

## CONSTRUCTION NOTES

1. ALL DIMENSIONS TO EXISTING STRUCTURES ARE APPROXIMATE AND THE CONTRACTOR IS TO OBTAIN ALL SITE DIMENSIONS NECESSARY TO CARRY OUT THE WORKS. THE EXACT SITE LOCATION AS SHOWN ON THESE DRAWINGS IS TO BE ADJUSTED TO SUIT ANY EXISTING UNDERGROUND SERVICES PRESENT. ALL UNDERGROUND SERVICES TO BE LOCATED & IDENTIFIED PRIOR TO COMMENCEMENT OF WORKS.
2. ALL SPECIALIST ITEMS TO BE INSTALLED BY COMPETENT PERSONS AND USED IN ACCORDANCE WITH THE MANUFACTURERS RECOMMENDATIONS.
3. THE CONTRACTOR SHALL SUBMIT HIS PROPOSALS FOR ANY TEMPORARY SUPPORTS AND METHOD STATEMENT SHOWING THE SEQUENCE OF CONSTRUCTION OF THE WORKS TO THE EMPLOYER FOR COMMENT BEFORE COMMENCEMENT OF THE WORKS.
4. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ENSURING THAT SUFFICIENT TOLERANCES ARE PROVIDED AND INTEGRATED THROUGHOUT ALL ELEMENTS OF THE WORKS.
5. THE CONTRACTOR IS ENTIRELY RESPONSIBLE FOR MAINTAINING THE STABILITY OF ALL EXISTING BUILDINGS AND STRUCTURES WITHIN & ADJACENT TO THE WORKS.
6. ALL STEELWORK FABRICATION AND ERECTION SHALL COMPLY WITH THE "NATIONAL STEELWORK SPECIFICATION".
7. BOLTS TO BE GRADE 8.8 TO BS4190. MINIMUM SIZE M16 UNLESS STATED OTHERWISE. ALL BOLTS SHALL BE SPUN GALVANISED FINISH IN ACCORDANCE WITH BS EN 1461.
8. ALL WELDS TO BE 6mm FULL PROFILE FILLET WELD U.N.O.
9. ALL CONNECTIONS TO BE PROVIDED WITH FLAT WASHERS / SPRING WASHERS.
10. ALL STEELWORK TO BE GRIT BLASTED TO SA 2.5, PICKLED AND HOT DIP GALVANISED (100 MICRONS NO. MINAL THICKNESS) ALL IN ACCORDANCE WITH BS729.
11. ALL STEEL PRODUCTS MANUFACTURED TO HARMONISED BS EN STANDARDS SHALL BE SUPPLIED COMPLETE WITH CE MARKING AS FOLLOWS:
  - STEEL SECTIONS TO BS EN 10025-1
  - HOT FINISHED HOLLOW SECTIONS TO BS EN 10210-1
  - COLD FORMED HOLLOW SECTIONS TO BS EN 10219-1
  - FABRICATED SECTIONS TO BS EN 1090-1
12. THE CONTRACTOR SHALL BE RESPONSIBLE FOR CHECKING FOR THE ACCURACY OF ALL SITE DIMENSIONS AND THE CORRECT SETTING OUT OF WORK ON SITE.
13. STANDARD GALVANISING TO BS ENISO 1461:2009
14. ALL STEELWORKS AND WELDS TO BE EXECUTION CLASS 2
15. ALL STEELWORK TO BE GRADE S355 UNLESS OTHERWISE STATED

## FABRICATION & INSTALLATION INSTRUCTIONS

- PROPOSED HORIZONTAL BRACINGS BETWEEN 20.0m, 100X100X10 RSA IN S355 STEEL, SHALL BE SECURED BY A SINGLE M16 BOLT OF GRADE 8.8 AT EACH END.
- ALL FIXINGS TO BE POSITIONED ON, OR AS CLOSE AS POSSIBLE TO, THE MEMBERS CENTROIDAL AXIS AND ALL CONNECTIONS TO BE ARRANGED SUCH THAT THE CENTROIDAL AXES INTERSECT AS PER DETAILS.
- SNIPED ANGLES SHALL BE DONE USING A SINGLE STRAIGHT CUT PRIOR TO GALVANIZING AND ADHERE TO THE CRITERIA GOVERNING END DISTANCE.
- ALL STEEL IS TO BE IN ACCORDANCE WITH BS EN 10025 AND SHALL BE OF EXECUTION CLASS 2 (EXC2) TO BS EN 1090-2.
- ALL STEEL IS TO BE HOT DIP GALVANISED TO BS EN ISO 1461 AFTER CUTTING AND DRILLING OF HOLES.
- ALL BOLTS ARE TO BE TO BS 4190 GRADE 8.8 SHANKED BOLTS, SUCH THAT THE SHANK IS IN THE SHEAR PLANE. ALL DISTURBED CONNECTIONS ARE TO BE REFITTED WITH NEW BOLTS.
- SITE DRILLING OF THE EXISTING STEEL SHALL BE PERMITTED SUBJECT TO, THE HOLES BEING DE-BURRED, CLEANED AND PAINTED WITH A ZINC-RICH PAINT SYSTEM TO ACHIEVE A MINIMUM 100 MICRON OVERALL COATING AND THE SWarf BEING CAPTURED AND DISPOSED OF.
- WHERE NECESSARY FEEDER BRACKETS CURRENTLY FIXED TO EXISTING MEMBERS, SHALL BE REMOVED IN ORDER TO ALLOW BRACING TO BE INSTALLED. ANY DISCONNECTED FEEDER BRACKETS SHALL BE RE-FIXED TO THE STRUCTURE AS CLOSE TO ORIGINAL POSITION AS PRACTICABLE
- CONTRACTOR TO MAKE ADEQUATE PREPARATION FOR SITE DRILLING AND TRIMMING OF PROPOSED STEEL AS REQUIRED, CLEANED AND PAINTED WITH A ZINC-RICH PAINT SYSTEM TO ACHIEVE A MINIMUM 100 MICRON OVERALL COATING. AGREEMENT AND APPROVAL BY KAEG PRIOR TO ENGAGING SITE TO ELIMINATE AVOIDABLE DELAY AND ABORT.

## BOLT TORQUE VALUES

| BOLT SIZE<br>(ISO) | FULL NUT TOQUE (Nm) -DRY |                  |
|--------------------|--------------------------|------------------|
|                    | Class 4.8                | Class 8.8 or 9.8 |
| M10                | 29                       | 55               |
| M12                | 50                       | 95               |
| M14                | 80                       | 150              |
| M16                | 125                      | 240              |
| M18                | 175                      | 330              |
| M20                | 240                      | 475              |
| M22                | 330                      | 650              |
| M24                | 425                      | 825              |
| M27                | 625                      | 1200             |
| M30                | 850                      | 1650             |
| M33                | 1150                     | 2200             |
| M36                | 1450                     | 2850             |

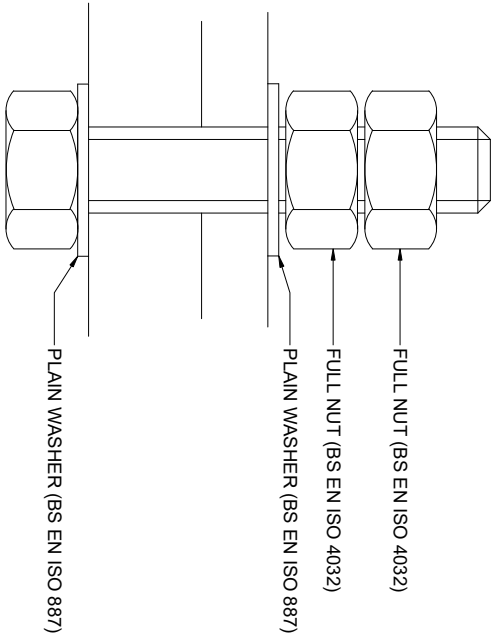
"DRY" MEANS PLAIN OR ZINC PLATED WITHOUT ANY LUBRICATION  
GENERAL BOL T/SET SCREW ARRANGEMENT SHALL BE :  
WASHER > BOLT , WASHER > NUT.

### STANDARD STEEL WEIGHT

| DESCRIPTION<br>(SIZE AND THICKNESS) | WEIGHT - kg/m<br>(IN ORDER OF THICKNESS) |
|-------------------------------------|------------------------------------------|
| PFC100x50                           | 10.2                                     |
| PFC125x65                           | 14.8                                     |
| PFC150x75                           | 17.9                                     |
| PFC150x90                           | 23.9                                     |
| EA90x90 – 12, 10, 8, 7              | 15.9, 13.4, 10.9, 9.6                    |
| EA100x100 – 15, 12, 10, 8           | 21.9, 17.8, 15.0, 12.2                   |
| EA120x120 – 15, 12, 10, 8           | 26.6, 21.6, 18.2, 14.7                   |
| CHS60.3 – 5.0, 6.3                  | 6.82, 8.39                               |
| CHS76.1 – 5.0, 6.3                  | 8.77, 10.8                               |
| CHS88.9 – 5.0, 6.3, 8.0, 10.0       | 13.3, 12.8, 16.0, 19.5                   |
| CHS114.3 – 5.0, 6.3, 8.0, 10.0      | 10.5, 16.8, 21.0, 25.7                   |
| CHS139.7 – 5.0, 6.3, 8.0, 10.0      | 16.6, 20.7, 26.0, 32.0                   |
| CHS168.3 – 5.0, 6.3, 8.0, 10.0      | 22.5, 25.2, 31.6, 39.0                   |

## NOTES

- [illegible]



## STRUCTURAL NOTES

|              |          |          |          |
|--------------|----------|----------|----------|
| SCALES       | DRAWN    | CHECKED  | APPROVED |
|              | AOS      | KAGG     | KAGG     |
| As indicated | DATE     | DATE     | DATE     |
|              | 23.10.19 | 23.10.19 | 23.10.19 |
| DRAWING NO.  |          |          | REV      |
| 0005         |          |          | A        |

| REV | DATE     | DESCRIPTION           | D   | C    | A    |
|-----|----------|-----------------------|-----|------|------|
| A   | 23.04.19 | 1 <sup>ST</sup> ISSUE | 095 | 1463 | 1462 |

**FOR CONSTRUCTION**

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**RADIO STRUCTURES LTD**

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21m SLIMLINE SQUARE  
LATTICE TOWER

## TITLE