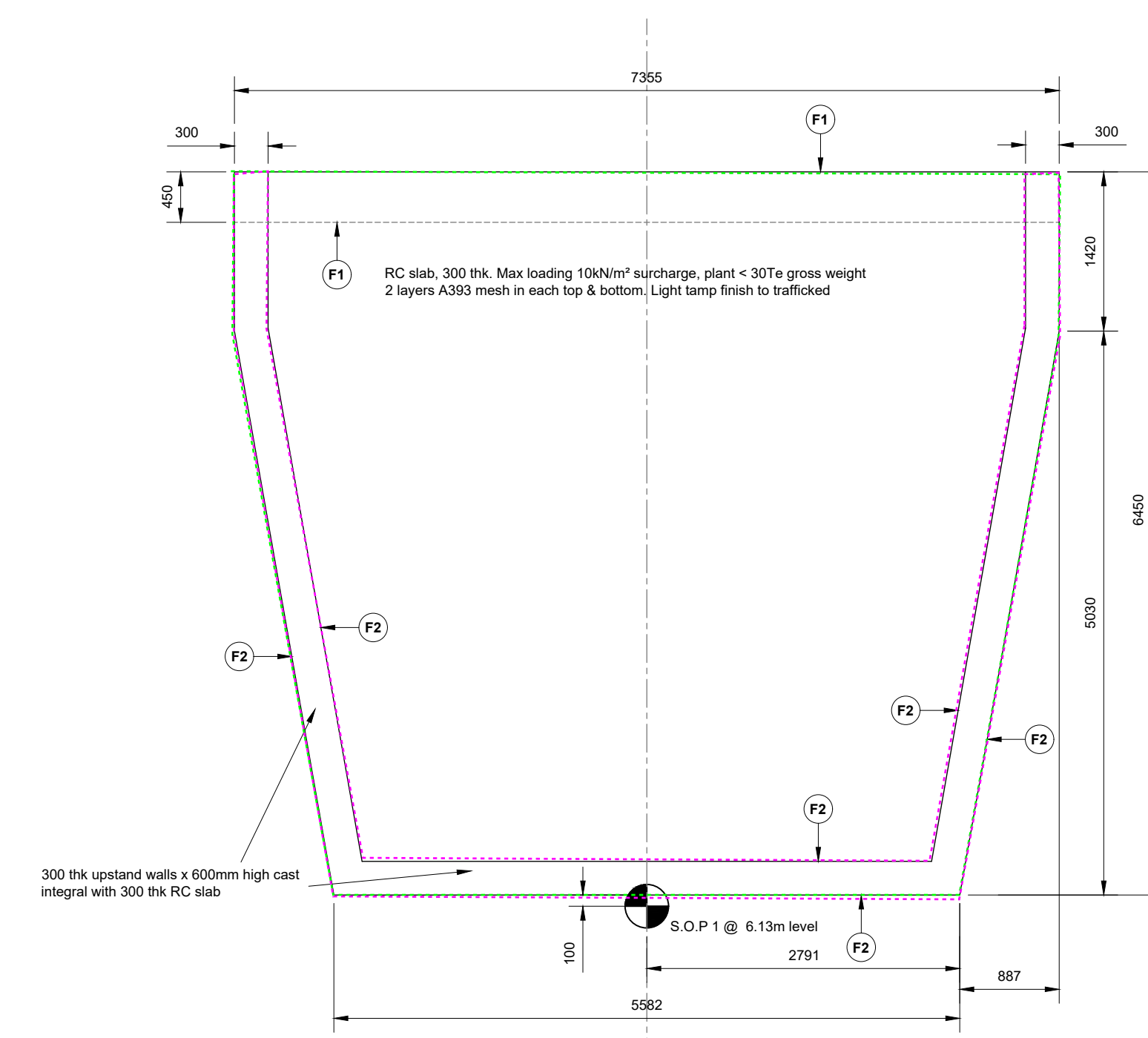
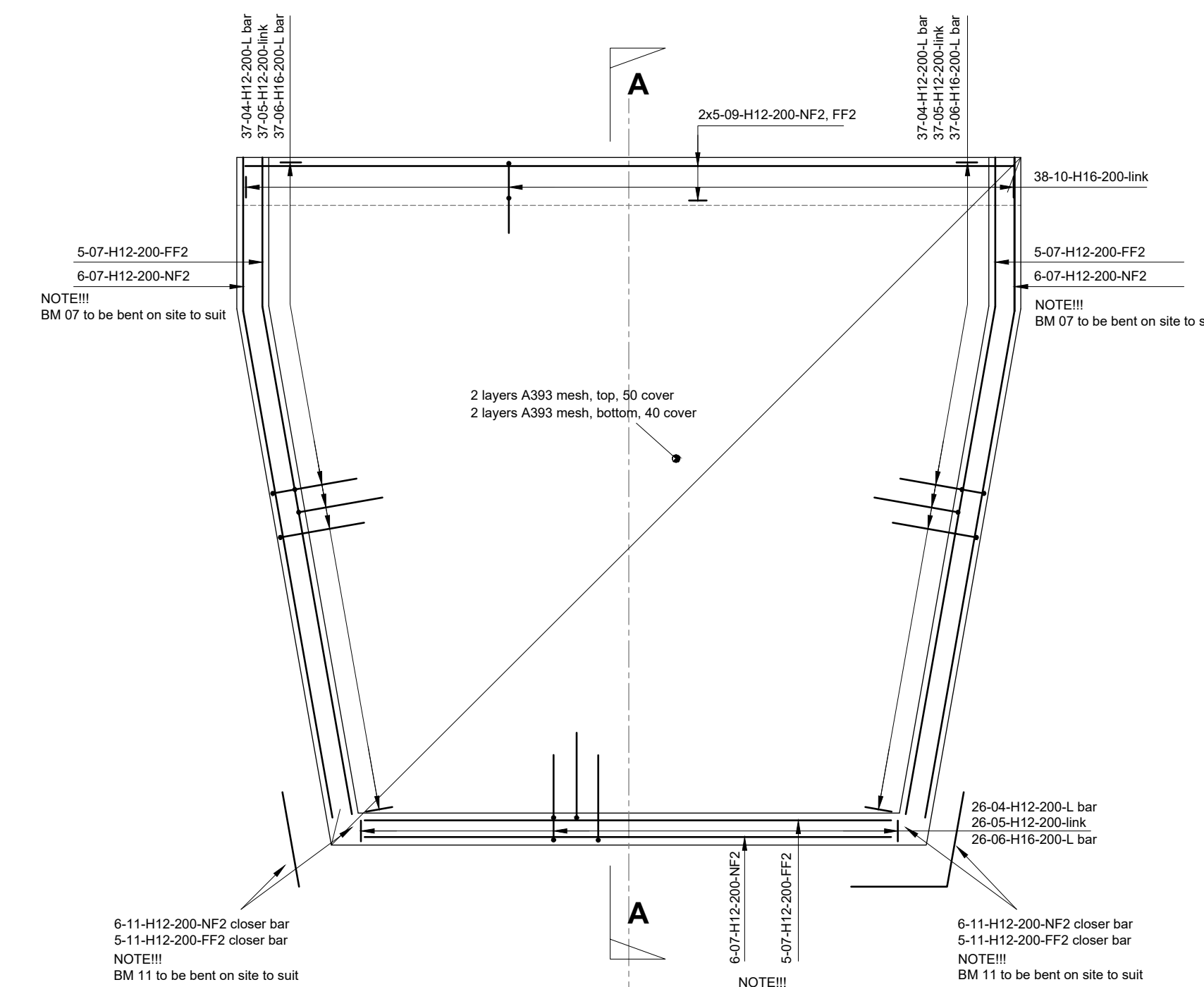


PLAN ON MECHANICALLY STABILISED GRANULAR RAFT FOUNDATION AT LOWER LEVEL, 1:50 (-1.0m level)

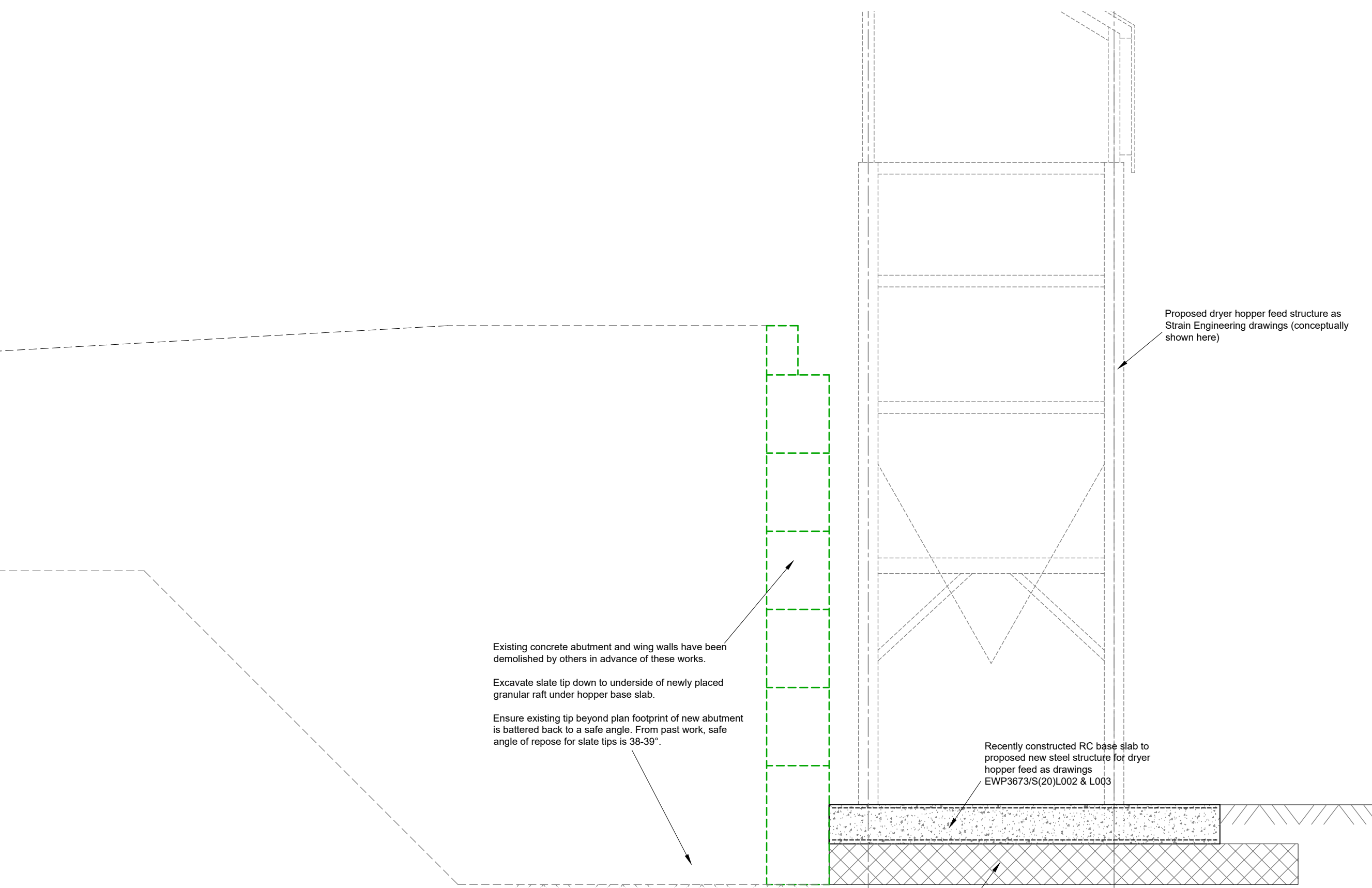


PLAN ON RC SLAB AT LOADING LEVEL, 1:50 (+6.13m level)

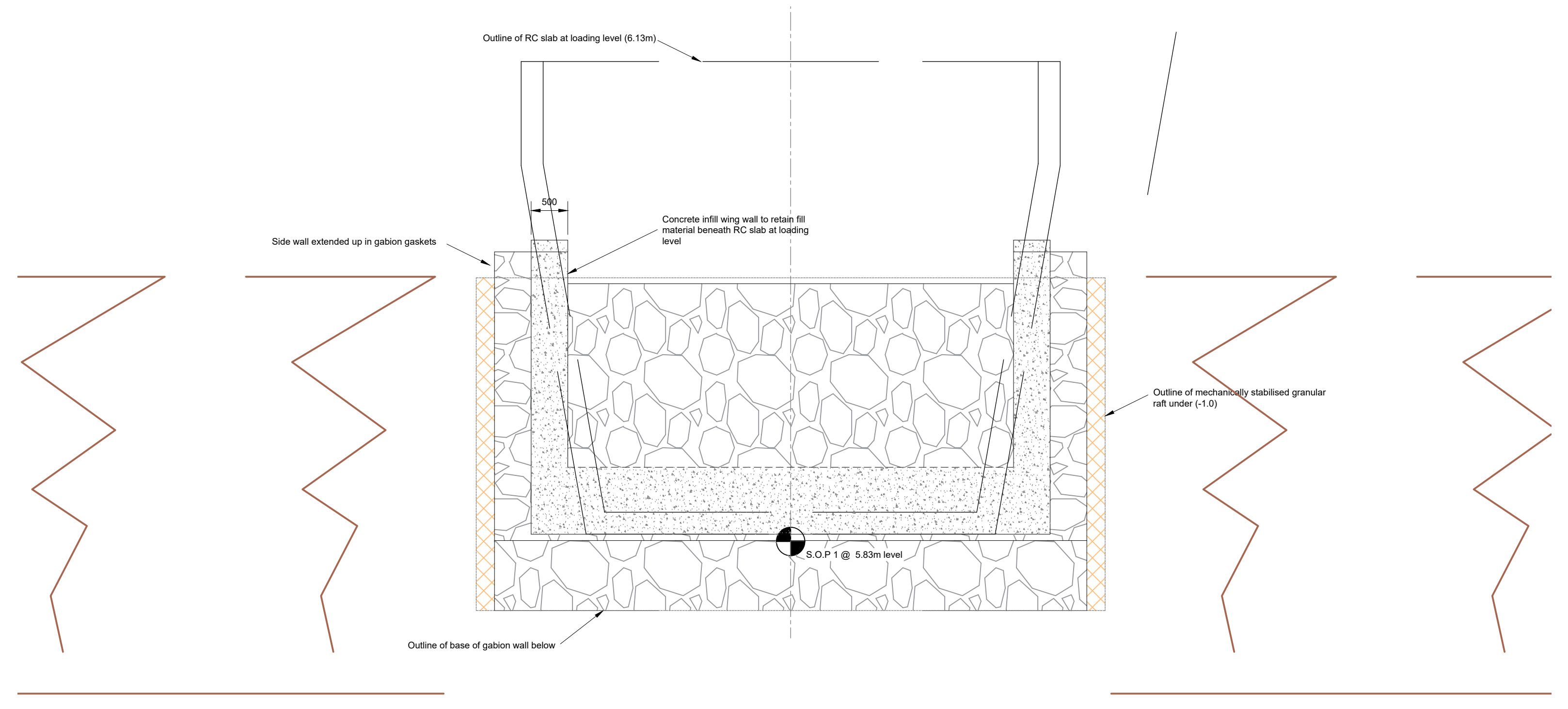


DETAIL C - PLAN ON RC SLAB AT LOADING LEVEL SHOWING REINFORCEMENT DETAILS, 1:50 (+6.13m level)

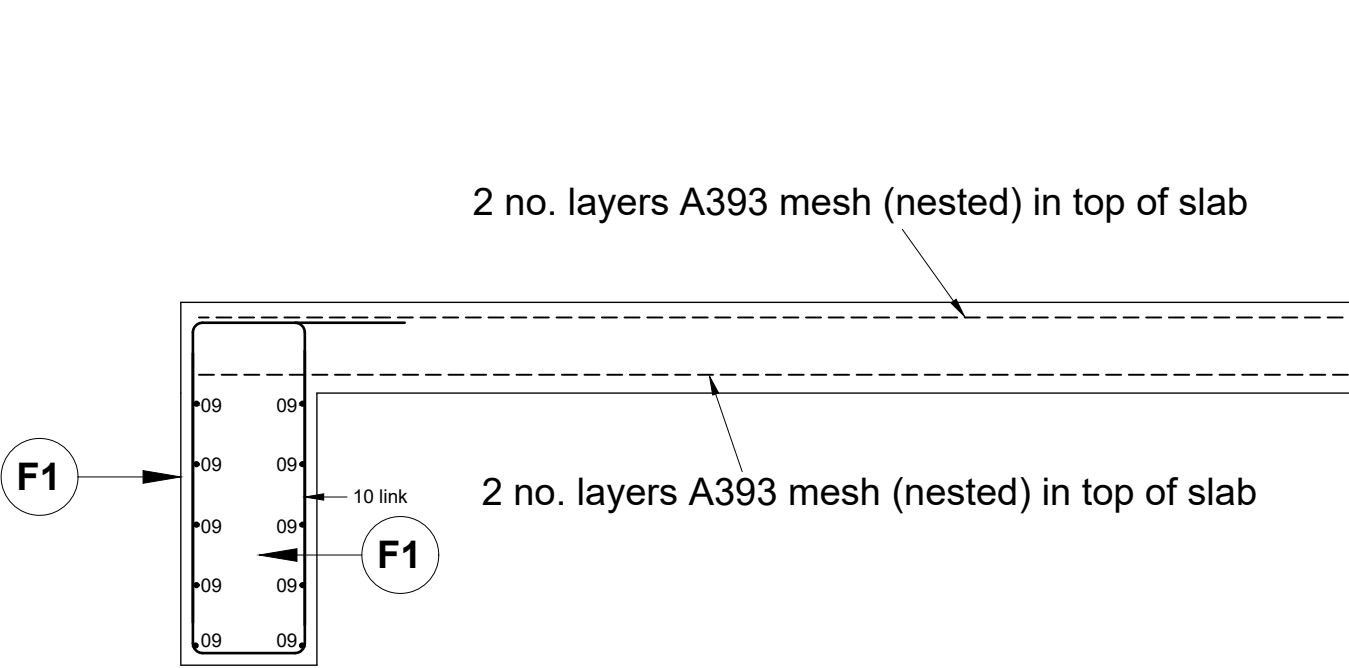
Notes:
Do not scale from this drawing.
All dimensions to be verified by site measurement.
This drawing to be read in conjunction with all other relevant contract drawings & specifications.
All work to be carried out in accordance with the Specification for Highway Works (current edition)
Structural Concrete to slab bases & upstand walls:
Designed mix:
- 50 year design life
- Exposure class XC3/4, XD3, XF4 to BS5500-1:2015
- Min cover, 40mm walls, 50mm top of slab
- Strength grade, C35/45
- Max aggregate size, 20mm
- Fines-to-total aggregate, BS5500-2:2015, 4.3.2
- Coarse aggregate to BS EN 12620 & PD 6682-1
- Fine aggregate to BS EN 12620 & PD 6682-1
- Max W/C ratio, 0.40
- 4.5% air entrainment
- Minimum cement content, 380 Kg/m³
- Cement type IIIA, 100-V
- For type IIIA cement, GGBFS shall not exceed 50%
- Slump class, S3
- Min cover, top 50mm
- Min cover, bottom 40mm
- Side faces 40mm
Concrete binding under slab bases where required:
Designated mix, reference GEN3 to BS 8500-1:2006
- Slump class, S3
Formwork: (specification for highway works, clause 1708, SHW)
- Exposed faces, vertical & formed to be class F2
- Buried faces, vertical & formed to be class F1
- Exposed faces, unformed, top of walls to be class U3
- Light tamp finish to trafficked surface
All exposed external arrises to have min 25x25mm chamfer
Reinforcement:
For reinforcement, see bar bending schedule No. EWP5949/s(20)L001/01
Laps in reinforcement shall not be less than 40 x smaller bar diameter in lap
All reinforcement to be free of damage & excessive rusting
Notations
EF Each face ABR Alternate bars reversed
FF Far face EQ SPD equally spaced
NF Near face
T Top
B Bottom
Where the rebar is denoted T1 etc, the number 1 refers to the outermost layer etc
All rebar to conform with BS 4449: 2005, H being the designation of grade B500A, B500B or B500C meeting this standard except designation X which shall be plain round mild steel, grade 250 to BS4449



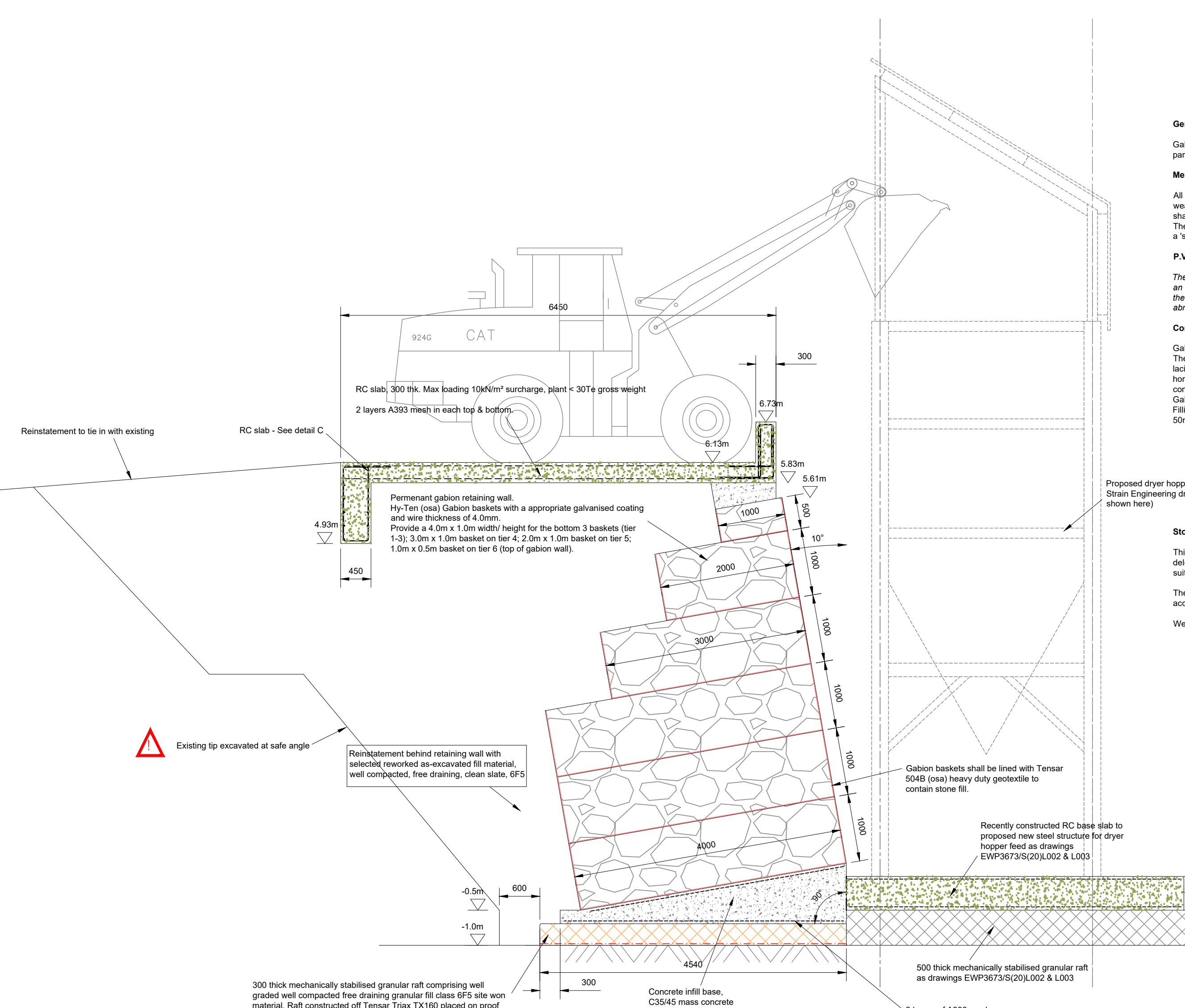
SECTION THROUGH MID REGION OF HOPPER FEED LOADING STRUCTURE - EXISTING RETAINING WALL/NEW TOWER FOUND, 1:50



PLAN ON TOP TIER OF GABION WALL, 1:50 (+5.83m level)

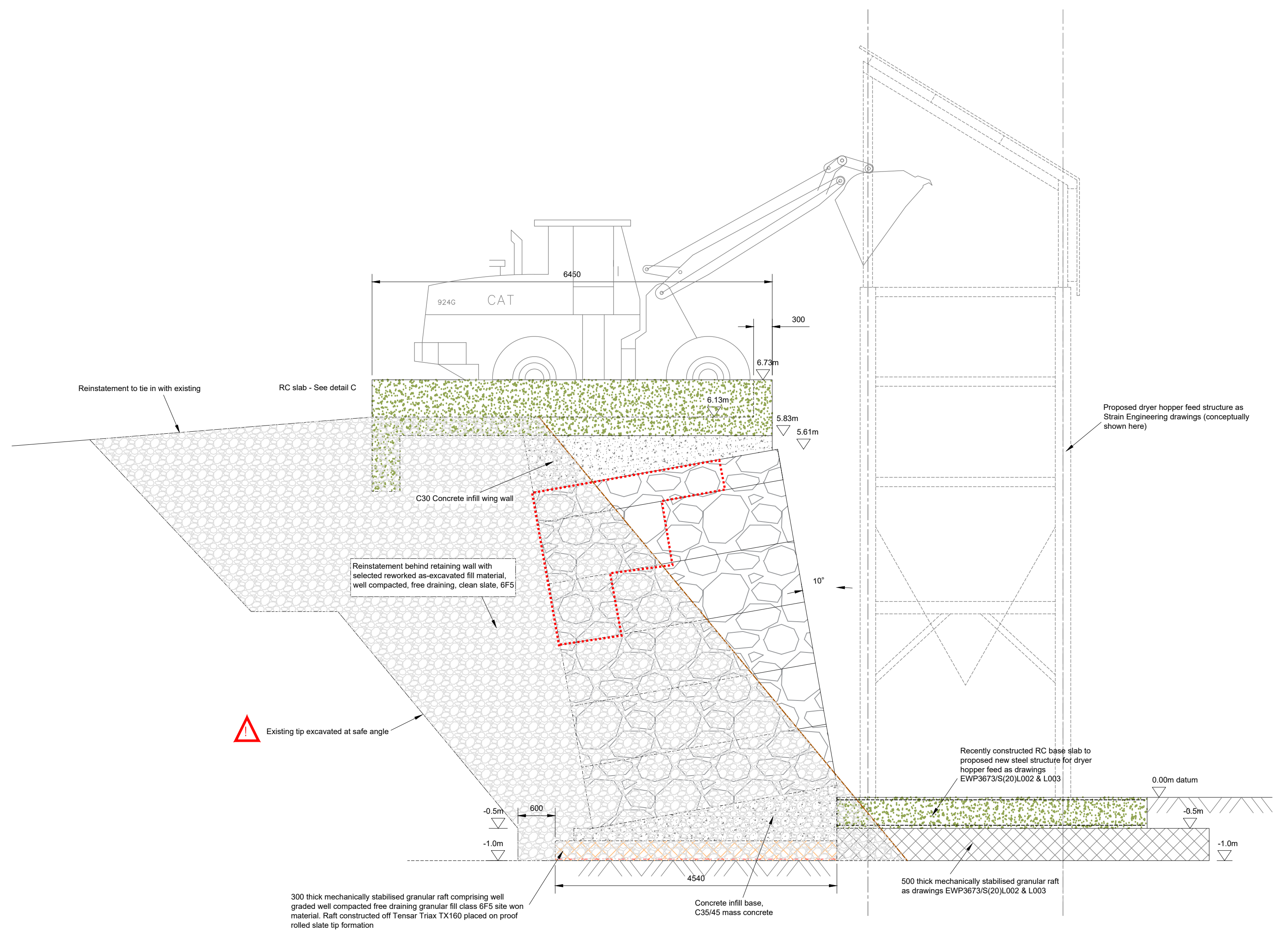


see bar bending schedule EWP5949/s(20)L001/01 for reinforcement



SECTION THROUGH MID REGION OF HOPPER FEED LOADING STRUCTURE - PROPOSED RETAINING STRUCTURE, 1:50

General
Gabion boxes and mattress units shall be formed from hexagonal woven steel wire mesh, divided by partition panels (diaphragms) at 1m centres, as detailed on the drawings.
Mesh
All wire shall be in accordance with BS 10521:980 heavily galvanized with a zinc coating to BS 443:1982 prior to weaving the mesh. Mesh openings shall be hexagonal in shape, nominally 80 x 100mm (Type S). Mesh joints shall be flexible and shall consist of one and a half turns of wire. (This mesh is often called double or triple twist). The mesh wire shall be 4mm dia. All baskets are to be tied together. All edges of the mesh shall be reinforced with a 'hedgehog' wire, heavier than the mesh wire and not less than 3.45mm diameter for mesh type B2.
P.V.C. Coating (to be included only if required)
The wires shall be additionally coated with p.v.c. sheathing grey in colour of mean wall thickness 0.50mm, giving an average overall diameter 1.2mm greater than the zinc coated core wire. The p.v.c. shall be capable of resisting the corrosive effects of exposure to ultra violet light, immersion in sea water, normally occurring pollutants and abrasion.
Construction
Gabion construction to be to BS8002. The assembly and erection of the units shall be generally in accordance with the manufacturer's instructions, using locking wire 2.2mm in diameter, of the same specification as the mesh wire. All locking must be continuous and horizontal bracing wires must be fixed on exposed faces of box gabions. Particular care will be taken throughout construction to ensure tightness of mesh, well packed filling with minimum voids, and secure lacing. Gabion baskets shall be fixed with Tensar (S48) (pass) heavy duty geotextile to concrete stone fill. Filling shall be carried out by hand. Box gabions shall be filled whilst under tension and overlaid by 20mm to 50mm above their tops to allow for subsequent settlement. 100mm filling material must be used for this purpose.
Stone Fill
This shall be clean rough crushed stone and shall be essentially free from dust, clay, vegetative matter and other deleterious matter. It should be hard, tough, durable and dense, resistant to the action of air and water and suitable for all aspects of the purpose intended. The stone size shall be not less than 80mm and not greater than 200mm. A tolerance of 5% of smaller material is acceptable. Waste Stone can offer 0/80-200 graded stone FOC.
Reinforcement to be in with existing
RC slab - See detail C
Permanent gabion retaining wall. 100mm loose gabion baskets with an appropriate galvanneal coating and wire thickness of 2.0mm. Provides a 6m x 1.0m width height for the bottom 3 baskets (for 1-3). 3.0m x 1.0m basket on tier 4. 2.0m x 1.0m basket on tier 5. 1.0m x 0.5m basket on tier 6 (top of gabion wall).
Proposed dryer hopper feed structure as shown Engineering drawings (conceptually shown here)
Gabion baskets shall be lined with Tensar S01B (pass) heavy duty geotextile to contain stone fill.
Recently constructed RC base slab to proposed new steel structure for dryer hopper feed as drawings EWP5949/s(20)L002 & L003
500 thick mechanically stabilised granular raft as drawings EWP5949/s(20)L002 & L003
3 layers of A393 mesh on each top & bottom of base slab, 40mm cover
Concrete fill base, C35/45 min concrete



ELEVATION OF HOPPER FEED LOADING STRUCTURE - PROPOSED RETAINING STRUCTURE, 1:50

DESIGN STATUS
 Preliminary, not for construction
 Awaiting Client approval
 Final, issued for construction

| | | |
|---|--|----------------|
| Specification for gabion retaining walls added | | Mar 2016 |
| EVANS WOLFENDEN PARTNERSHIP First Floor, 27 Princes Drive, Colwyn Bay, Conwy, LL29 8HT Tel: +44 (0)1492 533721 www.expeng.co.uk | | |
| Client | Welsh Slate Ltd Pantyrwyn Quarry Bethesda Bangor Gwynedd, LL57 4YG | |
| Project | Dryer feed system, Powders Plant, Blaenau Ffestiniog | |
| Title | Alternative gabion retaining wall scheme and High level hopper loading bay structure | |
| Original Scale | Drawn | Checked |
| 1:50 | RGLR | JIE |
| Date: May 2018 | Date: May 2018 | Date: May 2018 |
| Drawing Number | A0 | Rev A |
| EWP5949/s(20)L001 | | |