

*Min 1500
from
boundary*

Select square metres of disposal area in conjunction with owners requirements and future plans for sheds or swimming pools etc. Please maintain clearances as described in depth in Guidelines for Horizontal Separation Distances which is available from DLG&P Website. Effluent must not be allowed to pond or leave the property either by flow or by wind. Disposal areas to be constructed generally in accordance with the completed design and specifications attached. Signage is required in at least two locations throughout disposal areas to advise of the use of recycled water and to avoid human contact.

Additional disposal area can be installed if undertaken in a manner compliant with separation distances supplied and Council requirements.

Please note this setback can be altered should the designer be notified either before installation or at a commission stage.

15 METRE MINIMUM SETBACK AS REQUIRED FOR SURFACE IRRIGATION UNDER THE CODE OF PRACTICE FOR ON SITE SEWERAGE FACILITIES. ANY EFFLUENT APPLIED TO THE SURFACE OF THE LAND WITHIN THIS AREA MUST BE BY COVERED MULCH SURFACE IRRIGATION SYSTEMS (I.E. UNDER A BARK CHIP OR HAY MULCH)

225sq mtrs effluent disposal area.
18.0mtr diameter or square area at 15.0 x 15.0mtrs minimum.

(Max flexible hose length of 7.0mtrs approx)

Site Plan
1:500

Trenches and irrigation areas must be located well clear of existing water bores, dams and water ways. It is outside the scope of this firms current undertaking to investigate and locate all bores that may be influenced. If bores are present within 50 metres of this application area it is the responsibility of the owner to locate and identify them to Darling Downs Hydraulic Services Design. A greater separation distance than that provided may be required.

On some sites it may be difficult to accurately predict the optimum disposal area for trenches and irrigation systems, and the possibility that overload may occur from time to time cannot be completely discounted due to the following circumstances;

- * The use of greater than anticipated volumes of waste water,
- * Abnormally adverse weather conditions, - i.e severe wet and cold periods or extended dry periods, where the soils appear to naturally close and reduce permeability.
- * Lesser soil permeability than that anticipated over the disposal areas.

To deliberately oversize the installation to accomodate all possibilities is to incur substantial unnecessary expenses upon the owner for additional construction costs. Therefore the owner must assume some risk, or request a maximum design to be undertaken to accomodate all contingencies prior to system construction. The owner must assume the responsibility should over load occur on a regular basis requiring additional disposal area to be installed. Acceptance of this design is acceptance of this condition. Please contact designer should a full system to cover all possibilities be required, (possibly double sized areas).

The effluent application area is to be tested with clean water prior to the application of effluent, to ensure even application occurs.

The installer must ensure that cross land stormwater flows cannot enter the disposal area, and that adequate top soil is present for effluent storage without ponding.

Setback Distances generally are as follows;

- * 2.0 metres to Boundaries, (Level sites)
- * 4.0 metres to Boundaries (Downhill)
- * 15 metres to Dwellings, Play Areas (Spray Irrigation)
- * 6 metres to pools.
- * 4 metres to footings or structures (refer to engineer if in doubt)
- * all other setback distances can be found in state government guidelines.

ALL WORK TO BE COMPLETED IN ACCORDANCE WITH AS3500 AND THE PLUMBING AND DRAINAGE ACT 2002.

NOTES:

1. VENT TO BE SUITABLY LOCATED IN ACCORDANCE WITH AS3500 FOLLOWING DISCUSSIONS WITH OWNER.

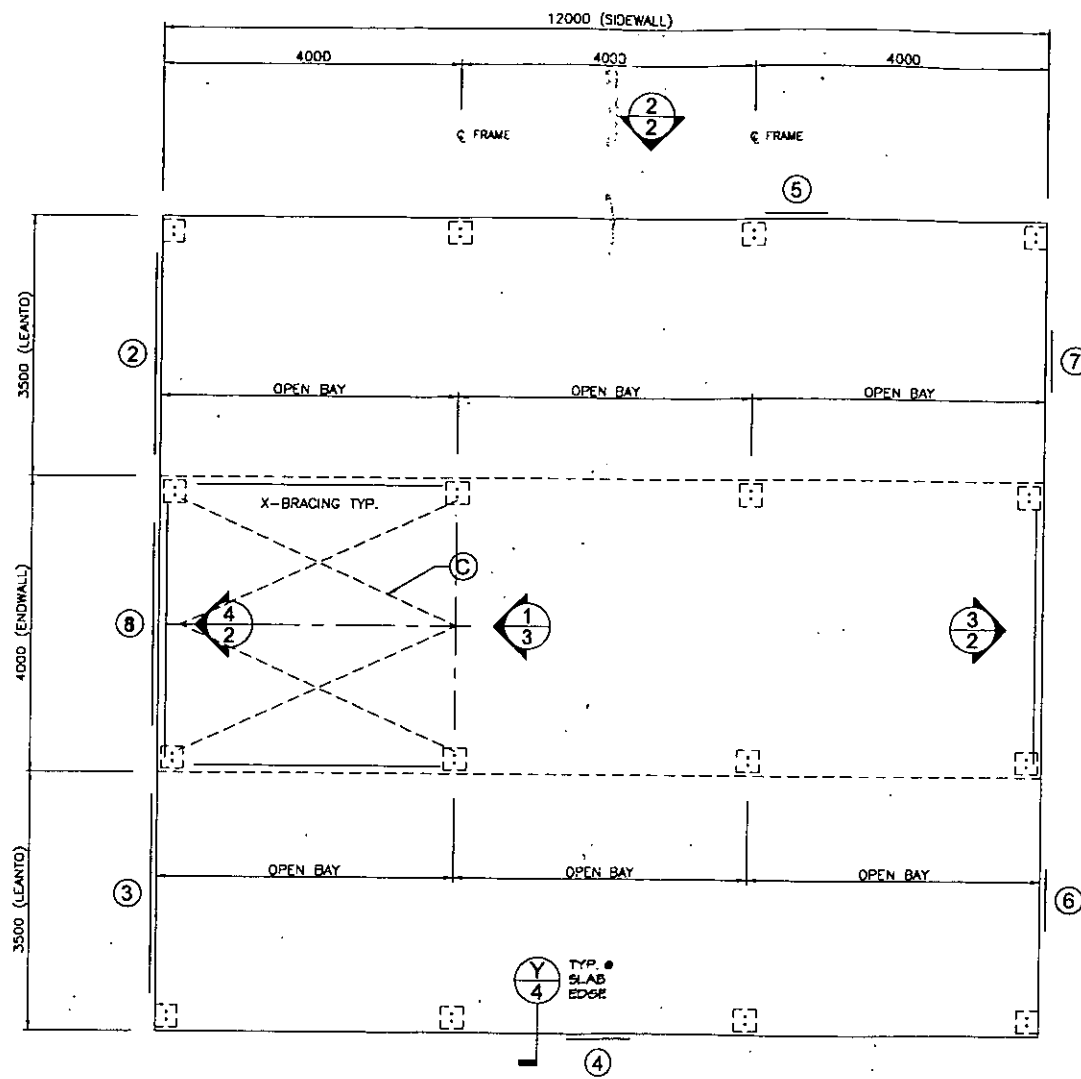
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| LEGEND | | CLARK & SWENDSON ROAD | |
|--------|-------------------------------|-----------------------|----------------------|
| ORG | Overflow Relief Gully | 1. | Water Closet |
| DG | Disconnecter Gully | 2. | Sink |
| IJ | Inspection Junction | 3. | Bath (Trapped) |
| SDR | Sanitary Drainage Riser | 4. | Hand Basin (Trapped) |
| IOS | Inspection Opening to Surface | 5. | Shower (Trapped) |
| IO | Inspection Opening. | 6. | Laundry Tubs |
| Td | Tundish | 7. | Dishwasher |
| | | 8. | Washing Machine |
| | | 9. | Floor Waste Gully. |

Proposed On Site Sewerage Plan

| | | | |
|--|---------|--|--|
| DARLING DOWNS HYDRAULIC SERVICES DESIGN | | SJ & SL Grott 26 Parkers Avenue, Dalby ddhsd@bigpond.com | |
| Proposed New Sanitary Drainage System for Use in Conjunction with Domestic On Site Sewerage Facility | | Mob: 0427 625 874 Fax: (07) 4662 5875 | |
| G Berends & S Kratzmann L6 Clark & Swenson Road Kingaroy QLD 4610 | | SCALE As Noted (A3) | |
| DRN | SJG | 30th Nov 2005 | |
| DSND | SJG | PAGE | |
| BSA# | 899249 | 1 OF 1 | |
| DWG# | 0282~05 | | |



1 FOUNDATION PLAN
SCALE: 1 = 100

**KINGAROY SHIRE COUNCIL
BUILDING DEPARTMENT**
028-06 - 9 FEB 2006
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1 OF 5 SHEET
JOB NO. CURM10394
DATE 16/1/2006
CHECKED AM
DRAWN AGS

STEEL BUILDING BY (CONTACT)
STEELWAY BUILDINGS
FOR **SUE KRATZMANN**
AT **21 CLARK & SWENDSON RD
KINGAROY**

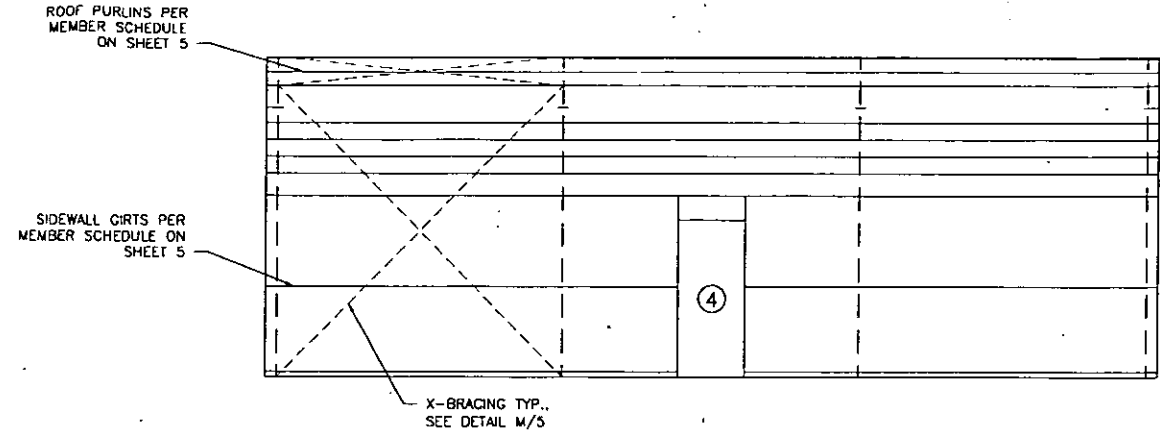


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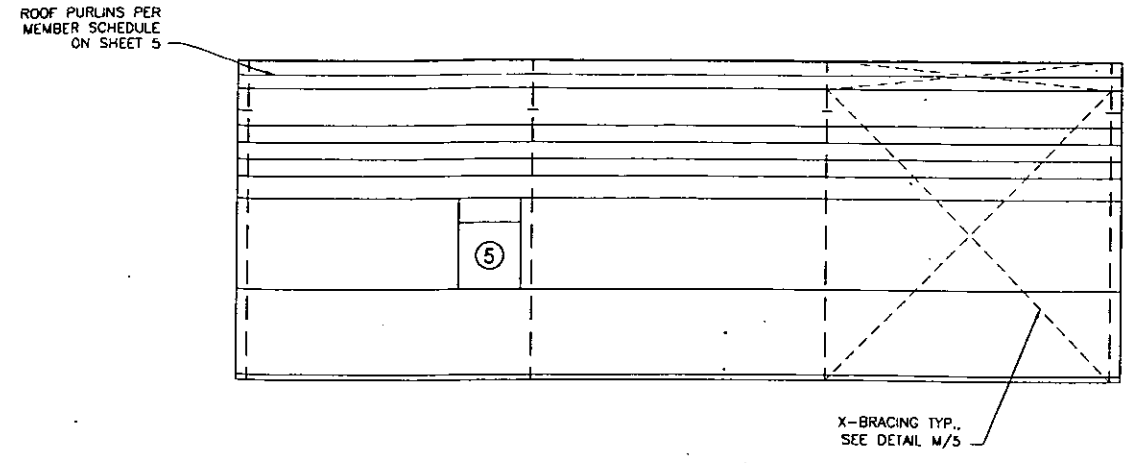
A B CONSULTING ENGINEERS
Structural & Civil
Andrew Matiukevitch
MIEAust. CPEng. (Regd. NPER - 3 Structural)
Practising Structural Engineer R.P.E.Q. No. 4748.
Building Designer/Structural Certifier
TAS Reg No. CC850L

Registered Professional Engineer 341550
Mr Andrew Matiukevitch
MIEAust CPEng (Structural) NPER-3
Signature..... Date 16/1/06
Registered on the NPER-3 in the Category of Structural
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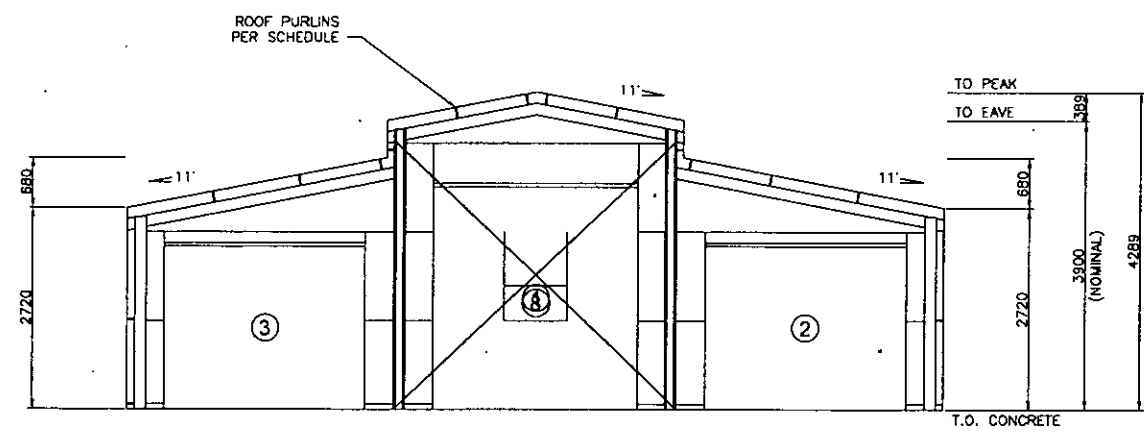
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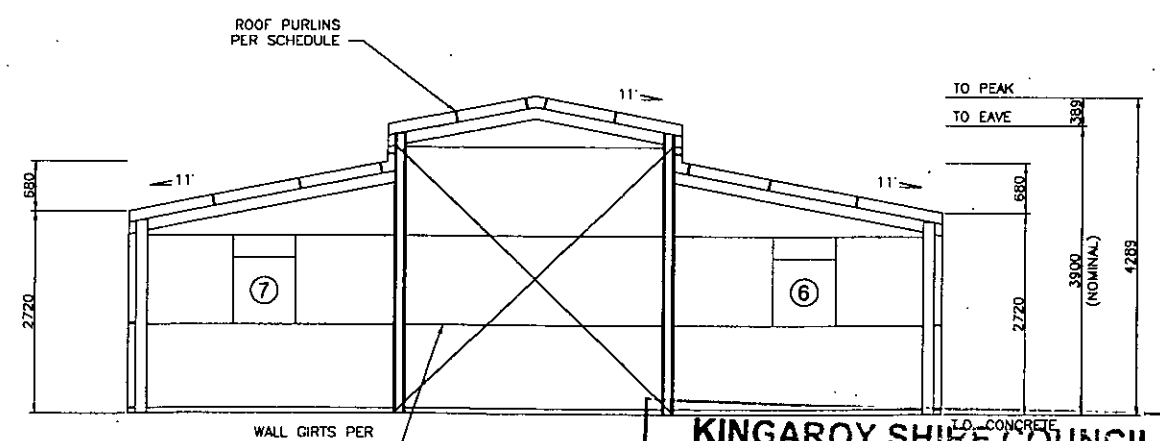
1 SIDEWALL EXTERIOR ELEVATION
2 SCALE: 1 = 100



2 SIDEWALL EXTERIOR ELEVATION
2 SCALE: 1 = 100



4 ENDWALL INTERIOR ELEVATION
2 SCALE: 1 = 100



3 ENDWALL INTERIOR ELEVATION
2 SCALE: 1 = 100

**KINGAROY SHIRE COUNCIL
BUILDING DEPARTMENT**

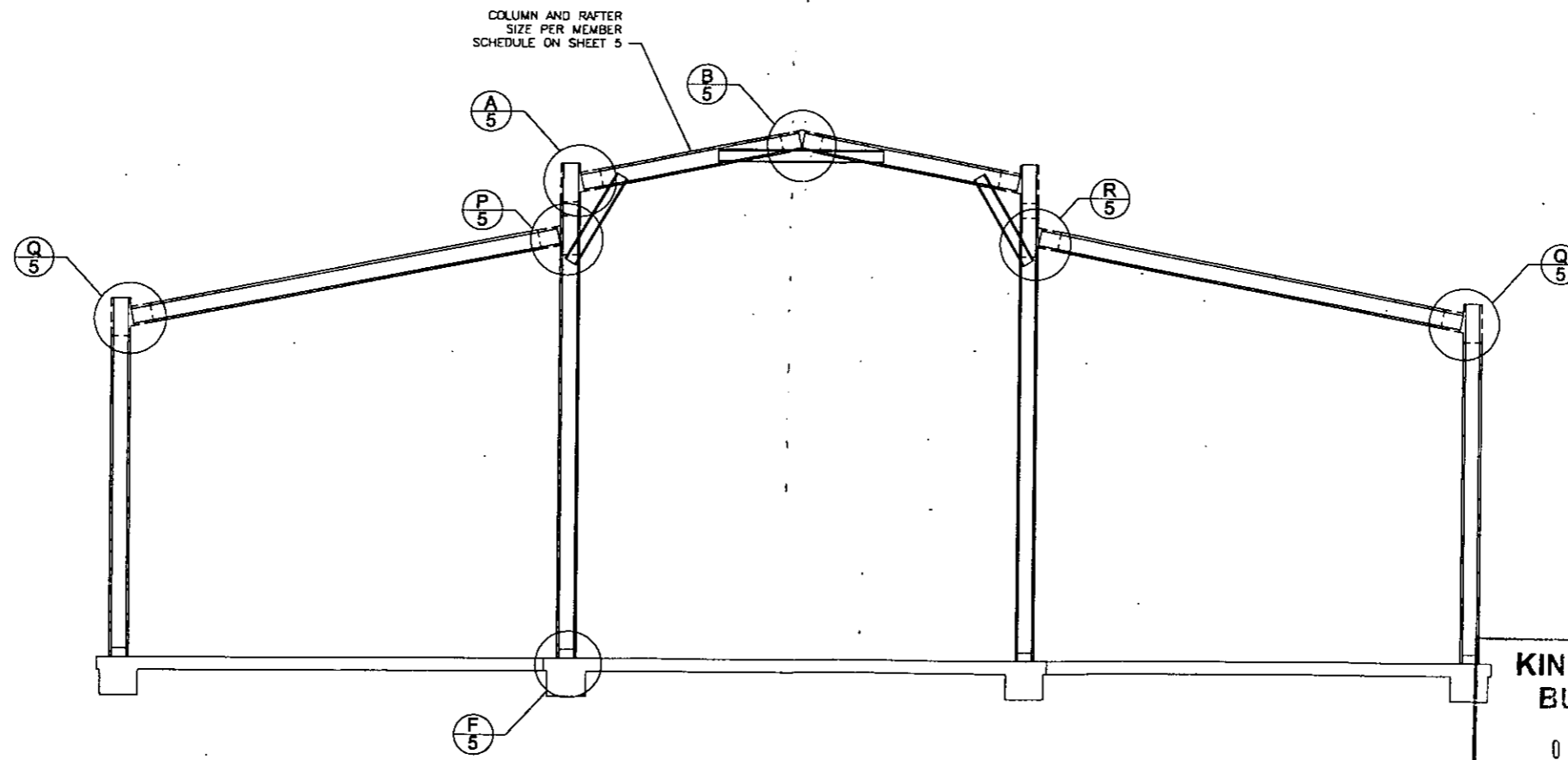
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BRACING Level 1. Bracing Strap (Per 50m Roll) 32 x 1.2 diagonally in 33.33333% of all wall bays under eaves. One roof bay each side, one gable end bay and every 5th bay in length.

NOTE: CLADDING OMITTED FOR CLARITY. SEE SHEET #5 FOR CLADDING DETAILS

| | | | | | | | | |
|-----------------------|----------------------|-------------------|---------------|--------------|---|--|--|--|
| 2 OF 5 SHEET | JOB NO. CURM10394 | DATE 16/1/2006 | CHECKED AM | DRAWN AGS | STEEL BUILDING BY STEELWAY BUILDINGS (CONTACT) SUE KRATZMANN 21 CLARK & SWENDSON RD KINGAROY | | A B CONSULTING ENGINEERS Structural & Civil Andrew Matiukevitch MIEAust. CPEng. (Regd. NPER - 3 Structural) Practising Structural Engineer R.P.E.Q. No. 4748. Building Designer/Structural Certifier. TAS Reg No. CC850L | Registered Professional Engineer 341550 Mr Andrew Matiukevitch MIEAust CPEng (Structural) NPER-3 Signature: <i>Andrew Matiukevitch</i> Date: 16/1/06 Registered on the NPER-3 in the Category of Structural National Professional Engineers Register Section Three |
| | FOR AT | | | | | | | |



1 INTERNAL FRAME SECTION
3 SCALE: 1 = 50

(Refer to Sheet #4 for concrete specification).

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| | | | | |
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| SHEET 3 OF 5 | JOB NO. CURM10394 | DATE 16/1/2006 | CHECKED AM | DRAWN AGS |
| | STEEL BUILDING BY (CONTACT) STEELWAY BUILDINGS FOR SUE KRATZMANN AT 21 CLARK & SWENDSON RD KINGAROY | | | |

STEEL BUILDING BY (CONTACT)
STEELWAY BUILDINGS
FOR
SUE KRATZMANN
AT
21 CLARK & SWENDSON RD
KINGAROY



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National Professional Engineers Register Section Three

STRUCTURAL GENERAL NOTES

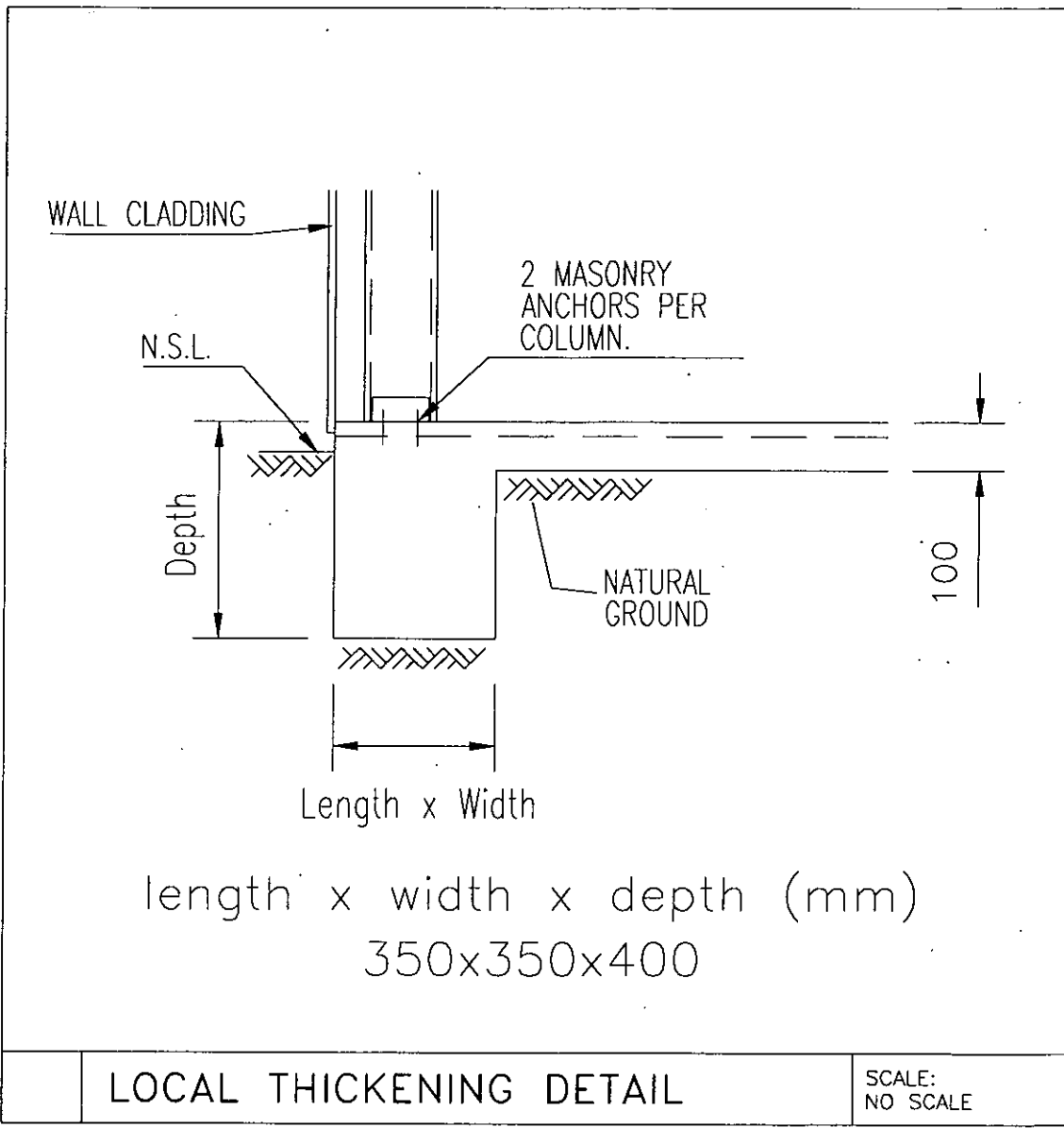
- GOVERNING CODE:** BUILDING CODE OF AUSTRALIA (BCA), LOADING TO AS1170 - ALL SECTIONS. BUILDING SUITABLE FOR DOMESTIC/LIGHT INDUSTRIAL USE UNLESS OTHERWISE SPECIFICALLY NOTED.
- DRAWING OWNERSHIP:** THESE DRAWINGS REMAIN THE PROPERTY OF AG&S BUILDING SYSTEMS PTY. LTD (AG&S). ENGINEERING SIGNATURE AND CERTIFICATION IS ONLY VALID WHEN BUILDING IS SUPPLIED BY A DISTRIBUTOR OF AG&S. DRAWINGS ARE PROVIDED FOR THE DUAL PURPOSE OF OBTAINING BUILDING PERMITS AND AIDING CONSTRUCTION. ANY OTHER USE OR REPRODUCTION IS PROHIBITED WITHOUT WRITTEN APPROVAL FROM AG&S.
- DRAWING SIGNATURE REQUIREMENTS:** THESE DRAWINGS ARE NOT VALID UNLESS SIGNED BY THE ENGINEER. THE ENGINEER ACCEPTS NO LIABILITY OR RESPONSIBILITY FOR DRAWINGS WITHOUT A SIGNATURE. EACH TITLE BLOCK CONTAINS A WATER MARK UNDER THE CUSTOMERS NAME CONTAINING THE DATE OF PRODUCTION OF THE DRAWINGS; THE DRAWINGS ARE TO BE SUBMITTED TO COUNCIL WITHIN 21 DAYS OF THIS DATE. THIS IS TO ENSURE THAT ONLY CURRENT DRAWINGS ARE IN CIRCULATION.
- CONTRACTOR RESPONSIBILITIES:** CONTRACTOR SHALL VERIFY AND CONFIRM ALL EXISTING CONDITIONS AND DIMENSIONS. ENGINEER SHALL BE NOTIFIED OF ANY DISCREPANCIES BETWEEN DRAWINGS AND EXISTING CONDITIONS PRIOR TO START OF WORK. CONTRACTOR MUST NOT MAKE ANY DEVIATION FROM THE PROVIDED PLANS WITHOUT FIRST OBTAINING WRITTEN APPROVAL FROM ONE OF THE UNDERSIGNING ENGINEERS. THE ENGINEER / AG&S TAKE NO RESPONSIBILITY FOR CHANGES MADE WITHOUT WRITTEN APPROVAL. CONTRACTOR IS RESPONSIBLE FOR ENSURING NO PART OF THE STRUCTURE BECOMES OVERSTRESSED DURING CONSTRUCTION. BUILDING IS NOT STRUCTURALLY ADEQUATE UNTIL THE INSTALLATION OF ALL COMPONENTS AND DETAILS SHOWN IS COMPLETED IN ACCORDANCE WITH THESE DRAWINGS. THE INDICATED DRAWING SCALES ARE APPROXIMATE. DO NOT SCALE DRAWINGS FOR CONSTRUCTION PURPOSES. FOR FURTHER DIRECTIONS ON CONSTRUCTION THE CONTRACTOR SHOULD CONSULT THE APPROPRIATE INSTRUCTION MANUAL.
- ENGINEERING:** THE ENGINEER / AG&S ARE NOT ACTING AS PROJECT MANAGERS FOR THIS DEVELOPMENT, AND WILL NOT BE PRESENT DURING CONSTRUCTION. THE UNDERSIGNING ENGINEERS HAVE REVIEWED THIS BUILDING FOR CONFORMITY ONLY TO THE STRUCTURAL DESIGN PORTIONS OF THE GOVERNING CODE. THE PROJECT MANAGER IS RESPONSIBLE FOR ADDRESSING ANY OTHER CODE REQUIREMENTS APPLICABLE TO THIS DEVELOPMENT. THESE DOCUMENTS ARE STAMPED ONLY AS TO THE COMPONENTS SUPPLIED BY AG&S. IT IS THE RESPONSIBILITY OF THE PURCHASER TO COORDINATE DRAWINGS PROVIDED BY AG&S WITH OTHER PLANS AND/OR OTHER COMPONENTS THAT ARE PART OF THE OVERALL PROJECT. IN CASES OF DISCREPANCIES, THE LATEST DRAWINGS PROVIDED BY AG&S SHALL GOVERN.
- INSPECTIONS:** NO SPECIAL INSPECTIONS ARE REQUIRED BY THE GOVERNING CODE ON THIS JOB. ANY OTHER INSPECTIONS REQUESTED BY THE LOCAL BUILDING DEPARTMENT SHALL BE CONDUCTED AT THE OWNER'S EXPENSE.
- SOIL REQUIREMENTS:** SITE CLASSIFICATION TO BE A, S OR M ONLY. SOIL SAFE BEARING CAPACITY VALUE INDICATED ON DRAWING SHEET 4 OCCURS AT 100mm BELOW FINISH GRADE, EXISTING NATURAL GRADE, OR AT FROST DEPTH SPECIFIED BY LOCAL BUILDING DEPARTMENT, WHICHEVER IS THE LOWEST ELEVATION. REGARDLESS OF DETAIL Y ON SHEET 4 THE MINIMUM FOUNDATION DEPTH SHOULD BE 100MM INTO NATURAL GROUND OR BELOW FROST DEPTH SPECIFIED BY LOCAL COUNCIL. ROLLED OR COMPACTED FILL MAY BE USED UNDER SLAB, COMPACTED IN 150mm LAYERS TO A MAXIMUM DEPTH OF 900mm. CONCRETE FOUNDATION EMBEDMENT DEPTHS DO NOT APPLY TO LOCATIONS WHERE ANY UNCOMPACTED FILL OR DISTURBED GROUND EXISTS OR WHERE WALLS OF THE EXCAVATION WILL NOT STAND WITHOUT SUPPLEMENTAL SUPPORT, IN THIS CASE SEEK FURTHER ENGINEERING ADVICE.
- CONCRETE REQUIREMENTS:** ALL CONCRETE DETAILS AND PLACEMENT SHALL BE PERFORMED IN ACCORDANCE WITH AS2870 AND AS3600. CONCRETE SHALL HAVE A MIN. 28-DAY STRENGTH OF 20MPa FOR EXPOSURE A1 & B1, 25MPa FOR EXPOSURE A2 & B2 AND 32MPa FOR EXPOSURE C. CEMENT TO BE TYPE A. MAX AGGREGATE SIZE OF 20mm. SLUMP TO BE 80mm +/- 15mm. SLABS TO BE CURED FOR 7 DAYS BY WATERING OR COVERING WITH A PLASTIC MEMBRANE, AFTER WHICH CONSTRUCTION CAN BEGIN, DUE CARE GIVEN NOT TO OVER-TIGHTEN HOLD DOWN BOLTS. GIVEN ALLOWABLE SOIL TYPES 1 LAYER OF F72 REINFORCING MESH IS TO BE INSTALLED ON STANDARD SLABS WITH A MINIMUM 30MM COVER FROM CONCRETE SURFACE. CONCRETE REINFORCING TO CONFORM TO AS 1302, AS1303 & AS 1304. ALL REINFORCING COVER TO BE A MINIMUM OF 30mm.
- STRUCTURAL STEEL REQUIREMENTS:** ALL STRUCTURAL STEEL, INCLUDING SHEETING THOUGH EXCLUDING CONCRETE REINFORCING, SHALL CONFORM TO AS 1397 (GAUGE <= 1mm fy = 550MPa, GAUGE > 1mm < 1.5mm fy = 500MPa, GAUGE >= 1.5mm fy = 450MPa). NO WELDING IS TO BE PERFORMED ON THIS BUILDING. ALL STRUCTURAL MEMBERS AND CONNECTIONS DESIGNED TO AS4600. ALL BOLT HOLE DIAMETERS TO STRAMIT GENERAL PUNCHINGS.
- SNOW LOAD:** BUILDINGS SUPPLIED IN AREAS REQUIRING UP TO AND INCLUDING A 1kPa SNOW LOADING MUST COMPLY WITH THE REQUIREMENTS OF THE "AB CONSULTING ENGINEERS GENERAL SNOW LOAD CERTIFICATION LETTER DATED 31-05-04.

| PROJECT DESIGN CRITERIA | |
|-----------------------------|---------------|
| ROOF LIVE LOAD: | 0.25 kPa |
| WIND REGION: | Reg B |
| TERRAIN CATEGORY: | Terrain Cat 2 |
| SOIL SAFE BEARING CAPACITY: | 100 kPa |

| DETAIL KEYS | |
|-------------|--|
| (A) | ENDWALL VERTICAL MULLION (SEE DETAIL C/5 FOR TOP CONN. AND F/5 FOR BASE CONN.) |
| (B) | FLYBRACING PER DETAIL L/5 |
| (C) | X-BRACING IN ROOF ABOVE (SEE DETAIL M/5) |

| DOOR SCHEDULE | | | | | |
|---------------|-------|--------|-------------------------------|-------------|---------------|
| DOOR | WIDTH | HEIGHT | OPENING TYPE | HEADER GIRT | OPENING JAMBS |
| ① | 2750 | 3000 | 3.00H x 2.80 CB *FIRMADOR R/D | SINGLE | |
| ② | 2710 | 2200 | 2.20H x 2.77 CB *FIRMADOR R/D | SINGLE | |
| ③ | 2710 | 2200 | 2.20H x 2.77 CB *FIRMADOR R/D | SINGLE | |
| ④ | 900 | 2100 | PA DOOR 3 ZINC SPECIAL | SINGLE | |
| ⑤ | 840 | 900 | WINDOW | SINGLE | |
| ⑥ | 840 | 900 | WINDOW | SINGLE | |
| ⑦ | 840 | 900 | WINDOW | SINGLE | |
| ⑧ | 840 | 470 | WINDOW | SINGLE | |

NOTES: 1) SEE SHEET 5 FOR DOOR OPENING FRAMING INFORMATION.
2) ALL DOOR SCHEDULE MEASUREMENTS ARE ACTUAL DOOR/WINDOW SIZE NOT OPENING SIZE.



KINGAROY SHIRE COUNCIL
BUILDING DEPARTMENT
 078-06 - 9 FEB 2006
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| | | | |
|---------|-----------|-------|-----------|
| SHEET | 4 | OF | 5 |
| JOB NO. | CURM10394 | DATE | 16/1/2006 |
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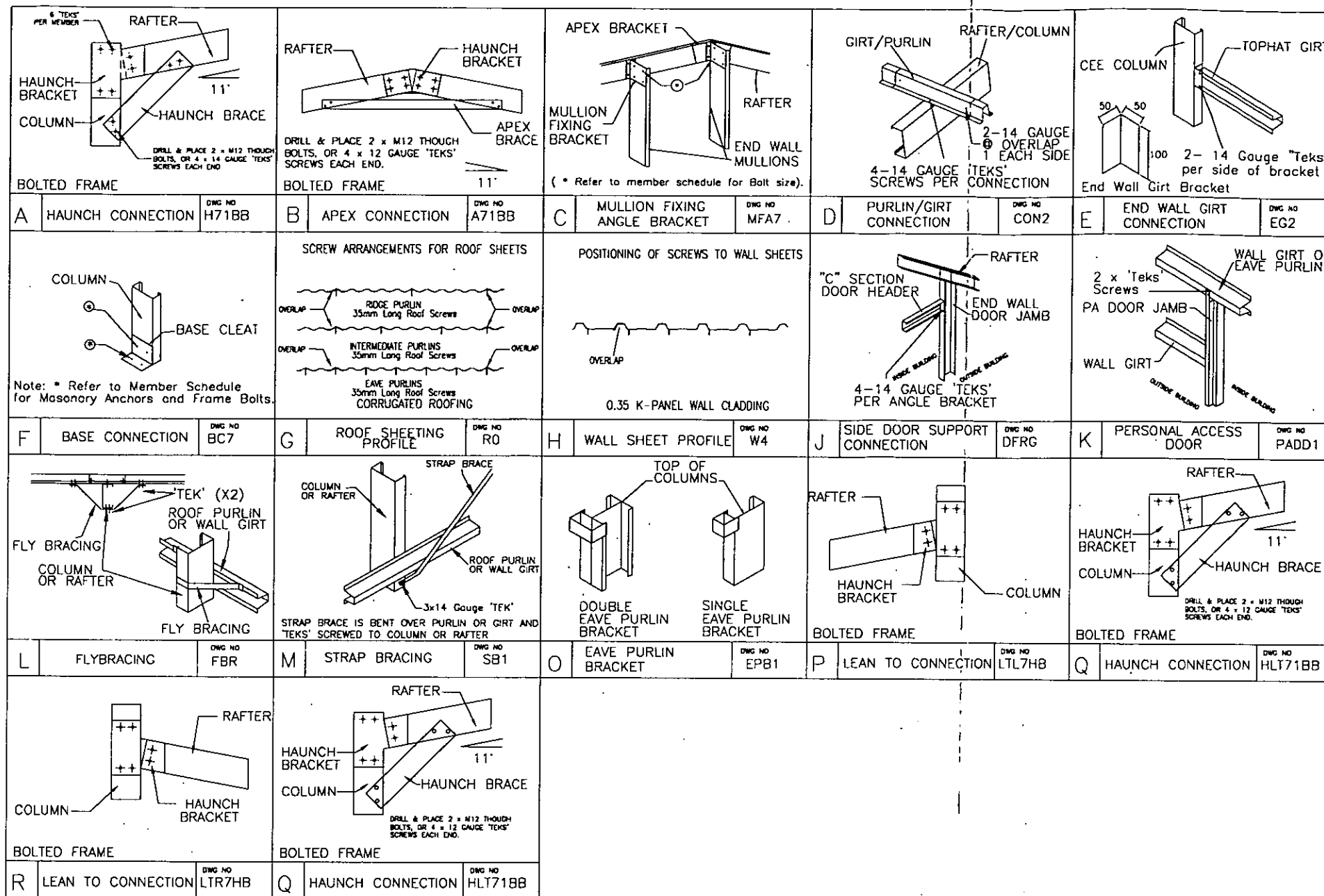
STEEL BUILDING BY (CONTACT) **STEELWAY BUILDINGS**
 FOR **SUE KRATZMANN**
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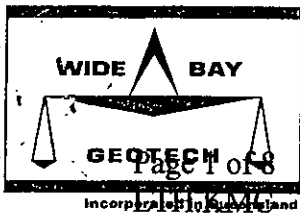
Registered Professional Engineer 341550
Mr Andrew Matiukevitch
 MIEAust CPEng (Structural)
 Signature: *Andrew Matiukevitch* Date: 15/1/06
 Registered on the NPER-3 in the Category of Structural
 National Professional Engineers Register Section Three



| MEMBER AND MATERIAL SCHEDULE | | |
|------------------------------|------------------------------------|--|
| 1 | C.S. FRAME RAFTER | Single C15024 |
| 2 | C.S. FRAME COLUMN | Single C15024 |
| 3 | C.S. FRAME KNEE BRACE | Single C10010 |
| 4 | C.S. FRAME APEX BRACE | Single C10010 |
| 5 | ENDWALL RAFTERS | C15024 |
| 6 | ENDWALL COLUMNS | C15024 |
| 7 | LEFT LEANTO RAFTER | C15024 |
| 8 | RIGHT LEANTO RAFTER | C15024 |
| 9 | ENDWALL VERTICAL MULLIONS | Single C15024 |
| 10 | ANCHOR BOLTS (# PER DETS.) | Sleeve Anchor 12.0x75 Z/Y |
| 11 | EAVE PURLIN | C10010 |
| 12 | TYP. ROOF PURLIN SIZE | Tophat section 64mm x 1.0mm |
| 13 | MAIN BLDG. PURLIN SPACING | .96 m. Max. |
| 14 | LEFT LEANTO PURLIN SPACING | 1.19 m. Max. |
| 15 | RIGHT LEANTO PURLIN SPACING | 1.19 m. Max. |
| 16 | TYP. SIDEWALL GIRT SIZE | Tophat 64 x 1.0 |
| 17 | MAIN BLDG. SIDEWALL GIRT SPACING | 1.2 m. Max. |
| 18 | LEFT LEANTO SIDEWALL GIRT SPACING | 1.21 m. Max. |
| 19 | RIGHT LEANTO SIDEWALL GIRT SPACING | 1.21 m. Max. |
| 20 | TYP. ENDWALL GIRT SIZE | Tophat 64 x 1.0 |
| 21 | MAIN BLDG. ENDWALL GIRT SPACING | 1.2 m. Max. |
| 22 | LEFT LEANTO ENDWALL GIRT SPACING | 1.21 m. Max. |
| 23 | RIGHT LEANTO ENDWALL GIRT SPACING | 1.21 m. Max. |
| 24 | FRAME SCREW FASTENERS | 14-13x22 Hex C/S (SP HD 5/16" Hex Drive) |
| 25 | FRAME BOLT FASTENERS | Purlin Assy M12x30 Z/P |
| 26 | X-BRACING STRAP AND FASTENERS | Single Bracing Strap Per Roll Light |
| 27 | WALL COLOUR | MANOR_RED |
| 28 | ROOF COLOUR | ZINCALUME |
| 29 | DOOR COLOUR | CLASSIC_CREAM |
| 30 | DOWNPIPE COLOUR | MANOR_RED |
| 31 | GUTTER COLOUR | CLASSIC_CREAM |
| 32 | CORNER COLOUR | MANOR_RED |
| 33 | BARGE COLOUR | CLASSIC_CREAM |
| 34 | OPENING FLASHING COLOUR | MANOR_RED |
| 35 | OPEN BAY HEADER HEIGHT | 0.5 |

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|-----------------------|----------------------|---|---------------|--------------|---|--|---|---|
| SHEET 5 OF 5 | JOB NO. CJFM10394 | DATE 16/1/2006 | CHECKED AM | DRAWN AGS | STEEL BUILDING BY STEELWAY BUILDINGS (CONTACT) SUE KRATZMANN 21 CLARK & SWENDSON RD KINGAROY | | A B CONSULTING ENGINEERS Structural & Civil Andrew Matiukevitch MIEAust. CPEng. (Regd. NPER - 3 Structural) Practising Structural Engineer R.P.E.O. No. 4748. Building Designer/Structural Certifier TAS Reg No. CC850L | Registered Professional Engineer 341550 Mr Andrew Matiukevitch MIEAust CPEng (Structural) Signature Date 16/1/06 Registered on the NPER-3 in the Category of Structural National Professional Engineers Register Section Three |
| | FOR AT | Registered Professional Engineer 341550 Mr Andrew Matiukevitch MIEAust CPEng (Structural) Signature Date 16/1/06 Registered on the NPER-3 in the Category of Structural National Professional Engineers Register Section Three | | | | | | |



WIDE BAY GEOTECHNICAL SERVICES PTY. LTD.

SOIL & CONCRETE TESTERS A.C.N. 006 482 051
A.B.N. 70 006 482 051

Email: widebaygeotech@bigpond.com

HERVEY BAY:
107 Old Maryborough Rd,
(P.O. Box 380)
Hervey Bay Q 4655
Telephone: (07) 41 243677
Fax: (07) 41 283284

4 November 2005

S Kratsmann & G Berends
6597 Bunya Highway
KUMBIA 4610

Ph: 0437435787 or 0741644026

SITE TESTING & SITE CLASSIFICATION

Proposed Residence for S Kratsmann & G Berends at
Lot 6 Clark & Swenson Roads, Kingaroy

Attached are reports showing the results of tests carried out at Lot 6 Clark & Swenson Roads, Kingaroy on the 17 October 2005.

The test results and subsoil conditions have been evaluated and a report stating the determined site classification is enclosed.

AUTHORISATION/INFORMATION

The investigation was authorised by S Kratsmann & G Berends for site testing and class evaluation on the proposed foundation.

The scope of the investigation allowed for auger boreholes to inspect the subsoil profile with logging and sampling of soil types.

Subsoil sampling was necessary, with laboratory testing of the subsoil to determine soil moisture limits.

The results of field and laboratory testing were to be evaluated and the site class classification determined for the foundation and reported. Where testing/inspection revealed conditions likely to cause the site to be stable/unstable, then the client or his engineer should advise our office to further re-assess the footings excavated to possibly re-classify the site.

A Sketch of the enclosed boreholes drilled on the 17 October 2005, is enclosed..

Proposed Residence for S Kratzmann & G Berends at Lot 6 Clark & Swenson Roads, Kingaroy

4 November 2005

SITE

The proposed site is situated on a large town block and is situated on top of a ridge at the rear of the block. One tree has been noted. **The proposed site was indicated by the client and the boreholes were drilled accordingly in this area.**

TESTING/FINDING

The boreholes drilled revealed soil to approximately 0.4m, covering varying strata layers of sandy silty clay over (CH) silty clay with some layers of grey silty clay.

The subsoil was sampled at an approximate depth of 1.0m, at borehole No.1 and the sample was tested in the laboratory to determine the soil's natural (insitu) moisture content and moisture limits (Atterberg Limits). The test results indicate that the soil strata is not considered to alter appreciably with seasonal change. The limit results show that the soil is of high plasticity and is considered to be highly reactive.

This report is based on the extent of the soil investigation undertaken. Interpolation was used to give soil parameters for areas not specifically tested. If during any phase of the building development ground profile conditions revealed differ or vary from those described in this report, our office or suitably qualified personnel should be contacted.

Wide Bay Geotechnical Services Pty Ltd
(BSA Licence No. 717937)

P O Box 380, Hervey Bay Q 4580

Ph: 0741 243677 Fax: 0741 283284 Email: widebaygeotech@bigpond.com

Proposed Residence for S Kratzmann & G Berends at Lot 6 Clark & Swenson Roads, Kingaroy

4 November 2005

CLASSIFICATION

The foundation profile is a highly plastic, highly reactive (CH) silty clay with some layers of silty clay. The clay is of high plasticity and likely to offer high reactivity. The site is classified as H site for footings designed in accordance with AS2870 "Residential Slabs & Footings".

FOUNDATION MAINTENANCE/REMARKS

Ongoing foundation maintenance is always essential for the durability and stability of the footings and foundation and the appropriate required maintenance is described in AS2870 "Residential Slabs and Footings". Briefly, however, it is advised to keep away from the footings/foundation all water taps, garden and trees, and provide adequate compaction of loose ground around the outside of the footing perimeter. Rainwater/water should not be allowed to pond against the perimeter of the footings/foundations. (Refer to current CSIRO Information Bulletin enclosed).

Any site/earthworks following the date of this report must comply with the requirements of AS3798 "Guidelines on Earthworks for Commercial and Residential Developments" to validate the site classification.

Thank you for the opportunity to be of service and should you require any further assistance, please contact our office.

Yours faithfully



LEX T HEWITT

Manager (BSA Licence No. 1001730)

Wide Bay Geotechnical Services Pty Ltd
(BSA Licence No. 717937)

P O Box 380, Hervey Bay Q 4580

Ph: 0741 243677 Fax: 0741 283284 Email: widebaygeotech@bigpond.com

LTH.KMC
H7872

4 November 2005

S Kratsmann & G Berends
6597 Bunya Highway
KUMBIA 4610

SITE TESTING & SITE CLASSIFICATION

Proposed Residence for S Kratsmann & G Berends at
Lot 6 Clark & Swenson Roads, Kingaroy

ATTERBERG LIMITS

A sample (our sample number 30698) was obtained, air dried then dry sieved in preparation to determine its L L, P L, P I and L S in accordance with AS1289 2.1.1, 3.1.1, 3.1.2, 3.3.1 and 3.4.1, Australian Standards.

The results are as follows:

| | | |
|------------------|---|---------|
| Liquid Limit | = | 68.0% |
| Plastic Limit | = | 29.0% |
| Plastic Index | = | 39.0% |
| Linear Shrinkage | = | 19.0% |
| Iss | = | 4.5% |
| Ys | = | 45-50mm |

GROUND TOO HARD FOR PUSH TUBES

Note: The Ys value for above is based on the current site conditions when site investigation was conducted. However, the Ys value may be re-evaluated if the site is to be cut/filled or if a controlled fill is to be placed over the site.

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LTH.KMC/H7872
4 November 2005

Client: S Kratsmann & G Berends
Address: 6597 Bunya Highway KUMBIA 4610
Subject: Proposed Residence for S Kratsmann & G Berends at
Lot 6 Clark & Swenson Roads, Kingaroy

SITE CLASSIFICATION

(In accordance with AS2870)

CLASS 'H'


GENERAL DEFINITIONS OF SITE CLASSES

| CLASS | FOUNDATIONS |
|--------|---|
| A | Most sand and rock sites with little or no ground movement from moisture changes |
| S | Slightly reactive clay sites with only slight ground movement from moisture changes |
| M | Moderately reactive clay or silt sites, which can experience moderate ground movement from moisture changes |
| H | Highly reactive clay sites, which can experience high ground movement from moisture changes |
| E | Extremely reactive sites, which can experience extreme ground movement from moisture changes |
| A to P | Filled sites (See Clause 2.4.6) |
| P | Sites which include soft soils, such as soft clay or silt or loose sands; landslip; mine subsidence; collapsing soils; soils subject to erosion; reactive sites subject to abnormal moisture conditions or sites which cannot be classified otherwise |

For Classes M, H & E further division based on the depth of the expected movement is required. For deep-seated movements, characteristic of dry climates and corresponding to a design depth of suction change H_s , equal to or greater than 3m, the classification shall be M-D, H-D or E-D as appropriate.

Note: For example, H-D represents a highly reactive site with deep moisture changes and H represents a highly reactive site with shallow moisture changes.

- Notes: (a) Please read attached reports for details and information on the site.
- (b) **Class 'H' and it is recommended to seek your consulting engineer with regard to the appropriate footing system.**


LEX T HEWITT
Manager (BSA Licence No. 1001730)

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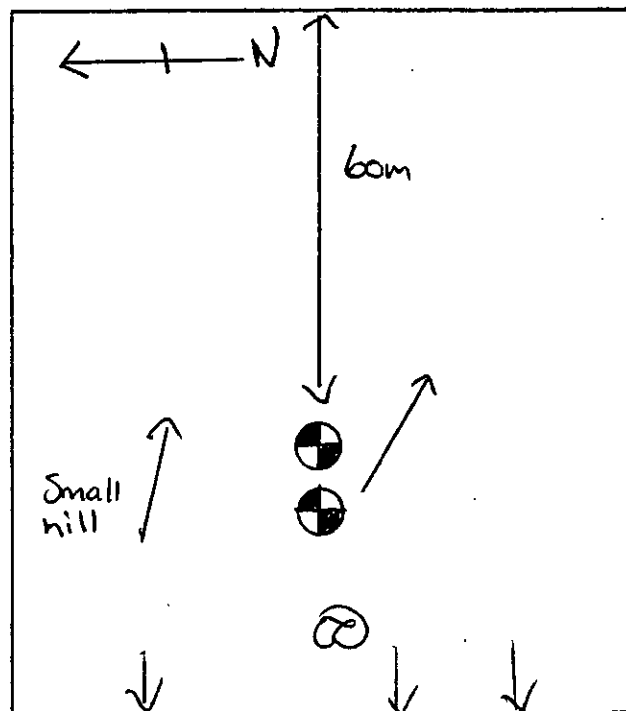
4 November 2005

S Kratsmann & G Berends
6597 Bunya Highway
KUMBIA 4610

SITE INVESTIGATION & SITE CLASSIFICATION

Proposed Residence for S Kratsmann & G Berends at
Lot 6 Clark & Swenson Roads, Kingaroy

SKETCH NOT TO SCALE



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PROFILE LOG

H7872

CLIENT: S KRATZMANN & G BERENDSPROJECT: PROPOSED RESIDENCESITE: LOT 6 CLARK & SWENSON ROADS, KINGAROYLOGGED BY: BH DATE 17.10.05BOREHOLE NO: 1 SURFACE R.L. SAMPLING & FIELD TESTING

| DEPTH (M) | MOISTURE | CONSISTENCY | CLASSIFICATION | BIT USED | DEPTH (M) | FIELD TEST RESULT |
|--|----------|-------------|--|-----------------------------------|-----------|-------------------|
| 0-0.4 | S | F | Dark brown soil, medium plasticity | | | |
| 0.4-1.0 | S | F | Red sandy silty clay, medium-high plasticity | | | |
| 1.0-2.0 | M | VF | Red (CH) silty clay, high plasticity with some layers of grey silty clay | TC 'V' | 1.0 DS | |
| | | | END OF HOLE | | | |
| | | | | | | |
| | | | | | | |
| Drill Type JACRO 100 DRILL RIG Driller BH | | | | Water Noted NIL Steady Level - | | |

Moisture: D - Dry
SM - Slightly Moist
M - Moist
S - Saturated
W - Wet

U50 - Undisturbed 50mm dia tube sample
DS - Disturbed sample
SPT - Standard Penetration Test N Value is number of blows to drive 50mm sample 300mm with a 63.3kg drop hammer falling 762mm. Blow count shown () is the number of blows required to drive U50 300mm.

Consistency: VS - Very soft
S - Soft
F - Firm
VF - Very Firm
ST - Stiff
VST - Very Stiff

VL - Very Loose
L - Loose
MD - Moderately Dense
D - Dense
VD - Very Dense

P - Hand Penetrometer est'd shear strength kPa
N - Factor reported in kPa
V - Steel V Bit
TC - Tungsten Carbide Bit
DY - Dynamic cone test 9kg hammer falling 508mm

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PROFILE LOG

H7872

CLIENT: S KRATZMANN & G BERENDSPROJECT: PROPOSED RESIDENCESITE: LOT 6 CLARK & SWENSON ROADS, KINGAROYLOGGED BY: BH DATE 17.10.05BOREHOLE NO: 2 SURFACE R.L SAMPLING & FIELD TESTING

| DEPTH (M) | MOISTURE | CONSISTENCY | CLASSIFICATION | BIT USED | DEPTH (M) | FIELD TEST RESULT |
|--------------------------------|----------|-------------|--|-----------------|-----------|-------------------|
| 0-0.4 | S | F | Dark brown soil, medium plasticity | | | |
| 0.4-1.0 | S | F | Red sandy silty clay, medium-high plasticity | | | |
| 1.0-2.0 | M | VF | Red (CH) silty clay, high plasticity with some layers of grey silty clay | | | |
| | | | END OF HOLE | | | |
| | | | | | | |
| | | | | | | |
| Drill Type JACRO 100 DRILL RIG | | | | Water Noted NIL | | |
| Driller BH | | | | Steady Level - | | |

Moisture:

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 ST - Stiff
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 L - Loose
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 D - Dense
 VD - Very Dense

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 N - Factor reported in kPa
 V - Steel V Bit
 TC - Tungsten Carbide Bit
 DY - Dynamic cone test 9kg hammer falling 508mm

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