

**FUTURE
BUILT**



Circular buildings

07.03.2023

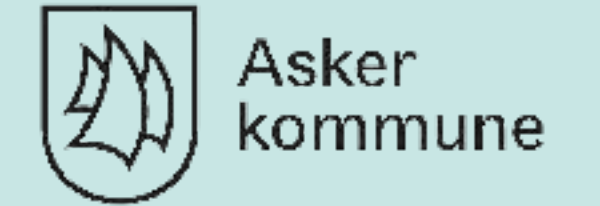
Ulla Hahn

ulla@ullahahn.no

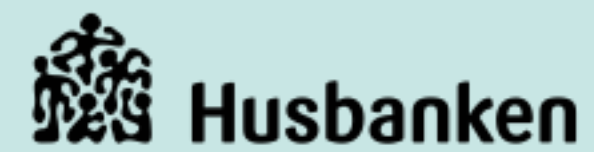
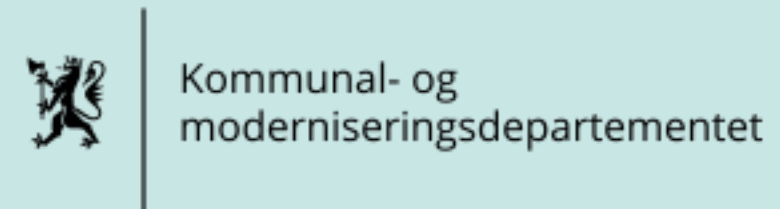
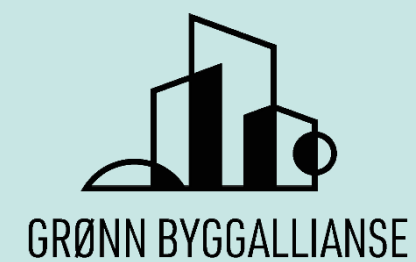
FutureBuilt partnere:



Oslo



FutureBuilt samarbeidspartnere:



ENOVA





Nansenparken/Flytårnområdet,
Bærum/Fornebu

Lilleakerbyen, Oslo/Bærum
Grønlikaia, Oslo

Landbrukskvartalet, Oslo
Hospital area, Drammen



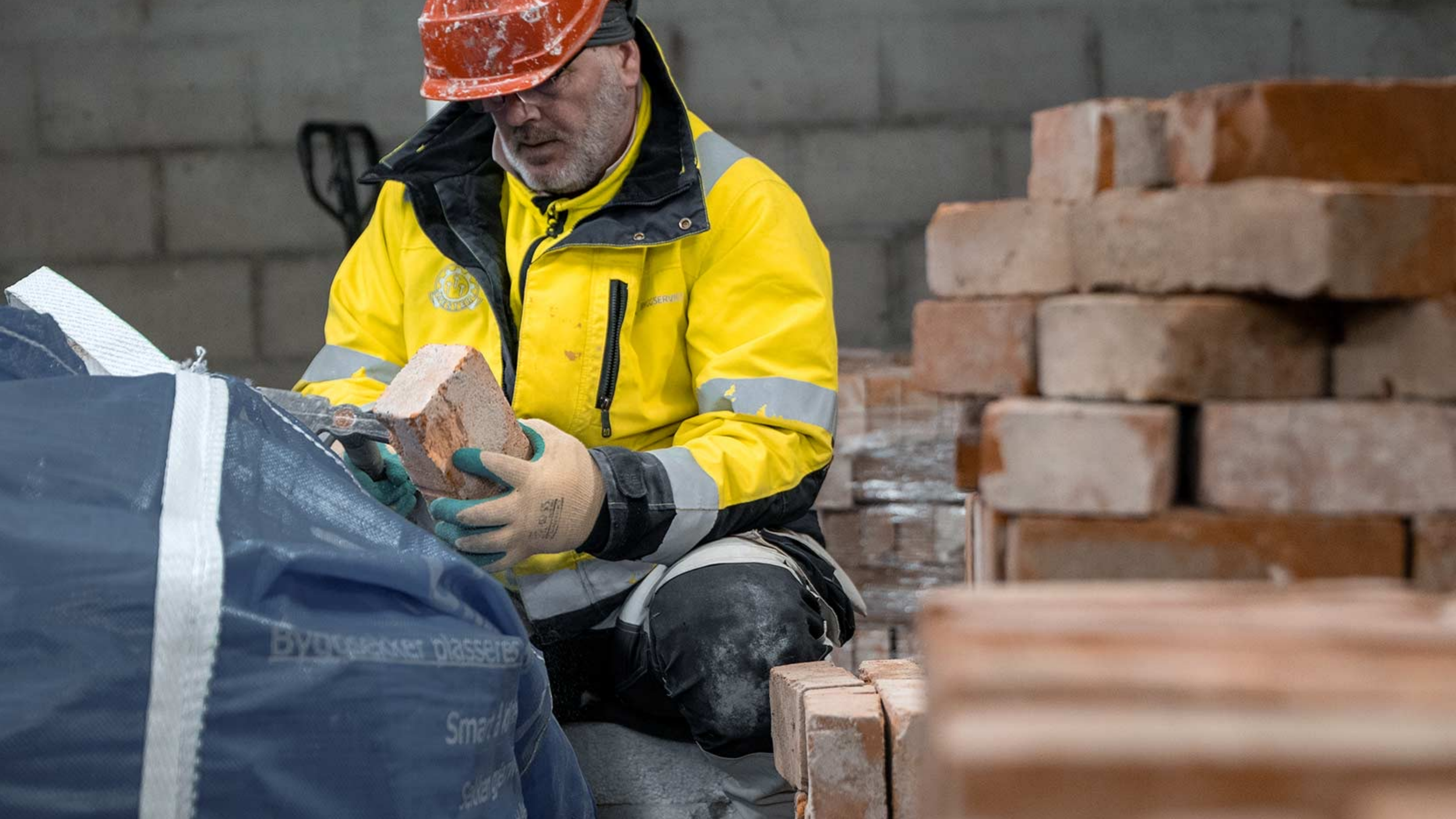
Lilleakerbyen, Oslo og Bærum



Lilleakerbyen, Oslo/Bærum
Developer: Mustad eiendom

The image shows a top-down view of a workspace where various materials and waste samples are being organized. On the left, there are several clear plastic jars containing different types of waste: one with dark, irregular fragments, one with white foam, one with a mix of small debris, one with cork stoppers, and one with white fibers. The central area features a large, dense grid of cork stoppers, a rectangular board of wood chips, a board of oriented strand board (OSB), and a petri dish filled with grey granules. Below these are several small, rectangular blocks of different colors and textures, including a grey one with a ribbed pattern, a light brown one, and a dark brown one. On the right, there are more samples, including a dark grey textured board, a wooden beam, and a row of small, colored squares (black, orange, black). A person's hands and arms are visible, interacting with the materials. The word 'WASTELAND' is overlaid in a white box in the center of the image.

WASTELAND





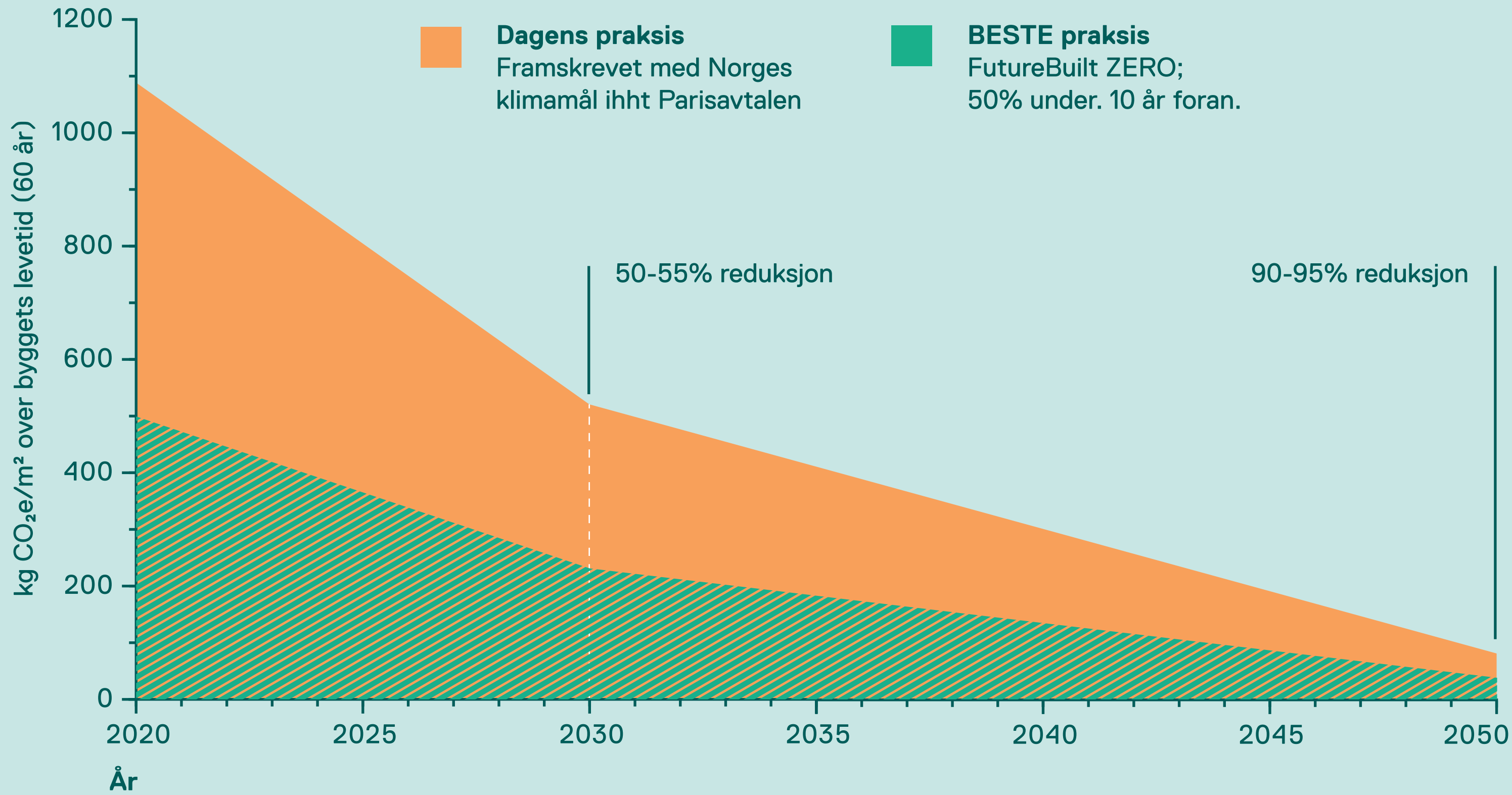
Backdrop

- 1) Climate crisis
- 2) Nature crisis
- 3) Waste crisis
- 4) Mentality crisis

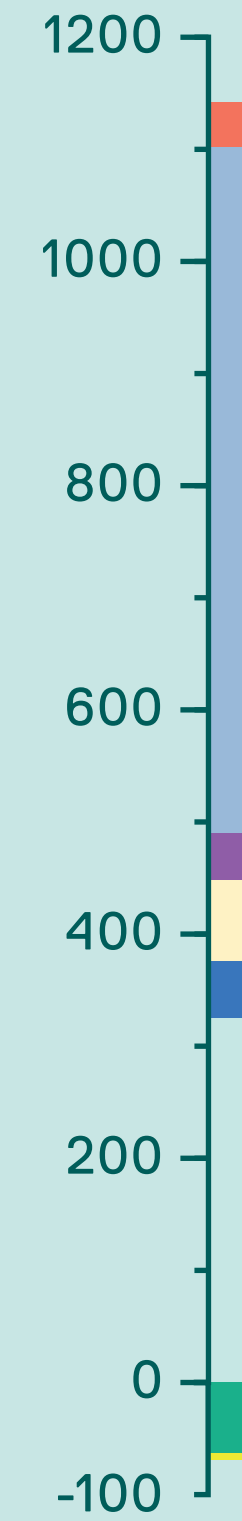
FutureBuilt ZERO

veien mot nullutslipp

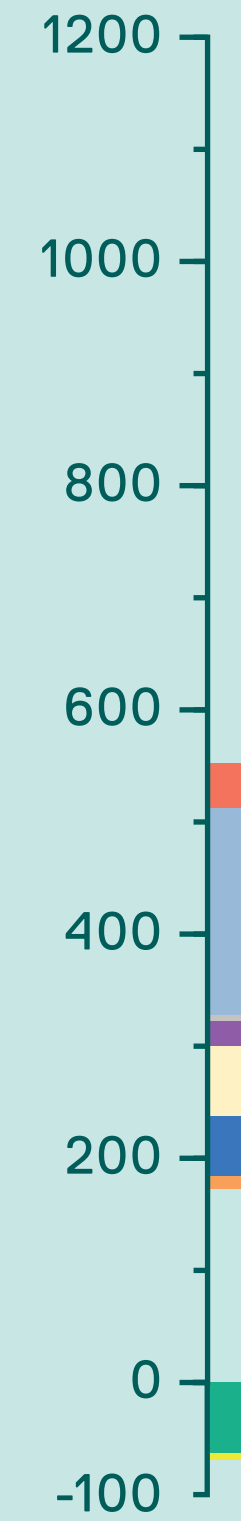
Klimagassutslipp for bygg



Dagens praksis
Fordeling av utslipp 2020

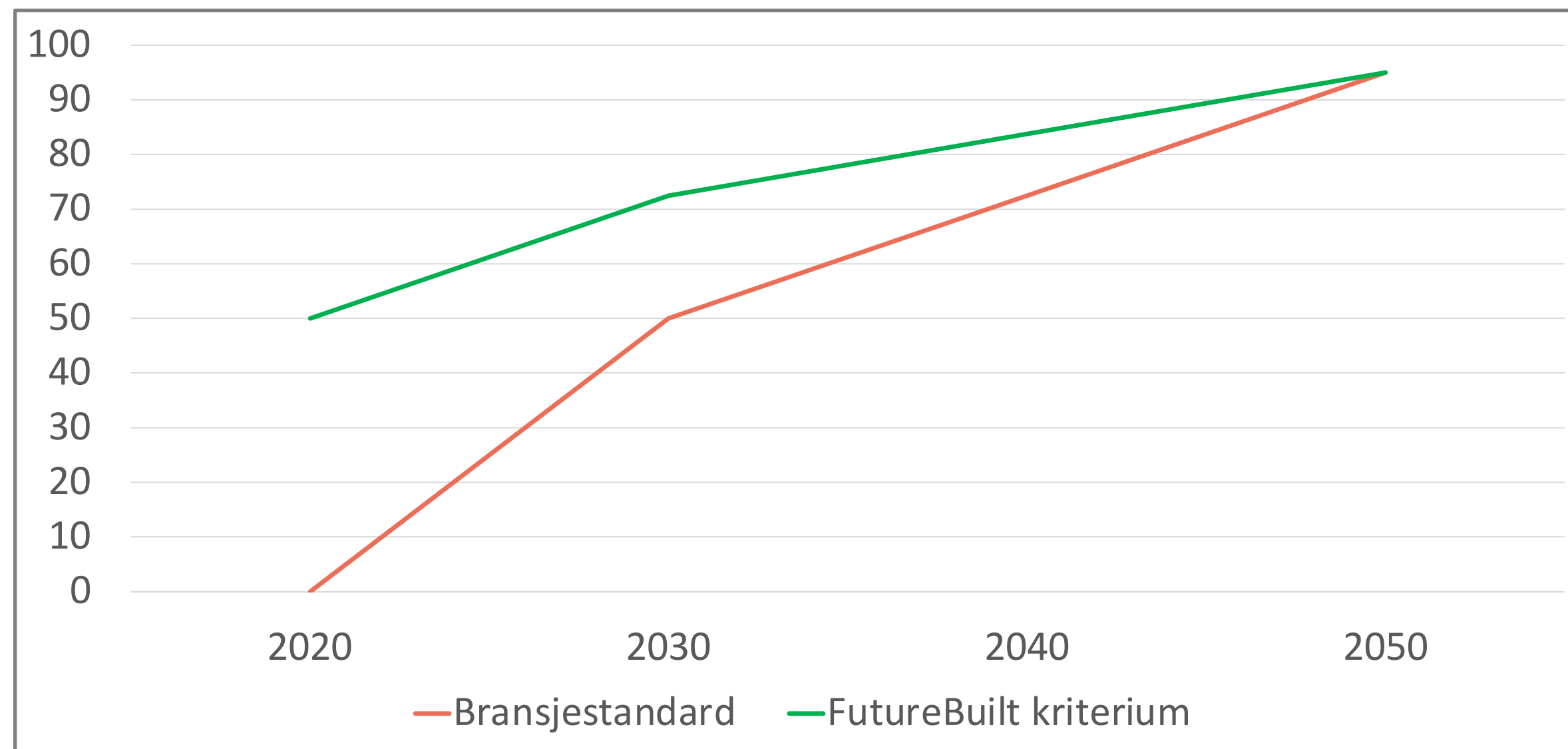


BESTE praksis
Fordeling av utslipp 2020



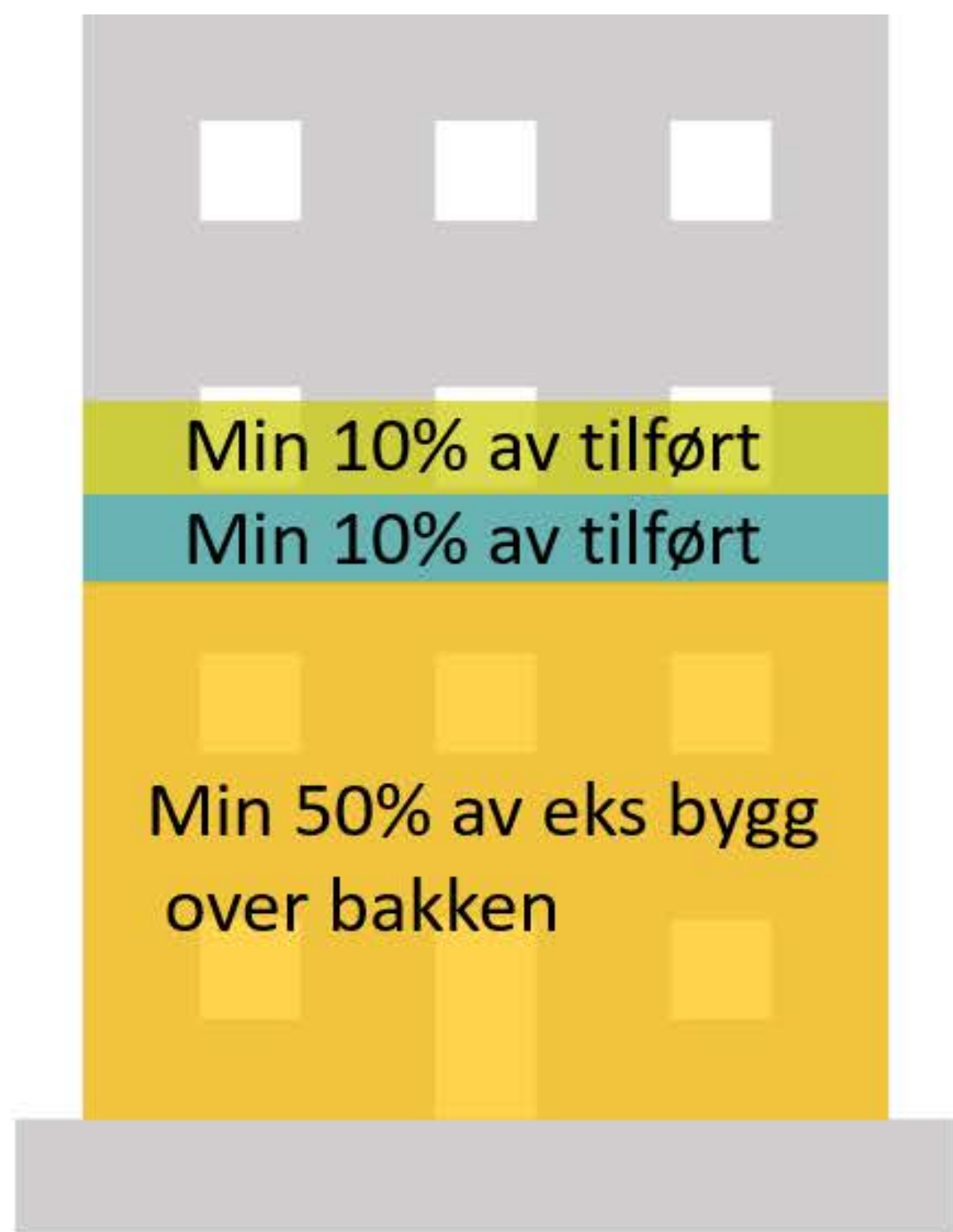
- Avfallsforbrenning
- Netto energibruk i drift
- PV, utskiftning
- Materialer, driftsfase
- Byggeplass
- Transport til byggeplass
- PV, byggeår
- Materialer, byggeår
- Biogent
- Karbonatisering

FutureBuilt Circular



A Nåtid	Bevart	30 %	100 %	53 %	67 %
	Ombrukt	10 %	100 %		
	Gjenvunnet	25 %	50 %		
B Fremtid	Ombrukbart	40 %	67 %	45 %	33 %
	Gjenvinnbart	55 %	33 %		
Sirkularitet - hele levetiden					50 %

FUTURE
BUILT

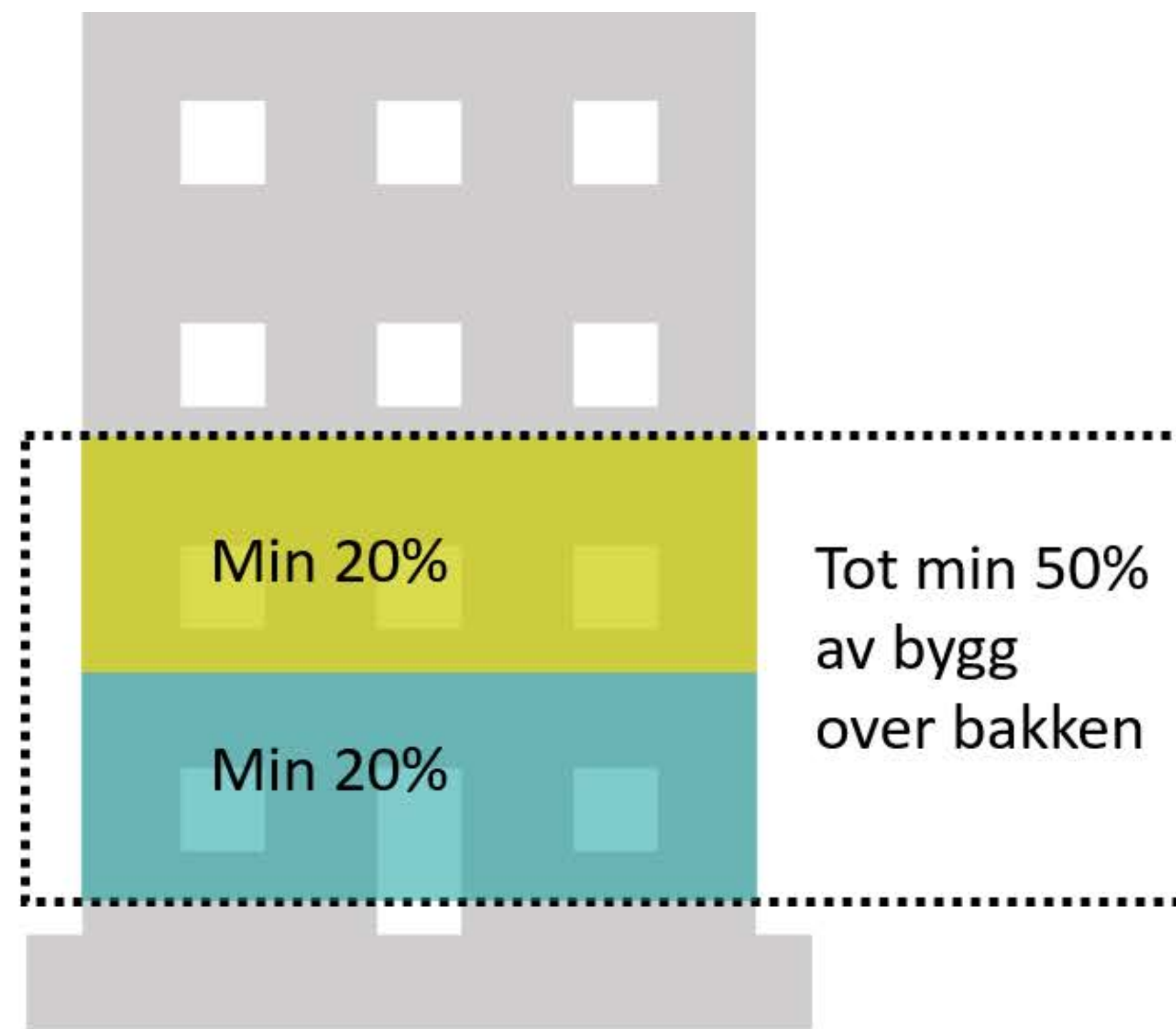


Rehabilitering

Ombrukbare komponenter

Ombrukte komponenter

Eksisterende bygg



Nybygg

BUILDING TRANSFORMATIONS

- Carbon storage
- identity
- donor of components
-



Building Transformations

Sofienberggta 7; Skur 38; KA13;
KA23; Landbrukskvartalet;
Christian Kroghs gt. 2



Chr. Kroghs gate 2
Oslo Areal / Entra; Oslo Works; Haugen Zohar Architects



Fredrik Selmers vei 5
«Circular Powerhouse»
Skanska; Grape Architects

REUSE OF BUILDING COMPONENTS

- Use the resources at the highest level possible
- Min. 50 per cent reuse or reusable components

lokasjon

avn KF

Heiskabin
Akershusstranda 19, 0150 Oslo

1 0 0

Røykvarsler
Akershusstranda 19, 0150 Oslo

1 0 0

Trapperekkverk
Akershusstranda 19, 0150 Oslo

1 0 0

Vindeltrapp
Akershusstranda 19, 0150 Oslo

1 0 0

WLAN router
Akershusstranda 19, 0150 Oslo

38 0 0

Skyvedør
Akershusstranda 19, 0150 Oslo

1 0 0



Resource mapping during demolition
Skur 38; KA23



Resources during demolition
KA23

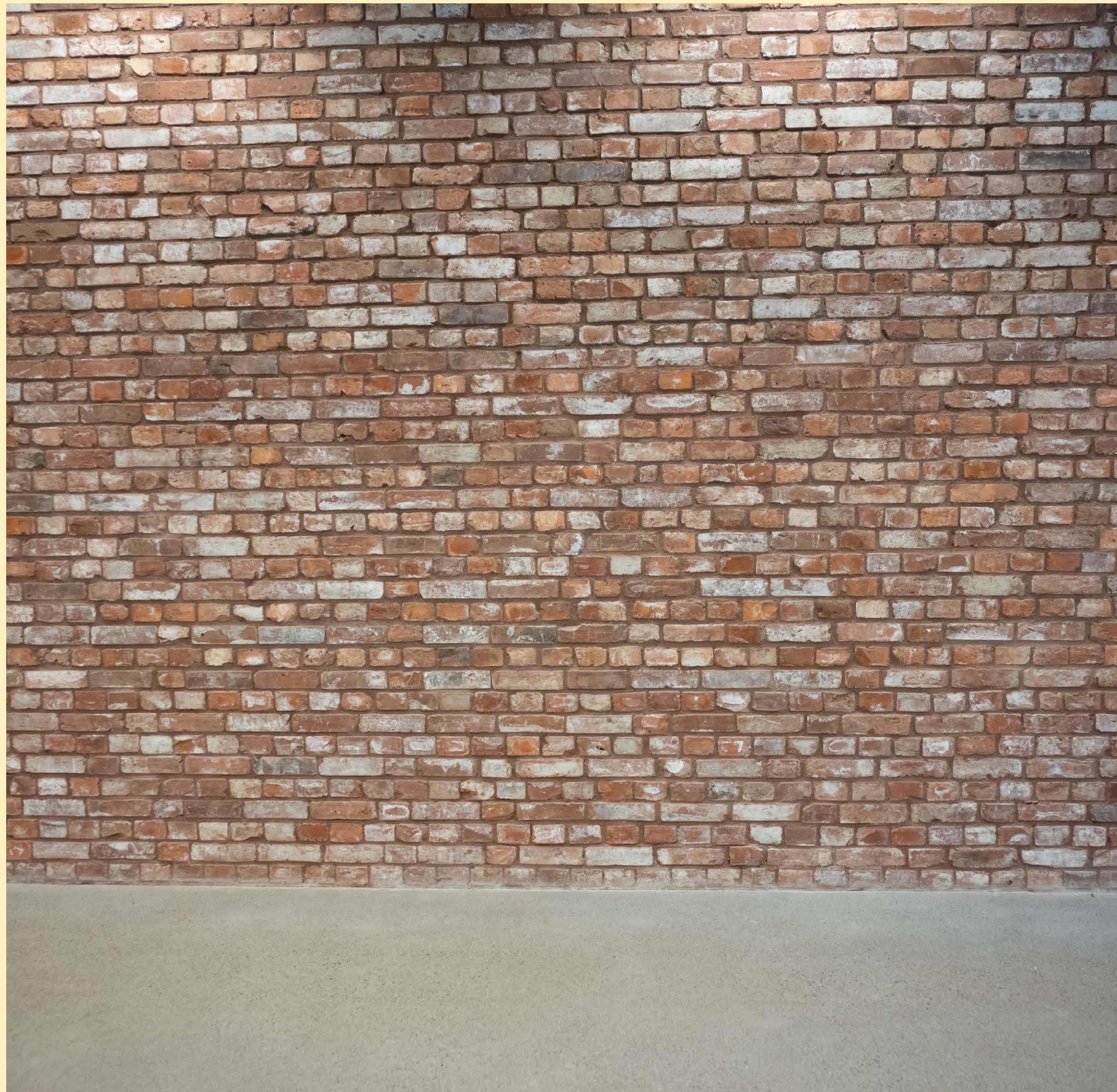


Nansenløkka
Obos, Dyrvik & Transborder Architects



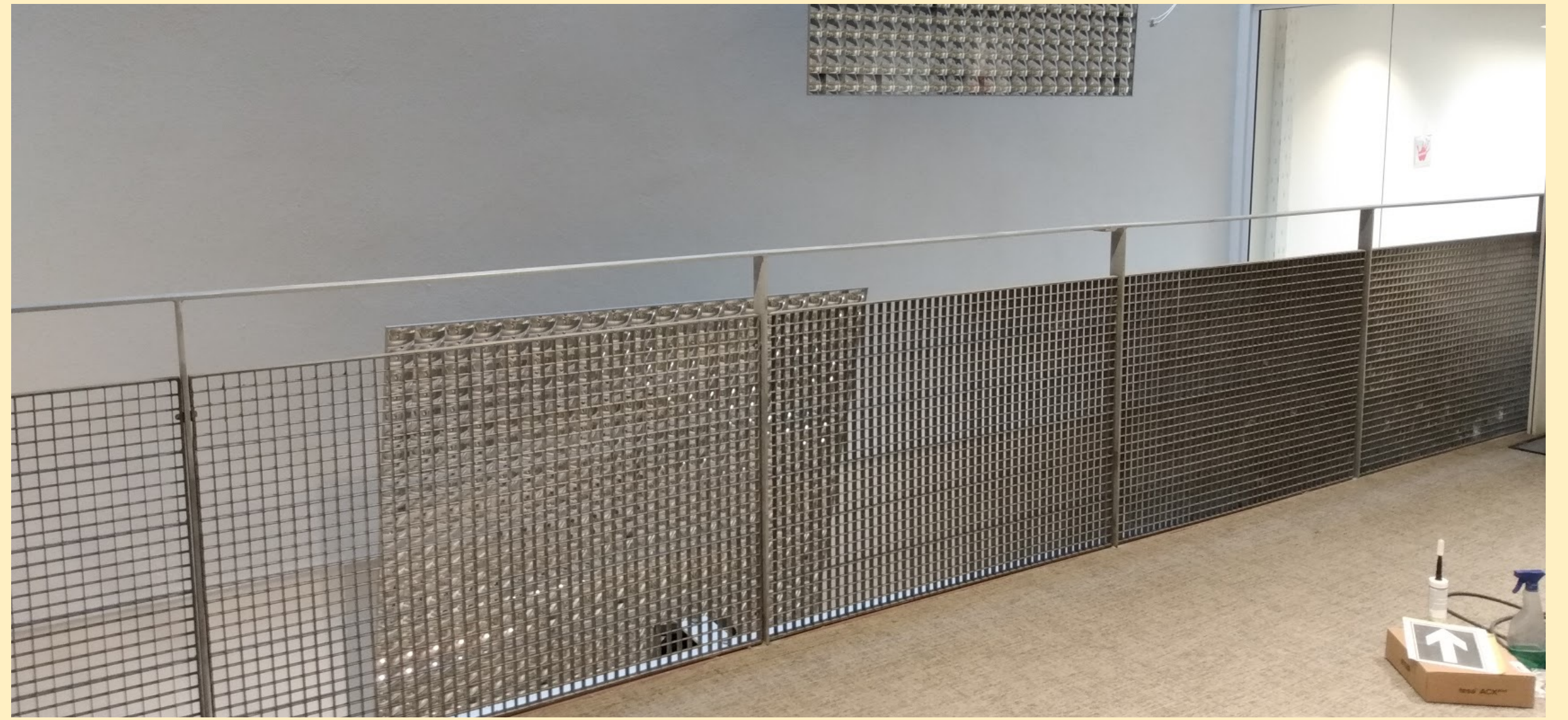
Skur 38, Oslo





Ruseløkka School, Oslo
Eikeli School, Bærum





KA13
Entra; Mad Architects



Reuse of hollow core concrete slabs
KA13



Reusability



Reusability



Reusability
Hasle tre; Oksenøya senter



KA23, Høegh eiendom; Arcasa arkitekter
Circle House, København, Lendager Group



Sirkulær ressursentral, Oslo, Økern

Partners: Resirqel, Pådriv, Statsbygg.



14. mar. 2023

Tid: kl. 09.00 – 12.00

Sted: Sirkulær
Ressurssentral, Økern