

URBAN LIFE MEETS KELDUR PARK

4.1 LAND VALUE AND QUALITY

Keldur's strategy for high land value & urban quality is based on two complementary approaches:

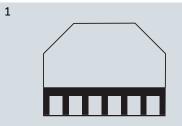
- Firstly, health and nature are prioritized by building upon local landscape identities such as the sea bay, agricultural fields, Keldur's local streams and forests and the Korpa river (fig1.a.). Allowing the project to retain and enhance the existing valuable cultural landscape (fig1.b.) providing outdoor quality at all scales (fig1.c, 1.d.).

- Secondly, by introducing smaller properties and employing a fixed plot price, the approach establishes a points-based system encompassing 10 quality criteria to allocate the plots to the best proposals (fig2.)

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2. The 10 quality criteria:



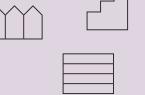
PROGRAM Premises on ground floor and/or flexible re-programming (Supporting active ground floors).



SUSTAINABLE

6

Reduced carbon footprint; use of low embodied carbon materials, recycled material, design for disassembly. Etc.



DIVERSITY Various typologies per properties (3 or more). And/or typology flexibility (re-configuration).

1.a.Enhanced

landscape qualities

Sea

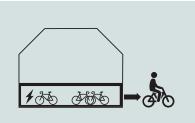
bav

Farm

park

3

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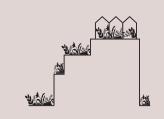
MOBILITY Sheltered bicycle parking on ground floor level including charging stations and bicycle maintenance hub.



Korpa

river

SOCIAL Alternative lease forms. Among others: co-housing, student housing, elderly housing, etc.



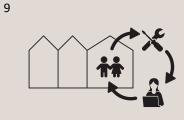
URBAN Presence of front gardens, balconies, winter gardens, terraces and/or roof terraces.



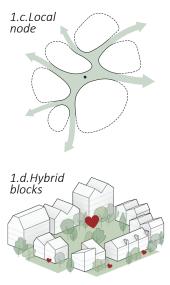
1.b.Landscape

permeability & BRT line

SOCIAL At least 30% of affordable apartments (long term lower rent). At least 10% of social housing.

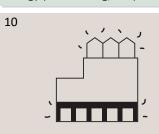


COMMUNITY Presence of alternative rentable spaces. Such as co-working, workshop, micro daycare, etc.



SUSTAINABLE Energy efficiency buildings. (Passive housing, net zero housing,

5



energy-plus housing, etc.)

COMMUNITY All blocks must include a community space (on ground floor or roof top). 2-3% of total residential floor area.

2

4.1 LAND VALUE AND QUALITY

Keldur scheme for 15.000 residents relies on the same principles and is built on the regular's masterplan qualities:

Attractive liveable neighbourhoods are designed within the immediate perimeter of new public transportation with easy access by foot or bicycle. The establishment of human-scale urban centers fosters a distinct sense of place and identity, propelling densification in tandem with local amenities and transit nodes.

Sustainable communities are promoted through a blend of public, residential, commercial, and communal spaces, including urban squares, hybrid zones, mixed typologies, and recreational facilities, enhancing adaptability for more intensive urban development.

The scheme is **designed to be robust**, supporting long-term growth and adaptability, offering options for local densification, or expanded footprint to address residents' evolving needs.

These guidelines culminate in an attractive, liveable urban development that honours nature, local history, culture, and cultivates a strong sense community.



Masterplan for 15.000 residents

4.1 LAND VALUE AND QUALITY

In a scenario for 15.000 residents, higher density is achieved through numerous actions. Influencing the building-scape, profile and footprint of the project while retaining it's most important characteristics.

10.000 RESIDENTS

Residents10.000
Workplaces5.000
Housing units4.450
20% semi-detached/row houses typologies
Total average apartment size107m ²
Average apartment size semi-detached and row housing typologies135m ²
Community space (2-3%)14.185m ²



15.000 RESIDENTS

Residents15.000
Workplaces7.500
Housing units7.360
15% semi-detached/row houses typologies
Total average apartment size95m ²
Average apartment size semi-detached and row housing typologies125m ²
Community space (3%)20.380m ²

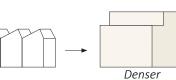
- Proposed extended footprints

The scheme shows possibilities for growing the masterplan's footprint in various areas, where infrastructures are existing or planned and where disturbances to the landscape are minimized.

For example, new neighbourhoods are proposed along the BRT line, taking advantage of future sustainable mobility solutions, and offering greater adaptability to BRT stops locations.



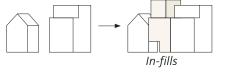
Part of the lighter typologies could be designed for dismantling and replaced with more efficient solutions.



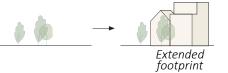
typologies

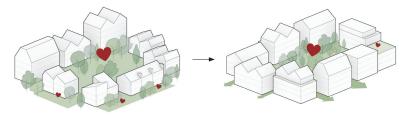
Raising

Gaps can accommodate supplementary buildings while ensuring the block permeability is preserved.



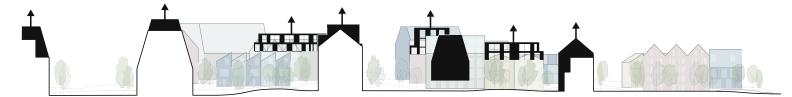
New areas are proposed to be developed while existing landscape qualities should be retained.

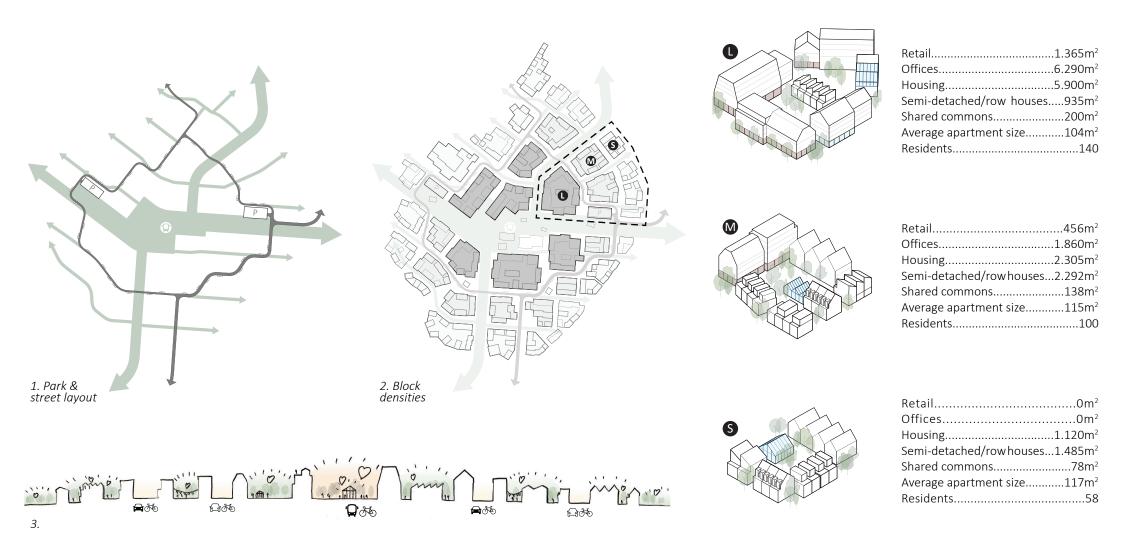




- Evolutive hybrid blocks

By promoting evolutive design and diverse solutions, hybrid blocks are implemented with adaptability in mind. The initial smaller plots and permeability will be key resources for densification schemes.





In response to the demand for urban development, the project proposes a diverse range of urban typologies that cater to various needs and densities.

- Strategically placed green spaces

Parks and green spaces are the primer underlay of the new urban development and are following the terrain contour lines (eastwest) allowing for levelled streets and better accessibility. (fig1.)

- Overall urban scales

Diverse neighbourhoods are created through various urban typologies that allow for a cohesive mix of uses within a 5-minute walk. To maximize the use of public transportation, higher densities are concentrated around main transport stops, while higher buildings are strategically located along main roads and the BRT line. Consequently, denser blocks (dark grey) border the main node and park, while medium and smaller blocks are found further from public transport. (fig2).

Thanks to the points-based system and smaller plots, hybrid blocks combine various typologies and uses allowing them to be customized to their surroundings.

4.2 DENSITY DISTRIBUTION AND FORM

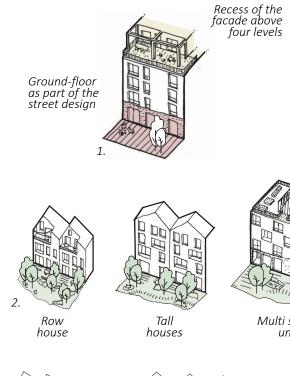
- Urban context at eye level Building masses are also influenced by their immediate environment, building ground floors are designed in response to the streetscapes, while upper floors are recessed from the street (fig1.).

- Landscape interactions

Besides, different building typologies cater for different slopes. For example, while larger buildings are located parallel to the terrain, smaller, more agile typologies are more suited for sloping streets (fig2.).

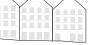
-Hybrid block fro hybrid need

Hybrid blocks combine mixed densities, catering to various needs such as commercial ground floors, lower houses for better sun exposure, duplexes, community services, shared green houses and more (fig3.).





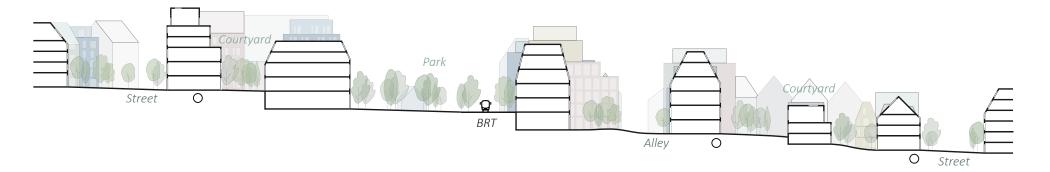
Multi storey unit

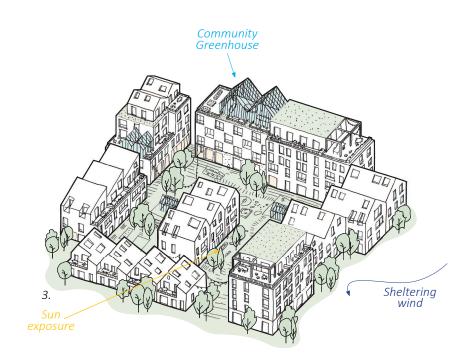


High slope adaptability

Average slope adaptability









To create a vibrant and diverse neighbourhood, new developments are designed around public transport, supporting walkable and bikefriendly areas where people can live, work and shop in the same neighborhood. This will facilitate easy access to retail, residential, and office spaces that should be thoughtfully balanced to create cohesive and connected communities. Active ground floor façades along the main urban streets and public transport routes create the right conditions for centrally located public buildings and business premises. While gradually providing more housing further away from the center, incorporating more community functions and outdoor activities.

Living environments for people of different backgrounds are promoted by catering for

diversity of building shapes and typologies. Promoting housing unit adaptability (over time and/or various social structures; families, students, young actives, elderly, etc.). Ensuring that social housing incentives are implemented blending residents with diverse incomes.

4.3 MIXED USES

Combining diverse typologies, functions and densities across the site allows to cater for mix uses at all scales.



- Row house / semi-detached typology

Small scale with semiprivate gardens meting the street, easily adaptable to sloping terrain (fig3.).

- Neighbourhood house typology

Urban hybrid houses (multi-dwelling/ hybrid) with active ground floor, retail space and community functions. Complemented with an accessible roof terrace for the community (fig4.).

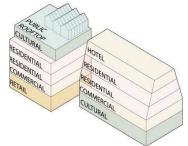
- Urban typology

Urban buildings, with public ground floor including, retail, public services, culture... as well as business premises in the upper floors. Facing public urban spaces and transportation (fig5.).



3. Row house / semi-detached typology

4.4 SOCIAL MIXING



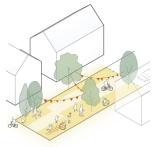
Mixed-Use Development

Mixed-use developments combining residential, commercial, and recreational spaces. This mix attracts people with different needs and interests, increasing social interaction among residents, workers, and visitors.



Public Gathering Spaces

Designing attractive and accessible public gathering spaces, such as parks, plazas, squares, and community centres...These spaces act as hubs for social interaction and community engagement.



Pedestrian-Friendly Streets

Creating pedestrian-friendly streets with wide sidewalks, enhancing opportunities for encounters and spontaneous social interactions.



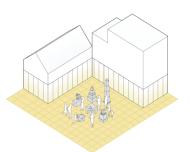
Community Gardens

Allotting spaces for community gardens to provides opportunities for residents to work together, fostering a sense of ownership and community pride.



Inclusive Design

Creating public spaces with universal access in mind ensures that everyone, regardless of age, ability, or background, can enjoy and use these spaces together, promoting social inclusion.



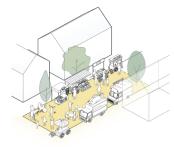
Public Art and Installations

Integrating public art and interactive installations attract people from different backgrounds to engage and share experiences.



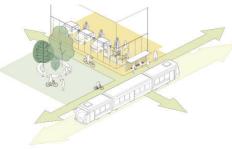
Bicycle and Walking Paths

Designing safe and pleasant bicycle lanes and walking paths promoting physical activity and sustainable modes of transportation.



Street Markets and Events

Organizing street markets, fairs, festivals, and cultural events in public spaces, creating a sense of community and shared identity.



Public Transportation Nodes Efficiently designed public transportation nodes provide opportunities for people from different background.



Seating and Rest Areas

Providing ample seating and rest areas in public spaces encourages people to linger, relax, and engage with others.



Community Participation

Engaging the local community in the design and decision-making process ensures that public spaces reflect the needs and desires of the people who will use them, fostering a sense of ownership and pride.

4.5 BORGARLÍNA ROUTE & BUS ROUTES

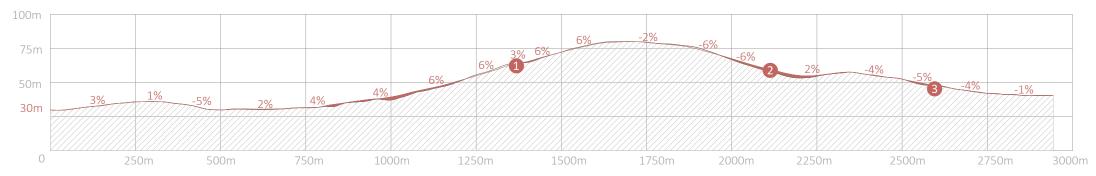
The proposed public transport route aims to provide efficient connectivity while preserving the local landscape and influencing Keldur's future positively. The project includes one stop in Keldur west and two in Keldur east.

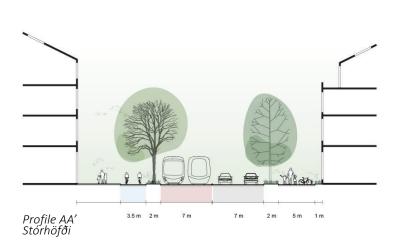
The 1st Borgarlína stop in Keldur west is strategically located on the midpoint of the hill to develop a new urban centre while retaining the natural character Keldur west. Combined with an urban park, this stop offers accessibility, views, and sun exposure essential for urban development and landscape integration.

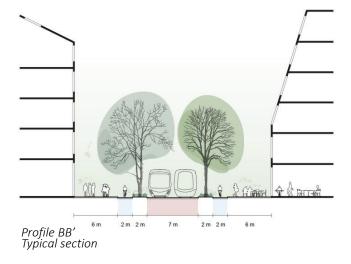
In Keldur east, the Borgarlína 2nd stop is located on a flat terrain halfway between the Vikurvegur road and the Korpa river. This stop offers great opportunities for multimodal transport, including car-sharing, while preserving the natural environment and ensuring urban quality.

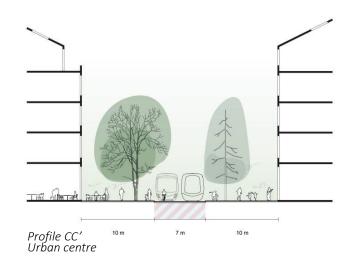
The project proposes an innovation quarter between the 2nd and 3rd stops to promote a vibrant neighborhood and boost mixed uses. While the 3rd stop in Keldur north expands the urban spine of Keldur east and creates a hub for new developments in Keldur north in line with the long-term vision for the transformation of the areas of Leynar and Mosfellsbaer.

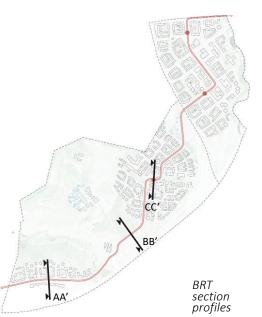












- The Borgarlína is designed for efficiency and successfully become the mobility backbone of Kedlur.

In order to be able to operate with high frequency, the Borgarlína is allocated a dedicated lane, regardless of car traffic. Furthermore, the city line will also be used by buses and emergency services. In typical section (BB') the Borgarlína will run centrally while dedicated bicycle lanes and green buffer are implemented along. Making the city line a new bicycle spine with its 6% maximum slope, and improve the urban environment with plantings and bio-swale. In limited urban zones, the Borgarlína is implemented as a shared space (CC'), promoting public walkability and safer interactions.



- Alternatives routes and stops are possible within the current scheme.

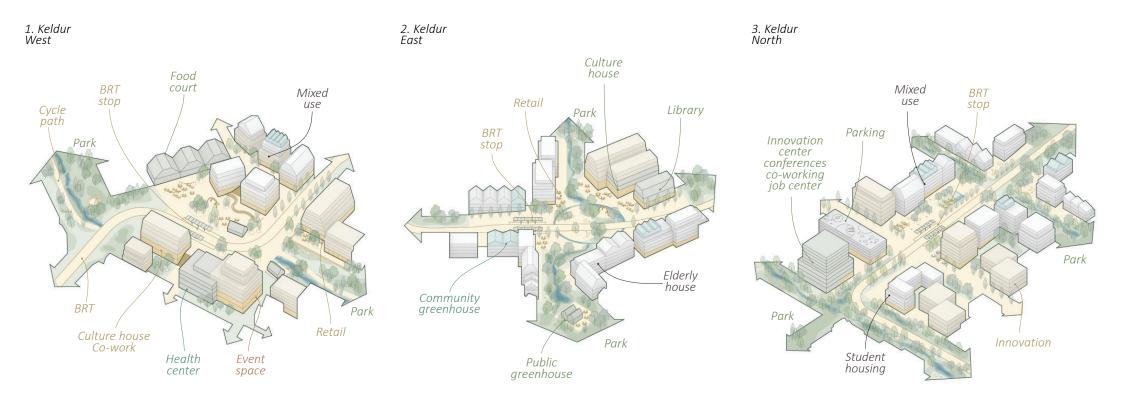
Multiple options for Borgarlína stops will be valuable when phasing and alternatives building footprints will be discussed. As well as long term scenarios, with changing density locations.

While alternatives routes can foster alternative density scenarios and long term objectives.

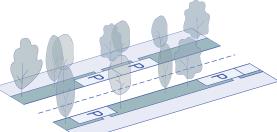
4.5 BORGARLÍNA ROUTE & BUS ROUTES

The Borgarlína station areas accommodate higher average density, including numerous retail and commercial realms along with civic, public and cultural programs. Such programs are combined with generous public spaces and pedestrian street.

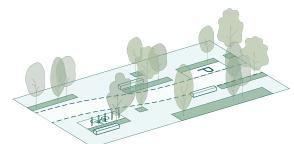
The areas are car free and provide places for stay and sheltered public spaces in combination with parks and water features.







1. Blue loops. Integrated planting and car parking.

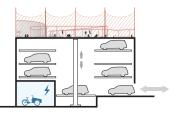


2. Green streets: Slow profile, car parking reserved for shared cars.

3. Soft mobility hubs with cargo bike and charging points are located on the ground floor along with retail spaces.

41 de de	RETAIL

Automated parking longitudinal section



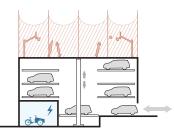
Automated parking section

The project provides an innovative solution to the critical issue of parking in urban planning through two means: parking houses and street parking. Bicycle parking is also spread throughout the area, with attention given to connectivity with the capital's region bicycle routes and public transport.

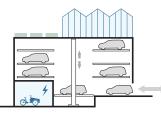
The parking houses are strategically located near public transport and traffic loops, making them easily accessible from all transport modes. This reduces the car's

impact on the living areas while promoting sustainable alternatives by making the car less efficient. The majority of parking needs are met by the parking houses. Street parking is use in complement and is prioritized for shared cars.

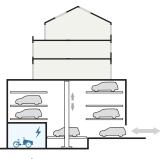
It is proposed that all future developers will contribute to the parking houses as well as funding a free 3 year car sharing membership for all residents. The project includes 1,800 car parks in parking houses and 400 on the streets.



Parking + Sport & play



Parking + Growing



Parking + Housing

4. Parking rooftops provide complementary functions (public spaces, playgrounds, elderly homes, and productive roofs among others).

4.7 STREETS, PATHS AND CONNECTIONS

The proposed car-based traffic connections will extend existing infrastructure and minimize disturbances to neighbourhoods. This will help transform local roads into slower, more urban roads that serve the Keldur, Grafarvogur, and Grafarholt area. Public transport will be prioritized to offer more direct connectivity across Keldur and toward the city center.

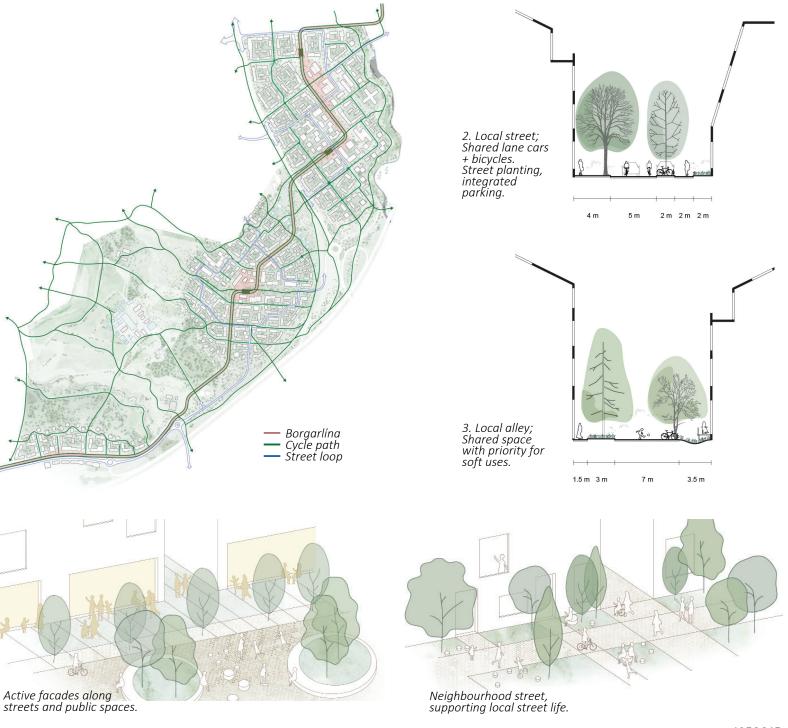
To promote sustainable transportation, the existing bicycle network will be reinforced, and new connections will be created (fig1.), making it more suitable for commuting by bike. The aim is to make it simpler and faster to use sustainable transport modes and switch from one to another, rather than owning a personal car.

Urban streets along the Borgarlína line will foster street life, active facades, and public spaces. They will provide accessibility and easy wayfinding for locals and visitors on foot or bicycle.

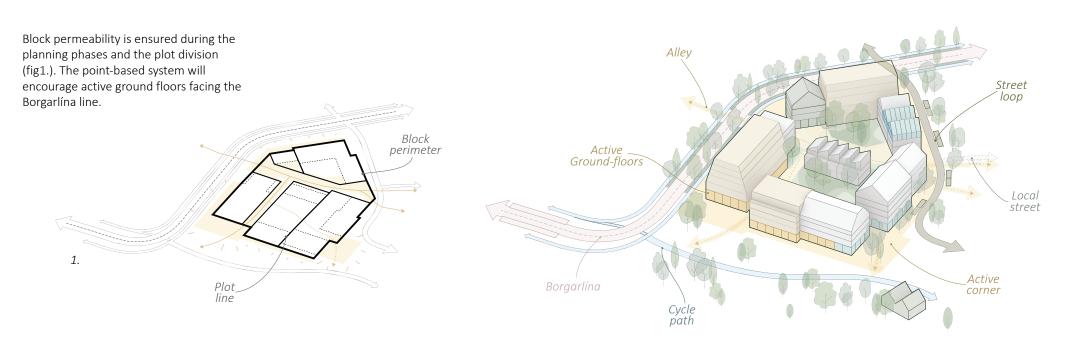
Neighbourhood streets will allow for local street life to happen, designed as shared spaces with numerous planted areas, forming green alleys within neighbourhoods that connect to the surrounding nature. These streets will reinforce the human scale and community through adaptable uses, numerous bicycle parking spaces, bioswales, and other features (fig2,3.).

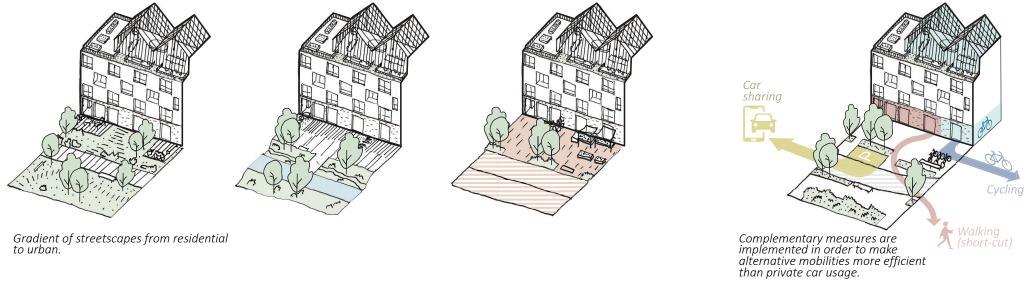
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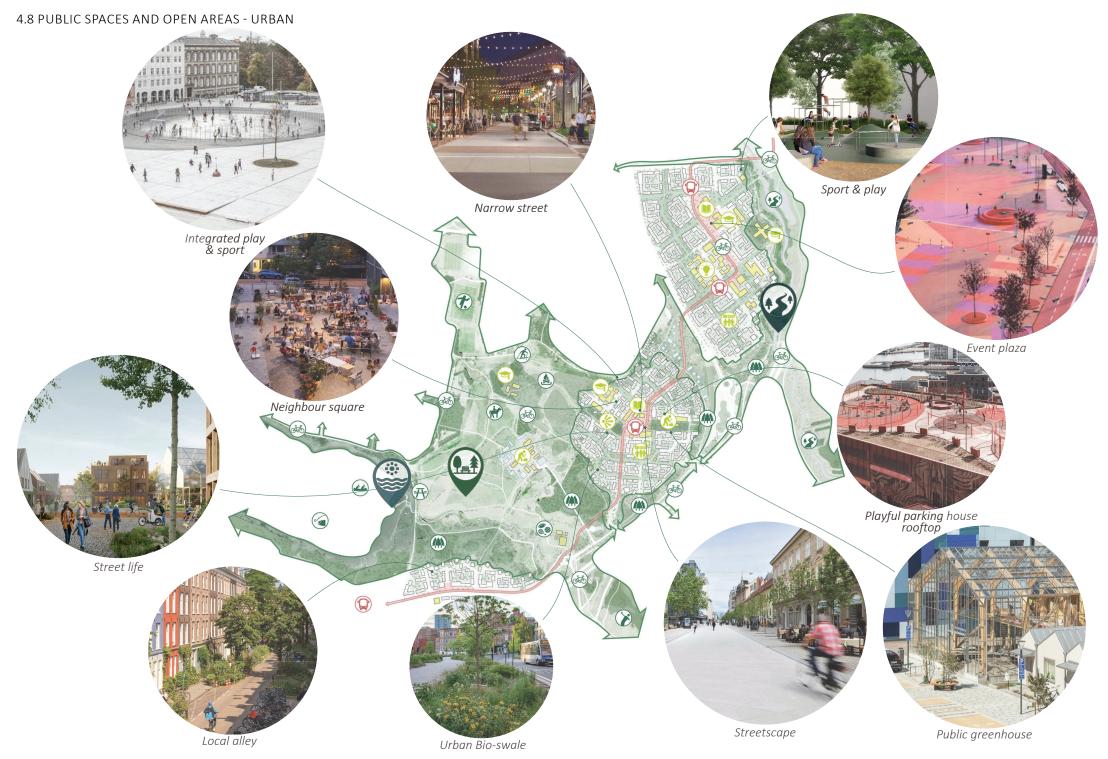
The plan prioritizes sustainable transportation and community building. By enhancing bicycle infrastructure and prioritizing public transport, it aims to reduce the reliance on personal vehicles and improve quality of life.



4.7 STREETS, PATHS AND CONNECTIONS





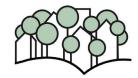






Experience the future of urban living in our innovative project, where health, nature, and community are at the forefront. Within walking or biking distance from public transportation, our liveable neighbourhoods are surrounded by lush green spaces, gardens, and playgrounds, Human-scale public spaces feature a mix of public, residential, commercial, and community spaces reflecting local history and culture. Where diverse typologies, programming, and densities cater for a cohesive community promoting social mixing, affordability and sustainability. Join a vibrant way of life, where community, nature, and sustainability thrive, celebrating the local landscape identities of Keldur's water side, agricultural fields, hill, and rivers.

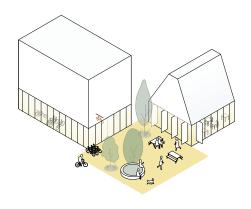






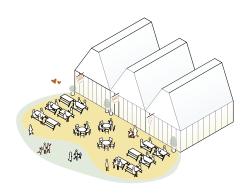


Closeness to nature Healthy living Sustainable communities



Active corners

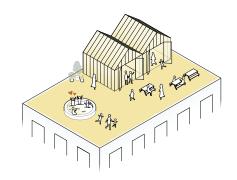
Blocks corners are ideal places for urban activation. Natural street meeting point, high visibility, naturally sheltered.



Food court Programmed public space fostering social interaction and contributing to the overall attractiveness and identity of Keldur from early stages.



Community gardens Using Keldur's history to provide meeting places and identity for the future development.

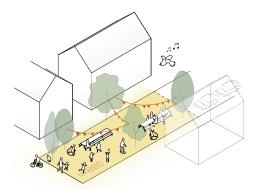


Accessible roof tops Accessible rooftops provide opportunities for extra outdoor spaces for all and scenic views on the surroundings.



Accessible Park and nature

Surrounding natural areas are the canvas of Keldur future development, supporting activities such as biking, kayaking, bathing, horse riding, etc. that will participate in Keldur identity.



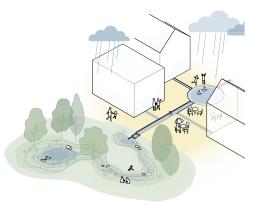
Collective streets

Small streets are ideal for temporary gathering and events within the neighbourhood providing a sense of place and ownership from the residents.



Community roof tops

Provide community space within each development (2-3% contribution from each household). For a 100m² flat, the extra 2m² offers access to a common rooftop sheltered space of 200m²!



Water features

Integrating open gutters, pools, streams, and ponds for water management not only enhances sustainability but contributes to urban place branding and cultivates a distinct sense of place.

4.10 LOCATION OF SCHOOLS AND OTHER SOCIAL SERVICES

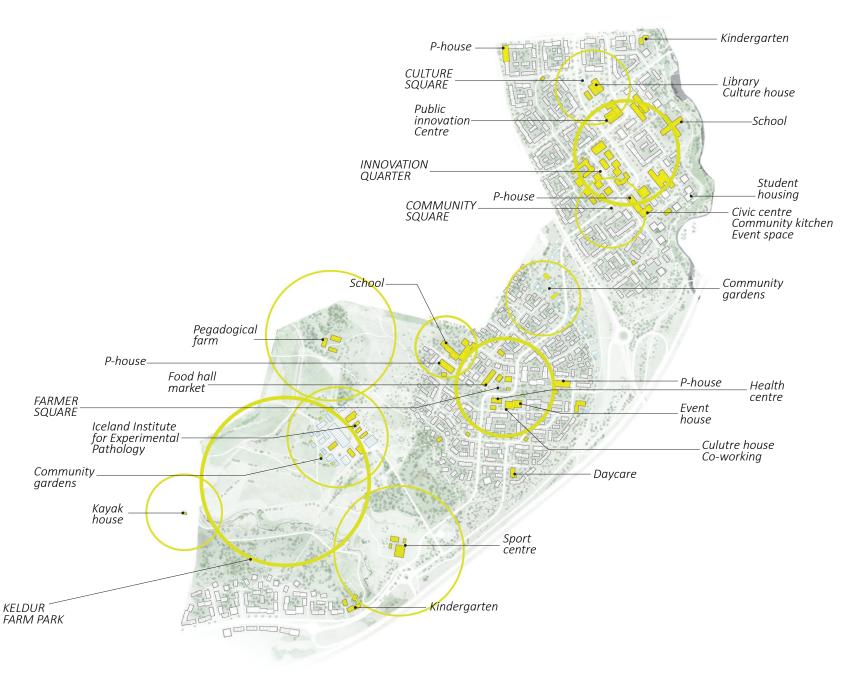
- Easy access & sustainable mobility The project prioritizes the location of schools for accessibility and interaction with nature. Therefore, schools should be located with easy access to public parks, public transport or pedestrian and bike networks, reducing the need for car travel.

- Closeness to nature and recreation In addition, schools should integrate outdoor green spaces and be connected to larger green infrastructures, providing direct access to nature for children to learn and grow in healthy and enjoyable spaces.

- Educational & recreational network Keldur can be seen as a network of landscape paths across hills, forests, and farmlands connecting indoor and outdoor programs, such as schools, a pedagogical farm, daycares, a sport centre, a kayak house and many more. Schools are located at the periphery of the neighbourhoods and also act as rural equivalents to urban centres, providing a meeting place for nature lovers.

- Boosting communities

To complement education facilities, public and social services are located at the heart of the neighbourhood, activating the areas, and supporting non-commercial activities, cultural events, and community services such as co-working, shared kitchens, and gathering spaces. By prioritizing the location of schools and public services, we create sustainable communities that promote accessibility, connectivity, and interaction with nature.



4.10 LOCATION OF SCHOOLS AND OTHER SOCIAL SERVICES

By establishing well-designed cycling routes that prioritize safety and accessibility, particularly for children, the project promotes active mobility while simultaneously creating a framework for enhanced public spaces. These cycling networks not only ensure secure pathways for young cyclists, fostering a sense of freedom and healthy independence, but also contribute to a broader urban plan that seeks to enrich the lives of residents.

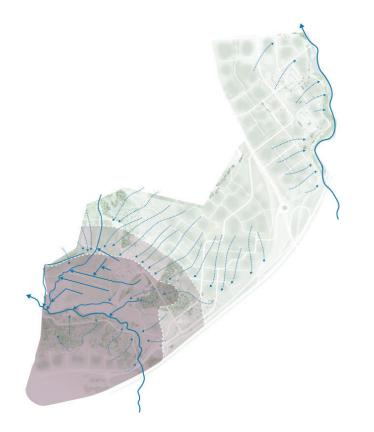
By intertwining cycling routes with public amenities such as parks, recreational spaces, and community centers, this comprehensive approach encourages an active lifestyle among youth while promoting community interaction and engagement.

This synergy between cycling infrastructure and amenities exemplifies the urban development's commitment to sustainability, health, and fostering a cohesive and dynamic neighborhood for all its residents.



Safe cycling connections & youth programs

Major cycling infrastructures are part of a wider strategy for overall nature accessibility



- Geomorphology, ground conditions

The new development in Keldur is primarily located in the upper part of the region where the thin soil and permeable bedrock provide an ideal opportunity for blue-green drainage and landscape infiltration solutions. By taking advantage of the natural terrain, we can avoid costly water management and local floodings. Meanwhile, the lower part of Keldur is preserved, maintaining important cultural and forested landscapes.





- Cultural landscape

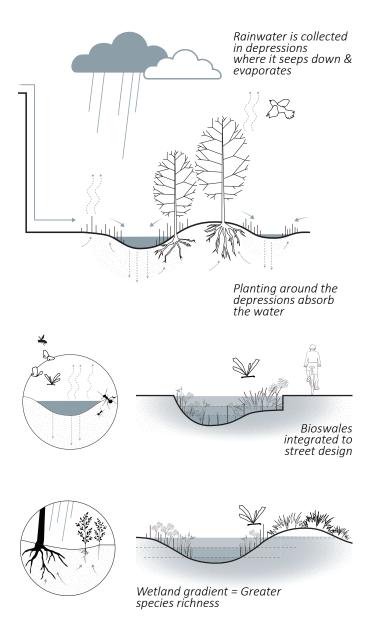
Building upon local landscape identities, a large portion of Keldur natural landscape is preserved and enhanced through local interventions. Offering residents and visitors the opportunity to experience a rich landscape of ancient glacial moraine, agricultural fields, mud flats, the Grafarlakur stream, the Korpa river, as well as view toward Mt. Esja.

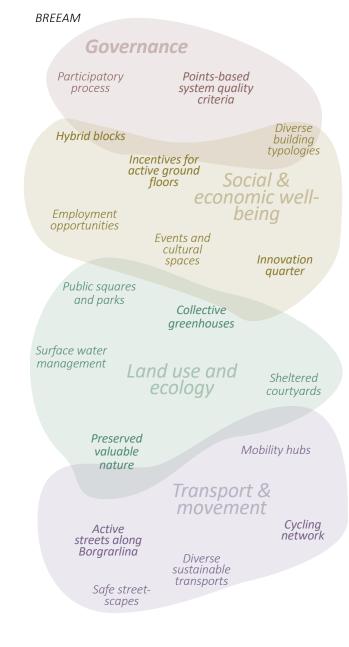
- Terrain adaptation

The overall schemes is orientated in various directions, following the slopes of keldur, adapting to the terrain and providing better accessibility along with opportunities for views and sun exposure. Sustainable rain water management



The blue-green network includes bioswales, infiltration ditches, detention ponds, etc. and aims to capture and delay the water "upstream" before directing it via gravity to infiltration ponds enhancing local nature and biodiversity. Additionally, the blue network connects to existing ditches and streams "downstream". In addition, existing green edges and trees are preserved and new trees are planted in the areas surrounding the new development, particularly on the eastern side.





4.12 PHASING

The project's phasing strategy involves an incremental approach to development, with careful consideration given to the environmental impact of each phase. This approach not only reduces the strain on resources and minimizes waste but also allows for greater flexibility in responding to changing needs and preferences.

This requires collaboration and engagement with all stakeholders, including residents, businesses, and community groups, to ensure that the development meets their needs and is supported by the community.



Initial Phase Identify and protect valuable natural & cultural landscapes.



Getting the infrastructure ready:

Establishment of the Borgarlína line, street loop, parking house and underground network for energy, waste, etc. are required to prepare the ground for future dougloments. developments.

Phase 1

Development areas for phase one are strategically located near existing infrastructure, the first Borgarlína stop and include a wide range of housing typologies as well as a parking house.

Phase 2

Hybrid urban development is prioritized in a second phase, insufflating more diversity and liveliness to the new neighborhood.

Phase 3

The remaining areas of Keldur west are developed, with the possibility to adapt to the changing needs.



Landmarks and urban generators:

Key programs are started early in order to foster interest, identity and branding of Keldur. For example; food court, kayak house, farm house, community gardens, topport opace of temporary event space, etc.

4.12 PHASING

Alternative phases

The following alternative scenarios can be used in complement to Keldur development or as individual phases generating a higher range of options.

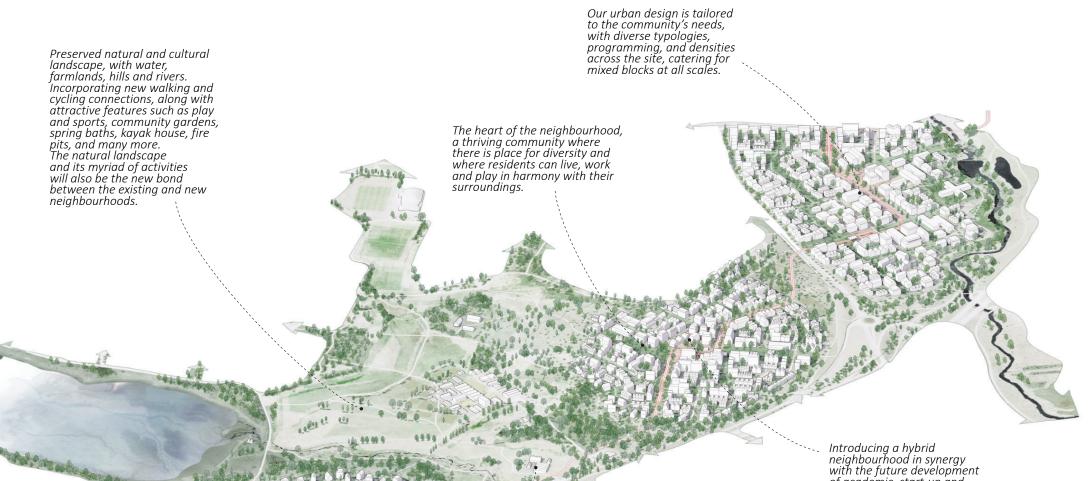


Keldur south

Extended footprints

Keldur village

Keldur east represents longer term urban development. Where uncertainty and different needs may arise. Also, the innovation quarter may have a different timeline than the rest of the development.



The new city edge can serve as a dynamic gateway to Reykjavik, with active facades, dedicated bicycle infrastructure, and breathtaking views. This development has the potential to transform Höfðar into a thriving and eclectic neighbourhood, featuring a mix of commercial, business, and residential spaces.

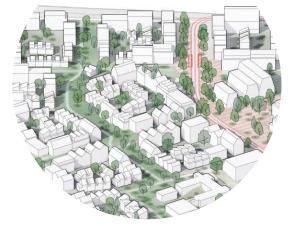
Opportunity for sport park activities connecting Keldur with Bullaugu Introducing a hybrid neighbourhood in synergy with the future development of academic, start-up and tech activities, among others. Working and living are fully integrated into the urban structure, along with community spaces for events, culture or gatherings, making it a future model for sustainable urban planning.



Facing the bay, Keldur's enhanced local nature will make Keldur a destination where nature meets sustainable urban life.



Hybrid blocks allow for typology diversity, solar exposure, great views and great permeability toward Keldur park.



Keldur north is setting the base for long term northern extensions in Leynar, both with public transport and linear park.



Keldur's southern edge facing Vesturlandsvegur is design to shelter the noise from the motorway and provide comfortable inner courtyards.

New opportunity for producing food locally, adding new high tech greenhouses and growing labs to the existing research infrastructure.



View from one of Keldur West courtyards. Illustrating a green sheltered community landscape in connection with the surrounding nature.



View from Keldur West urban linear park. Illustrating urban nature, cycle path, density and buildings diversity.



View from Keldur West Urban centre. Illustrating Borgarlína lane and stop, urban square and linear park.



View from one of Keldur's East urban centres. Illustrating street life, community house, shared space and integrated nature.



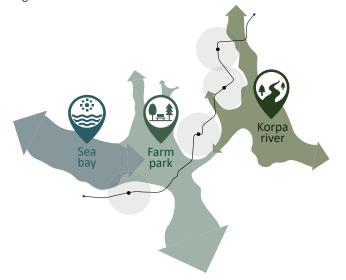
THE KELDUR VISION

The design guidelines for the new sustainable masterplan in Keldur encapsulate a holistic approach that aligns with the local natural context while prioritizing sustainable mobility and fostering vibrant communities.

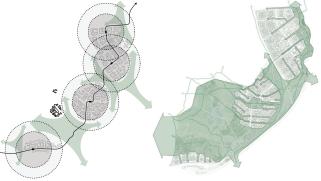
In order to materialize this vision, a model for social planning tailored to Keldur is developed and promotes contained plots size to encourage smaller, more creative developers competing on quality rather than price.

A LANDSCAPE APPROACH

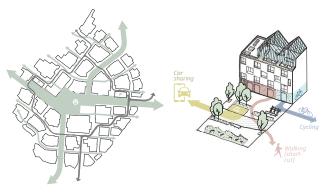
The cornerstone of the masterplan is its adaptation to Keldur's unique natural setting. The project strategically leverages the existing landscape identities, not only preserving the valuable cultural landscape but also capitalizing on the inherent beauty and ecological significance of these features.



Central to the masterplan's success is its emphasis on sustainable mobility. In fact all proposed new buildings are within a 5min walking radius from public transport hubs. This results in more compact neighborhoods with a larger concentration of public amenities and a greater porosity to nature.



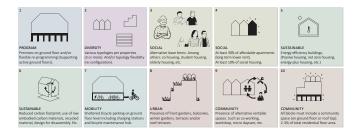
At the neighborhood scale, generous public spaces of squares and green parks are centrally located where Borgarlína stops can be found. Promoting car free and sheltered outdoors at the heart of the district.



Green alleys are spread across the neighborhood, levelled with the existing terrain they provide the fine local network for healthy living and safe access to outdoors.

THE KELDUR MODEL

The project suggests a tailored innovative process where emphasis is put on quality and diversity. It caters for smaller properties and advocates a mixture of detached houses, town houses and apartment blocks that makes it possible for more actors to build. The local planning takes place before selling, when the municipality can express higher demands. It also shortens the time between monetary investment and yield, often beneficial for smaller actors. This model uses a fixed price for the land and lets the constructor compete by offering the best proposals weighted using a points-based system on 10 criteria. For example, a diversity of apartment sizes and premises for other activities on the ground floor is worth more points, and the actors who offer these kinds of solutions will be given precedence for the plots.



Additionally, developers must adhere to overall guidelines, including contributing to communal parking houses and funding a 3-year car-sharing membership for future residents, with charges only when the car is used. Locally, each unit includes a 2-3% surcharge, funding communal "greenhouses" with workspace, indoor play areas, and spaces for gardening and events. For instance, a 100m² flat adds 2m² extra cost, offering access to approx. 200m² of communal spaces in the block! IN CONCLUSION, KELDUR'S MASTERPLAN CONCEPT IS BASED UPON:

Density for urban life –allowing for efficient public transport scheme and providing a better basis for service, both commercial and public.

Cater for diversity – a mix of house types and tenancy forms providing the conditions for a social mix and great variety of architecture.

Meetings in everyday life- meeting places are created at different social levels; own residence, communal houses, public squares...

Nature for identity and well-being – the Keldur park and cycle paths tie the area together strengthening Keldur's identity and attractiveness.

