urban design case studies

THE DEVONSHIRE QUARTER :: Sheffield, England
The Quarter has seen a renaissance of life due to several dynamic mixed use, urban infill development projects. Each project integrates with the existing neighborhood and reinforced the sense of place by further stitching the fabric of the existing community as an identifiable place. Each project contributes a mix of residential units, boutique shops, bars, restaurants and community uses.

HAMMARBY SJOSTAD :: Stockholm, Sweden
This project exemplifies large scale urban design principles and vision that are the result of solid master planning and strong public leadership. It includes multiple sustainable elements, a diverse collection of neighborhoods, social housing and a thoughtful public realm system.

EMPIRE SQUARE :: London, England
Integrated urban design, landscape and architectural thinking transforms this irregular three acre block into a distinctive and memorable urban neighborhood. Although relatively small, Empire Square informs the potential for one of the high rise sectors of Yesler Terrace. Through thoughtful design, the affordable housing component is integrated and indistinguishable from market rate units.

GREENWICH MILLENNIUM VILLAGE :: London, England
This project offers a mix of inspiring open spaces, pedestrian walkways and contemporary design. The architecture reflects contemporary sustainable practices with twenty percent of the dwelling units reserved for social housing which is indiscernible from market rate housing.
The Devonshire Quarter is located in the center of Sheffield, England, in a traditionally industrial and residential neighborhood. After WWII the demolition of derelict buildings lead to a series of disjointed developments during the early 1980’s that created the opportunity to reinvent the district. Recent developments are mixed use and much more urban in nature. Housing components achieve densities of up to 180 dwelling units per acre. As a result, Devonshire Street is now known for its independent shops and variety of pubs and bars that have energized the Quarter as an alternative, hip urban village. The area has a population of over 1,000 and is expected to grow to more than 5,000. Significant public realm improvements strengthen the connection between the Quarter and the Sheffield city center.

Devonshire Quarter offers lessons of how infill development that provides a proper mix of open space and land uses combined with a range of public realm initiatives can create a vibrant urban neighborhood.
Contemporary architecture is respectfully integrated with the existing urban fabric while forming the edges of the Quarter.

Neighborhood retail and services located along mixed use streets create safe, active urban environments.

The courtyard located on the roof of the retail spaces creates common space and contributes to storm water management. Surrounding buildings are appropriately scaled to frame the space and offer a sense of enclosure.

The courtyard contains a variety of uses including gardens, seating areas and open lawn. Hedges separate private space from public space.

Balconies provide private open space for residents.

Signature architecture in the plaza creates a sense of place and identity.

Locating the stair tower at the corner of the building and enclosing it in glass creates an iconic element while offering views and reinforcing “eyes on the street” for security.
The integrated system of open spaces contributes much to the identity and order of the Devonshire Quarter. Open spaces create internal nodes that are linked by view corridors and pedestrian ways to historic icons of the city, St. Georges and St. Mary's Tower.

Devonshire Green, the largest open space in the Quarter, is visible and accessible from all sides and serves as the informal center of the community.

The gently sloping and terraced lawn encourages leisurely use as well as orientation and seating for performances.

Surrounding residential and retail uses overlook the open space ensuring constant public monitoring.

Diverse open spaces allow for a variety of uses, passive, active and playful.
Connections
The Devonshire Quarter

Streets act as connectors bringing users to a variety of spaces within the city.

Multi-modal streets accommodate light rail, buses, automobiles, bicyclists and pedestrians.

Storefront façade heights and materials are scaled for the pedestrian user.

Narrow street widths and proper building massing create a pleasant and human scaled environment.

Active uses front the street, creating a vibrant, safe urban environment.

Permeable facades allow light spillover onto the sidewalk and constant monitoring of public spaces.

Contemporary architecture is scaled and proportioned to complement traditional architecture.

New development terminates street view, and pedestrian through ways form gateways into the development.
Site elements such as lights, signs, traffic signals and regulatory signs are integrated and consistent, reducing clutter and creating a better pedestrian environment.

The district name engraved in the light pole reinforces identity, and creates a strong sense of place.

Indirect fixtures reflect light to the sidewalk, creating a softer ambiance and contribute to dark sky protection.

Traffic signals are placed on poles adjacent to the street, allowing for unobstructed corridor views.
The urban design of Hammarby Sjostad is based on Stockholm city standards in terms of street width, block sizes, densities and land uses, thus integrating it with the city through familiarity of scale. The traditional city block structure combines with contemporary architectural styles that respond specifically to the waterside context and promote integrated sustainable technology.

At 18 dwelling units per acre, the gross density is relatively low. This is due in large part to the variety of open spaces, pedestrian connections, and sustainable features. The project has succeeded beyond expectations in attracting families with children and is a model for large scale sustainable development practices. Among the ample amenities provided for families are three schools, a preschool and nursery, a library, a sports center and children's play areas. A mix of specialty shops, bars, restaurants, and entertainment venues coupled with multiple public transit options maintain an urban character.
Building heights and massing capitalize on views and solar access. Unique and iconic buildings identify nodes of activity.

Taller buildings form a consistent street edge along main corridors, while lower more permeable structures along the water edge encourage public access and activity.

Buildings define street edges and activate the public realm.

High densities and a mixed use development pattern creates active environments populated with people, creating a sense of community and safety.
Open space system is organized by an internal canal that links to the river. Semi-private open space is located at the interior of blocks, linked by pedestrian ways to the waterfront, urban parks, natural open spaces and the development edges. Pedestrian boardwalks, quays and linear parks contribute to the variety of open spaces.

Seating areas and lawn engage to encourage passive and active uses in a single space.

Architecture is appropriately scaled to frame open spaces.

Residential balconies overlook open space to provide views and public monitoring while activating and individualizing the facades.

Architectural elements create a sense of place and identity and diverse means to engage with the spaces.
A network of pedestrian paths encourage walking and biking by linking a variety of open spaces and destinations.

Massing, use of glass and open space locations maximize light and views.

Balconies overlook connectors and spaces, adding activity to the edges and increasing the sense of security.

Where residences are located on the ground level, landscaping and pavement textures create separation between private and public space.

Buildings are built to street and path edges forming a consistent urban wall.

Paving materials are used to delineate different zones of pedestrian paths (storefront, movement and seating zones).
Streets encourage all modes of transportation, comfortably integrating pedestrians, bicycles, autos and transit.

Mass transit is emphasized and includes light rail, buses and ferries. The development also supports neighbor‐hood car share program with over 270 members.

Transit stations are easily identifiable and accessible from throughout the neighborhood, forming key nodes of activity and identity.

Development is located immediately adjacent to transit stations.
Vacuum receptacles for recycling are installed throughout the development.

Integrated stairs and ramps provide access and encourage the creative use of carts and carriages.

Covered communal storage units allow bikes to remain outside and protected from the elements, allowing easy access and relieving interior spatial limitations.
Hammarby Sjostad integrates many creative and leading sustainable concepts in design and management. These notions will become the standards for the future:

- Ground floor of all buildings is built as flexible space suitable for commercial, community or leisure use.
- Native reeds and rushes are preserved or have been rehabilitated at the waterfront.
- Tram and transit infrastructure is incorporated into design, and new bus routes and a free ferry across Hammarby Sjo have been added.
- Car share program includes more than 270 residents as members.
- From the outset, the project goal was to be twice as environmentally effective as typical new construction. Success of achieving targets is monitored and shared through on information kiosks and community website.
- Sanitary sewage is cleaned and purified at a large sewage plant nearby. Heat produced through the purification process is recycled as natural gas at a district-heating unit, providing an energy source for the neighborhood. Nutrients from sewage are recycled for use on nearby agricultural land.
- Storm water is naturally filtered onsite.
- Each apartment block has recycling facilities.
- Any combustible waste produced is recycled into heat energy for use in the apartments.
- Biodegradable waste is composted nearby.
- An environmental education center built at center of district to educate residents.
Empire Square is a former city warehouse site that has been transformed into a new mixed use, mixed income development. The developable portion of the triangular site is just under three acres and is immediately adjacent to existing buildings. The new development includes 572 apartments and 360 for sale units achieving a density of 310 units per acre. The project also incorporates a small super market, nursery, fitness center, restaurant and bar.

This project offers open space and pedestrian connection lessons for a challenging urban site. 37% of all dwelling units are affordable. These residences are distributed throughout the project and indistinguishable from the other units.
The twenty-two floor tower creates new urban landmark and offers 360 degree views of the city and establishes an icon for the adjacent neighborhood.

The predominant building height, eight stories, is taken from the rooflines of existing structures which surrounds the site.

Residential units face the interior courtyard and the street, creating well observed public spaces and active edges.

The dramatic pavilion functions as a neighborhood node containing a café and pub, a destination in the courtyard.
Street elevations are clad with brick facades, integrating into fine grain character of the existing built environment.

Active uses are incorporated at the first level continuing the mixed use character of the street.

Private space is separated from public space by raising the elevation of ground level units and integrating a planting buffer.

Affordable and rental housing is carefully integrated with market rate, privately owned units and are indistinguishable from the exterior.
Empire Square

An interconnected system of unique spaces contribute to the identity of Empire Square. Gardens, plazas and terraces are linked to each other and the surrounding city by pedestrian walkways.

Two distinct gardens, one at ground level and at second floor level are open to the public from 6am to 11pm. The ground level communal garden adjoins the backyards of a nineteenth century terrace. The gardens integrate mature trees with new landscape to establish an immediate park setting.

Nesting and habitat boxes encourage resident and migrating bird life.

Buildings enclose the garden on all sides creating a tranquil oasis from the busy city streets.

Each dwelling unit has access to a balcony overlooking the gardens.

A raised planting zone reinforces the separation of private and public areas.
Thoughtful design and quality paving materials transform alleys into pedestrian walkways.

Affordable housing units located along the walkways have direct individual exterior entrances, creating more ground level activity and monitoring of public spaces.

Pedestrian walkways create permeability through the site, connecting the corners of the triangular block and link spaces within.
Plaza space is located on the roof of a supermarket, and creates a transition between the development and the surrounding neighborhood.

Sculptural design of ventilation shafts from below grade parking decks integrates them with the plaza as an additive element.

Interior facing facades are clad in white or textured aluminum, creating a light, airy feeling in the garden while reflecting natural light into interior dwelling units.

Parking is limited to .42 cars per unit and space is provided for 40 scooters or motorcycles and 317 bicycles.
Greenwich Millennium Village (GVM) is a 44 acre brownfield site located on the Greenwich Peninsula. It is integrated into the surrounding urban fabric by a riverside cycle path, river transport pier and good links to buses, tube and mainline railway stations. When fully built out, it will included 1,400 housing units, 20% of which will be affordable. 45,000 square feet commercial and retail uses, 19,000 square feet of community uses as well as a state of the art school and healthcare facilities are also planned.

The residential portion built to date averages a net density of 118 du/acre and represents one potential product type for Yesler Terrace. The development aims to cut primary energy use by 80% utilizing low-energy building techniques and renewable energy. Building materials were selected that require low levels of energy to produce and create minimal waste during construction.
Architectural style establishes the neighborhood identity.

Buildings address the street and pedestrian paths establishing a consistent urban wall.

Higher density creates activity and observation enhancing safety and security for residents and pedestrians.

Buildings are oriented and spaced to maximize solar gain, natural light and ventilation.

A range of dwelling unit sizes allows for a variety of families to live here.
Open space is organized around a series of internal courtyards, linked by pedestrian ways. The internal courtyards function as semi-private, relaxing garden environments close to residences.

Each dwelling unit has a private balcony allowing access to light and fresh air.

Open spaces are designed specifically for children, with enclosures and multiple points of observation.
A system of diverse pedestrian paths throughout the site link spaces and access to the edges and the surrounding neighborhood.

Quality paving materials transform alleys into pedestrian friendly connections.

Streets provide separate automobile, bicycle and pedestrian lanes.
A screen wall is transformed into a sustainable living green wall that adds life, seasonal change, sound absorption and identity.

Separate, dedicated bus lanes encourage use of mass transit.
part II

Among the urban design precedents are projects that do not directly correlate to Yesler Terrace as a whole, but offer intriguing ideas and components that could be integrated into the development. The following images are intended to inspire and expand our collaborative thinking.
buildings
Low Rise Residential

materials. space. flexible space, attached and detached.

form. identity. character. color.
buildings
Low Rise Residential

integrated systems. roof drains to bio-swales.

scale. edge. proportion. rhythm.
buildings
Mid Rise Residential

views. pattern. personal and community space.

urban. dense. mixed.
buildings
Mid Rise Residential

dense. multi-scaled. proportioned.

children. urban. private in public.
buildings
High Rise Residential

shape. form. response to context.

contemporary and historic juxtaposed in harmony. material.
buildings
Tower Residential

identity. views. landmark.

scale. progression. rhythm. layered.
terminus. relief. light.

buildings
Tower Residential
buildings
Tower Residential

personality. edge.
connections
Streets

market. festive. social.

calm. mixed. continuity.
connections

Streets

district. pedestrian. vibrant.

alive. safe. memorable.
connections
Pedestrian

textured. material. intimate scale.
connections
Pedestrian

ceremonial.
connections
Pedestrian

identity. scale. inviting.

grade change. contemporary.
connections
Woonerf

public - private. multi-function.

hierarchy. interaction. mixed. diverse.
spaces

solitude.

contemplative.
spaces

Park

social. external

social. internal
spaces
Park

ceiling. rejuvenate. soothing.

playful. shared experience. urban.
spaces
Park
views.
spaces

Park

community. children. health

food. education. pride.
spaces

Park

nourishment. connection.

agriculture. health.
spaces

Plaza

timeless. grand. iconic. elevation.

retreat. rendezvous. personal.
spaces

Plaza

scale. context. form. node. destination.

context. destination. elevation.
spaces
Private

air. sky view. rooftop.

outdoors inside.
innovation
Energy

renewable. bold.

integrated systems.
innovation

Stewardship

integrated recycling. systemic.
innovation
Green Streets

integrated filtration. mitigation.
innovation
Green Streets

verdant. responsible. functional.

education. filtration.
innovation
Nature

ordered. walkable green roof.

productive. health. food.
innovation
Transportation

escalator? elevator? enabler!

hub. human. concentration.
innovation
Transportation

multimodal. segregated. safe.

vertical. horizontal. access.
innovation
Noise Mitigation

living. form. pattern.

multi-function. solar energy.
innovation
Slopes

connected. memorable. proportioned.
innovation
Slopes

multi-layered. complex. statement.

clean. iconic. perspective.
innovation

Slopes

ambitious.