

Killer Whale—Freddy Stapersma

Posted on Facebook—in Kitebuilders. Here is my gift to the community



In the beginning of my kite building I had lots of help from people all around the world with design questions, sewing questions, you name it the community helped me. My requests were always answered and so I also had this idea to share my knowledge for others who might enjoy building some kites or line laundry.

So I will release the templates of the killer whale. But not just like that. I hope people would like to read the journey that brought me here with a finished product. Some lessons in how I did it and might be useful to do this yourself.

My kite flying history starts at a young age seeing a Flexifoil stacker for the first time. I was hooked on that kite but would take another 2 years when I bought one. All of my childhood and a large part of my young adult time I was flying stuntkites.

I had a uncle who built his own oneliners and we we met it was always about kite flying.

Years gone by. I got married, got two kids and they were getting the age that kite flying would be fun. So I bought a few one line kites from China and started kiting with my kids. I told my uncle that I started to fly one line kites now. He told me he was getting old and wanted to sell his kites. Me with my big mouth said no way! They need to be kept into the family!! We talked all evening about what he made and where he got the plans from.

3 weeks after this conversation my mom stood at my front door, crying. Suddenly my uncle had died from heart failure. To make a long story short. I inherited all kites he made. His tools, fabric. everything.

Some kites needed repair and so my sewing adventure started. First repair. Then building

my first own kite (compound cody) and I was hooked. Later I told myself that I will try to build everything myself. I made few more kites and line laundry from images I saw online Found a lot of new friends along the way who helped me a lot with my problems.

Building kites from plans is fun but I wanted to make something that was designed by myself. So the search for something to design started. Designing a kite was way over my head so this is what led me to line laundry and that is the Killerwhale the is in front of you now.

My hobby history is in Photoshop and texture making. Before I started kite building I've been working on racegames and texturing. The object in the games are made in 3d and for texturing they make a flat file that you can use to paint on. When you done that you can see the texture ingame. The file looks a bit like a sewing pattern and my quest was to use this for a template I can use for kitebuilding.

The programs I use for 3d.

For the 3d models I use Blender.(<https://www.blender.org/>). Blender is a freeware program with a lot of import possibilities so you can load a lot of 3d formats. (NOT ALL!!) You need to see if the 3d object you used is useful to import. OBJ files are mostly fine.

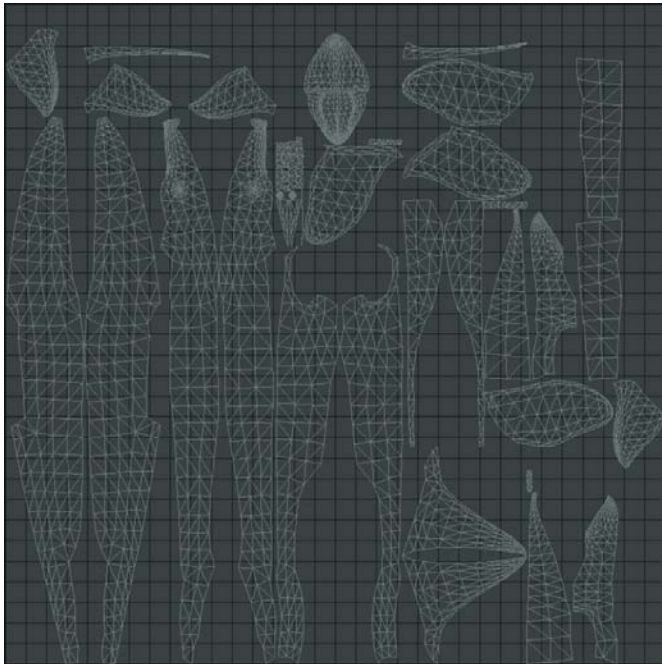
Designing and making templates

So It all starts with 3d models. While you could learn to create your own you could start by finding free ones online. Lot's of free models of animals, figures and other things are there to grab for free. But please always read the copyright. Most of them are free to use non commercially only!

When selecting a 3d model you need to look if a model is good enough to inflate. So very thin legs could be a problem. You should also imagine that what would happen to a model when you inflate it. How will the details blow up. do I need internal reinforcements. A lot of that is eyeballing.

You can load/import a 3d figure in blender and you can see the 3d file is made by lines. These are the lines we use to make the templates. In the industry this is called UV mapping which is used by 3d artists to draw textures on the 3d file—search Youtube for tutorials on using blender.

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UV Mapping example.

To be short. We need to add a seam to the 3d model so that the program knows what parts of the triangles belong together. But there is a problem with UV mapping. Not everything is laid out correctly, there is still some tinkering to be done. Hollow and bold parts are not always correctly visible in a UV map.

When you are able to make templates and export them to a usable file format for your drawing program (I use Adobe Illustrator eps format) you can check all parts for errors. Combine parts or delete parts you do not want to use.

The files

I made template pdf files for every part needed to build the orca. The orca has many different parts which I tried to give logical names.

instructions.pdf is this file

00.killerwhaleoverview.pdf shows all parts. (reproduced below)

01.topnose.pdf

02.greypart.pdf

03.reartop.pdf

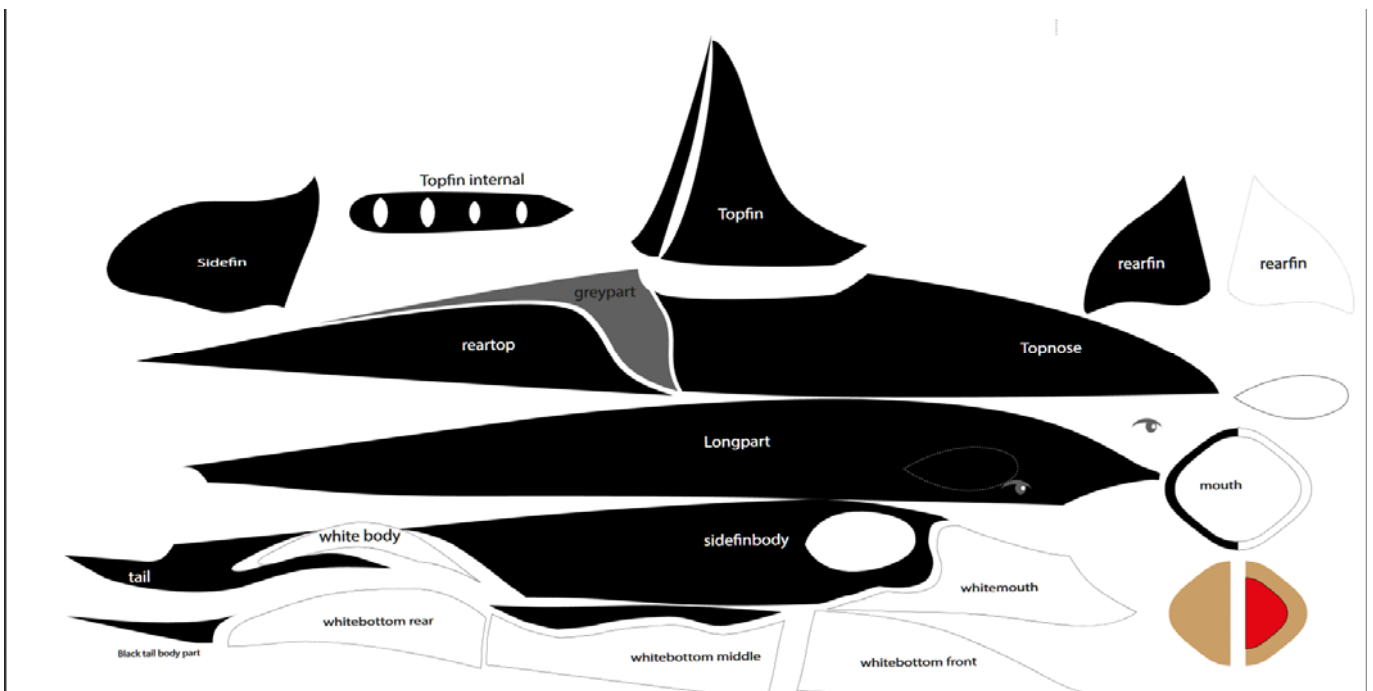
04.longpart.pdf

05.whitemouth.pdf 06.sidefinbody.pdf

07.tailbodybody.pdf

08.whitebottom front.pdf

On the pdf files I added a 5x5cm grid so you can measure if your printer is doing a good job. If you print this in poster format and at 100% you should be able to print this out and do not need to measure the grid at all. 9 out of 10 times that worked for me. I also added a cutline and sewing line also tried to add the names of the parts that need to be sewn around those parts. After printing the templates I glued them on cardboard and cut them out that works for me if I want to make more than one.



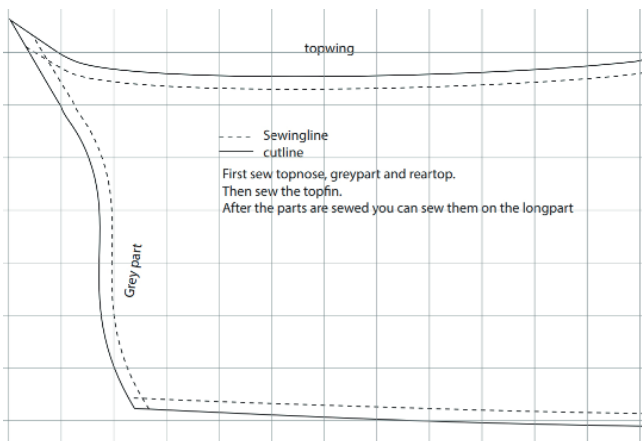
Overview of Killer Whale elements

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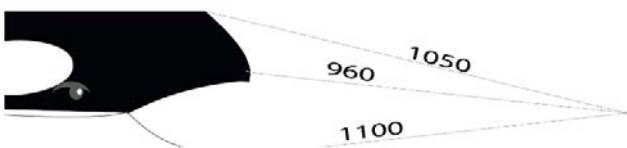
This Killerwhale is about 3 meter (yeah sorry I am from Europe) 118inch.

Sewing

I started with connecting all horizontal layers so I was left with a couple of bigger parts. All stitching is done with a plain seam on the wrong side that in the end will be the inside of the killerwhale.



Also sewing the two tail parts together and last the mouth parts. Then I completed the two sides so then had two body parts, two tail parts and a mouth. Then I sewed the fins on the two body parts. putting everything together I started bottom up. So first his white belly and then worked my way up.



Before closing the Killerwhale I added the mouthpart. The mouth works as a simple valve. Only the sides of the inner mouth are sewed together. when the killerwhale is full of air it will close the inlet due to inner pressure.

Bridle

I also added loops for the bridle (make them strong enough if you make a bigger version). I made a mistake with that when I made the 8 meter version!

For stabilizing the small killer whale you need a extra bridle on the dorsal fin. I added the middle bridle on the nose to keep the head in shape

All of the patterns can be found at <http://tiny.cc/4w23hz>

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Disclaimer: instructions are used at own risk. This is my first instructions for building a inflatable. I could have made some errors in writing these instructions. If so please let me know. I will change and add extra info as needed.

Contact

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Proto Type, using cheaper material to ensure concept and pieces are correct



Paper testing. After designing I printed some parts out on paper to see if the idea would work. Glued some parts and it seemed to work. So work started at the first prototype.

A Visitor's View—Marcus Halling

Martin Corrie Memorial Fly-In

Morning to the 20th October was a cold one, 2.5c at 8:00am, walking the dog enjoying hazy sunshine. Whilst planning the route we would take, to drive to Frinton I noticed, with apprehension, that the boiler vents from the suburbia Hobo and I were strolling through, were vertical! A classic sign of little or no wind. Being a relative newbie to kite flying I began to think "What Beaufort scale" this would relate to. I was however lucky enough to gather information on the pending Martin Corrie Memorial Fly-in and made my decision "It's always Breezier by the sea".

Portsmouth International Kite Festival, is surely testament and look at what those guys and girls put into flight for us. So, with all this into consideration I packed a few kites and headed off.



We arrived an hour later, minus one dog to be greeted by the East Anglian Kite Flyers (EAKF). The dew on the ground was greeted by my walking boots. We took stock of situation; a building wind was developing from off the land, over the coastal houses and out to the Wind farm in the far distant horizon. Hazy sunshine was keeping the chill to a minimum and I settled to take a few snaps of the kites everyone was flying.

I could see self-inflating kites, lifters, Fighter kites, Revs to mention a few. The self-inflating kites included Gisha Girl with Rabbit, whose

owner commented on its "cheap construction although once up there looked as good as any other" The good people of EAKF helped us with staking and the relevant Spanish Knot to anchor the Oriental Lady amongst a few fresh mole hills. A large dragon put in an appearance towards mid-day, much to the numerous children's delight I can only assume that their shouts were being aimed at. There were other kites too; Smiley emoji, Turbines, skilfully sustained by a Large Rokkaku, A large Dove, Love Heart, Butterfly (Karl Longbottom), to mention a few.



Coffee at lunch time was enjoyed on a bench over looking the sandy beach, after which I had a go at flying a hand made Kono Box Kite that I built. More puff would be needed to get my incarnation up this time, but all in all a delightful day from a visitor's point of view.

