

OKO



EYE

THE NEW NATIONAL LIBRARY OF THE CZECH REPUBLIC

1 8 0 4 9 5 X Y



# T H A N K Y O U

THANK YOU FOR THE KIND  
RECEPTION AND MANY  
NICE SURPRISES. I USED  
TO COME HERE TO READ  
AS A BOY AND NOW I  
REMEMBERED ALL THAT.  
I WISH THE NATIONAL  
LIBRARY SUCCESS IN  
KLEMENTINUM AND ALSO  
IN THE NEW BUILDING.

VACLAV HAVEL

Děkuji za vřídne přijetí  
a čtrnácti minut přečtení.  
Chodil jsem si sem číst  
jako chlapec a teď jsem si  
to připomel. Přeji Národní  
knihovně úspěchy v Klemen-  
tinu i v nové budově!

Václav Havel



14/9/2006

# I N S P I R A T I O N

BOOKS ARE FOR PEOPLE AS WINGS ARE FOR BIRDS

JOHN RUSKIN

I ALWAYS VISUALIZE PARADISE AS A LIBRARY NEVER AS A GARDEN

JORGE LUIS BORGES

IN A WELL SELECTED LIBRARY WE ARE LIKE IN ETERNITY

T. G. MASARYK



- BOOK IS A GARDEN FOR YOUR POCKET

ARAB PROVERB

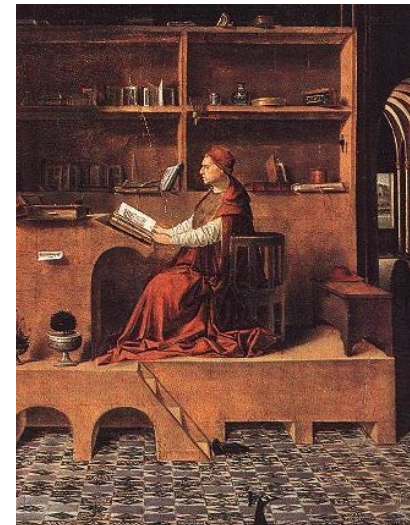
- READING – THE WAY TO THE ART

1801

POLISH PROVERB

# L I B R A R Y

JUST A FEW YEARS AGO THE BOOK WAS DECLARED DEAD WITH SUCH CONFIDENCE AND FINALITY THAT NO ARGUMENT SEEMED POSSIBLE. IT'S A PREDICTION THAT, AS WE SHOULD HAVE KNOWN, WAS AS FLAWED AND SHALLOW AS THE ALLEGED END OF HISTORY THAT ACCOMPANIED THE CLOSING STAGES OF THE COLD WAR. THERE ARE SO MANY THINGS ABOUT THE IDEA OF A LIBRARY THAT ARE SO FUNDAMENTAL THAT THEY DON'T NEED TO BE REINVENTED. AND A NATIONAL LIBRARY IS EQUALLY FUNDAMENTAL BUILDING BLOCK IN THE CULTURAL INFRASTRUCTURE OF ANY STATE. CITIES DECENTRALIZE, GOOGLE IS WORKING ON PUTTING EVERY BOOK EVERY WRITTEN ON LINE, TO THE OUTRAGE OF THE COPY WRITE HOLDERS, BUT STILL WE NEED PLACES IN WHICH YOU CAN SMELL INK ON PAPER, EXPLORE BINDINGS, AND THE MARGINAL NOTES, AND SHARE A SPACE WITH OTHERS TO WHOM BOOKS, WORDS AND IDEAS MATTER. IF THE IDEA OF THE LIBRARY IS AN UNCHANGING FUNDAMENTAL, THE ARCHITECTURAL LANGUAGE THAT IT SPEAKS, AND THE TECHNICAL PRINCIPLES THAT ALLOW IT TO FUNCTION, CONTINUALLY EVOLVE. THEY ARE THE MARKS SUCCEEDING GENERATIONS LEAVE OF THEMSELVES TO THEIR SUCCESSORS. THE REALM OF THE BOOK IS ONE THAT IS BOTH PRIVATE AND PUBLIC. A NATIONAL LIBRARY THAT CARRIES WITH IT ALL THE HIGHLY CHARGED ASSOCIATIONS OF A CRUCIAL CULTURAL INSTITUTION, MUST AT THE SAME TIME SUPPORT THE SCHOLARS AND THE SCHOLARSHIP WHICH IT EXISTS TO SERVE. IT MUST CELEBRATE THEIR WORK, AND MARK THE SIGNIFICANCE THAT THEY HAVE FOR A SOCIETY. IT MUST BE PROTECTIVE OF FRAGILE LITERARY TREASURES AND PROVIDE AN APPROPRIATE ATMOSPHERE FOR STUDY. BUT NEITHER IS IT A MONASTERY. SCHOLARS AND THEIR WORK TODAY BELONG TO THE WIDER WORLD, AND A NATIONAL LIBRARY MUST EMBRACE IT AND WELCOME IT. A LIBRARY HAS TO ADDRESS BOTH THE TECHNICAL, FUNCTIONAL ISSUES, AND THE EMOTIONAL ONES. IT MUST BE A PLACE IN WHICH THE RAW MATERIALS OF THE SCHOLAR'S WORK ARE ACCESSIBLE WITH THE MINIMUM OF FUSS AND FRICTION. BUT IT MUST ALSO MIRROR ITS INSTITUTIONAL SIGNIFICANCE. IT MUST LOOK TO THE OUTSIDE WORLD, BOTH SYMBOLICALLY AND LITERALLY. THERE ARE TIMES WHEN THE SCHOLAR MUST LOOK BEYOND THE PAGE TO REFRESH THEMSELVES AND TO REST THEIR EYES, AND TO BE REMINDED OF THE MATERIAL WORLD AROUND THEM. AND THE LIBRARY MUST PROVIDE A SENSE OF REWARD FOR THOSE VISITORS WHO ARE NOT SPECIALIST SCHOLARS BUT COME TO SEE A NATIONAL TREASURE. NOR CAN IT TAKE THEIR INTEREST FOR GRANTED. IT MUST WORK TO EARN ITS PLACE AT THE CENTRE OF NATIONAL LIFE BY ENCOURAGING VISITORS AND OFFERING THEM AN ENGAGING EXPERIENCE. THE LIBRARY IS BOTH A LANDMARK FOR PRAGUE: ONE THAT GROWS FROM THE LANDSCAPE, AND THE CITY'S ARCHITECTURAL TRADITION, AND A VANTAGE POINT, PERHAPS THE BEST IN THE CITY. AS SUCH IT IS THE PHYSICAL EMBODIMENT OF ALL THAT A NATIONAL LIBRARY MUST BE, IN BOTH THE PRACTICAL, AND THE SYMBOLIC SENSE. IT IS A REFLECTION OF ITS OWN TIME, AS WELL AS OF THE FUNDAMENTAL NOTION OF A TIMELESS INSTITUTION THAT IS A LIBRARY.



# I 2 P O I N T S

PLASTICITY



- PLACE FOR THIRD MILLENNIUM
- DEMOCRATIC ARCHITECTURE IN A DEMOCRATIC STATE
- KEY WORDS AS BEAUTY, ELEGANCE, COLOUR, PLASTICITY, PEOPLE AND BOOKS
- VIEWS AS PART OF URBAN COMPOSITION
- COLOUR AS REFERENCE TO THE PAST AND FUTURE

BEAUTY



- THE 'STREET' AS LINK BETWEEN OUTSIDE AND INSIDE
- BOOKS FROM STORAGE REACH READER IN LESS THAN 5 MINUTES
- BOOKS ARE PLACED BACK TO ORIGINAL POSITION IN STORAGE
- STORAGE FOR 10 MILLION VOLUMES WITH 4 MILLION EXTENDED CAPACITY
- MAXIMUM FLEXIBILITY IN THE INTERNAL BUILDING LAYOUT

COLOUR



- COMFORT OF SOFT FURNITURE THROUGHOUT THE BUILDING
- UNIQUE INTERNAL PLANNING REDUCES FLOOR AREA BY 30%



# I M A G E





# S I T E • A R C H I T E C T U R E

**SITE** OF THE NEW NATIONAL LIBRARY IS AT THE EDGE OF THE ENORMOUS EXISTING PARK OF LETNA. NEW PARK AREA AND ROW OF PUBLIC BUILDINGS WILL BE PLACED AS PART OF NEW URBAN PLAN. FUTURE TUNNEL ENTRANCE WITH GREAT AMOUNT OF POLLUTION AND NOISE IS CERTAINLY NOT BEST **SITE** FOR BUILDING OF NATIONAL IMPORTANCE. NEW AND PROGRESSIVE URBAN PLAN FOR WHOLE LETNA **SITE** IS ABSOLUTELY NECESSARY. GREENERY SHOULD DOMINATE. TREES AND MORE TREES. LIBRARY AS ECO BUILDING IN THE PARK. LETNA AS A PLACE OF PEACE, DEMOCRACY AND CULTURE. NOT A PLACE FOR MILITARY PARADES. EASY PEDESTRIAN ACCESS FROM TRAM, METRO, PARK AND STREET FROM ALL DIRECTIONS.

**ARCHITECTURE** OF PROPOSED BUILDING IS THREE DIMENSIONAL VOLUME HARDLY TOUCHING THE GROUND. SIMPLE, MODERN, EXCITING, PROGRESSIVE, COLOURFUL AND UNIQUE. MINIMAL VOLUME PROTRUDING ABOVE TREES LEVEL. CHAMPAGNE COLOUR CREATING LINK WITH PAST AND FUTURE. IT IS **ARCHITECTURE** FOR THE THIRD MILLENNIUM. IT IS **ARCHITECTURE** FOR PEOPLE, KIDS, DISABLED, AND SCHOLARS. EXTERNAL AND INTERNAL **ARCHITECTURE** IN BALANCE. PRIVATE SPACES, PUBLIC SPACES. **ARCHITECTURE** WHICH INVITES PEOPLE IN. **ARCHITECTURE** WITH VIEWS. HAPPY **ARCHITECTURE**. **ARCHITECTURE** FOR THE BOOK. PEOPLE AND BOOKS DOMINATE BUILDING. EASY MOVEMENT OF THE PEOPLE. LIFTS AND RAMPS. **ARCHITECTURE** OF NEW NATIONAL LIBRARY IN PRAGUE.





# P O D I U M

L E V E L 0

**PODIUM** ITSELF IS FINISHED IN UNPOLISHED WHITE MARBLE. WITH PERIMETER EDGES LIFTED UP IN CERTAIN AREAS. SLOPING SURFACES COVERED WITH MIRRORED, FINISHED STAINLESS STEEL. BUILDING IS REFLECTED IN THESE 'MIRRORS' FROM DIFFERENT ANGLES. WHOLE BUILDING IS VISUALLY ELEVATED OVER THE **PODIUM**. GROUPS OF PINE TREES. IVY ON CARPARK BANKS. CREATING GREEN VISUAL BARRIER. BOULDERS AROUND TREES. SEATING EVERYWHERE. STAINLESS STEEL BOWLS AS SPRINGS INSERTED IN THE MARBLE SURFACE. WATER OVERFLOW GOING INTO LITTLE STREAMS. PERHAPS COLOURED WATER. IN WINTER HEATED WATER. CREATING HERE ALL YEAR GARDEN. COLOUR RAMPS AND STAIRCASES. MINIATURE CAFÉ. PEOPLE SITTING, WALKING, RELAXING. MOST MODERN, ARTISTIC **PODIUM**. **PODIUM** OF NEW NATIONAL LIBRARY. IN THE MIDDLE SPACES ESSENTIAL FOR RUNNING OF THE LIBRARY. SUPPLIES IN RUBBISH OUT. BOOKS IN AND OUT. SEVERAL LOADING BAYS. SEPARATE LOADING BAYS FOR BOOKS. ROOMS FOR LIBRARY STAFF. DAY LIT, NATURALLY VENTILATED CAR PARK. EASY PARKING FOR DELIVERIES AND CARS. SECURITY **PODIUM** OF NATIONAL LIBRARY IN PRAGUE.



# ' S T R E E T '

L E V E L 1

'STREET' IS A PUBLIC SPACE ELEVATED ABOVE THE PODIUM WITH DIRECT CONNECTION TO THE STREET AND PARK VIA RAMPS AND STAIRCASES. STREET IS MAIN ARCHITECTURAL ELEMENT. LINK OF OUTSIDE AND INSIDE. FULL OF PEOPLE SOMETIMES DOUBLE HEIGHT SPACE. TREES. EXHIBITIONS. BOOKSTORES. LIFTS. COFFEE TABLES. VIEWS AND DIRECT ACCESS TO THE READING ROOMS. DIRECT ACCESS TO READING ROOMS AUDITORIUM AND RESTAURANT. VIEW TO THE OTHER FLOORS. FANTASTIC VIEW OF AUTOMATIC BOOK STORAGE THROUGH LARGE CIRCULAR OPENING. ALMOST DARKNESS THERE WITH THE BOOKS, STREAMS OF DAYLIGHT COMING THROUGH. VISIBLE MOVEMENT ELEVATORS.



SHADES OF ONE COLOUR. ACOUSTIC CEILING. PEOPLE WALKING. PEOPLE SITTING. SHINY SHINY COLUMNS, SOFT SEATING, SEMI SOFT FLOOR. PLACE TO HAVE A DATE. PUBLIC SPACE OF THE 'STREET' IN NEW NATIONAL LIBRARY IN PRAGUE.



# R E A D I N G R O O M

L E V E L 1 , 2 , 3

B O O K S A R E S I L E N T T E A C H E R S

A L U S G E L L I U S

READING ROOM IS ANOTHER ARCHITECTURAL ELEMENT OF THE LIBRARY. MAIN VOLUME OF READING ON ONE STREET LEVEL. BOOK STORAGE ON MEZZANINE SERVING ALL READING ROOM ON FLOOR ABOVE READING ROOM FOR PARLIAMENTARY LIBRARY WITH LIMITED PUBLIC ACCESS. CONTROLLED DAYLIGHT. SILENT SOFT FLOOR. SOFT ACOUSTIC CEILING. SPECIAL SCENTED SURROUNDING. VARIOUS SHADES OF ONE COLOUR. SHINY SHINY COLUMNS. ELEGANT BOOK SHELVES WITH EASY ACCESS. PLACE TO READ, RELAX, MEDITATE AND THINK. SILENCE. PEOPLE MOVING AROUND SILENTLY. FRITTED GLASS WALLED BOOK DISTRIBUTION CENTRES. SOFT FURNITURE EVERYWHERE. TABLE LAMPS. PLACE TO REMEMBER. PLACE TO STAY LONGER. TRANQUILITY. SILENCE. BEAUTIFUL SPACE TO THINK. READING ROOM OF NEW NATIONAL LIBRARY IN PRAGUE.



# OFFICES . EYE

LEVEL 3 , 4 , 5 , 6 , 7 , 8

OFFICES AND ADMINISTRATION ARE ON LEVELS 3 4 5 6, OPEN PLAN PARLIAMENTARY LIBRARY WITH RESTRICTED PUBLIC ACCESS. PRIVACY OF MEETING ROOMS AND SOME OFFICES. SOFT FLOOR AND CEILING. COLOURS AGAIN. SHINY COLUMNS. CONTROLLED DAYLIGHT. NO CORRIDORS. DIRECT LIFT CONTACT WITH CENTRAL STORAGE AREA AND DELIVERIES. EASY CONTACT WITH READING ROOMS. BEAUTIFUL SPACES TO WORK. CERTAINLY NOT DARK CORRIDORS OF KLEMENTINUM. OFFICES IN NEW NATIONAL LIBRARY IN PRAGUE.

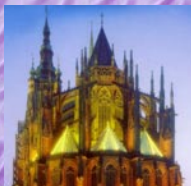
EYE SPACE IS ON THE TOP FLOOR. UNIQUE SPACE ON SEVERAL LEVELS. UNIQUE PLACE. DYNAMIC SPACE. 3 FUNCTIONS. OBSERVATION DECK. CAFÉ. PERIODICAL READING ROOM. PLACE TO READ LATEST NOVEL. KIDS BOOKS. BREATHTAKING VIEWS. 30M ABOVE THE GROUND. ST VITUS CATHEDRAL. OLD TOWN SQUARE.



KLEMENTINUM. RIVER. HORIZONS. CLOUDS. BLUE SKY. SNOW. GREENERY. BEAUTY OF PRAGUE. OLD AND NEW. SOMETHING PEOPLE WANT TO SEE. MAGNET. BEST COFFEE. PLACE FOR CHARMING DATE. SOFT FLOOR AND CEILING. COLOUR. SOFT SEATING EVERYWHERE. GENTLE LIGHTING. GLASS TABLES FOR VISIBILITY. COMFORT. PEACE. PLACE TO BE. EYE SPACE OF NEW NATIONAL LIBRARY IN PRAGUE.



# V I E W S





# B

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“**BOOK**: PORTABLE WRITTEN OR PRINTED TREATISE FILLING A NUMBER OF SHEETS FASTENED TOGETHER.” **OXFORD DICTIONARY**

**BOOK** IS THE MAIN AND MOST IMPORTANT ELEMENT OF THE DESIGN. ARCHITECTURE FOR THE **BOOK**. AN ESSENTIAL PART OF OUR CULTURE. ALWAYS WAS, AND ALWAYS WILL BE. FROM STONE PIECES, CERAMIC TILES, HAND WRITTEN, ART PIECES, FIRST PRINTS, MODERN PAPERBACK TO LATEST CD. **BOOK** WILL STAY WITH US.

STORAGE OF **BOOK** IS AN ESSENTIAL PART OF THE LIBRARY. IT MAKES THE LIBRARY. RIGHT STORAGE SYSTEM IS VITAL. EXTENDIBILITY CRUCIAL. THE PROPOSED SYSTEM HAS IT ALL. FULLY AUTOMATIC. THE STORAGE AND RETRIEVAL SYSTEM IS DESIGNED TO GUARANTEE THE RETURN OF ANY BOOK TO ITS ORIGINAL TOTE LOCATION WITHIN THE STORAGE. FULLY TESTED AND ALREADY IN USE IN OTHER LIBRARIES. NO HUMAN HAND TOUCHES THE **BOOK**. SAFE.

ANY **BOOK** OR DOCUMENT WILL REACH THE READER OR STAFF MEMBER WITHIN 5 MINUTES. IT IS MULTIFUNCTIONAL AND ERGONOMICALLY DESIGNED. STORAGE AND RETRIEVAL **BOOK** CENTRES FOR INTERNAL OR READER USAGE.

THE MOST ADVANCED **BOOK** STORAGE IN THE WORLD. **BOOK** STORAGE OF THE NATIONAL LIBRARY IN PRAGUE.





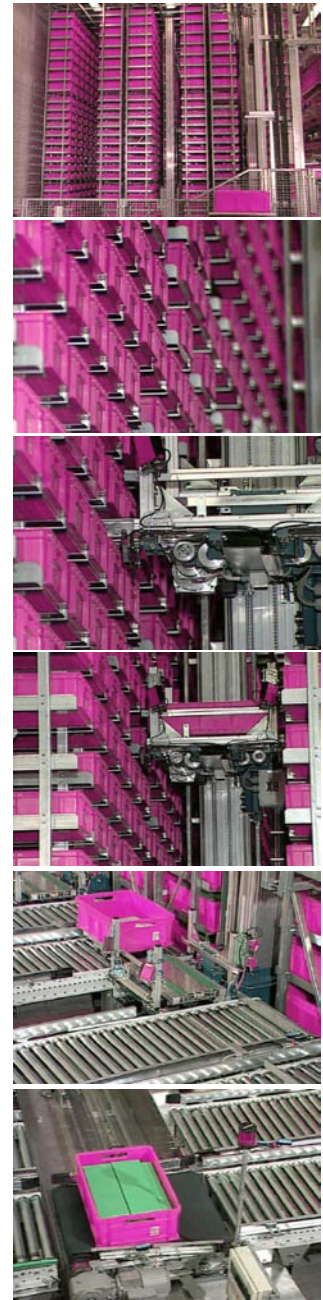
# B

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- HIGH SECURITY IN AUTOMATED CONTROLLED FACILITY.
- IT CONTROL SYSTEMS PROVIDING ACCURATE TRACEABILITY OF BOOKS.
- IT CONTROL SYSTEMS WITH PROVEN INTERFACES TO HIGH LEVEL HOST SYSTEMS.
- PROTECTION OF BOOKS IN SAFE CONTAINERS.
- HIGH DENSITY VOLUME STORAGE, MINIMISING LAND FOOTPRINT.
- RAPID, RELIABLE AND ACCURATE ACCESS TO STORAGE OF BOOKS.
- MODULAR DESIGN SOLUTION TAILORED FOR GROWTH AND EXPANSION.
- REDUNDANCY AND BACKUP SUB-SYSTEMS WITHIN DESIGN.
- SUBTERRANEAN AREAS TO MAXIMISE ABOVE GROUND BUILDING FACILITIES.
- LOW MAINTENANCE AUTOMATED EQUIPMENT, WITH HIGH AVAILABILITY AND RELIABILITY.
- GOODS TO MAN SOLUTION CONSIDERABLY REDUCING PERSONNEL.
- AUTOMATED CYCLIC INVENTORY FACILITY.
- ISOLATED ENVIRONMENT WITH INDEPENDENT FIRE PROTECTION.
- COMPLIANT WITH CODES FOR ARCHIVE PROTECTION RECOMMENDATIONS
- LOW MAINTENANCE OF ALL AUTOMATED EQUIPMENT.

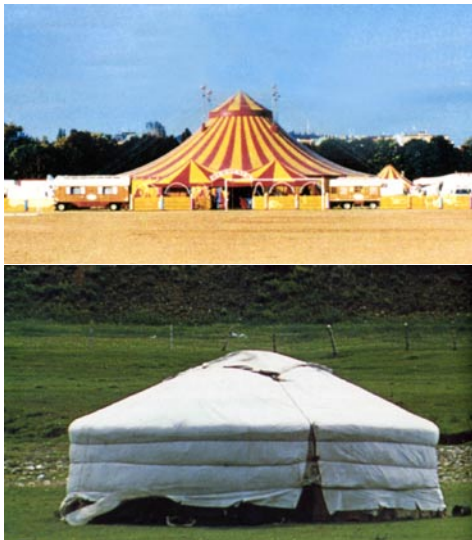


# S T R U C T U R E

THE **SUPERSTRUCTURE** IS DESIGNED AS A STRUCTURAL STEEL FRAME WITH INTERNAL COLUMNS ON A 12M × 9M GRID, SUPPORTING A COMPOSITE FLOOR MADE UP OF STEEL BEAMS AND CONCRETE FLOOR SLABS. DUE TO THE REDUCTION OF FLOOR AREA AT EACH LEVEL, PERIMETER COLUMNS WILL BE INCLINED TO SUPPORT SLAB EDGES ALLOWING FOR A 3M PERIMETER CANTILEVER ZONE. **LATERAL STABILITY** OF THE FRAME WILL BE PROVIDED BY INTERNAL CONCRETE CORES WORKING IN COMBINATION WITH THE FACADE OF THE BUILDING. THE **FACADE** ITSELF WILL CONSIST OF TENSION CABLES SUPPORTING INSULATED ALUMINIUM CLADDING PANELS. THE **SKIN** WILL BE CONNECTED TO THE INTERNAL FRAMEWORK BY A RING BEAM LOCATED AT LEVEL 7. THE **RING BEAM** IS A KEY STRUCTURAL ELEMENT WHICH NOT ONLY SUPPORTS THE 'HUNG' FAÇADE WITH BUT ALSO SUPPORTS A SERIES OF STEEL ARCHES AT THE TOP OF THE STRUCTURE.

THE **SUBSTRUCTURE** CONSISTS OF A 15M DEEP, SINGLE-STOREY BASEMENT USED AS THE PRINCIPLE BOOK STORAGE AND ARCHIVE AREA. THE PERIMETER RETAINING WALLS ARE CONCEIVED AS 1.2M THICK **DIAPHRAGM WALLS**, STIFFENED BY BUTTRESSES AND INTERMEDIATE WHALING BEAMS WHICH ARE DESIGNED TO RESIST THE LARGE EARTH PRESSURES RESULTING FROM THE DEPTH OF BASEMENT. ON THE INSIDE FACE OF THE DIAPHRAGM WALL, A 300MM REINFORCED CONCRETE LINING WALL WILL BE CAST TO FORM A SECOND BARRIER AGAINST WATER INGRESS. A

1.2M THICK **RAFT SLAB** WILL FORM THE BOTTOM OF THE BASEMENT BOX, BEARING ONTO THE SHALE STRATA, AND WILL ACT AS THE FOUNDATION FOR ALL INTERNAL COLUMNS. THE SLAB ITSELF WILL BE CAST IMMEDIATELY ONTO A **DRAINAGE BLANKET** RESTRICTING THE AMOUNT OF WATER WHICH WILL PERMEATE INTO THE SLAB. IN ADDITION, A DRAINED WALL AND FLOOR CAVITY WILL BE PROVIDED TO COMPLETE THE WATERPROOFING SYSTEM. THE **INTERNAL LINING** TO THE WALL CAVITY WILL BE CONSTRUCTED OF TWO SKINS OF BLOCKWORK WITH A WATER/VAPOUR RESISTING MEMBRANE IN BETWEEN. THE **CAVITY** BENEATH THE FLOOR WILL BE FORMED FROM PURPOSE-MADE TILES OVERLAIN BY A WATER/VAPOUR RESISTING MEMBRANE. THIS SYSTEM ENABLES ANY WATER WHICH HAS ENTERED THE STRUCTURE TO BE CONTAINED AND DIRECTED TO SUMPS, FROM WHERE IT IS REMOVED BY PUMPING.





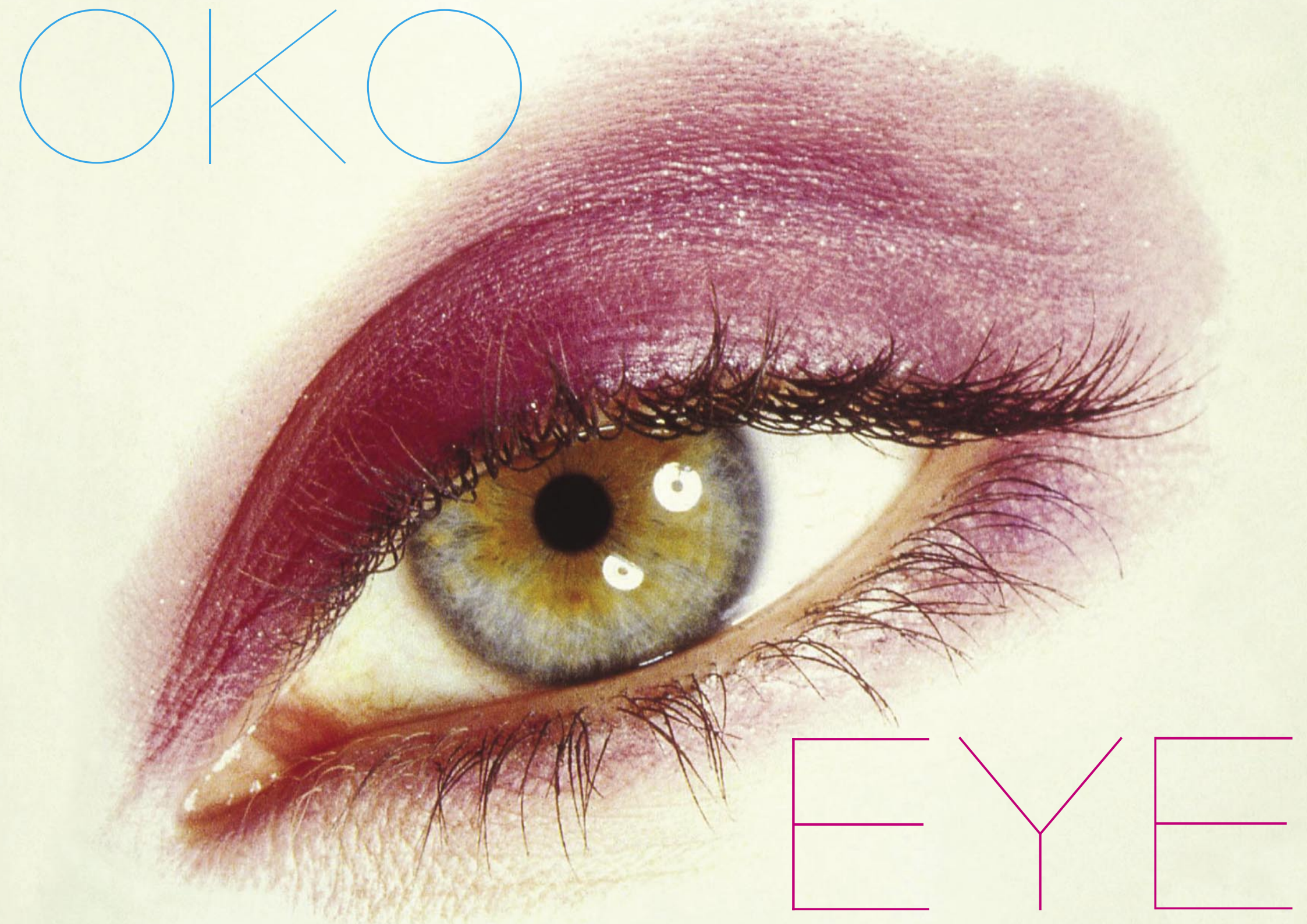
# E N V I R O N M E N T

**LIGHT.** GENEROUS LEVELS OF NATURAL LIGHT IN ALL PUBLIC AREAS ARE PROVIDED BY CIRCULAR AREAS OF GLAZING DISTRIBUTED OVER THE EXTERNAL SKIN, CREATING A HUMAN FRIENDLY CONDITION WITH STRONG VISUAL CONNECTIONS TO THE OUTSIDE WORLD, WHILST PROVIDING A CALM ATMOSPHERE FOR CONTEMPLATION AND CREATIVITY. NATURAL LIGHT LEVELS IN MANY PUBLIC AREAS WILL BE SUFFICIENT FOR CIRCULATION AND READING FOR MORE THAN 70% OF LIBRARY OPENING HOURS – SUBSTANTIAL SAVINGS IN ELECTRIC LIGHTING ENERGY WILL THEREFORE BE ACHIEVED. HOWEVER, THE EXTENT OF GLAZING IN THE BUILDING ENVELOPE IS CAREFULLY CONTROLLED AND RELATIVELY MODEST - IT HAS BEEN CALCULATED THAT A SKIN WITH 15% GLAZING GIVES THE OPTIMUM CARBON EFFICIENCY BALANCE WHEN HEATING, COOLING AND ELECTRIC LIGHTING USAGE ARE CONSIDERED FOR A WHOLE YEAR.

**CLIMATE AND ENVIRONMENTAL CONTROL.** THE CLIMATIC CONTROL SYSTEM FOR THE BUILDING FOLLOWS THE SAME OBJECTIVE OF A CALM AND COMFORTABLE ENVIRONMENT WITH LOW ENERGY CONSUMPTION. A LOW VELOCITY MECHANICAL VENTILATION SYSTEM IS USED TO BRING A CONTROLLED AMOUNT OF FRESH AIR INTO THE OCCUPIED AREAS OF THE BUILDING – THE AIR IS SUPPLIED INTO THE LIBRARY, AUDITORIUM, OFFICES AND STUDY ROOMS THROUGH A RAISED FLOOR. THIS LOW LEVEL SUPPLY ARRANGEMENT IS SILENT AND ENERGY EFFICIENT, AND AVOIDS THE RISKS OF EXCESSIVE NOISE AND DUSTY INTRUSION THAT WOULD ENTER THROUGH OPENING WINDOWS. SOME DEGREE OF LOCAL CLIMATE CONTROL WILL BE PROVIDED FOR LIBRARY STAFF USING SMALL LOCALISED FAN UNITS WITHIN THE FLOOR CAVITY. THE RETAINING WALLS IN THE BASEMENT WILL BE CONFIGURED AS A THERMAL LABYRINTH TO GIVE PASSIVE CLIMATIC CONDITIONING TO THE WHOLE BUILDING INCOMING FRESH AIR WILL BE TEMPERED BY INDIRECT CONTACT WITH THE MASS OF THE EARTH BY PASSING THROUGH THE CAVITY WALL AROUND THE BASEMENT PERIMETER, GIVING FREE COOLING IN SUMMER AND FREE HEATING IN WINTER. THE BASEMENT LOCATION FOR BOOK STORAGE MEANS THAT THE STORE IS NOT EXPOSED TO NATURAL LIGHT OR THE EXTREMES OF THE EXTERNAL CLIMATE. THE AUTOMATIC BOOK RETRIEVAL SYSTEM CAN LARGELY WORK IN DARKNESS, WITHOUT THE NEED FOR EXTENSIVE ELECTRIC LIGHTING. A VERY LOW CAPACITY HEATING AND COOLING SYSTEM IS THEREFORE ALL THAT IS REQUIRED TO KEEP OPTIMAL CLIMATIC CONDITIONS WITHIN THE STORE.



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