

Company Details: Sample Engineers Ltd
 Sample Company, Sample Road, Any town, Any County, SA12 3LE

Project: Sample **Project Ref:** SAMP 01
Client: A N Other Homes **Client Contact:** An Other

Version: SAMP 001 **Report No:** 25800864

Created by: Mr Engineer **Checked:** **Approved:**
Date: 10th May 2010 **Date:** **Date:**

Design Data

Service Class - 1

Fastner - Smooth Nail

Type: Round **Diameter:** 3.35 mm **Head diameter:** 10 mm **Length:** 74 mm **Tensile strength:** 600 N/mm²

Members	headside - Timber	pointside - Timber
Thickness:	47 mm	47 mm
Strength class:	C24	C24
Angle of load to grain:	0°	0°
Pre-drilled:	no	no
Density:	350 kg/m ³	350 kg/m ³
Yield strength:	n/a	n/a
$f_{c,90,k}$	2.50 N/mm ²	2.50 N/mm ²

Embedment strength:	19.97 N/mm ²	19.97 N/mm ²
k_{90}	1.40025	1.40025

Factors			
$k_{mod,perm} = 0.60$	$k_{mod,st} = 0.90$	$M_{y,R,k} = 4172.43$ Nmm	Axial withdrawal characteristic resistance: = 2.45 N/mm ²
$k_{mod,lt} = 0.70$	$k_{mod,inst} = 1.10$	$F_{ax,R,k} = 3.31$ N	Head pull through characteristic resistance: = 8.57 N/mm ²
$k_{mod,mt} = 0.80$	$\gamma_M = 1.30$	Rope-effect: = 15%	

Results

Fastner capacities

Permanent:	362 N
Long term:	422 N
Medium term:	483 N
Short term:	544 N
Instantaneous:	665 N

Spacings	headside	pointside
a_1	34 mm	34 mm
a_2	17 mm	17 mm
$a_{3,t}$	51 mm	51 mm
$a_{3,c}$	34 mm	34 mm
$a_{4,t}$	17 mm	17 mm
$a_{4,c}$	17 mm	17 mm

