

Project Name: Urriðaholt Master Plan
Project Location: City of Garðabær, Iceland
Project Type: Master Planning
Type of Client: Private Development

Program:

Residential: 1,625 dwelling units | Office and Retail: 970,000 square feet | Civic uses: 700,000 square feet
The development plan creates a compact, and diverse, mixed-use neighborhood with numerous local amenities on a 250 acre site. Woven together with 90 acres of open space, the neighborhoods will provide a walkable community with a mix of dwellings. Office and street retail is planned along a tree-lined boulevard from the entrance plaza of the development up to the hilltop where major civic facilities are planned.

Special Constraints:

Icelandic Cultural Archaeology:

1. An old farmhouse and its vegetable garden front the lake. These remains have been integrated into a square near the lake. This will become an interpretive landscape feature that forms an important event on the route between the lake and the top of the hill.
2. A WWII encampment will be the location for a kindergarten. The path system will be laid out to reflect the camp's original design.
3. Two locations on the hillside are believed to be enchanted with elves. One will become the focal point of a school courtyard. The plan provides enhanced accessibility to the other which will remain untouched and lies outside the development area.

Site Description:

The site encompasses a hill formed during the last ice age. The hill rises 160 feet above a lava field on the site's north side and a lake at its southern edge. The site offers views of the Reykjavik capital area, a ring of mountains, and the North Atlantic Ocean. Located between residential neighborhoods and a nature preserve, The Green Scarf, the site serves as a gateway from the city to the natural Icelandic landscape beyond. The most unique aspect of the site is the lake, which is formed by a tongue of lava that wraps around the foot of the hill.

Urban Design Analysis & Response (problems, goals, size, key design concepts, etc.):

Development pressures in Iceland are similar to those in the US in the later half of the 20th century. As the current population embraces the automobile, suburban sprawl is expanding throughout the greater capital area. Urriðaholt presents an opportunity to reverse this trend. The new plan will recall the walkable character of the central core of downtown Reykjavík. Increased residential density and mixed uses will be integrated with sustainable urban design strategies. Urriðaholt is envisioned as a gateway between the seaside community of Garðabær and the island's vast inland nature preserve.

The development is organized around civic and family-oriented recreational uses on the hilltop. The hillside will have its own "Green Scarf" leading through the landscape to the lake. At a more intimate scale, a network of sidewalks and paths knit neighborhoods together.

Sustainable Design Elements (energy efficiency, appropriate land use, ecological impact, etc.):

Sustainable Urban Drainage System: To maintain the natural hydrology of the site, impervious materials were kept to a minimum. A natural stormwater drainage system ensures that rain falling within the watershed area will continue to feed the lake naturally. This design integrates the development with a network of swales placed to collect water from roads and roofs to allow infiltration as the rainwater runs along the contours. When the rate of infiltration of these swales is exceeded, they feed retention ponds in the green wedges that run down the hill located adjacent to blocks of flats. At the center of the business boulevard, a swale collects stormwater and directs it between down-slope buildings. Green roofs reduce storm surge and improve views from above.

Solar Access: In a country where "The sun is always on the horizon," the ridge of the hill is fortuitously oriented along an axis that runs from the southeast to the northwest. This axis provides the logic for the primary site organization. Residential areas are oriented to the southwest for solar access and protection from the cold easterly winds. Office space is sheltered from the low-angled southern sun by the hill itself. All of the major landscaped spaces, including the lakeside, and two green corridors receive the maximum levels of sunlight during the day which will ensure that they are valuable areas for outdoor recreation.

Universal Design Elements:

Universal design is a substantial challenge with a hillside development. However, the site was carefully organized with two connector streets: the Diagonal Connector and the Business Boulevard which connect the lower entry plaza with the upper portions of the hill. These streets and the residential streets have slopes less than 5%. The Green Wedges that establish the framework for the open space have a maximum slope of 10%. They incorporate a path network that knits together the neighborhoods on both sides with a maximum slope of 5%.

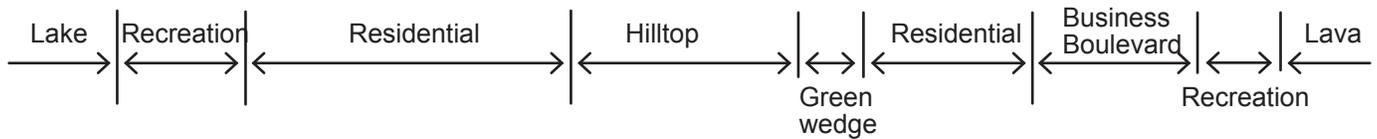
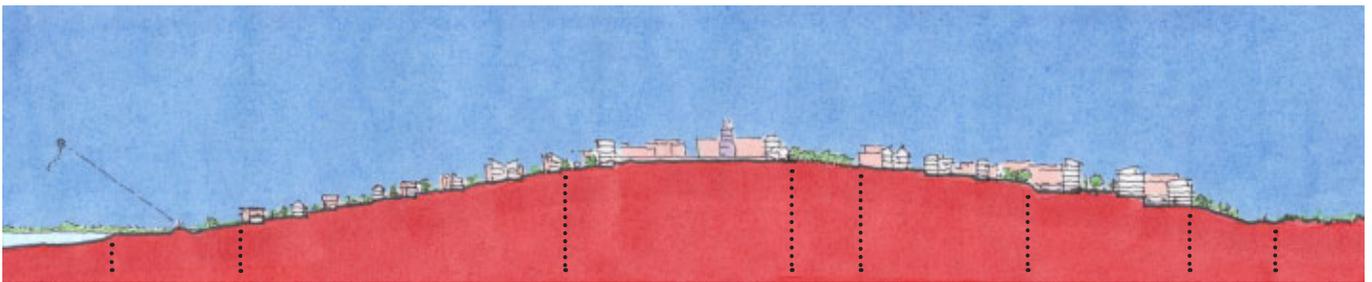
Brief Description of Others' Involvement in Urban Design Process (community groups, etc.):

Community participation in its broadest definition has been a key element throughout the preparation of this plan. The master plan has been developed in close association with the town council, planning committee, town officials and key stakeholders. The planning process began at the end of 2004, when several participatory meetings were held with the community. After establishing a vision that was based on consensus points from the meetings, the Municipal Plan was revised in response to this input. An additional change was later made to the Capital Area Regional Plan to integrate the revised plan with the region issues. It is the goal of this master plan to serve as broader guidance for future planning for the area.

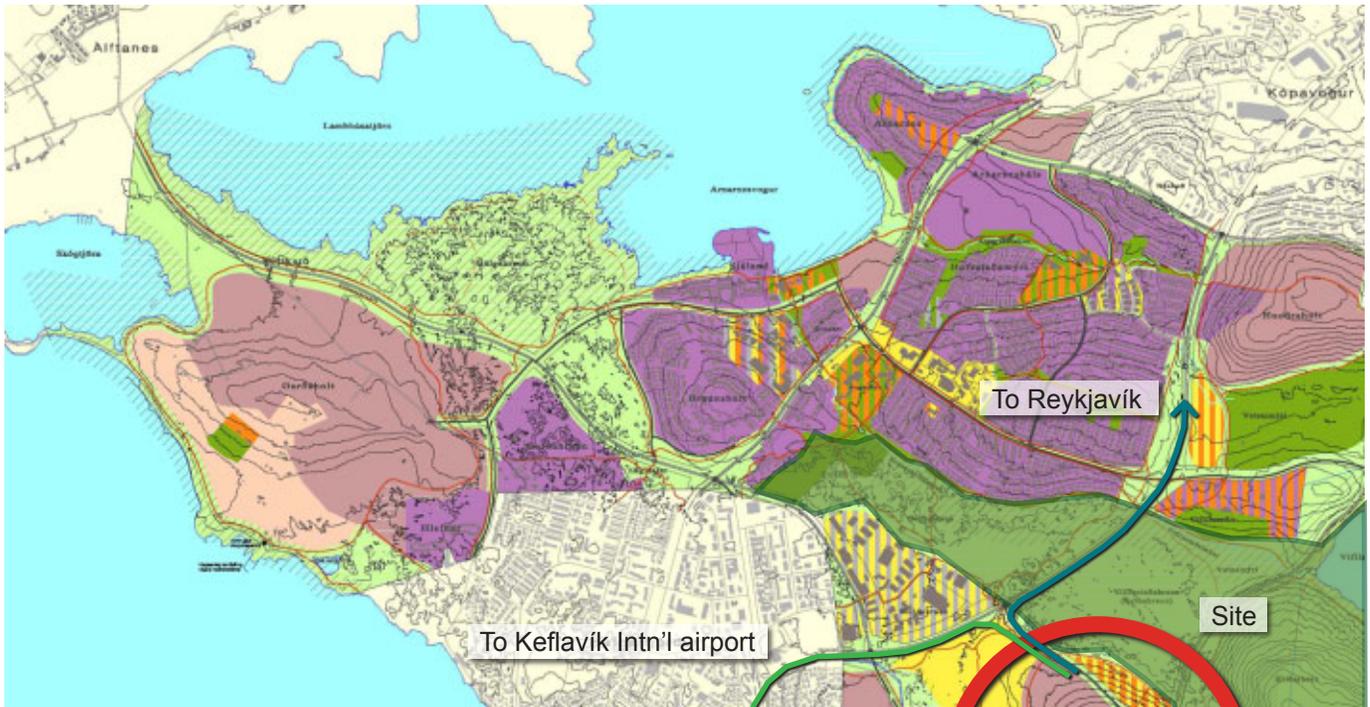
Completion Date (year): 2020 (Anticipated)



Urriðaholt hillside community



Section through Urriðaholt looking Northwest



Protective green scarf around Reykjavik capitol area

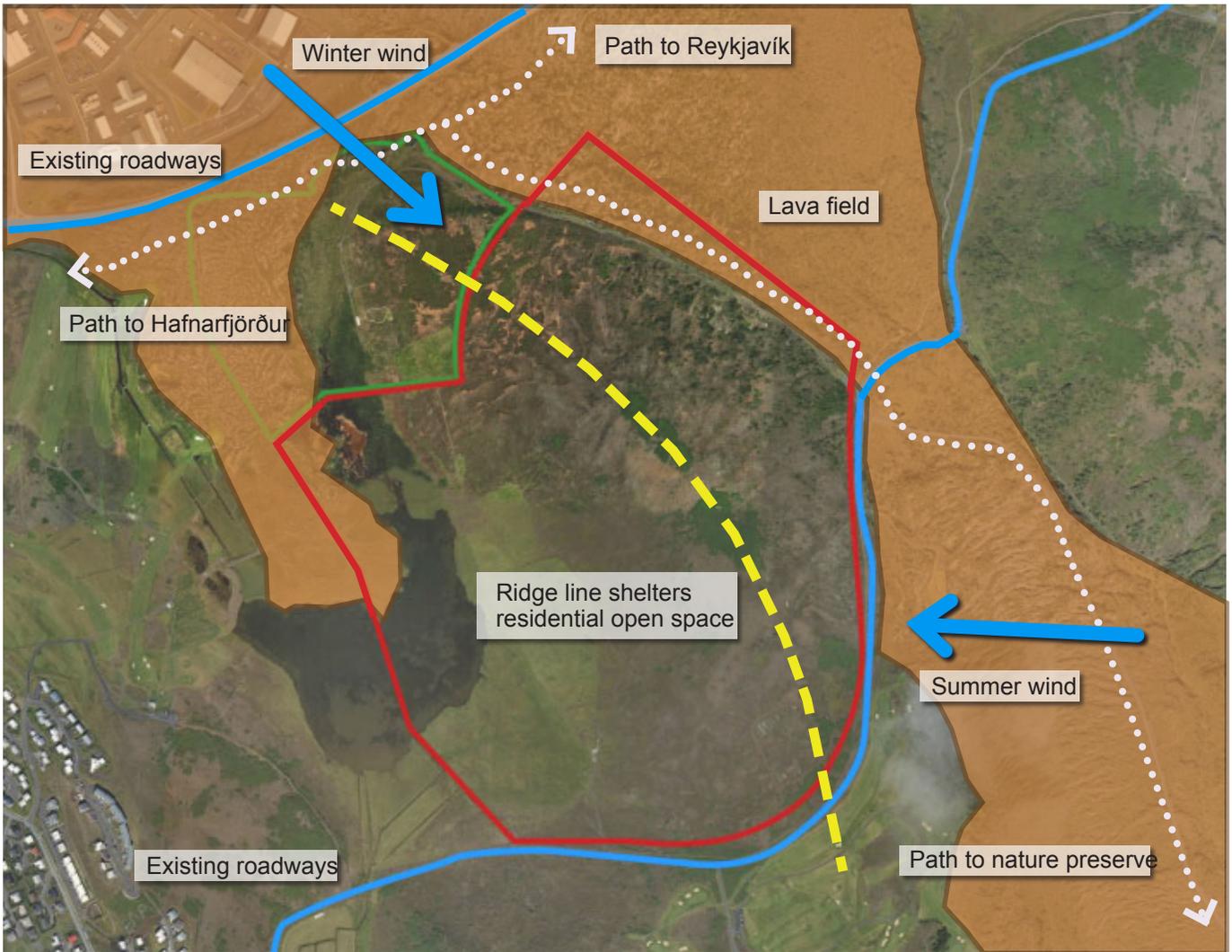


Green fingers - new access to ocean



Green scarf - developing protective forest around Reyk-

3 SITE ANALYSIS



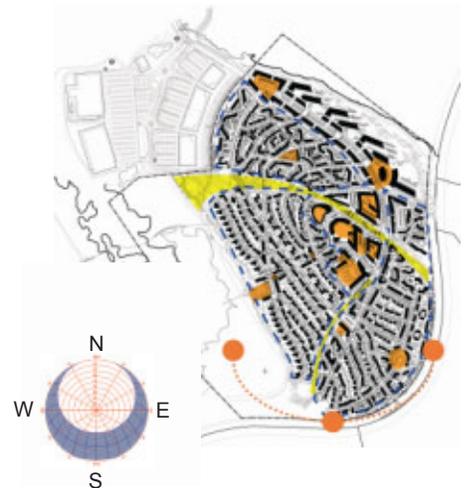
Aerial photography with site boundary ——



Primary winter wind direction from East



Primary summer wind direction from Northwest



Solar access - the sun often hangs on the horizon



- | | |
|--|--|
|  Residential |  Culture |
|  Office, business |  Education and recreation |
|  Open space |  Retail, apartments |



Nature gateway



Path network



Green wedge path network negotiates the slope and knits the neighborhood together



Hilltop connection

- Business street
- Path, green
- Hilltop connector through cultural core
- Protected hilltop path
- Lake path to hilltop
- Hilltop bus loop



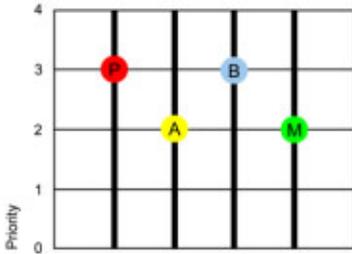
Business boulevard with sidewalks on both sides of street



Diagonal connector with sidewalks on both sides of street



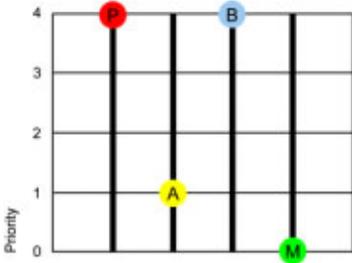
Residential streets with sidewalks on both sides of street



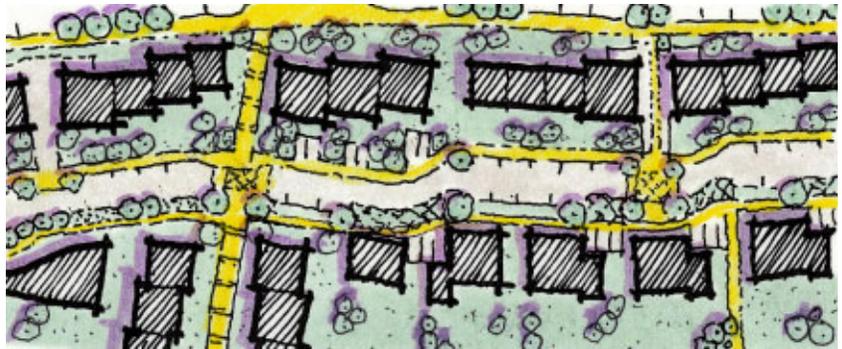
Priority diagram Diagonal connector



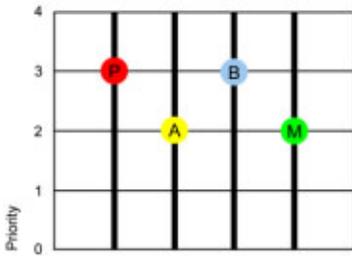
Each residential street is given a unique character, a variety of traffic calming methods are used to reinforce this variety. The Diagonal Connector meanders slightly to continually change the vista for pedestrians and drivers, tabletops slow traffic at pedestrian crossings and intersections



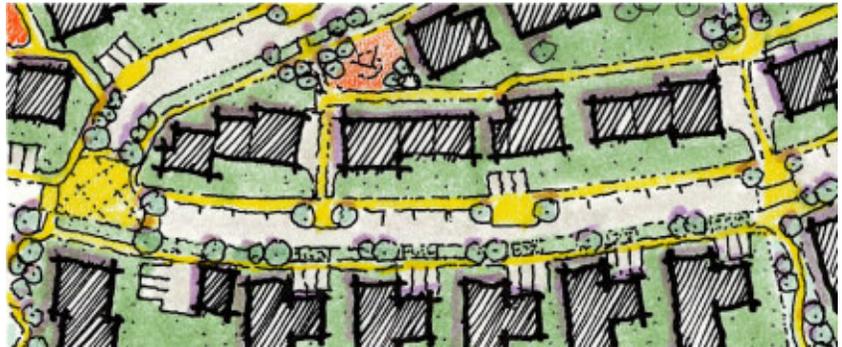
Priority diagram Residential street



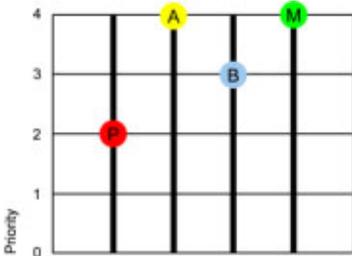
Some residential streets are chicaned to calm traffic and give priority to the pedestrians. Tabletops are also included at pedestrian crossings



Priority diagram Diagonal connector

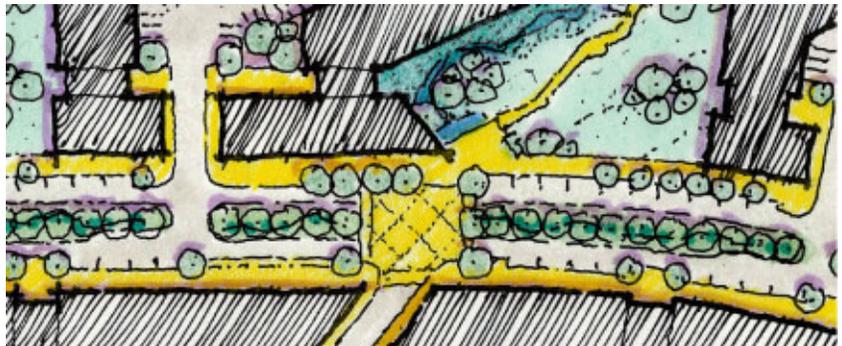


Other residential streets have frequent landscaped curb extensions to calm traffic and breakup the parallel parking spaces



Priority diagram Business boulevard

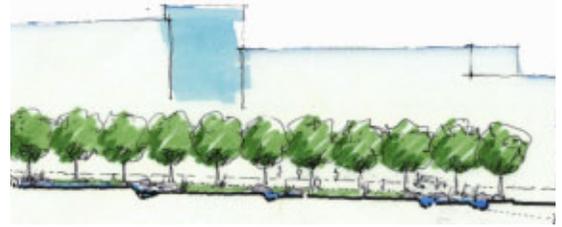
- Pedestrian
- Bicycle
- Auto
- Mass Transit



The Business boulevard serves as a spine to connect two regional roadways, so priority is given to the vehicle and bus. Material changes are provided at pedestrian crossings to slow traffic at these points



Urriðaholt sustainable drainage system - green wedges provide retention for severe storm events



Bio-swale at Business boulevard median



Integration of natural landscape with Business boulevard - path connecting to lava trail



Bio-swales integrated in landscape design



Bio-swale bridge



Celebrating the sound of water

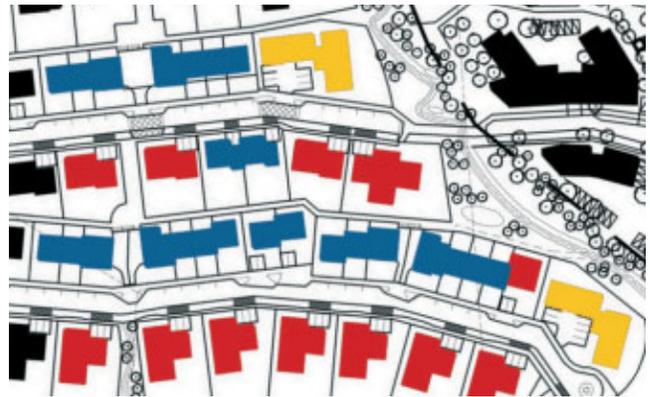


Designing to celebrate the natural hydrologic cycle





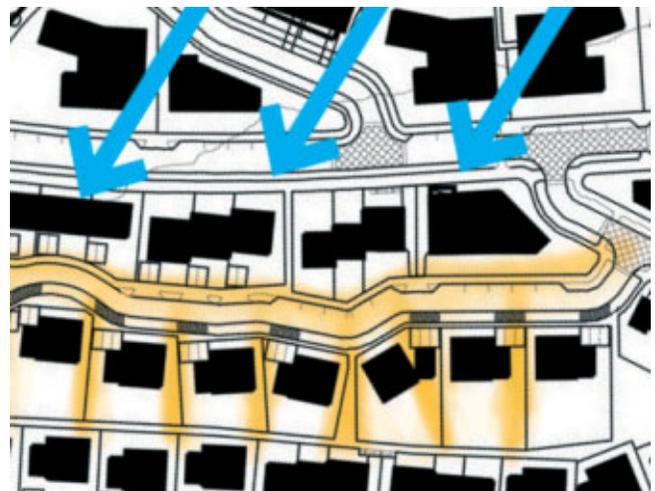
Walkable street character



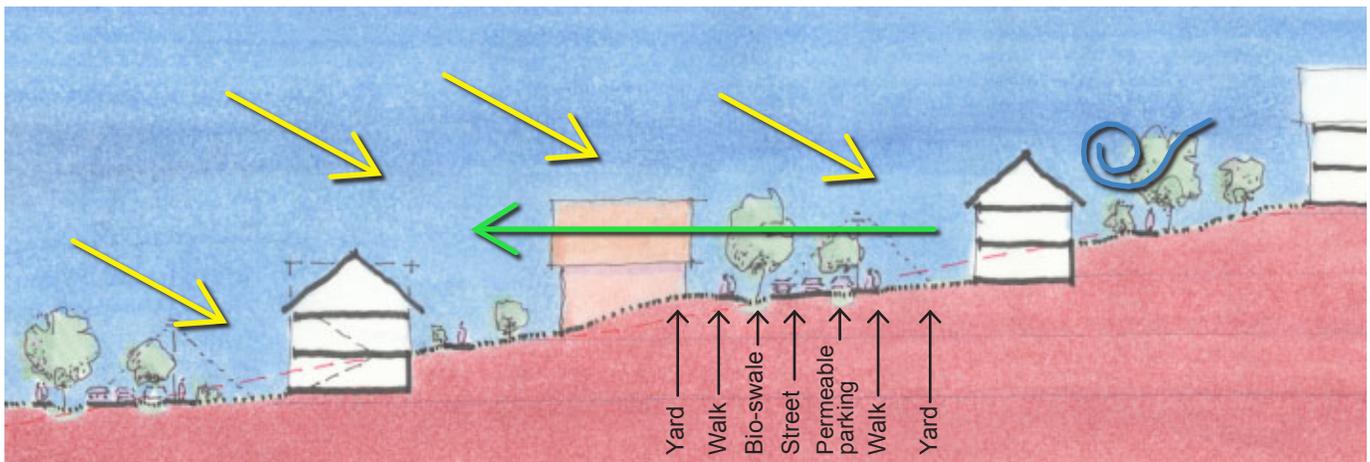
One-family houses ■ Multi-family housing ■
 Row-houses/Duplexes ■



Single family houses are located on the down slope side of the street to open up views to the lake



Rowhouses protect street from wind
 Separated single-family houses increase solar access

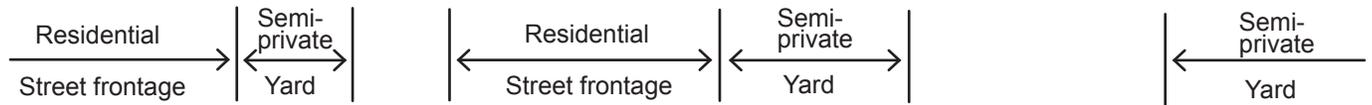
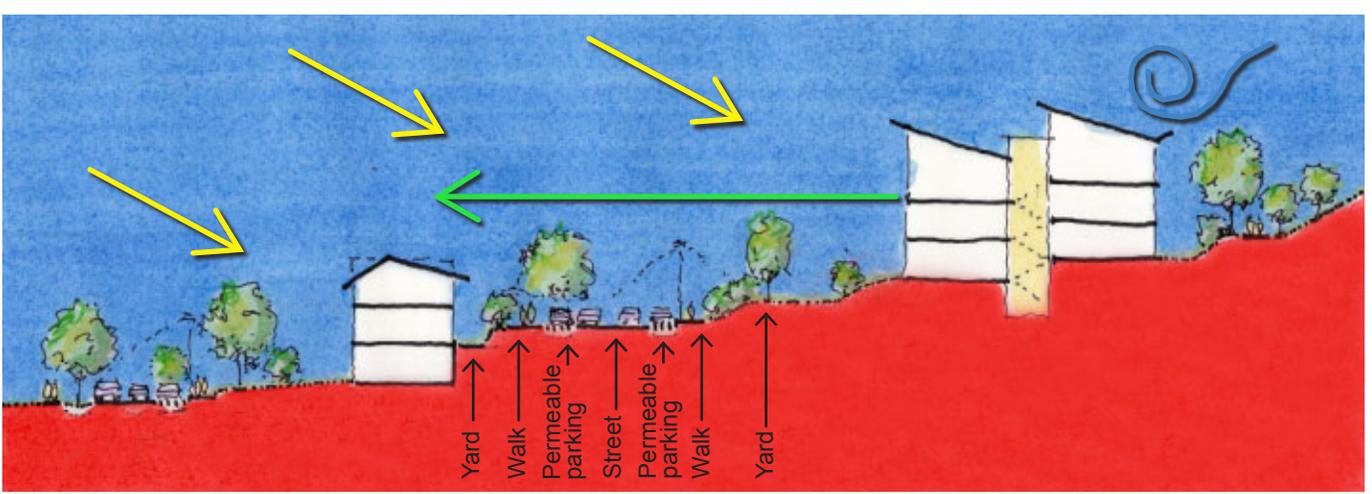


Street section sun ■ wind ■ views ■



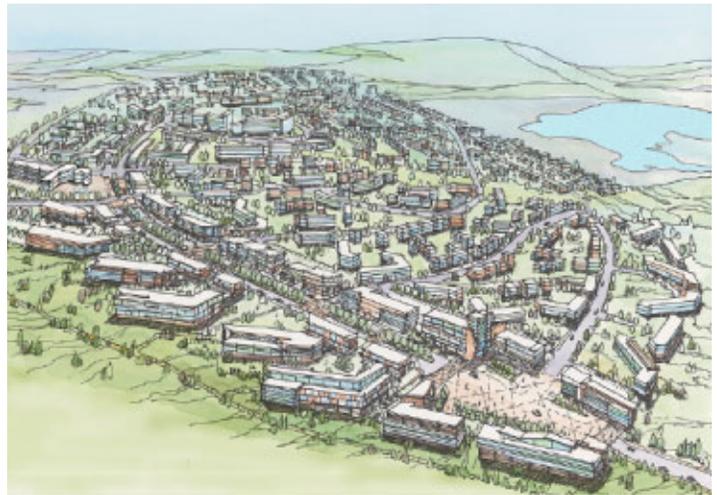
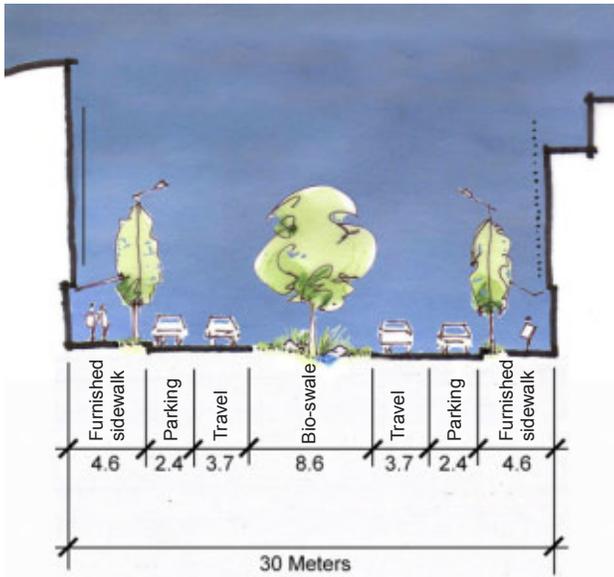
Pocket play and garden areas along diagonal connector

The diagonal connector organizes the street system by gently cutting a diagonal across the contours ———

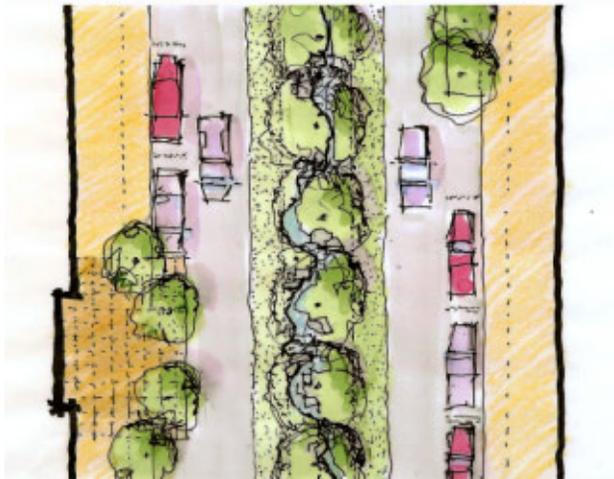


Diagonal connector section

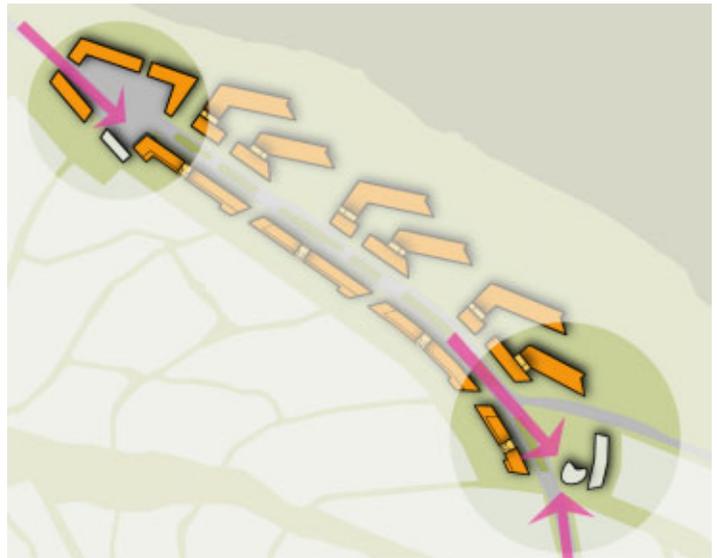
sun ——— wind ——— views ———



Business boulevard with Entry plaza



Business boulevard



Business boulevard plazas provide connections to residential areas and natural landscape



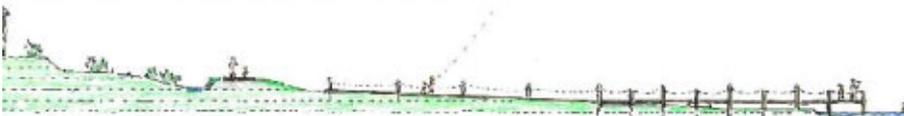
Views preserved to natural landscape encourages pedestrian movement to nature preserve



Lake edge



Landscape feature by archaeological remains



Lakeside activity



Archaeological remains of farmhouse



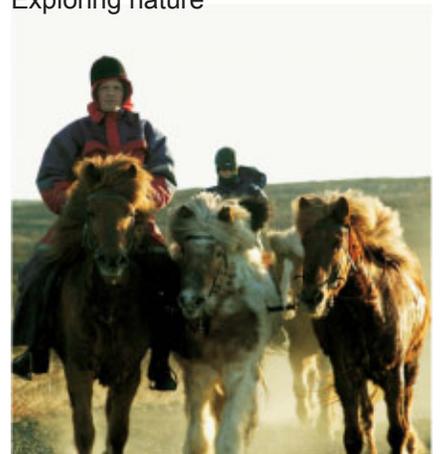
Green Wedge gathering space, path network and sustainable drainage system



Exploring nature



Connection to nature preserve along lava edge



Outdoor activity area



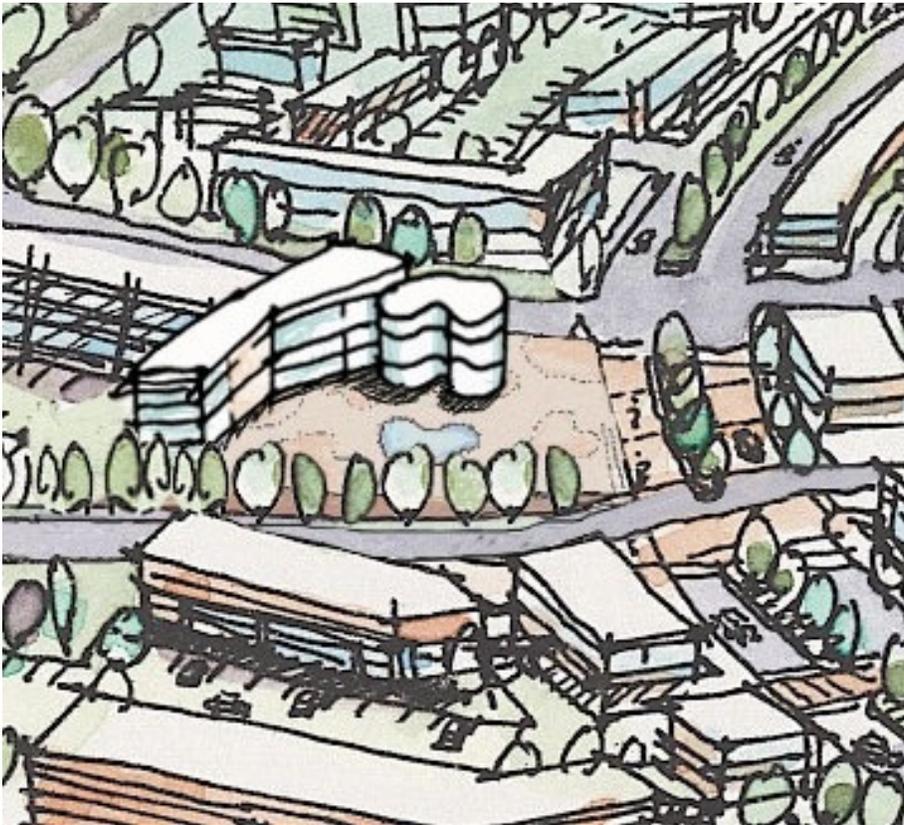
Hilltop character - enclosure and protection from winds and access to the sun



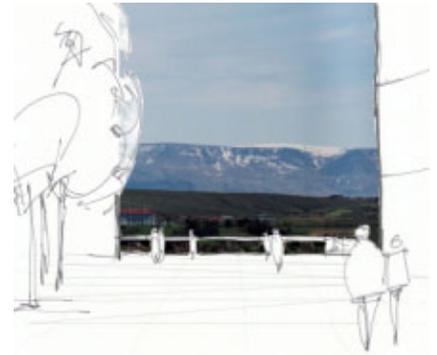
Hilltop activity



Hilltop section



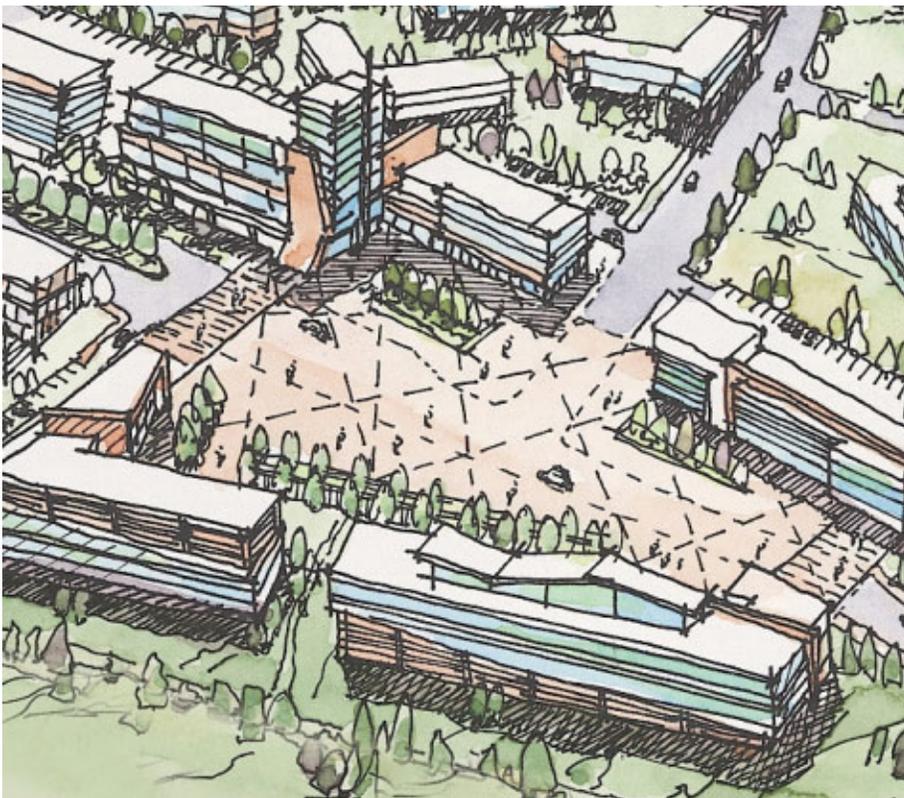
Upper plaza gathering space



Views and connection to natural landscape



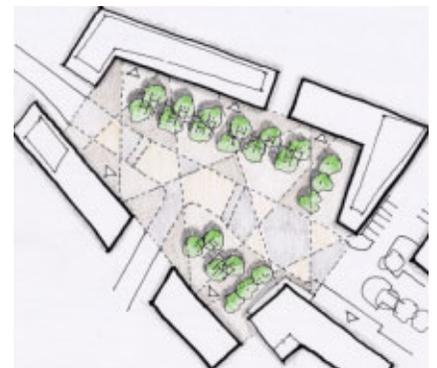
Upper plaza, plan view



Lower entry plaza arrival



Shared pedestrian and vehicular space



Entry plaza, plan view



Iceskating on the lake



Snowplay on the lake



Family activity in green wedges



Social activity on the hilltop



Family activity in green wedges



Musical gathering envisioned on the hilltop



Family activity in green wedges

Project: Urriðaholt Master Plan | **City:** City of Garðabær, Iceland | **Client:** Þekkingarhúsið hf, Iceland

OWNER

Urriðaholt ehf
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MASTER PLAN

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