

= Nemesis ( roller coaster ) =

Nemesis is an inverted roller coaster located at the Alton Towers amusement park in England . The ride 's concept and layout was devised by designer John Wardley . It was manufactured by Bolliger & Mabillard ( B & M ) and opened in March 1994 . It is located in the Forbidden Valley area of the park , adjacent to Galactica , a B & M Flying roller coaster that originally opened in 2002 as Air .

The 716 @-@ metre @-@ long ( 2 @,@ 349 ft ) ride stands 13 metres ( 43 ft ) tall and features a top speed of 80 @.@ 5 kilometres per hour ( 50 @.@ 0 mph ) . The four @-@ inversion roller coaster was one of the first Bolliger & Mabillard rides to be installed outside of the United States and the first in Europe ( as an independent company ) . The ride has been very well received , consistently ranking highly in industry polls .

= = History = =

= = = Development history = = =

In 1990 , Alton Towers added the Thunder Looper roller coaster ; the addition was only temporary due to planning restrictions imposed on its installation . The park began planning for a new roller coaster which would open prior the closure of the Thunder Looper . They desired a roller coaster that was big , different and exciting , but they were constrained by the tree @-@ level height limit imposed on the park .

Alton Towers approached Arrow Dynamics for the new roller coaster . The Utah @-@ based company was working on a prototype of a pipeline roller coaster , similar to TOGO 's Ultratwister design . John Wardley worked on the design of the ride which was originally to be themed around a secret military facility , codenamed " Secret Weapon 1 " ( SW1 ) . Due to the design of the ride and the height restriction imposed on the park , SW1 would only have a track length of 300 metres ( 980 ft ) . Development of the project was put on hold a short time into the process , due to the financial problems being encountered by Arrow at the time and technical problems with the ride 's design . The project was revived a year later under the codename " Secret Weapon 2 " ; rock blasting was used to clear more space for the larger ride . The project was again abandoned when Wardley rode the prototype , describing it as slow , boring , cumbersome and energy inefficient . The park began to look for an alternative .

Wardley became aware of a new roller coaster design being installed by Bolliger & Mabillard at Six Flags Great America . He subsequently entered into discussions with Six Flags who agreed to privately disclose information about the new ride , in exchange for a similar favour at a later date . Jim Wintrobe , the general manager of Six Flags Great America at the time , proposed the concept of an inverted roller coaster that featured inversions . Although Wardley believed this would be impossible , Wintrobe worked with Bolliger & Mabillard to develop Batman : The Ride . Wardley rode Batman : The Ride prior to its May 1992 opening and wanted to add a similar ride to Alton Towers .

The inverted roller coaster , then dubbed " Secret Weapon 3 " , was developed throughout 1992 . Wardley and Nick Varney , marketing director of Alton Towers , came up with the name " Nemesis " and pitched a theming concept about an alien creature trapped beneath the park . Tussauds Studios elaborated on this , creating visuals for later promotion . Wardley also worked alongside Stengel Engineering to develop a layout for the ride which was exciting for both riders and non @-@ riders ; for example , the final inversion was built at the eye level of an observer .

= = = Operational history = = =

The £ 10 million Nemesis officially opened to the public on 19 March 1994 , following a soft opening three days prior . It opened as one of the first Bolliger & Mabillard rides to be installed outside of the United States , along with Diavlo at Himeji Central Park , Japan , which opened four months later .

In August 2004 , Nemesis gained the Guinness World Record for the " Most Naked People on a

Rollercoaster ". The ride set the record at 32 riders ? the number of seats on a single Nemesis train . It took the record from Thorpe Park 's Nemesis Inferno roller coaster which set the record at 28 just three months prior . The ride lost the record in 2010 when 40 naked riders boarded Green Scream Rollercoaster at Adventure Island .

In 2009 , Alton Towers received several complaints from nearby residents regarding increased noise levels emitted from the ride . New wheels had to be installed on the two trains before the ride returned to normal operation .

= = Characteristics = =

The 716 @-@ metre @-@ long ( 2 @,@ 349 ft ) Nemesis stands 13 metres ( 43 ft ) tall , however , due to the modified terrain , it features a drop height of 31 @.@ 7 metres ( 104 ft ) . With a top speed of 80 @.@ 5 kilometres per hour ( 50 @.@ 0 mph ) , the ride features four inversions including two corkscrews , a zero @-@ g roll , and a vertical loop . Riders of Nemesis experience between 3 and 4 times the force of gravity on the 1 @-@ minute , 20 @-@ second ride . Nemesis operates with two steel and fiberglass trains , each containing eight cars . Each car seats four riders in a single row for a total of 32 riders per train . As guests approach the ride a loud roar from the ride can be heard .

= = Ride experience = =

Once the train is locked and checked the floor beneath it is lowered before the train then departs the station making a 45 @-@ degree , right @-@ hand turn towards the lift hill . Once at the top of the 13 @-@ metre ( 43 ft ) hill , the train makes a small dip and turns around 180 degrees to the left . The train then descends 31 @.@ 7 metres ( 104 ft ) down the first drop into the first inversion , a right @-@ handed corkscrew . The train then navigates a right @-@ handed , 270 @-@ degree downward helix that features 90 degree banking . Then the train rises up into the second inversion , a zero @-@ g roll , where riders experience the feeling of weightlessness . It then makes a 180 @-@ degree right @-@ handed stall turn into the third inversion , a vertical loop . After a left stall turn the train enters the second corkscrew . The train then passes through an underground tunnel , and through one more 180 @-@ degree turn , before being stopped by the brake run and returning to the station .

= = Reception = =

" Nemesis " has received overwhelmingly positive reviews , by park visitors and the industry as a whole . The roller coaster has continuously ranked high in worldwide polls and , as of 2007 , featured queues in excess of an hour due to its popularity . More than 50 million people have ridden Nemesis since opening .

In Amusement Today 's annual Golden Ticket Awards , Nemesis has consistently ranked highly . It is also one of only seven roller coasters to appear in the top 50 every year since the award 's inception in 1998 . It debuted at position 10 in 1998 , before peaking at position 7 in 2003 .

In Mitch Hawker 's worldwide Best Roller Coaster Poll , Nemesis entered at position 7 in 1999 , before dropping to a low of 12 in 2012 . The ride 's ranking in subsequent polls is shown in the table below .

Due to the success of Nemesis , park owners Merlin Entertainments have created two related rides . The first is Nemesis Inferno at Thorpe Park , another Bolliger & Mabillard inverted roller coaster . The ride opened in 2003 . Alton Towers hosts the second related ride , Nemesis : Sub @-@ Terra . The drop tower opened on the former Dynamo site in 2012 and closed in August 2015 due to cost @-@ cutting .

As a result , Nemesis is commonly compared with its Thorpe Park counterpart ? Nemesis Inferno ? with many citing Nemesis as the superior ride . Nemesis has ranked favourably in Amusement Today 's annual Golden Ticket Awards , being one of only seven roller coasters to appear in the top

50 steel roller coasters for all 15 years . Nemesis Inferno , on the other hand , has never made an appearance . In Mitch Hawker 's worldwide Best Roller Coaster Poll Nemesis Inferno has an average ranking of 80 , while Nemesis ' average ranking is 6 . In a poll conducted by the Los Angeles Times , Nemesis received 37 @. @ 93 % of the vote for title of best roller coaster in England , while Nemesis Inferno received 0 @. @ 32 % . Jeremy Thompson of Roller Coaster Philosophy describes Nemesis as " a vastly superior ride " to Nemesis Inferno .