UNDERSTANDING MANCHESTER
THE PROCESS OF COTTON MANUFACTURING
MANCHESTER COTTON INDUSTRY
THE SYSTEM OF MECHANIZATION

HUMAN LABOR PRODUCTION BEFORE
MACHINE CENTERED PRODUCTION AFTER INDUSTRIALIZATION

ENGINE ROOM
MACHINE ROOM
MACHINE ROOM
MACHINE ROOM
CANAL OR RESERVOIR
BOILER HOUSE
SMOG
WATER
STEAM
GENERAL DETAILS OF AQUEDUCT

CONVEYS
50,000,000 gallons a day
= 189,000,000 litres
= 189,000 m³

LENGTH
TOTAL: 95 miles, 1,642 yards
1 CUT AND COVER: 14+1/8 miles
2 TUNNEL: 36+3/4 miles
3 PIPES: 45 miles

IN CUT AND COVER

IN TUNNEL

PIPES (BRIDGES)

7 feet
2m 10cm

surface of ground

50 million gallons per day
10 million gallons per day

concrete aqueduct

with socket joint

with collar joint

soil replaced

WATER AND MOUNTAIN, NORTH WEST, UK
AQUEDUCT FROM THIRLMERE TO MANCHESTER
LAKE DISTRICT
THIRLMERE
MANCHESTER
IRISH SEA
URBAN AREA
PENNINE MOUNTAIN RANGE
WARM, MOIST AIR FROM THE AZORES
WATER AND MOUNTAIN, NORTH WEST, UK
TOPOGRAPHICAL CONDITION AND WIND BLOW
1 FERRY  6 LOCK  
2 WHARF  7 DOCK  
3 EMBANKMENT  8 BRIDGE  
4 TIDAL OPENING  9 BASIN  
5 POWER MAGAZINE  10 RAILWAY  

MANCHESTER SHIP CANAL
MANCHESTER SHIP CANAL
THE PROCESS OF CONSTRUCTION
MANCHESTER SHIP CANAL
MANCHESTER DOCKS
POST INDUSTRIAL TERRITORY
POST INDUSTRIAL TERRITORY

PHOTO BY BERND AND HILLA BECHER
IBA EMSCHER PARK
REFERENCE FOR DEALING WITH POST INDUSTRIAL TERRITORY
MANCHESTER DOCKS IN TRANSITION
URBAN REDEVELOPMENT AROUND POMONA DOCKS
WATERWAYS
WATER INFRASTRUCTURE

- BINGLEY FIVE RISE LOCKS
- BURNLEY EMBANKMENT
- STANEDGE TUNNEL
- DEVIZES LOCKS
- BARTON SWING AQUEDUCT
- PONTCSYLLTE AQUEDUCT
- ANDERTON LIFT
WATERWAYS
WATER INFRASTRUCTURE

BARTON SWING AQUEDUCT
LOCK IN MANCHESTER SHIP CANAL
CENTENARY LIFT BRIDGE
PONTCSYLITE AQUEDUCT
ANDERTON LIFT
BRINGLEY FIVE RISE LOCKS
POMONA DOCKS
PAST AND PRESENT

1950's

2009
BULBUSH (TYPHA)

REED (PHRAGMITES AUSTRALIS)

CLUB RUSH (SCHENOPLECTUS)

PURPLE MOOR GRASS (JUNCUS)
WORKS FROM 1965-66 IN EVA HESSE'S STUDIO
WORKSHOP AND FILLING STATION
WORKSHOP AND FILLING STATION
VIEW TO FILLING STATION
In 1918, Klee evoked the following image in his diary: “The storm on the wheat field was captivating; I’ll paint a ship sailing on waves of rye.” Klee never painted that picture, but this one seems just as miraculous. A boat of the type of Noah’s Ark—the “112”—is moored to a boathouse. The face of the girl in the left window is expressionless; her eyes are closed. Perhaps this “miraculous landing” exists only in her imagination.

Source: Paul Klee: Miraculous Landing, or the “112!” (1984.315.23) | Heilbrunn Timeline of Art History | The Metropolitan Museum of Art
PHYTOREMEDIATION

- **Popular Trees**: 15 ft
- **Indian Mustard**: 1 ft
- **Grasses**: 2 ft
- **Alfalfa**: 4-6 ft
BOATER'S CAMP
VIEW FROM OBSERVATORY
1 STEEL BRACKET
2 12mm PLASTERBOARD
3 10mm STEEL PLATE
4 EXPANDED METAL
5 GLASS MULLION
WORK BY EVA HESSE, 1969

MUSEUM AND OBSERVATORY
MUSEUM AND OBSERVATORY
FRONT VIEW
MUSEUM AND OBSERVATORY
FRONT VIEW
1. infiltrated concrete surface hardner
100mm concrete slab on deck plate
steel structure

2. 50mm precast concrete panel
10mm water proofing(bitumen roofing, 2 layers)
100mm thermal insulation
vapour barrier
200mm concrete slab
steel structure
10mm semi-transparent acrylic plate

3. infiltrated concrete surface hardner
50mm floor heating system
water proof
80mm thermal insulation
damp-proof membrane
300mm concrete ground slab(foundation)
50mm lean concrete

4. paint finish
40mm ply wood board, 2 layers
100mm thermal insulation
200mm concrete with water-repelling admixture
water proof(bitumen paint)
60mm porous boards

5. 20mm wood deck finish with water resistant paint
various wood battens
10mm water proofing(bitumen roofing, 2 layers)
100mm thermal insulation
vapour barrier
200mm concrete slab
steel structure
expanded metal
1 150x50x20mm T STEEL PROFILE
2 LOWER FASTENING
3 150x20mm STEEL BAR
4 EXPOSED CONCRETE
5 50x50mm L STEEL PROFILE
6 10mm STEEL PLATE
7 ROLL BLIND
8 3mm STEEL PLATE
9 GLASS MULLION
10 10mm SEMI-TRANSPARENT ACYCL PLATE
PORTICO OF SAN LUCA, BOLOGNA
MUSEUM AND OBSERVATORY
VIEW FROM MANCHESTER SHIP CANAL