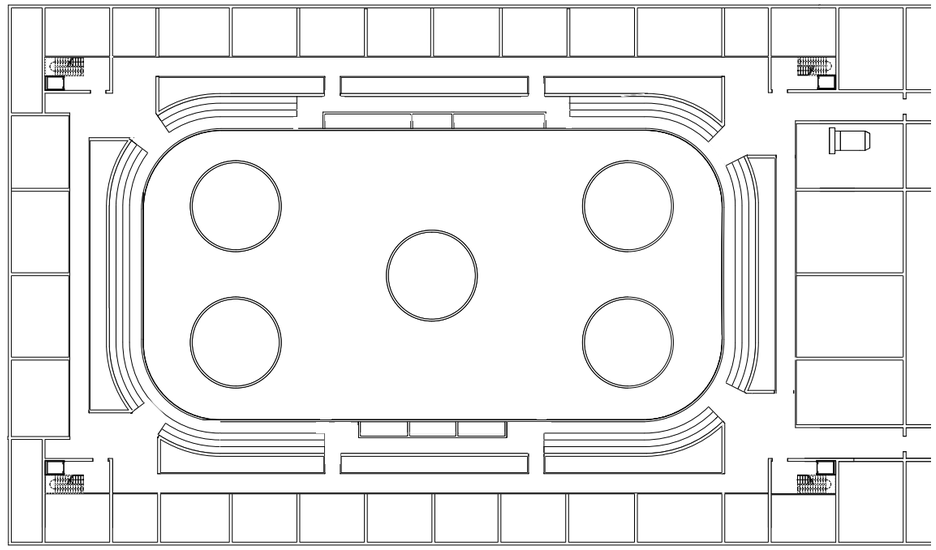




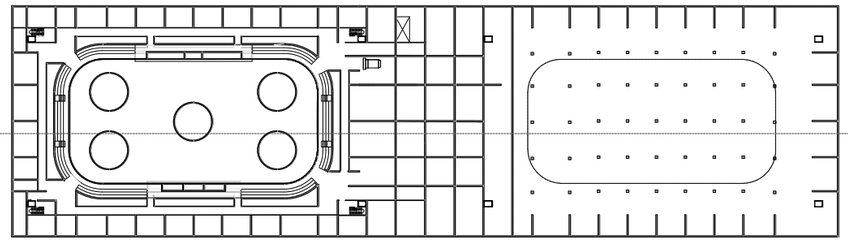


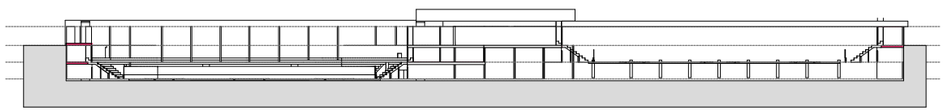


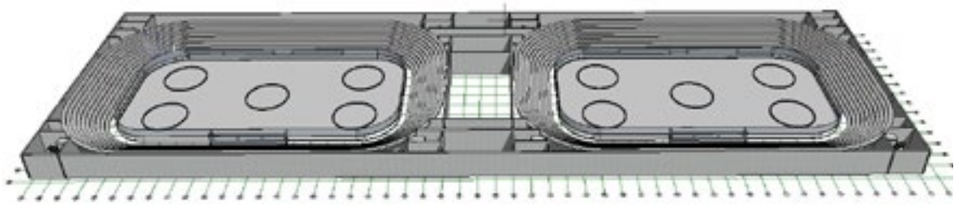


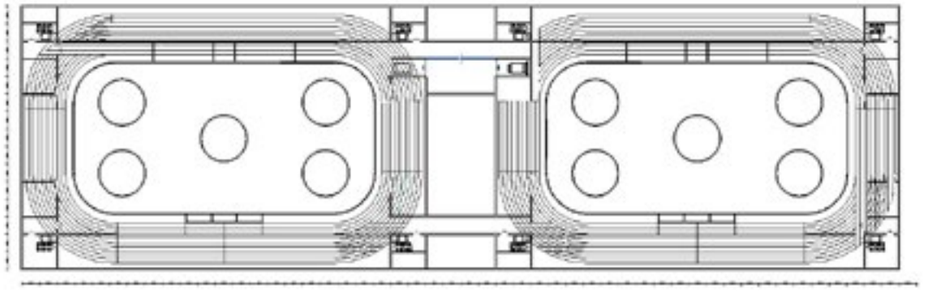


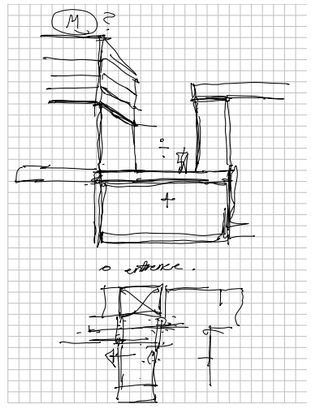
50000

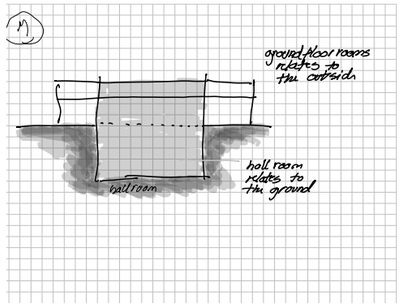




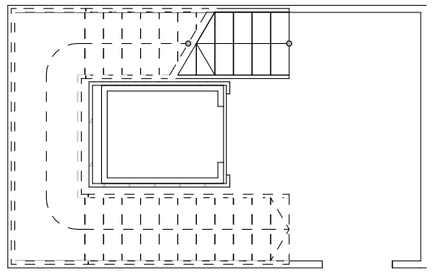


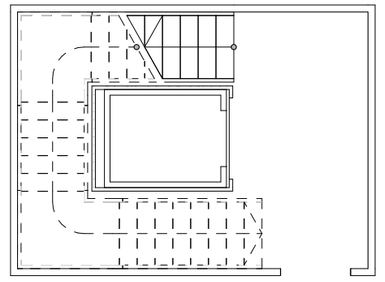


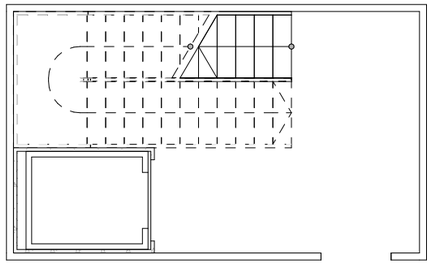


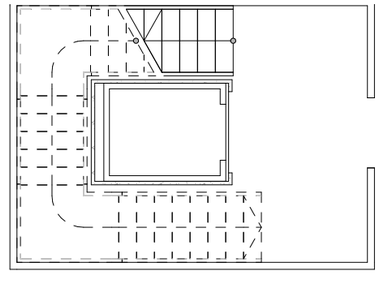


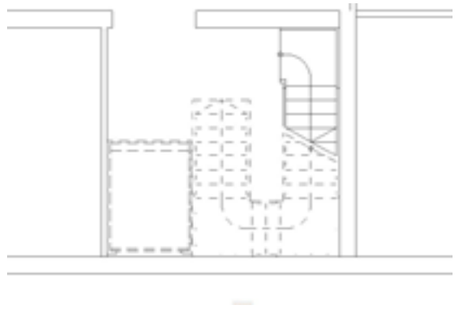
Staircase and elevator

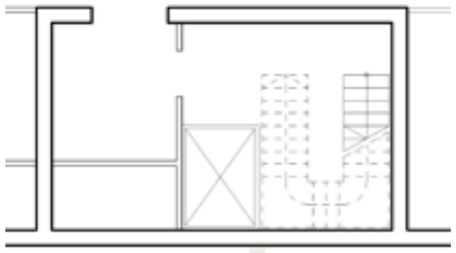




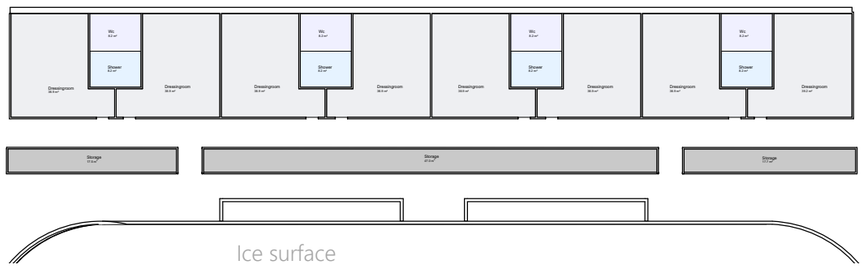


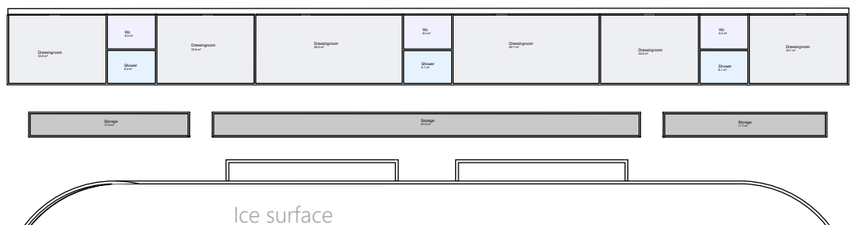


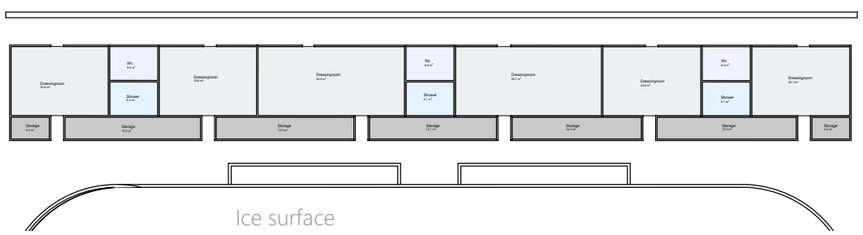




Organisation - Warderobe and storage







Storage

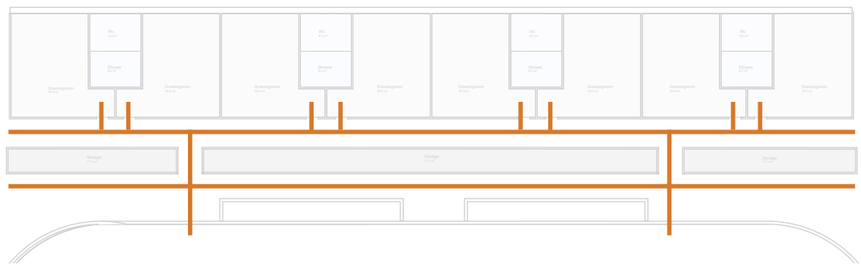
Dressingroom

Shower

Wc

Fig. xx. Formations of wardrobes, storage and walking zones

Sirculation - from warderobe to ice surface



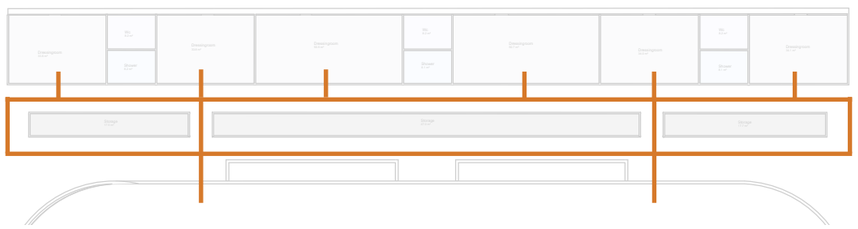


Fig. xx.
Diagrams of w
patterns

References - Structure / Roof

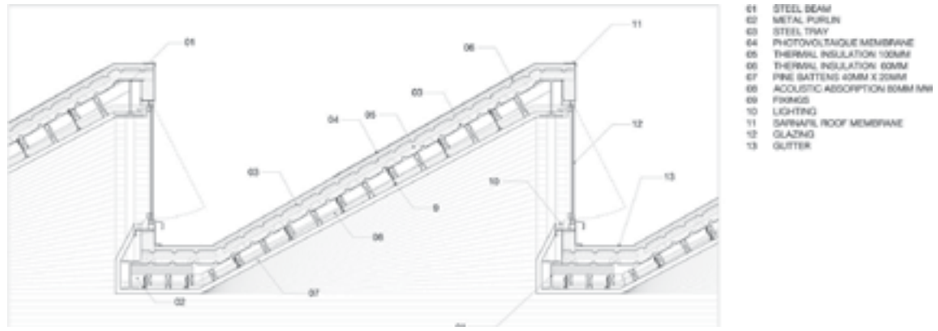
https://www.archdaily.com/922719/alfriston-swimming-pool-duggan-morris-architects?ad_source=search&ad_medium=projects_tab?ad_source=myarchdaily&ad_medium=bookmark-show&ad_content=current-user

Fig. xx.

Swimming Pool, UK.
Architects: Morris + Company
Year: 2014

https://www.archdaily.com/465263/pajol-sports-centre-brisac-gonzalez?ad_source=search&ad_medium=projects_tab?ad_source=myarchdaily&ad_medium=bookmark-show&ad_content=current-user

Gymnasium, Paris, France.
Architects: Brisac Gonzalez
Area : 4060 m2. Year : 2012



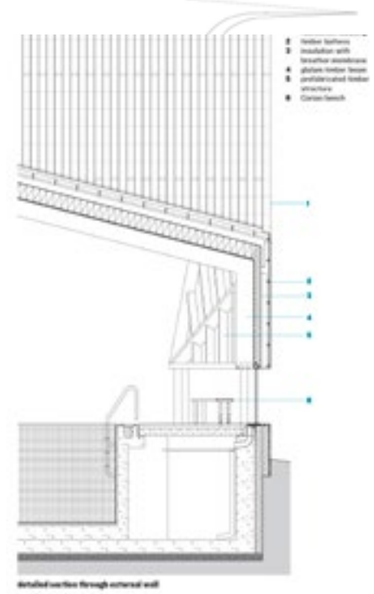


Fig. xx.

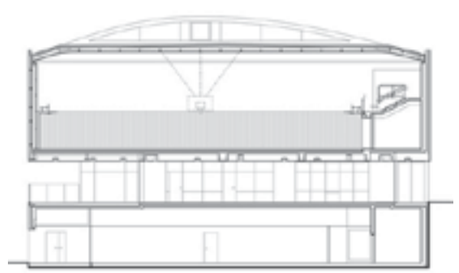


Fig. xx.

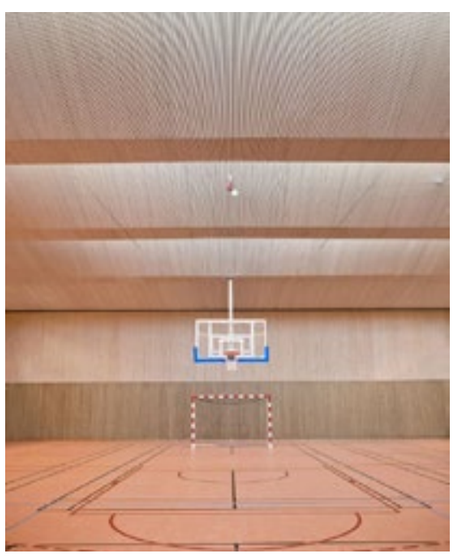
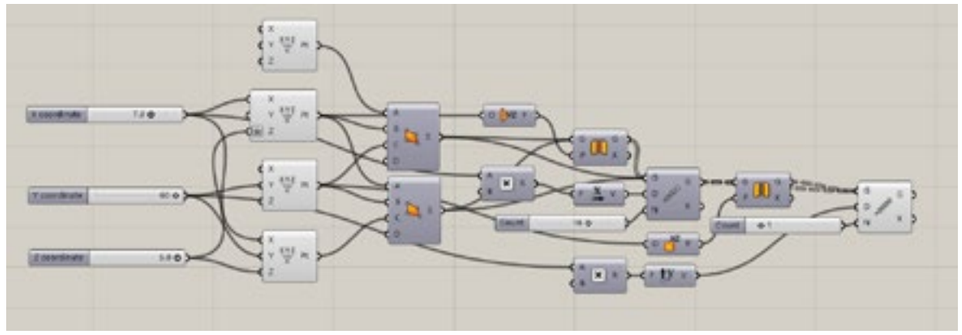


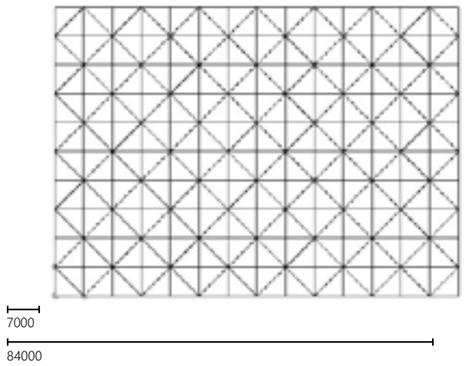
Fig. xx.

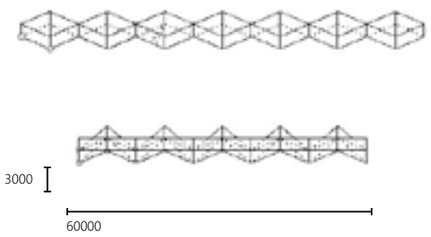
Design - Roof structure

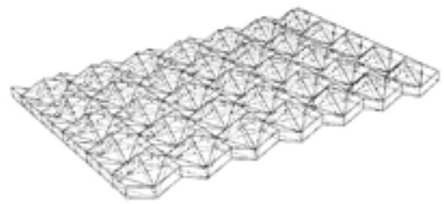
The ice surface is 30m x 60m. With encircled stands, the span will be 50 m in one direction and 70 - 80 m in the longitudinal direction. A metal construction will be able to take this span. In order to achieve a playful and interesting sceiling surface both inside and outside, I am looking for a design that can provide this without building too much in height.

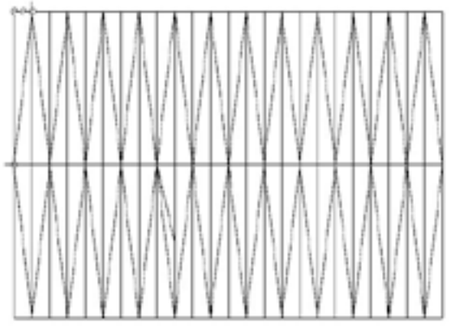
So that the ridge height does not become too high, but at the same time allows room for technical installations such as lighting and ventilation. The hall room should also have good height above the ice surface.

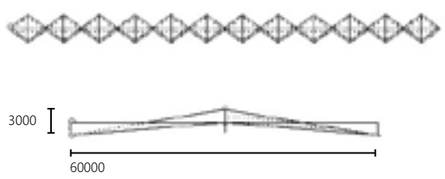


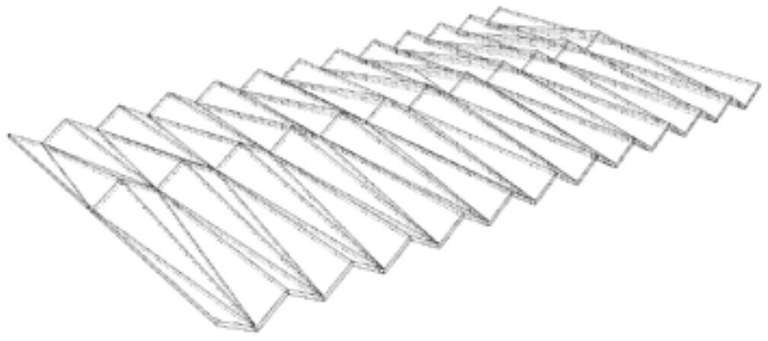


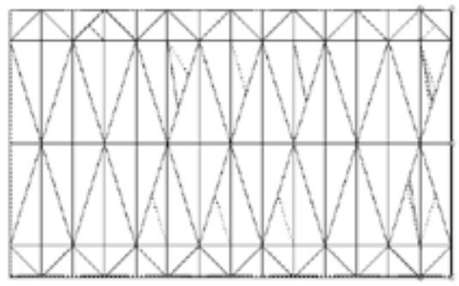


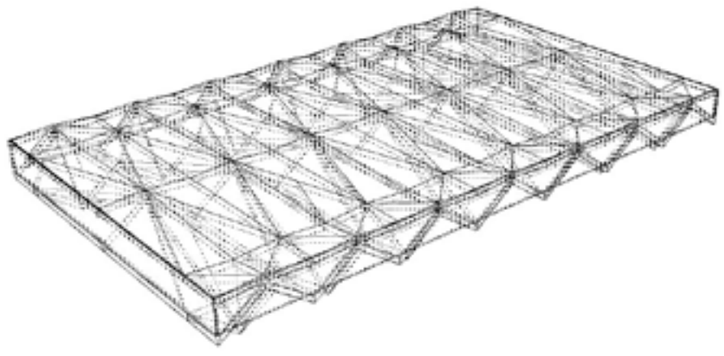


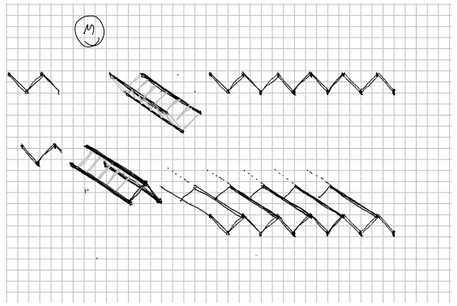


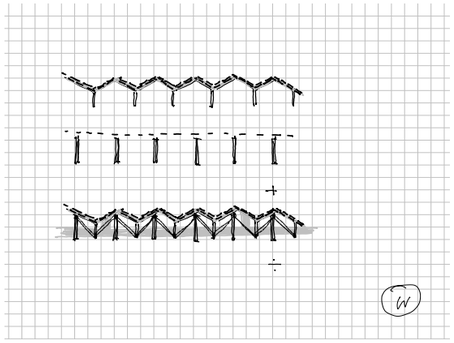


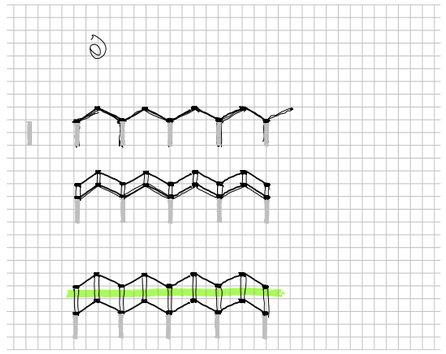


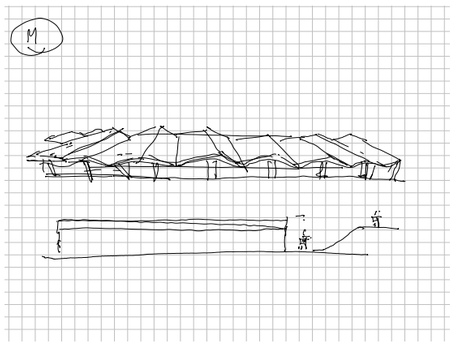


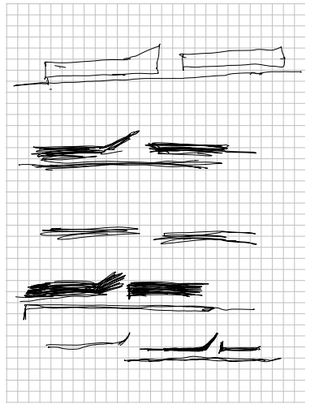


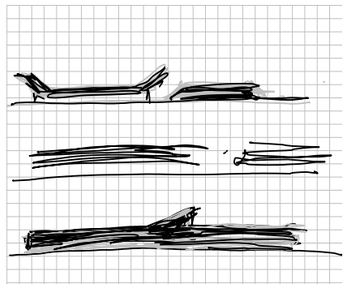


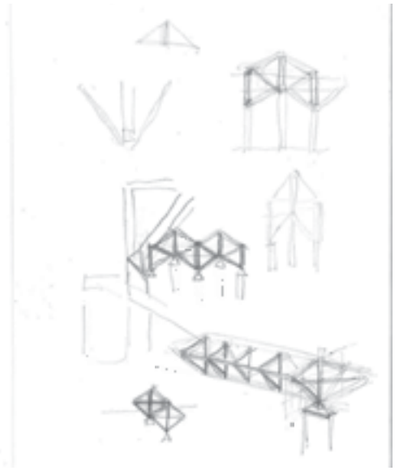


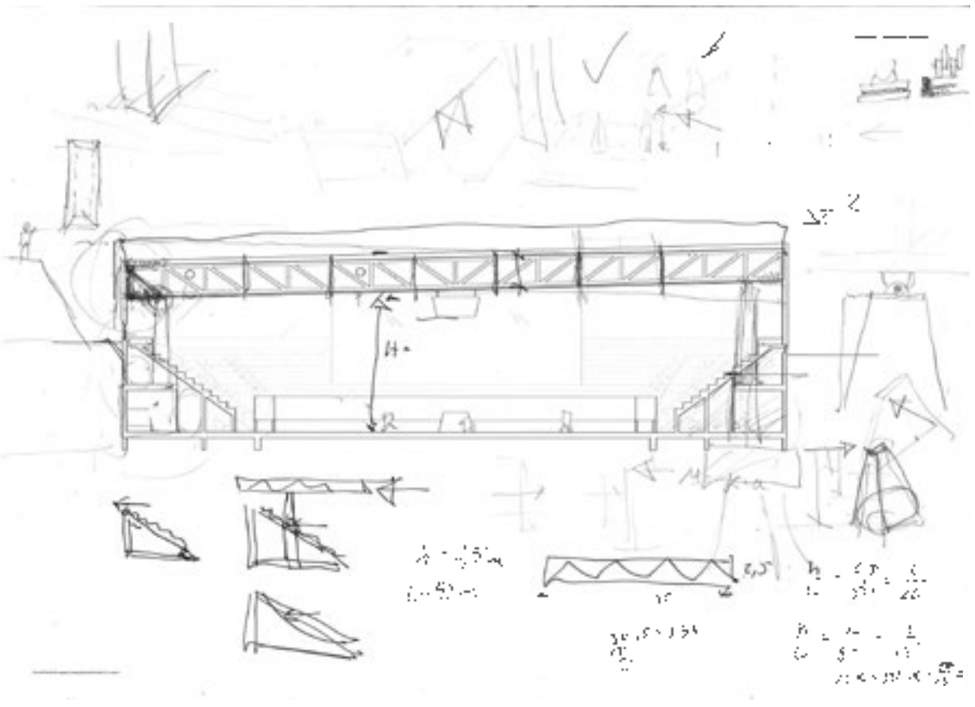


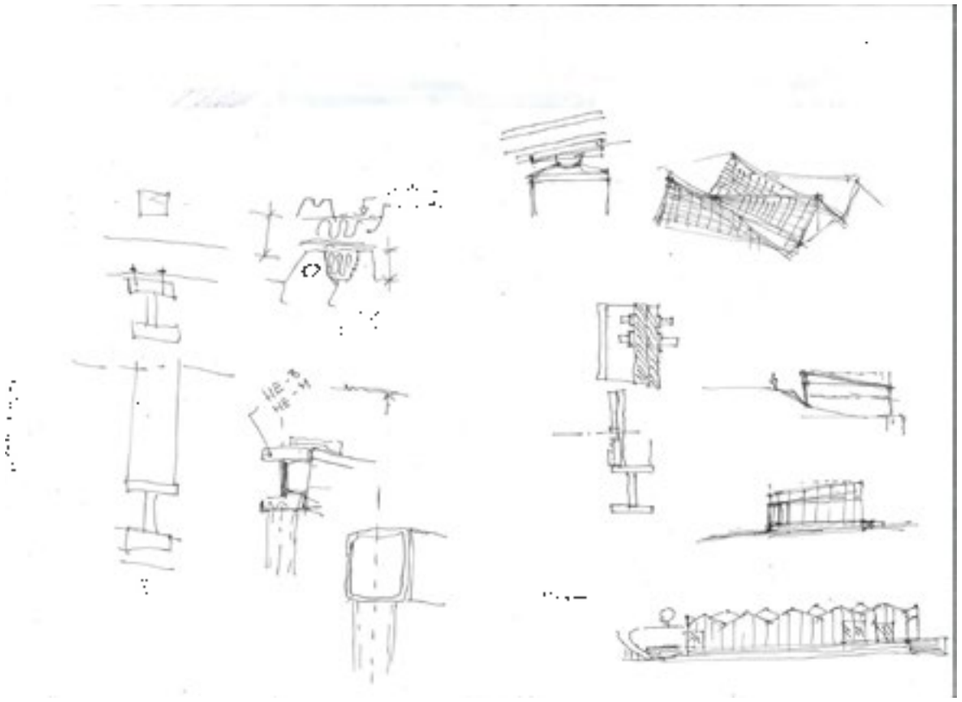


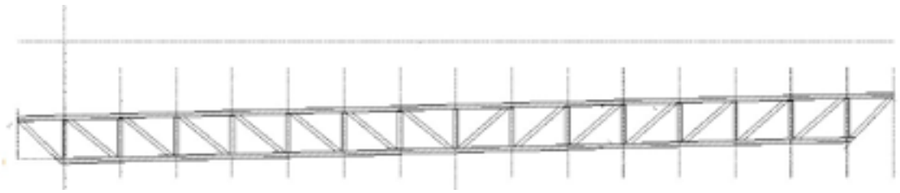


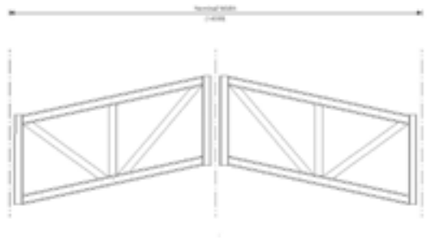


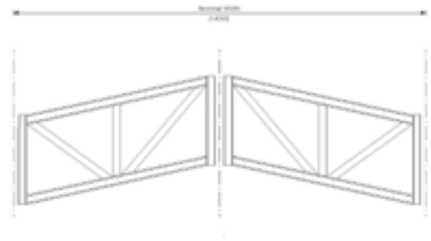


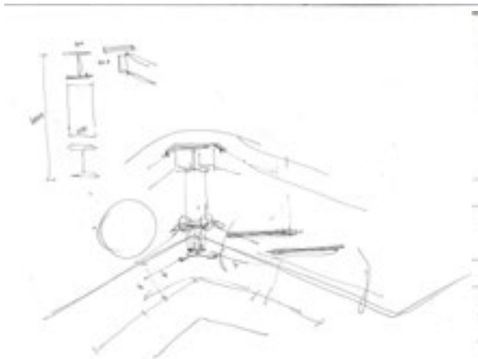


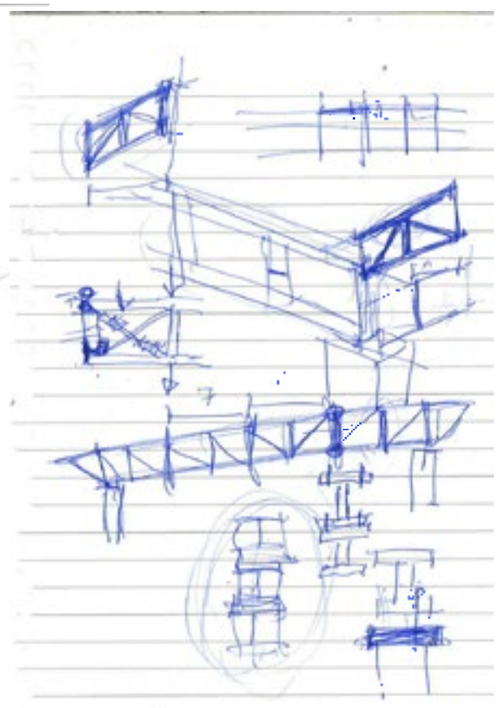


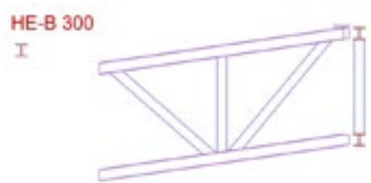












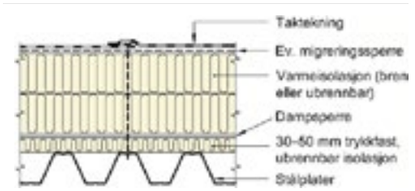
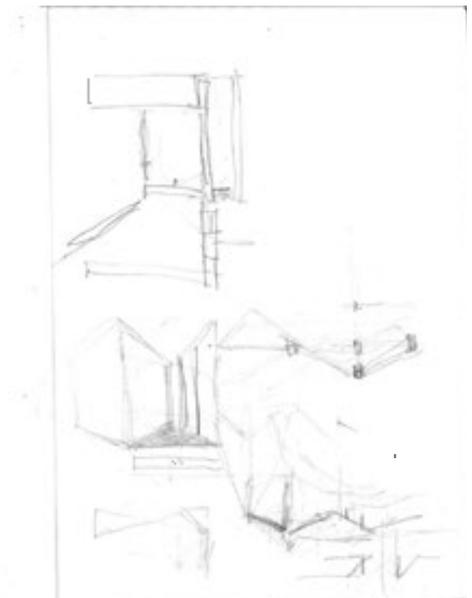
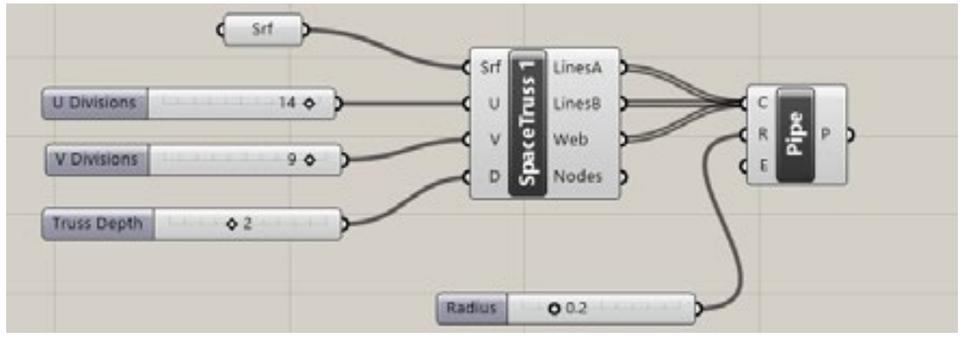


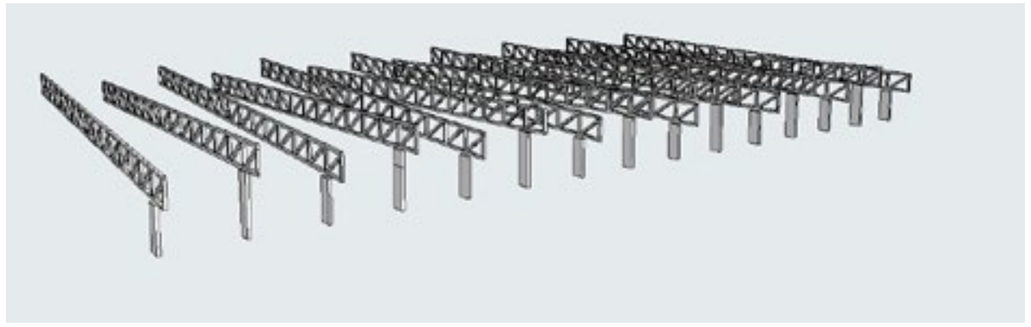
Fig. 221 a

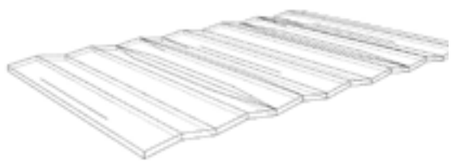
Eksempel på rettvendt tak med bærekonstruksjon av stål

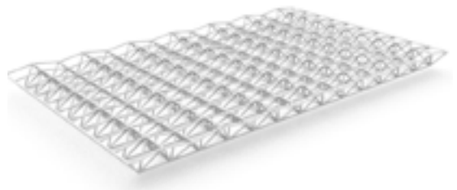
Detail, roof build up.
Section.
From: byggforsk.no

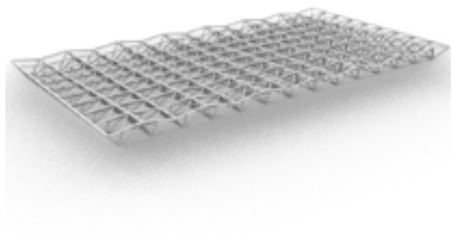


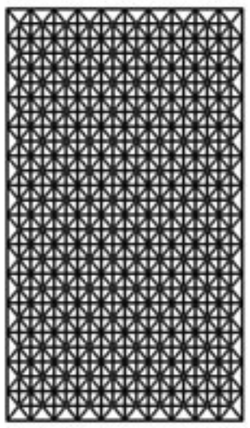

Srf
U Divisions
14
V Divisions
9
Truss Depth
2
Srf
U
V
D
SpaceTruss 1
LinesA
LinesB
Web
Nodes
C
R
E
Pipe
P
Radius
0.2

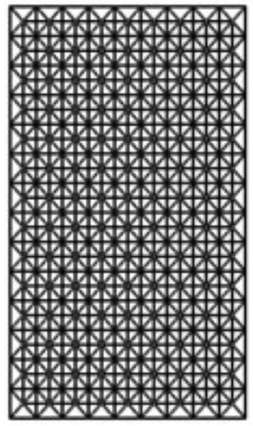


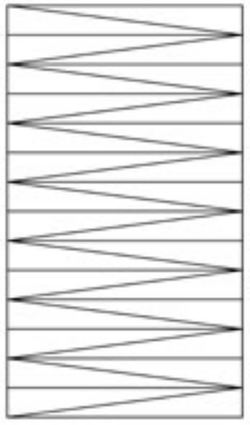


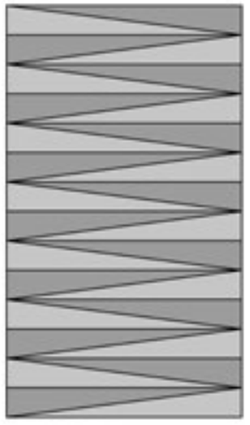


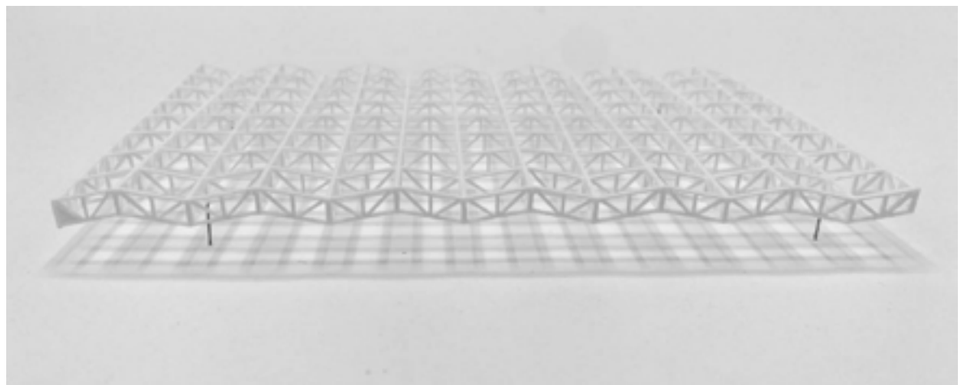


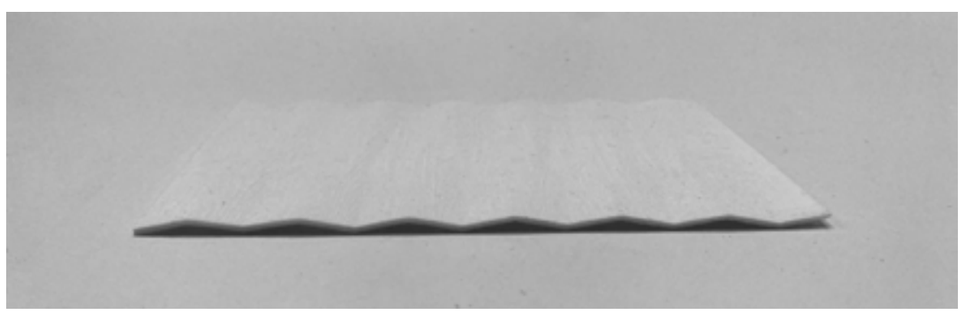


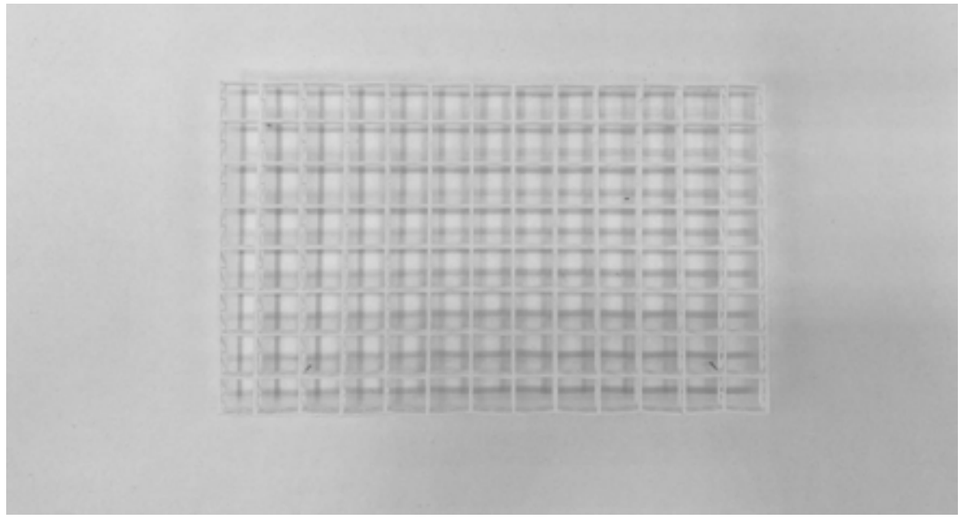




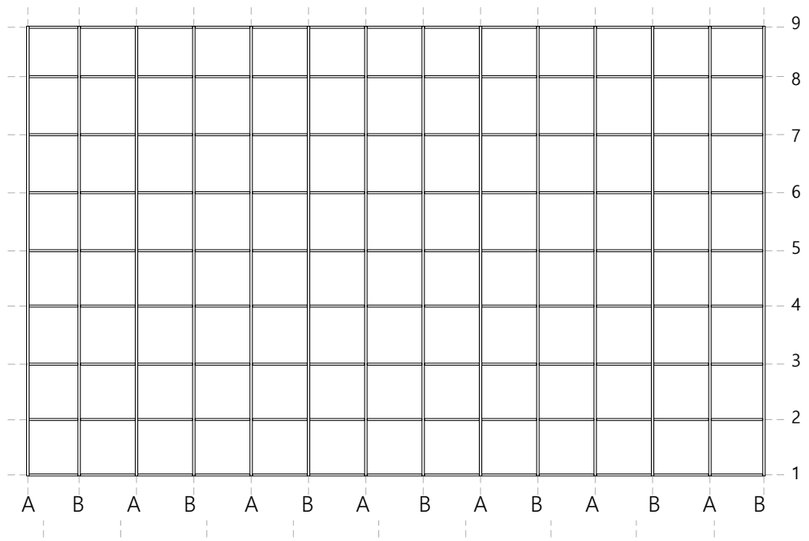


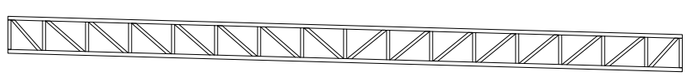




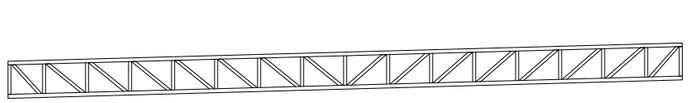


Roof grid.

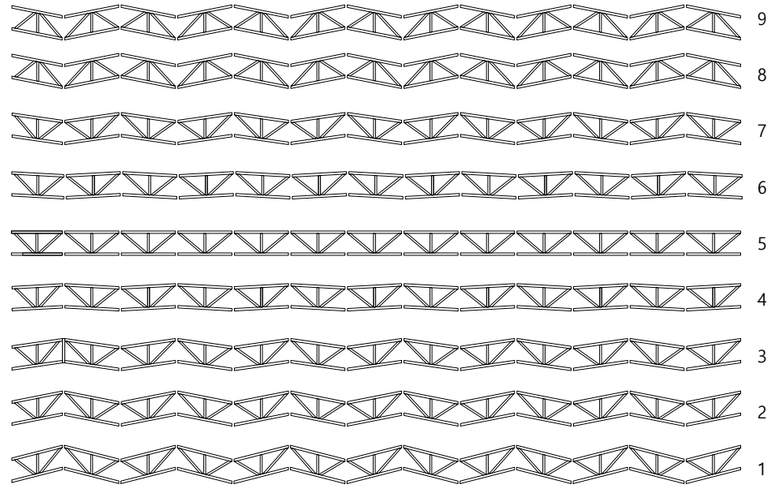




Beam A



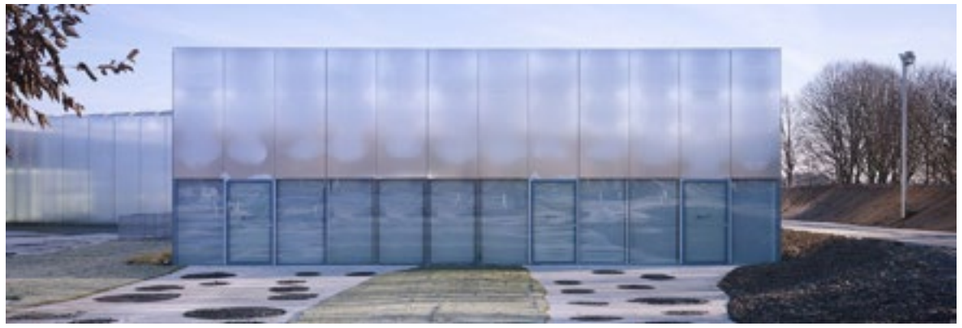
Beam B



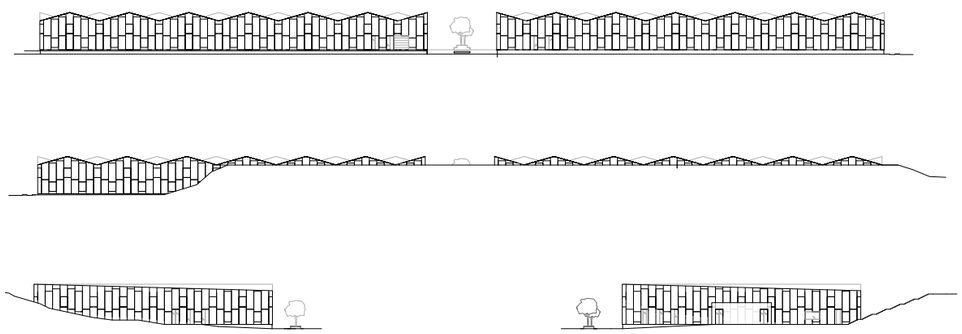
Module formation

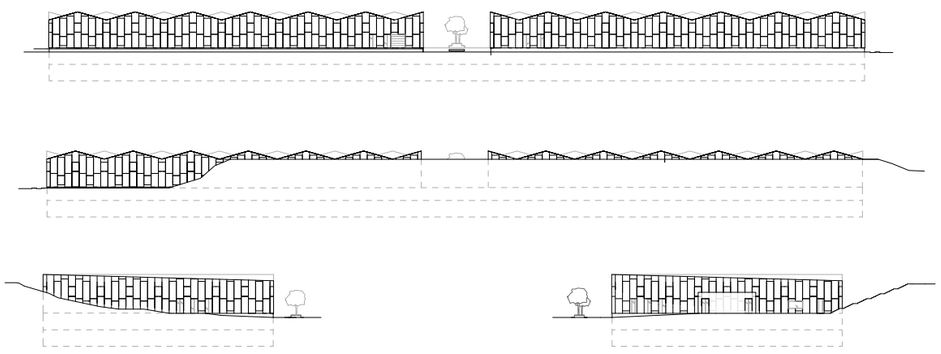
Facade reference

https://www.arch-daily.com/312978/louvre-lens-sanaa/louvre-lens-by-sanaa-23?next_project=no

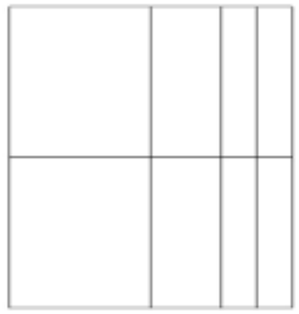


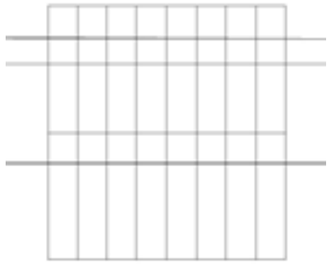
Gallery
Luvre Lens, FRANCE
Architects: SANAA
Year : 2006

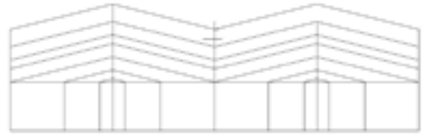


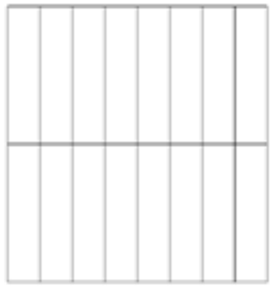


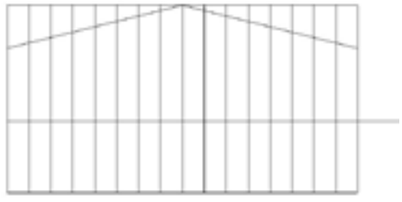
Design - Facade

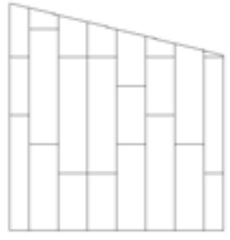


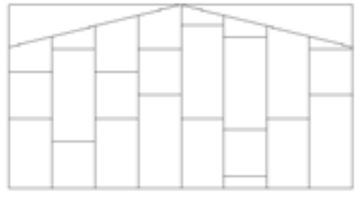


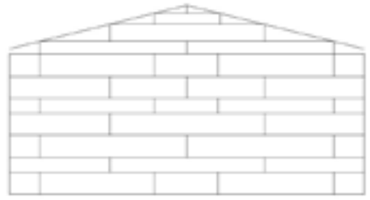


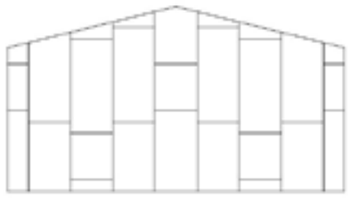


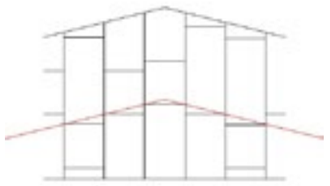


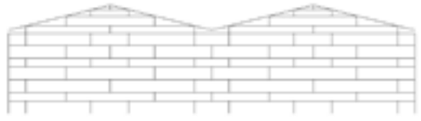


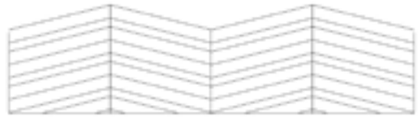




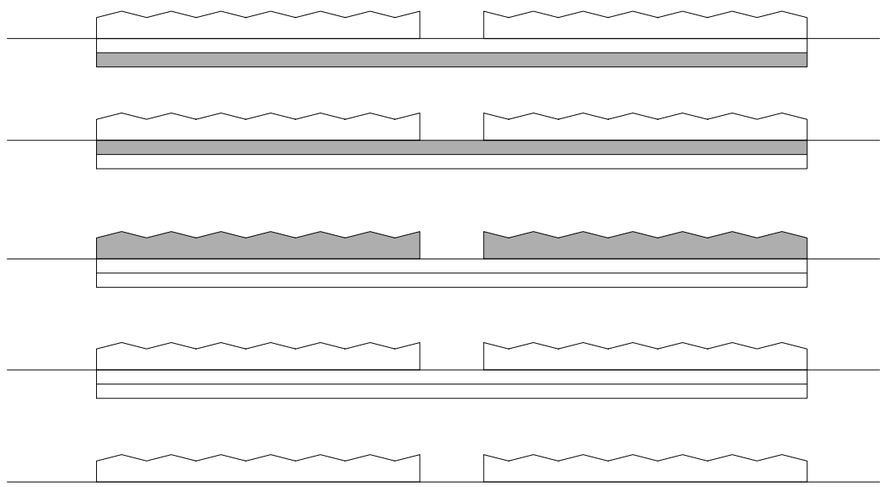


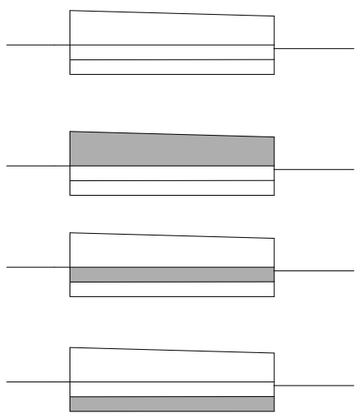


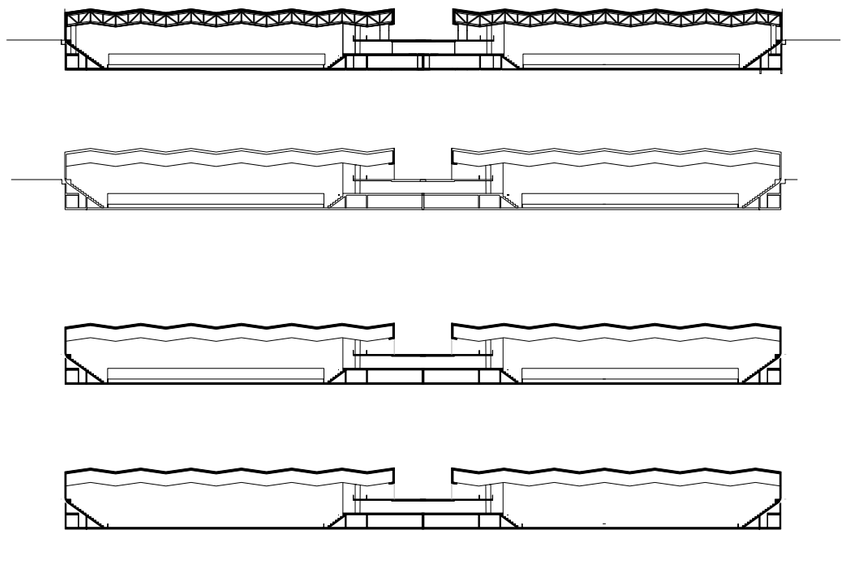


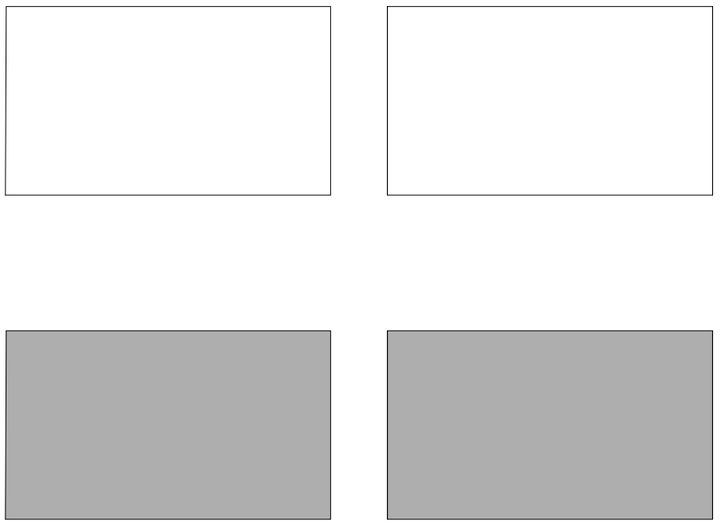


Diagrams -









Hall room