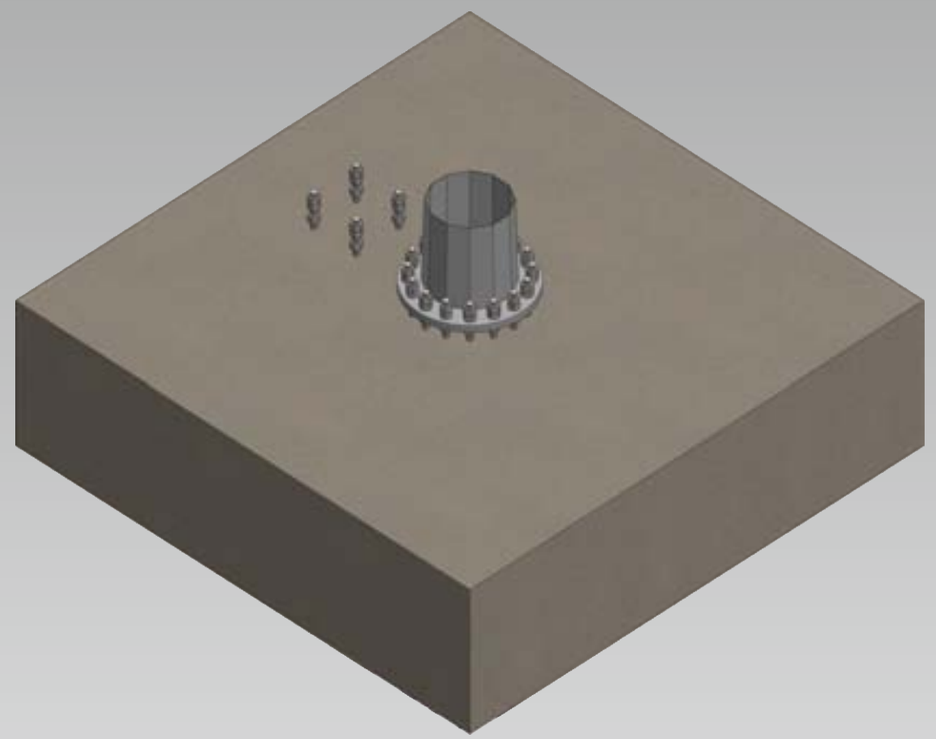
Pad Foundation Details

ARE 11m Tower

Kingspan 6kW Turbine



ARE 11m Tower
Kingspan 6kW Turbine

REV	DATE	DESCRIPTION
A	24/04/13	ISSUED FOR APPROVAL

jor Joseph O'Reilly
Consulting Civil & Structural Engineers
Unit 1, St. Therese's Place Flowerhill,
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+353 (0)46 907 7032
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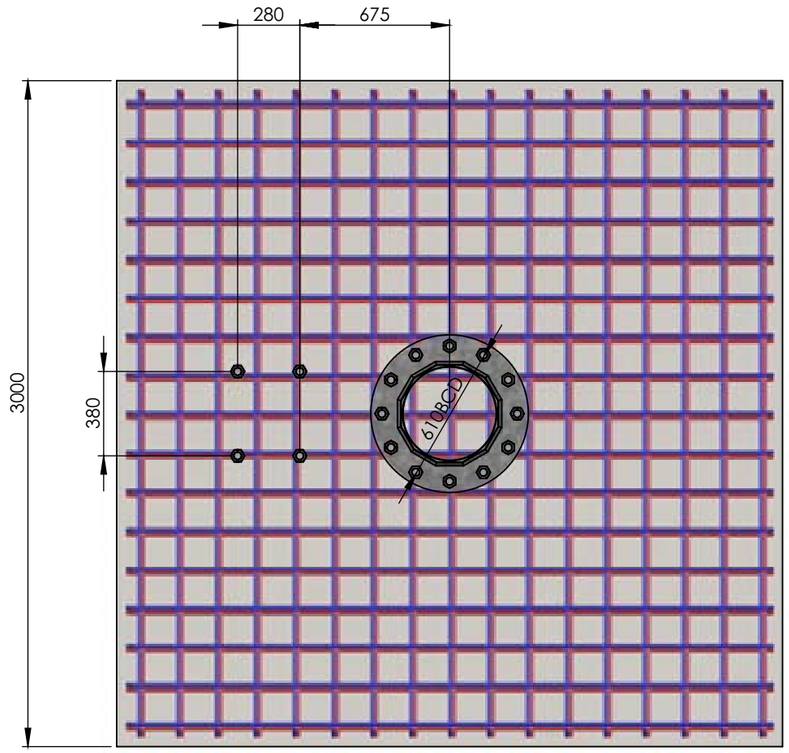
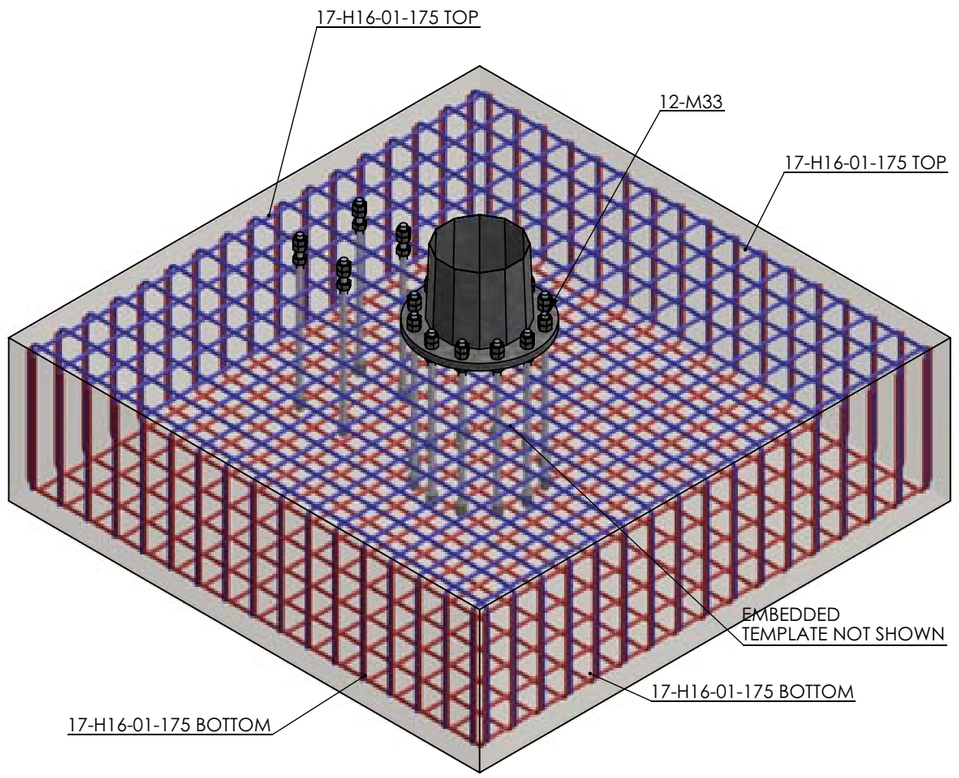
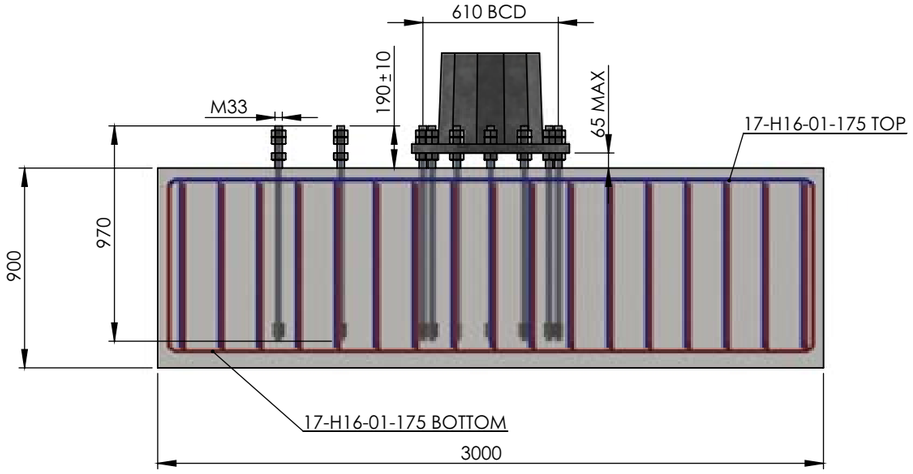
ARE
AMERICAN RESOURCE & ENERGY
www.arewindtowers.com

PROJECT	FOUNDATION DESIGN		
SCALE	NTS	DATE	APRIL 2013
JOB. No.	J12-036	DRAWING No.	ARE-12-007
REV	A		



Pier Foundation
Concrete Volume: 8.10m^3
Reinforcement Weight: 438kg





Reinforcement Schedule

Member	Bar mark	Type and size (type)	(size)	No. of mbrs	No. of bars in each	Total no.	Length of each bar † mm	Shape code	*A* * mm	*B* * mm	*C* * mm	*D* * mm	*E/R* * mm	Rev letter
	01	H	16	1	68	68	4075	21	775	2900	450			

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PROJECT	FOUNDATION DESIGN
SCALE: NTS	DATE: APRILI 2013
JOB. No.: J12-036	DRAWING No.: ARE-12-008
REV: A	

NOTES:

THE FOUNDATION HAS BEEN DESIGNED IN ACCORDANCE WITH EN 1997-1:2004 & BS 8110-1:1997.
& DESIGNED TO RESIST THE MAXIMUM TOWER ULTIMATE REACTIONS PROVIDED BY ARE.
BASE PLATE AND HOLDING DOWN BOLT DESIGN CARRIED OUT BE ARE.

MAXIMUM TOWER ULTIMATE REACTIONS
VERTICAL REACTION - (Fz) = 24kN
HORIZONTAL REACTION - (Fx) =29kN
MOMENT REACTION - (My) = 235kNm

GEOTECHNICAL DATA

THE FOUNDATION DESIGN IS BASED ON PRESUMPTIVE SOIL PARAMETERS
A MINIMUM ALLOWABLE SOIL BEARING PRESSURE OF 100kN/m2 IS REQUIRED FOR PAD FOUNDATIONS.
A FIRM CLAY WITH A MINIMUM UNDRAINED SHEAR STRENGTH, CU=50kN/M2 IS REQUIRED FOR
PIER / ROOT FOUNDATIONS.
IT IS ASSUMED THAT GROUND WATER IS NOT PRESENT WITHIN THE DEPTH OF THE FOUNDATION.

EARTHWORKS

THE FOUNDATION EXCAVATION SHALL BE FREE OF ALL SURFACE ORGANIC MATERIAL

CONCRETE

CONCRETE TO BE GRADE C25/30 TO BS EN 206-1 AND BS 8550-2
CONCRETE HARDENING TIME - THE FOUNDATION SHOULD BE POURED TWO WEEKS
PRIOR TO ERECTION OF THE TOWER

REINFORCEMENT

REINFORCEMENT TO BE HIGH YIELD TYPE 2 TO BS 4449:1998, TO BE
CUT AND BENT IN ACCORDANCE WITH BS 8666:2005

COVER TO REINFORCEMENT TO BE 50mm TOP AND 75mm BOTTOM AND SIDES

ANCHOR BOLTS

PLEASE REFER TO ARE DRAWING FOR SPECIFICATION AND INSTRUCTIONS ON CORRECT
INSTALLATION OF HOLDING DOWN BOLTS

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PROJECT		
FOUNDATION DESIGN		
SCALE: NTS	DATE: APRIL 2013	
JOB. No.: J12-036	DRAWING No.: ARE-12-009	REV: A