

CONCEPT BOOK



MANNI GREEN TECH



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MANNI GREEN TECH

Manni Green Tech is the technological partner to solve structural and energy efficiency issues in order to assure:

BETTER BUILDINGS



HIGH QUALITY



COMFORT



RESISTANCE TO EARTHQUAKES
AND INCOMBUSTIBILITY



LOWER COSTS
OF MAINTENANCE

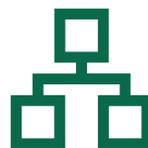
MORE EFFICIENT PROJECTS



ENERGY
EFFICIENCY



INTEGRATED
LOGISTICS



DIGITAL
PROCESSES



LESS WASTE
OF WATER

INCREASE TIME AND COST PREDICTABILITY

THE FUTURE OF THE BUILDING INDUSTRY: CHOOSE SUSTAINABLE PREFABRICATION

MANNI GREEN TECH, a Manni Group company, is specialised in off-site building and sustainable prefabrication. Through its own construction system, it enables the creation of modular and scalable industrial and residential buildings. Manni Green Tech researches and develops new technologies for the creation of residential, industrial and commercial units with light steel profiles. These are prefabricated construction systems in Cold Formed Steel (CFS), with light-weighted, easy to assemble, modular structures: features that allow them to be pre-assembled in the factory and have customised solutions.

Off-site building is a new synthesis between constructions and manufacturing, between consolidated production processes and new digital technologies. The production of components intended for the building industry moves from the construction site to the factory. With an increase in productivity, cost reduction, respect of delivery times and contractual budgets.

This new building production acquires renewed reliability thanks to the advantages of manufacturing single components, individually controlled and certified to ensure high performance levels, even during management and maintenance processes.

Manni Group, the Holding based in Verona (Italy) specialised in processing and using steel in all its applications, launched MGT at the end of 2017. It was presented as the manufacturing partner of the prefabricated construction sector that supports players operating in the off-site market. The design team is involved from the first analysis, to address technological choices that are appropriate not only from a structural point of view, but also in performance and budget terms. The design phase, linked to production, is of fundamental importance for the success and optimisation of the system.

MGT vision follows three main guidelines: attention to international markets, digitisation of services integrated with production processes and performance optimisation for materials designed to favour the best insulation, structure lightness, ease of assembly to ensure the best insulation solutions.



SERVICES

PHASE 1

DESIGN



Support the customer from the early design phases to find the technological solutions that best meet the needs of the specific project. MGT qualified technicians involved in the final design phase are a valid support in combining the best technologies and thanks to integration with latest generation software, MGT engineers can quickly and accurately produce structural calculations for buildings.

PHASE 2

MANUFACTURING



Thanks to the careful design and digitisation of processes, the structures are produced with maximum precision and quality. Construction times can be significantly reduced thanks to the millimetric precision of factory production. Each structure and coating component is studied in detail by the latest technology to prevent on-site construction issues.

Great attention is paid to the choice of materials and their supply to meet construction site needs and provide the best possible service to customers during the construction phases.

PHASE 3

ASSEMBLY



Respect of times and construction quality standards through the qualified network of on and (off-site) installers. Clean, safe, rapid construction site thanks to the attention paid to materials with the production department, whose integrated logistics service is able to fulfill customer's need.

PHASE 4

SUPERVISION



Supervision by qualified personnel during construction check on site activities. The Supervisor also provides the required trainings to the installer.

PHASE 5

WORK MANAGEMENT AND MAINTENANCE



Integration of building monitoring systems is possible thanks to BIM design. Information can be gathered throughout the life cycle of the structure, facilitating routine and extraordinary maintenance operations.

PHASE 6

DECOMMISSIONING THE BUILDING



Thanks to the careful selection of the materials and tracking information, when the building is decommissioned it will be possible to operate safely or recycle and reuse a significant amount of the materials used.

CONSTRUCTION SYSTEM AND TECHNOLOGY

DESCRIPTION OF THE CONSTRUCTION SYSTEM

Green construction is not just a trend: it is a responsibility. Architects, builders, designers and entrepreneurs increasingly require tools and resources to improve the environmental performances of buildings. Manni Green Tech supports the construction industry in its efforts to create sustainable commercial and residential constructions.

All this is possible thanks to the use of cold-formed galvanised steel structures, a consolidated construction technique worldwide, despite being little known outside the professional building sector.

Thanks to its high potential and to some regulatory actions concerning to **structural quality, energy saving and living comfort, it is definitely spreading in the world.**

Cold Formed Steel or CFS is the term most commonly used to identify the profiles produced by cold bending or profiling of thin steel sheets used in the aforementioned structures.

THINK MODULAR... DESIGN FREE

The cold-formed steel frame is a versatile structural product for use in load-bearing structures and curtain walls, in the construction of floors and roofs, for trusses and internal non-load-bearing partitions. Floor extensions, as well as raised parts, can easily be created on existing buildings.

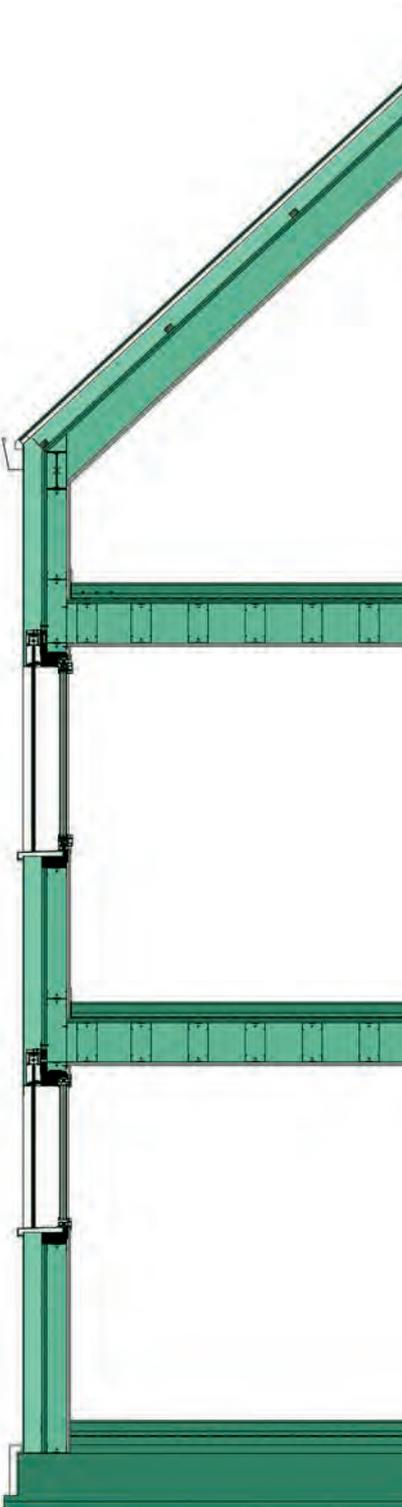
DESIGN VERSATILITY

Steel structures can be used independently or with other structural systems. Furthermore, the steel structure can also be adapted to many traditional applications built with hot-rolled structural steel, wood, masonry or other conventional materials.

ENVELOPE

The construction system developed by MGT is structurally flexible and achieves excellent performances regarding. Thanks to solutions studied, important energy saving needs are met, ensuring excellent internal comfort, even in different climatic areas. This thanks to the design support of Manni Green Tech technicians who can recommend the most suitable solutions based on the different climatic conditions of the area.

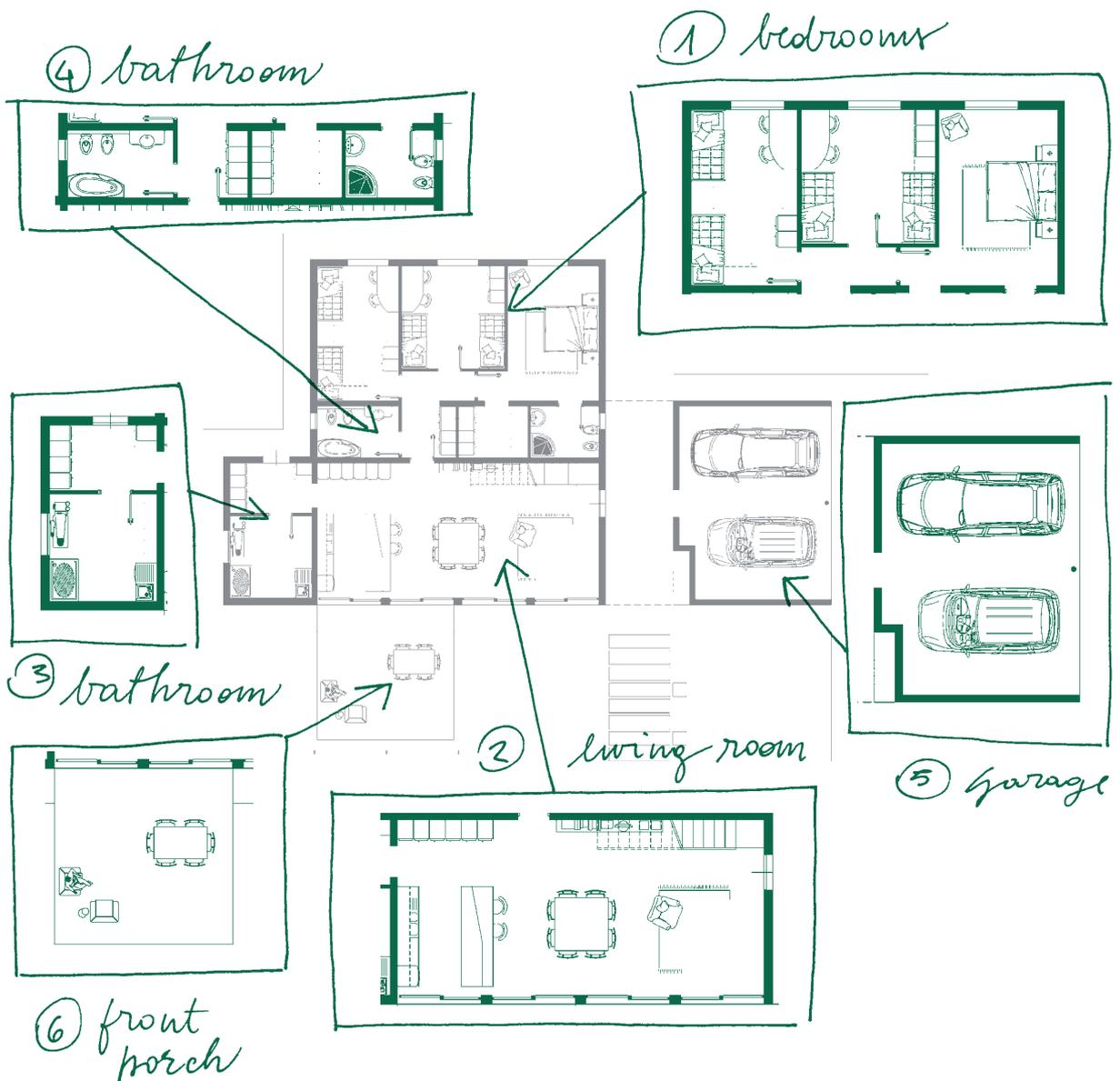
The whole is completed by plant technologies integrated with renewable energy production systems to obtain high annual energy savings and high energy building certification.



HOUSING MODULES

TABLE PROPOSED

| TYPE OF HOUSING | TYPE OF HOUSE | COUPLINGS | GROSS INTERNAL SURF. | NUMBER OF PEOPLE | LOOK |
|-----------------|---------------------|-----------------|----------------------|------------------|---------|
| House 4.0 | Two-storey house | Terraced houses | 155 sqm | 4 | Classic |
| House 4.1 | Two-storey house | Terraced houses | 155 sqm | 4 | Modern |
| House 3.0 | Single-storey house | Detached house | 83 sqm | 2-3 | Various |
| House 3.1 | Single-storey house | Detached house | 97 sqm | 3-4 | Various |
| House 3.2 | Single-storey house | Detached house | 119 sqm | 3-4 | Various |
| House 3.3 | Single-storey house | Detached house | 133 sqm | 4 | Various |
| House 3.4 | Single-storey house | Detached house | 157 sqm | 4-6 | Various |
| House 2.0 | Single-storey house | Detached house | 125 sqm | 4-5 | Classic |
| House 1 | Single-storey house | Detached house | 60-80 sqm | 2-3 | Various |



HOUSE 1

Single family house

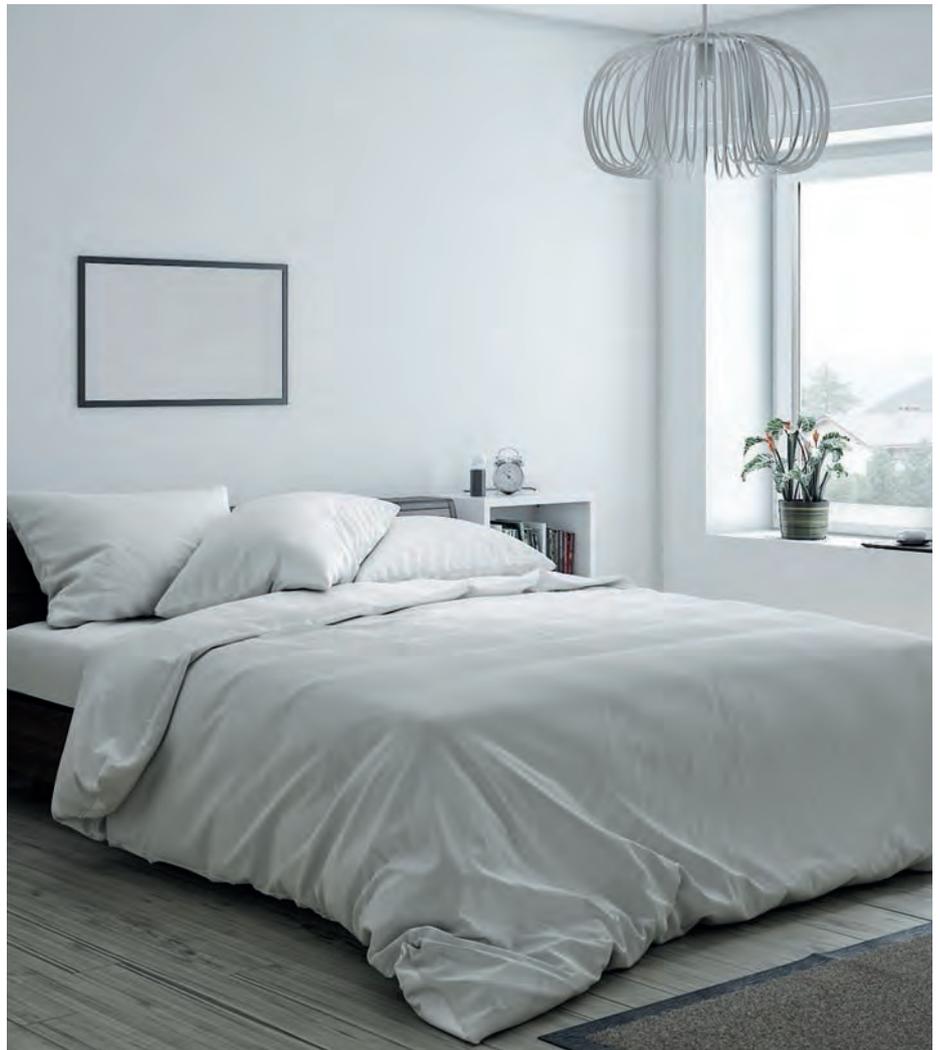
One floor

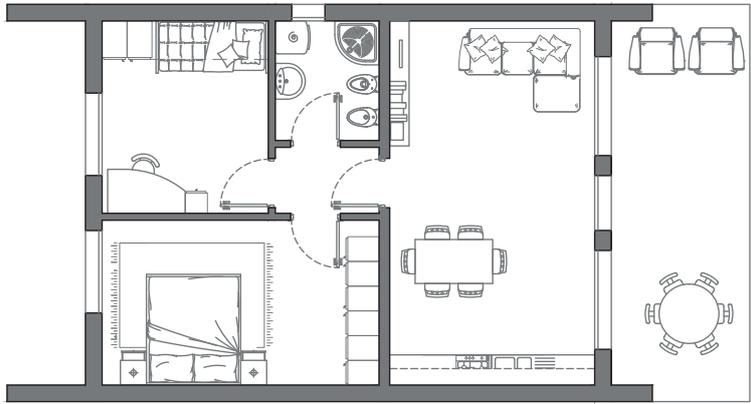
Gross Surface 68,50 sqm

Porch Surface 18,06 sqm

Parking space shelter/Garage Surface 15,00 sqm*

* on request

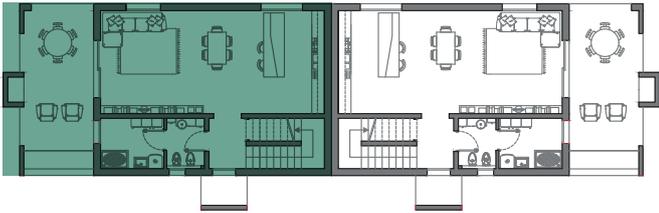




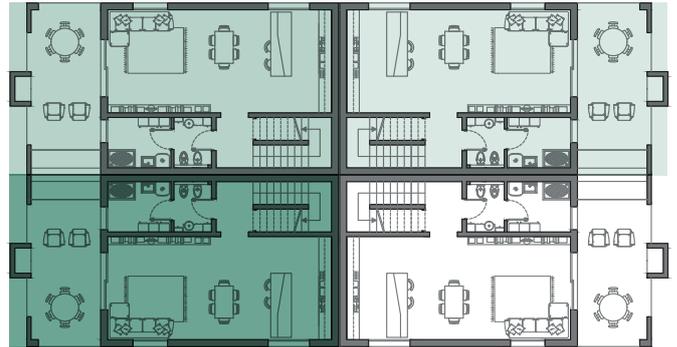
HOUSE 4.1

Single family house
Two floor
Gross Surface $77,25 \times 2 = 155$ sqm
Porch Surface 25,00 sqm
Parking space shelter 15,60 sqm
Balcony 24,00 sqm

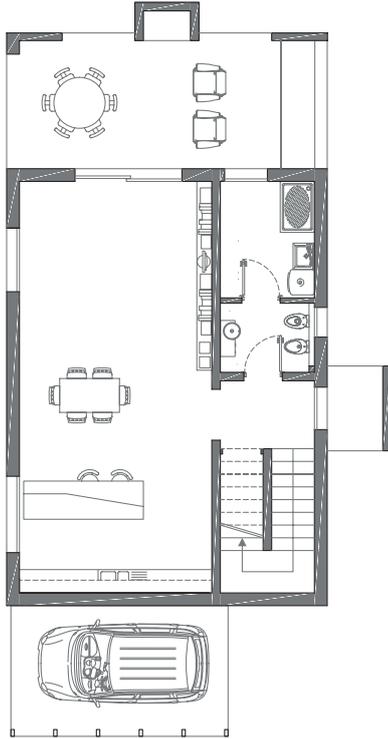
MODULE x2



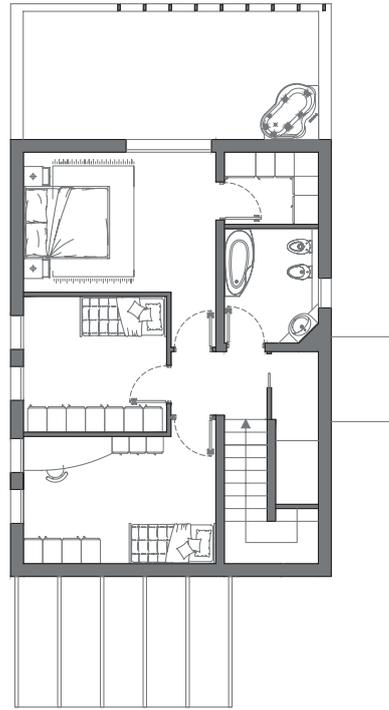
MODULE x4



GROUND FLOOR



FIRST FLOOR

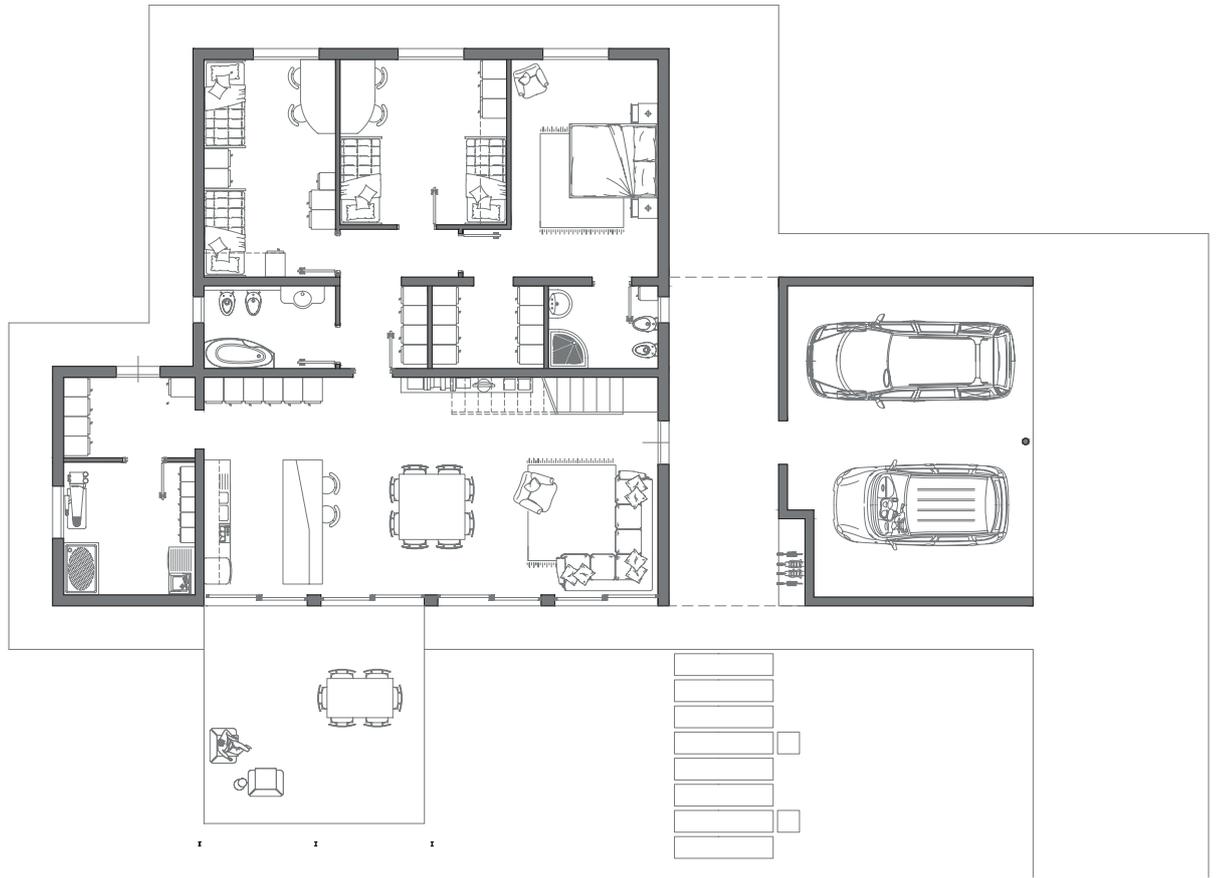




HOUSE 3.4

Single family house
One floor and loft
Gross Surface 157 sqm
Loft Surface 42,00 sqm
Porch Surface 18,87 sqm
Garage Surface 43,79 sqm
Terrace surface 62,60 sqm









think **modular**
design **free**



THE STRENGTH OF A GROUP

Resistance and reliability, sustainability and beauty. In a word, steel. Since 1945, Manni Group, a well-established company based in Verona, has been processing steel and turning it into a very wide range of products and services.

With their constant investment in R&D, an ongoing commitment to reach the highest levels of quality and service and great care for the needs of the Client. Thank to the synergy of its companies, Manni Group, is able to produce the best solutions to extend or redevelop buildings, of liaising with a single sound, reliable partner.



MANNI GROUP
BUILDING FUTURE





MANNI GREEN TECH

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