

19 March 2012

Clerk to Panel on Environmental Affairs
Legislative Council Secretariat
2/F Legislative Council Complex
1 Legislative Council Road
Central
Hong Kong

Honorable Members of The Legco Panel on Environmental Affair,

"Reduce, Recycle and Proper Waste Management": Progress of the
Key Initiatives under the Waste Management Strategy

In regards to the subject, I want to bring all of your attention to an excerpt titled "Urban-Friendly Utilities" from the March 2012 issue's American Planning Association's Planning magazine. The excerpt provided a comprehensive summary on how Not In My Backyard (NIMBY) facilities could perfectly integrate into local community if proper urban design and planning is implemented.

As a world city with majority of citizens demanding for a green and sustainable environment, Hong Kong government should take proper measures immediately to improve the design and planning of current landfills, future Integrated Waste Management Facilities and all relevant amenities surrounding the current or future waste disposal facilities. In particular, I want to bring all of your attention to Southeast New Territory Landfill (SENT) in Tseung Kwan O, where nearby residents are unsatisfied with the way SENT is causing a loads of environmental, hygienic and traffic problems to the community.

Hence, I strongly hope members of the panel could urge Environmental Protection Department (EPD) to take a look at the attached article and demand EPD to put forth a proposal that would mitigate the concerns of the community in relating to SENT, before allowing EPD to submit their funding proposal to expand SENT in Legco.

Thank you for your attention.

Your Sincerely,



Tim Lo
Green Community Planning Practitioner
Tseung Kwan O Resident

The Following is an Excerpt From American Planning Association Planning — March 2012 Issue

Urban-Friendly Utilities

Turning power plants into amenities.

By Adam Regn Arvidson

Industrial Minneapolis is easy to find. Just northwest of downtown, railroad yards, warehouses, and factories have always taken advantage of easy access to the Mississippi River and land too marginal for housing and agriculture. Wetlands were filled, creeks were buried in underground pipes, and tracks and roads jostled for access routes between lumberyards and materials staging areas.

Then came a massive trash incinerator: The Hennepin Energy Recovery Center, completed in the late 1980s, receives garbage from all over the city and burns it to generate electricity. HERC's tan and brown hulk reminds us of what it takes to make a city work: **Refuse must be eliminated, power must be generated.**

In the last few years, though, a set of well-known trends began to transform old industrial districts. Warehouses were converted to condominiums, rail corridors were turned into trails, and planners eyed underused industrial land for large public projects: parking ramps, convention centers, stadiums. All those things came to pass in Minneapolis. The industrial area started to bustle again — this time with professionals walking their dogs and suburban residents parking at the edge of downtown for a night of clubbing, dining, or spectator sports.

This neighborhood, dubbed the North Loop, became a classic example of gentrification — except that a trash burning power plant sat right in the middle of it. HERC remained, if not out of sight, then certainly out of mind until about 2008, when a new Twins ballpark was envisioned for the tiny (by stadium development standards), infrastructure-laden site just east of HERC.

"With the ballpark going up," says landscape architect Ross Altheimer of HGA, the Minneapolis architecture and planning firm that recently renovated HERC and its landscape, "the neighborhood's back yard was becoming its front yard." A front yard, of course, is not generally a good place for an incinerator.



Cleaning up their act

Utilities, no matter what type, are ubiquitous in the urban landscape. District steam plants billow white clouds in downtown cores. Hydropower facilities dam rivers and sprout tangles of distribution wires along recreational waterfronts. Gigantic opaque boxes hum away near campus quadrangles. Most often, such facilities are viewed as necessary evils: not at all pretty, not desirable neighbors, but a small price to pay for living in the city.

Larger power stations — nuclear facilities, major hydro plants, and massive gas- or coal-fired plants — are typically located outside of cities, of course, but smaller district energy generators, especially steam plants, rely on proximity to gain efficiency.

The International District Energy Association, a trade group, counts 538 member systems at colleges, hospitals, and in cities in every state and several foreign countries. A spokesperson from IDEA conceded, in a recent phone call, that although small in-town district energy facilities provide an essential and environmentally beneficial service, few urban facilities do much for their areas' aesthetics. From an urban planning and design standpoint, these urban utilities often feature blank facades, heavy truck traffic, noises, and odors not always compatible with financial, shopping, or residential districts.

Examples of urban-friendly utilities do exist. Perhaps one of the most innovative small power plants is the False Creek Energy Centre in Vancouver, British Columbia. Built to serve the 2010 Olympic athletes' village and the subsequent neighborhood on that site, this plant generates steam heat from the waste heat of the sewer system (see "Heating the 'Hood," December 2009).

The center's low building hides under the Cambie Bridge, its raw concrete matching the causeway's girders. Pedestrian connections and plazas flank the building, and a large expanse of

glass on the neighborhood end of the building demystifies the building's use and provides that nighttime storefront glow so desired in urban areas. Five exhaust stacks rise up past the bridge in the abstract form of a hand — the thumb is the fattest and shortest stack, the pinky the skinniest.

A public art installation includes colored lighting at the tips of the stacks. Blue means energy demand is low, while red means it is high. The False Creek Energy Centre not only offers a benign face to the neighborhood, it has become an icon, accentuating the neighborhood's environmental credibility with excellent architecture and a touch of whimsy.

Architecture and urban form are perhaps the most common way to make urban utilities neighborhood-friendly. OUCooling serves drinking water and air conditioning customers across the Orlando metro area with multiple treatment facilities and chilled air plants, including one downtown. The downtown plant cools water to 37 degrees and distributes it through underground pipes to downtown buildings, where it is used to chill those buildings' air. The water then returns to the plant to be cooled again.

Built in 1998, the downtown plant is a jewel box of gray stone and concrete and features picture windows on the ground floor that offer a view of the process taking place inside. Above the single story, a large upper cornice doubles the height of the building. The open voids in the cornice recall Roman or Greek architecture, featuring views of the sky framed by weighty structure.

The 2008 expansion of the district cooling plant at the Texas Medical Center in Houston glorifies the building's purpose while creating visual interest. Located next to a plaza associated with a cancer center and at the junction of two major streets, the plant's most notable feature is its cylindrical thermal storage tank — the world's tallest, according to the plant's operator — which is painted with an engaging pattern in orange, black, and white. On the facade facing the park is another supergraphic.

The "back-of-the-house" stuff (pipes, transformers, etc.) faces away from the pedestrian-oriented medical center. Although still a massive structure, this plant (the largest district cooling plant in the U.S., by capacity) is still dwarfed by taller and more massive medical center buildings, and as such it becomes a unique feature in the landscape rather than an industrial eyesore.



Retrofitting

These examples are markedly different from Minneapolis's HERC in two ways. The utilities in Vancouver, Orlando, and Houston are heating or cooling facilities, while the primary purpose of HERC is to generate electricity, though the Minneapolis facility also generates steam heat for a small group of downtown buildings, including the nearby basketball arena. The second difference has to do with these facilities' timelines.

HERC was retrofitted. All the other examples were purpose built within urban environments (or developing neighborhoods). As such their urban-friendly features — creative architecture, whimsical public art, pedestrian connections, and site layout — were designed from the start, not added on later. In Minneapolis, the neighborhood grew up around HERC.

"This was a working part of the city," says HGA's Altheimer. And now that people live and recreate on the doorstep of the incinerator, he says, "they have different opinions on whether this is an amenity or not."

In 2008, as the Twins ballpark was being designed, Hennepin County Environmental Services asked HGA to consider how the HERC site could be improved so that it would better fit with the neighborhood's new character. The initial stages of that master planning exposed yet another difference between HERC and other facilities.

Vancouver's power source, municipal sewage, flows through the plant in pipes, invisible to the outside world, day in and day out. The cooling plants chill water with various conventional "piped-in" fuel sources, like electricity or natural gas. HERC burns garbage, which comes by garbage truck — about 220 vehicles per weekday. (All Minneapolis residential garbage — about 1,000 tons a day — is turned into power at HERC.)

Although the dumping, sorting, and burning of garbage all happens inside, the trucks still rumbled all the way around the facility, exiting the building through two massive doors on the east side — where the ballpark would be. And one of the main features of the ballpark would be an encircling public promenade, meaning that the entire west side of the stadium would be flanked with a linear plaza, open all the time and facing the most active side of HERC.

Alzheimer's team began mapping the function of the facility and made digital models to help understand HERC's scale in the context of the ballpark and the neighborhood. This analysis led to the realization that the vehicular circulation could be altered, and that the massive access drives and entrance doors on the east side could be replaced with landscaping.

That reorganization is a key feature of the master plan, completed in 2009, as well as a \$1.9 million renovation project, completed in time for opening day of the Twins' 2010 inaugural season at Target Field. HGA's design closes the east-facing doors and cuts a new one facing south, next to the existing entry door. Trucks now enter and exit from the south through high-speed doors. The area between the building and the elevated ballpark promenade features monumental gabion walls and plantings designed to mitigate elements of the site: switchgrass to absorb petrochemicals, a vast bank of juniper to perfume the air, and birch and swamp white oak to break up the scale of the building.

In addition, a new, wider, tree-lined streetscape along 7th Street, south of the building, provides a relaxed and leafy connection to the ballpark for visitors arriving on tour buses, which have designated game day parking along this stretch of roadway.



More on the way

If HERC is becoming enveloped by uses not anticipated when it was built 25 years ago, this is just the beginning. Minneapolis's Downtown Council, a business group, in December unveiled its 15-year plan for downtown. Though short on details, the plan calls for a new Vikings football stadium near the ballpark, which would create a sports district just west of downtown. There is some dispute about stadium locations, but if this plan wins out, the sports district would presumably envelop the HERC site.

In addition, the Twin Cities' third planned light-rail corridor would serve the southwestern portions of the metro area, beginning at the existing rail terminus at Target Field. The locally preferred alternative has the new tracks running either along or through the northern and western edges of the HERC site. Further planning of the HERC site will be necessary to continue the neighborliness begun with the ballpark project, and to ensure that, as downtown grows around it, the power facility fits in.

Locally produced and distributed energy can benefit the environment and save energy. If new and existing facilities are eyesores, though, no one will want them in their back yards, no matter how cheap and green the energy is. **Improvements in architecture, vehicular circulation, aesthetics, and site design can make these urban utilities better neighbors**, as the examples noted here certainly show. These are not the only nice-looking power plants and district heating and cooling facilities, but they are in a minority of utilities that effectively address urban environments.

Ultimately, proof of success will be shown in the real estate market. HGA, at least, recently indicated its opinion on the matter: In December, the firm's 310 Minneapolis office employees

moved to a newly renovated warehouse building right across the street from HERC. From the office windows, employees can see the downtown skyline, the ballpark, and, yes, a garbage incinerator. It's not a bad view at all.

Adam Arvidson is a Minneapolis-based writer and landscape architect. Every Tuesday his alley rumbles with garbage trucks taking his refuse to HERC.

Resources

Images: Top — The Hennepin Energy Recovery Center converts trash to electricity at its facility on the edge of downtown Minneapolis. Photo by Paul Crosby. Middle — HERC's site master plan. Image courtesy of HGA Architects & Engineers. Bottom — New landscaping, including stone gabion walls, copes of birch and oak, and masses of switchgrass to remediate polluted soils. Photo by Paul Crosby.