



SPHERE
S O T O G R A N D E

Building Specifications

SPHERE is designed as to ensure that its spaces are maximally useful and efficient and deliver high performance to residents. To this end, the design and development will not only comply with the strict requirements of the Spanish Technical Building Code (CTE) but also with the latest advances in the fields of construction and human well-being.

A healthy and sustainable project that closes the loop.

The passive design and building envelope features—which must withstand adverse weather conditions and achieve high air tightness—provide a greater degree of comfort.

The ongoing well-being of residents calls for active heating and cooling systems; air renewal, filtration and purification solutions, and relative humidity monitoring equipment to cover a wide range of possible climate and air quality scenarios via the use of smart systems.

Avoiding obvious or potential risks to human health requires the use of low- or zero-emission certified materials.

This is what SPHERE Sotogrande is all about.





BUILDING SPECIFICATIONS

Structural System

Building Foundations

Foundations to be in accordance with the recommendations, findings and hypotheses contained in the geotechnical study.

Frame Structure

Reinforced concrete and steel frame structure in accordance with the construction drawings, the Spanish Instruction on Structural Concrete (EHE), the Spanish Technical Building Code on Structural Safety (CTE-SE) and the Core Document on Structural Safety and Building Standards (SE-AE), and linked to the validation of the Technical Control Body (OCT).

Slabs to generally be waffle solid slabs or post-tensioned slabs. Slab thickness and reinforcement to be determined according to structural calculation, location within the building, and relationship with thermal and acoustic insulation and fire protection.

Staircases in common areas to feature reinforced concrete slabs.

Reinforced concrete pillars below ground and metal pillars above ground.

Building Envelope System

High performance building envelope to passively provide energy efficiency and to enhance interior comfort thanks to its increased thermal, acoustic and airtight insulation system.

Passivhaus criteria are to be met and BREEAM Excellent and WELL Gold ratings are to be earned.

Dynamic computer simulations are to be carried out. Construction is to be assessed against airtightness (BlowerDoor), thermal bridging (thermography) and acoustic insulation testing (tests on extra airborne noise, extra impact noise and extra external noise), with values higher than those required by the Spanish Technical Building Code (CTE).

Solar control to be envisaged in the design via a studied dimensioning of shading elements, the choice of joinery and glazing, and the implementation of home automation control systems.

Façade

Curtainwalling, Passivhaus System, with excellent thermal, acoustic and waterproofing/vapour performance, and sealing elements and acoustic joints. Interior lining to be double gypsum plasterboard.

Exterior lining to feature continuous insulation covering framework edges, waterproofing sheet and ventilated façade with engineered wood cladding.

Eaves and overhang structure to feature photocatalytic glass fibre reinforced concrete (GRC) elements.

Voids

EXTERIOR JOINERY. Thermally broken sliding and hinged windows and doors to feature multi-point locking system and reduced thermal transmittance values.

GLASS PANES. Double glazing of varying thicknesses (noise attenuation) to feature a 16 mm argon-filled chamber (thermal insulation). Glass panes to feature solar control, thermal emissivity and acoustic insulation depending on the location/orientation and sunlight level.

Glass panes to boast a layer of butyral in between for reinforcement, in accordance with the safety study.

Roofing

Inverted flat roofs. Watertightness to be assessed by performance testing to be carried out by certified staff. Roofs to be landscaped with endemic plant species—extensive or intensive depending on the rooms on which they are located—, in line with the project's promotion of biodiversity and sustainability.

Suelos

On floorplate, flooring to feature thermal insulation, acoustic insulation against impact noise, a levelling screed and a self-levelling base.



BUILDING SPECIFICATIONS

Compartmentalisation System

Partition Walls

In general, interior party walls in drywall systems designed to guarantee a high level of acoustic insulation over and above the requirements of the Spanish Technical Building Code (CTE).

Common walls between properties and outdoor areas to include security measures against intrusion.

Interior Joinery

All the wood used in the project to be sustainability and volatile organic compound (VOC) emissions certified.

FRONT DOOR TO THE PROPERTIES. Standardised armoured front door block with anti-bump lock cylinder, conforming to the requirements of the certified security consultant and 'Genoma del Robo ©' certified.

INTERNAL DOORS. With designer stainless steel doorhandle and top quality finishes

WARDROBES. Lined built-in wardrobes to be fitted with top storage compartments, hanging rails and chest drawer units. Door panels to be finished in natural wood. Sliding or hinged doors—depending on the layout.





BUILDING SPECIFICATIONS

Finishes

Vertical Cladding

FAÇADE. Designer, sustainable and highly energy-efficient façade. Worth mentioning are finishes in certified sustainable engineered wood slats and in glass fibre reinforced concrete (GRC) in eaves and roofs with a decontaminating photocatalytic effect.

TERRACES. Partitions via certified engineered wood slats. Terrace overhangs with planters.

LIVING AREAS. Finishes according to the layout. Ecoclay or alike, photocatalytic-effect paint and top quality porcelain stoneware cladding.

Horizontal Cladding

LIVING AREAS. Plasterboard and/or plaster suspended ceiling to feature coving lighting and lit recessed perimeter, depending on the type of room. Top coat in photocatalytic paint.

Flooring

PROPERTIES. Microcement and/or large-format rectified porcelain stoneware flooring, for a continuous look throughout.

RESIDENTIAL COMPLEX. Hydraulic elements, permeable to rainwater, for water management, integration and green factor.

Fit-Out, Facilities and Services

Lighting, electricity and telecommunications

Conforming to Low Voltage Electrotechnical Regulations and official regulations. Review of systems by Commissioning. Testing, performance testing and final suitability report.

Renewable energy facilities with PV (photovoltaic) and/or wind production, without storage.

Dynamic computer simulation of lighting in the most sensitive areas (impact on the circadian rhythm). Colour temperature study and colour rendering index (CRI). LED light fixtures. Sensors, controls and home automation system to create predefined scenarios.

Implementation of systems enabling high-speed connectivity throughout.

PROPERTIES. Electrical system to feature a high degree of electrification and to boast an electrical panel that allows independent control of each use. Recessed light fixtures in suspended ceilings, coving lighting and lit recessed perimeter. Plugs, switches and sockets to be equipped with prime and top quality mechanisms. Connectivity throughout via RJ45 cat6 sockets and WIFI.

GARAGE. Electric recharging point in each single or double parking space. Zoned lighting with On/Off control and/or illuminance control.

STORAGE ROOMS. Downlight light fixtures.

HVAC System and domestic hot water

System to cover all possible climatic conditions, including an RCP 4.5 (IPCC) average climate change scenario. In adverse outdoor air quality conditions, the properties are designed to be highly airtight, where the ventilation and air conditioning systems are to be activated.

Domestic hot water supply and air conditioning to be supported by fan coil units (heating and cooling) via individual aerothermal energy.

Underfloor heating system and cooling ceiling system, for a cathedral effect inside the properties.

Individual controlled mechanical ventilation system per property, indoor humidity control, dual-flow ventilation units with heat energy recovery function in winter and 100% by-pass for cooling.

Air flow in the controlled mechanical ventilation system and aerothermal air conditioning system to be via a network of ducts across suspended ceilings.

The various systems to be individually or jointly monitored via sensors, controls and home automation system.

AMENITIES. Aerothermal and controlled mechanical ventilation systems.

Fit-Out, Facilities and Services

Ventilation and indoor air quality

Sensors are to provide information on outdoor air quality conditions and, if adverse, the system will warn residents and encourage them to shut doors and windows, thereby creating a highly airtight interior space. Under such conditions, the controlled mechanical ventilation system, which allows for an 80% enhancement of thermal efficiency and a power consumption of less than 0.45Wh/m^3 , is to guarantee optimal and permanent ventilation.

Air pumped into the interior is to be filtered and sanitised by using ionisation/photocatalysis before entering the property, thereby removing PM2.5 and PM10 particulate matter, bacteria and even viruses.

Fume and smell generated in the kitchen to be vacuumed via a carbon filter system, thereby avoiding energy losses from air conditioning.

Swimming pool

Two outdoor swimming pools—an infinity swimming pool for leisure swimming and a swim-only swimming pool for lane swimming. Regenerative filter system for up to 96% water saving and 30% energy reduction compared to conventional systems. Water treatment according to current regulations.

Indoor heated swimming pool.

Sewerage System

Separate sewerage system. Network to boast the necessary acoustic insulation to deaden the noise that travels across the properties.

Rainwater to be treated for reuse as non-drinking water in irrigation and hosing down.

Plumbing System

Self-cleaning mesh type filter to avoid bacteriological proliferation; a 25-50 μm passage threshold. Its location is intended to allow inspection and maintenance. Water softeners, and chlorinator and filter equipment to be installed to ensure quality of drinking water.

Monitoring of water consumption, accessible for individual inspection at each property.

Sanitary ware and other water guzzling appliances to meet the minimum requirements recommended by the BREEAM certification: Toilets (l/flush) = 3.5; Wahsbasin tap (l/min 3 bar) = 5; Kitchen tap (l/min) = 5; Shower tap (l/min 3 bar $<30^\circ\text{C}$) = 8; Bathtubs (max. 40% vol. Overflow l) = 120; Dishwasher (l/cycle) = 8.50; Washing machines (l/year) = 8,700.

Leak detection system.



Fit-Out, Facilities and Services

Sensors, controls and home automation system

Air quality (CO2, VOCs), temperature and relative humidity sensors and lighting to understand the environmental conditions and to create healthy and comfortable programmed scenarios for residents via the use of controls and home automation system.

Devices in homes and/or mobile apps for real-time interaction. Monitoring of water and energy consumption. Flood and fire detectors.

Presence-detection devices to enable lighting and air conditioning scenarios.

Electronic anti-intrusion security systems.

Transport

Lifts to boast furnished cabin equipped with state-of-the art technology and security.

Fire prevention

Fire detection and fire alarm system in garages. Switchboards on all garage levels and fire hydrants equipped with a pressure and accumulation group. Exterior hydrants. Emergency lighting to comply with 1 lux in evacuation routes and 5 lux in security points.

Seguridad

Advanced security measures. 'Genoma del Robo ' certified.



Equipment System

Sanitary ware and taps

MASTER BEDROOM

Freestanding bathtub to be fitted with A-brand premium thermostatic taps.

Shower to be fitted with C3 non-slip large-format shower base made up of mineral filler and ISO NPG unsaturated polyester resin, to be flush with flooring, and to include double built-in thermostatic shower taps with double-jet system, overhead rain shower head, handshower with multi jet system, and ecological excess flow valve.

Transparent safety glass shower screen. Anti-limescale treatment. A minimum 8mm wall-fixing.

Designer wall-mounted toilet to be fitted with soft-close toilet seat, frame, concealed built-in cistern for reduced water consumption (3/6l), recessed dual-flush button, and hygienic toilet shower; and to be located in a separate room.

Large overflow washbasin to be fitted with double single-handle taps, automatic drain and aerators to reduce water and energy consumption.

Large freestanding or wall-mounted demisting mirror—depending on the type of property—to be fitted with LED lighting.

BEDROOMS

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Overflow washbasin to be fitted with single-handle taps, automatic drain and aerators to reduce water and energy consumption.

Wall-mounted demisting mirror to be fitted with LED lighting.

TOILETS/LAVATORIES

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Overflow washbasin to be fitted with single-handle taps, automatic drain and aerators to reduce water and energy consumption.

Equipment System

Kitchen and household appliances

Panel ready kitchen to be fitted with high-capacity base and wall units, and to boast kitchen island with base units, and to further include full extension drawers with brake system, water-repellent cap, Gola profile handle on base units, 3D-adjustable hinged doors with brake system, and resin or porcelain stoneware countertop.

Under counter sink in stainless steel to be fitted with single-handle swivel spout kitchen taps, removable aerator and ecological excess flow valve.

Large capacity module for separate management of domestic waste. An additional module for hydroponic cultivation and food preparation may be fitted.

Kitchen to be fitted with induction hob, cooker hood with activated carbon filtration system, multifunction oven, 20L integral microwave, and highly energy-efficient integrated dishwasher and fridge-freezer.

Separate laundry room. Highly energy-efficient washing machine and tumble dryer.

Common areas

Signage intended for cognitive accessibility to enhance emotional well-being.

Ground floor garden areas to be landscaped with low water consumption endemic plant species. Ecologically landscaped roofs.

Treated natural stream with the implementation of elements to promote biodiversity (insect hotels and bird nests).

Furnished gourmet area to be equipped with kitchen furniture and household appliances.

Fully equipped gym.

Equipped and furnished coworking space.

Equipped and furnished reception hall.

Surveillance control.

Outdoor swimming pools for leisure swimming and an outdoor swim-only swimming pool for lane swimming.

Indoor heated swimming pool.





We found this beautiful address in Sotogrande—one of the best residential complexes in Europe—which benefits from a natural stream – a rare privilege.

The challenge we have set ourselves is to create a pioneering natural and organic project, where residents' wellbeing takes centre stage and which places design and sustainability at the core.

A wealth of space and an abundance of light provide residents with the highest standard of comfort

This is what SPHERE SOTOGRADE is all about – 33 residences boasting storage rooms and 100 parking spaces, and benefitting from a range of services and exclusive facilities designed to make day-to-day life easier for residents.

A residential complex aiming to earn a WELL Gold rating, be BREEAM Excellent certified, and become a European benchmark. In addition, the scheme's performance is to be assessed against the most demanding LEVEL(s) 3 framework.

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SUN PROPERTIES
marbella's real estate experts

A PROJECT BY ONYS