

a+t

RECLAIM
REMEDiate REUSE RECYCLE



082

RECYCLE

Measuring traceability and social recycling Medición de trazabilidad y reciclaje social

BELONGS TO PROJECT:

HAKA RECYCLE OFFICE - Doepel Strijkers
Rotterdam (The Netherlands) 2010

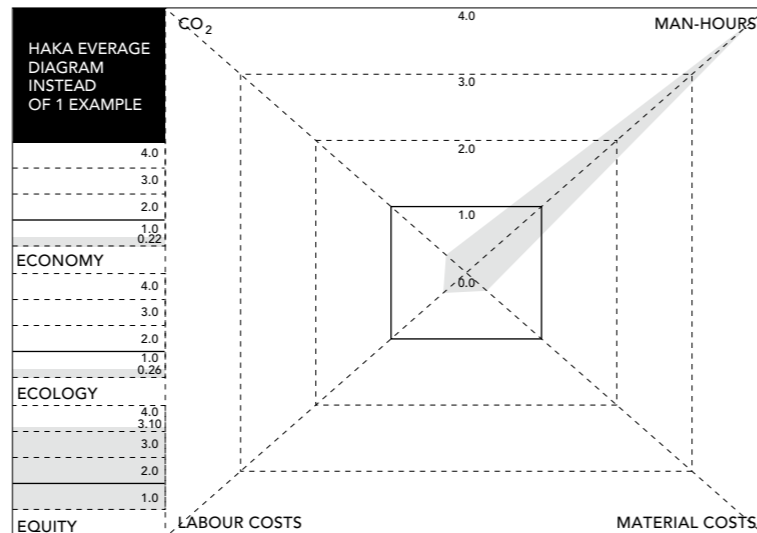
Site area Superficie de la parcela (m²) 1,000
Project budget Presupuesto del proyecto (euros/m²)

276 304 226

SOURCE		
GREENHOUSES 'Reytec'		DEMOLITION MATERIALS DIY 'Komu'
POSTWAR HOUSING de Velden	SCHOOL primary school 'de Kei'	RESIDUAL clothing 'Memotex'
FACTORY brick kiln factory	PREWAR HOUSING Katendrecht	

MATERIALS		
ROOF SLATS		CONSTRUCTION BEAMS
BOARD DOORS	PANELS	SOLID DOORS
BEAMS	ALUMINIUM PROFILES	COMPACT LAMINATE PANELS
UNDERLAYMENT	FLOAT GLASS	CLOTHING

DISTANCE TO HAKA	POSTWAR HOUSING de Velden	GREENHOUSES 'Reytec'	DEMOLITION MATERIALS DIY 'Komu'	FACTORY brick kiln factory	SCHOOL primary school 'de Kei'	RESIDUAL clothing 'Memotex'	PREWAR HOUSING Katendrecht
0 - 5 km						650 m	6.4 km
5 - 10 km	7.8 km				8.1 km		
10 - 20 km							
20 - 30 km		28.4 km					
30 - 50 km							
50 - 100 km							
100 - 150 km							
150 - 200 km				187.4 km			
MATERIAL QUANTITY	100 DOORS	1,000 kg ALUMINIUM	970 kg GLASS	11,320 kg WOOD	600 kg TRESPA PANELS	14,000 kg WOOD	24 DOORS
						8,000 kg CLOTHING	800 kg WOOD

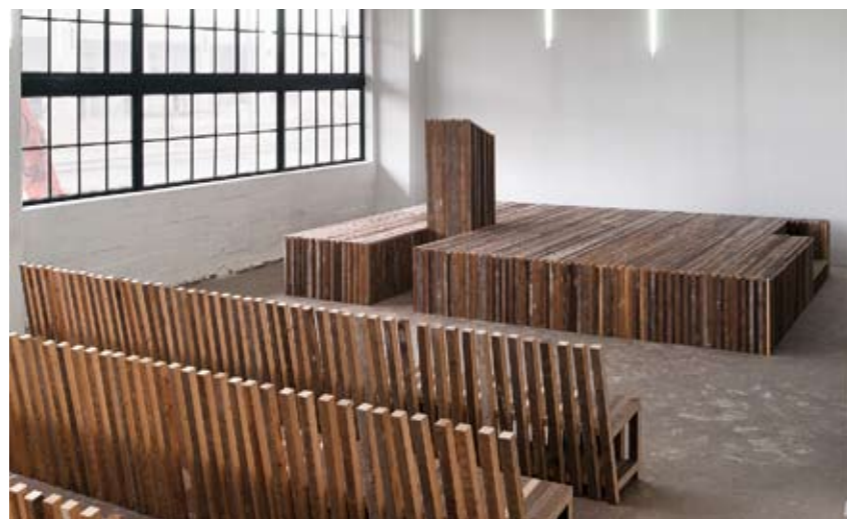
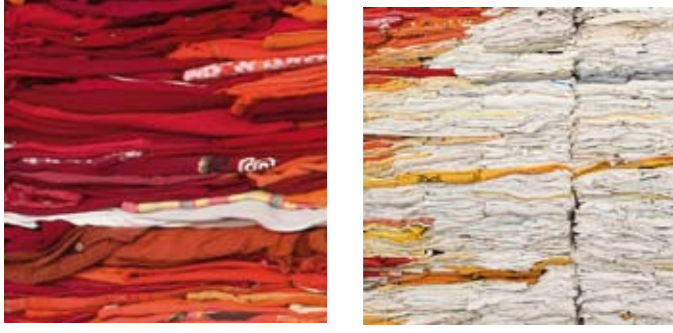


The reuse of the Haka Building has been useful for measuring traceability and social recycling. In the new interiors, demolition rubble and waste material from industrial processes, sourced from nearby locations, was used and the quantity was limited to the maximum. Furniture design was based on the intrinsic qualities of the above materials and the idea was to use as few electrical tools as possible, to produce minimum waste and for them to be easily dismantled at a future time. Furthermore, the assembly details are very simple, so that the furniture can be assembled by unskilled workers (in this case, a group of ex-convicts).

La reutilización del edificio Haka ha servido para efectuar una medición de los procesos de trazabilidad y reciclaje. En los nuevos interiores se han empleado restos de demoliciones y residuos de procesos industriales disponibles, procedentes de lugares cercanos, y cuya cantidad fue limitada al máximo. El diseño del mobiliario se basa en las cualidades intrínsecas de estos materiales, y está pensado para utilizar pocas herramientas eléctricas, producir pocos residuos y ser desmontado fácilmente en el futuro. Además, los detalles constructivos son muy sencillos de manera que el mobiliario pueda ser montado por mano de obra sin cualificar (en este caso, un grupo de presidiarios).



FACTOR MATRIX	PODIUM	AUDITORIUM SEATING	AUDITORIUM WALL	SHOW BLOCKS	EXHIBITION SEATING	RECEPTION DESK	PLATFORM	KITCHEN BAR / PANTRY	MEETING ROOM
CO ₂ HAKA									
CO ₂ New									
CO ₂	225	1.145	10.000	30	50	87	1.040	85	66
FACTOR CO ₂	0,7	0,9	0,05	0,01	0,02	0,16	0,34	0,04	0,09
MAN-HOURS	304	2.880	1.496	8	56	40	464	160	128
FACTOR MAN-HOURS	80	240	720	24	24	72	160	240	40
FACTOR MAN-HOURS	3,8	12	2,08	0,33	2,33	0,56	2,90	0,67	3,2
€	3.000	7.200	6.700	560	400	1.120	11.250	3.500	2.750
FACTOR LABOUR COSTS	11.080	33.240	99.720	3.324	3.324	9.972	22.160	33.240	5.540
FACTOR LABOUR COSTS	0,27	0,22	0,07	0,17	0,12	0,11	0,51	0,11	0,50
€	300	4.000	18.000	2.200	3.400	1.050	8.800	3.450	450
FACTOR MATERIAL COSTS	15.587	46.760	140.280	4.676	4.676	14.028	31.173	46.760	7.793
FACTOR MATERIAL COSTS	0,02	0,09	0,13	0,47	0,73	0,07	0,28	0,07	0,06



The reception desk comprises a counter built with strips of wood used in roof-building and which here function as shelves. The upper level is enclosed with glass panes and frames from a greenhouse. The meeting room is divided off using 24 solid wooden doors salvaged from the demolition of a social housing block. The doors are fixed onto wooden struts reused as frames. In the area set aside for the auditorium and exhibition hall an acoustic wall has been put up between the two spaces, made from 8 tonnes of old clothing. The clothing is fixed to hidden wooden frames on casters, meaning the set-up can be changed according to requirements.

El mostrador de recepción es de listones de madera empleados para construir cubiertas y que ahora funcionan como estantes. La parte superior se cierra con vidrios y carpinterías procedentes de un invernadero. La sala de reuniones se conforma con 24 puertas de madera procedentes de un bloque de vivienda social. Las puertas están fijadas a riostras de madera reutilizadas como marcos. En el área destinada a auditorio y sala de exposiciones se ha dispuesto una protección acústica entre los dos espacios, construida con 8 t de ropa usada. Está fijada a bastidores de madera ocultos y equipados con ruedas, para flexibilizar su uso.



080

RECYCLE

Building office furniture with material from demolition sites Construcción de mobiliario de oficina con material de desecho

BELONGS TO PROJECT:

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Site area Superficie de la parcela (m²) 1,000
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276 304 232

The furniture system designed to furnish the Haka building is based on reusing different pieces of used wood, ranging from strips of timber to old doors, even roof braces and beams, which, using repetition and addition, are made into a wide office programme. Partition walls, desks, platforms, display cases, benches, chairs and cabinets are all made from this recycled material. The construction system further takes into consideration not only the approximate sourcing of the materials but also the ease of dismantling.

El sistema de mobiliario diseñado para la ocupación del edificio Haka se basa en la utilización de diferentes piezas de madera usada, desde listones hasta puertas viejas, incluso antiguas riostras y vigas, que se transforman, mediante la repetición y la adición, en un amplio programa de oficina. Con el material reciclado se crean particiones, escritorios, plataformas, expositores, bancos, sillas y armarios. El sistema de construcción tiene en cuenta, no solo la procedencia próxima de los materiales, sino la facilidad de desmontaje

PLATFORM

CLOSED SPACE
horizontal

OPEN SPACE
horizontal

OPEN SPACE
adjustable

RECEPTION DESK
small

KITCHEN

CLOSED SPACE
glass with mirrored foil

OPEN SPACE
glass with colored foil

OPEN SPACE
glass

KITCHEN
glass

AUDITORIUM SEATING

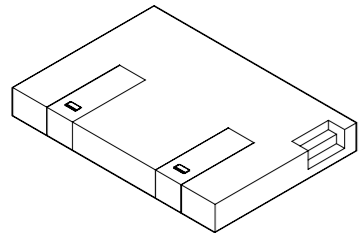
STORAGE
open, large

PODIUM
flat

WORK STATION
two persons, concentration

INFORMAL SEATING
two persons, double sided and partition

PODIUM



STORAGE
large



PODIUM
lecture



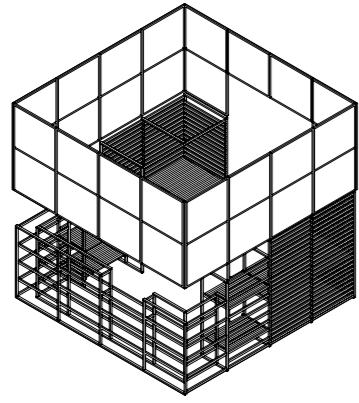
WORK STATION
one person



INFORMAL SEATING
two persons



RECEPTION DESK



CLOSED SPACE



OPEN SPACE



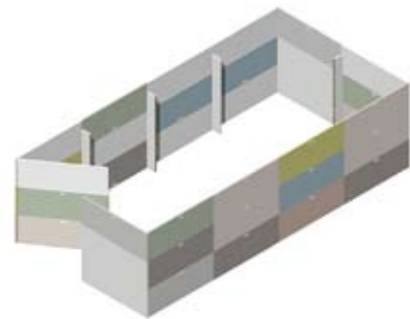
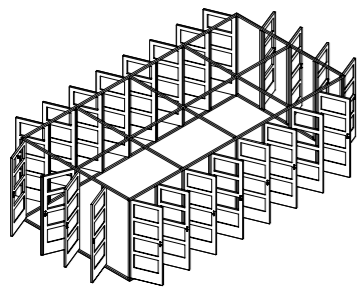
OPEN SPACE
adjustable



RECEPTION DESK



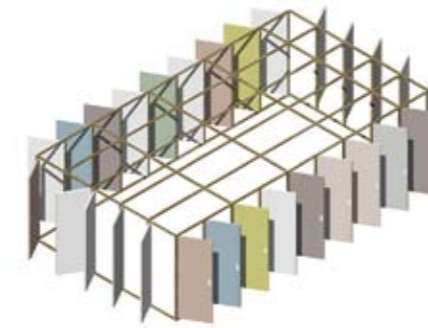
MEETING ROOM



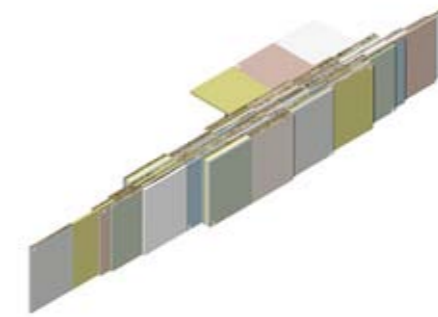
CLOSED SPACE
horizontal



OPEN SPACE



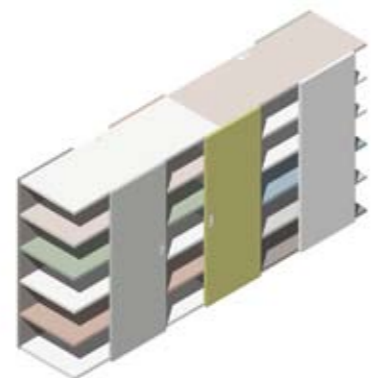
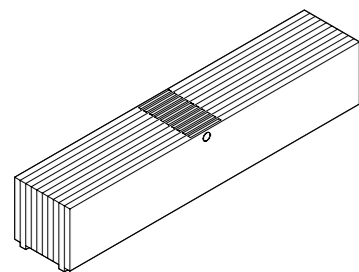
OPEN SPACE
adjustable



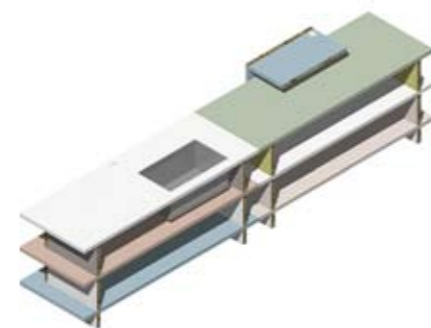
RECEPTION DESK
small



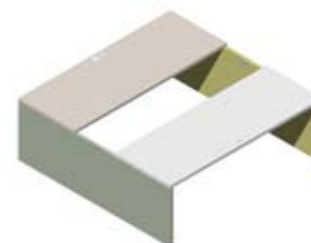
EXHIBITION SEATING



STORAGE
large



PANTRY / BAR / KITCHEN



WORK STATION
two persons



INFORMAL SEATING
small

