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1. GENERAL:  
1.1 THESE NOTES SHALL BE READ IN CONJUNCTION WITH THE ARCHITECTURAL DRAWINGS, THE SPECIFICATIONS AND THE ENGINEER'S FOOTING CONSTRUCTION REPORT/STRUCTURAL DOCUMENTATION, ETC.  
1.2 ALL DIMENSIONS AND LEVELS SHALL BE CONFIRMED WITH THE ARCHITECTURAL DRAWINGS AND/OR CHECKED ON SITE.  
1.3 ENGINEER'S DRAWINGS MUST NOT BE SCALED.  
1.4 THE BUILDER AND/OR AGENT SHALL BE RESPONSIBLE FOR MAINTAINING THE STABILITY OF ALL STRUCTURES AND ANY ELEMENTS UNTIL THEIR COMPLETION AND SHALL ENSURE THAT NO PART OF STRUCTURES OR ANY ELEMENTS ARE OVERSTRESSED BY EXCESSIVE LOADING.  
1.5 THE SPECIFICATIONS BELOW SHALL APPLY UNLESS NOTED OTHERWISE.  
1.6 REQUEST FOR INFORMATION WILL GENERALLY BE RESPONDED BY THE ENGINEER WITHIN 5 WORKING DAYS, WHILST REVIEWS OF THE SHOP DRAWINGS GENERALLY WITHIN 10 WORKING DAYS.

2. CONCRETE:  
2.1 CONCRETE CONSTRUCTION TO COMPLY WITH AS3600.  
2.2 CONCRETE SHALL BE AS FOLLOWS:

ELEMENT	GRADE (MPa)	ELEMENT	GRADE (MPa)
STRIP, PADS	25	SUSPENDED SLABS	32
SLAB ON GROUND	32	CONCRETE BEAMS	32
PRECAST WALL PANELS	40	CONCRETE COLUMNS	40

CONCRETE TO HAVE NOMINAL 100mm SLUMP UNO  
FOR SITES WITHIN 1KM OF THE SHORE LINE OF LARGE EXPANSES OF SALTWATER, HEAVY INDUSTRIAL AREAS OR HIGH SULPHATE SOILS WHERE SURFACES (egVERANDAHs, BALCONIES, CARPORTS) ARE EXPOSED, THE SURFACE SHALL BE PROTECTED WITH SUITABLE TOPPING, SEALER, TILES (etc) OR THE CONCRETE GRADE SHALL BE NOT LESS THAN N40.  
2.3 CONSTRUCTION JOINTS ARE TO BE THOROUGHLY SCABBLED OF ALL LAITANCE AND POORLY COMPACTED MATERIAL. VERTICAL JOINTS TO BE POURED AGAINST SHUTTERING.  
2.4 ALL CONCRETE TO BE PROPERLY CURED BY KEEPING ALL EXPOSED SURFACES IN A MOIST, DAMP CONDITION FOR AT LEAST THE FIRST 7 DAYS AFTER PLACING OR BY SPRAYING WITH AN APPROVED CURING COMPOUND, SUBJECT TO COMPATABILITY WITH PROPOSED SURFACE FINISHES.  
2.5 MINIMUM STRIPPING TIMES:

- SLAB-SOFFIT 14 DAYS, PROPS 21 DAYS
- BEAMS-SIDES 3 DAYS, SOFFIT 21 DAYS
- COLUMNS AND WALLS - (UNLOADED) 3 DAYS

2.6 REINFORCEMENT DESIGNATIONS ARE AS FOLLOWS:

- R - PLAIN ROUND STRUCTURAL BAR TO AS/NZS 4671
- F - HARD DRAWN WIRE FABRIC TO AS/NZS 4671
- W - HARD DRAWN WIRE BAR TO AS/NZS 4671
- N - HOT ROLLED DEFORMED BAR TO AS/NZS 4671
- SL - SQUARE RIBBED FABRIC TO AS/NZS 4671
- RL- RECTANGULAR RIBBED FABRIC TO AS/NZS 4671

2.7 PROVIDE 0.2mm HIGH IMPACT RESISTANCE BRANDED POLYETHYLENE MEMBRANE TO AS 2870 THROUGHOUT UNDERSIDE OF FLOOR SLABS ON GROUND, ALL LAPS TO BE 300mm AND SEALED WITH A 50mm WIDE STRIP OF PRESSURE-SENSITIVE WATERPROOF TAPE.  
2.8 ALL FILLING TO BE NON-CLAY MATERIAL COMPACTED IN 200mm LAYERS TO 98% MAXIMUM DRY DENSITY WHEN TESTED IN ACCORDANCE WITH AS1289 ES.11 STANDARD (1993).  
2.9 WHERE ROD REINFORCEMENT IS SPLICED, THE MINIMUM LAP LENGTH SHALL BE:  
N12-500 LAP, N16-750 LAP, N20-1000 LAP, N24-1450 LAP, N28-1800 LAP, N32-2150 LAP, N36-2600 LAP.  
2.10 LAPS TO SLAB MESH TO BE ONE (1) FULL MESH PANEL PLUS 25mm.  
2.11 CLEAR CONCRETE COVER TO REINFORCEMENT (INCLUDING FITMENTS AND WIRE TIES) SHALL BE:  
SLAB ON FILL - 30mm BOTTOM AND SIDES, 20mm TOP.  
FOOTINGS PROTECTED BY VAPOUR BARRIER - 40mm BOTTOM AND SIDES, 20mm TOP.  
RESIDENTIAL FOOTINGS UNPROTECTED BY VAPOUR BARRIER - 40mm TOP, 50mm BOTTOM AND SIDES  
NON-RESIDENTIAL FOOTINGS UNPROTECTED BY VAPOUR BARRIER - 50mm TOP, BOTTOM AND SIDES  
SUSPENDED SLABS, BEAMS AND COLUMNS - 20mm INTERNAL, 40mm EXTERNAL.  
2.12 CONCRETE TO BE KEPT FREE OF LOAD BEARING BRICKWORK BY TWO (2) LAYERS OF SUITABLE MEMBRANE.  
2.13 BRICKWORK MUST NOT BE BUILT ON CONCRETE SLABS OR BEAMS UNTIL FORMWORK AND PROPS SUPPORTING SAME HAVE BEEN REMOVED.  
2.14 TENSION CRACKS MAY OCCUR IN SLABS; APPLY SUITABLE SEALANT FOR EXPOSED SURFACES.  
2.15 PROVIDE 10mm ISOLATION JOINTS WHERE CONCRETE IS ADJACENT STEELWORK/MASONRY.  
PROVIDE SUITABLE FILLER AND SEALANT.

3. MASONRY:  
3.1 CONSTRUCTION TO COMPLY WITH AS3700.  
3.2 MINIMUM CHARACTERISTIC UNCONFINED COMPRESSIVE STRENGTH OF UNITS TO BE AS FOLLOWS:  
CLAY BRICKS 40MPa  
CONCRETE BRICKS 10MPa  
CONCRETE HOLLOW BLOCKS 15MPa  
3.3 MORTAR: BRICKWORK 1 : 0.25 : 3 (CEMENT : LIME : SAND)  
BLOCKWORK 1 : 0.5 : 4.5  
3.4 INFILL CONCRETE GROUT TO REINFORCED MASONRY TO BE GRADE 20, SLUMP 230 +/- 30, 10mm AGGREGATE.  
3.5 FOR HOLLOW BLOCK RETAINING WALLS, ALL CORES ARE TO BE GROUTED.  
3.6 GROUTING TO REINFORCED MASONRY SHALL BE COMPACTED BY RODDING WITH A PLAIN ROUND BAR. ALL AIR POCKETS AND BUBBLES MUST BE DISPLACED DURING COMPACTION. HOWEVER, CARE MUST BE TAKEN TO AVOID DAMAGING OR DISLODGING THE MASONRY OR REINFORCEMENT WHILE COMPACTING THE GROUT.

4. STEELWORK:  
4.1 ALL TO COMPLY WITH AS 4100, AS/NZS 1538, AND AS 2327.  
4.2 ALL WELDING TO COMPLY WITH AS 1554, PARTS 1, 2 AND 3.  
4.3 ALL FILLET WELDS TO BE 6mm (CATEGORY SP) EXTENDING THE FULL LENGTH OF THE EDGES IN CONTACT, EXCEPT WHERE PLATE THICKNESSES ARE LESS THAN 6mm, USE A WELD SIZE TO MATCH.  
4.4 THE STEELWORKER SHALL SUPPLY ALL HD BOLTS, NUTS AND ALL OTHER BOLTS AND WASHERS REQUIRED FOR THE ERECTION OF THE STEELWORK, HOLES FOR HD BOLTS TO BE 3mm OVERSIZE, HOLES FOR OTHER BOLTS TO BE NO MORE THAN 2mm OVERSIZE.  
4.5 ALL BOLTING SHALL COMPLY WITH AS 4100 AND BE GRADE 8.8/S UNO.  
4.6 ALL BASE PLATES, HD BOLTS AND COLUMNS IN CONCRETE WHICH IS IN CONTACT WITH GROUND TO HAVE CONCRETE COVER OF 75mm MINIMUM.  
4.7 MINIMUM EDGE DISTANCE (TAKEN FROM CENTRE OF FASTENER) SHALL BE:  
SHEARED OR HAND FLAME CUT EDGE - 175D  
ROLLED PLATE, MACHINE FLAME CUT SAWN OR PLANED EDGE - 150D  
ROLLED EDGE OF A ROLLED SECTION - 125D  
(WHERE 'D' IS THE NOMINAL DIAMETER OF THE FASTENER).

4.8 STEELWORK TO BE CONCRETE ENCASED MUST FIRST BE WRAPPED WITH F41 MESH. THE REINFORCEMENT IS TO BE PLACED 25mm FROM THE STEELWORK.  
4.9 PROVIDE A 10mm CLEARANCE BETWEEN VERTICAL FACES OF STEELWORK AND ADJACENT MASONRY WALLS. PROVIDE PURPOSE MADE W6 OR SIMILAR APPROVED TIES BETWEEN STEELWORK AND MASONRY AT 600 C/C (MAXIMUM).  
4.10 ALL STEELWORK TO BE ADEQUATELY PROPPED AND BRACED DURING CONSTRUCTION UNTIL ALL PERMANENT BRACING, MASONRY AND CLADDING HAS BEEN ERECTED.  
4.11 ALL COLD FORMED SECTIONS ARE TO BE CONSTRUCTED IN ACCORDANCE WITH THE MANUFACTURER'S SPECIFICATIONS. TRIMMING MEMBERS THE SAME SIZE AS THE ADJOINING MEMBERS SHALL BE PROVIDED TO SUPPORT EDGES OF SHEETING ALONG UNSUPPORTED EDGES SUCH AS HIPs, VALLEYS AND ROOF/WALL PENETRATIONS.  
4.12 STEELWORK PROTECTIVE COATINGS TO BE:

- EXPOSED EXTERNAL STEELWORK WITHIN 1 km OF BREAKING SURF OR WITHIN 100m OF SALT WATER NOT SUBJECT TO BREAKING SURF OR HEAVY INDUSTRIAL AREAS : HOT-DIP GALVANIZED, AND PAINTED WITH AN APPROVED PAINTING SYSTEM TO AS/NZS 2312.
- EXPOSED EXTERNAL STEELWORK (NOT EXPOSED TO CORROSIVE ENVIRONMENT) : HOT-DIP GALVANIZED, 'DIMET' TREATED OR ONE COAT SPRAYED INORGANIC ZINC SILICATE PAINT OVER CLASS 2.5 ABRASIVE BLAST SURFACE.
- STEELWORK ACTING AS DOWNPIPE OR GUTTER : HOT-DIP GALVANIZED.
- INTERNAL STEELWORK (NOT EXPOSED TO MOISTURE OR CORROSIVE ENVIRONMENT): RED OXIDE ZINC CHROMATE PRIMER (ROZC) OVER WIRE BRUSH SURFACE.
- STEELWORK IN CONTACT WITH GROUND (e.g. RETAINING WALLS) : 2 COATS OF APPROVED QUALITY BITUMINOUS PAINT, TAR, EPOXY OR SIMILAR.
- NOTE: ALL STEELWORK IN CONTACT WITH THE GROUND, PAVING OR SOIL ETC SHALL IN ADDITION TO THE PROTECTION REQUIRED ABOVE BE EITHER WRAPPED IN 'DENSO' TAPE OR CONCRETE ENCASED WITH A MINIMUM OF 75mm THICK CONCRETE.

4.13 TWO (2) COPIES OF THE SHOP DETAIL DRAWINGS ARE TO BE SUBMITTED TO THE ENGINEER AND REVIEW OF THE SAME OBTAINED BEFORE COMMENCING FABRICATION. REVIEW WILL NOT COVER DIMENSIONS. SHOP DRAWINGS WILL GENERALLY BE REVIEWED BY THE ENGINEER WITHIN 10 WORKING DAYS.

5. TIMBER NOTES:  
5.1 ALL TO COMPLY WITH AS 1720 AND AS 1684.  
5.2 ALL MGP10 GRADE TIMBER MUST EXCLUDE "HEART IN" MATERIAL TO GIVE THE TIMBER A MINIMUM JOINT GROUP STRENGTH OF JD4 IN ACCORDANCE WITH AS 1720.

6. EARTHWORKS:  
6.1 ALL TO COMPLY WITH AS 3798 GUIDELINES  
6.2 UNLESS OTHERWISE APPROVED BY THE ENGINEER THE LIMITATIONS OF EXCAVATIONS NEAR FOOTINGS SHALL BE AS FOLLOWS:

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CRITICAL LINE

FOOTING EXCAVATION

BACKFILLED TRENCH OR OTHER EXCAVATION

7. SITE INSPECTIONS:  
7.1 MUST BE CARRIED OUT AT THE FOLLOWING STAGES.

- AFTER SITE PREPARATION AND TRENCHING FOR THE FOOTING BEAMS
- AFTER THE PREPARATION OF REINFORCEMENT, PRIOR TO THE PLACEMENT OF ANY CONCRETE.
- AT THE CONCRETE POUR.
- AFTER COMPLETION OF THE MASONRY, PRIOR TO CONSTRUCTION OF THE ROOF TO ENSURE CORRECT PLACEMENT OF CONTROL JOINTS.
- UPON COMPLETION OF THE INSTALLATION OF PAVING, STORMWATER DRAINS, PIPES AND STRUCTURES.

8. SURFACE PROTECTIVE COATINGS:  
ALL STRUCTURAL MEMBERS AND SURFACES,IE: BEAMS,COLUMNS,WALLS,FLOORS,CEILINGS,ROOFS AND THE LIKE BOTH INTERNALLY AND EXTERNALLY SHALL BE COATED WITH AN APPROVED PROTECTIVE COATING TO SUIT THEIR INTENDED USE/EXPOSURE ENVIRONMENT, WHICH IS TO BE APPLIED IN STRICT ACCORDANCE WITH MANUFACTURERS RECOMMENDATIONS AND SPECIFICATIONS.

9. TERMITE PROTECTION:  
TERMITE PROTECTION SYSTEM SHALL BE IN ACCORDANCE WITH AS 3660.1

10. RETAINING WALL CONSTRUCTION:  
10.1 GENERAL

- THE DESIGNS ARE FOR A SPECIFIC JOB AND/OR SITE AND ARE BASED ON THE INFORMATION PROVIDED REGARDING THE PARTICULAR SUPPORT CONDITIONS WHICH OCCUR ON THE SITE AND THEY SHALL NOT BE USED FOR ANY OTHER PROJECT WITHOUT PRIOR WRITTEN APPROVAL FROM THIS OFFICE.
- ALL DIMENSIONS AND DETAILS MUST BE CHECKED BY THE BUILDER/CONTRACTOR PRIOR TO THE COMMENCEMENT OF ANY SITE WORKS OR CONSTRUCTION.  
UNLESS SPECIFICALLY NOTED, THE WALLS ARE DESIGNED ON THE BASIS THAT NO BUILDINGS OR OTHER STRUCTURES ARE BUILT, OR WILL BE BUILT, WITHIN A DISTANCE FROM THE BACK OF THE WALL EQUAL TO THE HEIGHT OF THE WALL. SPECIFIC DESIGNS MUST BE PREPARED IN THE EVENT THAT ANY SUCH BUILDINGS EXIST OR ARE PROPOSED.  
SIMILARLY, THE DESIGN IS BASED ON THERE BEING NO EXCAVATIONS IN FRONT OF THE FOOTING, EXISTING OR PROPOSED, WHICH ARE DEEPER THAN HALF THE DISTANCE FROM THE FRONT OF THE FOOTING.
- EXTREME CARE MUST BE TAKEN IN THE EVENT THAT ANY EXCAVATION IS CARRIED OUT IN FRONT OF THE WALL, INCLUDING TRENCHES FOR SERVICES. TEMPORARY PROPPING OF THE WALL MAY BE REQUIRED IN SUCH A CASE, AND ANY EXCAVATIONS MUST HAVE PROPERLY COMPACTED BACKFILL.

10.2 SOIL CONDITIONS

- UNLESS SOIL TESTS HAVE BEEN CARRIED OUT TO ASSESS THE SOIL TYPE, THE DESIGN IS BASED ON LOCAL KNOWLEDGE OF THE SOIL. IN THIS CASE IT REMAINS THE BUILDER/CONTRACTOR'S RESPONSIBILITY TO CHECK THAT THE ACTUAL SOIL TYPE IS CONSISTENT WITH THE DESIGN. IT IS RECOMMENDED THAT SOIL TESTING BE CARRIED OUT BY THIS OFFICE FOR ALL WALLS.

10.3 CONSTRUCTION

- PROPPING DURING CONSTRUCTION  
CONCRETE/GROUT INFILLED MASONRY RETAINING WALLS ARE TO BE ADEQUATELY PROPPED AND/OR TIED DURING POURING OF CONCRETE TO PREVENT BURSTING OF THE BRICKWORK OR BLOCKWORK.  
THE CONCRETE FOR THE WALL STRUCTURE SHOULD BE POURED IN STAGES OR LIFTS OF APPROXIMATELY 1.0M IN HEIGHT. A PERIOD OF APPROXIMATELY FOUR HOURS SHOULD ELAPSE BETWEEN THE POURING OF SUCCESSIVE LIFTS TO ALLOW PREVIOUSLY POURED CONCRETE TO SET ADEQUATELY.
- CONTROL JOINTS  
10MM WIDE CONTROL JOINTS IN MASONRY RETAINING WALLS ARE TO BE PROVIDED AT 12M MAXIMUM C/C AND AT ALL JUNCTIONS. CONTROL JOINTS SHALL BE CONSTRUCTED ACROSS THE FULL WIDTH OF THE WALL AND TIED WITH MASONRY FLEXIBLE ANCHORS AT 600 C/C VERTICALLY (OR 1 W6 ROD 500 LONG, GREASED AT ONE END).

10.4 MATERIALS

- CONCRETE: FOOTINGS; GRADE N20  
WALLS; GRADE N25  
INFILL GROUT TO MASONRY; GRADE 12, SLUMP 230 + 30, 10MM AGGREGATE.

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When sheet printed full size, the scale bar is 100mm.

• TIMBER: F11 HARDWOOD, OR TREATED SOFTWOOD, COMPLYING WITH DURABILITY CLASS 1 REQUIREMENTS.  
• STEEL: GRADE 300+. CORROSION PROTECTION SHALL BE AS NOMINATED.  
• MASONRY  
MINIMUM CHARACTERISTIC UNCONFINED COMPRESSIVE STRENGTH:  
CLAY BRICKS 40 MPa  
CONCRETE BLOCKS 12 MPa  
MORTAR:  
BRICKWORK 1 : 1/4 : 3 (CEMENT:LIME:SAND)  
BLOCKWORK 1 : 0 : 3 (CEMENT:LIME:SAND)  
10.5 WATERPROOFING / DRAINAGE REQUIREMENTS  
WATERPROOFING IS TO BE PROVIDED AS SPECIFIED AND USED STRICTLY IN ACCORDANCE WITH THE MANUFACTURERS SPECIFICATIONS. ALTERNATIVE PRODUCTS OR SYSTEMS MAY BE USED SUBJECT TO APPROVAL.  
10.5.1 RETAINING WALLS IN HABITABLE AREAS  
(OR AREAS WHERE WATERPROOFING IS REQUIRED, EG. CELLARS)  
PROVIDE AN AGRICULTURAL PIPE AT APPROXIMATELY 200MM BELOW LOWEST FLOOR LEVEL, EXCEPT WHERE THIS LEVEL DOES NOT ALLOW THE DISCHARGE OF THE DRAIN ON THE SITE LOCATE THE PIPE AT THE LOWEST LEVEL POSSIBLE BEHIND THE WALL. PROVIDE A SUMP AND PUMP TO DISCHARGE WATER IF IT CANNOT BE DISCHARGED VIA GRAVITY.  
• FORMED CONCRETE WALLS:  
PROVIDE 'MICROPOZ' CONCRETE ADDITIVE AND PURPOSE MADE WATERSTOP AT CONSTRUCTION JOINTS.  
OR  
'POLYTANK' WATERPROOFING SYSTEM (AND WATERSTOP IF GROUND WATER IS EXPECTED TO BE A PROBLEM).  
• SPRAYED (SHOTCRETE) CONCRETE WALL AND FLOOR (IE. NO CONSTRUCTION JOINTS):  
PROVIDE 'MICROPOZ' CONCRETE ADDITIVE.  
• OTHER WALL TYPES:  
PROVIDE 'POLYTANK' (AND WATERSTOP IF GROUND WATER IS EXPECTED TO BE A PROBLEM.)  
INTERNAL SLAB STEPDOWN GREATER THAN 600MM HIGH AND LESS THAN 1500MM:  
PROVIDE 2 LAYERS OF VAPOUR BARRIER.  
10.5.2 RETAINING WALLS EXTERNAL TO BUILDING (OR WHERE WATERPROOFING IS NOT REQUIRED)  
• REINFORCED CONCRETE OR MASONRY RETAINING WALLS.  
HEEL TYPE OR PART HEEL/TOE TYPE:  
PROVIDE AN AGRICULTURAL PIPE.  
TOE TYPE ON BOUNDARY:  
PROVIDE 'CORDRAIN' AND 'STRIP DRAIN'  
OR  
'STRIP DRAIN' AND WEEP HOLES  
TOE TYPE NOT ON BOUNDARY:  
PROVIDE AN AGRICULTURAL PIPE OR WEEP HOLES.  
• CRIB OR SLEEPER RETAINING WALL:  
PROVIDE AN AGRICULTURAL PIPE AT THE LOWEST POINT OF THE WALL (OR TOP OF FOOTING).

10.6 BACKFILLING METHOD

- BACK-FILL SHALL NOT BE PLACED AGAINST RETAINING WALLS UNTIL SEVEN DAYS AFTER THE POURING OF THE CONCRETE FOR WALL STRUCTURE UNLESS ADEQUATELY PROPPED ON OTHER SIDE, EXCEPT AS NOTED BELOW.
- BACK-FILL SHALL NOT BE PLACED AGAINST RETAINING WALLS WHICH ARE DESIGNED TO BE SUPPORTED AT THE TOP BY BEING TIED INTO EITHER SUSPENDED SLABS OR GROUND SLABS UNTIL SEVEN DAYS AFTER THE POURING OF CONCRETE FOR SLABS - UNLESS THE WALL IS PROPPED IN A MANNER WHICH WILL PROVIDE A RESTRAINT TO THE WALL EQUIVALENT TO THE SUPPORT OFFERED BY THE SLAB.

10.7 GROUTING OF MASONRY WALLS

- CAVITIES/CORES TO BE THOROUGHLY CLEANED PRIOR TO POURING. PROVIDE TEMPORARY CLEAN OUT HOLES AT THE BASE OF EACH POUR AS REQUIRED.
- FOR HOLLOW BLOCK WALLS, ALL CORES ARE TO BE GROUTED, IE. INCLUDING CORES WITHOUT REINFORCEMENT.
- GROUT SHALL BE COMPACTED BY RODDING WITH A PLAIN ROUND BAR. ALL AIR POCKETS AND BUBBLES MUST BE DISPLACED DURING COMPACTION. HOWEVER, CARE MUST BE TAKEN TO AVOID DAMAGING OR DISLODGING THE MASONRY OR REINFORCEMENT WHILE COMPACTING THE GROUT.

10.8 BACKFILLING AND DRAINAGE AND DETAILS

- BACKFILL MATERIAL IS TO BE GRANULAR, AND COMPACTED IN LAYERS NOT MORE THAN 200MM DEEP. THE DEGREE AND METHOD OF COMPACTION SHALL BE AS THOROUGH AS POSSIBLE BUT WILL DEPEND ON THE PROPOSED USE OF THE BACKFILLED AREA.
- THE DRAINAGE SYSTEM BEHIND THE WALL SHALL NOT BE CONNECTED TO THE MAIN DRAINAGE SYSTEM.
- WHERE AN AGRICULTURAL PIPE IS SPECIFIED, PROVIDE A FINE GRAINED SAND - CLAY MIXTURE BEDDING OR LEAN-MIX CONCRETE BASE SUCH THAT THE PIPE FALL IS NOT LESS THAN 1 IN 100. THE INITIAL 400MM OF FILL ABOVE THE PIPE IS TO BE 16MM SCREENINGS, HAND PLACED CAREFULLY.
- WHERE WEEPHOLES HAVE BEEN SPECIFIED, PROVIDE APPROXIMATELY 20 LITRES BY VOLUME OF 16MM SCREENINGS BEHIND THE WALL, AT EACH LOCATION, EXCEPT WHERE THE WALL IS ON THE BOUNDARY. THIS IS TO BE PLACED AS THE FILL IS BUILT UP. UNLESS AN ALTERNATIVE DRAINAGE SYSTEM HAS BEEN PROVIDED, AN OPEN GUTTER MUST BE CONSTRUCTED IMMEDIATELY IN FRONT OF THE WALL AND CONNECTED TO THE DRAINAGE SYSTEM.

11. DESIGN LOADS:  
11.1 THE STRUCTURAL ELEMENTS HAVE BEEN DESIGNED FOR THE FOLLOWING SUPERIMPOSED LIVE LOADS IN ACCORDANCE WITH AS 1170, PART 1, DEAD AND LIVE LOADS.

ELEMENT	LIVE LOAD (kPa)
CARPARK	5.0
APARTMENT GENERAL LIVING	2.0
BALCONIES	3.0
TERRACE, WALKWAYS	4.0
ROOF	0.25

SOME LOCATIONS WITHIN THE ABOVE GENERAL AREAS HAVE BEEN DESIGNED FOR HEAVIER LOADINGS, REFER TO FLOOR PLANS FOR DETAILS. LIVE LOAD REDUCTIONS IN ACCORDANCE WITH AS 1170 PART 1 HAVE BEEN TAKEN WHERE APPLICABLE.

11.2 WIND LOADING HAS BEEN DETERMINED IN ACCORDANCE WITH AS 1170 PART 2.  
V<sub>sif</sub>,β = 40 m/s (ULTIMATE WINDSPEED)

11.3 EARTHQUAKE LOADING HAS BEEN DETERMINED IN ACCORDANCE WITH AS 1170 PART 4.

AA

FOR CONSTRUCTION

DG

FK

21.05.19

No

REVISION

DRAWN

CHE

KD

DATE

PROJECT

NEW APARTMENTS

AT: No. 168 PROSPECT ROAD

PROSPECT SA

FOR: MICHAEL CALABRO

DRAWING TITLE

GENERAL NOTES

Civil  
Environmental  
Mechanical  
Fire  
Lifts

Structural  
Geotechnical  
Electrical  
Hydraulics  
Green ESD

TMK

CONSULTING ENGINEERS

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SCALES

AS SHOWN

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DATE

APR 2017

ENGINEER

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