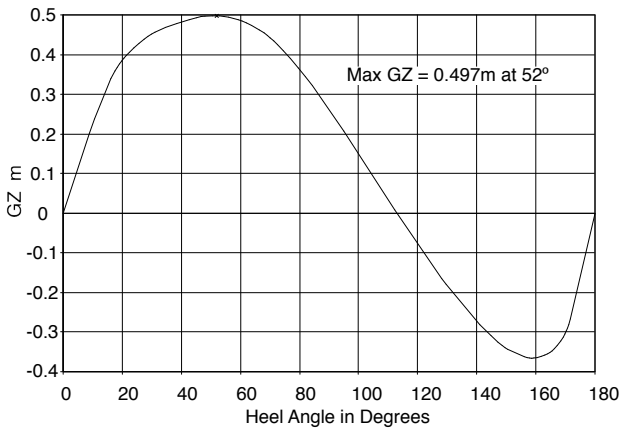
Date	Change History
07 Aug 2015	Original.
08 Sep 2015	Increased main length. Added reefs in main, 135% furling genoa, working jib & No. 3 jib. Gaff saddle. Other minor changes.
11 Sep 2015	Minor corrections.
07 Nov 2015	Babystay moved. Off-centre bowsprit & sampson post.
20 Mar 2016	Sheet winch stools added. Sheet position data corrected.

Theoretical Stability Curve at Δ = 900 kg and vcg = +175



GZ at 30º = 0.451 m
RM at 30º = 3982 Nm
RM max = 4388 Nm

Typical Moments of Inertia for Mainmast at 30º:

Aluminium alloy:

Ixx = 33 cm^4
Iyy = 49 cm^4

Spruce:

Ixx = 238 cm^4
Iyy = 356 cm^4

Douglas Fir:

Ixx = 194 cm^4
Iyy = 290 cm^4

Moment of Inertia for 100mm Ø spar with 20mm walls = 427 cm^4

Mainsail

P	3520	mm
E	3235	mm
Head	2810	mm
Leech	6190	mm
Diagonal Throat to Clew	4615	mm
Area	11.750	m^2

125% Genoa

Luff	6265	mm
Foot	4125	mm
Leech	5400	mm
LP	3512	mm
Area	11.000	m^2

100% Working Jib

Luff	6265	mm
Foot	3575	mm
Leech	4930	mm
LP	2810	mm
Area	8.800	m^2

No. 3 Jib

Luff	6265	mm
Foot	3180	mm
Leech	4600	mm
LP	2248	mm
Area	7.040	m^2

100% FT

I	6055	mm
J	2810	mm
Area	8.500	m^2

135% Furling Genoa

Luff	6015	mm
Foot	4240	mm
Leech	5600	mm
LP	3793	mm
Area	11.410	m^2

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Design 165

Sail Plan
Gaff Sloop

Scale	1/33.333
Date	20 Mar 2016
Plan No.	165/011/002
Issue No.	05

All dimensions in millimetres unless otherwise noted

	Dyneema (Preferred)	1 x 19 S/s Wire
Masthead (swifter) shrouds	6 mm	4 mm
Lower shrouds	6 mm	4 mm
Bowsprit shrouds	4 mm	3 mm
Forestay	6 mm	4 mm
Babystay	6 mm	4 mm
Bobstay	6 mm	4 mm

Note: Dyneema is 12-strand braided and is sized for stretch rather than strength.

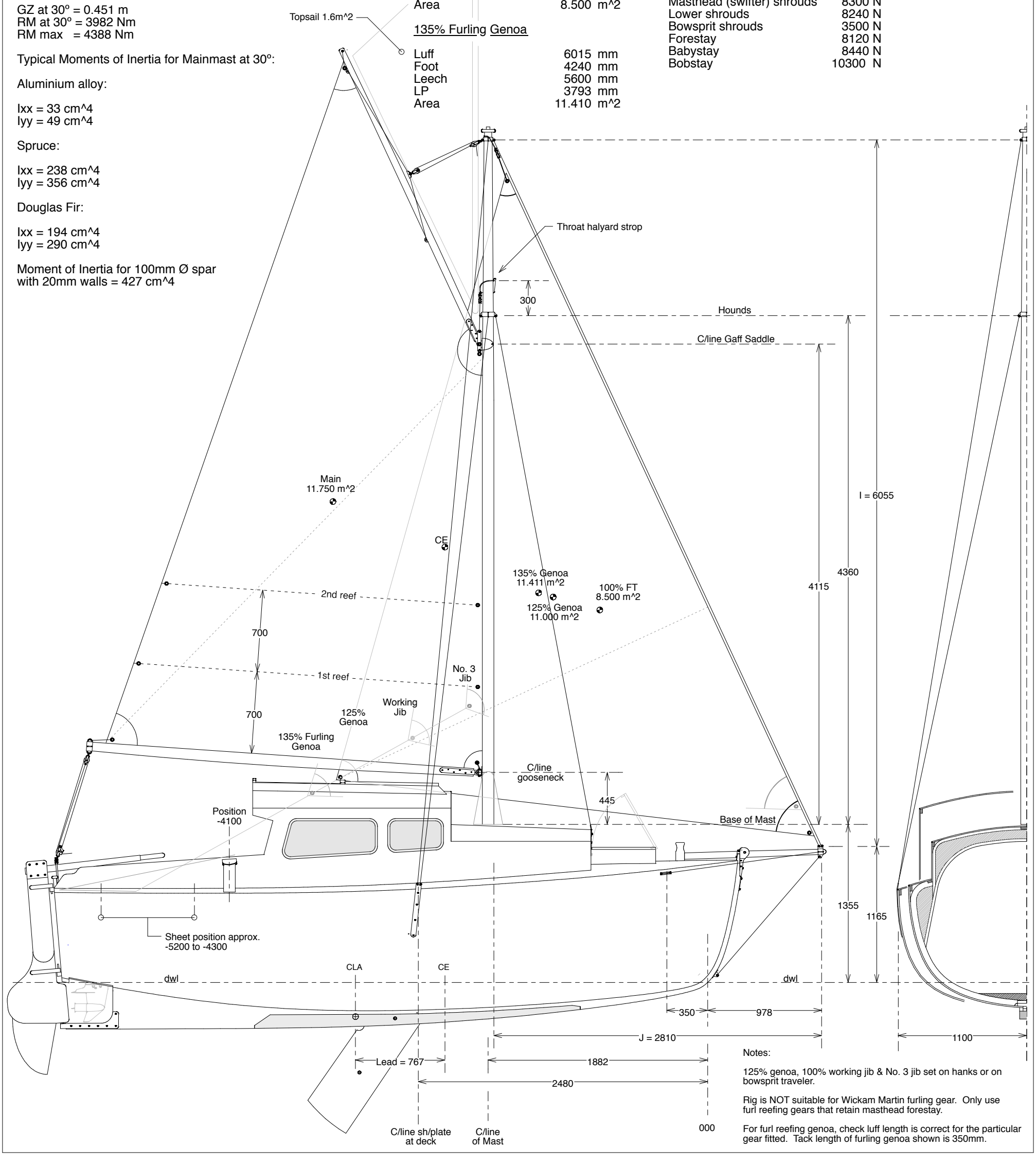
Shrouds & stays with hard eye (s/steel rope thimble) top & bottom, set up on 4mm braided polyester lanyards, minimum 4 turns, preferably 6 turns.

Top ends shackled to mast fittings with 8mm s/steel "D" shackles.

8mm s/steel "Harp" shackles in shroudplates and stay fittings to take lanyards.

For designing standing rigging and termination types other than specified consider the following minimum breaking loads:

Masthead (swifter) shrouds	8300 N
Lower shrouds	8240 N
Bowsprit shrouds	3500 N
Forestay	8120 N
Babystay	8440 N
Bobstay	10300 N



Notes:

125% genoa, 100% working jib & No. 3 jib set on hanks or on bowsprit traveler.

Rig is NOT suitable for Wickam Martin furling gear. Only use furl reefing gears that retain masthead forestay.

For furl reefing genoa, check luff length is correct for the particular gear fitted. Tack length of furling genoa shown is 350mm.