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Infrastructure as object and producer

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SHU Space & Place conference | Investigating Infrastructure | Wednesday 13 June 2018



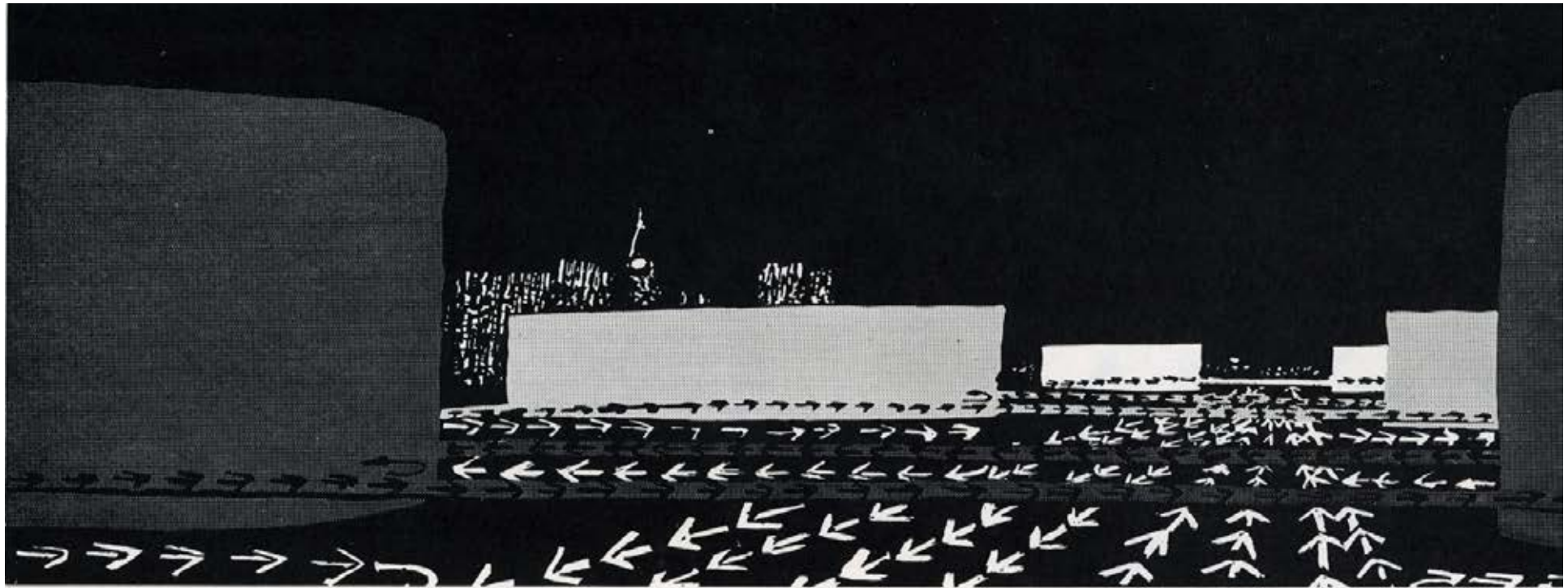
Backwater Reservoir, Angus. Baxter, Clark & Paul (Architects) & Babbie, Shaw and Morton (Engineers) for East of Scotland Water Board, 1964-1969

SOURCE: <https://www.flickr.com/photos/spacelightorder/13897074424>



Yona Friedman, *Ville Spatiale*, 1958-70

SOURCES: Various (web)



Expressways are like **RIVERS**

These **RIVERS** *frame the area to be served*

RIVERS *have* **HARBORS**

HARBORS *are the municipal parking towers*

from the **HARBORS** *branch a system of* **CANALS** *that serve the interior*

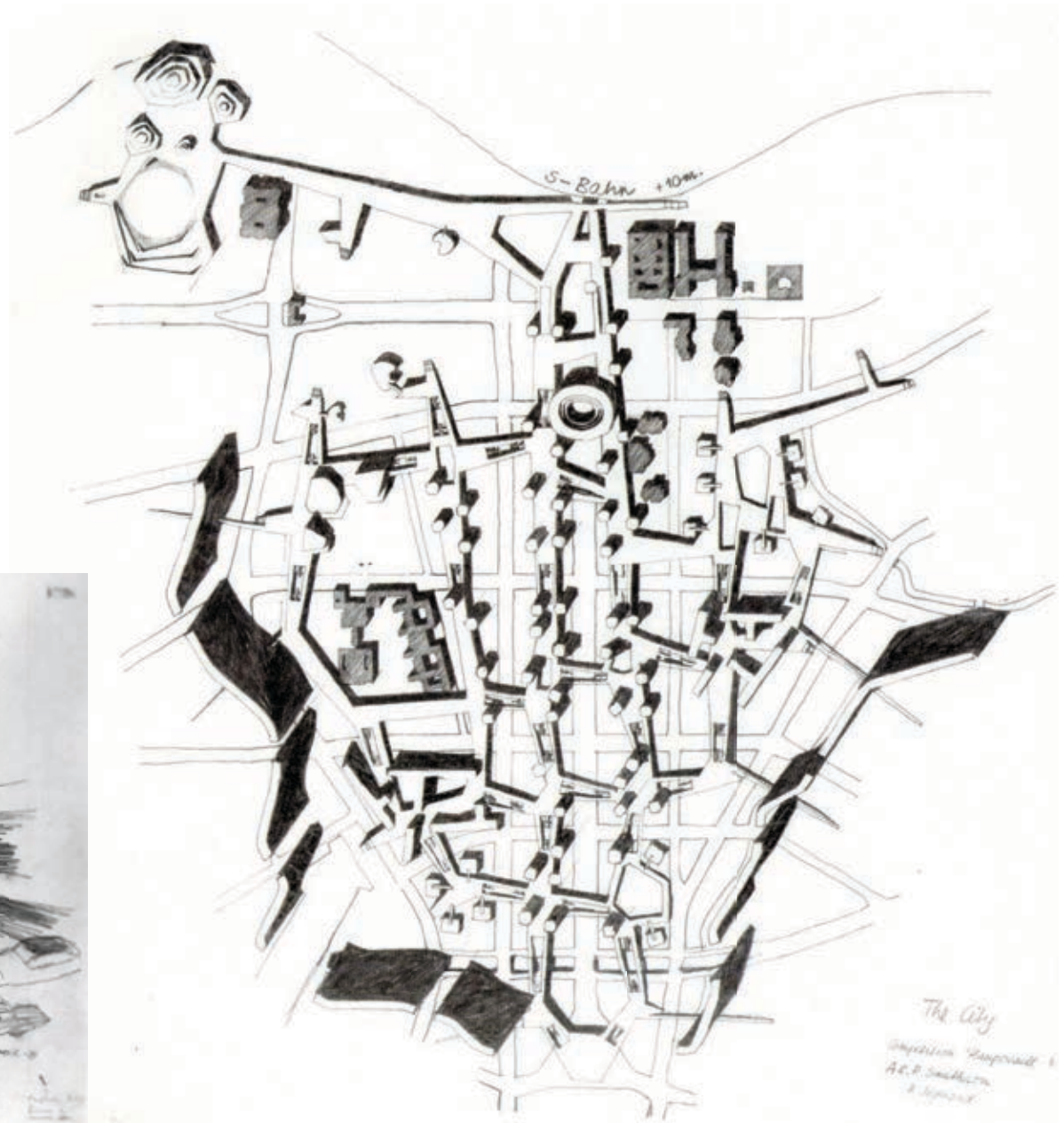
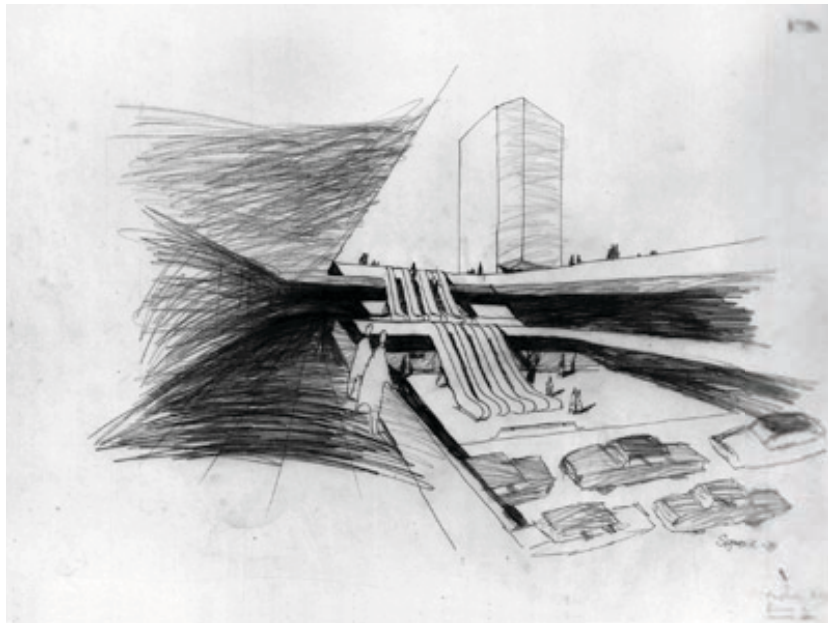
the **CANALS** *are the go streets*

from the **CANALS** *branch cul-de-sac* **DOCKS**

the **DOCKS** *serve as entrance halls to the buildings*

Louis Kahn. Wound up parking towers and poem

SOURCE: Architectural Design, November 1962

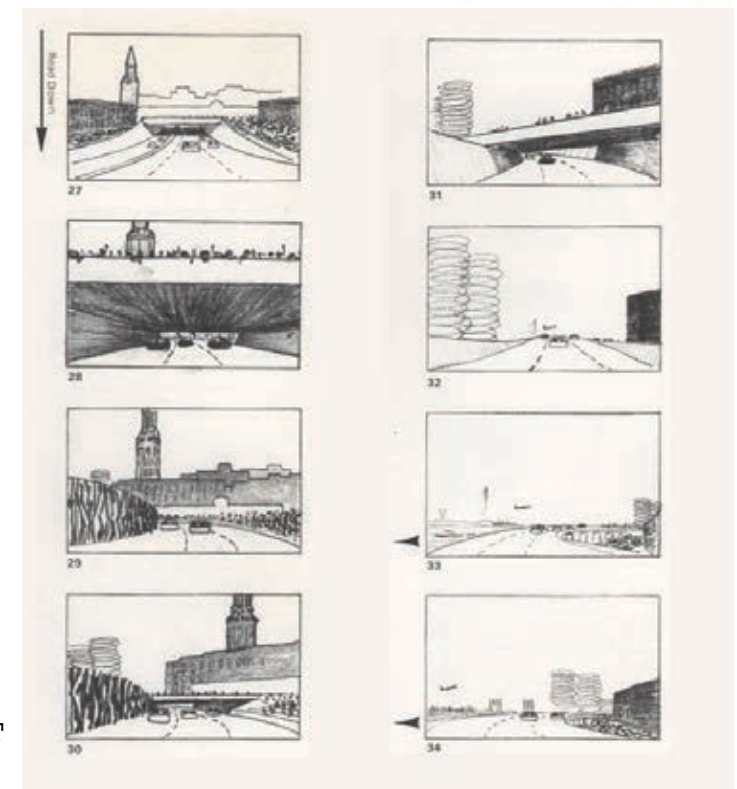
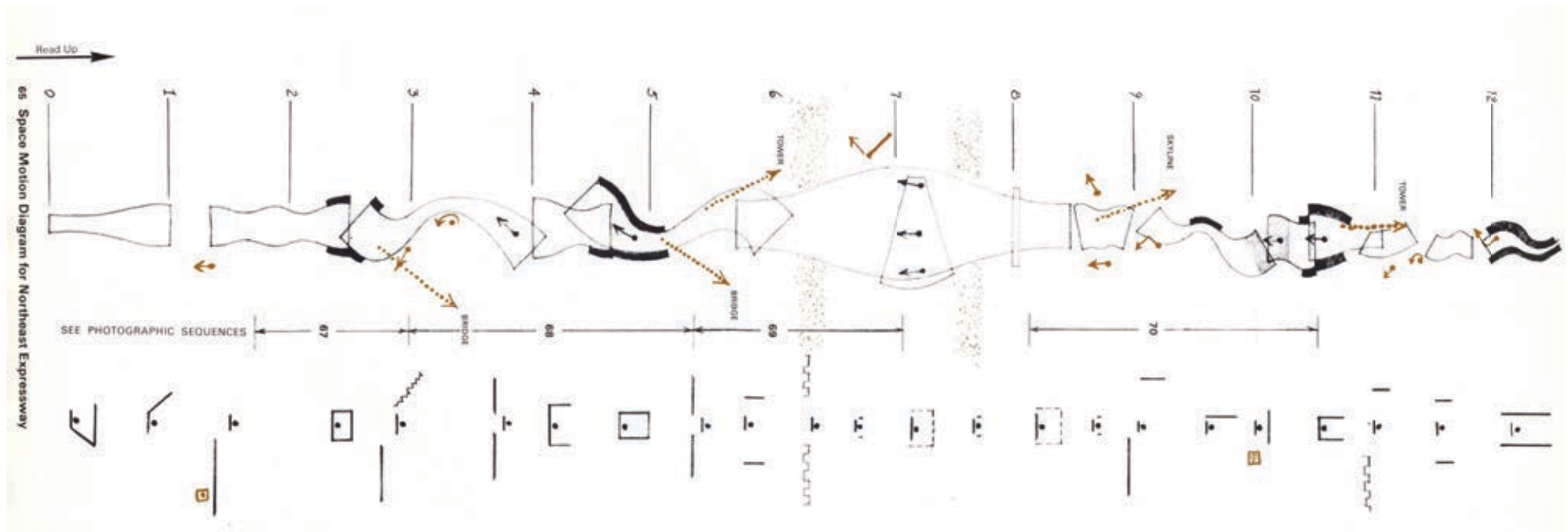


Alison and Peter Smithson, *Hauptstadt Berlin* [competition entry] 1957

COMPARED PLANS OF TRANSPORT SYSTEMS (shown to 1/4 inch scale)	COMPARED SECTIONS FOR 3 DIRECTIONS	ECONOMIC DATA ON STATION STOP PER HOUR	PASSENGER OR VEHICLE CAPACITY PER HOUR PER LANE	AVERAGE SPEED	ECONOMIC ADVANTAGE COST PER CAR OR PASSENGER MILE
100' 120' 140' 160' 180' 200'	10' 15' 20' 25' 30'				
PRIVATE CAR ON SURFACE STREET IN CITY		1100/100	700-900 v.p.h. 3,500-4,000 v.p.h.	10-15 m.p.h. 20-30 m.p.h.	2-3-5¢ per vehicle mile 3-5 cents
PRIVATE CAR ON AUTOMATED MOTORWAY (OUTGOING) SYSTEM		interchange points 2 m.p.h. overhead (mainline)	7,000-9,000 v.p.h. One 8' = 2 lanes	40-70 m.p.h.	41¢ plus passenger toll
MINI CAR ON SURFACE STREET IN CITY (40-50 m.p.h.)		interchange points 25-35 m.p.h. 1 mainline	2,000 v.p.h. One 8' = 2 lanes	30 m.p.h.	5¢
MINI CAR ON ELEVATED AUTOMATED ROAD (STAPACARS) SYSTEM			3,000-4,000 v.p.h.	15 m.p.h. (100 m.p.h.)	5¢
EXPRESS BUS ON GRADE SEPARATED ROAD (one lane)		1 mile	1,400 v.p.h. 63,000 passengers	25 m.p.h.	4¢ 30 cents per car mile
DOUBLE DECK BUS ON SURFACE STREET IN CITY		2 mile	120 v.p.h. 2,200 passengers	8-15 m.p.h.	44¢ per car mile 2.5¢ per bus mile
TELECAPS (one-lane system)		2 mile	8,000	8 m.p.h.	25¢ per passenger mile
CARVEYOR 4 SEAT (one-lane system)		2 mile	5,000 seated 10,000 seated and standing	15 m.p.h.	
MONORAIL		2 mile	5,000 seated	6-15 m.p.h.	25¢
NEVER-STOP RAILWAY		2 mile	12,500 seated 18,000 seated and standing	15 m.p.h.	25¢
OPEN BUS TRAILER (separated riding track)		45 minutes	700 v.p.h. 7,000	8 m.p.h.	
CARVEYOR 10 SEAT (one-lane system)		25 mile	11,000 seated 22,000 seated and standing	15 m.p.h.	
TELEPHOROUS CONDOLO CAR (8 min car)			900-1,000	6-10 m.p.h.	5¢
PEDESTRIAN CONVEYOR ON MOVING BELT		100 feet 800 feet	35' belt x 3,000 ft/min 48' belt x 10,000 ft/min	1-1.2 m.p.h.	0.25¢
URBORAIL (one-lane system)		5-mile min.	16-20,000	50 m.p.h.	
MONORAIL (high capacity)		15 m.p.h.	2 coach = 48,000 2 coach = 12,000	50 m.p.h. 75 m.p.h.	50-1.5¢
TRANSIT EXPRESSWAY (Westinghouse)		15-2 miles	8-20,000	21 m.p.h. (4 m.p.h. 100 ft) 75-100 ft (2 m.p.h. 100 ft)	
UNDERGROUND RAILWAY (London system)		8-1 mile	40,000	20-30 m.p.h.	28 cents 35¢ per car mile
ARTICULATED 3-CAR TRAIL		25-5 mile	20,000	20-30 m.p.h.	5¢

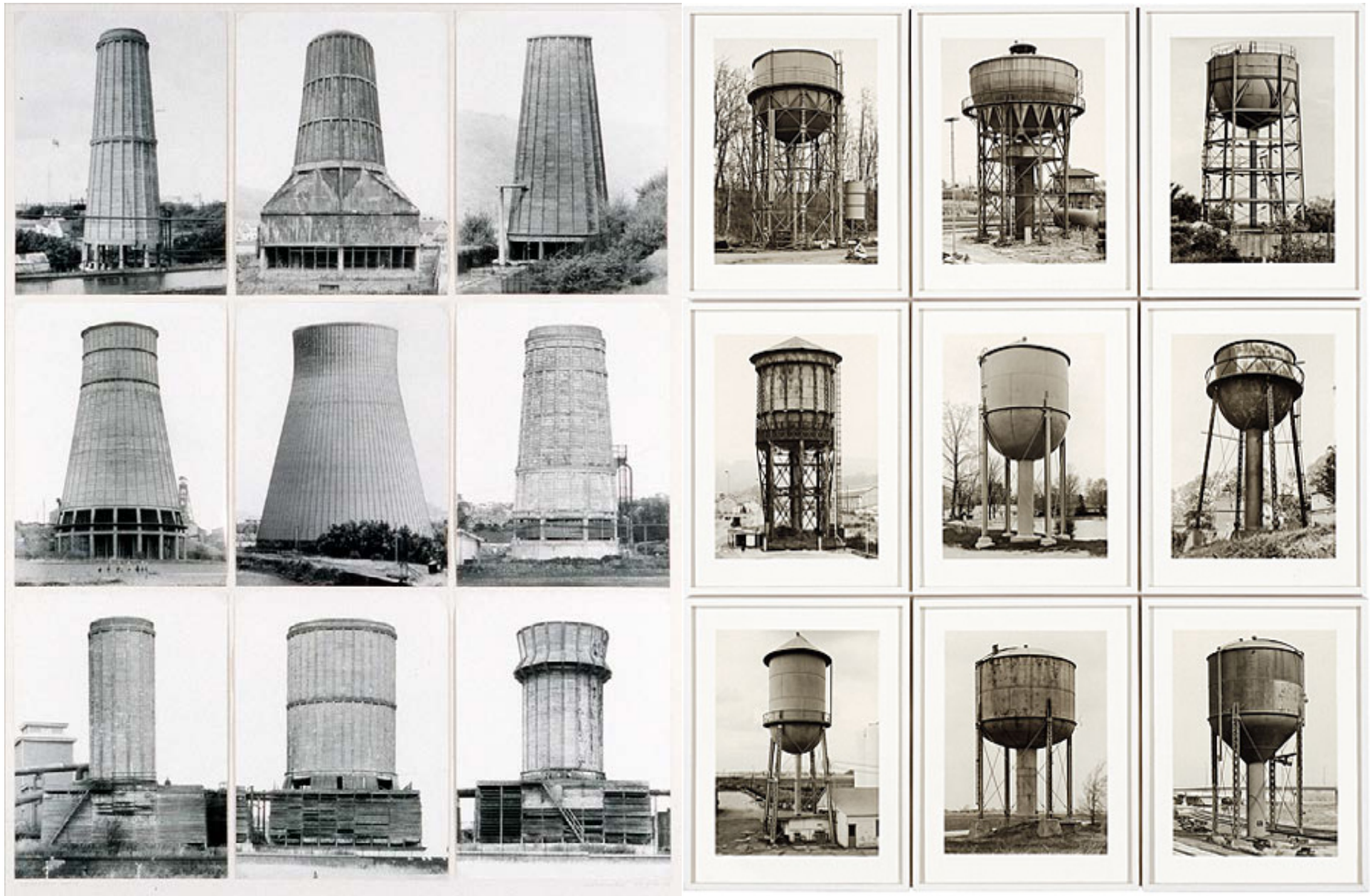
Notation and symbols for urban transport

SOURCE: Richards, B. (1966) *New Movement in Cities* (London: Studio Vista)



Notation and serial views, View from the Road

SOURCE: Lynch, K. & Appleyard, D. (1964) *The View from the Road* (Cambridge MASS: MIT Press)



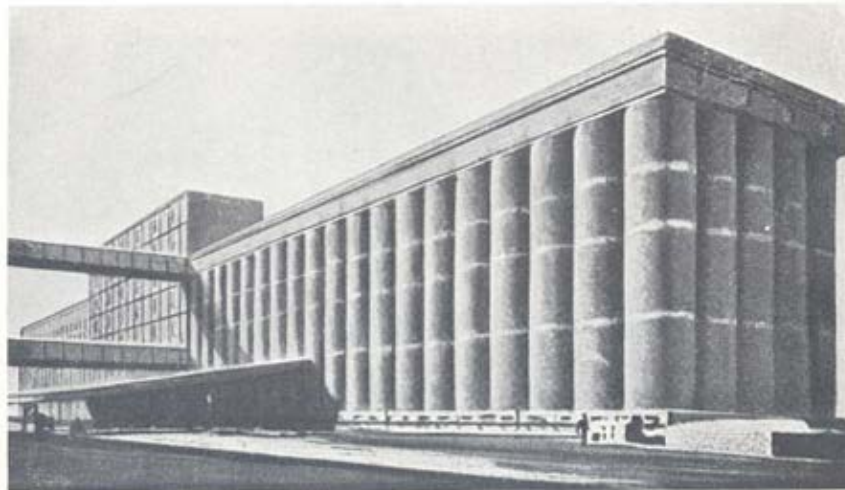
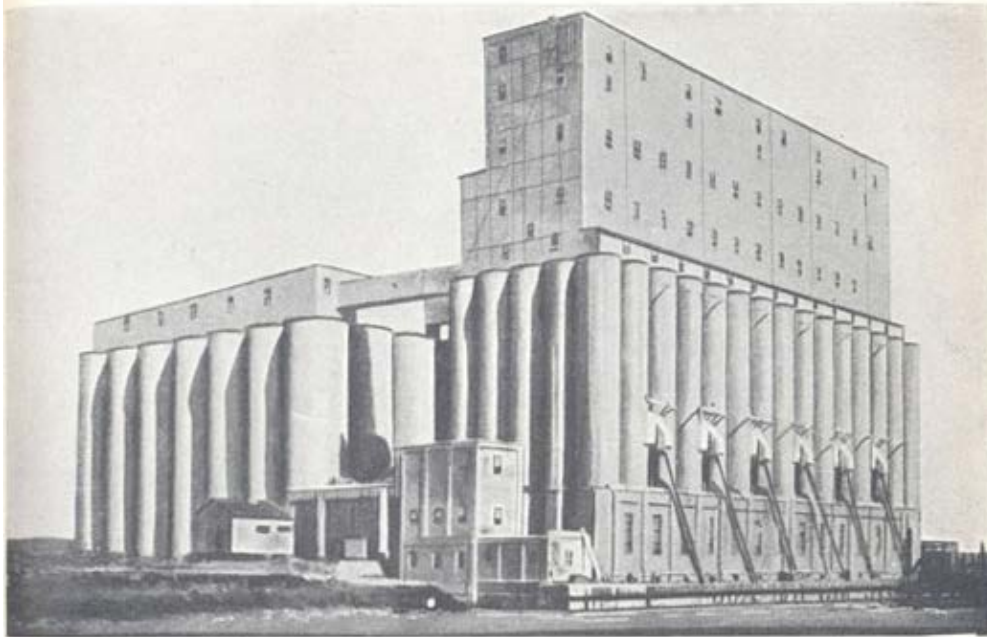
Cooling Towers and Water Towers, Bernd and Hiller Becher

SOURCE: Becher, B. & Becher H. (2006) *Cooling Towers* (Cambridge MASS: MIT Press); Becher, B. & Becher H. (2006) *Water Towers* (Cambridge MASS: MIT Press)



Grain elevators, Bernd and Hiller Becher

SOURCE: Becher, B. & Becher H. (2006) *Grain Elevators* (Cambridge MASS: MIT Press)



CANADIAN GRAIN STORES AND ELEVATORS

Canadian Grain Stores and Elevators

SOURCE: Le Corbusier (1927) *Towards a New Architecture*, translated by Frederick Etchells, published London 1948, reprinted 1974, p.29

Table showing bodies responsible for provision of infrastructure of development in England and Wales

<i>Services/Utilities</i>	<i>Body responsible</i>	<i>Responsibilities</i>	<i>Remarks</i>
Electricity	Electricity Council Central Electricity Generating Board Twelve area electricity boards	General policy Controls power stations, main trans- mission lines, and supplies ABs distri- bution to customers	Each Area Board is a large organization operating in- dependently with varying administrative arrangements
Gas	Gas Council Gas Boards	General policy Produce, distri- bute, and sell gas to customers	The Area Boards are large organizations operating under varying administrative arrangements. Many appear to be indepen- dent in outlook
Telecommuni- cations	Post Office Headquarters Divisions, ten regions	National policy and controls finance Day to day operation of service	Willingness to co- operate with other public utilities and building teams generally
Water Supply	Local authority Joint board Statutory water co.	Supply and distri- bution under Ministry of Local Government and Development	259 different under- takers (1966), not necessarily coinciding with local authority boundaries or popu- lations they serve
Sewerage	County boroughs County districts and joint sewerage authorities	To provide such sewers as may be necessary for effectively draining the district	Too small to be pro- gressive, too pre- occupied in meeting demands to seek out innovations
Surface water drainage	River authorities Local authorities	River authorities control "main" river conservation Local authorities engineering depart- ments concerned with "washlands"	Lack of co-ordination Not easy to gauge effect of development proposals over wide area
District heating	Various authorities and private companies	To provide district or group heating	
Street lighting	Highway authorities Lighting authorities, i.e. county councils, borough councils	Road and footway lighting	Much to be said for electricity board taking over whole service

OTHER SERVICES including security, safety, remote meter reading, refuse disposal, wired sound and television, central oil distribution, etc.

SOURCE: Pollard, D. (1971) 'Regional Plan implementation: infrastructure', *Town and Country Planning*, Nov. 1971, pp. 500-505



Microwave backbone towers. GPO London & Heaton Park





Cooling towers in the landscape at Fiddler's Ferry, Warrington and Ironbridge, Shropshire.

SOURCE: Flickr user, Tarboat.



“Thousands of people turned up to watch the planned demolition of the Tinsley Cooling Towers in Sheffield at 3am on Sunday 24th August 2008. They'd been camping out since teatime. Some had portable gas stoves, some brought their young children tucked up in duvets in the back of their cars.”

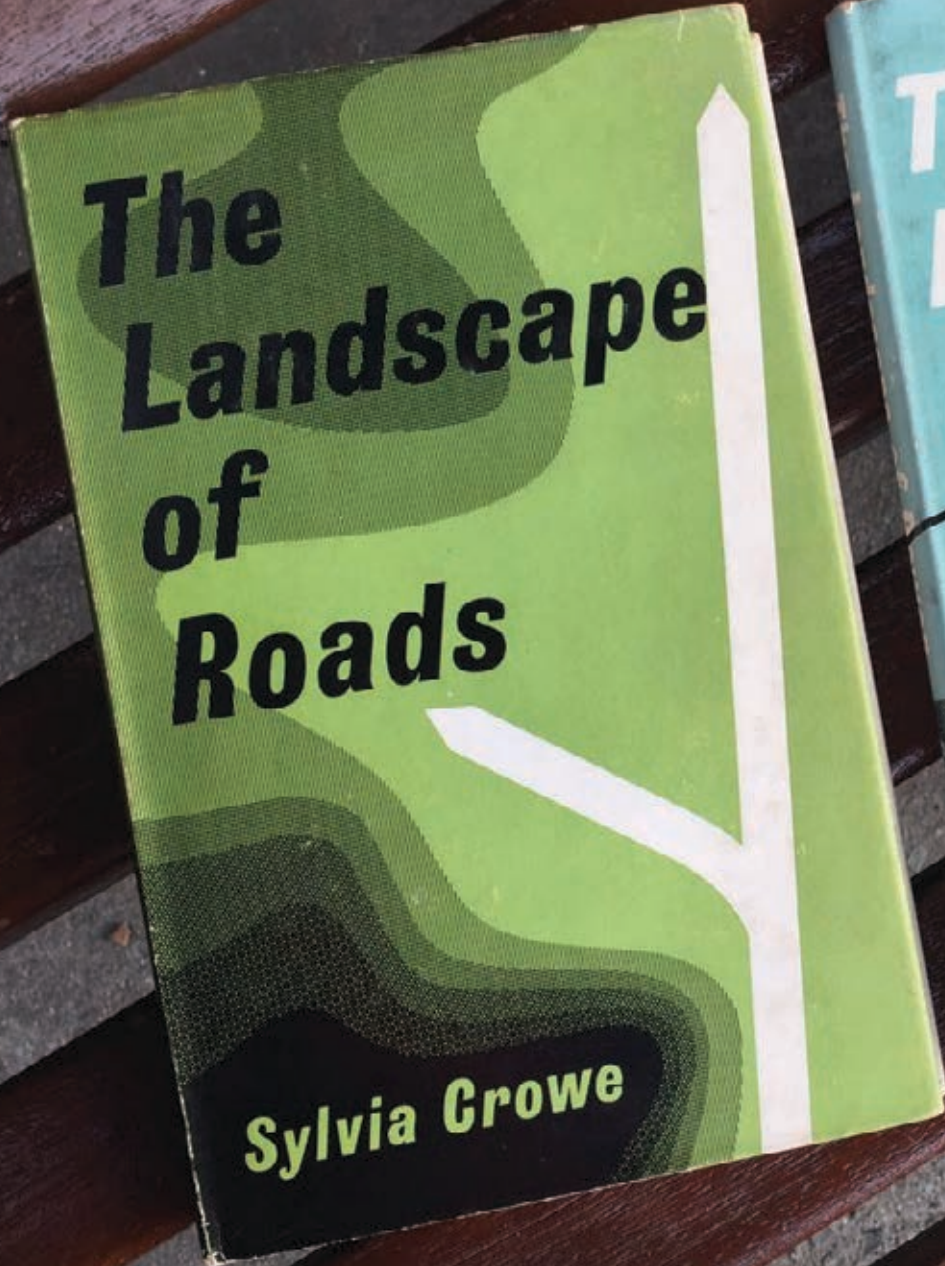


SOURCE: ITV.com



Magnox-reactor nuclear power station at Trawsfynydd. Construction of the plant, designed by architect Basil Spence to look like ‘a castle in the landscape’, started in 1959 and lasted six years.

SOURCE: <https://geotopoi.wordpress.com/2012/10/07/trawsfynydd-power-station/>



The Landscape of Roads

Sylvia Crowe



The Landscape of Power

Sylvia Crowe

Valve tower

Scammonden Water, Yorkshire

Architect: John A. Strubbe, FRIBA
Consulting engineers: Rofe, Kennard and Lapworth
Contractor: Sir Alfred McAlpine and Son Limited

Scammonden Water was inaugurated by The Queen in October 1971.



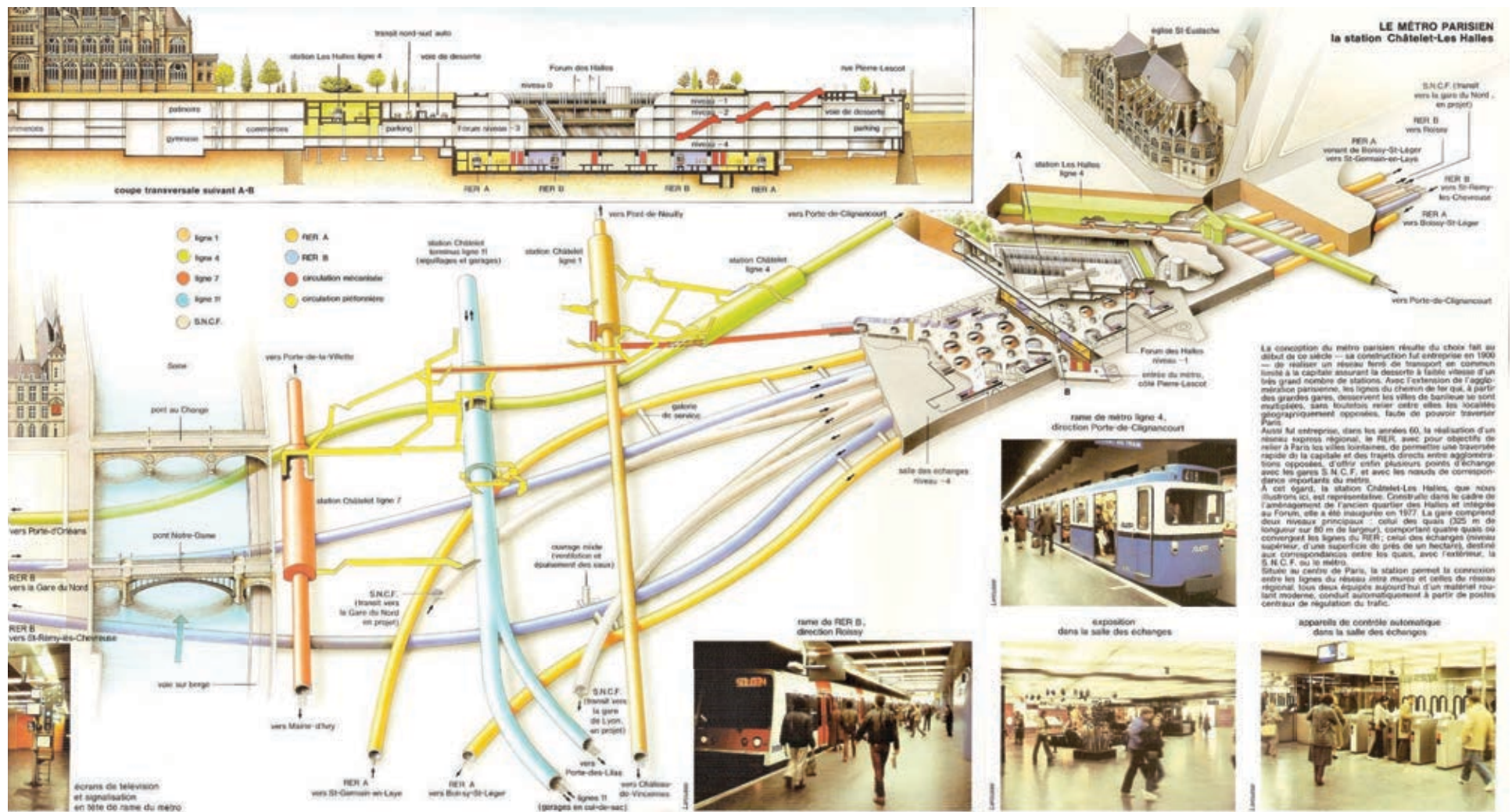
The Queen photographed at the opening of Scammonden Water in October 1971. In the background is Scammonden Bridge over the Deanhead cutting, the middle ground shows the slope of the dam, leading up to the M62 carriageway and in the foreground is the bridge to the valve tower above the bellmouth overflow.

SOURCE: Concrete Quarterly, Summer 1972, p.26



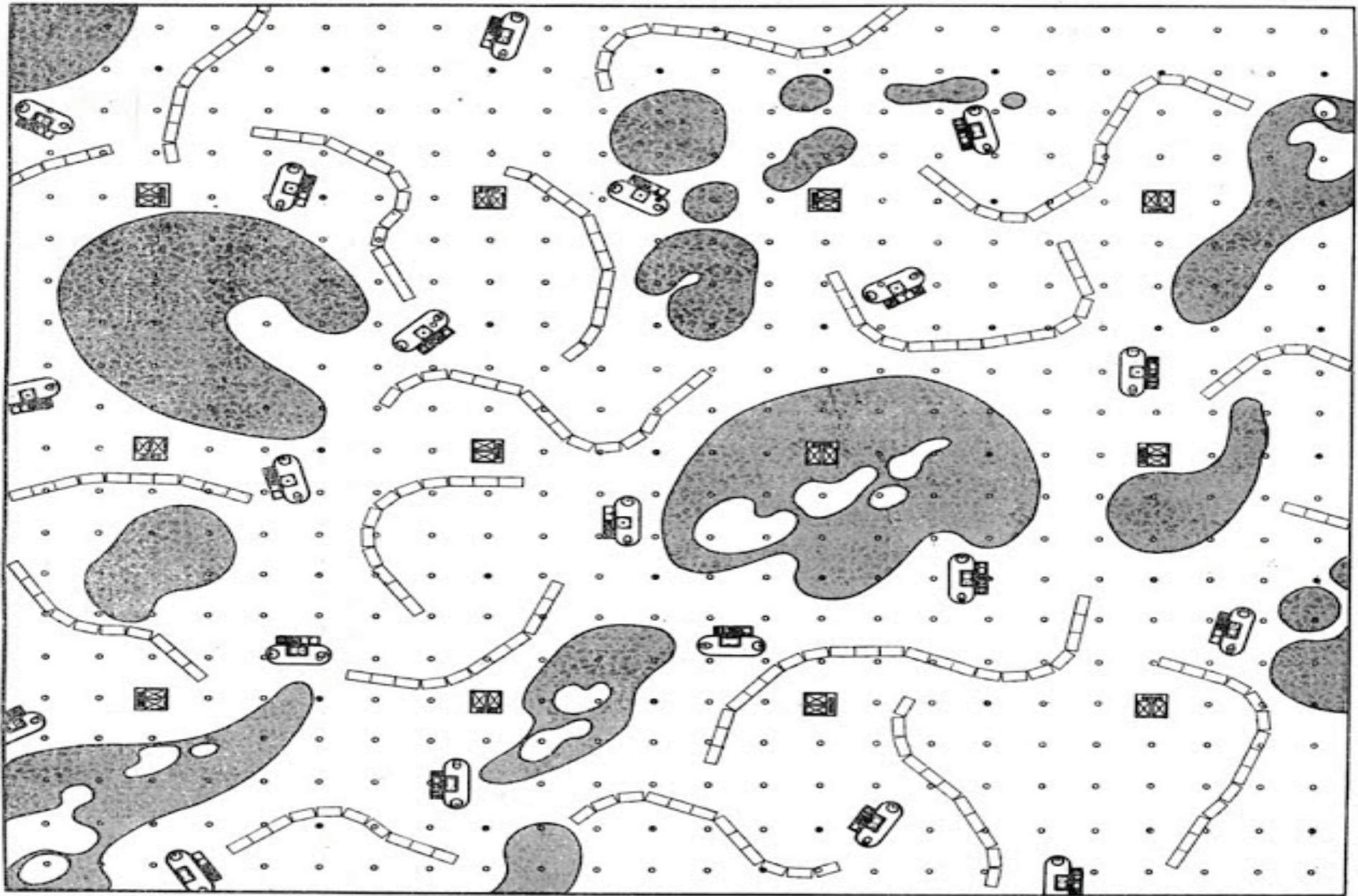
Dounreay nuclear power station - currently being decommissioned.

SOURCE: <https://www.flickr.com/photos/13422316@N00/2822118107>



Les Halles, Paris.

SOURCE: Skyscrapercity forum



Archizoom - No Stop City. The No-stop City is an instrument of emancipation. "The idea of an inexpressive, catatonic architecture, outcome of the expansive forms of logic of the system..."

SOURCE: Branzi, A. (2006) No Stop City: Archizoom Associati (Orleans: Editions HXX)