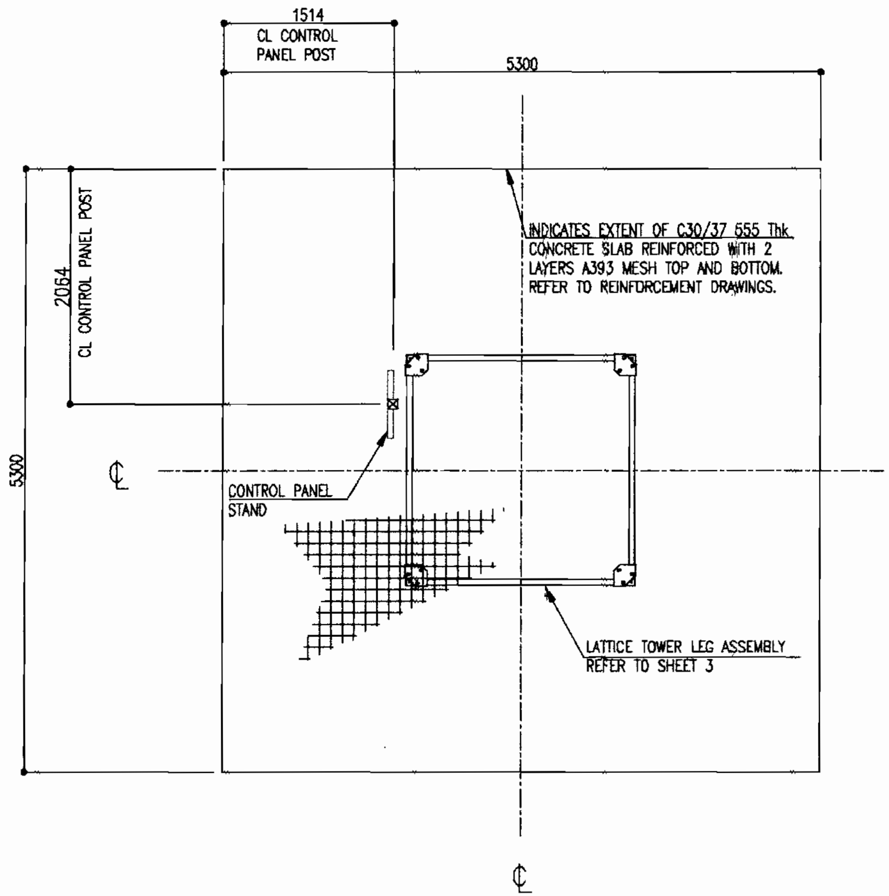


FOUNDATION PLAN GENERAL ARRANGEMENT
SCALE 1:50

Notes:

1. THIS DRAWING IS TO BE READ IN CONJUNCTION WITH ALL RELEVANT GAIA-WIND TOWER AND FOUNDATION INSTALLATION INSTRUCTIONS, INCLUDING THE REINFORCEMENT DRAWING AND SCHEDULE.
2. THIS DRAWING IS COPYRIGHT.
3. ALL DIMENSIONS ARE mm UNLESS NOTED OTHERWISE.
4. ALL DIMENSIONS TO BE CHECKED ON SITE BEFORE COMMENCEMENT OF WORKS. ANY DISCREPANCIES ARE TO BE REPORTED TO GAIA-WIND FOR VERIFICATION. FIGURED DIMENSIONS ONLY ARE TO BE TAKEN FROM THIS DRAWING. DO NOT SCALE.
5. GROUND INVESTIGATION TO BE CARRIED OUT PRIOR TO CONSTRUCTION TO ASCERTAIN AGGRESSIVE SOIL AND DESIGN SULPHATE CLASS FOR CONCRETE.
6. IN THE CASE OF COHESIVE SOILS (SILTS/CLAYS), WHERE TREES ARE EITHER PRESENT, OR HAVE BEEN REMOVED WITHIN 1 YEAR PREVIOUS, A GROUND ENGINEER IS TO BE CONSULTED PRIOR TO CONSTRUCTION.
7. ALL TOPSOIL AND VEGETATION/ORGANIC MATERIAL TO BE STRIPPED FROM THE FOUNDATION SITE PRIOR TO EXCAVATION, AND STOCK-PILED FOR RE-USE IF REQUIRED.
8. FOUNDING STRATA TO BE SUCH AS TO PROVIDE IN ALL CASES A MINIMUM BEARING CAPACITY OF 100kN/m² AND A MINIMUM ANGLE OF INTERNAL FRICTION (ϕ) OF 30° IN GRANULAR SOIL (SANDS/GRAVELS). THIS FOUNDATION DETAIL IS NOT SUITABLE FOR SOILS OF LOWER BEARING CAPACITY OR ϕ VALUE. IN SUCH INSTANCES A BESPOKE DESIGN WILL BE REQUIRED, TO BE DESIGNED BY A STRUCTURAL ENGINEER.
9. EXCAVATION AND DETERMINATION OF FORMATION LEVEL TO BE OVERSEEN BY A GROUND ENGINEER OR COMPETENT GROUND ASSESSOR. EXCAVATE TO 1.005m BELOW EXISTING GROUND LEVEL TO SUITABLE BEARING STRATA. SHOULD GROUND CONDITIONS DICTATE A DEEPER EXCAVATION, THEN A GROUND ENGINEER/COMPETENT GROUND ASSESSOR IS TO BE CONSULTED.
10. EXCAVATION TO BE KEPT FREE IN ALL INSTANCES FROM STANDING WATER FROM PRECIPITATION/SURFACE WATER RUN-OFF/GROUND WATER. CONCRETE BLINDING TO BE INSTALLED IMMEDIATELY FOLLOWING CONFIRMATION BY GROUND ENGINEER OR COMPETENT GROUND ASSESSOR OF SUITABILITY OF FOUNDING STRATA.
11. ALL FOUNDING SURFACE IRREGULARITIES AND POCKETS OF SOFT MATERIAL OR MADE GROUND TO BE EXCAVATED AND REPLACED WITH FILL MATERIAL, AS NOTE 13, OR WITH MASS GEN 1 CONCRETE. THIS COULD MEAN THAT MORE EXCAVATION THAN STATED ABOVE MAY BE NECESSARY – TO BE CONFIRMED ON SITE, BUT WHICH MUST NOT EXCEED 600mm IN DEPTH.
12. CONCRETE, REINFORCEMENT AND ASSOCIATED ACCESSORIES TO BE INSTALLED BY A CONTRACTOR WITH SUITABLE EXPERIENCE AND COMPETENCE IN STRICT COMPLIANCE WITH GAIA-WIND FOUNDATION INSTALLATION AND CONSTRUCTION DETAILS.
13. ON COMPLETION OF FOUNDATION CONSTRUCTION, THE GROUND IS TO BE REINSTATED AROUND FOUNDATION WITH A SUITABLE ENGINEERED GRANULAR FILL MATERIAL e.g. CONFORMING TO MATERIAL CLASS 1 803 AS DEFINED IN H.A. (HIGHWAYS AGENCY) SPECIFICATION, PLACED AND WELL COMPACTED IN MAX 100mm LAYERS TO H.A. SPECIFICATION, WITH 100-300mm TOPSOIL OVER AS REQUIRED.

ZONE	REV.	ECN.	DESCRIPTION	DRAWN	APP'D	DATE
-		0014	FIRST ISSUE.	MM	GF	09/02/11

REVISIONS

REVISION -

		NAME	DATE
DIMENSIONS IN MM UNLESS OTHERWISE STATED	DRAWN	MCM	09.02.11
DO NOT SCALE DRAWING	CHK'D	GF	09.02.11
DEBUR AND BREAK SHARP EDGES	APP'D		
THIRD ANGLE PROJECTION	FINISH:		
FILENAME: P0000115.dwg	MATERIAL:		
	WEIGHT (kg):		

Gaia-Wind

TITLE: FOUNDATION INSTALLATION - 18m LATTICE TOWER

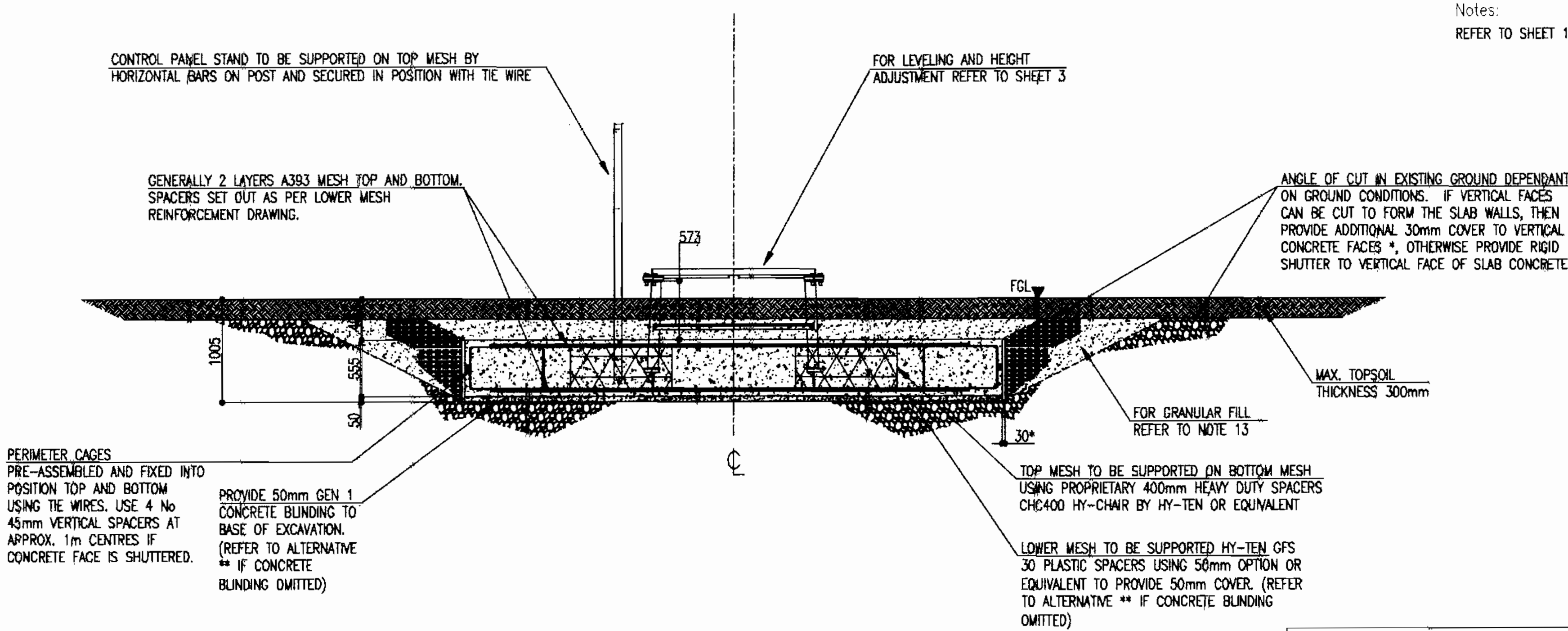
DWG NO. P0000115

TOLERANCES

A3

SCALE 1:50

Notes:
REFER TO SHEET 1



PRIOR TO INSTALLATION OF BLINDING CONCRETE, INSTALL 4 No COPPER EARTHING RODS, SEE GAIA-WIND FOUNDATION INSTALLATION INSTRUCTIONS FOR DETAILS.

FOUNDATION SECTION
SCALE 1:50

**** ALTERNATIVE TO PROVIDING GEN 1 CONCRETE BLINDING TO BASE OF EXCAVATION:**
THE BLINDING MAY BE OMITTED PROVIDED THE THICKNESS OF THE BASE IS INCREASED (DOWNWARDS) TO PROVIDE MINIMUM COVER TO BOTTOM LAYER OF REINFORCEMENT OF 75mm.

THE CONCRETE SHOULD BE PLACED AS SOON AS POSSIBLE FOLLOWING EXCAVATION AND ON THE SAME DAY IF POSSIBLE. IF LEFT OVERNIGHT, THE EXCAVATION SHOULD BE PROTECTED FROM WATER INGRESS, WHICH MAY SOFTEN THE SOIL BASE, USING SUITABLE WATERPROOF SHEETING.

IN THE EVENT THAT THE EXCAVATION BASE BECOMES WET, EXCAVATE THE SOFTENED MATERIAL AND REPLACE WITH GEN 1 CONCRETE.

IF HEAVY RAINFALL IS ANTICIPATED, THIS ALTERNATIVE SHOULD NOT BE EMPLOYED.

CONSIDERATION SHOULD ALSO BE MADE FOR THE REQUIREMENT FOR FIRM AND LEVEL BEARING REQUIRED FOR THE LEGS OF THE FRAME AND REINFORCEMENT SPACERS. ALTERNATIVE 75mm HIGH SPACERS WILL BE REQUIRED BELOW BOTTOM MESH AND LEGS OF FRAME e.g. HY-TEN 7501 CONCRETE SPACERS.

LEGEND:
- TOPSOIL
- GRANULAR FILL
- GRANULAR SOIL (SAND/GRAVEL)
- COHESIVE SOIL (SILT/CLAY)
- IN SITU CONCRETE C30/37
- IN SITU BLINDING CONCRETE GEN 1

REVISIONS

ZONE	REV.	ECN.	DESCRIPTION	DRAWN	APPV'D	DATE
-		0014	FIRST ISSUE.	MM	GF	09/02/11

		NAME	DATE
DIMENSIONS IN MM UNLESS OTHERWISE STATED	DRAWN	MCM	09.02.11
DO NOT SCALE DRAWING	CHK'D	GF	09.02.11
DEBUR AND BREAK SHARP EDGES	APPV'D		
THIRD ANGLE PROJECTION	FINISH:		
FILENAME: P0000115.dwg			

MATERIAL:
WEIGHT (kg):

Gaia-Wind
GENERATING BETTER VALUE

 REVISION -

TITLE: FOUNDATION INSTALLATION - 18m LATTICE TOWER

DWG NO. P0000115

TOLERANCES

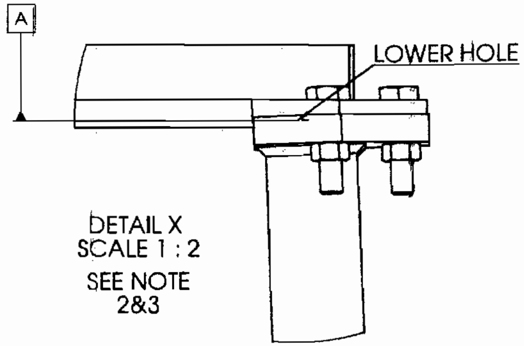
A3

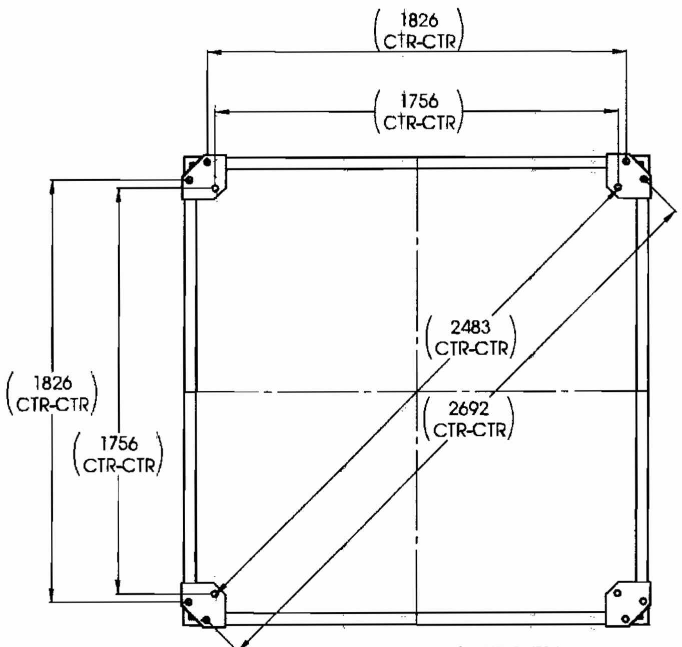
SCALE 1:50

ITEM NO.	PART NO.	REVISION	DESCRIPTION	WITH POURING FRAME/QTY.
1 **	2081011	-	FOUNDATION LEG	4
2 **	2082010	1	FOUNDATION LEG BRACE	4
3 **	0141030	-	HEX HEAD SCREW ISO 4017 M10x30-8.8-tZn	8
4 **	0181010	-	HEX HEAD NUT ISO 4033 M10-8Z-tZn	8
5 ♦	2083010	-	POURING FRAME	1
6 ♦	0142500	-	HEX HEAD SCREW ISO 4017 M24x100-10.9-tZn	12
7 ♦	0182024	-	HEX HEAD NUT ISO 4033 M24-10Z-tZn	12
8 **	0181016	1	HEX HEAD NUT ISO 4033 M16-8Z-tZn	8
9 **	0170010	-	PLAIN WASHER ISO 7089 M10 - 200 HV-tZn	8
10 **	0168163	-	THREADED ROD ISO 898-1 M16x300-8.8-tZn	4

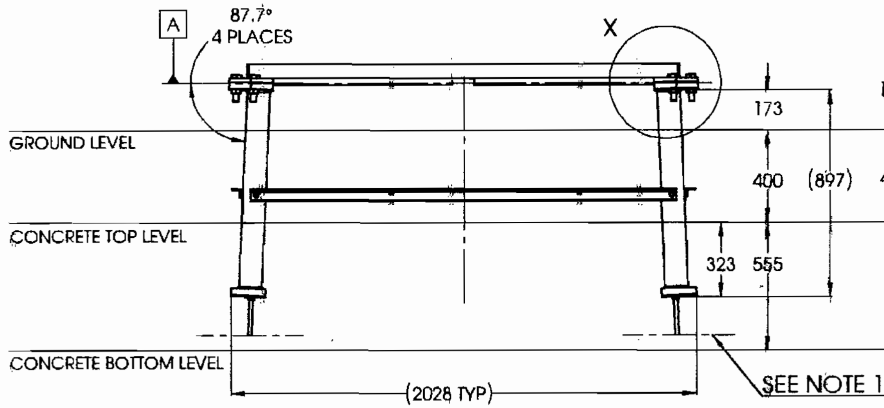
** ITEMS INCLUDED IN P0000115(1) - FOUNDATION KIT (see also:- SHEET 8 MATERIALS LIST)

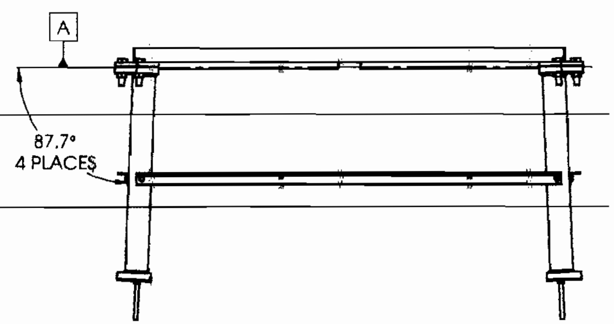
♦ ITEMS INCLUDED IN P0000115(2) - FOUNDATION TOOLING KIT





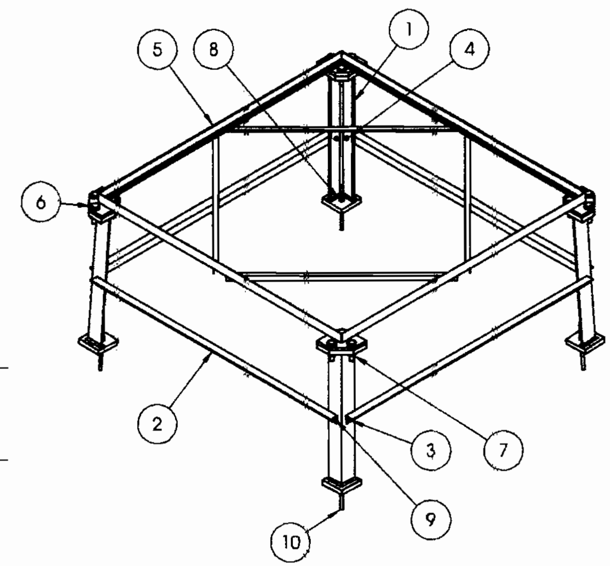
(POURING FRAME HIDDEN
FOR CLARITY)
(NOTE 4)





NOTES:

1. PLACE THIS FOUNDATION STEELWORK ONTO A GOOD BEARING SURFACE(S). THE HEIGHT OF EACH LEG AND THEREFORE DATUM A'S LEVEL CAN BE ADJUSTED USING THE M16 THREADED ROD AND NUTS.
2. DATUM A PASSES THROUGH THE CENTERS OF EACH FOUNDATION LEG'S FOOT FLANGE LOWER HOLE (TOP FACE).
3. DATUM A IS TO BE WITHIN 0.1 DEGREES OF LEVEL.
4. HOLE SPACING IS GOVERNED BY THE POURING FRAME.
5. THE WEIGHT SHOWN IN BRACKETS IS OF THE FOUNDATION LEGS, BRACES AND INCLUDES POURING FRAME AND FASTENERS.
6. REFER TO SHEET 8 FOR THE RE-INFORCEMENT BILL OF MATERIALS.
7. CALCULATED WEIGHT DOES NOT ACCOUNT FOR GALVANISING AND WELDING. FOR AN INDICATION OF THE FINAL WEIGHT WITH GALVANISING AND WELDING INCLUDED, ADD A 6% MARGIN.



ZONE	REV.	ECN	DESCRIPTION	DRAWN	APPV'D	DATE
	-	0014	FIRST ISSUE	TBN	PJR	15/03/2011

REVISIONS

		NAME	DATE
ALL DIMENSIONS IN MM UNLESS OTHERWISE STATED	DRAWN	TBN	15/03/2011
DO NOT SCALE DRAWING	CHK'D	PJR	15/03/2011
DEBUR AND BREAK SHARP EDGES	APPV'D	PJR	15/03/2011
THIRD ANGLE PROJECTION	FINISH: -		
FILENAME: P0000115.SLDDRW	MATERIAL: -		
Gaia-Wind	WEIGHT (kg): 142 (198)		

REVISION -

TITLE: FOUNDATION INSTALLATION - 18m LATTICE TOWER

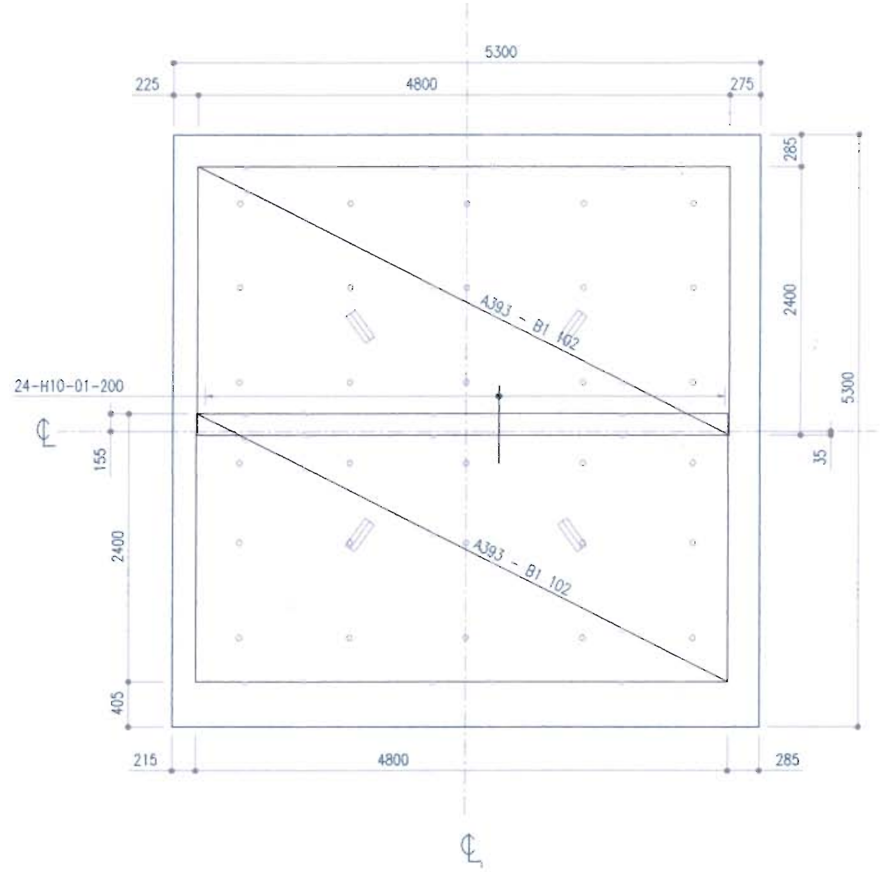
DWG NO. P0000115

TOLERANCES ISO2768-mK

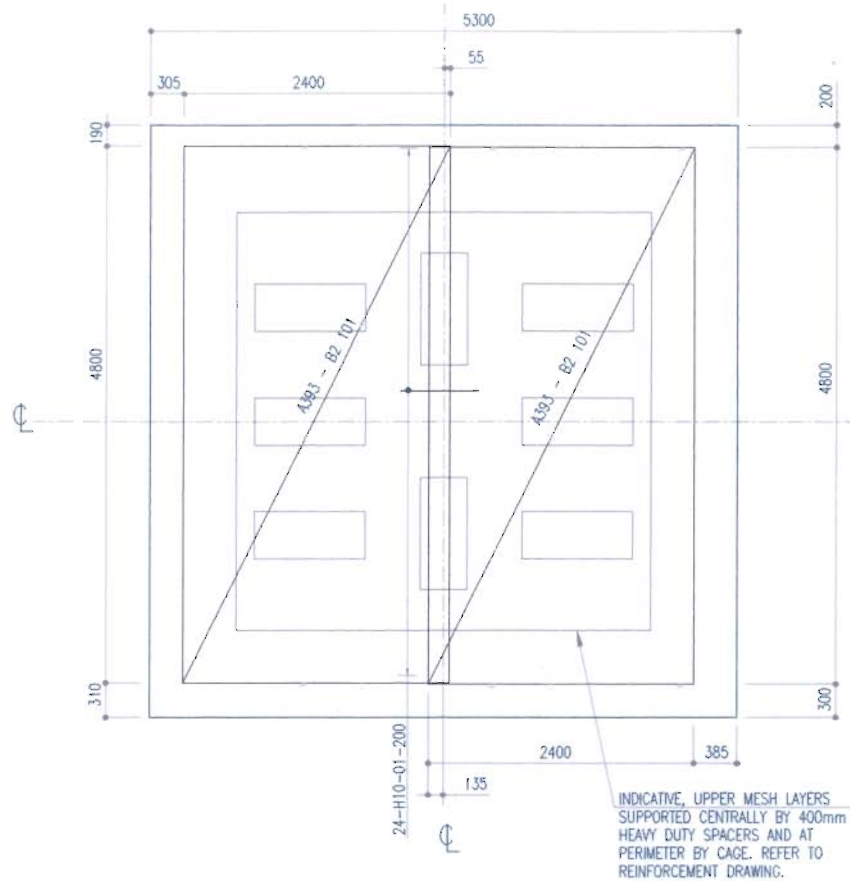
A0

SCALE 1:10

SHEET 2 OF 8



LOWER BOTTOM LAYER MESH REINFORCEMENT B1
SCALE 1:50



UPPER BOTTOM LAYER MESH REINFORCEMENT B2
SCALE 1:50

LEGEND:

INDICATIVE LOCATIONS OF 1m LONG 400mm CHC400 HY-CHAIR HIGH HEAVY DUTY SPACERS BY HY-TEN OVER BOTTOM MESH.

INDICATIVE LOCATIONS OF HY-TEN GFS 40 PLASTIC SPACERS USING 50mm OPTION SUPPORTING LOWER MESH (REFER TO SHEET 2 NOTE ** FOR ALTERNATIVE SPACERS)

INDICATIVE LOCATIONS OF HY-TEN SOLID 50mm SPACERS OR EQUIVALENT, 300mm SUPPORT/FOOTING FOR LEVEL ADJUSTING RODS ON FOUNDATION LEGS

B1: DENOTES LOWER BOTTOM MESH
B2: DENOTES UPPER BOTTOM MESH

A393 MESH: H10 BARS AT 200mm PITCH IN BOTH DIRECTIONS

ZONE	REV.	ECN.	DESCRIPTION	DRAWN	APPV'D	DATE
-		0014	FIRST ISSUE.	MM	GF	09/02/11

REVISIONS

Notes:

REFER TO SHEET 1

REVISION -

		NAME	DATE
DIMENSIONS IN MM UNLESS OTHERWISE STATED	DRAWN	MCM	09.02.11
DO NOT SCALE DRAWING	CHK'D	GF	09.02.11
DEBUR AND BREAK SHARP EDGES	APPV'D		
THIRD ANGLE PROJECTION	FINISH:		
FILENAME: P0000115.dwg			

TITLE: FOUNDATION INSTALLATION - 18m LATTICE TOWER

DWG NO. P0000115

MATERIAL:

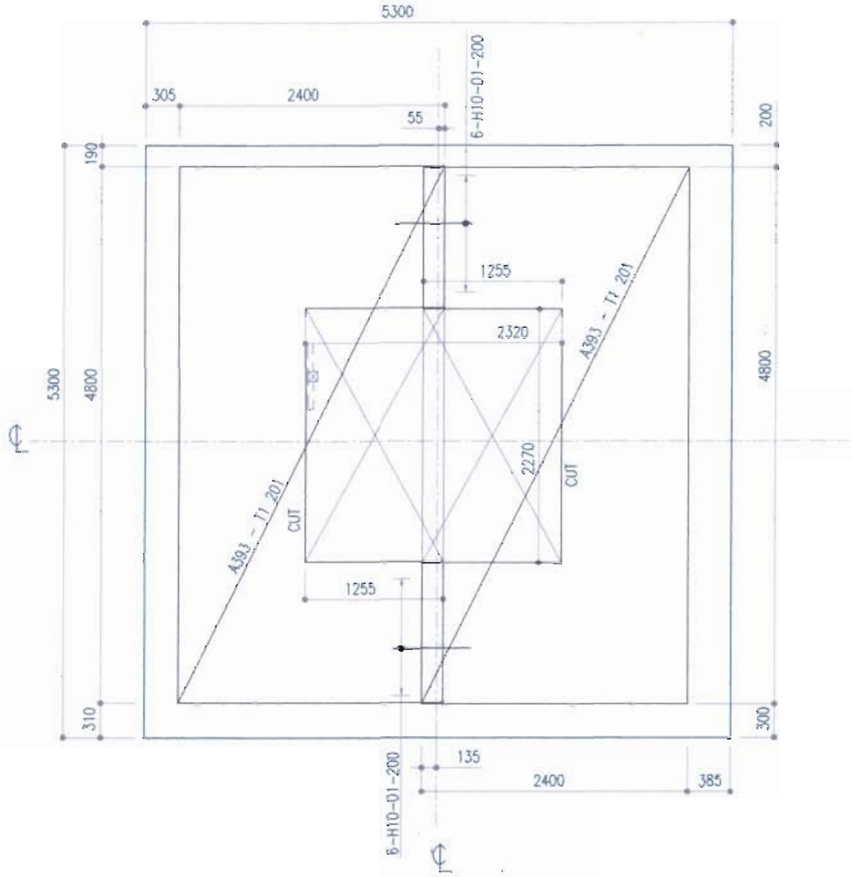
TOLERANCES

A3

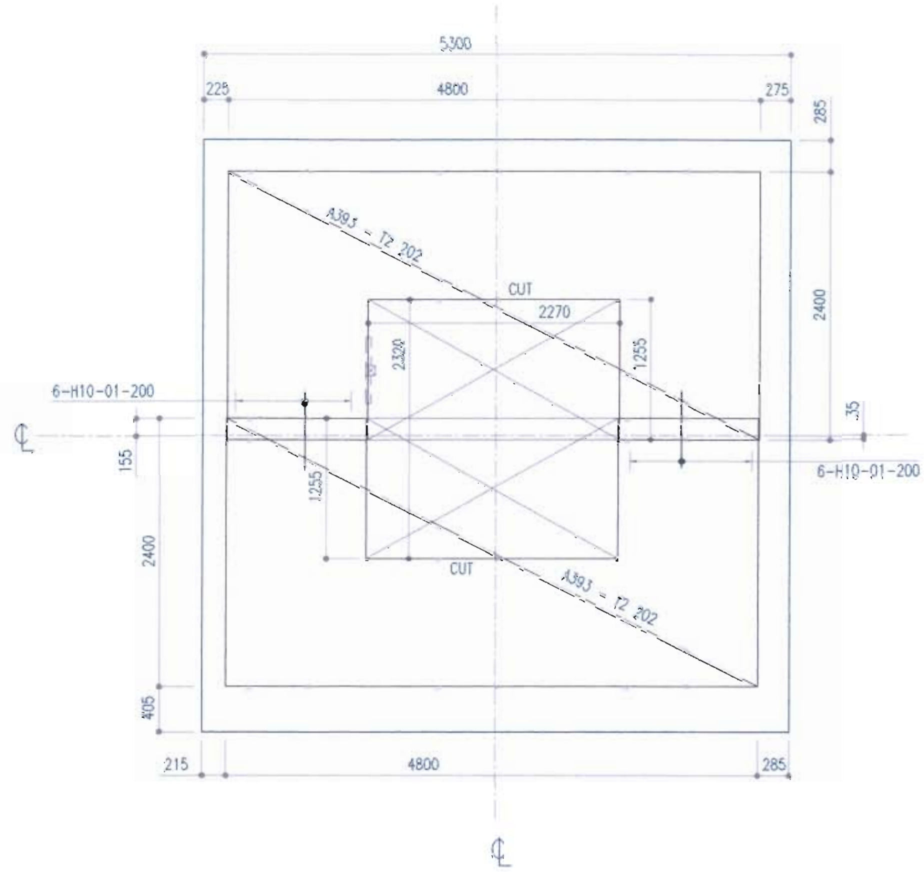
Gaia-Wind

WEIGHT (kg):

SCALE:1:50



LOWER TOP LAYER MESH REINFORCEMENT T1
SCALE 1:50



UPPER TOP LAYER MESH REINFORCEMENT T2
SCALE 1:50

CENTRAL SLAB AREA BELOW LEG ARRANGEMENT TO RECEIVE H10 STRAIGHT BARS AT 100 CRS. REFER TO REINFORCEMENT DRAWING AND SCHEDULE. THESE BARS MAY THEN BE ADJUSTED AS REQUIRED TO ALLOW LEGS TO PASS THROUGH TOP REINFORCEMENT. WHILST THE OVERALL NUMBER OF BARS IS TO BE UNCHANGED, THE BAR SPACING MAY BE INCREASED TO 150mm AS REQUIRED TO ALLOW LEGS TO PASS THROUGH.

A393 MESH: H10 BARS AT 200mm PITCH IN BOTH DIRECTIONS

T1: DENOTES LOWER TOP MESH
T2: DENOTES UPPER TOP MESH

ZONE	REV.	ECN.	DESCRIPTION	DRAWN	APPV'D	DATE
-		0014	FIRST ISSUE	MM	GF	09/02/11

REVISIONS

REFER TO SHEET 1

		NAME	DATE
DIMENSIONS IN MM UNLESS OTHERWISE STATED	DRAWN	MCM	09.02.11
DO NOT SCALE DRAWING	CHK'D	GF	09.02.11
DEBUR AND BREAK SHARP EDGES	APPV'D		
THIRD ANGLE PROJECTION	FINISH:		
FILENAME: P0000115.dwg			

MATERIAL:

WEIGHT (kg):

REVISION -

TITLE: FOUNDATION INSTALLATION - 18m LATTICE TOWER

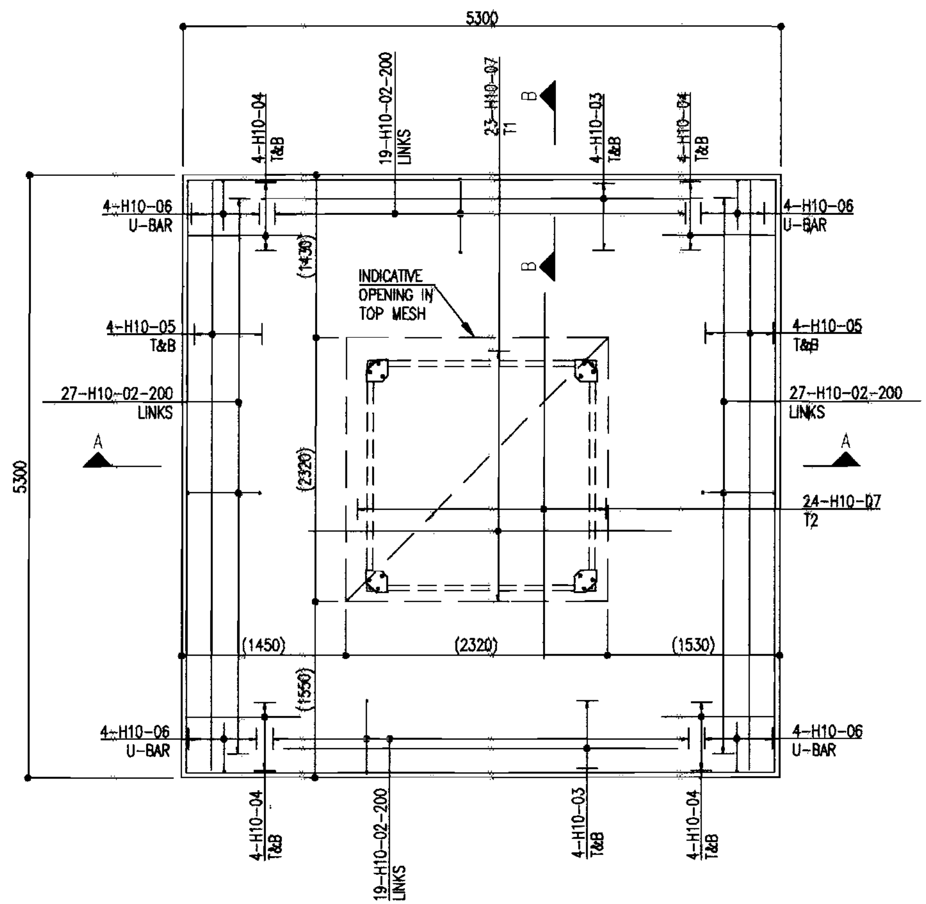
DWG NO. P0000115

TOLERANCES

A3

SCALE: 1:50

SHEET 5 OF 8



REINFORCEMENT GENERAL ARRANGEMENT
(MESH AND ASSOCIATED LACERS OMITTED FOR CLARITY)
SCALE 1:50

Notes:

REFER TO SHEET 1

1. THIS DRAWING IS COPYRIGHT
2. ALL WORK TO COMPLY WITH THE RELEVANT NATIONAL STANDARDS, EUROCODE 2 (INCL. NATIONAL ANNEXES), CODES OF PRACTICE AND BUILDING REGULATIONS.
3. REINFORCEMENT DENOTED (H) TO BE GRADE B500 A,B OR C IN ACCORDANCE WITH EUROCODE 2. BENDING OF REINFORCEMENT TO BE IN ACCORDANCE WITH EUROCODE 2.
4. CONCRETE GRADES TO BE AS FOLLOWS:
   C30/37 TO EUROCODE 2
5. NOMINAL COVER TO ALL REINFORCEMENT TO BE:
   45mm TOP
   50mm BOTTOM
   45mm SIDES WHERE SHUTTERED
   75mm SIDES/BASE WHERE CAST AGAINST GROUND OR SAND BLINDING
6. REINFORCEMENT ABBREVIATIONS:
   B1 - BOTTOM MESH, LOWER LAYER
   B2 BOTTOM MESH, UPPER LAYER
   T1 - TOP MESH, LOWER LAYER
   T2 - TOP MESH, UPPER LAYER
   T&B - TOP AND BOTTOM MESH'
7. ORDER OF MESH PLACEMENT TO BE B1,B2,T1,T2.
   NOTE WHERE HORIZONTAL POSITIONING AND ORIENTATIONS ARE EQUAL IN DIFFERENT LAYERS, ie;
   B1 = T2
   B2 = T1
8. MINIMUM LAPS TO ALL REINFORCEMENT TO BE:
   H8 - 320mm
   H10 - 400mm.
9. REINFORCEMENT SHOWN ON THIS DRAWING IS LISTED ON BAR BENDING SCHEDULE.
10. PERIMETER CAGES CAN BE PREFABRICATED AND THEN LACERS ADDED IN SITU

ZONE	REV.	ECN.	DESCRIPTION	DRAWN	APPV'D	DATE
-		0014	FIRST ISSUE,	MM	GF	09/02/11

REVISIONS

		NAME	DATE
DIMENSIONS IN MM UNLESS OTHERWISE STATED	DRAWN	MCM	09.02.11
DO NOT SCALE DRAWING	CHK'D	GF	09.02.11
DEBUR AND BREAK SHARP EDGES	APPV'D		
THIRD ANGLE PROJECTION	FINISH:		
FILENAME: P0000115.dwg			

Gaia-Wind

MATERIAL:

WEIGHT (kg):

REVISION -

TITLE:
FOUNDATION INSTALLATION - 18m LATTICE TOWER

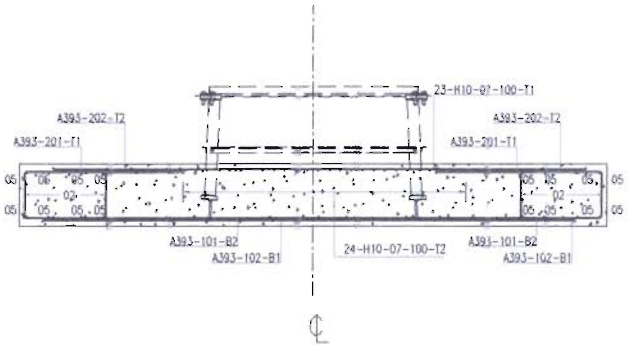
DWG NO.
P0000115

TOLERANCES

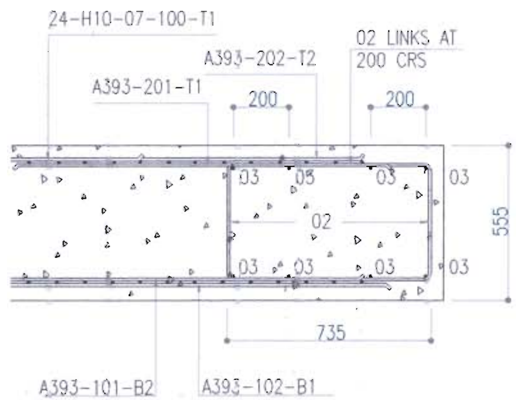
A3

SCALE:1:50

SHEET 6 OF 8



FOUNDATION SECTION A-A
SCALE 1:50



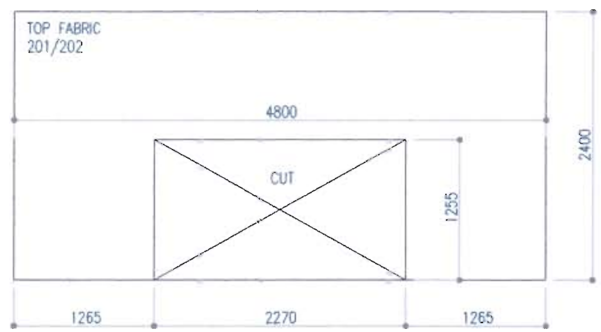
TYPICAL EDGE REINFORCEMENT DETAIL
AT SECTION B-B

BAR BENDING SCHEDULE - FOUNDATION INSTALLATION - 18m LATTICE TOWER

MEMBER	BAR MARK	TYPE AND SIZE		No OF MEMBERS	No OF BARS IN EACH	TOTAL No	LENGTH OF EACH BAR	SHAPE CODE	qc;A mm	qc;B mm	qc;C mm	qc;D mm
	01	H	10	1	72	72	700	00	700			
	02	H	10	1	92	92	2410	51	735	395	125	125
	03	H	10	1	16	16	3910	00	3910			
	04	H	10	1	32	32	1250	00	1250			
	05	H	10	1	16	16	5170	00	5170			
	06	H	10	1	16	16	1210	21	440	370	440	
	07	H	10	1	47	47	3215	00	3215			
FABRIC	201	A	393	2	1	2			4800	2400	CUT AS SHOWN	
TOP	202	A	393	2	1	2			4800	2400		
FABRIC	101	A	393	2	1	2			4800	2400		
BOTTOM	102	A	393	2	1	2			4800	2400		

NOTE:

DIMENSION 'A' IS IN DIRECTION OF LONG SIDE OF FABRIC



Notes:
REFER TO SHEETS 1&6

REVISION -

		NAME	DATE
DIMENSIONS IN MM UNLESS OTHERWISE STATED	DRAWN	MCM	09.02.11
DO NOT SCALE DRAWING	CHK'D	GF	09.02.11
DEBUR AND BREAK SHARP EDGES	APPV'D		
THIRD ANGLE PROJECTION	FINISH:		
FILENAME: P0000115.dwg			

TITLE: FOUNDATION INSTALLATION - 18m LATTICE TOWER

DWG NO. P0000115

MATERIAL:

TOLERANCES

A3

WEIGHT (kg):

SCALE:1:50

ZONE	REV.	ECN.	DESCRIPTION	DRAWN	APPV'D	DATE
-		0014	FIRST ISSUE.	MM	GF	09/02/11

REVISIONS

MATERIALS LIST – FOUNDATION INSTALLATION – 18m LATTICE TOWER

ITEM	GAIA-WIND PART NUMBER	QUANTITY	SPECIFICATION
STRUCTURAL SPECIFICATION	GWTD0022		EXCAVATIONS, IN SITU CONCRETE
FOUNDATION INSTALLATION– 18m LATTICE TOWER	P0000115		
MESH REINFORCEMENT		8 SHEETS	A393 MESH, 4 OF CUT, SEE DRAWING
STRAIGHT/BENT REINFORCEMENT			SEE DRAWING/SCHEDULE
CONTROL PANEL STAND **	2050520	1	SEE DRAWING
HY-CHAIR SPACERS		8	HY-TEN HEAVY DUTY CHC400 HY-CHAIR SPACERS = 400mm OR EQUIVALENT
GROUND FLOOR SPACERS *		30	HY-TEN GFS 40 = 50mm OR EQUIVALENT
VERTICAL SPACERS		16	HY-TEN 4555 DOUBLE COVER = 45mm OR EQUIVALENT
SOLID CONCRETE SPACERS *		8	HY-TEN SOLID CONCRETE 50mm SPACERS OR EQUIVALENT, LENGTH 300mm
EARTHING RODS AND TAPE			GAIA-WIND FOUNDATION INSTALLATION INSTRUCTIONS
TIE WIRE			

REFER TO SHEET 3 FOR FOUNDATION LEG ASSEMBLY BILL OF MATERIAL

* IF ALTERNATIVE TO GEN 1 BLINDING USED, REFER TO SHEET 2 NOTE ** FOR ALTERNATIVE SPACERS

** PART OF GAIA-WIND SUPPLIED FOUNDATION KIT P0000115(1). SEE SHEET 3.

-		0074	FIRST ISSUE.	MM	GF	09/02/11
ZONE	REV.	ECN.	DESCRIPTION.	DRAWN	APPV'D	DATE

REVISIONS

REVISION -

		NAME	DATE
DIMENSIONS IN MM UNLESS OTHERWISE STATED	DRAWN	MCM	09.02.11
DO NOT SCALE DRAWING	CHK'D	GF	09.02.11
DEBUR AND BREAK SHARP EDGES	APP'VD		
THIRD ANGLE PROJECTION	FINISH:		
FILENAME: P0000115.dwg			

TITLE: FOUNDATION INSTALLATION - 18m LATTICE TOWER

DWG NO. P0000115

MATERIAL:

TOLERANCES:

A3

WEIGHT (kg):

SCALE:

SHEET 8 OF 8