



South Coast Wakeboarding  
Hilsea Wakeboarding Proposal

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## Background - Sport Definition

**wake-board** (wkbórd, -brd) *n.*

A short, very broad water ski ridden in the manner of a surfboard by a person towed by a motorboat.

**wakeboarder** *n.* **wakeboarding** *n.*

Wakeboarding in its purest form involves a **wakeboarder** being towed behind a boat on a stretch of calm water. The rider stands on "*A short, very broad water ski*" called a wakeboard with their feet secured to the board with specifically designed wakeboarding bindings. The board/binding setup is conceptually similar to a snowboard, but obviously is designed for use on water.

The boat which usually travels at around 18mph creates 2 waves as it displaces water - this forms the wake. This wake is used by wakeboarders as a ramp, which, with a bit of skill allows wakeboarders to perform jumps and aerial tricks. Other simpler surface tricks can be performed without the use of the wake.

Not surprisingly Wakeboarding is one of the fastest growing extreme water sports in the world and with this growth has come a number of new innovations and ways to ride. These include spinning, flipping, and twisting using sliders (stationary structures riders slide along), and kickers (similar in concept to water-ski jumps).

The biggest single innovation is the introduction of cable parks, where wakeboarders are towed via an overhead cable as opposed to a boat. This means many more people can enjoy the sport without the multitude of expenses associated with owning and using a power boat.

The first cableway opened in Germany in 1962, now you will find cable waterskiing and wakeboarding on every continent in the world (apart from Antarctica for obvious reasons). There are cableways throughout the UK with the most recent opening this year in Swansea and Blackpool.

Experiences has shown that a population of 500,000 within 50km is required to support a large and successful cable park. Portsmouth has a population of nearly 800,000 within 30km with the majority along the key arteries of the A3 and A27.

Wakeboarding is organized by the International Water-ski and Wakeboard Federation (IWWF). The IWWF is founded in 1946. The IWWF was recognized by the International Olympic Committee (IOC) as official partner since 1967. Wakeboarding is part of the World Games (Non Olympic Games patronized by IOC) since 2005.

The IWWF has more than 90 Member Nations all over the World and is organizing the Nationals Championships together with these Federations all over the globe. IWWF is also organizing together with the Agencies and local Federations the IWWF World Championships, the IWWF World Cup, the IWWF World Trophy and hundreds of international Competitions all over the World.

Worldwide more than 90 affiliate countries, hundreds of clubs and thousands of members the IWWF is the global leader in the sport of water-ski and wakeboarding. The IWWF and its Cable Wakeboard World Council (CWWC) is a rider formed voluntary non-profit working council and is organizing and promoting the wakeboard sport on a worldwide level. It is the leading group for organizing competitions, developing the Cable Wakeboard World Rules, formats, judging criteria's, educating Judges and helping organizers to running the competitions. The CWWC is specialist in running the sport Parts of Events under fair conditions for all riders, fair and fast judging, perfect just in time timetables, live and online results and TV Production Results Interfaces for Live Streaming or Live TV Productions.

## Business Concept

South Coast Wakeboarding will be the only beginner to advanced wakeboarding training and practice facility in Hampshire on the south coast of England near Portsmouth. Utilizing the latest cable tow technology South Coast Wakeboarding are opening this extreme sport to everyone at a fraction of the price and hassle of using expensive power boats. With no direct competition from other cable tows and very little competition from other more expensive wakeboarding boat tow facilities, South Coast Wakeboarding is well placed to become a huge success story in the Waterfront City - Portsmouth

Wakeboarding is an aspirational sport part of the x-games phenomenon and with its roots way back in surfing appeals to a wide demographic. With the introduction of cable tow technology the sport can be opened up to even more people. Including those on lower incomes, youngsters and families – There will be no shortage of customers.

It is estimated that South Coast wakeboarding will attract approximately 3000 riders in the first year rising to nearly 8000 in the second season. These numbers ensure that our natural resources are enjoyed by the maximum number of people possible.

### Keys to Success

Location: Proposed location is using the 19<sup>th</sup> Century defensive moat adjacent to Hilsea Lido in Hilsea Hampshire. The moat could have been designed specifically for the purpose of cable wakeboarding with the width depth and length perfect for the facilities proposed. In addition we will be able to partner the nearby lido and using their changing rooms for our customers negating the need for investment in our own facilities – cooperation with the lido could also be extended to advertising and marketing activities.

*The operation of Hilsea Lido has been transferred to a community group which is now a charity with a 99 year lease. The council has given the group 10 years to bring public swimming back to the lido. The introduction of Cable Wakeboarding will assist phase 1 of the charities recommissioning plans to bring the changing facilities back into service.*

Low Overhead Cost: Start up costs for this venture at this location will be much reduced compared to other similar cable operations. We have no need to excavate a lake or build access roads, parking or changing facilities as we will partner the nearby lido.

Wide Range of Services: As well as the pay as you go cable tow, coaching and lessons will be available from our British Water-ski Federation Qualified Instructors. School groups will benefit from grants in association with PEPSYS. Traditionally the cable tow and wakeboarding is the anchor of the business with the associated services of equal importance such as catering. In this case it is clear that catering is not an option so other services need to be incorporated to make the business viable. Stand Up paddle boarding will be offered which will be a complimentary activity targeting those waiting to take their turn on the cable tow. South Coast Wakeboarding will investigate any commercial opportunities that will support the business.

Competitions: Hosting regular competitions will be extremely important to both raising the profile of the cable facilities but by also being a revenue generator. During the first year a small number of competitions will be hosted. These will be evening events which will benefit from the longer day light hours, with spectators watching from the balcony, concessions will generate income necessary to run the event and provide a small profit. These events will link into the National Competitions coordinated by the British Water-Ski Federation; if successful this site has all the necessary elements to make it a venue for the world tours. The nationals are well publicised with the internationals frequently being televised putting Portsmouth firmly on the map with regards to being progressive, inclusive city who support adventure water sports. These competitions will help mark out Hilsea as a centre for adventure water sports benefiting the whole city reinforcing our image as the Waterfront City and a major tourist destination.

### *Current Situation*

Initial Discussions with several key stakeholders have taken place with feedback being incorporated into this proposal. These discussions are key to ensure all existing and future users of the Hilsea lido area are happy with the South Coast Wakeboarding concept ensuring all permissions are granted in a timely manner.

Hilsea Lido Pool for the People (HLPP) were the first group approached, this is a charity which is tasked with reopening the lido which was closed due to increased costs to the local council whilst numbers of users were significantly reducing. HLPP have an uphill task of raising many thousands of pounds to reopen the pool, this will be done through increased engagement with a wide variety of organisations and encouraging various sporting clubs to use the site. Hampshire wakeboarding has been pitched as an 'anchor' attraction for the area attracting many users who would use the changing facilities and subsequently may also use the pool when it eventually opens. HLPP have shown significant interest and support. There are a number of operational considerations that still require decisions but on the main issue of equipment location, connecting to the sites phase 3 power and use of a site office have all been agreed.

Secondly the Hilsea ranger was approached for his ideas, concerns and support. Although he has no authority to provide permissions his input is vital as he is the only person with daily interaction with the site and the people who use it. Overall he likes the idea and welcomes any activity which will give local youths something to do and will in general raise respect for the area. Two main concerns were voiced firstly security of the wakeboarding tow equipment – this has been addressed with anti climb features being added to the design and secondly obstacles in the water (such as trolleys) – this will be dealt with by regular dredging of bric a brac, clearing and monitoring (undertaking work the ranger does but helping him out by doing it on a more frequent basis). As a qualified diver I could also undertake detailed surveys of the area.

The ranger subsequently made introductions to his manager who also helped a great deal with advice moving forward. Again two main concerns were voiced firstly a group of canoeists wishing to use the water to practice the Olympic sprint had shown an interest in using the site and it was key that I met with them to ensure that both of our needs were met without impeding the other. It is clear that quite rightfully the council wish to support our Olympic teams whilst still ensuring new and exciting activities are brought to the area. Although a meeting has not taken place Peter Burrard Lucas and his colleagues have gained their agreement that as long as they have a clear 200m plus wriggle room they will not object to the installation of the cable tow equipment.

The second concern was my reliance on HLPP, as noted previously they have a massive mountain to climb and they only have a limited period to make a success and if they fail I need a fall back plan. I confirmed that although my preference is to work with HLPP I could incorporate all the facilities I need into my office area positioned on the concrete apron outside of the lido complex.

Natural England have also been consulted following an initial meeting with the Portsmouth planning department. Natural England have confirmed that they will not object to the plans considering the main concern for the area is wintering birds and as my equipment will not be present over the winter months winter birds will not be affected.

Various Portsmouth City Council departments have been consulted with their feedback incorporated into this proposal and Risk Assessment.

## Next Steps

Aiming to open before Easter careful planning is required:

### Key Milestones:

1. Recieve official endorsement of the portfolio holder (culture, leisure & sport) and gain his support before lease agreements are drafted. This document has been submitted and endorsement is expected by early March.
2. A planning application has been submitted and given that all stakeholders have been consulted approval is expected no later than March 19<sup>th</sup>.
3. HLPP will provide lease agreement by end of February.
4. Equipment will be ordered from the supplier on Planning Approval.
5. On Planning Approval the official launch of the business will take place with website going live and marketing activities commencing.
6. Grand Opening April 2011

## **Vision**

### Vision/Mission statement

Opening on 9th April 2011 South Coast Wakeboarding will be a destination of choice for individuals, groups of friends and families from across the south coast. Enhancing the local area with world class facilities whilst generating a profit for its owners and investors. South Coast wakeboarding are determined to create an unmatched atmosphere typically associated with extreme sports relaxed and inclusive with a sense of fun and knowingly different from stereotypes associated with football, tennis or bowls.

Our hope is that South Coast Wakeboarding will offer something different, to some it will be a fun place to hang out, a day trip or birthday treat or a great hobby for others our venue will be a serious training facility to help them become champions of the future.

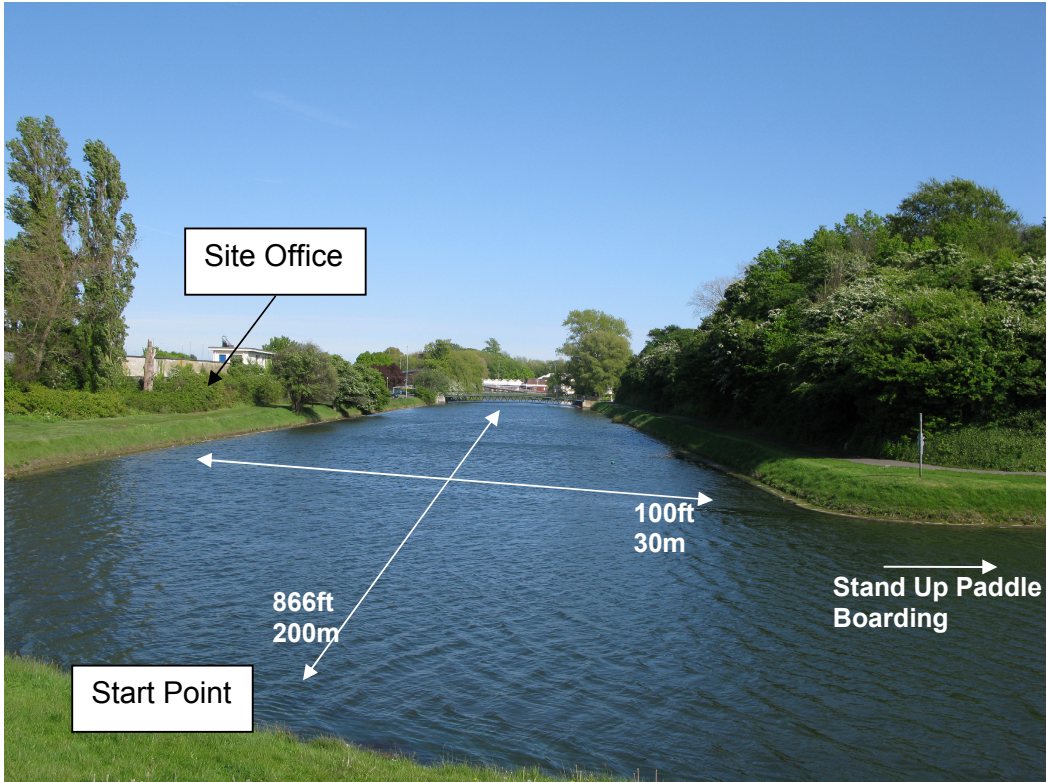


## Products/Services

### Cable System

Hampshire Wakeboarding will consist of a single straight line cable system positioned on Hilsea Moat adjacent to Hilsea Lido.

The cable system is a completely temporary structure which will be set up at the beginning of the season and removed at the end.





There are two manufacturers of cable tow systems, one uses 'A' framed towers the other a finger tower system. After feedback from HLPP I have decided to use the second more expensive system which offers a less obtrusive finger tower solution.

The chosen model stands out by its elegant design, simple operability and fast installation and deinstallation.

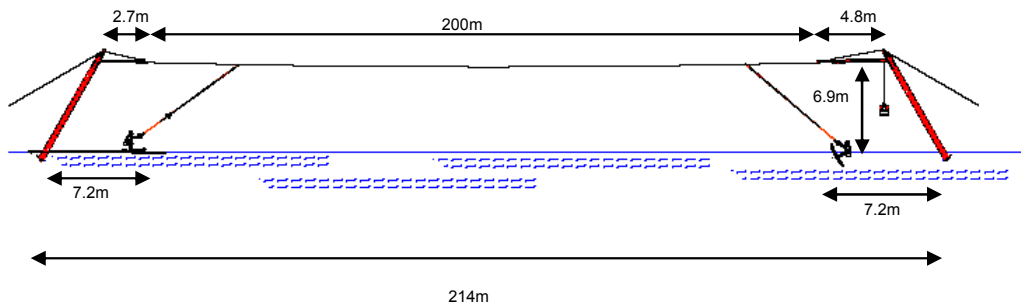
The system consists of 2 small masts, one with drive and one with deflecting pulley and counterweight, a running cable is driven by a frequency steered electronic drive. The bar and the bar rope are re-tracted in an aluminium tube and are handed over by the operator at the start. If a rider falls, the bar is automatically pulled back into the aluminium tube 2m above the water. This design eliminates the risk of loose bar to the fallen riders and waiting riders in the starting area.



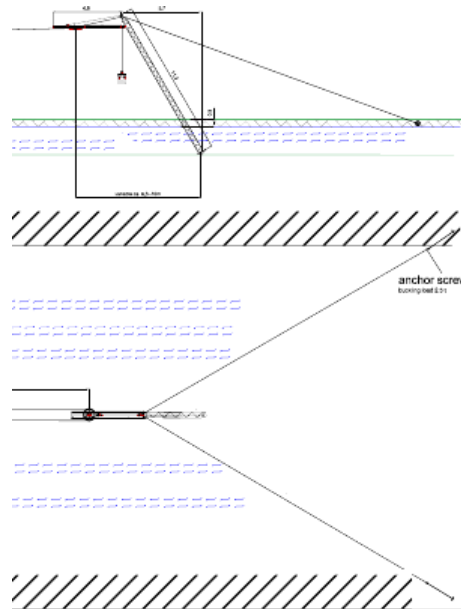
**For wakeboarders and wakeskaters** the Little Bro is the perfect training device for tricks and jumps. The Pro Loop and Pro Open Loop mode allows the riders to make a 180° turn at the end of the stretch and offers an endless ride.

That's the reason why many owners already offer wakeboard and wakeskate training lessons at this system. South Coast Wakeboarding will offer training and coaching lessons to riders of all levels. Coaches will be fully qualified by the British Water-ski Federation.

Dimensions:



Anchors:



Description :

Internally threaded sockets for use with any of our injection and pourable resin systems, designed for bonding in masonry and concrete where an internal thread is required allowing the use of standard metric fasteners. Particularly suitable for temporary works and applications requiring a low profile finish where projecting studs may be a hazard. Available in zinc plate and yellow passivated steel or high quality A4-316-80 grade stainless steel for maximum strength and corrosion protection.

Material : Grade 5.8 carbon steel  
 Finish : Bright zinc plated and yellow passivated  
 Tensile strength (nom) : 500N/mm<sup>2</sup>

Material : Grade A4-316 stainless steel  
 Finish : Self colour  
 Tensile strength (nom) : 800N/mm<sup>2</sup>

socket data

Internal thread diameter : mm (in)	Outside diameter : mm (in)	Anchor length : mm (in)	Internal thread length : mm (in)	Required drill hole diameter : mm	Required drill depth : mm
M8	12	90	30	14	95
M10	16	90	30	18	95
M12	20	90	40	22	95
M16	25	120	40	28	130
M20	30	150	60	35	155
M24	35	220	70	40	225
M30	45	280	90	50	285

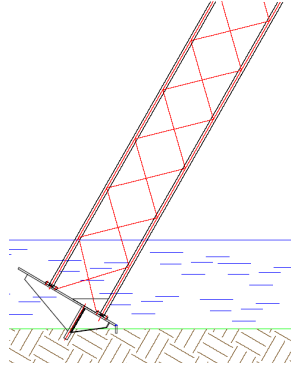
Traditionally these systems require permanent concrete anchors to be placed on the banks; in this case we will be connecting directly to the existing concrete edger's using chemical anchors. This means that no permanent remedial works are required and once the system is removed there will no evidence of the system ever being present.

The load on each anchor will be 3 tons, the manufacturers will use the chemical anchors outlined above using M24 stainless eyebolts to which shackles will connect. These anchors have been tested to 38.89Kn but naturally we must take into account the core substrate and will undertake rigorous system tests to ensure the system works as part of the manufacturers commissioning process.

More Details regarding the chemical anchors can be found in the appendix.

## Mast Construction

The mast is constructed using a fine mesh which allows you to see straight through making it virtually invisible. The masts incorporate a foot which will sit on the base of the lake - no permanent fixture is required.



The cable system is incredibly efficient but does require 3 phase power which is available from the plant room in the lido complex approximately 100m away. An armoured extension cable will be utilised again reinforcing the fact that the entire business consists of a range of temporary structures that can be completely removed.

## Equipment Security

It has been noted that equipment security could be an issue; the structures will be difficult to access and will be positioned in the water. In addition a plate similar to that below will be incorporated to prevent climbing.



## Environmental Benefits

More than 30 countries around the world host cable parks because of the economic and ecological benefits that cable systems provide. If we build more cables, we can create a “green” solution for getting more people on the water. Here are some benefits of a cable system.

### **Limited Power Consumption**

It doesn't take a lot of power to run the cable. The manufacturers estimate that the electric drives only consume an average of 10kW per operation hour. To put this in perspective, it takes an average of 5 kW of power to dry one load of laundry. A cable system can operate for less than £10 per day (depending on the cost of electricity). And since the amount of electricity used is so small, we can afford to purchase a renewable energy source, such as 100% clean wind, to power the cable system. Eventually with HLPP permission we would like to install a wind or solar generator.

### **Silence Is Golden**

The electric cable drive operates virtually silently. They create much less noise, for example, than the already quiet snow ski chair lifts that are commonly found on mountains. The peak decibel reading at the motor tower is below normal human speech (55 decibels).

### **Preserving the Landscape**

The cable's towers have a fine lattice construction that does not disrupt the view, and the parallel running cables blend into the background allowing the landscape to be preserved.

### **Ensuring Water Quality**

Cableways insure a high oxygen supply is delivered into the water. Between fallen riders swimming to shore and the intense water movement created by riders breaking the surface as they cruise around the lake, manufacturers estimate an oxygen supply of five tons per year is delivered into the local water. This creates excellent water quality for fish and other wildlife. Cable systems also emit no harmful emissions.

### **Maximizing Resources**

A cable system allows more participants to enjoy water sports while using fewer resources. For example, we can provide access to 100+ people per day, which is a great solution for those unable to afford expensive ski boats or have limited access to water and equipment

### **Local Wildlife**

The majority of locations where wake parks are located are in areas of natural beauty with diverse natural assets. It is noted that wake parks and those participating are sympathetic to nature and are often the most outspoken when it comes to preserving our environment. Hilsea Moat is the seasonal home to Egrets who visit the area over autumn and winter which is the closed season for the wakeboarding facilities. All wakeboarding equipment is removed at the close of the season.

### Office/Base Camp

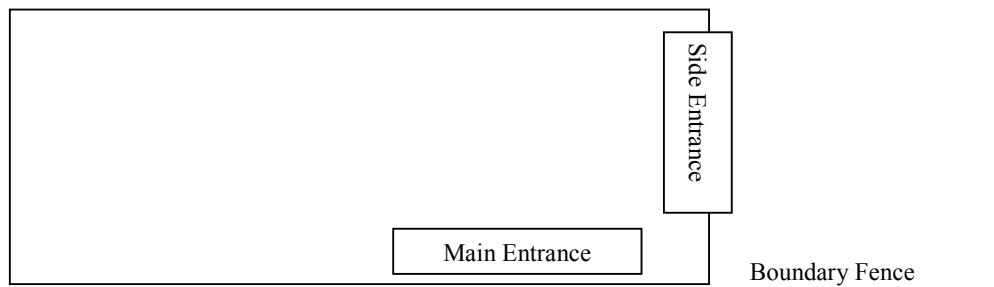
As previously described the office where users book in and collect equipment. Traditionally this is also the place where riders would gather to have a drink and snack in a warm dry environment but HLPP have confirmed that they will provide these facilities which are a vital requirement for users and the BWSF.

The actual dimensions of the site office are unknown at this stage as it will depend on availability when we purchase. It is safe to say that the size will not exceed 40ft by 10 ft.

An example of the office.



The layout of the site office will be such that riders will enter through a main front door and access the lido through a side door, thus maintaining site security. The site office in future could be housed within the lido structure.



## Riders Experience

The best way to appreciate the operational set up is to walk through a rider's experience.

Booking will be through the South Coast Wakeboarding Website [www.cablewakeboarding.co.uk](http://www.cablewakeboarding.co.uk). The user will be able to select a date and see availability; typically a user will book an hour slot shared with 3 to 4 other riders. A number of other sessions will be available. During the first season the facilities will be open at weekends, Thursday and Friday evening and during the holidays, although it is hoped to increase the opening days but this is dependent on demand. It is anticipated the opening hours will be from 0900 to dusk but again this depends on demand.

## Lessons

From beginners to advanced riders our lessons will be delivered by British Water-ski Federation (BWSF) Qualified and accredited professionals. Following the BWSF cutting edge program (see appendix)

## Exclusive Use

A group of friends, co-workers or family group could get together and hire the cable by the hour exclusively.

## Birthdays

Wakeboarding and knee boarding parties are perfect and completely different from a trip to bowling or the cinema.

## Early Bird/Happy Hour

Early mornings and late afternoon and any other times could be happy hour where prices will be slashed and booking can be made for shared or exclusive use.

## Pound a Pull

For those who have spare change at certain times we will be offering a pound a pull where just one pound buys a ride. This will be turn up play and pay and will not be bookable on the website.

Once a session is selected the user will be asked if they wish to hire any equipment such as wakeboards and wetsuits, they will be asked for their sizes so the equipment can be ready waiting for them. Of course if they have selected the wrong size or decide they want to hire a kneeboard or mono ski as well as wakeboard then these changes can be made as they book in. The riders will also be asked if they agree to our terms and conditions before paying, these terms will also be part of the receipt. Riders can just turn up and play but booking is recommended to avoid disappointment.

So the rider has booked online selected his or her hire equipment, they will be asked to attend 30 mins before their session is scheduled to start although they will be welcome before if they wish to absorb the atmosphere or try out the other activities such as stand up paddle boarding.

On arrival the rider(s) will report to the site office where the receipt will be checked and they will be asked to sign our terms and conditions which is a standard waiver approved by the BWSF. The riders will then be asked to watch a short safety video (which is also available on the website) this video highlights how to enjoy their experience safely. The next task is to present riders with their wetsuits if required and guided to the changing facilities. Once changed the riders will then return to the site office where they will collect their hire boards if required.

After collecting the hire boards the users will then make their way to the start of the cable tow, where they will take turns riding up and down the moat doing tricks and generally having a wild time. If a rider falls they have been instructed to leave the water only on the lido side.

The system has four programmable modes and depending on the group of users one of the following will be used.

### **Little BRO: 4 Programmed Modes**

**Beginner:** (2 groups of beginners on each side, capacity up to 200 Starts/hour) Beginner starts and rides to secondary end, system reduces speed automatically and handle bar can be passed to next waiting rider of second group at secondary starting ramp. This rider returns then rides back to the motor tower and gets in line again.

**Alternative:** (1 Pro Group with deepwater start, capacity 100 rounds/hour) Rider holds on handle, carrier goes slowly around deflecting pulley; rider sets down and makes deepwater start and returns to starting ramp. Upon returning to the motor tower the speed automatically stops and then starts over for next rider.

**Pro Turns:** (1 Pro Group with loop drive, capacity 100 rounds/hour) for experienced riders group; Rider makes full pass to secondary tower where system switches direction quickly and rider makes a loop. Rider then returns to the starting point where system automatically stops and next rider begins again.

**Pro Open Loop:** (constant ride with loops on both ends, rider continuously goes without stopping.) For single pro riders- constant drive - rider makes loop on both ends. Riders turn can be as long as desired.

At the end of the session the rider will return to the site office where they will return the hire boards if they have them have a warm shower and then return the hire wetsuits. Riders will then be asked if they wish to book another session and guided towards the warm and dry snack facilities at the water's edge.

### **Stand Up Paddle Boarding**

Stand up Paddle Surfing is an ancient form of surfing. It can be traced back to the very early days of Polynesia. It's most recent history dates back to the 1950/60's when the beach boys (surf instructors) on Waikiki beach used to stand up and paddle out to the break using a one bladed paddle, this allowed them to have better visibility over their group of surfing students and allowed them to call the sets easier as their upright position meant that they could see the swell long before the prone surfers. As time moved on board designs and fashions changed, the paddle was all but lost in the history of surfing. A few surfers in Waikiki continued to use a paddle but they were very much in the minority.

Fast forward to the first part of this century and the paddle made a return to surfing in the hands of some of the world's most famous watermen. They were re discovering stand up paddle surfing to allow them to keep in shape for the bigger days of tow surfing as well as adding a new dimension to their skills. Standing up and paddling out through the waves is a totally new experience, most of us are more used to lying down and ducking under the waves.

Modern technologies have allowed the boards to come down a lot in weight and modern understanding of board design has allowed the large boards to be maneuvered easily on the waves. Carbon paddles cut weight and increase board speed and suddenly Stand up Paddle Surfing has been reborn. It isn't going to revolutionise or take over the world, but it does add another angle to surf riding and will mean that your time on the water can be greatly increased.

South Coast Wakeboarding will provide an introduction to stand up paddle boarding for those who wish to take up the sport but more commonly it will just be something fun to try. This is an activity suitable for all and probably one which will get the riders wet. For those who do not wish to try the adrenaline of wakeboarding stand up paddle boarding is a great alternative. South Coast wakeboarding are connected to including as many people as possible in sport.





## Health and Safety

The cable Tow will be operated to the standards laid out in the British Water-ski Federation Cable Tow operator's manual with all operators required to hold an official operators certificate which demands the operator and coaches holding CRB checks. Please find the manual in the appendix; it describes health and safety considerations as well as a risk analysis. Please note the manual is written with large cable systems in mind although much of the information is applicable to simpler smaller systems such as the one proposed. Below I have highlighted some key Health and Safety considerations.

## Water Quality

Water quality safety has been highlighted as a key consideration with this in mind water samples will be taken fortnightly. Each sample being tested for the biological indicators of sewage discharge; Coliforms, Faecal Coliforms (E.Coli sp.), and Faecal Streptococci.

Each *Sample* must comply with the respective standards for each parameter tested, and will be given an overall classification based upon the highest recorded value (i.e. lowest standard achieved). For example, if one of the 3 parameters routinely tested fails to meet the mandatory standard, the overall sample category is recorded as "poor". Similarly a sample may only achieve "excellent" status if all biological parameters fall below the respective guideline values.

The water quality standards for the European Blue Flag awards are taken from the '*Guideline*' values of the Bathing Waters Directive, and this is the standard against which Hilsea Moat will be assessed.

Bathing Waters Directive compliance criteria have been explicitly formulated for the protection of bathers (swimmers); and are not strictly intended for application to exposure when participating in other water sports (kayaking, surfing, sailing, windsurfing or in this case cable wakeboarding for example).

South Coast Wakeboarding will be using a recognised laboratory to perform these independent tests. In addition if South Coast wakeboarding suspect possible water quality issues between the scheduled tests an AquaSafe Bacteria Test Strip which is an antibody based rapid test, that detects Pseudomonas, Aeromonas, E.coli, Shigella, species of Salmonella, Enterobacter, Klebsiella, and many other coliform and non-coliform Bacteria in any body of water used for recreation - in less than 20 mins.

The AquaSafe Bacteria Test has all the accuracy and reliability of a lab test in a disposable strip and requires no instrumentation or user training.

## Weils Desies

There have been a number of news stories recently surrounding Weil's disease which is a bacterial infection carried in rats' urine, which contaminates water and wet riverbanks. The bacterium does not survive for long in dry conditions. It can be a serious illness requiring hospital treatment and can lead to kidney or liver failure. Weil's disease is a notifiable illness. The bacterium is absorbed through the skin or mucous membranes of the mouth and eyes. It gets into the blood stream very easily if you have a minor cut on your skin or feet, or if you become immersed.

It is particularly common in (but not limited to) stagnant or slow moving water. The desies presents with flu-like symptoms within a few weeks of participating in

water activities should be reported to a doctor immediately, notifying him of the possibility of Weil's disease.

Pathogenic leptospire (the bacteria which causes Weils Disease) do not tolerate the salt levels in seawater although it can slowly adapt to survive in solutions up to 1%. Regular testing of salinity will be carried out with this in mind.

#### Blue Green Algae

This bacterium is found mostly on the shoreline (of both fresh and salt water) it has been identified as a regular problem in the fresh part of the moat, particularly where wind or currents have driven collections of algae onto the shore. High concentrations of algae may also be found in pools during times of drought.

To date this bacterium has only caused illness in humans although it has caused death in cows, sheep and dogs drinking at the water's edges.

The toxins attack the nervous system, which can cause acute liver damage. The toxins can also cause skin rashes.

Situations where recreational water users are most at risk from toxins are Ingestion of scum on water including raw sewage water or inadequately treated water and Skin contact with scum on water or raw sewage water.

South Coast wakeboarding will be vigilant checking visually for possible signs of Blue Green Algae, if there are possible signs the environment agency will be notified.

#### Reference Documents

World Health Organisation Report 'Guidelines for safe recreational water environments'  
[http://www.who.int/water\\_sanitation\\_health/bathing/srwg1.pdf](http://www.who.int/water_sanitation_health/bathing/srwg1.pdf)

World Health Organisation Report '**Monitoring Bathing Waters**'  
[http://www.who.int/water\\_sanitation\\_health/bathing/monbathwat.pdf](http://www.who.int/water_sanitation_health/bathing/monbathwat.pdf)

WHO report 'Water Recreation and desies'  
[http://www.who.int/water\\_sanitation\\_health/bathing/recreadis.pdf](http://www.who.int/water_sanitation_health/bathing/recreadis.pdf)

DEFRA Report 'The Quality of Bathing Water partial Regulatory Impact Assesment'  
<http://www.defra.gov.uk/environment/quality/water/waterquality/bathing/documents/partial-ria.pdf>

#### Security

Equipment security is of paramount importance not only is the equipment expensive and if damaged will take time to fix and inconvenience customers there is an additional risk of injury to those using the equipment and those intent on damaging it.

The main tower is situated in the centre of the water, to reach it someone will need to get wet which should be a sufficient deterrent, in addition anticlimb features as described earlier will be present making it extremely difficult to damage the towers from the water.

The most 'at risk' equipment will be the supporting cables which will be attached to the existing concrete edger's. For the majority of time the securing bolts will be submerged albeit under just a few inches of water. The bolts will be mechanically tightened meaning that without the aid of powered equipment the bolts cannot be untightened. People may attempt to climb the cables themselves in an attempt to reach the towers. The cables will be painted with anti climb paint and signs erected to prevent this, along with signs on the tower warning of

high voltage power and risk of electrical shock. A determined arsonist may attempt to cut the supporting cables this would be extremely difficult as the cables are constructed of

## **Market Analysis**

### Overall Market

In the same way that snowboarding has brought about a cultural revolution in the ski market, wakeboarding has reinvented water-skiing. Wakeboarding is the fastest growing water sport in the world and now has over 3 million participants worldwide. 63% of these participants are under the age of 24. Along with the three million plus wakeboarders worldwide there is now a growing faction of wakeskate enthusiasts. When included in the wakeboard figures you have a community of board sports enthusiasts who outnumber surfers by more than two to one. Although very different in principle, all board sports like skateboarding, surfing and snowboarding, crossover very easily, not just through the similarities in the tricks which are pulled off and the names that they are given, but also with the fashions and lifestyles which they encompass.

### Pricing

Pricing will be extremely competitive with other leisure activities the standard price for an hour will be £20 which is cheaper than many cable wakeboarding facilities although many offers will be available reducing the cost to as little as £1 for a return journey. A whole afternoon cable wakeboarding will cost the same as a trip to the cinema and cheaper than seeing Pompey play, a price within reach of the majority of users. Discounts will be offered to students, forces, emergency services and Portsmouth Leisure card holders.

I have been assured special arrangements will be in place for schools and youth groups where prices will be subsidised by the BWSF and Sport England.

### Competition

The nearest cable wakeboarding facility is Thorpe Park in Stains well over an hour away, and another little further in Heathrow. There are no cable wakeboarding facilities within at least 40 miles of Portsmouth. There are limited boat tow facilities in Chichester, Brighton and Bournemouth but these are expensive and only cater for a very small number of people,

The main competition is from other leisure activities but as discussed in the pricing section above cable wakeboarding is much better value for money and significantly more exciting. I request anyone reading this to talk with someone aged 13 to 30 and try and find out just how popular this sport could be.

## Market Segmentation

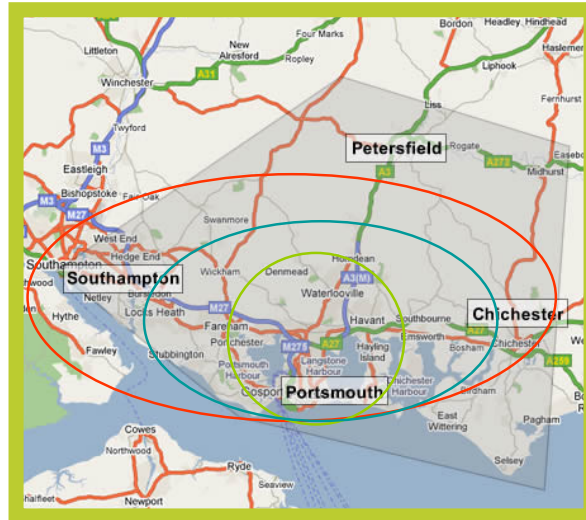
Hampshire Wakeboarding will provide world class cable wakeboarding facilities for individuals and families across the south coast... Customers will be broken into 5 core segments consisting of Kids 7-12, Teens 13-17, Students 18-21, Business Customers and Families. It is important to note that experienced wakeboarders will not be a major focus of marketing for Hampshire wakeboarding. This is for two primary reasons, firstly as the only cable tow in the area any experienced wakeboarders will naturally gravitate to the facility and secondly the total population of wakeboarders is quite small compared to the total population of the area.

Students aged 17-21 represent the greatest potential for revenue. The Portsmouth area has many students in this age range many more than similar cable tows in Swansea and Blackpool. Students are an ideal target as they tend to undertake activities in social groups. By drawing in one student, he or she will return with one or more friends on the next visit.

1. **KIDS 7-12** although we will not be targeting this group specifically we must note that our other target groups have brothers and sisters and that this group will become teens in due course and subsequently be our target market. In future seasons we will develop summer camp activities utilising our facilities as well as those of the swimming pool and the nearby nature reserve. Our equipment is suitable for this age range.
2. **TEENS 13-17** nearly as important as students, this group have less direct spending power but massive influence on family leisure activities. Always keen to impress friends and carve out their own identity this group have long been affiliated with board sports. This is also the age for parties and we will be rewriting the rule book on typical bowling and cinema parties with the very cool wakeboarding parties.
3. **STUDENTS 17- 21** It is important to note that with the majority of Wakeboarding participants under 24 years of age there is a significant population of potential participants in the immediate vicinity of the proposed wake park. 12,000 students from Highbury College are only a short walk away and 21,000 from the University of Portsmouth, interestingly the university has an active wakeboarding club who will be contacted.
4. **BUSINESS CUSTOMERS** The proposed site is surrounded by businesses from small start ups to medium and large business. IBM head quarters and the regional newspaper are both within walking distance. I can target these customers in two ways as direct customers where they can come as a group at lunch time or after work or as strictly business customers where I will offer team building and leadership exercises.
5. **WEEKEND WARRIORS** These are the guys who will be coming for fun a group of young single lads or girls, not always professionals but educated and with a disposable income. Something different is always a challenge. Social and going out for these twenties and more commonly thirty something's is a way of life.
6. **FAMILIES** These are key users of the nearby outdoor pool, splash pool and playground. The age ranges will be wide and I would be negligent not to target these potential customers who will be on the doorstep. Our service will be available
7. **TOURISTS** Portsmouth attracts many visitors for both the historical dockyard which contains Nelsons famous flagship Victory as well as King Henry the Eighth's Flagship the Mary rose and also Gunwharfe Quays which is the south coast's leading shopping outlet. Teenagers being dragged shopping or to the museum may do so a lot happier if they are allowed to do some wakeboarding as well!

## Operational Area

It is documented that a large cable park requires a population of 500,000 people within a range of 50km to operate successfully. Hampshire wakeboarding is a small wake park although will service a large urban area containing nearly 1m people.



- Portsmouth Urban Area approx 10km from site 442,252 people
- Approx 20km from site total  $442,252 + 70,166 + 110,500 = 622,928$
- Approx 30km from site total  $622,928 + 234,000 = 856,928$

The Portsmouth Urban Area contains a population well over twice that of the city of Portsmouth itself, and includes Fareham, Gosport, Havant (which includes the large suburbs of Leigh Park), Lee-on-the-Solent, Stubbington and Waterlooville. The administrative unit itself has a population of 197,700, which forms part of the wider Portsmouth conurbation, with an estimated 442,252 residents within the wider urban area making it the 11th largest urban area in England. At the 2001 census it was the only city in England with a greater population density than London. The suburbs of Portsmouth arguably form a conurbation stretching from Southampton to Havant on the M27/A27 road along the coast, and north to Canfield on the A3 in total in excess of 800,000 people live within 25 minutes of Portsmouth wake park.

Contacts:

Scott Sullivan (Business Owner)  
4 Waverley Grove  
Southsea  
Hampshire  
PO4 0PZ

02392 346352  
07905175077  
[scott@cablewakeboarding.co.uk](mailto:scott@cablewakeboarding.co.uk)

Accountants & Book Keeper

ARM Book

Business Mentor  
University of Portsmouth



# Appendix

## BWSF Cutting Edge Youth Coaching

British Water Ski & Wakeboard has been working with clubs, ski schools, pro's and most importantly lots of young people, to design a great way for young extreme enthusiasts to get into a water sport discipline, develop into a hobby and progress to competition level, achieving goals and earning awards along the way.

Some of the world's best skiers, wake boarders, bare footers and knee boarders have helped design a set of coaching stages to teach up-to-date techniques and skills. World Champion Nicole Arthur and well known ambassador for wakeboard Matt Crowhurst were amongst the development team. The 'Cutting Edge' scheme is available to everybody who uses a British Water Ski & Wakeboard club or Ski School, and is presented with a three stage objective program.

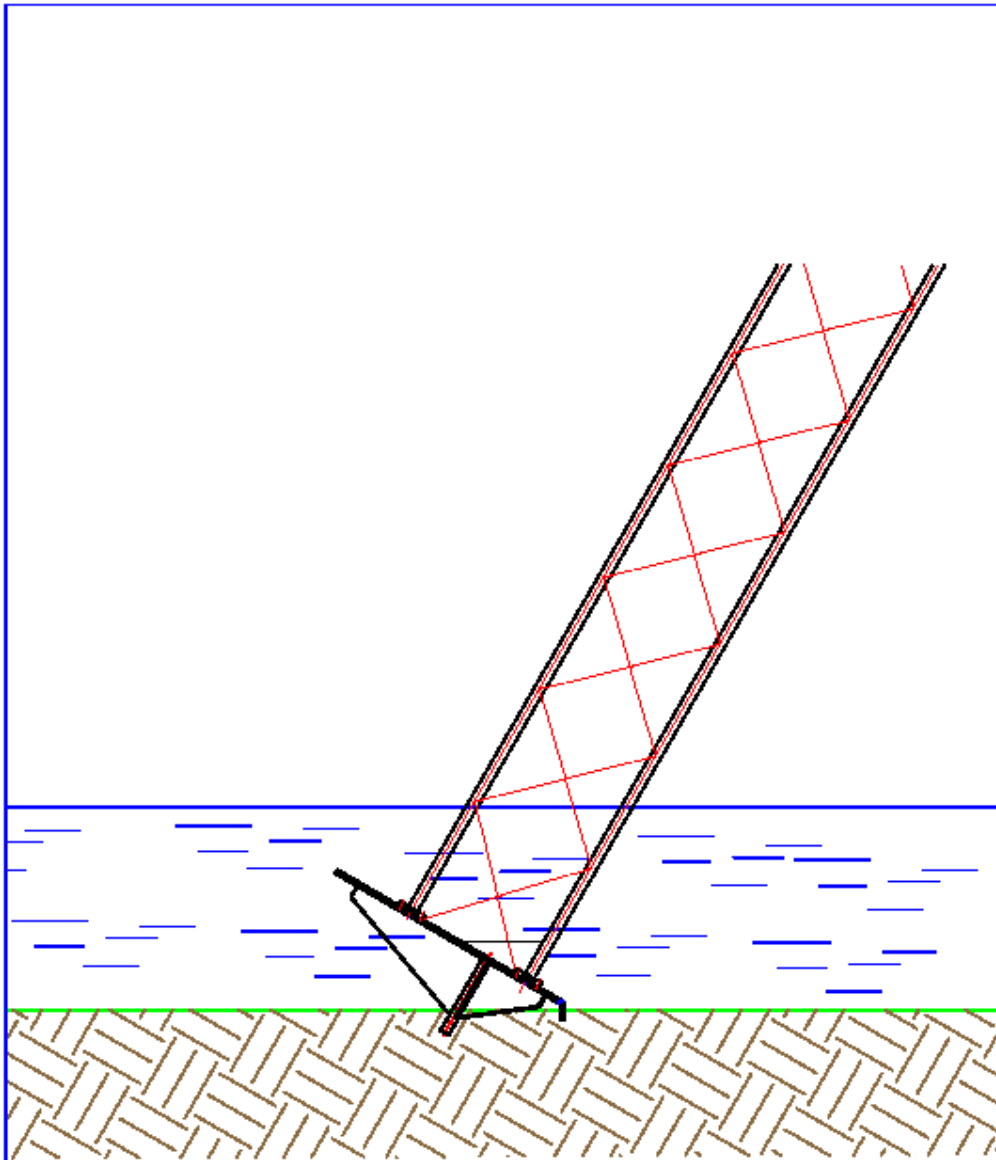
**Bronze award** provides beginners with a grasp of the essential basic skills required in any of the disciplines. On completion they will receive a certificate showing that they are able to get up on the water on their own and stay in control of the activity safely. At this stage of the activity the desire for the sport is developing and with a little encouragement from the coaches will lead on to the Silver award and the hobby begins!

**Silver award** is designed as a development program, which is a learning process for each discipline with broken down easy to achieve steps, the way the pros were taught. On completion of the Silver Award a Board or Ski sticker is awarded.

**Gold award** is all about progressing your skills up to competition standard, not only does it teach enough to earn valuable extra points at competition level but explains how competitions work. The Gold award is tough but certainly worth accomplishing. On completion of this award not only are you a competent competitor you will also receive from British Water Ski & Wakeboard a complimentary competition license.

Participation Certificates can also be issued for those who haven't had enough time on the water to achieve the Bronze award. Every Club and Ski School in the UK can offer this program.

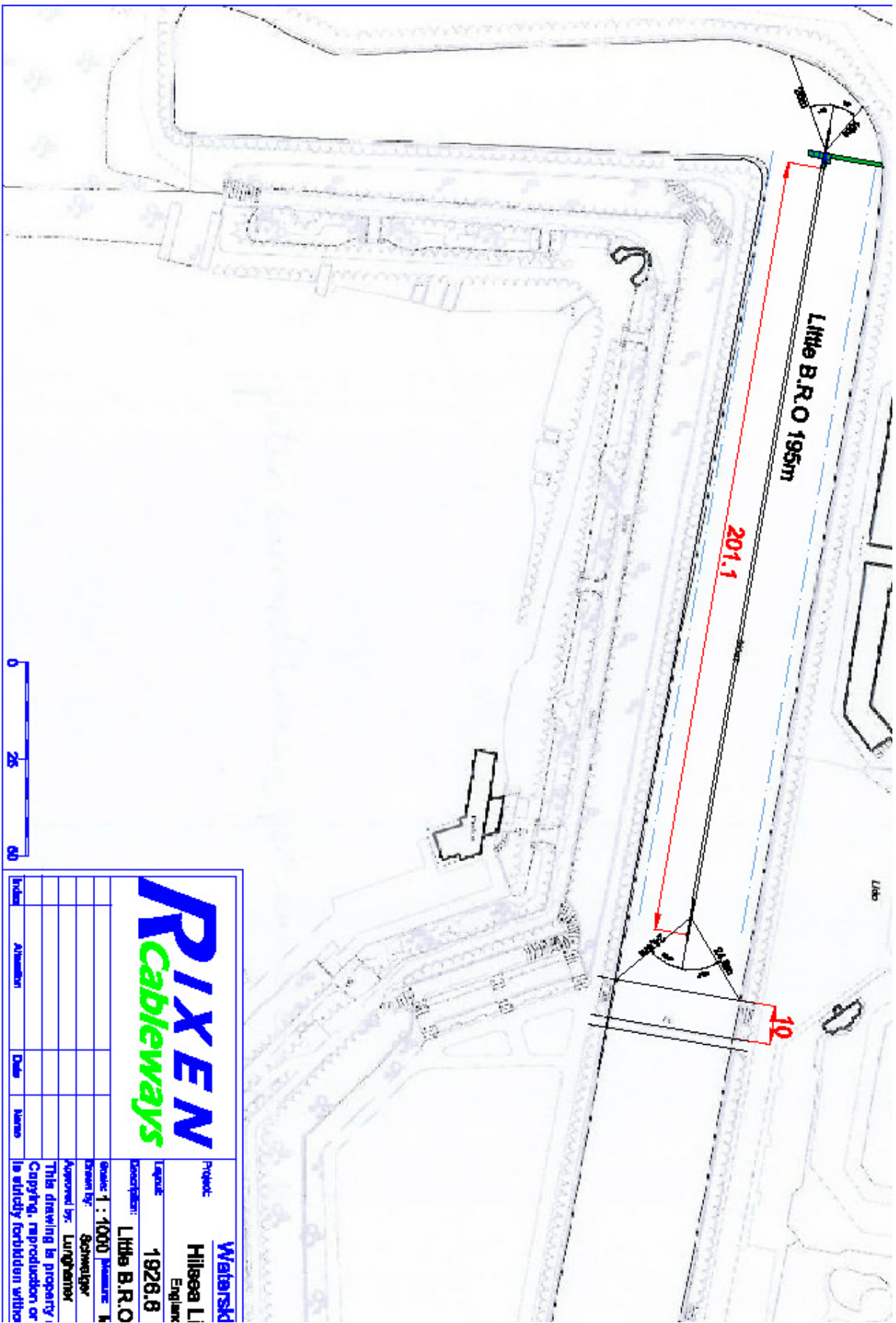




**Basic Sketch  
Mast foot**

			Scale: 1:20	Measure:	Paper size: 210x297mm
			Drawn by: Schmalzer	Date: 03.07.2006	
			Approved by: Lughamer	Date:	
This drawing is property of Rixen Germany. Copying, reproduction or handing out to third parties is strictly forbidden without written permission					
Index	Abstraktion	Date	Name		



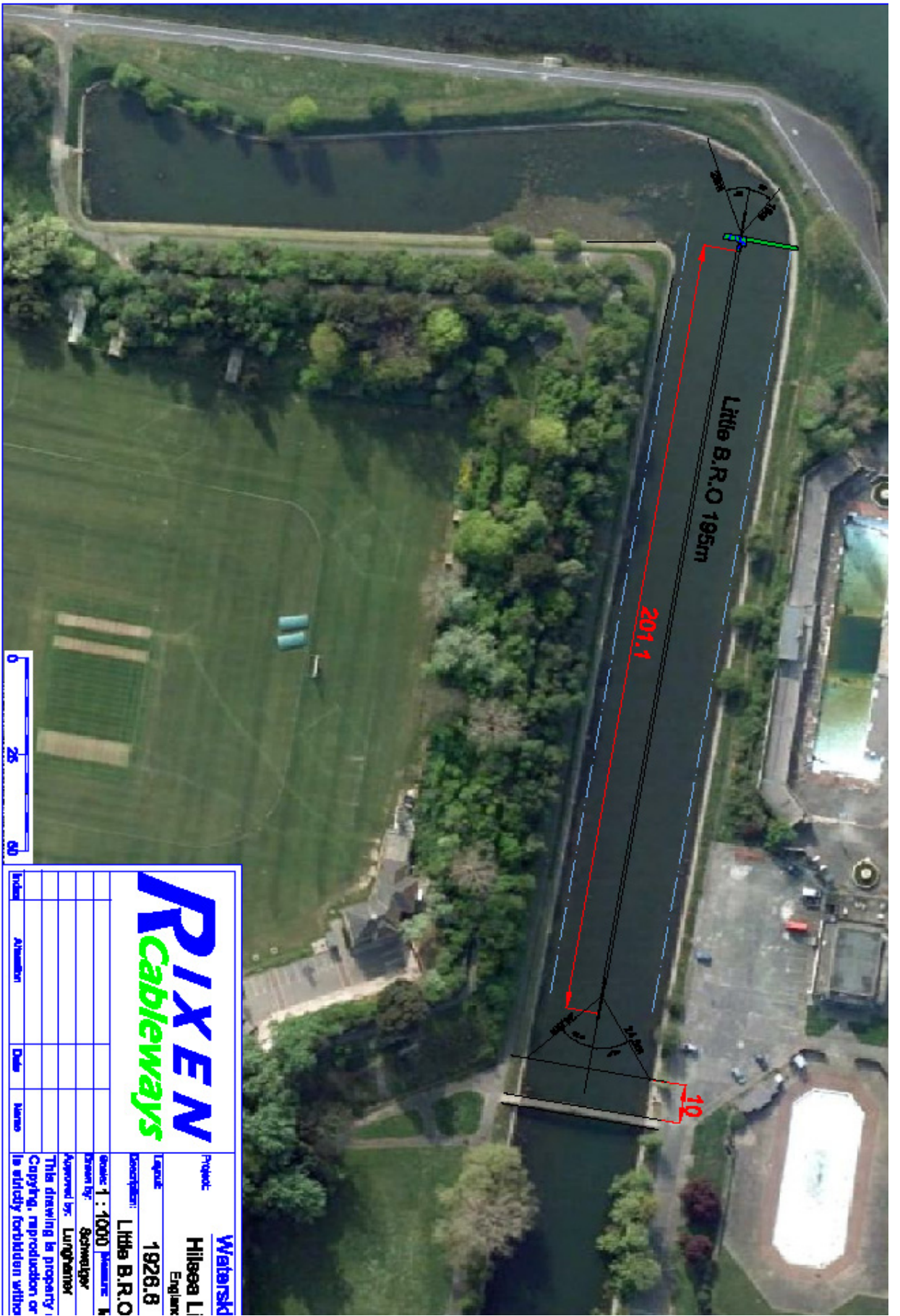


**RIXEN**  
Cableways

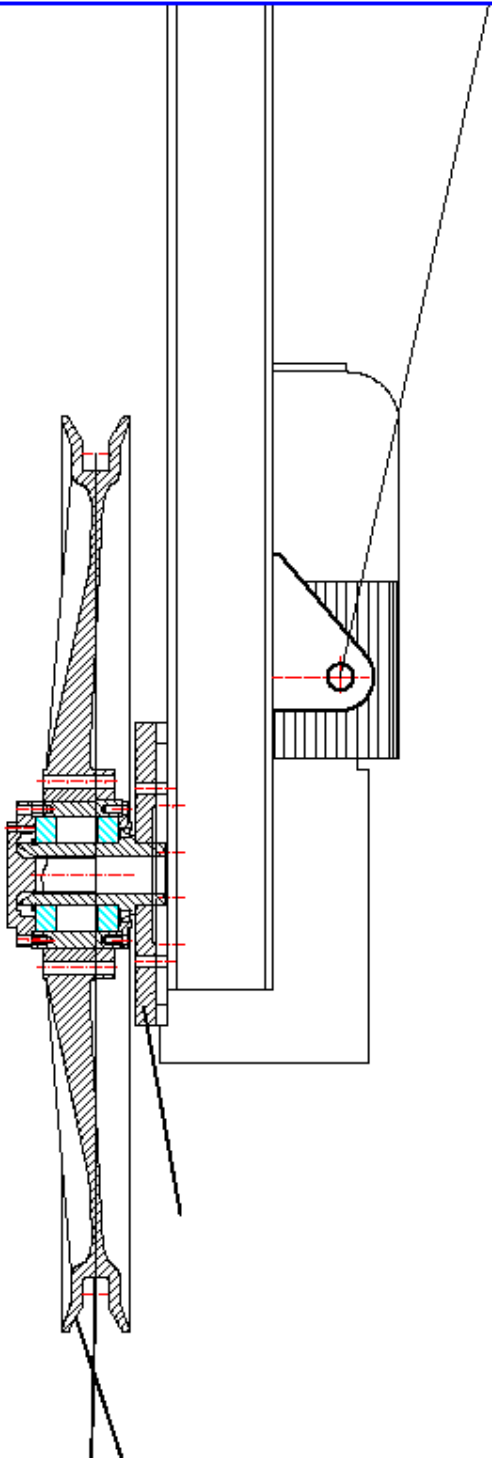
Index	Attention	Date	Name

Project: **Wafarski**  
 Hillsea L  
 Engineer  
 Layout: **1926.8**  
 Description: **Little B.R.O**  
 Scale: **1 : 1000** Measure: **M**  
 Drawn by: **Schweitzer**  
 Approved by: **Lutzpenter**  
 This drawing is property of RIXEN Cableways. Copying, reproduction or is strictly forbidden without written permission.





<b>RIXEN</b> Cableways		<b>Waterski</b>	
Project:	Hilsees L.I.	Project:	Little B.R.O
Layout:	1926.8	Engineer:	
Scale:	1 : 1000	Drawn by:	Schweitzer
Drawn by:	Schweitzer	Approved by:	Lutzpenter
Approved by:	Lutzpenter	This drawing is property of RIXEN Cableways. Copying, reproduction or use without written permission is strictly forbidden without the written permission of RIXEN Cableways.	
Index:	Attention:	Date:	Name:



**RIXEN**  
Cableways

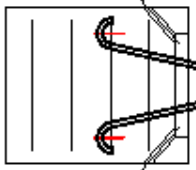
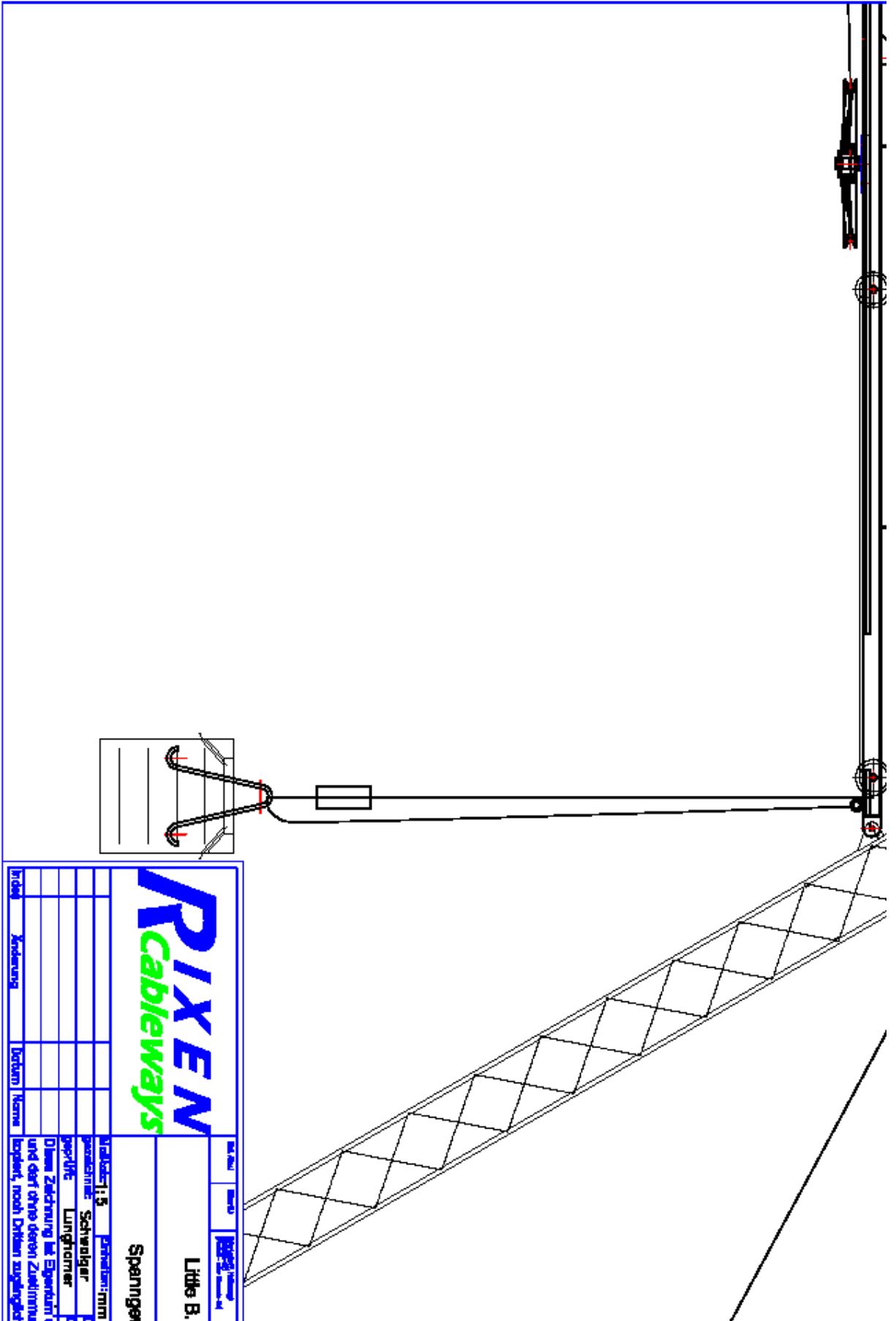
Träger	Konstruktion	Typ	Name

Artikel

Little B.F

Material: 1,5  
 geschw. Stahlblech  
 gew. Längsbohrer  
 Ø 10 mm  
 Diese Zeichnung ist Eigentum der RIXEN Cableways AG und darf ohne deren Zustimmung kopiert, noch Dritten zugänglich





<b>RIXEN</b> Cableways		Little B.F.	
Spannungsw		1:15	
Material:	1:15	Profilart:	mm
gewählte Schwinger	mm	gewählte Länge	mm
gewählte Länge	mm	gewählte Länge	mm
Diese Zeichnung ist Eigentum der RIXEN Cableways AG und darf ohne deren Zustimmung kopiert, noch Dritten zugänglich			
Datum	Konstruktion	Datum	Name

# RESICON<sup>5</sup>

high performance chemical injection anchoring

solvent free pure epoxy

## Product Description

Resicon 5 Pure Epoxy 1:1 Resin is a high performance, two component epoxy resin system. Applied in one single action this resin will produce a high performance, strong fixing with exceptionally high chemical resistance.

## Key Features

- Solvent Free, Odourless Resin, No Shrinkage
- Ideal for Diamond Drilled Holes.
- Ideal for Rebar Usage.
- Highest Durability.
- Can be used in Wet holes or Underwater.
- Longer Working Times.

## Approvals



INSTYTUT TECHNIKI BUDOWLANEJ  
 Approbacje Technicznej ITB  
 nr AT-15-6895:2005



Water Regulations Advisory Scheme  
 BS6920 approved

## Available Sizes

400ml 1:1 Side by Side Cartridge

Tested by:

Imperial College  
 London  
[www.imperial.ac.uk](http://www.imperial.ac.uk)

IMPORTANT NOTE:  
 Performance based on clean holes;  
 HAMMER DRILLED - blown and then brushed with a stiff metal brush & blown again.  
 DIAMOND DRILLED - ensure hole is rinsed until return water flow is clear.

## Typical Gel and Curing Time\*

BASE MATERIAL TEMPERATURE (°C)	35	25	15	5	-5
TYPICAL GEL TIME (mins)	20	40	60	180	-
MIN. LOAD TIME (mins)	180	240	300	900	-

\*Figures are based on M12 fixings. Full cure is achieved after 24 hours. All specifications are based on using a Resicon Mixer 14.

## Typical Performance Data at Standard Embedment Depth

Size	Concrete, $f_{c, min} = 25N/mm^2$ (C20/25) 5.8 Grade Studding										SETTING DATA			
	Characteristic Resistance (kN)		Design Resistance (kN)		Recommended Load (kN)		Characteristic Edge Distance (mm)		Characteristic Spacing (mm)	Hole Diameter In Concrete (mm)	Hole Diameter In Fixture (mm)	Standard Embedment In Concrete (mm)	Recommended Torque (Nm)	
	Tension ( $N_{t,d}$ )	Shear ( $N_{s,d}$ )	Tension ( $N_{t,d}$ )	Shear ( $N_{s,d}$ )	Tension ( $N_{t,d}$ )	Shear ( $N_{s,d}$ )	Tension ( $C_{e,d}$ )	Shear ( $C_{e,d}$ )						
M8	19.0	9.5	12.7	7.6	9.1	5.4	80	100	160	10	9	80	11	
M10	30.2	15.1	20.1	12.1	14.4	8.6	90	130	180	12	11	90	22	
M12	43.8	21.9	29.2	17.5	20.9	12.5	110	150	220	14	13	110	38	
M16	81.6	40.8	54.3	32.7	38.8	23.3	125	170	250	18	17	125	95	
M20	127.4	63.7	84.9	51.0	60.7	36.4	170	190	340	24	22	170	170	
M24	163.6	81.8	122.4	73.4	87.4	52.4	210	240	420	28	26	210	260	
M30	473.3	207.1	279.1	166.1	156.5	118.6	280	350	560	35	33	280	480	

## Typical Ultimate Physical Properties

	N/mm <sup>2</sup>	TEST METHOD	STORAGE / SHELF LIFE	IMPORTANT
COMPRESSIVE STRENGTH	82.68	(EN ISO 684) / (ASTM 695)	This product should be stored between +5 °C & +25 °C.	The shelf life and storage time is based on our own experience, research and testing is also performed to be added to our website. However, as it is not an ASTM the only case for the method used to which the products may be applied, or to a method of equal or better level, or to any other test, the responsibility of the product is given or implied, it is the user's responsibility to determine suitability of use. For the full technical data sheet visit <a href="http://www.constructionfixings.co.uk">www.constructionfixings.co.uk</a>
FLEXURAL STRENGTH	41.84	(EN ISO 378) / (ASTM 795)		
FLEXURAL MODULUS	4269.00	-		
TENSILE STRENGTH	28.21	(EN ISO 527) / (ASTM 638)	The Shelf life of the product is 24 months from the issued date.	
ELONGATION	4811.00	-		

Heads and All threads, Kettles Wood Drive, Woodgate Valley, Brimingham, West Midlands, B32 3DB  
 T 0121 5066300 F 0121 5066301 W [www.constructionfixings.co.uk](http://www.constructionfixings.co.uk)



**SAFETY DATA SHEET**  
RESICON 5 PURE EPOXY

Page 1  
Issued: 25/06/2010  
Revision No: 1

**1. IDENTIFICATION OF THE SUBSTANCE / MIXTURE AND OF THE COMPANY / UNDERTAKING**

**Product name:** RESICON 5 PURE EPOXY  
**Company name:** Heads & All Threads Ltd  
Kettleswood Drive  
Woodgate Valley  
Birmingham  
West Midlands  
B32 3DB  
United Kingdom  
Tel: +44 (0) 121 5066300  
Fax: +44 (0) 121 5066301  
Email: [marc@heads.co.uk](mailto:marc@heads.co.uk)

**2. HAZARDS IDENTIFICATION**

**Classification under CHIP:** Irritating to eyes and skin. May cause sensitisation by skin contact. Toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment.  
**Workplace exposure limit:** This substance does not have a workplace exposure limit.  
**PBT:** This substance is not identified as a PBT substance.  
**Directive 1999/45/EC:** This mixture meets the criteria for classification as dangerous in accordance with Directive 1999/45/EC.

**3. COMPOSITION / INFORMATION ON INGREDIENTS**

**Hazardous ingredients:** 1,6-HEXANDIOLDIGLYCIDYLETHER 3-10%  
EINECS: 240-260-4 CAS: 16096-31-4  
[X] R36/38; [Sens.] R43; [-] R52/53

- BISPHENOL A-(EPICHLORHYDRIN) (REACTION PRODUCT) 20-30%  
EINECS: 500-033-5 CAS: 25068-38-6  
[X] R36/38; [Sens.] R43; [N] R51/53
- BISPHENOL F-(EPICHLORHYDRIN), EPOXY RESIN 10-20%  
CAS: 28064-14-4  
[X] R36/38; [Sens.] R43; [N] R51/53
- BENZYL ALCOHOL 3-10%  
EINECS: 202-859-9 CAS: 100-51-6  
[Xn] R20/22
- 2-PIPERAZIN-1-YLETHYLAMINE 3-10%  
EINECS: 205-411-0 CAS: 140-31-8  
[Xn] R21/22; [C] R34; [Sens.] R43; [-] R52/53

[cont..]



resicon ITS - steel

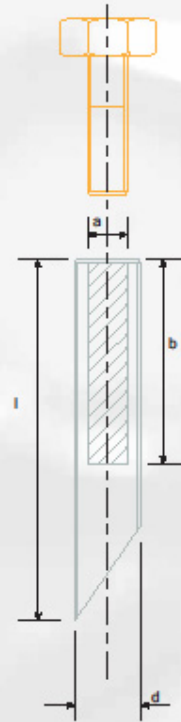


Description :

Internally threaded sockets for use with any of our injection and pourable resin systems, designed for bonding in masonry and concrete where an internal thread is required allowing the use of standard metric fasteners. Particularly suitable for temporary works and applications requiring a low profile finish where projecting studs may be a hazard. Available in zinc plate and yellow passivated steel or high quality A4-316-80 grade stainless steel for maximum strength and corrosion protection.

Material : Grade 5.8 carbon steel  
 Finish : Bright zinc plated and yellow passivated  
 Tensile strength (nom) : 500N/mm<sup>2</sup>

Material : Grade A4-316 stainless steel  
 Finish : Self colour  
 Tensile strength (nom) : 800N/mm<sup>2</sup>



socket data

Internal thread diameter: mm (A)	Outside diameter: mm (d)	Anchor length: mm (l)	Internal thread length: mm (B)	Required drill hole diameter: mm	Required drill depth: mm
M8	12	90	30	14	95
M10	16	90	35	18	95
M12	20	90	40	22	95
M16	25	125	40	28	130
M20	30	150	60	35	155
M24	35	210	70	40	215
M30	45	280	90	50	285

ordering information

product code	description	size: mm	box qty
ANC503	resicon its Gr5.8 ZnP	M8	10
ANC504	resicon its Gr5.8 ZnP	M10	10
ANC505	resicon its Gr5.8 ZnP	M12	10
ANC506	resicon its Gr5.8 ZnP	M16	10
ANC507	resicon its Gr5.8 ZnP	M20	1
ANC508	resicon its Gr5.8 ZnP	M24	1
ANC509	resicon its Gr5.8 ZnP	M30	1
ANC514	resicon its Gr A4-316	M8	10
ANC515	resicon its Gr A4-316	M10	10
ANC516	resicon its Gr A4-316	M12	10
ANC517	resicon its Gr A4-316	M16	10
ANC518	resicon its Gr A4-316	M20	1
ANC519	resicon its Gr A4-316	M24	1
ANC520	resicon its Gr A4-316	M30	1