

Gildi umhverfisvottanna bygginga fyrir fjárfesta

Reynsla Reykjavíkurborgar



Reykjavíkurborg
Umhverfis- og skipulagssvið

HVAÐ

- Tengingu umhverfisvottunar og grænna skuldabréfa
- Byggingar Reykjavíkurborgar sem eru umhverfisvottaðar eða í vottunarferli
- Eru vottaðar byggingar umhverfisvænni?
- Litið til framtíðar

HVER

Gréta Þórsdóttir Björnsson
Arkitekt frá Arkitektaskólanum í Árósum,
Studio Approaching Sustainable
Architecture

Verkefnastjóri á Umhverfis- og
skipulagssviði
Undirbúningur framkvæmdaverkefna,
þarfagreining og frumhönnun

Hverfabækistöðin Örfirisey

Mennta- og menningarmiðstöð
Úlfarsárdal



Sundhöll Reykjavíkur
Viðbygging

City of Reykjavík

– Green bond Framework

New and retrofitted buildings are expected to have a “Very good”, “Excellent”, or “Outstanding” BREEAM rating.

*If a building receives a “Very good” rating it must have a 65% score or higher, based on BREEAM scoring system. Only building projects initiated in 2017 or earlier can have a “Very good” rating, newer buildings will have an “Excellent” or “Outstanding” rating.






















ELIGIBLE PROJECTS

The selection criteria are aligned with ICMA’s Green Bond Principles⁴ and the Position Paper on Green Bonds issued by the Nordic Public Sector Issuers.

Eligible projects are projects that assist the City of Reykjavík in the transition to a low carbon economy and align with its long-term climate policy. Eligible projects have quantifiable environmental benefits, with environmental mitigation and/or adaptation potentials. Projects which lead to increased fossil fuel use cannot be financed using proceeds from bond issuances that fall under this Green Bond Framework. Project categories which are intended to be financed using the green bond proceeds are:

4. The ICMA Green Bond Principles are designed to guide issuers on areas to finance and improve transparency. They can be accessed through <https://www.icmagroup.org/green-social-and-sustainability-bonds/green-bond-principles-sbp>
5. Nordic Public Sector Issuers: Position Paper on Green Bonds Impact Reporting, October 2017.
6. If a building receives a “Very good” rating it must have a 65% score or higher, based on BREEAM scoring system. Only building projects initiated in 2017 or earlier can have a “Very good” rating, newer buildings will have an “Excellent” or “Outstanding” rating.

Project category	UN SDG	Project examples
Green buildings	  	<ul style="list-style-type: none"> New and retrofitted buildings are expected to have a “Very good”, “Excellent”, or “Outstanding” BREEAM rating. The grading must include the following: <ul style="list-style-type: none"> A screening for climate risk and resilience included in the design. Electricity and space heating from 100% renewable energy sources. Solutions for a car-free living and electric charging stations fuelled with 100% renewable energy sources.
Energy efficiency	  	<ul style="list-style-type: none"> Technologies for reducing energy consumption, e.g. retrofitting led bulbs for street lighting. Energy efficiency projects can not include fossil fuel based technologies.
Clean transportation	  	<ul style="list-style-type: none"> Urban rail or Bus Rapid Transit system for public transport. Infrastructure for bicycle transport. Infrastructure for EV charging. Infrastructure for e-bike charging. Transition to renewable energy in public transport.
Waste management	  	<ul style="list-style-type: none"> Equipment for improving waste processing. Waste collection vehicles using renewable energy (such as electricity from hydro or geothermal and hydrogen), or alternative fuels such as methane from landfills. Increased methane collection from landfills for CNG production for public and private transport.
Sustainable landuse / environmental management	    	<ul style="list-style-type: none"> Wetland reclamation and forestry within The City of Reykjavik’s management geographical limits. Document and preserve biodiversity. Urban planning for densification of the City of Reykjavik.
Adaptation measures	 	<ul style="list-style-type: none"> Mapping of risk due to rising sea levels. Blue-green/self-sustaining surface water solutions. Review of current flood prevention.



Sundhöll Reykjavíkur
- Viðbygging

VA Arkitektar

Hefur hlotið
Breeam hönnunaryottun
Fullnaðaryottun í ferli



Hverfabækisstöð Örfirisey

Arkþing / Dagný Helgadóttir

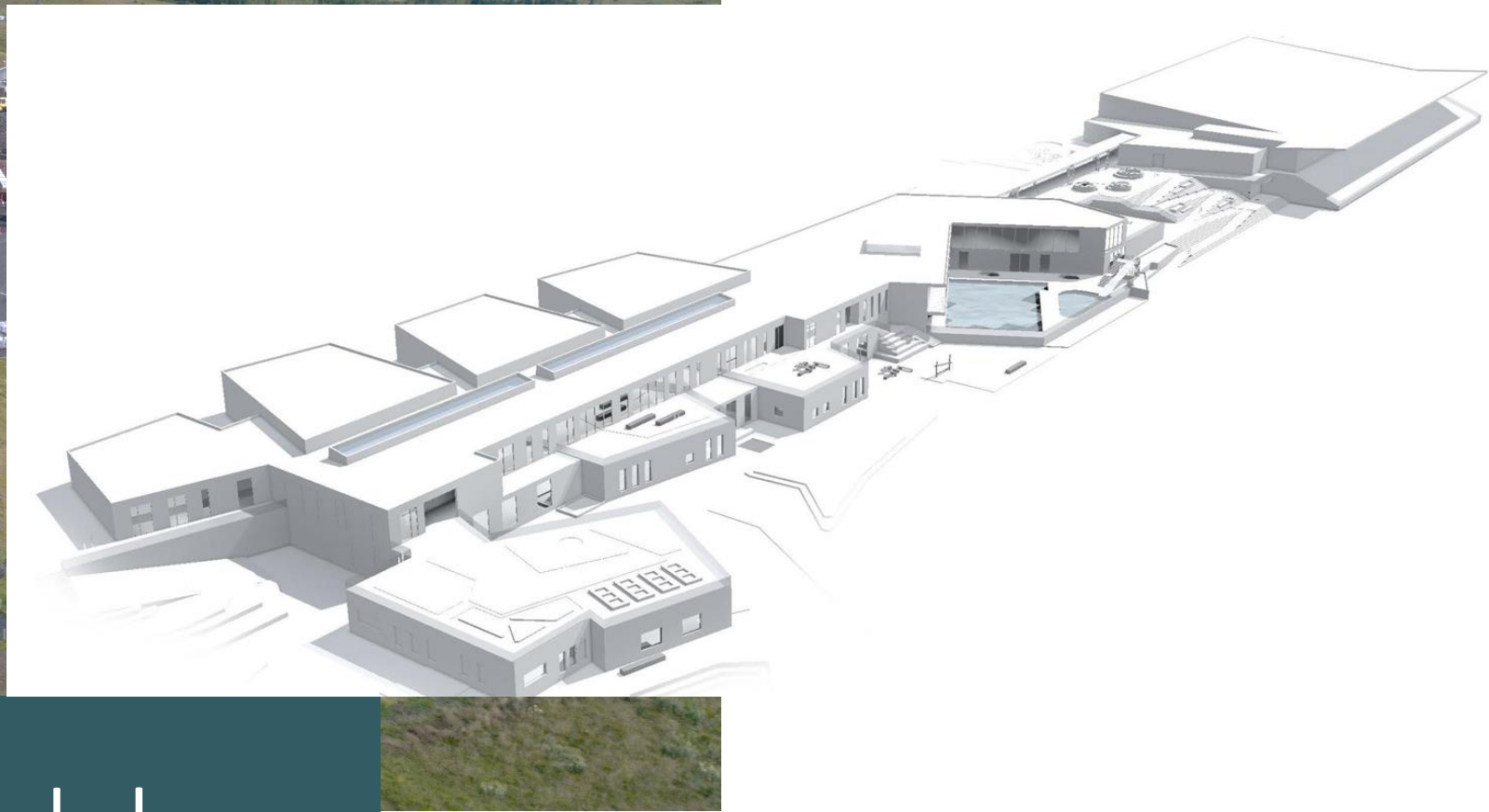
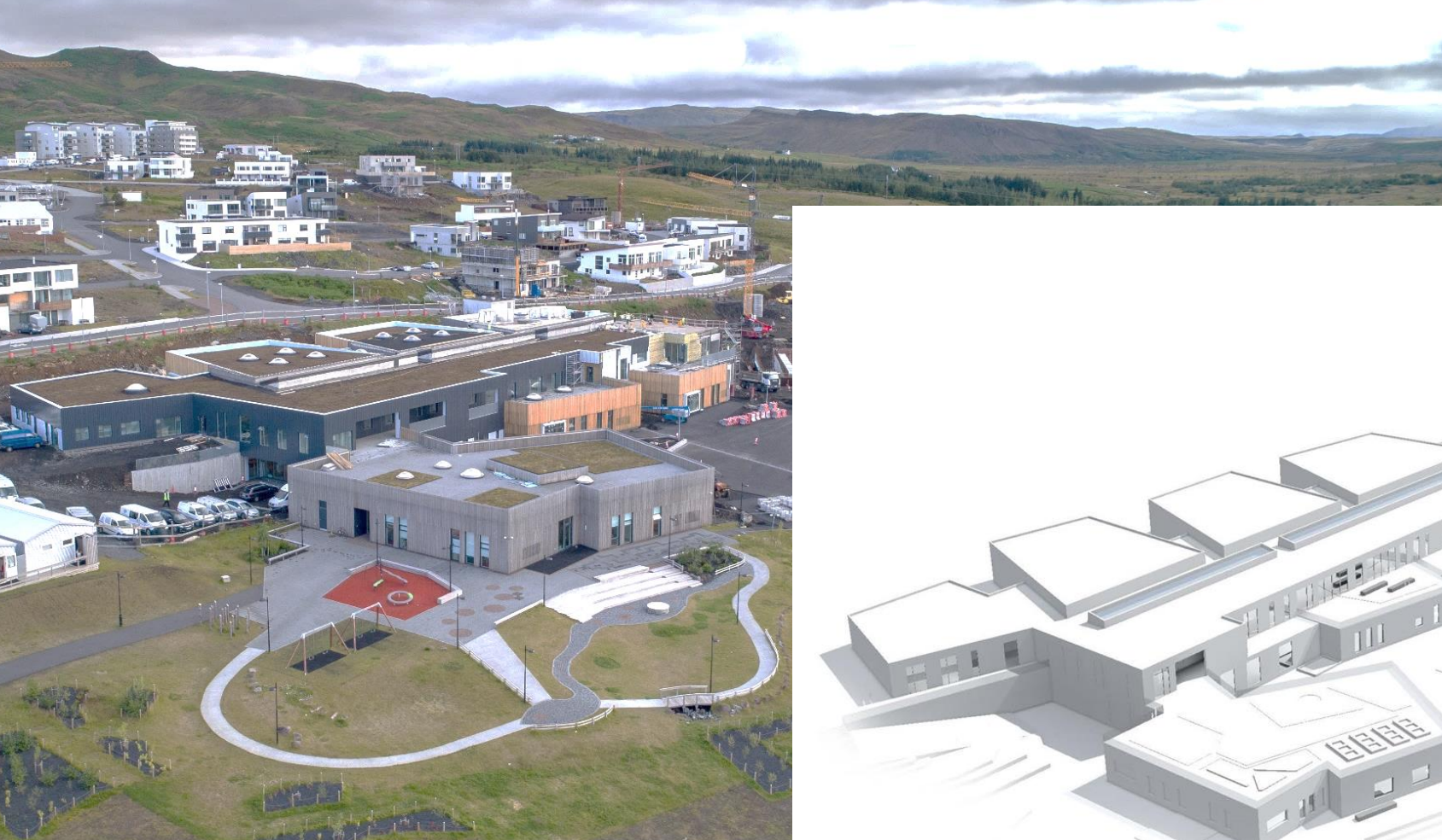
Breeam hönnunaryottun
í ferli



Mennta, menningar og
íþróttamiðstöð Úlfarsárdal

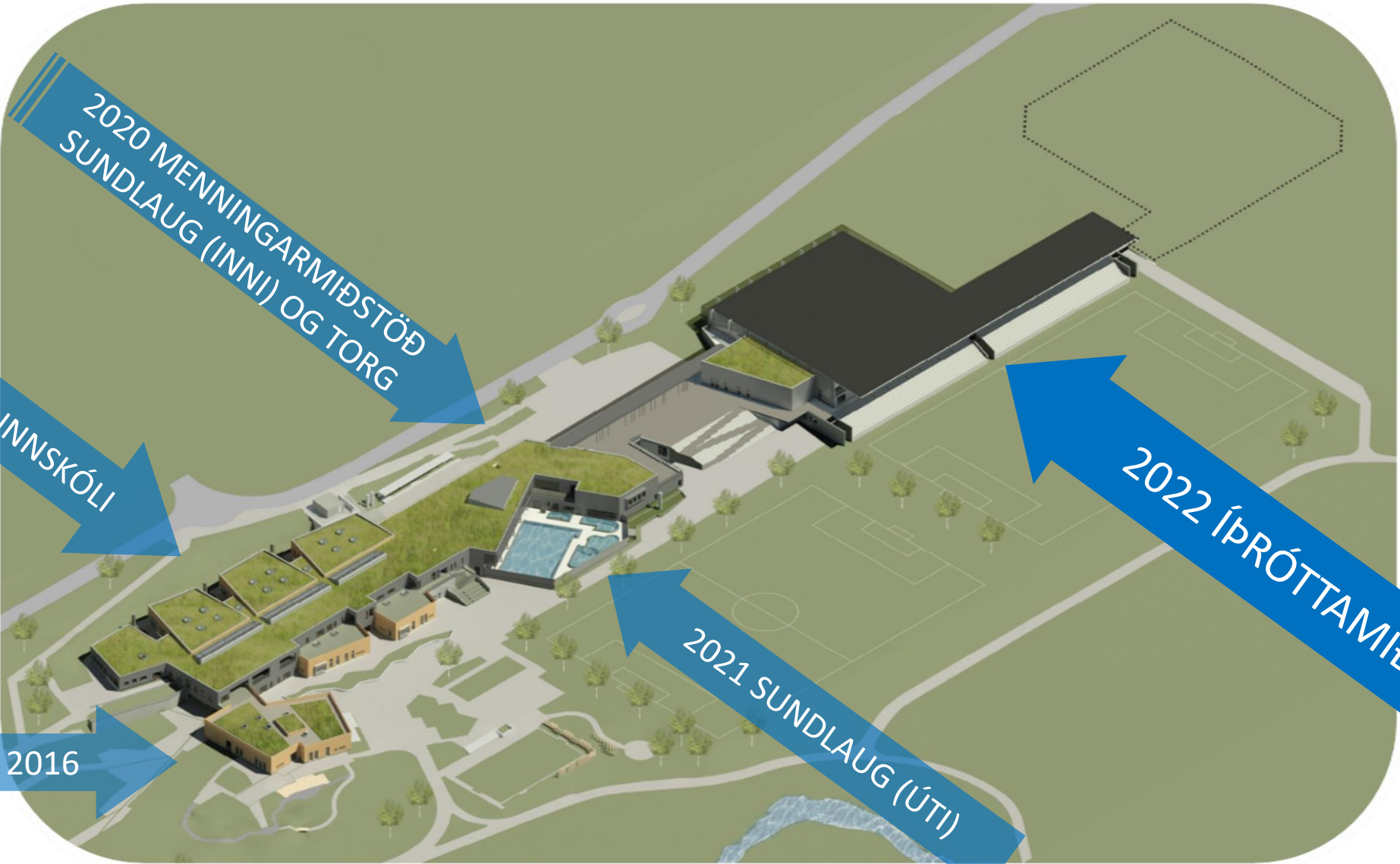
VA Arkitektar

Breeam hönnunaryottun
í ferli
1-2 áfanga saman og 3-5
saman



Úlfarsárdalur

Miðstöð mennta, menningar og íþróttar



2020 MENNINGARMÍÐSTÖÐ
SUNDLAUG (INNI) OG TORG

2017-2019 GRUNNSKÓLI

2022 ÍÞRÓTTAMIÐSTÖÐ

2021 SUNDLAUG (ÚTI)

LEIKSKÓLI 2016

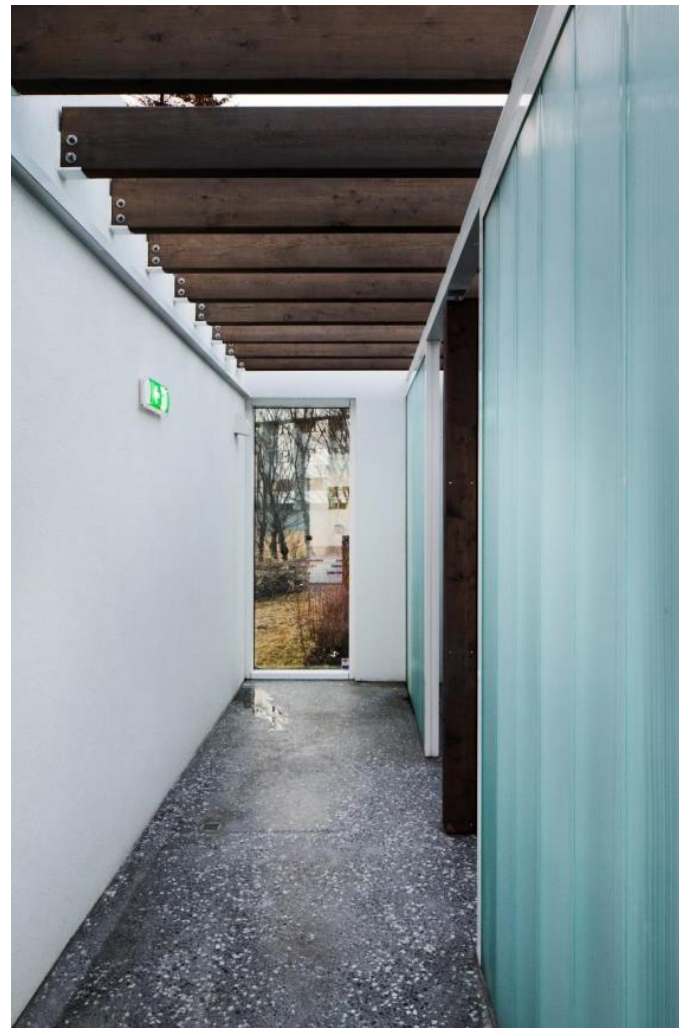


Örfirisey Hverfabækistöð

Sundhöll Reykjavíkur - viðbygging



Myndir: VA Arkitektar



„Það er allt svo umhverfisvænt á Íslandi, þurfum við nokkuð að vera spá þessu?“

BREEAM - Building Research Establishment Environmental Assessment Method



Orka
 Losun CO2
 Tækni með lágt kolefnisspor
 Orkumælar
 Orkunýtni kerfa og tækja



Heilsa og vellíðan
 Dagsljós
 Hitavist
 Hljóðvist
 Inniloft og vatnsgæði
 Lýsing



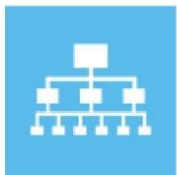
Nýsköpun
 Nýsköpun
 BREEAM AP



Landnotkun og vistfræði
 Staðsetning
 Vernd vistkerfa
 Auka vistfræðilegt gildi lóðar



Byggingarefni
 Vistferilsgreining
 Endurnotkun
 Einangrun
 Ábyrgur upprunni
 Endingargóð efni



Stjórnun
 Virki- og viðtökuprófanir
 Umhverfisstjórnun á byggingarstað
 Handbók hússins



Mengun
 Notkun kælimiðla og lekaleit
 FLÓðahætta
 Nox útstreymi
 Mengun vatns
 Útilýring og ljósmengun



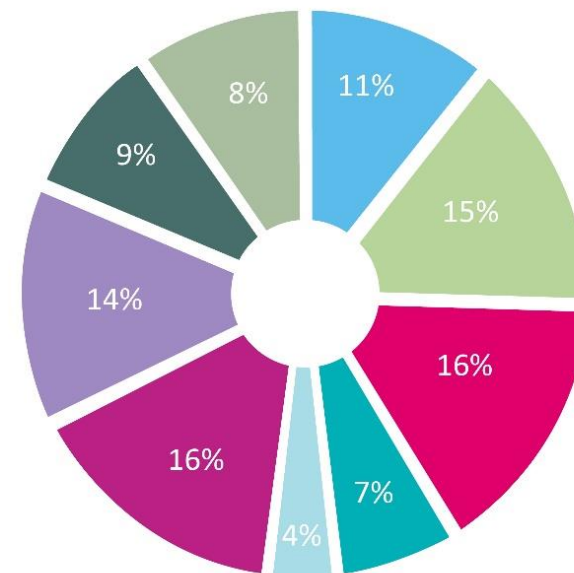
Samgöngur
 Nálægð við almennings-samgöngur
 Aðstaða fyrir gangandi og hjólandi
 Nálægð við þjónustu
 Ferðaáætlanir og upplýsingar



Úrgangur
 Byggingarúrgangur
 Endurnotkun steinefna
 Aðstaða til endurvinnlu



Vatn
 Vatnsnotkun
 Lekaleit
 Endurnýting og endurnotkun vatns



BREEAM Rating	% Score
Outstanding	85%
Excellent	70%
Very Good	55%
Good	45%
Pass	30%
Unclassified	<30%



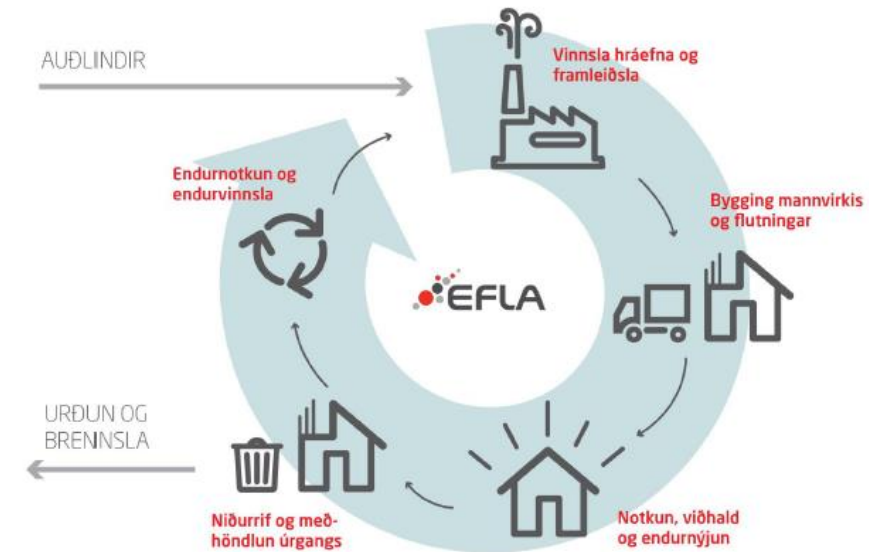
Mynd: VA Arkitektur

Vistferilsgreining fyrir viðbyggingu Sundhallar Reykjavíkur



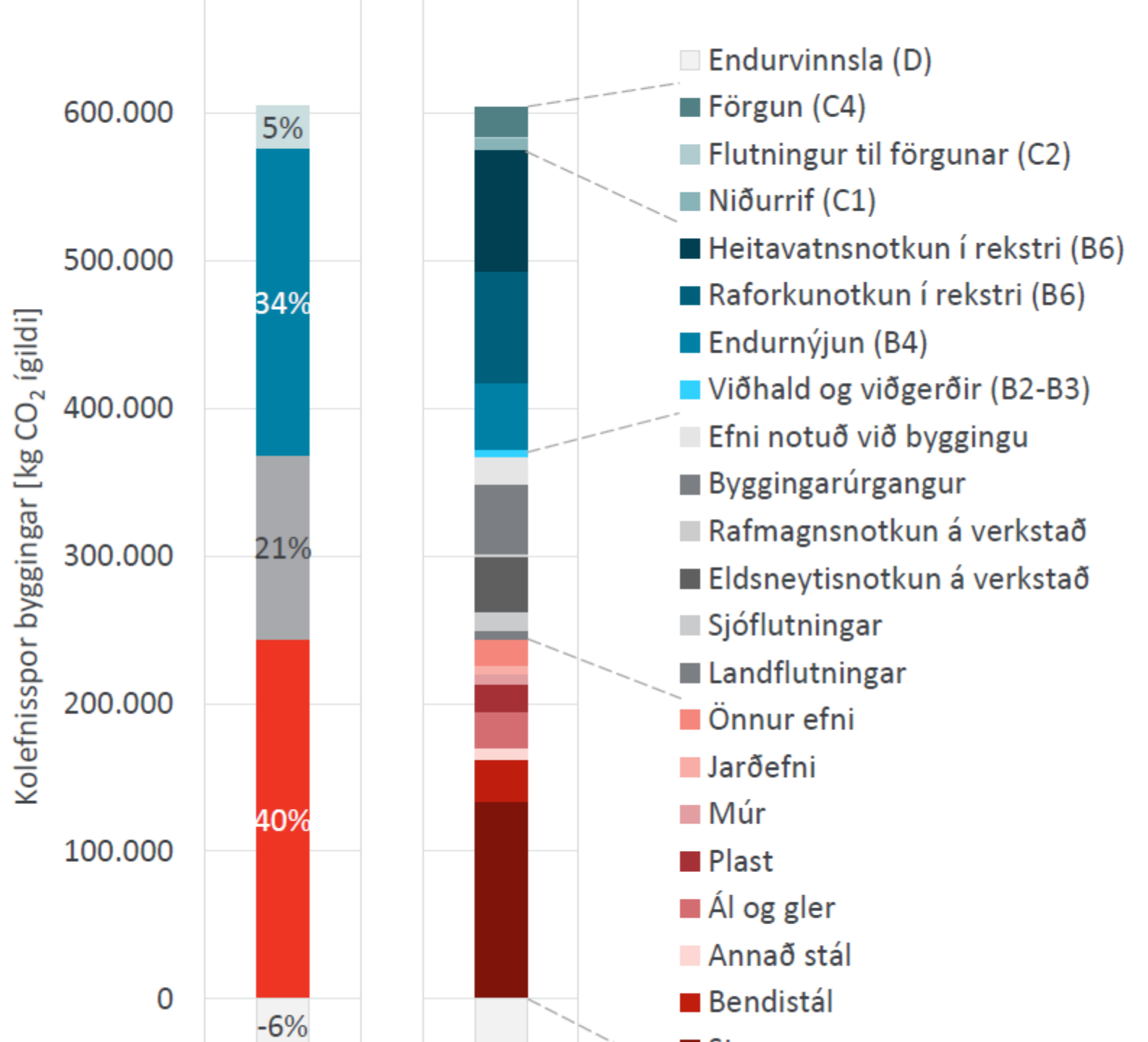
Um hvað snúast vistferilsgreiningar?

- Meta umhverfisáhrif vöru eða þjónustu yfir allan vistferilinn
- Hvar eru mestu umhverfisáhrifin?
- Hvor valkostur veldur meiri umhverfisáhrifum?
- Hvernig lágmarkum við umhverfisáhrifin?

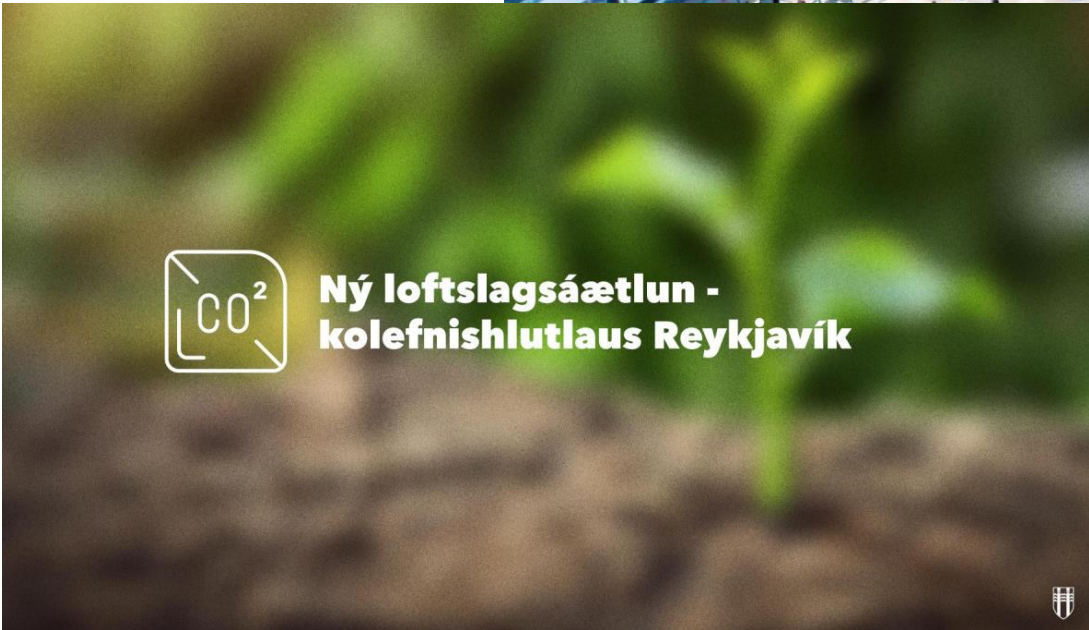


Kolefnisspor

- Endurvinnsla (D)
- Lok líftíma (C)
- Notkun (B)
- Flutningur og bygging (A4-A5)
- Öflun hráefna og framleiðsla (A1-A3)



Hvað kostar nú allt þetta?



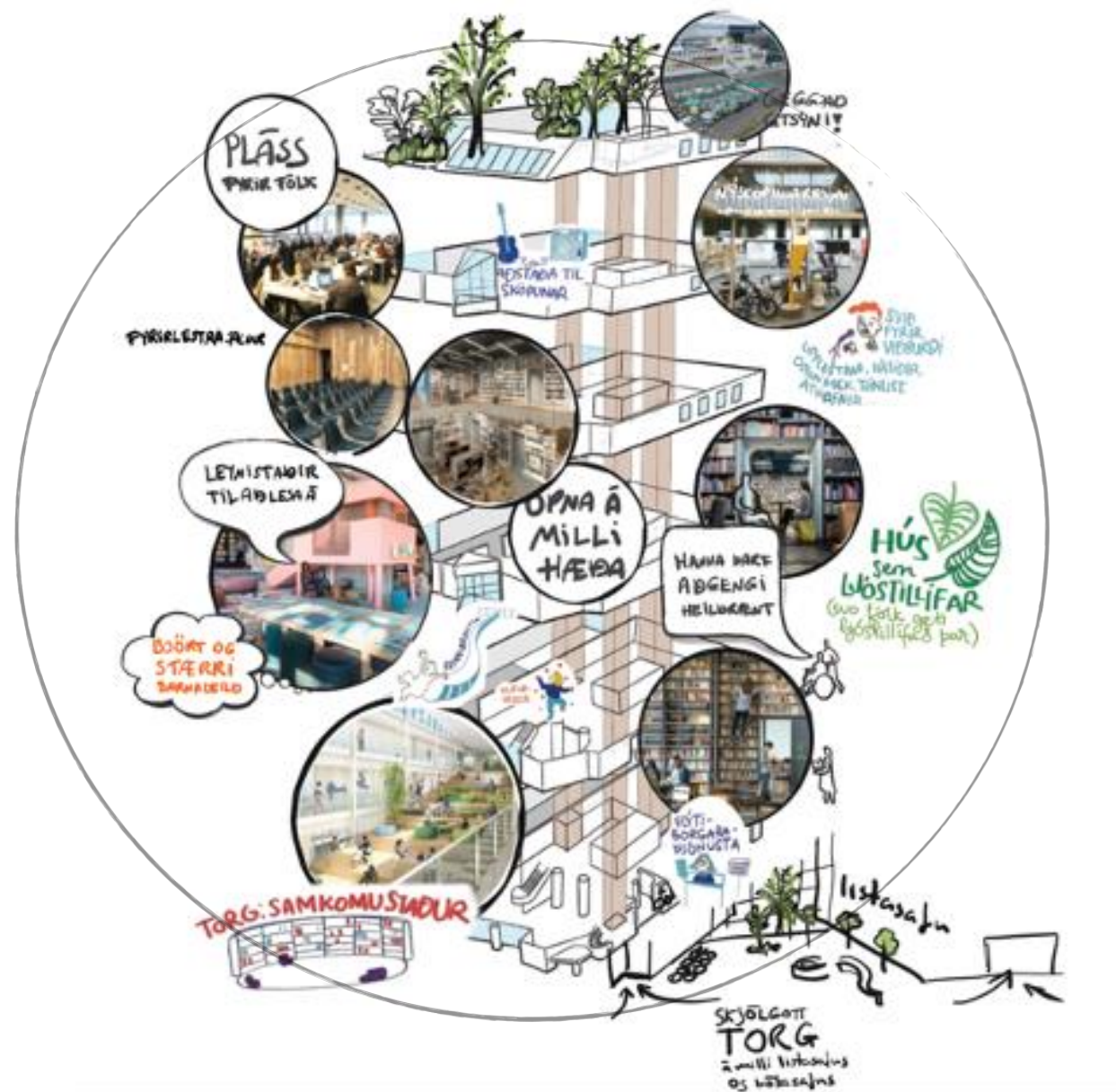
Hvað er næst?

Nýbyggjar/viðbyggingar

- Nýr miðborgarleikskóli
- Funaborg

Endurgerð

- Grófarhús



BREEAM

COMMUNITIES

BREEAMVOTTAÐ

DEILISKIPULAG

- Ártúnshöfði
- 2. Áfangi í Skerjafirði





Takk fyrir mig



Reykjavíkurborg
Umhverfis- og skipulagssvið