



Ferrari World

Abu Dhabi





At the centre of the landmark Yas Island mega-scheme in Abu Dhabi, sits the world's first Ferrari Theme Park, a thrilling brand experience like no other, a multi-sensory celebration of a design icon.

Opening in 2010, Ferrari World Abu Dhabi is set to become the world's largest indoor theme park. Externally the Ferrari World Abu Dhabi expresses the language, values and passion of the Ferrari brand itself. Benoy's vision – to create a building that reflects Ferrari's sinuous form, is directly inspired by the classic double curve side profile of the Ferrari GT chassis. The double curve was proportionately applied in elevation to set the structure's length and height. This proportion gave rise to the dynamic scale of the building at 700metres from tip to tip of the tri-forms.

The metal skin roof is highly insulated and the main façades utilise efficient glass to reduce thermal loads and glare. The spectacular roof forms a feature of the building providing a fifth elevation and serves as the backdrop to a huge Ferrari logo, that will welcome all passengers flying into Abu Dhabi International Airport.

Internally, a collection of over 20 high

octane attractions provide excitement for the whole family. The focal attraction will be the 60metre high 'G-Force Tower' – one of the most intense 'freefall' experiences in the world. Two roller coasters continue the adrenalin raising theme, including the world's fastest, reaching speeds in excess of 200kph.

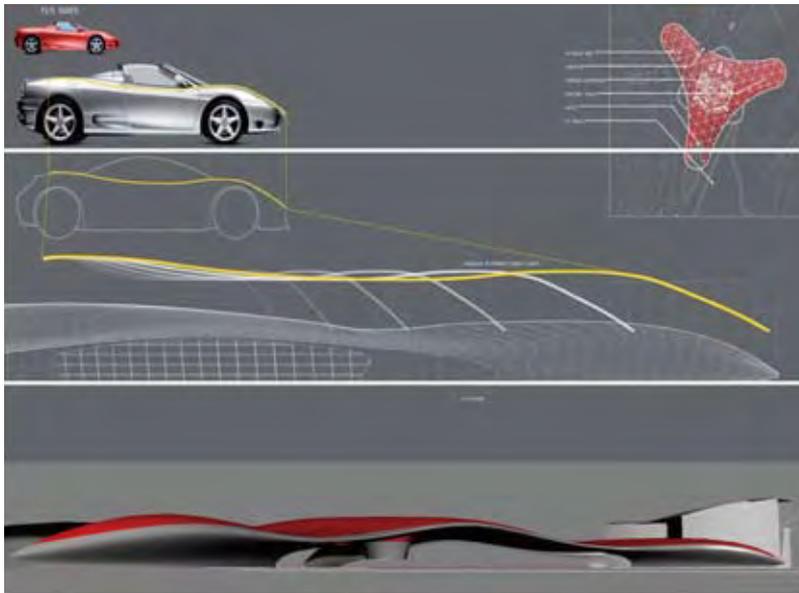
Ferrari World Abu Dhabi's location, scale and purpose combine to present enormous architectural challenges. In response Benoy has delivered a revolutionary design solution. The end result is an iconic landmark leisure destination that reflects both the integrity of the Ferrari brand and the ambitions of Abu Dhabi.

At a glance

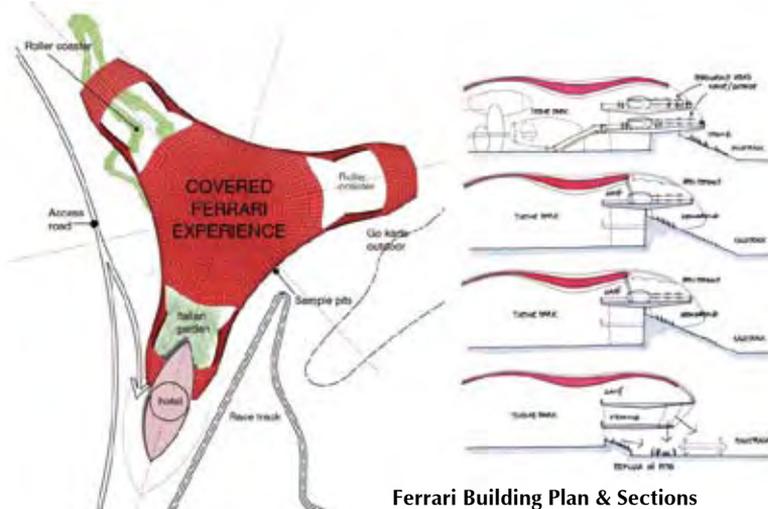
- Centrepiece of the 25 sq km Yas Island
- Total area of 172,000 sq m
- Enclosed footprint of 100,000 sq m
- Net roof area – 153,000 sq m
- Building height – 45 m
- Roof edge circumference – 2200 m

Master plan marina: Part of the 25km² landmark Yas Island masterplan





Inspiration - Classic double curve of the Ferrari GT



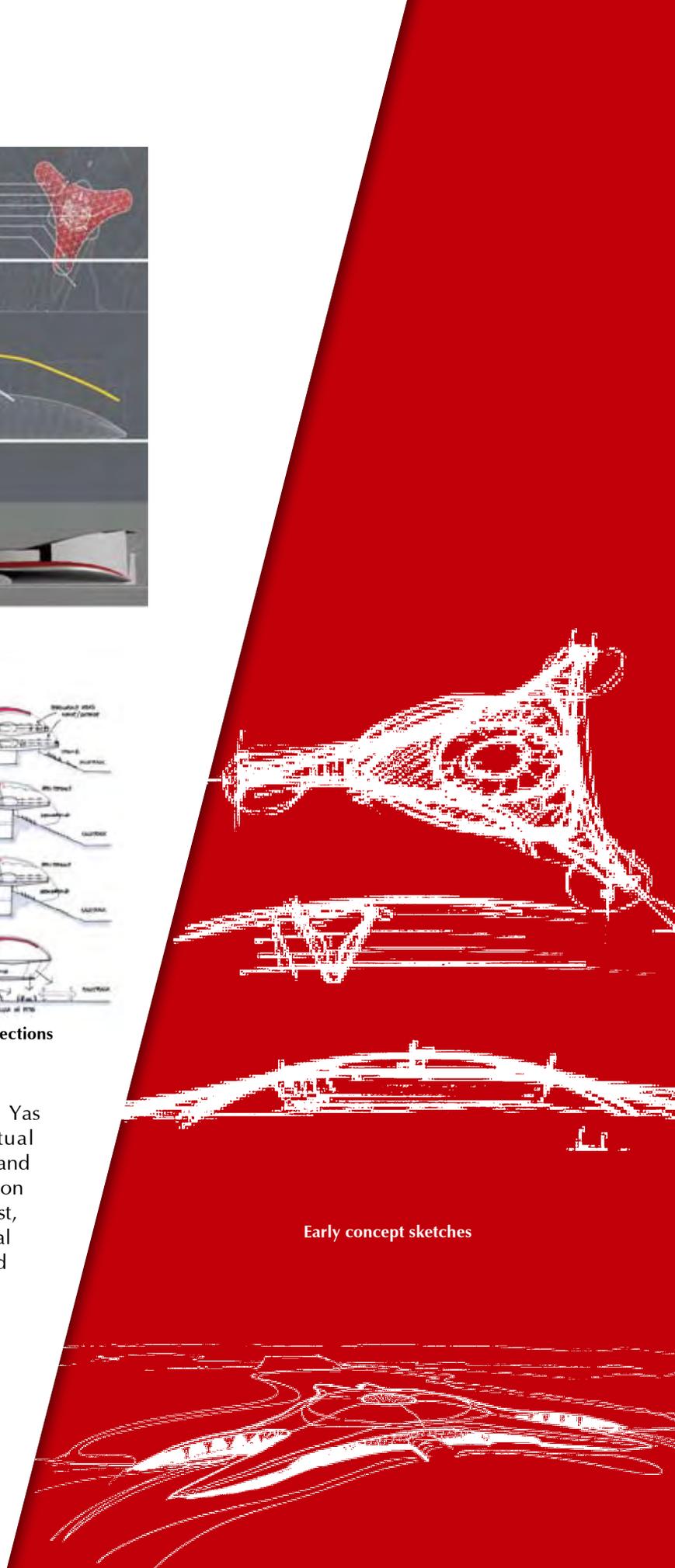
Ferrari Building Plan & Sections

The Yas Island Masterplan

Benoy set about developing the ground breaking Yas Island masterplan by establishing the contextual relationship between the key leisure components and the Retail Hub that serves as a community destination for the region. Water and theme parks to the west, stadia and performance arena to the east, residential parks and community spaces to the north, and Ferrari World Abu Dhabi to the south, all align with the masterplanning of the track facilities to create the world's most amazing and intensive island destination.

Ferrari World Abu Dhabi

At the spiritual heart of Yas Island sits Ferrari World Abu Dhabi. Due to the shape of the island and the position of Ferrari World, the building was conceived as a very simple 'ground hugging' form, peeling up from the landscape in flowing lines like a red sand



Early concept sketches





dune. The visually distinctive form and shape, crowns the Abu Dhabi Formula 1 track and every flight in and out of Abu Dhabi International Airport will experience the true beauty of the sleek shape and form of the building; an architectural expression of the values of the Ferrari brand itself.

A three pointed star form in plan, with a main core enclosed element and three extensive 'triform' claws to cradle the outdoor attractions, the 3D nature of the building was derived from an analysis of the sinuous double curves of countless Ferrari body shells.

At the very centre of the plan the huge roof dips and gathers itself into the ground like a huge crystal glazed and lit funnel, creating the perfect setting for one of the world's most exciting acceleration rides. The elegance of the roof form is part of the experience of Ferrari World Abu Dhabi theme park. As you approach the building, its scale deceives, the red roof with glistening silver edging houses a multitude of rides and attractions inside, designed with the direct input of Ferrari SpA.

The building entrance to the north is linked directly to the shopping complex via the Ferrari Gateway Bridge, leading into the Welcome Pavilion; an area dotted with authentic cafés and stylish restaurants. Inside the Ferrari World building, a soaring space frame structure covers a huge undulating plaza deck, on which the many themed rides and attractions – designed by Jack Rouse Associates, will be situated. Driving along the western arterial road, approaching the building, the southern tri-form peels up and sweeps off into the distance revealing the true extent of the buildings 700meter long elevation, shimmering in the sunshine from the west.

Exterior

The primary inclined shield facade that wraps around the building is over a kilometre in length and leans outward by 12 degrees, pushed nine meters into the air at the base and forward, accentuating the approach to the building while helping to visually position the attractions inside onto a pedestal, giving the impression that the interior is somehow unobtainable, like the Ferrari Car itself. In the distance the sunlight lights up the adjacent mangroves in a bath of light reflecting in the pixel solid and glazed facade, light dances and sparkles from within. As the sun sets the facade is lit by tracer lights from the exterior fins, these 'race' around the building's full 1km elevation, simulating the racing of cars into the night.

The roof form is based on a 120 degree tri-form arm arrangement that extends over 700meter in diameter, surrounding the 3 levels of 176,000 sqm of main accommodation within. The east and west





Elevations



tri-form arms house the worlds fastest Formula 1 themed roller coaster as well as the worlds first duelling roller coasters, and the southern tri-form arm acts as a flexible performance space capable of holding more than 15,000 people. Over the Abu Dhabi Formula 1 race weekend this area will be the venue for several international acts to perform, including Aerosmith, Beyonce and Jamiroquai.

As one continues past the western tri-form housing the GT coasters, the synergy of the roof forms and the coasters becomes apparent, one seemingly blending into the other, cascading forms that express the emotion of Ferrari. Looking back toward the race track, the sunset in the west, the light glistening off the silvered edge of the roof; you have arrived at something very special; a unique and prestigious development that delivers new benchmarks for quality and innovation, a building that utilises the vision

and skills of Benoy's a highly experienced design and delivery team.

On entering the building at the upper plaza level from the north one crosses the threshold between the outside world and the space within, one is struck by the sheer scale of the building. The roof extends up and over your head and disappears into the distance at 320 meters in diameter. You continue through the space, extending out in front of you is a vast glazed crystal like funnel roof at 100 meters in diameter, pulling down to just 17 meters diameter at its base, creating an intensity of space inside and providing the perfect location for the thrilling G-Force shot ride within its centre.

The central funnel roof is supported on 12 primary columns which form a 12 point Arabic star pattern that is used to describe the primary geometry of the overall roof space and extends out to meet the primary



raked shield facade. As you turn back to face the entrance, around you extending out in all directions are the themed rides and attractions that are unmistakably Ferrari set on a gross foot print area of over 86,000 sq m.

Technical information

The vision was to create a form that is unmistakably Ferrari, an expression of the passion and emotion of the brand. Functional requirements obviously include the need to house the theme park attractions in a huge environmentally controlled zone, but also to allow the attractions to engage properly with the adjacent shopping centre, racetrack, roller coasters and surrounding facilities.

Benoy's proposals realized the opportunity to externalise the edges of the building in a way which allows engagement with the outdoors. In addition, large voids are cut into the shell of the building to permit the integration of indoor/outdoor functions,

like the roller coasters, and the flexible performance space to the south.

The sculptural form will sit on an apron of landscape, growing out of the desert landscape. The apron will change in function as it wraps around the building, from landscaped terrace to public gardens, and engage with the adjacent track facilities. Benoy, as the Lead Consultants and Concept Designer of Ferrari World Abu Dhabi, is responsible for the building's shell and core design - this is further divided into roof, plaza, mezzanine and undercroft levels. The design is coordinated with Jack Rouse Associates (JRA), who are the designers for the front of house attractions, as well as the back of house facilities.

Facts and Figures

1. The enclosed volume of air of the upper plaza level is over 3,000,000 cubic meters.
2. The gross foot print of the plaza level is 86,000 sq m
3. The total accommodation of all 3 levels is 176,000 sq m
4. The building stands 48 m high above sea level, with the central shot ride at a staggering 62.5 m high, the highest permissible structure on the flight path to the airport.
5. The roof structure is over 700 meters in diameter.
6. The total 3D roof area is 201,000 sq m. That's enough aluminium to cover 16,750 Ferrari's, or if you laid the roof flat you could place 20,100 Ferrari's side by side and end to end.
7. If the Ferrari World building was stood on its end it would be the tallest man made structure in the world at over 300 storeys.
8. The Ferrari shield logo on the roof measures an incredible 65 meters in length and covers an area of 3000 sq m.
9. The FWAD roof would cover the Vatican City in Rome. The perimeter of the roof measures a staggering 2.4 km, it would take the world's fastest female runner a full 10 minutes to complete one lap of the building.
10. The plot the Ferrari World Abu Dhabi building sits on is over 700,000 sq m.

