Name of Witness	Paul Christopher PITMAN
Date of Birth	[redacted]
Address and contact details	[redacted] Woolloongabba Ph [redacted]
Occupation	Property Developer
Officer taking statement	Detective Sergeant Stephen Platz
Date taken	10th August 2011

Paul Christopher PITMAN states:

1. I am a property developer and owner/director of a 63 room motel located at 2 Opal Street, Emerald known as the Route 66 Motor Inn. In early March 2007 I submitted a development application to the Emerald Shire council to build this motel. The application was for Lot 60 on Survey Plan (SP) 140178, Parish of Selma at the corner of Opal and Cliffe Street, Emerald being a 4,767m2 block of vacant land. I am able to produce a copy of this application.

Exhibit: **Development Application (D203/06) on Lot 60 Survey Plan number 140178, in the parish of Selma at the corner of Opal and Cliffe streets, Emerald.**

Marked Exhibit No/...

2. In August 2008 purchased this block of land and began construction of motel. The land is located approximately 500 metres west of the Nogoa River on the eastern side of town. At the time of purchase I was aware that the area had been flooded in 2007 and previously on many other occasions. I do not recall being advised by my conveyance J Jones and Associate it was just common knowledge.

QFCI
Exhibit Number: 968
Date: 28/09/11
JM

400 George Street Brisbane
GPO Box 1738 Brisbane
Queensland 4001 Australia
Telephone 1300 309 634
Facsimile +61 7 3405 9750
www.floodcommission.qld.gov.au
ABN 65 959 415 158

3. Due to my knowledge of previous flooding I trusted that the council was fully aware of the flood history and that they would issue the correct fill heights to avoid future flooding. The development application set the minimum finished surface level over the site at 177.4 m Australian Height Datum (AHD) and the minimum finished floor level for any structure at 177.7 m AHD **(Witness refers to Exhibit No/... part (1) 28).** I ensured that the floor level as above this height and was constructed 150 mm higher than the set height. Construction was finished in April 2009 and it has been operating as a motel since this time.

4. Around October 2010 I took out an insurance policy with Latitude Insurance Company through my brokers, North Coast Finance Services. This policy was for business loss up to $500,000. I believed that this covered for flood at the time but I don't recall receiving a product disclosure statement.

5. On the 31st day of December 2010 Emerald experienced heavy flooding. On this day the Nogoa River broke its banks and flooded towards our property. I arranged for some sandbags and wooden sheeting in an attempt to protect the motel, but eventually the river inundated the entire motel 200ml above floor level. I thought that we would be safe from flooding due to the minimum floor heights imposed by the council. This flooding caused considerable damage to the walls, infrastructure, equipment, carpets and fixtures in the motel. I am able produce photographs of the flooding and subsequent damage.

Exhibit: Series of photographs depicting flooding in and around 2 Opal Street, Emerald.

Marked Exhibit No/...

6. As the pictures depict the majority of the flooding came from the river however we also experienced a back up of storm water from a blocked storm water drain.

7. Approximately one week after the flood, around the 10th of January 2011, I made an insurance claim through my broker. I initially contacted them by phone and was asked to fill out a form outlining my losses. I was encouraged to make this

[redacted]

claim and was told to wait for an assessor to attend the property. In the meantime I had a builder make an assessment with regards to the damage who estimated the repairs to be at least $500,000.

8. About one month later the assessor from the insurance company came and conducted an assessment. Not long after I received word through my broker that the insurance company had agreed to pay the full amount that my policy covered, which was $490,000 after the $10000 excess was deducted. I subsequently received this payment and made full repairs to my business. I rated their performance as excellent however now after the flood they are still assessing whether they will re insure me for flood.

9. My main issue with regards to the flooding was the approval of my development application based on floor heights that did not take into account previous flooding in Emerald. I thought that we would be safe from flooding due to the heights imposed by Emerald shire council now known as the Central Highlands Regional Council since amalgamation. I have made inquiries with the council concerning what records they have used to base these heights upon and I was told by a council representative that their historical records in relation to flood levels had been destroyed. I believe that all the planning heights should be reviewed and I am aware that the council have imposed an embargo on all development applications concerning the height issue.

10. Furthermore, I do not think that the council has done enough to prevent flooding in Emerald especially since flooding has been a historically regular occurrence. Firstly, the Fairbairn dam has limited flood mitigation capability and I believe that the dam spillway should be developed so it has the ability to conduct controlled releases of water or a levee bank be constructed round Emerald which ever is the most cost effective.

11. Another issue I identified is the damming effect of the Central Line Railway that runs from east west through the town. The railway is only a short distance from my motel and is raised a considerable distance above ground level on an earthen bed. When the flood came through I saw the water back up on the railway and was unable to pass through quickly as there are in-sufficient culverts in the line.

[redacted]

The only one closest to our location had an opening of approximately 1m x 1m to let an immense amount of water through. I am of the opinion that this back up of water also contributed to flooding in our area and that more culverts should be installed.

12. As I am unable to get insurance for flooding now I have invested in a number of measures to protect my business from future flooding. I consulted an engineer and constructed a levee bank around the motel to a height of about 1800 mm with heavy bracing to strengthen the wall. I have also installed two pumps to remove water, one of which has a 5000 litre per minute pumping capability.

P.PITMAN

Justices Act 1886

I acknowledge by virtue of section 110A(5)(c)(ii) of the Justices Act 1886 that:

(1) This written statement by me dated 11th August 2011 and contained in the pages numbered 1 to 4 is true to the best of my knowledge and belief; and

(2) I make this statement knowing that, if it were admitted as evidence, I may be liable to prosecution for stating in it anything that I know is false.

[redacted]

.....Signature

Signed at ....Brisbane...this.26th.....day of.....August.....2011

Witness Signature [redacted]. Signature of officer .....

[redacted]

Emerald

CONTACT NAME: Alexis Aylward
CONTACT NO: [redacted]

Our Ref: D203/06

RECEIVED
20 [redacted] 007
BY:

9 March 2007

Mr Paul Pitman.
C/- Murray & Associates (Qld) Pty Ltd
PO Box 665
EMERALD QLD 4720

Dear Sir

RE: DEVELOPMENT APPLICATION (D203/06) – LAND DESCRIBED AS LOT 60 ON SURVEY PLAN NUMBER SP 140178, IN THE PARISH OF SELMA SITUATED AT CNR OPAL & CLIFFE STREETS, EMERALD.

We refer to your application (D203/06) for Material Change of Use to establish an Accommodation Building [fifty-eight (58) units] on the abovementioned property.

Please be advised that the abovementioned Application (D203/06) was considered by Council at its meeting dated 5 March 2007. Pursuant to Section 3.5.15 of the Integrated Planning Act 1997, this letter is a Decision Notice.

Council has pleasure in enclosing a Decision Notice for a Development Permit for Material Change of Use subject to compliance with the conditions outlined in the attachment hereto.

Commencement of the land use, work or activity pursuant to this decision implies your acceptance of all the conditions imposed by Council. It is therefore most important that, prior to proceeding, you satisfy yourself that you are able to comply with all conditions.

Furthermore, it is to be clearly understood that:-

(i) The attached Decision Notice is NOT an approval to carry out any Building/Plumbing nor Operational Works. A formal Development Application must be submitted to Council and be approved before any of these works can be carried out on the subject land;

(ii) The premises shall not be used for any other purpose without Council's written consent; and,

(iii) Any further development is subject to a separate development application and Council's policies and Local Laws at the date of submission.

../2

ALL CORRESPONDENCE TO BE ADDRESSED TO THE CHIEF EXECUTIVE OFFICER - ATTN: (CONTACT NAME)
PO BOX 21/65 Egerton Street Emerald Qld 4720 General Enquiries: (07) 4982 8333 Fax: (07) 4982 1354 Email: enquiries@emerald.qld.gov.au

You are further advised that:-

(a) This approval extends only for the Material Change of Use. A further application will be required for:-
  (i) Operational Works including, but not limited to, construction of physical access to allotments, external and internal roadworks, stormwater drainage, water supply and sewerage provision, landscape treatment and earthworks involving cut and fill; and,
  (ii) any new construction work, alterations, demolition, or change of class which must be applied for and obtained under the provisions of the Building Act.

(b) Further requirements may exist under, and compliance will be required in accordance with, the following legislation:-
  (i) Environmental Protection Act;
  (ii) Regulations & Policies made under the Environmental Protection Act;
  (iii) Aboriginal Cultural Heritage Act; and,
  (iv) Any other relevant legislation.

For your information it is statutorily provided that any person who contravenes, or fails to comply with, any of the conditions of the Development Permit shall be guilty of an offence against the Act.

As Applicant, you may Appeal against Council's Decision to approve the application. Enclosed herewith for your information is an extract from the 'Integrated Planning Act' 1997, which sets out the procedure for appeals to the Court and the determination of appeals.

If there is any aspect of the Decision that you are uncertain of or unclear about, or if you would like to discuss further anything in connection with it, please contact Council's Environment and Development Planning Department on telephone number [redacted]

Yours faithfully

[redacted]

Bryan Ottone
Chief Executive Officer
[redacted]

Encl.
Decision Notice
Approved Plans
Extract of Integrated Planning Act

Emerald

Integrated Planning Act

SHIRE OF EMERALD TOWN PLANNING SCHEME

DECISION NOTICE NUMBER : D203/06

Emerald

DESCRIPTION OF LAND:	Lot 60 on SP140178, Parish of Selma
AREA OF LAND:	4,767 m2
POSTAL ADDRESS OF LAND:	Cnr Opal and Cliffe Streets, Emerald
CURRENT USE OF LAND:	Vacant
APPLICANT'S NAME:	Paul Pitman
APPLICANT'S ADDRESS:	C/- Murray & Associates (Qld) Pty Ltd PO Box 665, Emerald 4720
NAME AND ADDRESS OF REFERRAL AGENCIES:	Department of Main Roads. PO Box 1787, Emerald 4720 Queensland Transport Integrated Transport Planning Transport Planning Branch PO Box 1293, Townsville 4810

The Council of the Shire of Emerald as the responsible Local Authority hereby advises approval for a Development Permit for the Material Change of Use to establish an Accommodation Building [fifty-eight (58) units] and Caretaker's Residence subject to the following conditions:-

1. ASSESSMENT MANAGER CONDITIONS: Emerald Shire Council

General

1) The approved development, Accommodation Building (58 Units and Caretaker's Residence) and the conduct of the approved use, the carrying out of any works on the premises and the construction of any buildings on the premises associated with the development must be generally in accordance with the following approved plans prepared by Pittman Properties:
   - i. WD.01 Site Plan
   - ii. WD.03 Roof Plan
   - iii. WD.04 Elevations – Sheet 1 of 2
   - iv. WD.05 Elevations – Sheet 2 of 2
   - v. WD.06 Ground Floor Plan of Manager's Unit
   - vi. WD.07 First Floor Plan & Elevations of Manager's Unit
   - vii. WD.08 Manager's Unit – Sections and Details
   - viii. WD.09 Unit Types A and D – Plans, Section, Details
   - ix. WD.10 Unit Types B and C – Plans, Section, Details
   - x. WD.11 Maintenance, Store and Gymnasium – Plans, Section, Details
   - xi. WD.12 Laundry and Gazebos – Plans, Section, Details

Unless otherwise specified in this development permit, the conditions of this permit must be complied with prior to the commencement of the approved use.

All costs for works required as a condition of approval are to be borne by the applicant, and/or developer, and/or owner, as agreed between these parties, unless otherwise stipulated in a condition of approval.

2) The applicant shall submit revised plans of development in general accordance with approved plans specified in Condition No. 1. The proposal shall be amended to show all standard vehicular car parking bays to be a minimum of 2.75 mm wide.

The revised plans shall be submitted at the time of lodgement of a Building Work Development Application and endorsed by Council, prior to issue of a Building Works Development Permit.

3) An internal easement is required to be provided for any part of the drainage, water supply or sewerage infrastructure network that passes through the site and is of benefit to another allotment. Any such easement shall be of an adequate width, as set out in any future Operational Work Decision Notice, to protect that infrastructure. The minimum width of any easement is to be 4m. Any such easement is to be provided at the developer's cost and in accordance with Council's Development Manual on Engineering Works.

4) This approval shall lapse at the expiration of 4 years from the date of the approval taking effect if the Material Change of Use has not been commenced.

Landscaping Treatment

5) A landscaping and fencing plan shall be submitted as part of any future application for a Building Work Development Permit in general accordance with the revised plans of development as specified in Condition No. 2. The plans shall be amended to show the following:

   a) A planting bed with a minimum width of 1 m is to be provided along the Opal Street frontage, exclusive of the crossover area. Any fencing treatment along this frontage is to be constructed to the rear of the planting bed and in accordance with fencing detailed in the approved plans;
   b) Planting species that grow to either a maximum height of 0.5 m or a minimum height of 3.0 m are to be used in the planting bed so as not to obstruct views of the car parking area from Opal Street;
   c) Three (3) trees that grow to a mature height of 6 m are to be planted in the landscaping area adjacent to Opal Street; and,
   d) The four (4) existing cabbage tree palms adjacent to the Opal Street property boundary are to be retained, as far as practical.

6) The landscaped areas shall be provided with an underground irrigation system that can be controlled from one location and contain an approved backflow prevention device.

7) The landscaping shown on the approved landscaping plan shall be completed prior to the commencement of the use and maintained for the duration of the use.

Car parking and Access

8) On site car parking for the development shall be provided at the following minimum rate of 54 car bays, 2 bus bays and 1 garage for the exclusive use of the Caretaker's Residence.

9) Physical access to the site, car parking and vehicle maneuvering areas within the development shall be provided in accordance with Australian Standard 2890.1, except that the minimum width of any car space shall be 2.75 m.

10) All car parking and vehicle maneuvering areas within the development shall be linemarked, sealed and drained. This work shall be completed prior to the commencement of the use and maintained for the duration of the use.

11) The landscaped areas adjoining the vehicular areas shall be protected from vehicles by a minimum 100 mm high concrete kerb or similar construction.

12) Lighting shall be provided for security between the car park and buildings on the site. Such lighting shall be provided to prevent vandalism and screened from adjoining units and properties.

13) Pram ramps from building walkways to the parking area shall be provided throughout the proposal.

14) Provision is to be made for a commercial waste disposal vehicle to enter the site and service the bin enclosure.

Amenity

15) Unless otherwise approved in writing by the Chief Executive Officer, no construction work that makes or causes audible noise shall be carried out on site:

a) On a Sunday or a Public Holiday at any time; nor,
b) On a Saturday or business day before 6:30 am or after 6:30 pm.

16) All service equipment (including air conditioners) and lighting shall be located so as not to cause a nuisance to the occupants of neighbouring premises or adjoining Dwelling Units. The air conditioning plant for each building shall be located on the ground, unless otherwise approved by the Executive Manager Environment and Development.

17) External waste disposal areas shall have an imperviously paved washdown area, be provided with a hosecock and be accessible to a commercial waste disposal vehicle.

18) The outdoor storage of any equipment or material and any service area shall be aesthetically screened so as not to be visible from any carparking area or road frontage.

Development Contributions

19) Contribution to Council of an amount of $57,288.00 in accordance with Council's annually revised Local Planning Policy titled "Water Supply Undertaking Headworks Contributions". This headworks charge is to be paid and is applicable for a period of three (3) months from the date of approval, and thereafter shall be in accordance with Council's annually revised Local Planning Policy titled "Water Supply Undertaking Headworks Contributions" which, as per the 2006-2007 rate, shall increase to $82,211.30.

This contribution shall be paid to Council on, or before, the issue of the Final Certificate for any structure to be used for accommodation purposes. If the construction of buildings is staged, then the payment of the contribution shall also be staged.

20) Contribution to Council of an amount of $53,139.20 in accordance with Council's annually revised Local Planning Policy titled "Sewerage Supply Undertaking Headworks Contributions". This headworks charge is to be paid and is applicable for a period of three (3) months from the date of approval, and thereafter shall be in accordance with Council's annually revised Local Planning Policy titled "Sewerage Supply Undertaking Headworks Contributions" which, as per the 2006- 2007 rate, shall increase to $89,203.20

This contribution shall be paid to Council on, or before, the issue of the Final Certificate for any structure to be used for accommodation purposes. If the construction of buildings is staged; then the payment of the contribution shall also be staged.

Utilities

21) Submission to Council of a copy of a letter from Ergon Energy stating that satisfactory arrangements have been made for the provision of electricity to the development.

22) Submission to Council of a copy of a letter from Telstra stating that satisfactory arrangements have been made for the provision of communication services to the development.

Engineering

23) Stormwater Drainage:

a) The lawful and practical point of stormwater discharge is the Nogoa River;
b) The land shall be graded so that it is free draining;.
c) The development must not interfere with the natural flow of stormwater, nor cause ponding on adjoining property;
d) All stormwater run off from artificial and roof areas naturally occurring on the site must be collected within the premises and discharged through gross pollutant trap(s) to the lawful and practical point of stormwater discharge ; and,
e) The stormwater management system maybe augmented by the provision of rain water tanks on site.

24) Provision must be made for an external downstream drainage easement, or a combination of a road reserve and downstream drainage easement, to convey stormwater from the site via overland flow and or underground pipes to the point of lawful and practical discharge, the Nogoa River.

25) Provision shall be made for all necessary storm water drainage and erosion and sediment control measures including gross pollutant traps (both internal and external to the subject land) in accordance with Council's Development Manual on Engineering Works.

26) The following external roadworks for the construction of Cliffe Street are required at the minimum in accordance with Council's Development Manual Engineering:

a. provision of a 10.0 m wide carriageway to match the alignment and profile of the Opal and Cliffe Street round-a-bout;
b. provision of a turning head that contains a minimum turning dimension of 12.5 m radius;
c. provision of Emerald Shire profile kerb and channel for the full length of both sides of the new road;
d. provision of a 2m wide concrete footpath for the full length of the Opal Street and Cliffe Street frontages of the site, excluding point of access;
e. provision of a safe crossing point across Opal Street and a 2m wide concrete footpath to join with the existing footpath on the western side of Opal Street; and
f. Provision of safe trafficable 2 m wide concrete pedestrian / cycle access from the development to the north east corner of the Clermont and Opal Street intersection. This pedestrian network is to be in accordance with engineering standards of Emerald Shire Council, Department of Main Roads and Queensland Transport.

Alternatively, if the Cliffe Street precincts infrastructure is masterplanned in conjuction with other sites in the vicinity then external roadworks may be undertaken in accordance with a traffic report taking into account the optimum design for Cliffe Street to service the current development applications. This is likely to alter minimum road reserve (20m) and carriageway widths (10m), plus include points of constructed site access, turning lanes and limitations on onstreet carparking.

All construction of works for the new road must be in accordance with design plans approved by Council.

27) The street numbers, linemarking, road signs, verges, service conduits and street lighting shall be provided in accordance with Council's Development Manual on Engineering Works.

28) On site earthworks shall be undertaken in accordance with Australian Standard 3798-1996, *Guidelines on Earthworks for Commercial and Residential Development*

The site shall be filled to ensure that the minimum finished surface level over the site is 177.4 m AHD. The finished floor level of any structure shall be a minimum of 177.7 m AHD.

29) Provision of a retaining wall on the boundary of the site wherever fill is greater than 0.3 m above the adjoining lot's finished surface level.

30) The existing water connection to the site shall be connected and provision made to upgrade the water connection to sufficient size to cater for the development.

If the water main is extended then the capacity of the water main shall be demonstrated to meet Council's standards through the provision of a network analysis showing the impact on existing reticulation by the proposal. The developer shall provide all upgrades to the water supply system identified in the network analysis to ensure that the current level of service to existing consumers is not diminished.

31) Provision of an internal reticulated water supply service, with only one service connection point, in accordance with the Development Manual: Engineering. Each unit shall be provided with an above ground stop cock so that each unit or building can be isolated from the balance of the development.

32) Provision of an internal reticulated sewerage service to the development, with only one connection point, in accordance with Council approved plans.

This shall involve the construction of a sewerage pump station and rising main if the development proceeds as a stand alone development rather than as part of a Cliffe Street precinct.

Alternatively, if the Cliffe Street precinct's infrastructure is masterplanned, in conjuction with other sites in the vicinity, then the extension of the reticulated sewerage network may be undertaken in accordance with a layout to service the entire precinct and this may involve locating the new pump station elsewhere within the Cliffe Street precinct.

FURTHER, that the applicant be advised that:-

(a) This approval extends only to the Material Change of Use. A further application will be required for:

(i) Operational Works including, but not limited to, construction of physical access to allotments, external and internal roadworks, stormwater drainage, water supply and sewerage provision, landscape treatment and earthworks involving cut and fill; and,

(ii) any new construction work, alterations, demolition, or change of class which must be applied for and obtained under the provisions of the Building Act.

(b) Further requirements may exist under, and compliance will be required in accordance with, the following legislation:

(i) Environmental Protection Act;
(ii) Regulations & Policies made under the Environmental Protection Act;
(iii) Aboriginal Cultural Heritage Act; and,
(iv) Any other relevant legislation.

(c) Workplace amenities shall be provided in compliance with the Workplace Health and Safety Act and the Workplace Health and Safety Regulations as administered by the Department of Training and Industrial Relations.

(d) Further requirements may exist under, and compliance will be required in accordance with, the Health Act and the Health Regulation. Contact should be made with Council's Environmental Health Officer in this regard.

(e) All refuse storage, removal and disposal are to be in accordance with the Environmental Protection (Waste Management) Policy 2000 and Council's Policies, and to the satisfaction of the Environmental Health Officer.

(f) Any monetary figures listed in the above conditions are subject to periodic review and Council reserves the right to review the monetary figures applying three (3) months from the issue of approval.

Advisory Notes:

1. The applicant is to be aware that a Development Permit under the Integrated Planning Act 1997 (IPA) to carry out Operational Works where the total cost of the work, whether directly or indirectly and inclusive of GST is $80,000.00 or more, requires the payment of the Building and Construction Industry Portable Long Service Leave Levy.

Council advises that before a Development Permit, authorizing work is issued, Council has a legal obligation to ensure applicants under IPA provide proof of payment of the Portable Long Service Leave Levy and the Workplace Health and Safety fee.

2. *Interference with meters and fittings* (Local Law 24)
A person must not:

a) Cover over, fence in, lock, hinder access to or otherwise obstruct or obscure a water meter; or,
b) Erect a building or structure over a water meter; or,
c) Place any goods or materials near a water meter or permit growth of vegetation near a water meter.

In such a manner as to prevent an authorized person from obtaining practicable and convenient access to the meter to read it or for any other lawful purpose.

2. **CONCURRENCE AGENCY CONDITIONS: Department of Main Roads**

A complete copy of the Department of Main Roads' Conditions and Statement of Reasons is attached.

File Number: 830/130
Development Application Number: D203/06
Material Change of Use – Lot 60 on SP140178

Prior to commencing operation of the development, at the applicant's cost, the following conditions are to be satisfied in full:

Noise

1. Main Roads has reviewed the submitted Road Traffic Impact Noise Assessment Report (TTM Acoustics, Report No. 31836 report rev 2 dated 13/09/06) as part of the assessment. The strategy proposed to attenuate the impact of the road traffic noise is as follows:

   Architecturally treat the building envelope in accordance with AS3671 to achieve the criteria stated in AS2107. The acoustic report has provided sufficient guidance to the developer in Section 6.0. Where the requirements of AS2107 need to be achieved, it will be necessary for all windows and external doors to be closed at all times. Tightly fitting architectural elements with suitable acoustical seals should be used. Therefore, an air conditioning mechanical ventilation system that meets the ventilation requirements of the Building Code of Australia should be installed in noise impacted rooms. Due consideration shall be given to the type of system to ensure that the internal noise criteria can be achieved.

   It is essential that the acoustical treatments (architectural measures) proposed in the acoustical consultant's report be implemented by the developer. Thus the developer shall engage the services of an acoustical engineer to certify (RPEQ) that the architectural measures and a suitable outdoor recreational space have been incorporated into the envelope and building design. This will require the acoustical engineer to undertake an inspection at the end of construction and may require inspections during construction. It is the

developers' responsibility to forward certification to Main Roads prior to final acceptance being given.

Main Roads has not specifically reviewed the requirements of Emerald Shire Council or Queensland Rail or their approved strategies to manage road traffic noise. In the event of a conflict between Main Roads' and Emerald Shire Council's or Queensland Rail's strategies to manage road traffic noise, Main Roads requirements shall not be compromised. Where Emerald Shire Council's or Queensland Rail's criteria are more stringent than Main Roads', the implementation of Emerald Shire Council's or Queensland Rail's requirements is supported.

Concurrence Agency

2. Main Roads is to be included as a concurrence agency for all future developments that have road connectivity to this development.

Compliance

3. The applicant shall provide Council with a letter from Queensland Department of Main Roads confirming compliance by the applicant with the requirements of the Department prior to commencement of any new use of the land.

Condition

4. The above conditions are valid for two (2) years from the date of the Decision Notice. After the two (2) years, Main Roads reserves the right to review and amend any of the above conditions.

3. CONCURRENCE AGENCY CONDITIONS: Queensland Transport

A complete copy of Queensland Transport's Conditions and Statement of Reasons is attached.

Queensland Transport (QT) Reference: *TVS84*

Trespass

1. The developer shall erect or upgrade boundary fencing, at no cost to QT, along the common boundary with the rail corridor as outlined in their response to information request dated 8 September 2006, in accordance with Queensland Rail – Civil Engineering Standard Security Fence drawing numbers as amended from time to time:

   - 2544 Security Fence (*Attachment 2A*) (please note this standard may change in the near future);
   - 2545B 1800mm Timber Fence (*Attachment 2B*); or
   - 2546 Standard Steel Panel Fence (*Attachment 2C*).

Stormwater and Drainage

2. The developer must ensure that stormwater drainage on the site will be in accordance with the stormwater schematic in Appendix B of the response to information request dated 8 September 2006.

Works on the Boundary

3. The developer must ensure that if at any stage works are within 25 metres of the rail corridor occur, these works will be designed and constructed to avoid risk of collapse, subsidence, or other adverse impacts on the railway and/or the railway infrastructure, and shall be subject to the following criteria:

- Construction activities for any proposed wall/s on, or adjacent to, the rail corridor boundary will have the approval of a Registered Professional Engineer of Queensland;
- The design of any wall/s on, or adjacent to, the rail corridor boundary shall be in compliance with QR Standard Requirement MCE-SR-005 "Requirements for the design of buildings over or near railways" (Attachment 3) as amended from time to time.

4. The developer shall ensure that fill, debris, or building materials associated with the development does not intrude onto the rail corridor.

Noise

5. The developer must adhere to the noise amelioration measures outlined in the Environmental Noise Impact Report in Appendix F of their response to Information request dated 8 September 2006. All noise sensitive places in the development, as defined in the Environmental Protection (Noise) Policy 1997, within 100 metres of the rail corridor boundary shall be designed to:

a) Meet indoor design level noise criteria to achieve average maximum sound level (10:00 pm – 6:00 am) not greater than 50 decibels (dB) (to be achieved within bedrooms, living areas and noise sensitive areas of non residential uses); and,
b) Meet external design level noise criteria of:
   h) 65dB(A), assessed as the 24 hour average equivalent continuous A – weighted sound pressure level; and
   ii) 87dB(A), assessed as a single event maximum sound pressure level when assessed 1 metre in front of the most exposed part of the noise sensitive place.

4. PUBLIC NOTIFICATION

The applicant is advised that one (1) submission was received during the public notification period. The details of the submitter are set out below:

Mr A. Plunkett [redacted] Capella, Qld, 4723

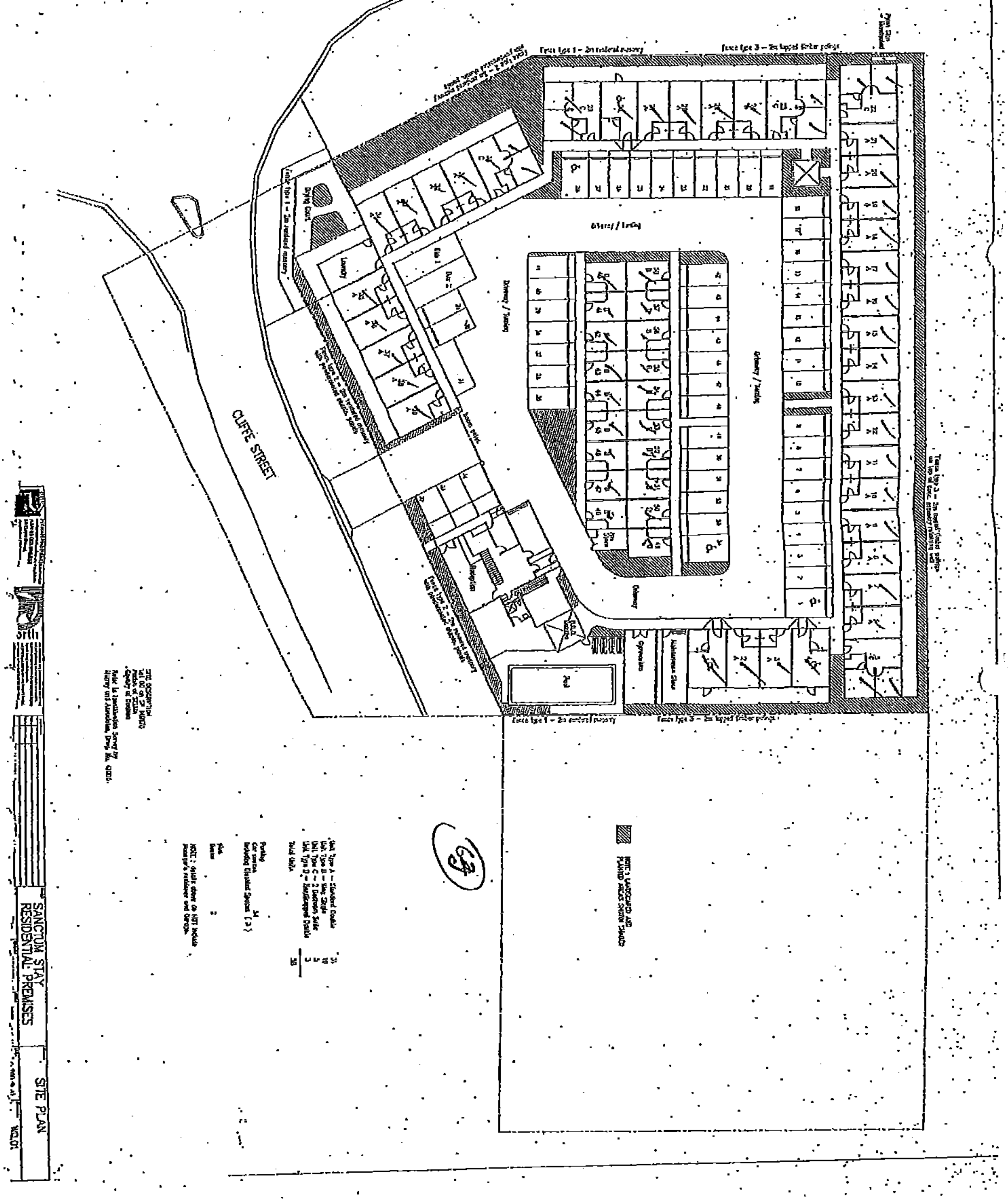
DATED THIS FIFTH DAY OF MARCH 2007

[redacted]

BRYAN OTTONE
CHIEF EXECUTIVE OFFICER
D203.06

ITEM NO. 80.1.1

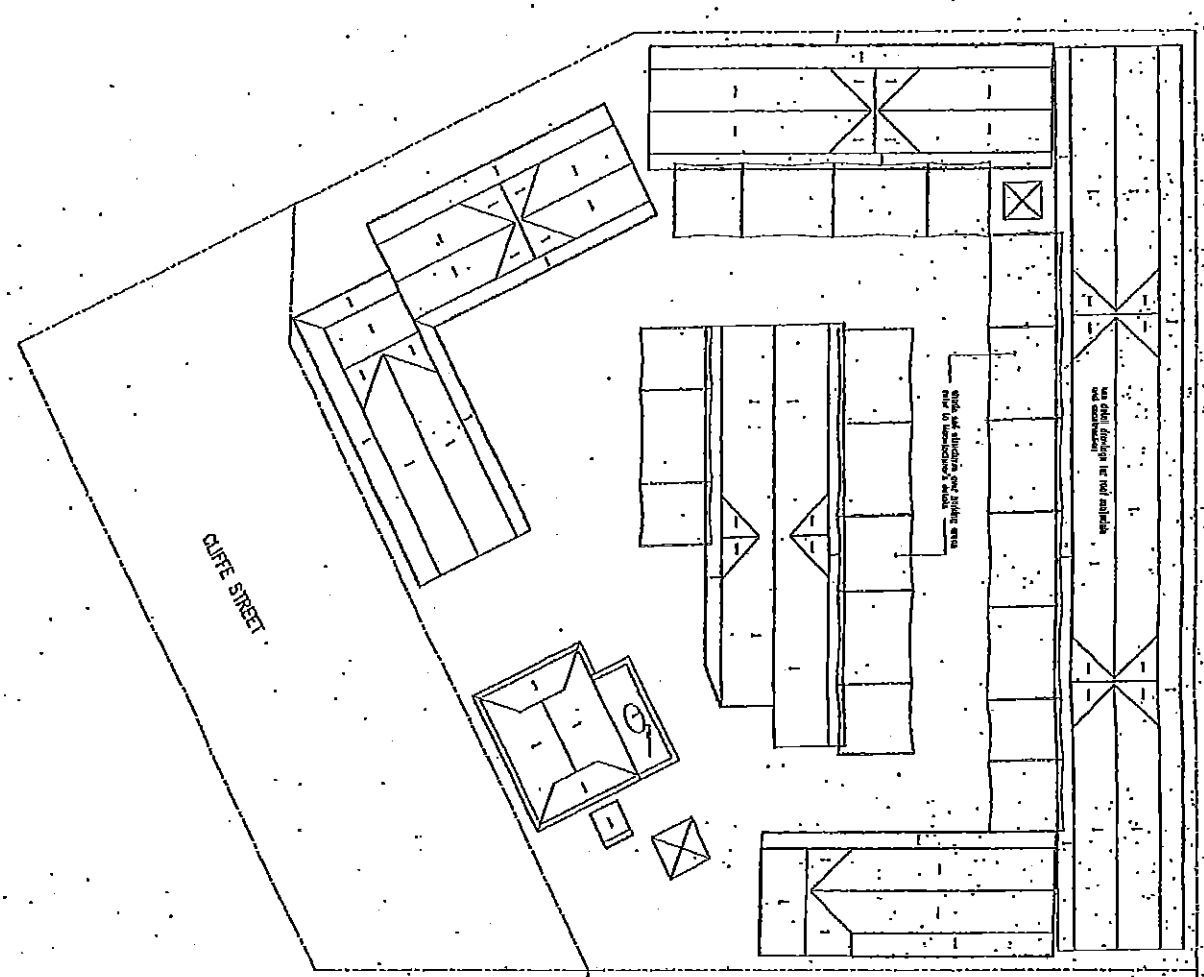
EMERALD SHIRE COUNCIL
TOWN PLANNING APPLICATION
NUMBER TP-D203/06
APPROVE AT COUNCIL MEETING
5 MARCH 2007



ITEM NO. 80.1.1

EMERALD SHIRE COUNCIL
TOWN PLANNING APPLICATION
NUMBER TP-D203.06
APPROVE AT COUNCIL MEETING
5 MARCH 2007

OPAL STREET

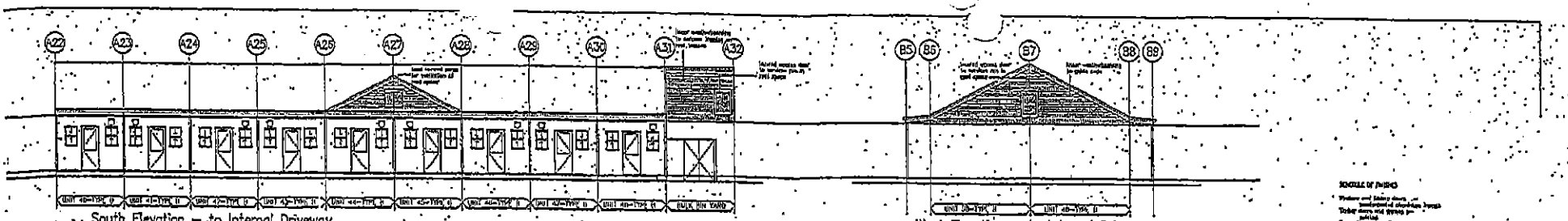


North

SANCTUM STAY
RESIDENTIAL PREMISES

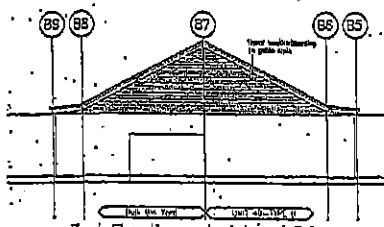
ROOF PLANS

ITEM NO. 80.1.1

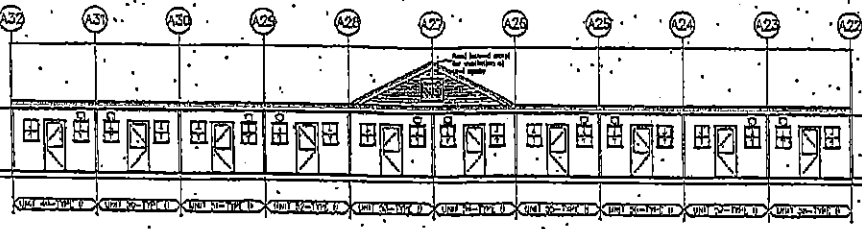


South Elevation – to Internal Driveway

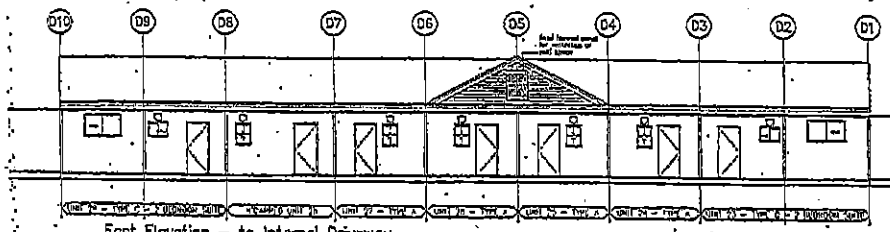
West Elevation – to Internal Driveway



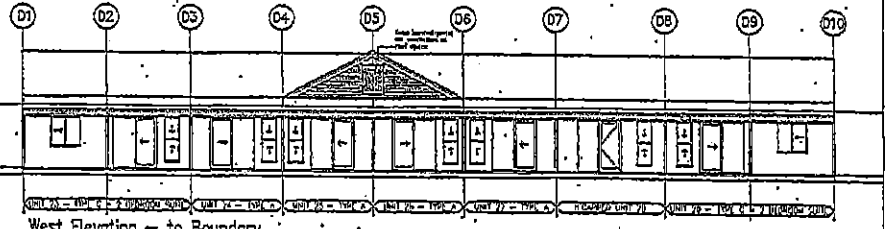
East Elevation – to Internal Driveway



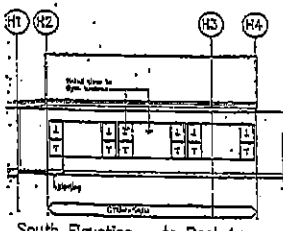
North Elevation – to Internal Driveway



East Elevation – to Internal Driveway

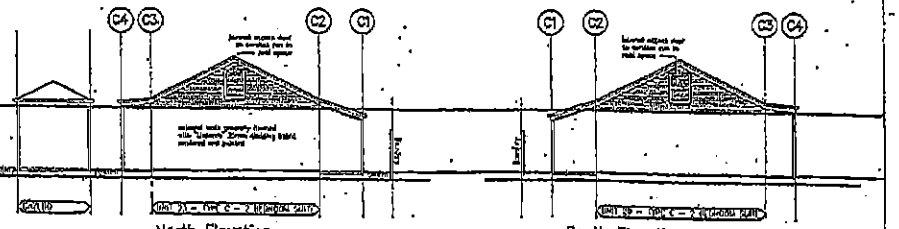


West Elevation – to Boundary



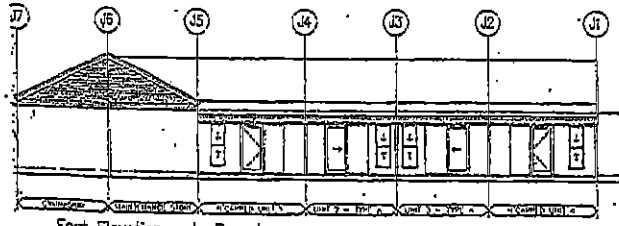
South Elevation – to Pool Area

EMERALD SHIRE COUNCIL
TOWN PLANNING APPLICATION
UNDER TP-D203/06.
APPROVE AT COUNCIL MEETING
5 MARCH 2007

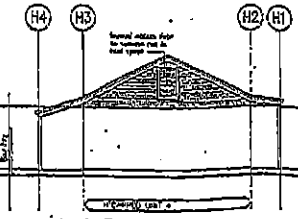


North Elevation

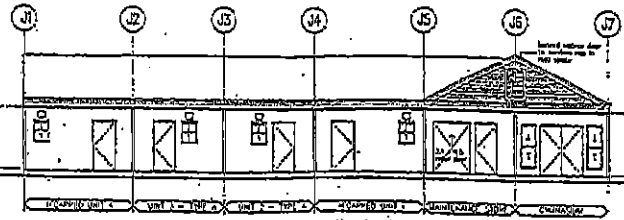
South Elevation



East Elevation – to Boundary



North Elevation



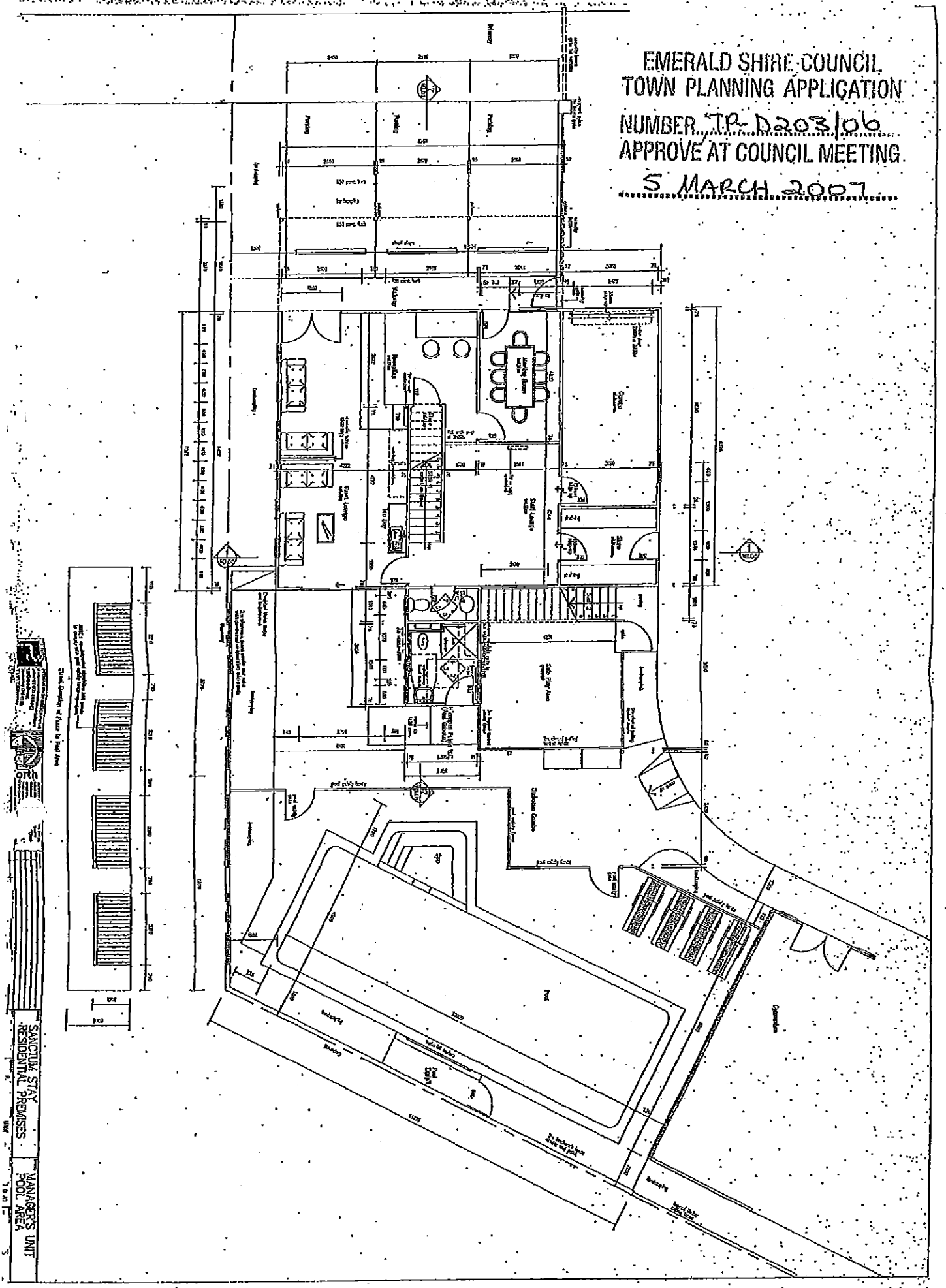
West Elevation – to Driveway

SANCTUM · STAY
RESIDENTIAL PREMISES

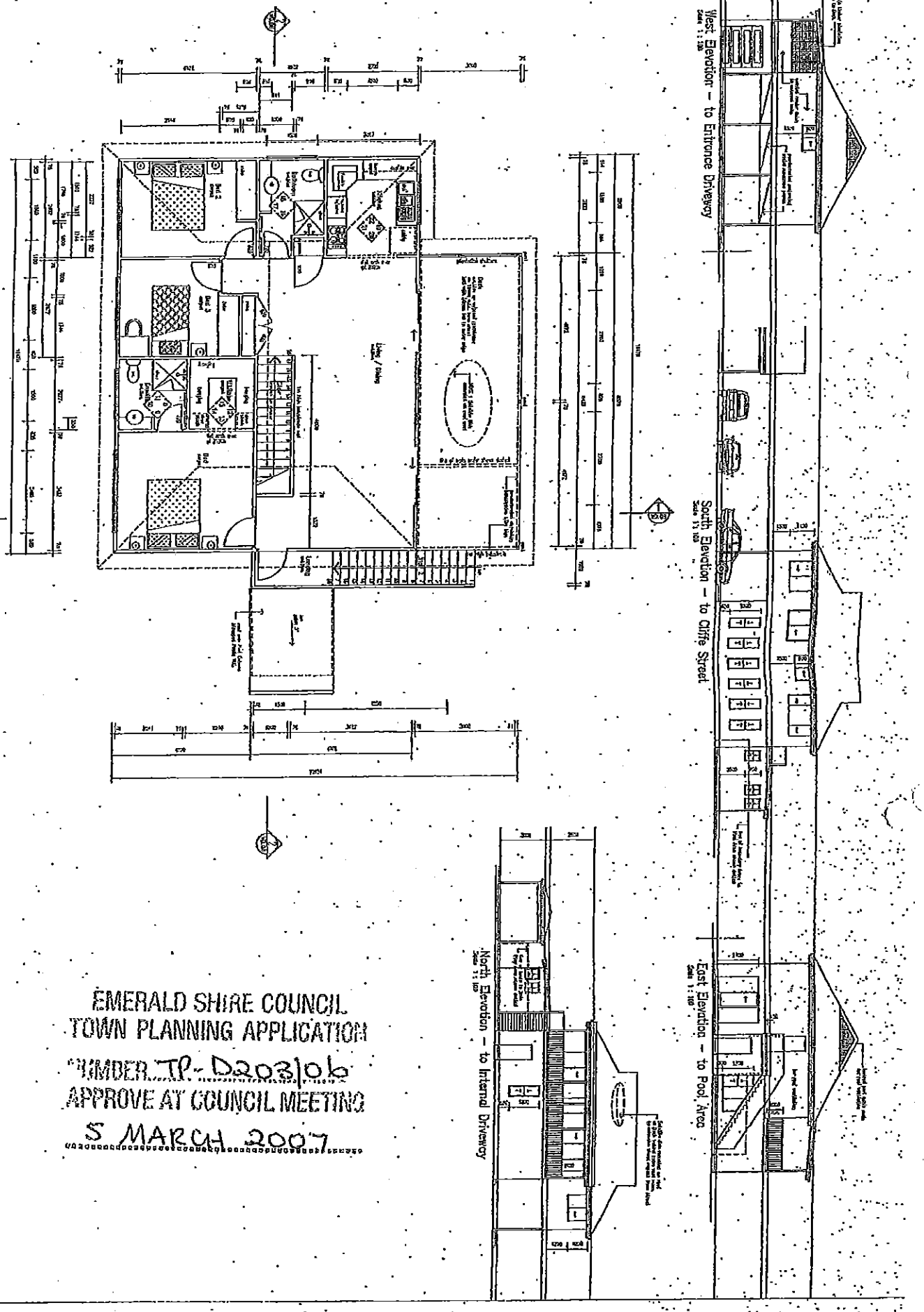
ELEVATIONS
Sheet 1 of 2

ITEM NO. 80.1.1

EMERALD SHIRE COUNCIL
TOWN PLANNING APPLICATION
NUMBER TP-D203/06
APPROVE AT COUNCIL MEETING
5 MARCH 2007



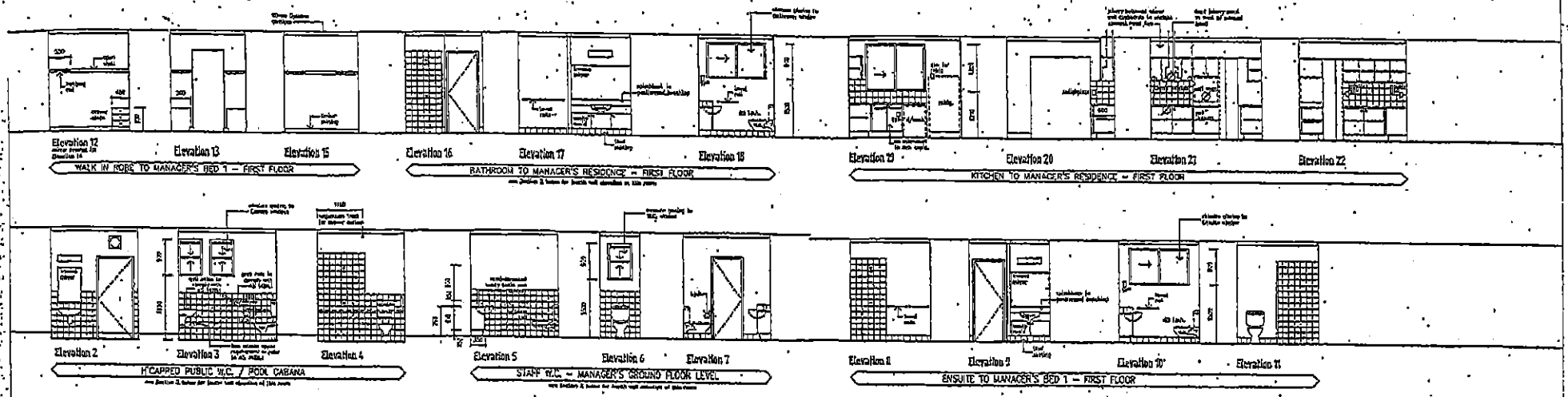
ITEM NO. 80.1.1

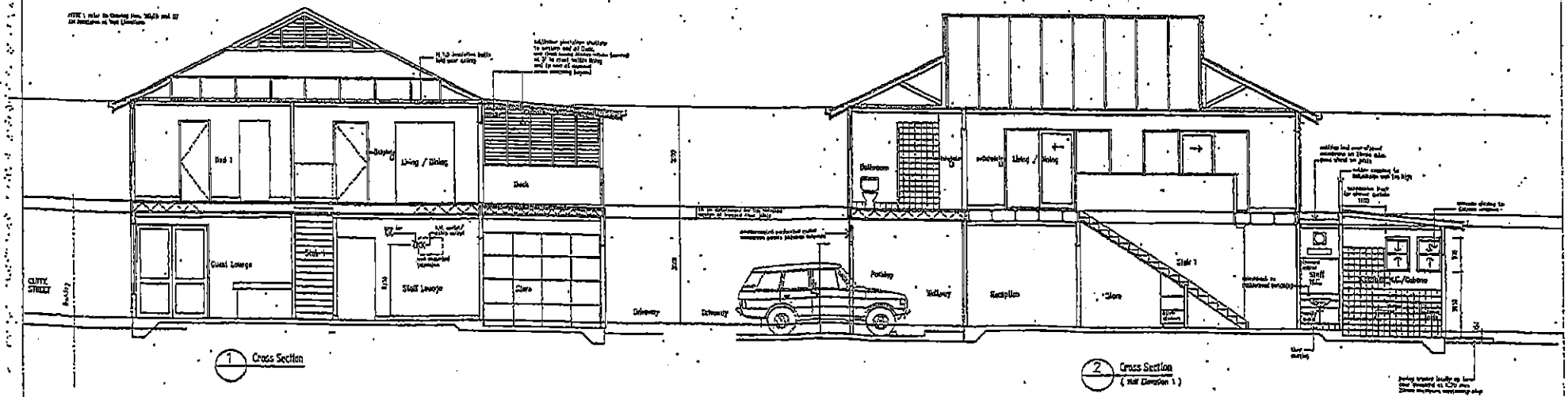


EMERALD SHIRE COUNCIL
TOWN PLANNING APPLICATION
NUMBER TP-D2031061
APPROVE AT COUNCIL MEETING
5 MARCH 2007

ITEM NO. 80.1.1

EMERALD SHIRE COUNCIL
TOWN PLANNING APPLICATION
UNDER TP-D203/06
APPROVE AT COUNCIL MEETING
5 MARCH 2007

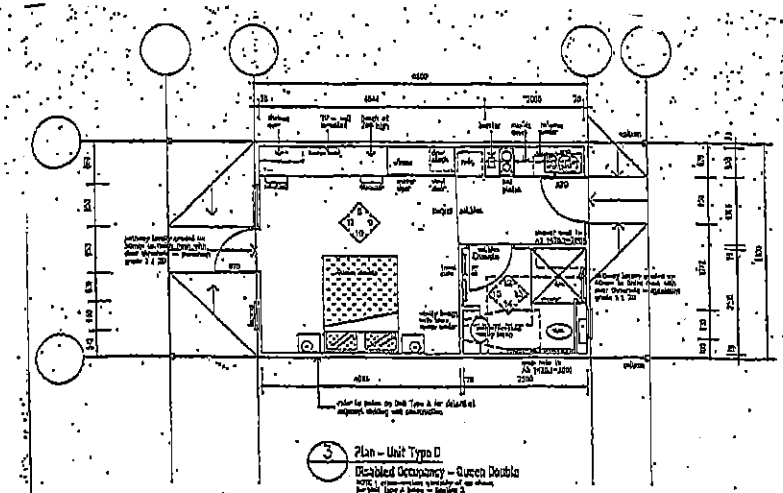


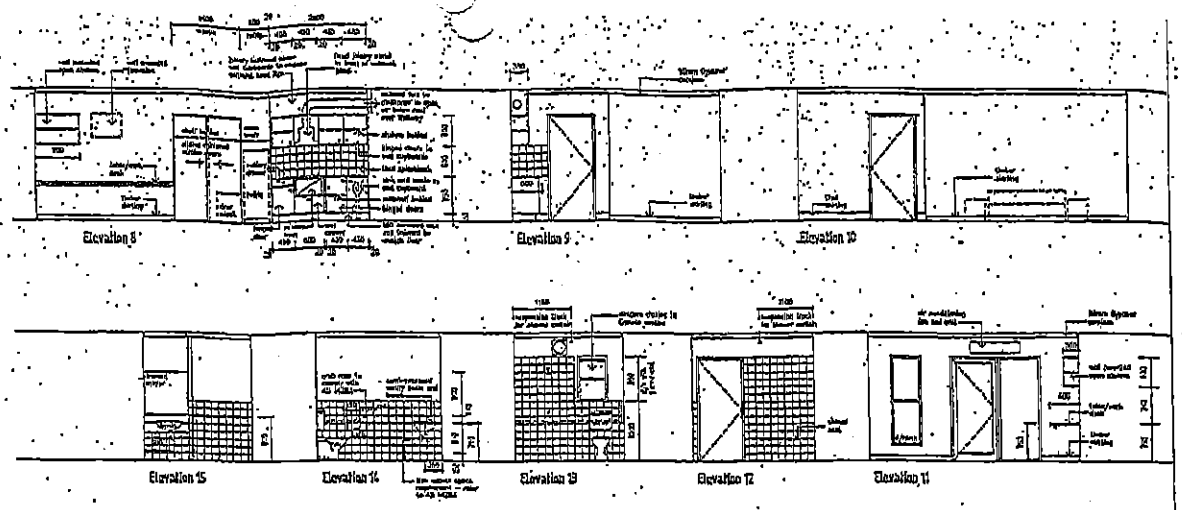


SANCTUM STAY RESIDENTIAL PREMISES

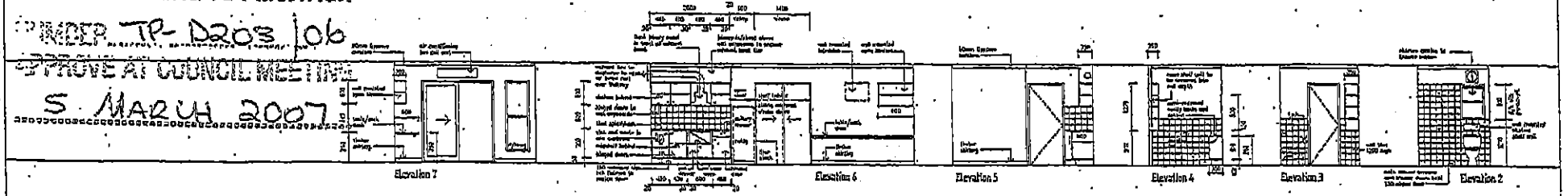
MANAGER'S UNIT SECTIONS, DETAILS

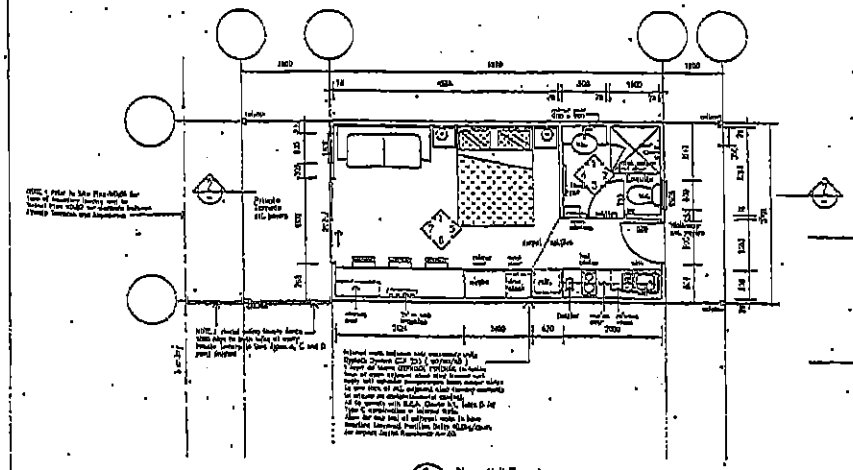
ITEM NO. 80.1.1

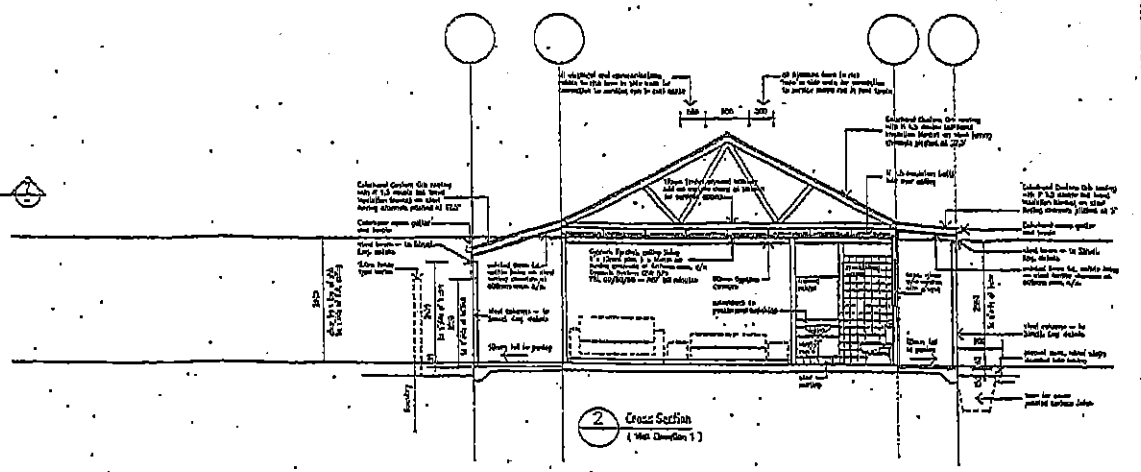




EMERALD SHIRE COUNCIL
TOWN PLANNING APPLICATION
NUMBER TP-D203/06
APPROVAL COUNCIL MEETING
5 MARCH 2007





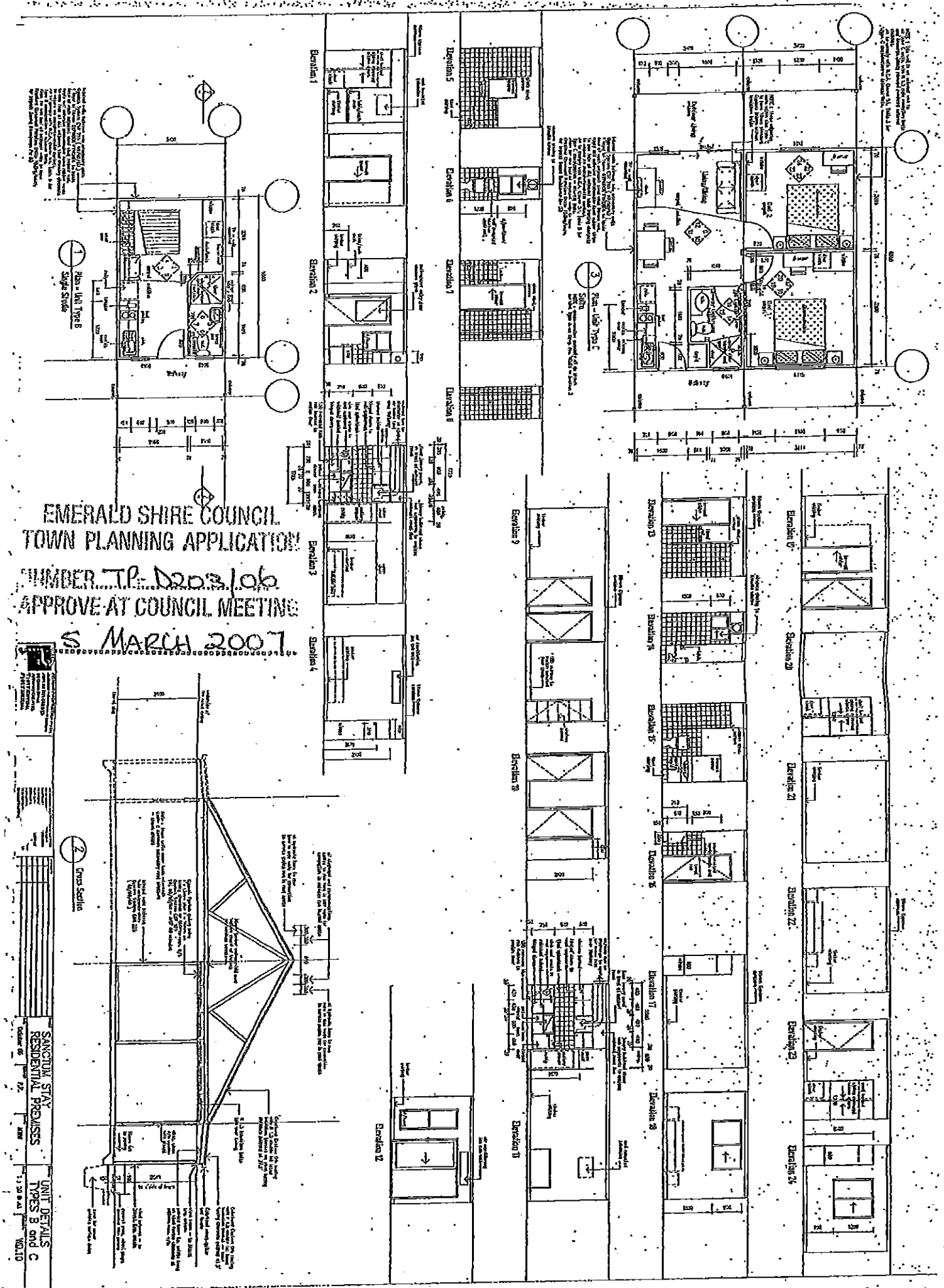


SANCTUM STAY RESIDENTIAL PREMISES

UNIT DETAILS TYPES A and D

WD.09

ITEM NO. 80.1.1


EMERALD SHIRE COUNCIL
TOWN PLANNING APPLICATION
NUMBER TP D2023/06
APPROVE AT COUNCIL MEETING
5 MARCH 2007
SANCTUM STAY
RESIDENTIAL PREMISES
UNIT DETAILS
TYPES B and C
Elevation 1
Elevation 2
Elevation 3
Elevation 4
Elevation 5
Elevation 6
Elevation 7
Elevation 8
Elevation 9
Elevation 10
Elevation 11
Elevation 12
Elevation 13
Elevation 14
Elevation 15
Elevation 16
Elevation 17
Elevation 18
Elevation 19
Elevation 20
Elevation 21
Elevation 22
Elevation 23
Elevation 24

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EMERALD SHIRE COUNCIL
TOWN PLANNING APPLICATION
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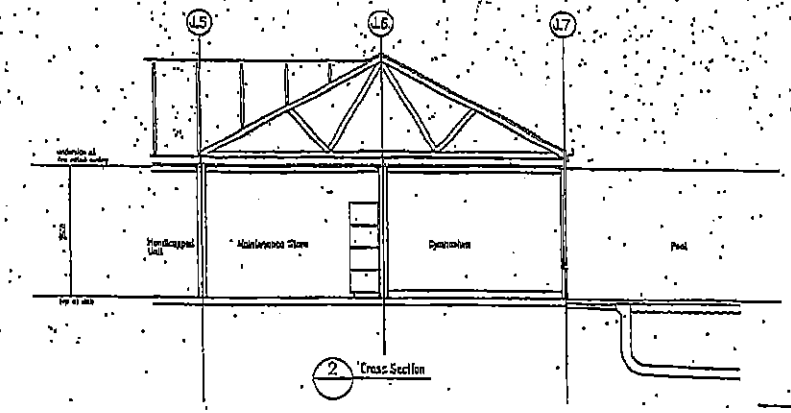
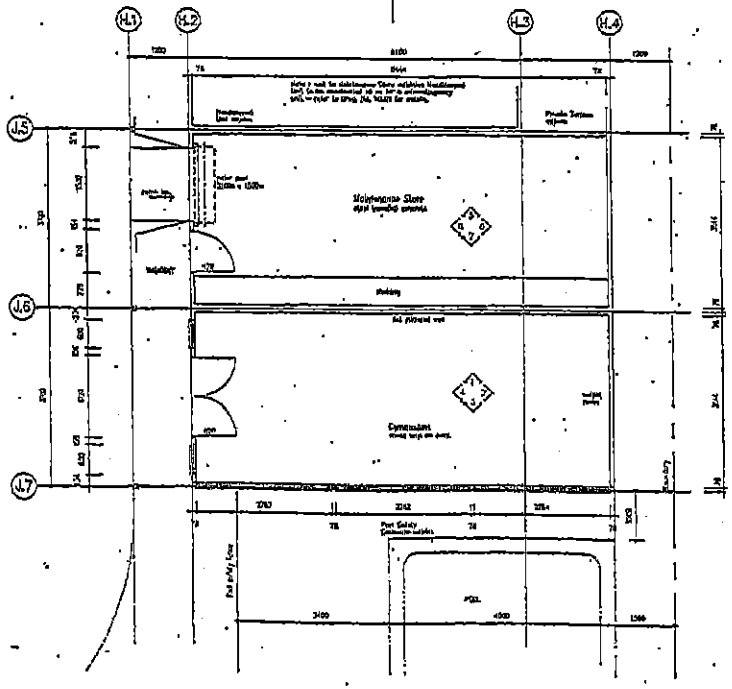
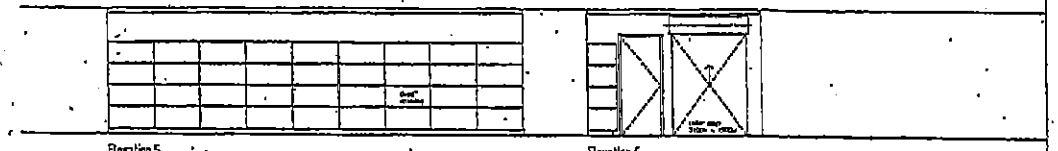
APPROVE AT COUNCIL MEETING
5 MARCH 2007

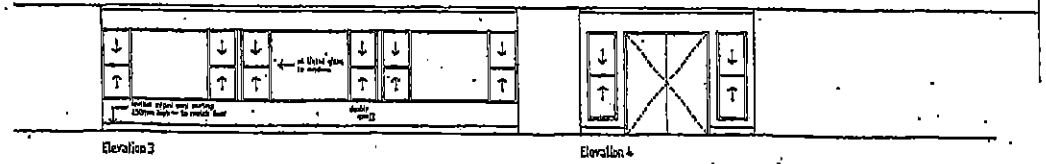


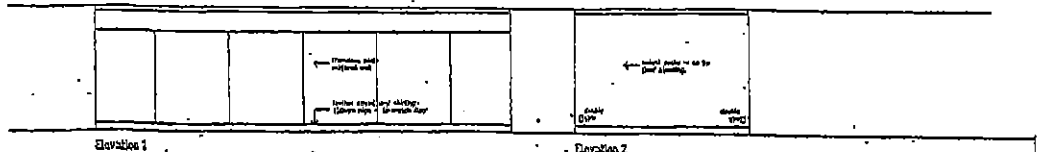
2 Cross Section



1 Plan – Gymnasium and Maintenance Store







PRELIMINARY
NOT FOR CONSTRUCTION

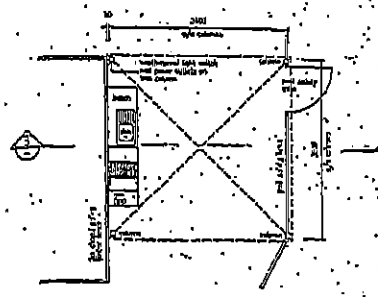
North

SANCTUM STAY
RESIDENTIAL PREMISES

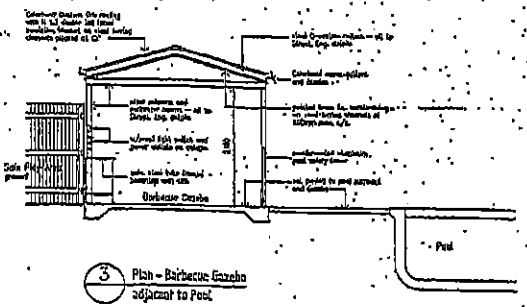
MAINTENANCE STORE AND GYM – DETAILS

December 06 | P.P. | MMM | 1 : 50 @ A1 | WD.11

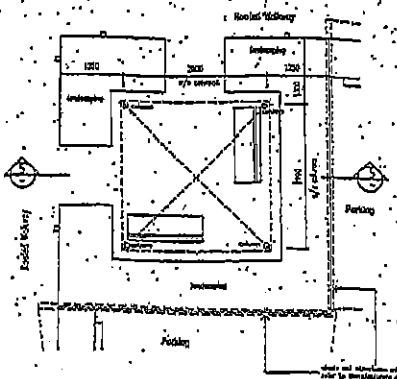
ITEM NO. 80.1.1



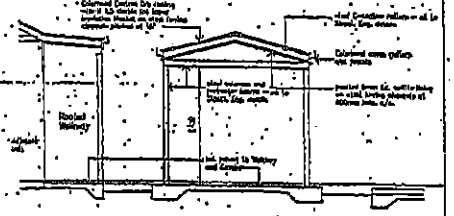
2 Plan – Barbecue Gazebo adjacent to Pool



3 Plan – Barbecue Gazebo adjacent to Pool

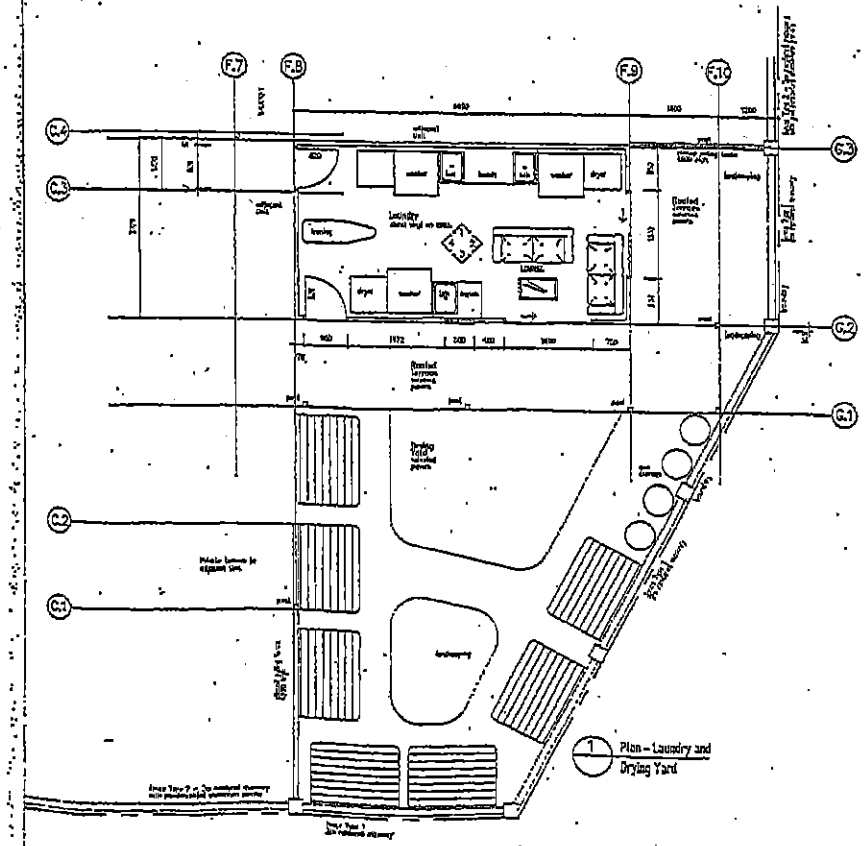


4 Plan – Garden Gazebo adjacent to Parking

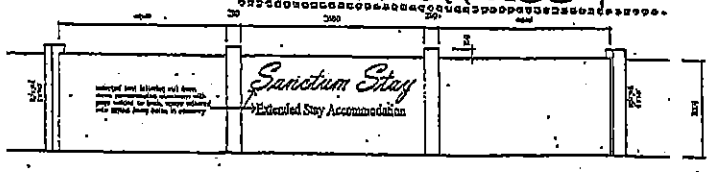


1 Plan – Garden Gazebo adjacent to Parking

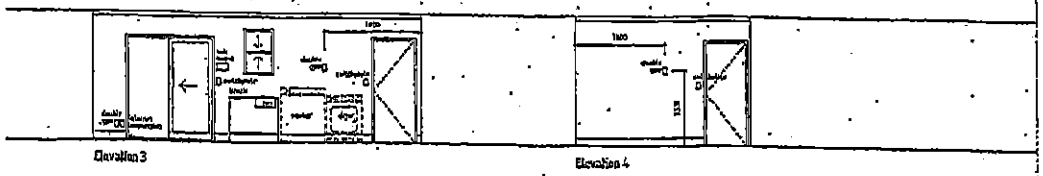
EMERALD SHIRE COUNCIL
TOWN PLANNING APPLICATION
UNDER TP-D203/06
APPROVE AT COUNCIL MEETING
5 MARCH 2007



1 Plan – Laundry and Drying Yard

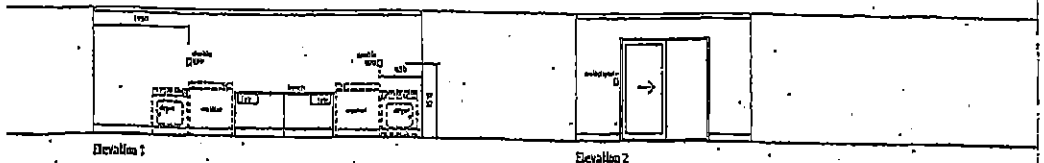


2 Elevation of Fence to Drying Yard



Elevation 3

Elevation 4



Elevation 1

Elevation 2

SANCTUM STAY RESIDENTIAL PREMISES

LAUNDRY & GAZEBOS PLANS AND DETAILS

December 05 | P.P. | 1:50 @ A1 | WD.12

STATEMENT OF REASONS

Emerald Shire: Gregory Highway (Springsure - Emerald)
Material Change of Use
Lot 60 on SP140178

File Number: 830/130
Sheet No. 3 of 3
Development Application Number: D203/06

Conditions of Development For The Subject Application	Issue/Concerns	The Information Used In Setting of Conditions Included:
CONCURRENCE AGENCY 2. Main Roads is to be included as a concurrence agency for all future developments that have road connectivity to this development.	Any increase in traffic generated by the developments may affect the efficiency of the Eclipse Street.	Section 3.1.8 of the Integrated Planning Act 1997
COMPLIANCE 3. The applicant shall provide Council with a letter from Queensland Department of Main Roads confirming compliance by the applicant with the requirements of the department prior to commencement of any new use of the land.	The reason for requiring the mentioned condition is that Main Roads has a statutory obligation to ensure that the department's conditions of development have been satisfied.	Section 49 of the Transport Infrastructure Act 1994
CONDITION 4. The above conditions are valid for 2 years from the date of the decision notice. After the 2 years, Main Roads reserves the right to review and amend any of the above conditions.		

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STATEMENT OF REASONS

Emerald Shire: Gregory Highway (Springsure - Emerald)
Material Change of Use
Lot 60 on SP140178

File Number: 830/130

Development Application Number: D203/06

Conditions of Development For The Subject Application	Issue/Concerns	The Information Used In Setting of Conditions Included:
Prior to commencing operation of the development, at the applicants cost, the following conditions are to be satisfied in full:		
NOISE 1. Main Roads has reviewed the submitted Road Traffic Impact Noise Assessment Report (TTM Acoustics, Report No. *31836 report rev 2* dated 13/09/06) as part of the assessment. The strategy proposed to attenuate the impact of road traffic noise is as follows: Architecturally treat the building envelope in accordance with AS3671 to achieve the criteria stated in AS2107. The acoustic report has provided sufficient guidance to the developer in Section 6.0. Where the requirements of AS2107 need to be achieved, it will be necessary for all windows and external doors to be closed at all times. Tightly fitting architectural elements with suitable acoustical seals should be used. Therefore an air-conditioning/mechanical ventilation system that meets the ventilation requirements of the Building Code of Australia should be installed in noise impacted rooms. Due consideration shall be given to the type of system to ensure that the internal noise criteria can be achieved.	The reason for requiring the mentioned condition is that the development is creating a new noise sensitive area adjacent to an existing state-controlled road.	Section 49 of the Transport Infrastructure Act 1994 Main Roads' Road Traffic Noise Management: Code of Practice (2000)

STATEMENT OF REASONS

Emerald Shire: Gregory Highway (Springsure - Emerald)
Material Change of Use
Lot 60 on SP140178

File Number: 830/130

Development Application Number: D203/06

Conditions of Development For The Subject Application	Issue/Concerns	The Information Used In Setting of Conditions Included:
o It is essential that the acoustical treatments (architectural measures) proposed in the acoustical consultant's report be implemented by the developer. Thus the developer shall engage the services of an acoustical engineer to certify (RPEQ) that the architectural measures and a suitable outdoor recreational space have been incorporated into the building envelope and building design. This will require the acoustical engineer to undertake an inspection at the end of construction and may require inspections during construction. It is the developers' responsibility to forward certification to Main Roads prior to final acceptance being given. o Main Roads has not specifically reviewed the requirements of Emerald Shire Council or Queensland Rail or their approved strategies to manage road traffic noise. In the event of a conflict between Main Roads' and Emerald Shire Council's or Queensland Rail's strategies to manage road traffic noise, Main Roads requirements shall not be compromised. Where Emerald Shire Council's or Queensland Rail's criteria are more stringent than Main Roads', the implementation of Emerald Shire Council's or Queensland Rail's requirements is supported.		

Queensland Government

Queensland Transport

Attachment 1

Queensland Transport Concurrence Agency Conditions and Statement of Reasons (TVS 84)

Applicant: Paul Pitman

Application: Material Change of Use – Proposed Motel

Location: Opal and Cliffe Streets, Emerald

Conditions for the subject application	Jurisdiction for the condition	Reasons
Trespass 1. The developer shall erect or upgrade boundary fencing, at no cost to Queensland Transport (QT), along the common boundary with the rail corridor as outlined in their response to information request dated 8 September 2006, in accordance with Queensland Rail – Civil Engineering Standard Security Fence drawing numbers: • 2544 Security Fence (*Attachment 2A*) (please note this standard may change in the near future); • 2545B 1800mm Timber Fence (*Attachment 2B*); or • 2546 Standard Steel Panel Fence	Section 258 of the *Transport Infrastructure Act 1994*	This fencing is required because the development must: • not encourage or create a higher risk of unauthorised pedestrian access • not create a demand for any pedestrian access point to or through the rail corridor; • not increase the risk of trespass, human related safety issues or interruptions to rail services by persons, animals or materials; • not have fill, debris or building materials intrude onto the rail corridor.

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(*Attachment 2C*) as amended from time to time.		
Stormwater and Drainage 2. The developer must ensure that stormwater drainage on the site will be in accordance with the stormwater schematic in Appendix B of the response to information request dated 8 September 2006.	Section 258 of the *Transport Infrastructure Act 1994*	The development must: • not cause an increase in run-off or flooding that will interfere with or impede the railway or will threaten, or is likely to threaten, the railway's safety or operational integrity; • not direct or increase stormwater or flooding flows onto the rail corridor; • not effect the stormwater or flooding flows adjacent to the rail corridor to ensure the structural integrity of the railway infrastructure and avoid scour and prevent obstruction of the railway as a result of stormwater or flooding debris.
Works on the Boundary 3. The developer must ensure that if at any stage works within 25metres of the rail corridor boundary occur, these works will be	Section 258 of the *Transport Infrastructure Act 1994*	Works associated with the development must not intrude onto the rail corridor or threaten the safety and operational integrity of the rail corridor.

ITEM NO. 80.1.1

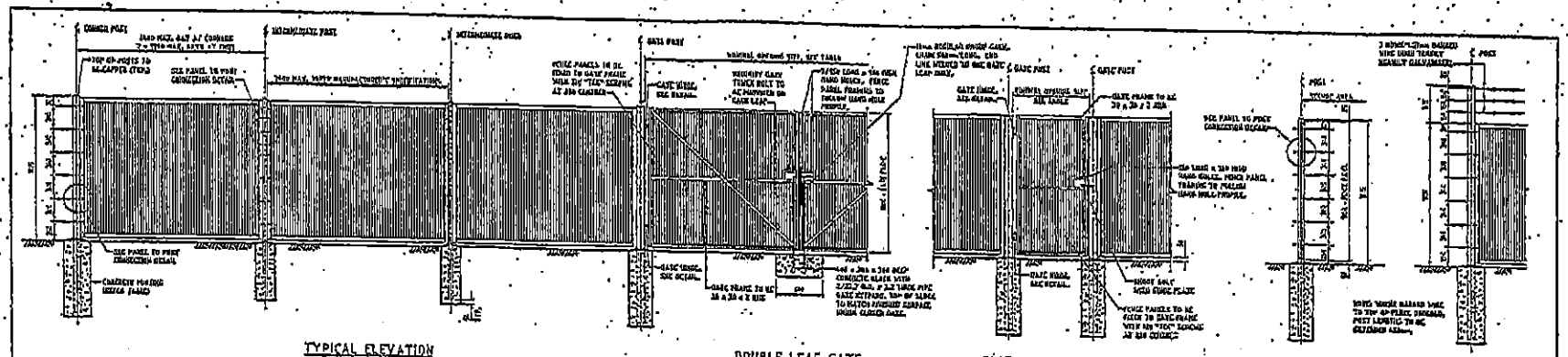
designed and constructed to avoid risk of collapse, subsidence or other adverse impacts on the railway and/or the railway infrastructure, and shall be subject to the following criteria: • Construction activities for any proposed wall/s on or adjacent to the rail corridor boundary will have the approval of a Registered Professional Engineer of Queensland; • The design of any wall/s on or adjacent to the rail corridor boundary shall be in compliance with QR Standard Requirement MCE-SR-005 "Requirements for the design of buildings over or near railways" (*Attachment 3*) as amended from time to time. 4. The developer shall ensure that fill, debris or building materials associated with the development does not intrude onto the rail corridor.		Any works within 25metres of the rail corridor boundary must avoid the risk of collapse, subsidence or other adverse impacts on the rail corridor and rail infrastructure, and must not cause any damage to any existing fencing on this site.
Noise 5. The developer must adhere to the noise	Section 258 of the *Transport Infrastructure Act 1994*	The proposal information provided shows that part of

amelioration measures outlined in the Environmental Noise Impact Report in Appendix F of their response to information request dated 8 September 2006. All noise sensitive places in the development as defined in Environmental Protection (Noise) Policy 1997 within 100 metres of the rail corridor boundary shall be designed to– a) meet indoor design level noise criteria to achieve average maximum sound level (10.00 pm - 6.00 am) not greater than 50 decibels(dB) (to be achieved within bedrooms, living areas and noise sensitive areas of non residential uses); and b) meet external design level noise criteria of: i) 65dB(A), assessed as the 24 hour average equivalent continuous A-weighted sound pressure level; and ii) 87dB(A), assessed as a single event maximum sound pressure level when assessed 1 metre in front of the most exposed part of the noise sensitive place.		the development contains noise sensitive places within 100 metres of the rail corridor boundary. Development must be located, designed and managed to ensure noise levels resulting from existing and future railway operations do not unduly adversely affect the amenity of users and occupants. Consequently this condition is applied.

ITEM NO. 11.1

ITEM NO. 80.1.1

Attachment 1C - Steel Panel Fence



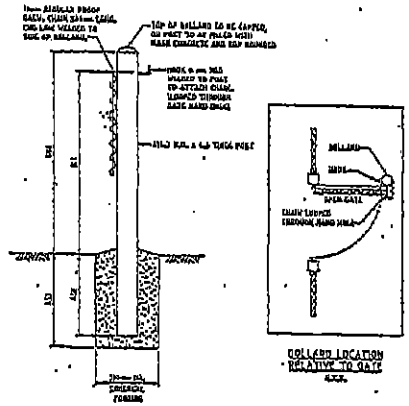
TYPICAL ELEVATION

DOUBLE LEAF GATE

SINGLE LEAF GATE

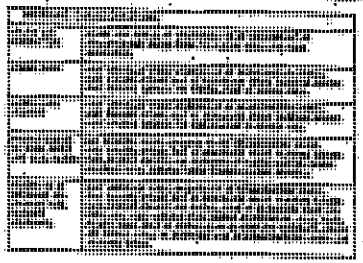
TYPICAL SECTION

ELEVATION SHOWING EXTENDED POST FOR BARBED WIRE FIXING (WHERE ORDERED)



BOLLARD DETAIL

BOLLARD LOCATION RELATIVE TO GATE



FENCE NUMBERS AND POSTINGS NOTES

TYPE OF FENCE	POST SIZE	CONCRETE FOOTING DIMENSIONS AND CONCRETE GRADE	CONCRETE FOOTING DIMENSIONS AND CONCRETE GRADE
INTERMEDIATE POSTS	75 x 75 x 5.0kg	450d x 350h 20MPa	450d x 600 20MPa
CORNER POSTS	89.0 O.D. x 5.0 CHS	600d x 1000h 20MPa	750d x 1200 20MPa
END POSTS	75 x 75 x 5.0kg	450d x 1000 20MPa	450d x 1200 20MPa
GATE POSTS	140 x 140 x 4.0kg	450d x 1000 20MPa	450d x 1200 20MPa

GENERAL NOTES:

1. ALL DIMENSIONS ARE IN MILLIMETRES, UNLESS NOTED OTHERWISE.
2. ALL STEEL PLATES SHALL BE GRADE 250 MPA IN ACCORDANCE WITH AS/NZS 3678.
3. ALL PAINT WORK SHALL BE NOT LESS THAN 1 mm.
4. ALL WELDING SHALL BE IN ACCORDANCE WITH AS/NZS 1554 PART 1 AND PART 2.
5. ALL NUTS, BOLTS AND WASHERS SHALL BE HOT DIP GALVANIZED IN ACCORDANCE WITH AS 1214.
6. ALL GALVANIZED SURFACES THAT HAVE BECOME DAMAGED OR ABRADED SHALL BE CLEANED OF FOREIGN MATTER INCLUDING WELDING SLAG AND PAINTED WITH TWO COATS OF AN APPROVED ORGANIC ZINC-RICH PAINT TO PROVIDE A DRY FILM THICKNESS OF 0.08mm.
7. CONCRETE SHALL BE GRADE N20 (20MPa).

GATE NOTES:

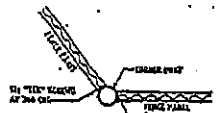
1. SINGLE GATES SHALL BE FITTED WITH STRUT RODS, DOUBLE GATES SHALL BE FITTED WITH FLAT ON GATE RODS AS SHOWN ON THE DRAWING.
2. ALL GATE FRAMES TO BE WELDED, BRACED TO BE OUT OF ALIGNMENT AFTER FABRICATION IN ACCORDANCE WITH AS 4687.
3. GATES SHALL BE USED LOCKED FOR EMERGENCY ONLY. GATES SHALL NOT BE INSTALLED FOR REGULAR USE.
4. GATES SHALL NOT BE INSTALLED IN ENCROACHING ALIGNMENT TO AN EXISTING INSTALLED FOR BUSINESS PURPOSES, LEAF CLEARANCE.

GATE TABLE

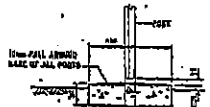
LOCATION	NOMINAL OPENING SIZE	LEAF TYPE (NOMINAL SIZE)
PEDESTRIAN + VEHICLE ACCESS	3600	DOUBLE 1800 OR SINGLE 3600
PEDESTRIAN - OR STAFF ONLY	1200	SINGLE 1200
VEHICULAR	3600	DOUBLE 1800

FENCING NOTES:

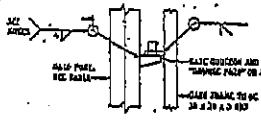
1. POSTS AND GATE FRAMES SHALL BE STEEL RECTANGULAR HOLLOW SECTIONS (RHS) GRADE C350, EXCEPT CORNER POSTS, WHICH SHALL BE CHS, GRADE C350 OR C450 IN ACCORDANCE WITH AS/NZS 1163 "STRUCTURAL STEEL HOLLOW SECTIONS".
2. ALL CLIPS, FITTINGS AND FASTENERS SHALL BE HOT DIP GALVANIZED AFTER FABRICATION IN ACCORDANCE WITH AS 4680. COLOUR-BONDED POWDER COATED SHALL ALSO BE PROVIDED WHERE ORDERED.
3. EACH PANEL BETWEEN POSTS SHALL BE A CONTINUOUS LENGTH.
4. BOLLARDS SHALL BE INSTALLED AT GATES TO ENSURE OPEN GATE PANELS ONLY WHERE INSTALLED AT AN ENCROACHING ANGLE, SEE DETAILS THIS DRAWING.
5. EACH LEG CONCRETE IN THE FOOTINGS WHERE AFTER SETTING AND SHRINKAGE OCCURS AND IT REMAINED TO OVERALL THICKNESS FOR COMPLETE FILL. ALL OTHER HOLES ARE NON-CONCRETE FOR COMPLETE FILL. IN CONCRETE AREA WHERE THE FO ON THE END, IN BETWEEN POSTS AND PANELS, THE FENCING MAY BE LOCALLY UNCLAMPLATED FROM THE FRAME, IN NON-CONCRETE AREA, FOOTING DEPTH CANNOT BE ALTERED.
6. METAL EXCEPTION SHALL BE "COLORBOND" OR AN APPROVED EQUIVALENT. PANEL FRAME RAILS AND POSTS SHALL BE TO MANUFACTURER'S SPECIFICATION.
7. FOR COATING DETAILS REFER MANUFACTURER'S SPECIFICATION.
8. THIS TYPE OF FENCE IS NOT RECOMMENDED FOR USE AS A MARINE OR SIMILAR CORROSIVE ENVIRONMENT.



FENCE CORNER DETAIL

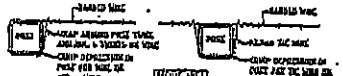


MOWING STRIP



GATE HINGE DETAIL

PANEL TO POST CONNECTION DETAIL



AT END OR ERASURE POSTS

AT INTERMEDIATE POSTS

BARBED WIRE TIE-OFF DETAILS (WHERE ORDERED)

THIS FENCE IS SUITABLE FOR USE IN AREAS WHERE SECURITY FENCING REQUIRES AN ENHANCED PRIVACY OR AESTHETIC COMPONENT SUCH AS: CAR PARKS; STATION SURROUNDS; HIGH PUBLIC TRAFFIC AREAS ADJOINING SENSITIVE RAILWAY INFRASTRUCTURE OR RAILWAY CORRIDOR. MAY ALSO BE USED WHERE ADJOINING OWNER REQUESTS ENHANCED PRIVACY FROM RAILWAY INFRASTRUCTURE OR RAILWAY CORRIDOR, OR PERSONS TO COMPLY WITH POOL FENCING LEGISLATION OR OTHER SPECIAL CIRCUMSTANCES. COST SHARING OPTIONS MAY BE NEGOTIATED WITH ADJOINING OWNERS IN THESE CIRCUMSTANCES.

REFER TO CURRENT QR FENCING SAFETY AND SECURITY MANAGEMENT SYSTEM FOR LOCATIONS AND TYPES OF FENCING.

1:5 1:10 1:20

DRAWING No.	A 20018.2
DRAWING NUMBER	2546

WIND LOADS
AS 1170.2 : 2002
REGION C
WIND SPEED : V100 = 36 m/s
TERRAIN CATEGORY 1

SCALES SHOWN ARE FOR AN A1 SIZE ORIGINAL DRAWING

ALTERATIONS

DESIGNED	A.K.	JAN 03	APPROVED
CHECKED	A.K.	JUNE 03	
DRAWN	A.K.	JUNE 03	
CHECKED	A.K.	JUNE 03	
PASSED	A.K.	JULY 03	

QUEENSLAND RAIL - CIVIL ENGINEERING

STANDARD

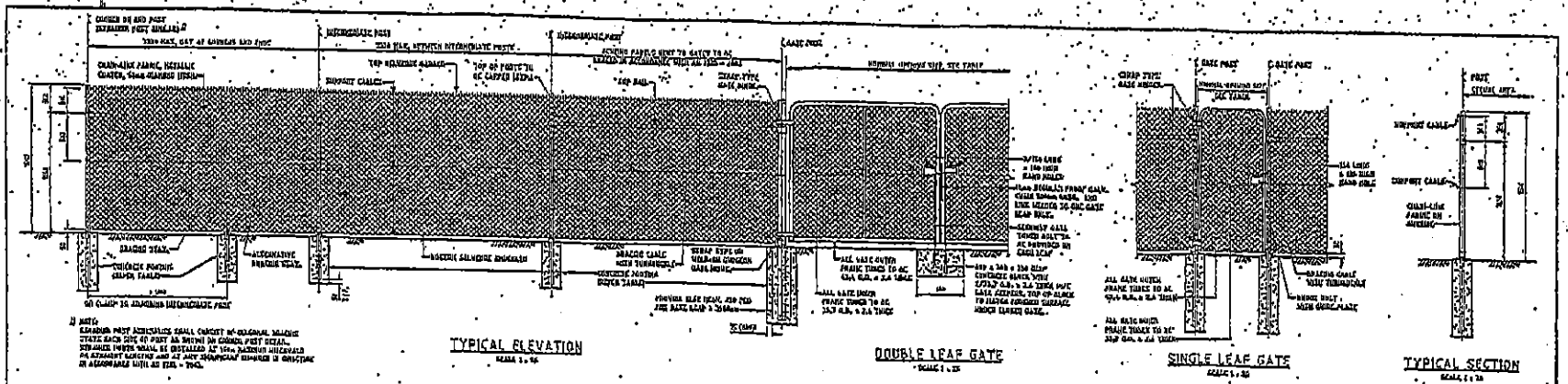
STEEL PANEL FENCE

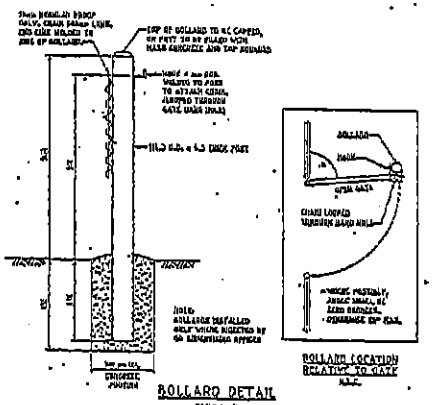
1500mm HIGH COLORBOND FENCE

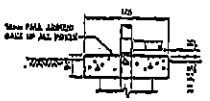
DRAWING NUMBER 2546

ITEM NO. 80.1.1

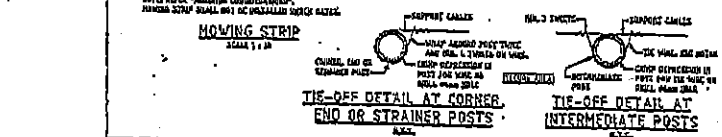
Attachment 2A - Security Fence






MOWING STRIP


CHAIN-LINK FABRIC TIE-OFF DETAIL



FENCE MEMBERS AND FOOTINGS SIZE		
TYPE OF MEMBER	MAIN SIZE	CONCRETE FOOTING
END, CORNER AND STRAINER POSTS	168.3 O.D. x 3.6 THICK	Ø533 x 750 DEEP
INTERMEDIATE POSTS	168.3 O.D. x 3.2 THICK	Ø533 x 600 DEEP
300 GATE	114.3 O.D. x 3.2 THICK	
GRADING STAT	114.3 O.D. x 3.6 THICK	Ø533 x 600 DEEP
GATE POSTS FOR GATE LEAF SHOWN		
SINGLE AND DOUBLE	168.3 O.D. x 3.6 THICK	Ø533 x 900 DEEP
1800 UP TO AND INCLUDING 2500mm	219.1 O.D. x 4.5 THICK	Ø584 x 1000 DEEP
1800 UP TO AND INCLUDING 2500mm	114.3 O.D. x 3.6 THICK	Ø584 x 1200 DEEP

GENERAL NOTES:

1. ALL DIMENSIONS ARE IN MILLIMETRES, UNLESS NOTED OTHERWISE.
2. ALL STEEL PLATES SHALL BE GRADE 250 MPA IN ACCORDANCE WITH AS/NZS 3678.
3. ALL FRAME HEADS SHALL BE NOT LESS THAN 3 mm.
4. ALL WELDING SHALL BE IN ACCORDANCE WITH AS/NZS 1554, PART 3.
5. ALL BOLTS, NUTS AND WASHERS SHALL BE HOT DIP GALVANIZED IN ACCORDANCE WITH AS 1214.
6. ATLAS STONE GALVANIZING ON PLASTIC COATING HAS BEEN REMOVED BY WELDING OR ABRASION SHALL BE CLEANED OF FOREIGN MATTER INCLUDING WELDING SLAG AND RIPPLES WITH TWO COATS OF AN APPROVED ORGANIC ZINC-RICH PAINT TO PROVIDE A 150 µm DRY FILM THICKNESS AT 450mm. COLOUR MATCHING SHALL BE ACHIEVED WHERE DIRECTED BY THE SUPERVISOR.
7. CONCRETE SHALL BE GRADE N20 UNLS.
8. "ZP" DENOTES GRADE ZONE DIMENSIONS MEASURED ACCORDANCE WITH AS/NZS 4676-2000.

GATE NOTES:

1. GATE POSTS CONSTRUCTION, PLACEMENT AND INSTALLATION SHALL BE IN ACCORDANCE WITH AS 4179 - 2003.
2. WHERE STRAP TYPE HINGES ARE USED AT BOTH TOP AND BOTTOM OF GATE, A CHAIN SHALL BE WELDED TO THE GATE FRAME TO PREVENT A REVERSE CHANGE THE HINGE TOP OR BOTTOM LEAF. BOTH STRAP-TYPE AND SHORTER BARE HINGES SHALL BE WELDED TO BARE POSTS.
3. SINGLE GATES SHALL BE FITTED WITH SHUT BOLT, DOUBLE GATES SHALL BE FITTED WITH FLAT STRIKE BOLT AS SHOWN ON THE DRAWING.
4. ALL GATE FRAMES SHALL BE WELDED. FRAMES SHALL BE HOT DIP GALVANIZED AFTER FABRICATION IN ACCORDANCE WITH AS 4680.
5. GATES SHALL BE INSTALLED PLUMB AND TRUE WHEN CLOSED. GATES SHALL NOT BE INSTALLED FOR DIAGONAL USE.

GATE TABLE		
LOCATION	NOMINAL OPENING SIZE	LEAF TYPE (NOMINAL SIZE)
PEDESTRIAN - PUBLIC ACCESS	1000	SINGLE 1000 OR DOUBLE 900
PEDESTRIAN - AS STAND ALONE	1200	SINGLE 1200
VEHICULAR	3600 MIN. 4000 MAX.	DOUBLE 1800 LEAVES (DOUBLE GATE)

FENCING IN ELECTRIFIED AREAS:

1. IN GENERAL TRACK FENCES ARE NOT ELECTRICAL BONDED, IN SPECIAL CIRCUMSTANCES, USUALLY DUE TO PROXIMITY TO ELECTRIFICATION WHERE OR WHERE ADJACENT SUPPORTS OR STRUCTURES, CATENARY OR INSULATED SECTIONS MAY BE REQUIRED IN ACCORDANCE WITH QR MAINTAIN ELECTRICAL ENGINEERING REQUIREMENTS.
2. GATES AND BOLLARDS SHALL BE PROVIDED TO PROVIDE AN OPEN GATE FROM WHICH ONE OF ELECTRIFICATION MUST BE DISCONNECTED OR ANY MAINTENANCE CONTRACTOR TO WORK.
3. SUPPORT CABLES SHALL BE GALVANIZED AND SIX PLASTIC SHEATHED.

FENCING NOTES:

1. ALL POSTS AND RAILS SHALL BE STEEL CIRCULAR HOLLOW SECTION (CHS) GRADE C350 IN ACCORDANCE WITH AS 1163 - 1991 "STRUCTURAL STEEL HOLLOW SECTIONS".
2. ALL PIPE CLAMP FITTINGS, EAVE BRACES, GATE HARDWARE, ETC SHALL BE "DURALOC" OR AN APPROVED EQUIVALENT.
3. CLOSE MESH, BARBED WIRE SHALL BE A GALVANIZED MATERIAL.
4. ALL FENCE, FITTINGS AND FASTENERS SHALL BE HOT DIP GALVANIZED AFTER FABRICATION IN ACCORDANCE WITH AS 4680.
5. FENCING MATERIALS SHOULD NOT MIX, BRANDS WHO CHOOSE DIFFERENT AND COMPATIBLE FENCE FABRIC SHALL BE MANUFACTURED IN ACCORDANCE WITH AS 2423-2003 "COATED STEEL WIRE FENCING PRODUCTS".
6. CONCRETE SHALL BE IN ACCORDANCE WITH AS 1379 - 1997 "SPECIFICATION AND MANUFACTURE OF CONCRETE".
7. FENCING WIRE SHALL BE CONTINUOUS FROM POST TO POST OR GATE POST AND BE ENCIRCLED WITH TWO 2mm NON CHAIN-LINK FABRIC. CHAIN-LINK FABRIC SHALL BE "HEAVY DUTY", MANUFACTURED FROM 3.15 mm DIA. GALVANIZED WIRE WITH DIAMOND 50mm DIAMOND MESH. THE TOP SELVEDGE SHALL BE BARBED AND THE BOTTOM SELVEDGE SHALL BE KNUCKLED.
8. SUPPORT CABLES SHALL CONSIST OF 2 OF 3.15mm DIA. GALV. CABLE WIRE TWISTED ANTICLOCKWISE PAIRS, AS 4 m MAX DIA. GALV. MINIMUM CABLE WIRE SIZE SPECIFIED. SUPPORT CABLES SHALL BE INSTALLED IN ACCORDANCE WITH AS 2423 - 2003.
9. LACING WIRE SHALL BE 2mm DIA. GALV. WIRE INSTALLED IN ACCORDANCE WITH AS 2423 - 2003.
10. TIE WIRE TO SECURE CHAIN-LINK FABRIC TO POSTS, AND STRAINER SUPPORT CABLES TO INTERMEDIATE POSTS, SHALL BE 2.5 x 1.25mm DIA. GALV. WIRE, OR 3 x 2mm DIA. GALV. WIRE. TIE WIRE TO SECURE CHAIN-LINK FABRIC TO BARBED WIRES AT 2 x 1.25mm DIA. GALV. WIRE TWISTED TWICE AND BEATEN OFF OFF, OR 2mm DIA. GALV. WIRE BENDED OVER. TIE WIRES SHALL BE AND INSTALLED IN ACCORDANCE WITH AS 2423 - 2003. SEE ALSO TIE-OFF DETAILS
11. BARBED GALVANIZED THROUGHOUT SHALL CONSIST OF 2 x 2.5mm DIA. GALV. WIRE TWISTED TOGETHER AND TOGETHER IN CONJUNCTION WITH A GALVANIZED DOUBLE TWISTED BARB. BARBED CABLES SHALL BE GALVANIZED AND INSTALLED IN ACCORDANCE WITH AS 2423 - 2003.
12. STRAINER ARRANGEMENTS SHALL BE INSTALLED AT 500m MAXIMUM INTERVALS OR WHENEVER LOCATED AND AT SIGNIFICANT CHANGES IN DIRECTION, ALL CORNER AND STRAINER POSTS SHALL HAVE BRACING INSTALLED IN ACCORDANCE WITH AS 2423 - 2003.
13. BOLLARDS SHALL BE INSTALLED AT GATES TO ENSURE OPEN GATE PANELS ONLY WHEN DIRECTED BY QR MAINTENANCE STAFF, SEE DETAILS THIS DRAWING.
14. IN EXISTING INFRASTRUCTURE'S EXTRA GALVANIZING SHALL BE PROVIDED FOR POSTS ABOVE PLASTIC COATED POSTS WHERE APPROVED.

THIS FENCE IS SUITABLE FOR USE ALONG RAILWAY CORRIDOR. REFER TO CURRENT QR FENCING SAFETY AND SECURITY MANAGEMENT SYSTEM FOR LOCATIONS AND TYPES OF FENCING. DRAINAGE AND OVERLAND FLOW SHALL BE CONSIDERED PRIOR TO INSTALLATION OF FENCE.

THIS DRAWING SUPERCEDES STD DWG No. 2647

1:10 1:25

ISSUE	A 29618.2	MINE LOADS
DRAWING NUMBER	2544	ISSUE

AS 1163 - 1991 GRADE C
WIND SPEED - VR50 = 50 m/s
TERRAIN CATEGORY 1

SCALES SHOWN ARE FOR AN A1 SIZE ORIGINAL DRAWING

ALTERATIONS			
	DESIGNED	A.L.	SEPT 01
	CHECKED	P.B.	APRIL 02
	DRAWN	M.L.H.	SEPT 01
	CHECKED	A.L.	SEPT 01
		A.L.	OCT 01
	PASSED	A.L.	JULY 02

APPROVED

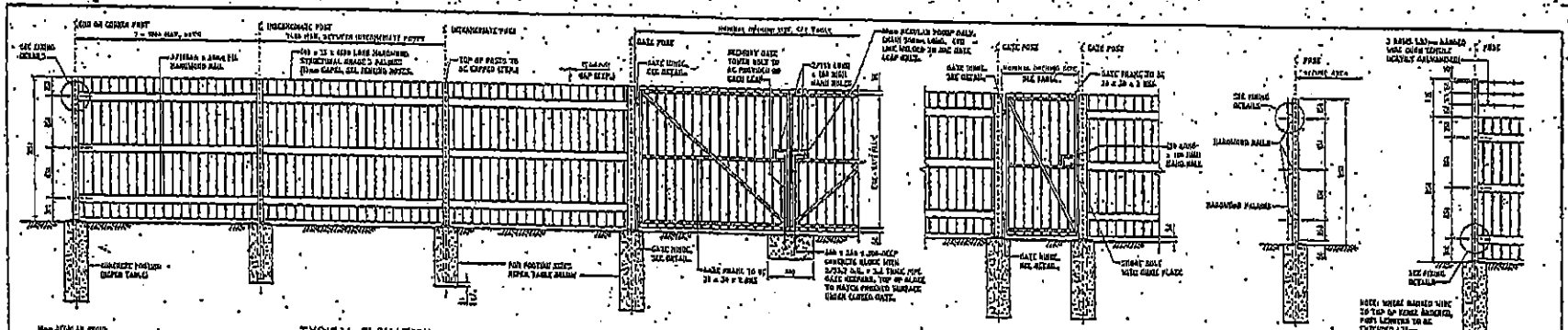
QUEENSLAND RAIL - CIVIL ENGINEERING

STANDARD
SECURITY FENCE
50mm CHAIN LINK FABRIC

DRAWING NUMBER 2544 ISSUE

ITEM NO. 80.1.1

Attachment 2B - Timber Fence



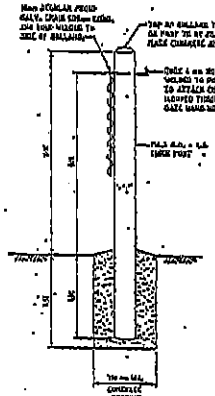
TYPICAL ELEVATION
SCALE 1 : 25

DOUBLE LEAF GATE
SCALE 1 : 25

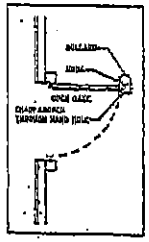
SINGLE LEAF GATE
SCALE 1 : 25

TYPICAL SECTION
SCALE 1 : 25

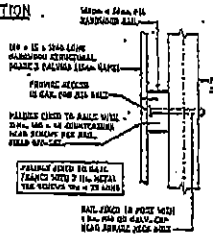
ELEVATION SHOWING EXTENDED POST FOR BARBED WIRE FIXING (WHERE ORDERED)
SCALE 1 : 25



BOLLARD DETAIL
SCALE 1 : 10



BOLLARD LOCATION RELATIVE TO RAIL
N.T.S.



FIXING DETAILS
SCALE 1 : 2

ORDERING CONSIDERATIONS

BOWING RISK	RAIL DISTANCES WERE SPECIFIED AT AN INTERMEDIATE GATE, BUT MARGIN OVERALL MAY BE INCREASED WHERE ADJOINING GROUND HAS EXPOSE MOVEMENT FOR INSTALLATION OF PANELS STOP.
GAUGE WIRE MISSING	RAIL DISTANCES WERE SPECIFIED AT AN INTERMEDIATE GATE, BUT MARGIN OVERALL MAY BE SPECIFIED WHERE ADJOINING GROUND HAS EXPOSE MOVEMENT FOR INSTALLATION OF BARBED WIRE.
LARGE FREE PANELS	ONLY INSTALLED WHERE SPECIFIED AT AN INTERMEDIATE GATE, BUT MARGIN OVERALL MAY BE SPECIFIED WHERE ADJOINING GROUND HAS EXPOSE MOVEMENT FOR INSTALLATION OF LARGE FREE PANELS.

GENERAL NOTES:

1. ALL DIMENSIONS ARE IN MILLIMETRES, UNLESS NOTED OTHERWISE.
2. ALL STEEL WORK SHALL BE GRADE 250 MPA IN ACCORDANCE WITH AS/NZS 3678.
3. ALL GRADE BOLTS SHALL BE AT LEAST GRADE 4.6.
4. ALL WELDING SHALL BE IN ACCORDANCE WITH AS/NZS 1554 PART 1 AND PART 2.
5. ALL BOLTS, NUTS AND WASHERS SHALL BE HOT DIP GALVANIZED IN ACCORDANCE WITH AS 1214.
6. HOLES WHERE GALVANIZED RAIL ARE BOLTED BY WELDING OR ABRADING SHALL BE CLEANED OF ANY DAMAGE AND PAINTED WITH TWO COATS OF AN APPROVED ORGANIC ZINC-RICH PAINT TO PROVIDE A MIN. DRY FILM THICKNESS OF 240µm.
7. CONCRETE SHALL BE GRADE 40 MPA.

GATE NOTES:

1. SINGLE GATES SHALL BE FITTED WITH HEAVY DUTY, DOUBLE ACTION, GATE LATCHES WHICH SHALL BE FITTED WITH PADLOCK EYES.
2. ALL GATE FRAMES SHALL BE WELDED, FRAMES SHALL BE HOT DIP GALVANIZED AFTER FABRICATION IN ACCORDANCE WITH AS 4680.
3. GATES SHALL BE INSTALLED FOR ON PURPOSES ONLY. GATES SHALL NOT BE INSTALLED FOR MOVEMENT USE.

GATE TABLE

LOCATION	MINIMUM OPENING SIZE	LEAF SIZE NOMINAL SIZE
PEDESTRIAN - PUBLIC ACCESS	1000	SINGLE LEAF AS SHOWN
PEDESTRIAN - AS STATED ONLY	1500	SINGLE 1500
VEHICULAR	3000	DOUBLE 3000

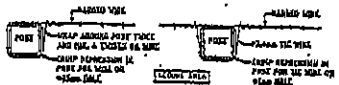
FENCING NOTES:

1. ALL POSTS AND GATE FRAMES SHALL BE STEEL RECTANGULAR HOLLOW SECTIONS UNLESS OTHERWISE SPECIFIED, PAINT SHALL BE IN ACCORDANCE WITH AS 1627 - STRUCTURAL STEEL PAINTING REQUIRED.
2. ALL TIMBER, FITTINGS AND FASTENING SHALL BE HOT DIP GALVANIZED AFTER FABRICATION IN ACCORDANCE WITH AS 1214.
3. EACH RAIL BETWEEN POSTS SHALL BE A CONTINUOUS LENGTH.
4. RAILS SHALL BE WELDED TO GUSSET PLATES WHICH ARE BOLTED TO STEEL POSTS WITH 2 M16 GRADE 4.6 BOLTS.
5. RAILS ARE CONSIDERED TO BE CONTINUOUS WHERE BOTH VERTICAL AND HORIZONTAL BENDS AND IF SIGNIFICANT POINT IS REQUIRED TO CONTROL THE GAP, FOR EXAMPLE RAILS. ALL STEEL RAILS ARE ANTI-CONCRETE TYPE EXAMPLE RAILS, OR CONCRETE RAILS WHERE THE GAP AT THE RAIL IS BETWEEN 25 MM AND 200 MM THE POSTING WIDTH MAY BE INCREASED INCORPORATED FROM THE TABLE, IN NON-CONCRETE RAIL, FENCING MUST BE CARRIED AS REQUIRED.
6. ALL TIMBER COMPONENTS SHALL BE OF AN APPROVED GRADE AS LISTED IN THE QR SPECIFICATIONS AND ALL DIMENSIONS GIVEN AS NOMINAL.
7. TIMBER FASTENERS SHALL BE PLACED WITH 10mm DIA/2.50 GAPS.

FENCING IN ELECTRIFIED AREAS:

A. IN MINERAL SHADE FENCES ARE SELF CARRYING, HOWEVER, IN SPECIAL CIRCUMSTANCES, RESULTS DUE TO PROXIMITY TO ELECTRIFICATION WORKS OR HIGHER SUPPORTS OR GENERATIONS, EARTHING OF METALLIC ELEMENTS MAY BE REQUIRED IN ACCORDANCE WITH QR PLANNER ELECTRICAL ENGINEERING STANDARDS.

1. GATES AND ANCHORS SHALL BE POSITIONED TO PREVENT AN OPEN GATE FROM COMING WITHIN 2.5m OF ELECTRIFICATION WORKS UNLESS OTHERWISE OR ANY METALLIC CONNECTED TO THEM.



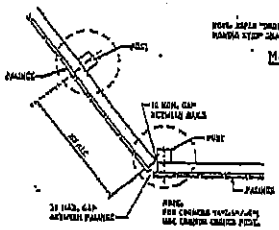
AT END OR STRAINER POSTS

AT INTERMEDIATE POSTS

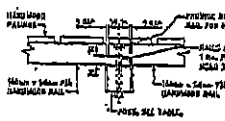
BARBED WIRE TIE-OFF DETAILS (WHERE ORDERED)
N.T.S.

FENCE MEMBERS AND FOOTINGS SIZES

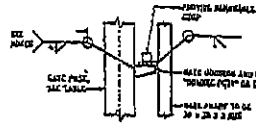
TYPE OF MEMBER	RAIL SIZE	CONCRETE FOOTING NON-CONCRETE AND ADHESIVE RAILS Ø = 760 + 150 DEEP	CONCRETE FOOTING CONCRETE RAILS Ø = 760 + 200 DEEP
INTERMEDIATE POSTS	75 x 75 x 4 RHS	Ø760 x 1250 DEEP	Ø760 x 1250 DEEP
END/CORNER POSTS	75 x 75 x 4 RHS	Ø760 x 1250 DEEP	Ø760 x 1250 DEEP
GATE POSTS	100 x 100 x 5 RHS	Ø760 x 1250 DEEP	Ø760 x 1250 DEEP



FENCE CORNER DETAIL
SCALE 1 : 10

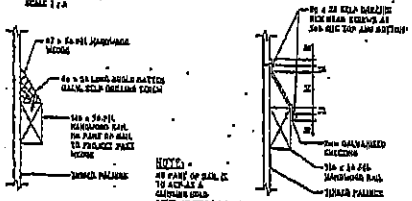


HARDWOOD RAIL JOINT DETAIL
SCALE 1 : 5



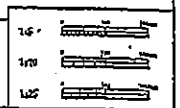
GATE HINGE DETAIL
SCALE 1 : 5

MOWING STRIP
SCALE 1 : 10



FENCE RAIL DETAIL AT SECURITY LOCATION e.g. ADJACENT TO POOL
SCALE 1:5

THIS FENCE IS SUITABLE FOR USE IN AREAS WHERE SECURITY FENCING REQUIRES AN ENHANCED PRIVACY OR AESTHETIC COMPONENT SUCH AS: CAR PARKS; STATION SURROUNDS; HIGH PUBLIC TRAFFIC AREAS ADJOINING SENSITIVE RAILWAY INFRASTRUCTURE OR RAILWAY CORRIDOR. MAY ALSO BE USED WHERE ADJOINING OWNER REQUESTS ENHANCED PRIVACY FROM RAILWAY INFRASTRUCTURE OR RAILWAY CORRIDOR; OR OTHER SPECIAL CIRCUMSTANCES. COST SHARING OPTIONS MAY BE NEGOTIATED WITH ADJOINING OWNERS IN THESE CIRCUMSTANCES.



DRG No.	A 2001612
DRAWING NUMBER	2545
ISSUE	B

WIND LOADS
AS 1170.2 : 2002
REGION C
WIND SPEED = Vdes = 36 m/s
TERRAIN CATEGORY 3.

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SCALES SHOWN ARE FOR AN A1 SIZE ORIGINAL DRAWING

ALTERATIONS

A	NOTES FOR FENCING IN ELECTRIFIED AREAS	CJL	JUNE 03
B	RAIL HEIGHTS FOR SECURITY AREAS	CJL	JUNE 03

DESIGNED	A.L.	JUN 03	APPROVED
CHECKED	C.J.	JUNE 03	
DRAWN	M.J.W.	JUN 03	CIVIL ENGINEER
CHECKED	A.L.	JUNE 03	CIVIL ENGINEER
	A.L.	JUNE 03	LOGIC ASSURANCE
PASSED	A.L.	JULY 04	SENIOR CIVIL ENGINEER

QUEENSLAND RAIL - CIVIL ENGINEERING

STANDARD
TIMBER FENCE
1800mm HIGH TIMBER PALING FENCE

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2545	B

Civil Engineering Technical Specification

NO: MCE-SR-005
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REQUIREMENTS FOR THE DESIGN OF BUILDINGS OVER OR NEAR RAILWAYS

ISSUE	DATE	DESCRIPTION/REASON
Initial Revision A	27.03.1997 09.09.2005	Complete revision.

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Civil Standards Manager

DATE: 09.09.2005

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1. INTRODUCTION

This Technical Specification gives Queensland Rail's (QR's) requirements for external party designs of buildings over or near railways. Associated Technical Specifications are:

MCE-SR-001	Requirements for the design of road overbridges
MCE-SR-002	Requirements for work in or about QR property
MCE-SR-003	Requirements for work adjacent to overhead line equipment
MCE-SR-006	Requirements for the design of footbridges over or near railways

2. BUILDINGS

2.1 Scope

This Technical Specification applies to the design of new buildings, or upgrading of existing buildings, and is intended to minimise impact on the operating railway.

This Technical Specification covers design of building enclosures to be treated as tunnels for Dangerous Goods considerations, but does not cover the design of tunnels.

Requirements relating to the aesthetics, use of building structures, lighting, handrails, disabled access, staircases etc are outside the scope of this document.

Queensland Rail may exclude buildings from being built over or near high speed or heavy haul railway lines, or at locations where there may be derailment risks.

2.2 General

Applications for approval to construct buildings over or near railways shall be made to the Manager Civil Engineering (MCE). The MCE will arrange for the General Manager Property or a Project Manager to liaise with other relevant groups within Queensland Rail.

The GM Property or the Project Manager may:

(a) arrange for the building owner and/or their contractors to enter into a licence to enter Queensland Rail property and construct the building;

(b) arrange a written agreement to be signed by the owner to reflect the ongoing existence of the building over the Queensland Rail corridor.

Queensland Rail costs associated with planning, design and construction of the building will be charged out to the constructing authority or the Contractor. Rates will be determined by Queensland Rail.

Where Queensland Rail has appointed a Project Manager for the project, all subsequent dealings shall be directed to the General Manager Projects.

2.3 Design and Documentation

The design of buildings shall comply with the Building Code of Australia, relevant Australian Standards, AS 5100 *Bridge Design* for collision protection and collision loads, and this Technical Specification.

Designers shall liaise with Queensland Rail to allow for the effect of construction on train services and to determine whether Queensland Rail will accommodate any speed restrictions, track closures and/or isolations of the overhead line equipment (OHLE) anticipated during construction.

The design of buildings shall take into account available access to the site and the need to minimise interference with train operations, passengers, and any railway activities.

QR reserves the right to restrict construction methods to those that minimise interference with train operations, passengers, and any railway activities.

Except where Queensland Rail is the principal for the construction contract, documentation for construction of buildings shall allow for and include *Requirements for Work in or About QR Property* (MCE-SR-002) and, where applicable, *Requirements for Work Adjacent to Overhead Line Equipment* (MCE-SR-003). Copies of these documents may be obtained from the MCE.

The drawings shall show the design loads and any other special provisions (e.g. structural redundancy and use of precast or prefabricated elements).

The drawings shall show the railway centrelines in the vicinity of the proposed building and the railway kilometrage linked to the set out. The drawings should also detail all infrastructure under and in the vicinity of the proposed building. All structural drawings, including temporary works such as falsework and formwork shall be certified as having been designed in compliance with the Professional Engineers Act 2002.

Copies of the drawings and documentation shall be submitted to the MCE to be reviewed for compliance with Queensland Rail requirements prior to construction. However, construction shall not commence until permission has been received from the General Manager Property or the Queensland Rail Project Manager.

The drawings and documentation shall include an overall scope of the works and details of works within, over or adjacent to QR occupied land.

2.4 Clearances

Clearances to railway tracks shall comply with the requirements of Standard Drawing No 2461, including provision for trackside access roads as required by Queensland Rail.

Piers, walls and columns adjacent to existing tracks shall, where practicable, be located sufficiently clear of the tracks to avoid any delays to train services, during construction, from speed restrictions, track closures and/or isolations of the OHLE. This may require clearances greater than the minimum clearances shown on Standard Drawing No 2461. The MCE will advise of clearances required in excess of the minimum.

Additional clearances may also be required to allow for formation drainage as in 3.2, for sighting of railway signals, for special items of OHLE such as switches, transformers and traction wiring at turnouts for passenger platform requirements, and for access to clean and maintain the building.

For buildings across existing and future electrified lines, supporting elements shall, where practicable, be located sufficiently clear of the overhead wiring system to not need protection screens to guard against access to OHLE.

The drawings shall show the railway clearance outline superimposed on an elevation of the building at 90° to the track alignment.

2.5 Earthquake Protection

Buildings over or near railways shall be classified at a minimum of Structure Type II in AS 1170.4 – *Earthquake Loads*, unless otherwise agreed by the MCE.

Buildings shall be detailed to minimise the risk of collapse during earthquakes.

Particular attention shall be given to detailing of:

- Bearing arrangements
- Widths of bearing shelves
- Reinforcing steel in columns.

2.6 Durability

The design life of the building enclosure over the railway tracks shall be 100 years.

Buildings shall be designed to avoid, during their design life, planned maintenance (such as maintenance of protective coatings on steelwork) which would incur delays to train services, unless agreed to by the MCE.

2.7 Demolition

A building shall be designed so that, at the end of its life cycle, it can be demolished progressively with minimum interference to train operations, passengers and any railway activities. A demolition scheme shall be included in the drawings and documentation to be submitted to the MCE in accordance with Clause 2.3.

3. SUBSTRUCTURE

3.1 Foundations

Foundations shall be designed to be installed with minimum interference to railway operations.

The design of shoring systems for excavations adjacent to operating railway tracks shall be submitted to the MCE for review before construction commences.

3.2 Formation Drainage

Railway formation drainage shall be allowed for and shall be lined where appropriate. Drains shall be at least 3m clear of track centreline.

Supports and foundations shall be designed to allow free drainage along the formation and not to pond water.

4. COLLISION PROTECTION AND COLLISION LOADS

4.1 General

Collision protection and collision loads shall be in accordance with AS 5100 *Bridge Design* and as follows.

Buildings shall be a single clear span over existing and future railway tracks, unless agreed otherwise by the MCE.

In addition to the requirements of AS5100, the following shall apply.

Piers, walls or columns shall not be located in or at the bottom of embankment slopes, even if further from track centreline than 10m, because of the risk of derailed rollingstock falling down the embankment slope. However, the MCE may

approve such location of piers (or columns), and approval may be subject to the provision of control measures such as one or more of the following:-

(a) Guard and splay rails;

(b) A retaining structure to widen the embankment;

(c) Piers, walls or columns complying with this Technical Specification and any additional protection required by the MCE.

Piers, walls or columns of heavy construction shall be smooth walled blade piers as parallel to the railway track as practicable.

A safety refuge normally 1.5m wide by 2.2m high above adjacent rail level and a minimum of 600mm deep shall be provided where:-

1. The length of pier or wall is greater than 15m length; and

2. Clearance between adjacent existing or future track centreline and face of pier or wall is less than 3m.

Refuges are to be spaced at a maximum of 15m centres and clearly defined.

4.2 Upgrading of Existing Buildings

Existing piers and columns which do not satisfy the above requirements shall have deflection walls provided. Independent deflection walls shall be provided where space permits. The MCE will advise on requirements on a case-by-case basis.

Otherwise deflection walls may be integral and shall be a minimum of 3.6m high, measured from the highest rail level of the adjacent railway track.

Integral deflection walls shall extend at least 2m past the end of each pier (or column) in a direction approximately parallel to the railway track, or shall continue past the next pier (or column) if the piers (or columns) are at a clear spacing of less than 4m.

The extreme ends of the integral deflection walls shall taper, on the side adjacent to the railway track at 1:6 from 300mm thick to the full thickness of the deflection wall.

Deflection walls shall be:-

(a) Smooth faced with the face of integral walls extending a minimum of 150mm beyond the face of the pier (or column) on the side adjacent to the railway track;

(b) Approximately parallel to the railway track;

(c) Constructed of reinforced concrete with a minimum thickness of 600mm;

(d) Designed to resist, the loads specified in AS 5100.2, section 10.

4.3 Design Report

A design report on the measures adopted for collision protection shall be included in the drawings and documentation to be submitted to the MCE in accordance with Clause 2.3.

5. SUPERSTRUCTURE

5.1 General

Building superstructures to be erected across existing tracks shall, where practicable, be precast or prefabricated to minimise the time needed for erection. The aim shall be to minimise any delays to train services during construction from speed restrictions, track closures and/or isolations of the OHLE.

The connection between the deck and piers shall be detailed to minimise the risk of collapse in the event of collision from rail traffic or earthquake.

5.2 Building Drainage

Building drainage shall discharge in a manner which does not adversely affect railway tracks, associated railway facilities, or property occupied by Queensland Rail. Building drainage discharge via scuppers shall not be permitted from spans over existing and future railway tracks. Building drainage pipes shall comply with the requirements for services in clause 8 of this Technical Specification.

6. TRAFFIC BARRIERS

In areas of the building accessible by vehicles, traffic barriers shall be provided across the rail corridors to prevent, as far as practicable, vehicles from accessing Queensland Rail tracks and property.

Traffic barriers shall be designed in accordance with AS 5100 *Bridge Design* and designers shall reach agreement with the MCE on the barrier performance level.

7. PROTECTION SCREENS

7.1 General

Protection screens shall be smooth-faced on the inside (building side), not readily climbable, and not have ready access to their outside faces. The height shall be measured from floor level or any adjacent foothold, whichever is highest.

Protection screens shall be provided to obstruct:

- Access to OHLE, and/or
- Throwing of objects at trains

The minimum requirements for protection screens shall be as in clauses 7.2 and 7.3 of this Technical Specification.

7.2 Obstructing access to OHLE

Protection screens shall extend along the building to a minimum of 3.0m (horizontal) beyond any part of the OHLE, including overhead masts, and shall be at least 1.8m high.

Protection screens may also be required at wingwalls, retaining walls and tops of cuttings in the vicinity of the building, as required by the MCE.

7.3 Obstructing the Throwing of Objects at Trains

Protection screens shall be at least 2.0m high if non see-through and at least 2.4m high if see-through. Expanded metal panels shall be considered as being see-through.

The provision and extent of protection screens on buildings may vary with location.

The MCE will advise on the screen requirements on a case-by-case basis.

8. SERVICES

Buildings shall allow for Queensland Rail services (signal, telecommunications and OHLE) and other services as required by or approved by Queensland Rail.

Services, including pipes for deck drainage, shall not be attached to the sides or undersides of buildings unless the MCE agrees to it, and the risks to Queensland Rail from failure of the services have been addressed.

Services and their attachment to the building shall have a 100 year design life and shall be designed for replacement with minimal delay to train services. Design and material selection shall be subject to review by the MCE. Drainage systems shall be designed to prevent leakage into or onto the building.

Existing underground services that are to remain in place shall be protected from loads during construction and operation of the building. Design details shall be submitted for approval by both the Service Owner and the MCE.

Alteration, relocation, lowering or replacement of existing underground services shall be designed in accordance with the AS 4799 Installation of Underground Utility Services and Pipelines within Railway Boundaries and the details shall be submitted for approval by the MCE.

9. WATERPROOFING

Building enclosures over railways shall be waterproofed to prevent water leaking through to the railway.

10. ANTI GRAFFITI COATING

Any part of the building vulnerable to graffiti and visible from trains and railway platforms, shall be protected with an approved non-sacrificial coating.

11. ADVERTISING SIGNS

Advertising signs and other hoardings shall not be placed on buildings except as approved by the MCE.

If any existing advertising signs on Queensland Rail property will require removal or relocation as a result of the proposed works, the MCE must be advised as early as possible. Failure to do so may cause delays in the start of the work.

12. LINES CARRYING DANGEROUS GOODS

The railway tracks under or beside the building may be used for transporting various Dangerous Goods (DGs). Queensland Rail will advise if DGs are to be considered in the design of a building. The potential risks in transporting DGs are loss of containment of DGs from a rail accident, and resulting fires, explosions and toxic emissions either directly from chemical spills or as products of combustion or reactions.

There are several components to the risk generated:

1. Safety of people occupying the building
2. Safety of people on platforms or in trains under or near buildings
3. Structural damage to the building and/or adjacent structures
4. Business interruptions and financial loss to building occupants in the event of incidents affecting the building
5. Commercial risks to QR in the potential loss of freight growth business in the event of incidents
6. Risk imbalances between having to move DGs via rail versus areas of increasing

population and infrastructure along the tracks and in air space, and

7. Adverse public perceptions of the risks of DGs goods freight movement through enclosed platforms, especially security related issues.

A quantitative risk assessment of the transport of dangerous goods has been conducted and the following design mitigation measures have been identified:

- Minimize or control the outbreak of fire
- Control the smoke/gas release from a fire
- Minimise the heat build up in structures
- Limit the blast damage effect to structural elements
- Provide stability or contingency measures to the structure
- Emergency access and egress

The feasibility of the development of buildings over DGs transport could be influenced by the cost of the risk mitigation measures. The measures identified are generic measures, all of which may not apply to all buildings. The extent of their applicability may have to be determined on a case by case basis, depending on the location and type of building.

This section provides guidance on risk mitigation measures that may be adopted for a building. It is not intended to cover decision criteria as to which mitigation measure applies where.

Documentation to be submitted to the MCE for review, in accordance with Clause 2.3, shall include a specialist design report on the assessment of DG risks and the design measures adopted.

12.1 Definition

The structure supporting a building over a railway may consist of individual pillars, with gaps between buildings, or may consist of a set of contiguous buildings forming a "tunnel" for the track. In the former, there is potential to design sufficient ventilation for gas release or smoke plume from a fire. In the latter, ventilation becomes more difficult.

It is necessary to establish a definition of a "tunnel" so that the structural requirements can be established.

A tunnel is defined by the NSW Rail Infrastructure Civil Engineering Standard – TS 34 100 3 01 SP as:

A space through which one or more rail tracks pass, which is continuously enclosed above, below and on both sides and is in excess of 80m in length. An air space development providing enclosure of 80m in length to a previously open track also forms a railway tunnel.

Buildings that have a sufficiently wide enclosure over the tracks may or may not behave like a tunnel depending on the length to width ratio of the enclosure. Such cases have to be considered by Computational Fluid Dynamics (CFD) modelling of smoke generation in fires to determine an effective ventilation strategy.

12.2 Design Intent

The aim of the design of buildings shall be to maintain structural integrity to achieve the following:

- Enable people in the building to escape to a safe area
- Rescue of people in stations beneath the building and their evacuation to a safe area
- Enable emergency services to control the fire before significant structural damage occurs in an incident

12.3 Design Measures for Mitigation of Fire Impacts

One way to reduce the rate of temperature rise in a fire within an enclosure is to provide adequate ventilation. Ventilation reduces the build up of smoke and toxic gases in the enclosure, and heat effecting the structure above. Alternatively the ventilation can be fed in a direction that enables all personnel to remain in the clear and provides an entry for emergency response personnel. Or by removing the smoke and gases into a ventilation duct and away from the enclosure space, the air in the enclosure can be kept free of smoke and gas, and the design intent in Section 12.2 achieved. Mechanical ventilation for fire and life safety shall be mandatory when the enclosure contains platforms or station facilities.

The design requirements are outlined below.

1. Keep the enclosure above the tracks to less than 80m wherever possible, so that the onerous provisions of a tunnel may not be required. It also minimises hot gas layer buildup and heating of the building.
2. Provide sufficient gaps between buildings wherever possible to ensure ventilation in between enclosures can occur, and

offtakes at the portals for ventilation. The optimum length of gaps is best determined by a generic ventilation study of an enclosed track section, using different lengths of enclosed track sections.

3. If the enclosure is longer than 80m, making it a tunnel, consider providing a natural ventilation shaft at appropriate intervals. Where the enclosed section is also wide, the requirements shall be determined by smoke modelling using CFD models.

4. The discharge point of the vent requires careful consideration as there is potential for dispersion of toxic plume (from the discharge point) to enter the air-conditioning air intake duct of the building. Dispersion modelling needs to be carried out using the meteorological data applicable to the building location, for various combinations of wind speeds and Pasquil stability conditions.

5. Construction of ventilation shafts to the 'surface' may require consideration of formal permissions or tenure rights for a ventilation outlet to exist if outside QR property. QR's long-term rights for the vent structure to remain and operate unrestricted while the railway operates also need consideration.

6. Undertake modelling of smoke dispersion at the concept design stage to predict ventilation patterns. CFD models provide a useful tool in this area.

7. The enclosure structure itself shall be designed for a fire load of 60 MW. This may be achieved by one or more of the following:

   (a) Appropriate thickness of the enclosure roof

   (b) Coating the enclosure roof with passive fire protection material

   (c) Providing firewater sprinklers on the enclosure roof above the tracks to reduce the heat generation rate and suppress fire by preventing air flow to the fuel.

   Option (c) will not be permitted if it interferes with the overhead traction equipment. Further, the situation would be aggravated if water is sprayed on Class 4.3 goods or burning xanthates. The frequency of transport of xanthates and Class 4.3 goods may be significantly lower than that for flammable liquids such as gasoline.

8. The effect of more fuel will not intensify the temperature of a hydrocarbon fire, but will only extend the duration of the fire. Therefore the temperatures attained will be similar to those designed for in road tunnels and the International code developed by PIARC is appropriate.

9. Based on smoke dispersion modelling, where air-conditioning air intakes of the building are within or close to the smoke plume, they shall be fitted with smoke detectors that would automatically shut down the air-conditioning fan and damper upon smoke detection. Redundancy of smoke detection is necessary to ensure reliability.

10. Ventilation design needs to look at operation under fire emergency mode in order to control smoke and enable emergency response teams to enter the enclosed space safely with appropriate fire fighting and protective equipment.

11. The use of an enclosed drainage system in the enclosure should be considered to enable removal of a large spill of flammable liquid, which would otherwise contribute to fire growth.

12. The provision of fire detection and alarm in the enclosure.

13. Protection of fire detection equipment from the fire itself. Separate circuits with feeds from both ends of the tunnel and closed loops are essential to ensure that these communications remain open during the fire.

14. Provide adequate firewater drainage from the enclosed section of track, as liquid fuel would float on the firewater and continue to burn, causing a hazard to fire fighting crew.

15. Consider including emergency exit doors leading to escape passages to enable a mass evacuation from a passenger train, if a freight train carrying DGs is stopped in the tunnel as a result of a fire or explosion event.

12.4 Design Measures for Passive Fire Protection

Spalling of concrete can be limited and structural integrity can be maintained by the provision of passive fire protection (PFP) materials. These coatings reduce the buildup of heat on the

concrete surface and therefore limit the potential for spalling.

PFP is defined as "a coating, cladding or free-standing system which, in the event of a fire, will provide thermal protection to restrict the rate at which heat is transmitted to the object or area being protected". PFP materials are used to:

(a) Prevent escalation of the fire due to progressive releases of inventory, by separating the different fire risk areas, and hence protect personnel until safe evacuation can take place

(b) Protect essential safety items and critical components such as separators, risers and topside emergency shutdown valves, and

(c) Minimise damage by protecting the critical structural members.

The use of passive fire coatings has been shown to maintain concrete surface temperatures in hydrocarbon fires below 400°C for up to 2 hours.

The use of polyfibres in concrete and minimising moisture content has also been shown to limit spalling. The polyfibres melt providing space for moisture to expand.

The design requirements are outlined below.

1. Consider use of Passive Fire Protection materials to coat the roof of the enclosure; as an alternative to structural design alone for a significant hydrocarbon fire.
2. Ensure that all materials to be used in the construction of the enclosure are evaluated with regard to their flammability and combustion characteristics.
3. Develop a building evacuation plan in the event of a fire in the enclosure.
4. Nominate a safe assembly area for the building occupiers in the building evacuation plan.

12.5 Design Measures for Mitigation of Blast Damage

The collision loads in AS 5100 are not suitable to design for the impact of explosions in enclosed spaces underneath the building. Some mitigation measures are outlined below.

1. In addition to looking at the actual structural design of specific support elements, limiting the effects of blast damage in the design of buildings may include the following:
   (a) Selective location of support pillars – to avoid domino effects
   (b) Spacing of pillars - sufficient number to provide strength, but at the same time providing adequate ventilation.
   (c) Use of structural walls instead of pillars only in cases where pillars are insufficient to support the load.
   (d) Provision of additional support elements
2. A structural redundancy analysis shall be carried out to verify the capacity to support the deck load at the ultimate limit state with one or more of the supporting columns removed.
3. Consider providing alternative support structures for the building independent of the enclosure, additional fire rating etc, so that the integrity of these structures can be maintained. The need for this has to be determined on a case by case basis.
4. Configuration of a ventilation system which allows rapid ventilation transition to zero air movement may be useful in a range of scenarios.

13. AS CONSTRUCTED DRAWINGS

Within six weeks of completion of construction, the constructing authority shall provide the MCE with as-constructed drawings for the enclosure structure, collision protection elements for the building, and DG risk mitigation measures.

14. CERTIFICATION

Design shall be carried out in compliance with the Professional Engineers Act 2002. The designer shall specify the functional requirements and the standards used for the design.

Design shall include verification by a competent person not directly involved in the design, as complying with the specified functional requirements and standards.

The designer shall formally certify to the MCE that the above design and verification requirements have been met. The certification shall include a summary of the specified functional requirements and standards.

The completed building must be certified by a Registered Professional Engineer of Qld, as having been constructed in accordance with the drawings or approved variations.

ITEM NO. 80.1.1

Queensland Government

Queensland Transport

B/c Mr Paul Pitman
C/- Murray & Associates
PO Box 665
Emerald Qld 4720

Attention: Mr Mark Murray

For your information. Should you wish to discuss any aspects of this concurrence agency response, please contact Mark Toombs on [redacted]

[redacted]

Mark Toombs
Principal Advisor (Planning)

Division 8 – Appeals to court relating to development applications

Appeals by applicants

4.1.27.(1) An applicant for a development application may appeal to the court against any of the following –

(a) the refusal, or the refusal in part, of a development application;

(b) a matter stated in a development approval, including any condition applying to the development, and the identification of a code under section 3.1.6;[30]

(c) the decision to give a preliminary approval when a development permit was applied for;

(d) the length of a currency period;

(e) a deemed refusal.

(2) An appeal under subsection (1)(a) to (d) must be started within 20 business days (the "applicant's appeal period") after the day the decision notice or negotiated decision notice is given to the applicant.

(3) An appeal under subsection (1)(e) may be started at any time after the last day a decision on the matter should have been made.

Appeals by submitters

4.1.28.(1) A submitter for a development application may appeal to the court about –

(a) the giving of a development approval, including any conditions (or lack of conditions) or other provisions of the approval; or

(b) the length of a currency period for the approval.

(2) The appeal must be started within 20 business days (the "submitter's appeal period") after the day the decision notice or negotiated decision notice is given to the submitter.

(3) If the person withdraws a submission before the application is decided, the person may not appeal the decision.

(4) If an application involves both impact assessment and code assessment, appeal rights for submitters are available only for the part of the application involving impact assessment.

Appeals by advice agency submitters

4.1.29.(1) An advice agency may, within the limits of its jurisdiction, appeal to the court about the giving of a development approval for a development application if –

(a) the development application involves impact assessment; and

(b) the advice agency told the applicant and the assessment manager to treat its response to the application as a submission for an appeal.

(2) The appeal must be started within 20 business days after the day the decision notice or negotiated decision notice is given to the advice agency as a submitter.

Appeals for matters arising after approval given (co-respondents)

4.1.30.(1) For a development approval given for a development application, a person to whom any of the following notices have been given may appeal to the court against the decision in the notice –

(a) a notice giving a decision on a request for an extension of the currency period for an approval;

(b) a notice giving a decision on a request to make a minor change to an approval.

(2) The appeal must be started within 20 business days after the day the notice of the decision is given to the person.

(3) Subsection (1)(a) does not apply if the approval resulted from a transitional development application that was assessed as if it were an application made under a superseded planning scheme.

Division 9 – Appeals to court about other matters

Appeals for matters arising after approval given (no co-respondents)

4.1.31.(1) A person to whom any of the following notices have been given may appeal to the court against the decision in the notice –

(a) a notice giving a decision on a request to change or cancel a condition of a development approval;

(b) a notice under section 6.1.44[31] giving a decision to change or cancel a condition of a development approval.

(2) The appeal must be started within 20 business days after the day the notice of the decision is given to the person.

Appeals against enforcement notices

4.1.32.(1) A person who is given an enforcement notice may appeal to the court against the giving of the notice.

(2) The appeal must be started within 20 business days after the day notice is given to the person.

Stay of operation of enforcement notice

4.1.33.(1) The lodging of a notice of appeal about an enforcement notice stays the operation of the enforcement notice until –

(a) the court, on the application of the entity issuing the notice, decides otherwise; or

(b) the appeal is withdrawn; or

(c) the appeal is dismissed.

(2) However subsection (1) does not apply if the enforcement notice is about –

(a) a work, if the enforcement notice states the entity believes the work is a danger to persons or a risk to public health; or

(b) carrying out development that is the demolition of a work.

Appeal is against decision on compensation claims

4.1.34.(1) A person who is dissatisfied with a decision under section 5.4.8 or 5.5.3[21] for the payment of compensation may appeal to the court against–

(a) the decision; or

(b) a deemed refusal of the claim

(2) An appeal under subsection (1)(a) must be started within 20 business days after the day notice of the decision is given to the person.

(3) An appeal under subsection (1)(b) may be started at any time after the day a decision on the matter should have been made.

Appeals against decisions on requests to acquire designated land under hardship

4.1.35.(1) A person who is dissatisfied with a designator's decision to refuse a request made by the person under section 2.6.19[19] may appeal to the court against –

(a) the decision; or

(b) a deemed refusal of the request.

(2) An appeal under subsection (1)(a) must be started within 20 business days after the day notice of the decision is given to the person.

(3) An appeal under subsection (1)(b) may be started at any time after the last day a decision on the matter should have been made.

Appeals from tribunals

4.1.37.(1) A party to a proceeding decided by a tribunal may appeal to the court against the tribunal's decision, but only on the ground –

(a) of error or mistake in law on the part of the tribunal; or

(b) that the tribunal had no jurisdiction to make the decision or exceeded its jurisdiction in making the decision.

(2) An appeal against a tribunal's decision must be started within 20 business days after the day notice of the tribunal's decision is given the party.

Court may remit matter to tribunal

4.1.38. If an appeal includes a matter within the jurisdiction of a tribunal and the court is satisfied the matter should be dealt with by a tribunal, the court must remit the matter to the tribunal for decision.

Division 10 – Making an appeal to court

How appeals to the court are started

4.1.39.(1) An appeal is started by lodging written notice of appeal with the registrar of the court.

(2) The notice of appeal must state the grounds of the appeal.

(3) The person starting the appeal must also comply with the rules of the court applying to the appeal.

(4) However, the court may hear and decide an appeal even if the person has not complied with subsection (3).

Certain appellants must obtain information about submitters

4.1.40.(1) If the applicant or a submitter for a development application appeals about the part of the application involving impact assessment, the appellant must ask the assessment manager to give the appellant the name and address of each principal submitter who make a properly made submission about the application and has not withdrawn the submission.

(2) The assessment manager must give the information requested under subsection (1) as soon as practicable.

Notice of appeal to other parties (div 8)

4.1.41.(1) An appellant under division 8 must, within 10 business days after the day the appeal is started (or if information is requested under section 4.1.40, within 10 business days after the day the appellant is given the information) give written notice of the appeal to –

(a) if the appellant is an applicant – the assessment manager, any concurrence agency, any principal submitter whose submission has not been withdrawn and any advice agency treated as a submitter whose submission has not been withdrawn; or

(b) if the appellant is a submitter or an advice agency whose response to the development application is treated as a submission for an appeal – the assessment manager, the applicant and any concurrence agency; or

(c) if the appellant is a person to whom a notice mentioned in section 4.1.30 has been given – the assessment manager and any entity that was a concurrence agency for the development application.

(2) The notice must state –

(a) the grounds of the appeal; and

(b) if the person given the notice is not the respondent or a co-respondent under section 4.1.43 – that the person, within 10 business days after the day the notice is given, may elect to become a co-respondent to the appeal.

Notice of appeal to other parties (div 9)

4.1.42.(1) An appellant under division 9 must, within 10 business days after the day the appeal is started give written notice of the appeal to-

(a) if the appellant is a person to whom a notice mentioned in section 4.1.31.[71] has been given – the entity that gave the notice; or

(b) if the appellant is a person to whom an enforcement notice is given – the entity that gave the notice and if the entity is not the local government, the local government; or

(c) if the appellant is a person dissatisfied with a decision about compensation – the local government that decided the claim; or

(d) if the appellant is a person dissatisfied with a decision about acquiring designated land – the designator; or

(e) if the appellant is a person who is disqualified as a private certifier – the entity disqualifying the person and if the entity disqualifying the person is not the accrediting body, the accrediting body; or

(f) if the appellant is a party to a proceeding decided by a tribunal – the other party to the proceeding;

(2) The notice must state the grounds of the appeal.

Respondent and co-respondents for appeals under div 8

4.1.43.(1) This section applies to appeals under division 8[73] for a development application.

(2) The assessment manager is the respondent for the appeal.


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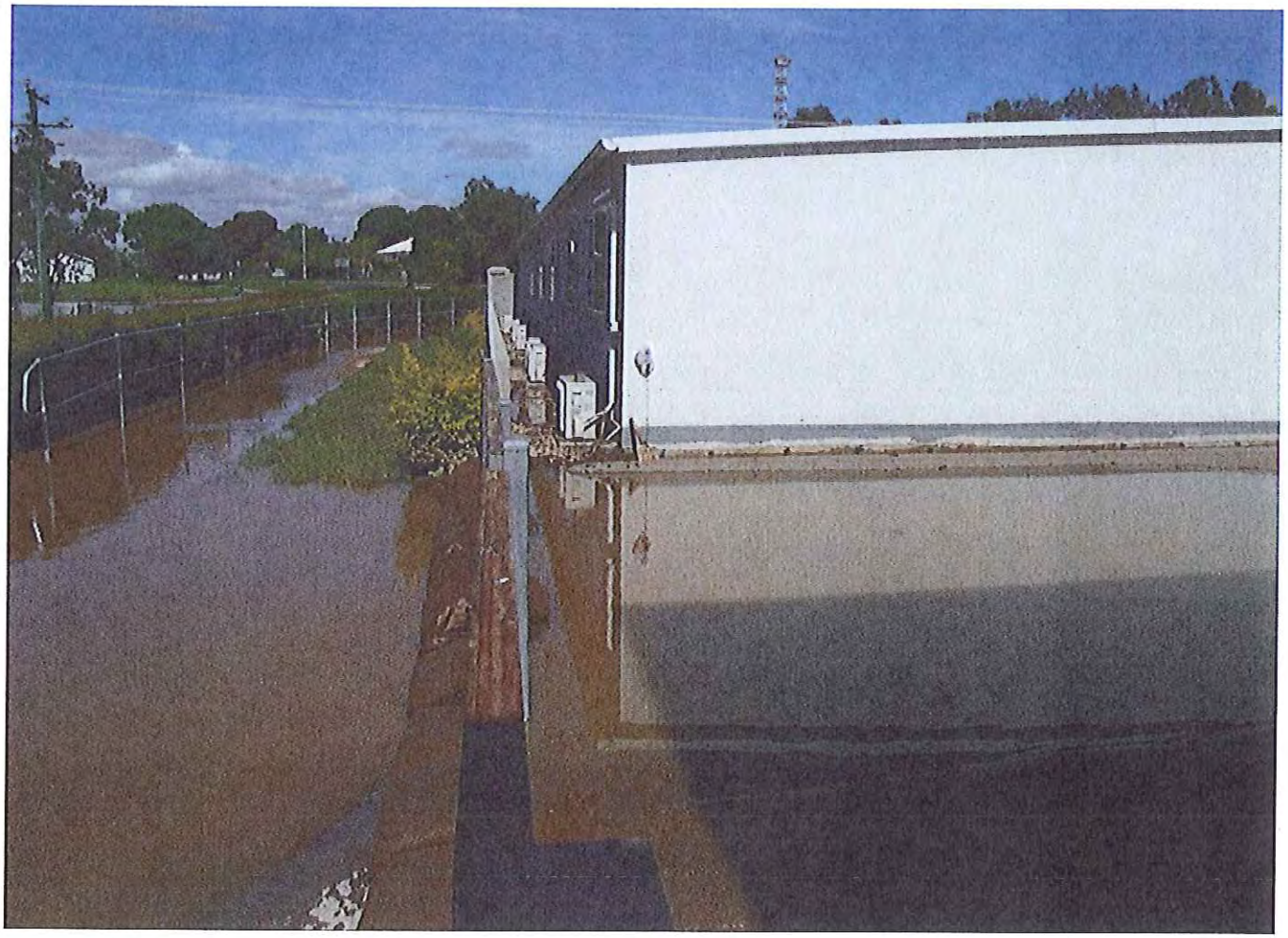

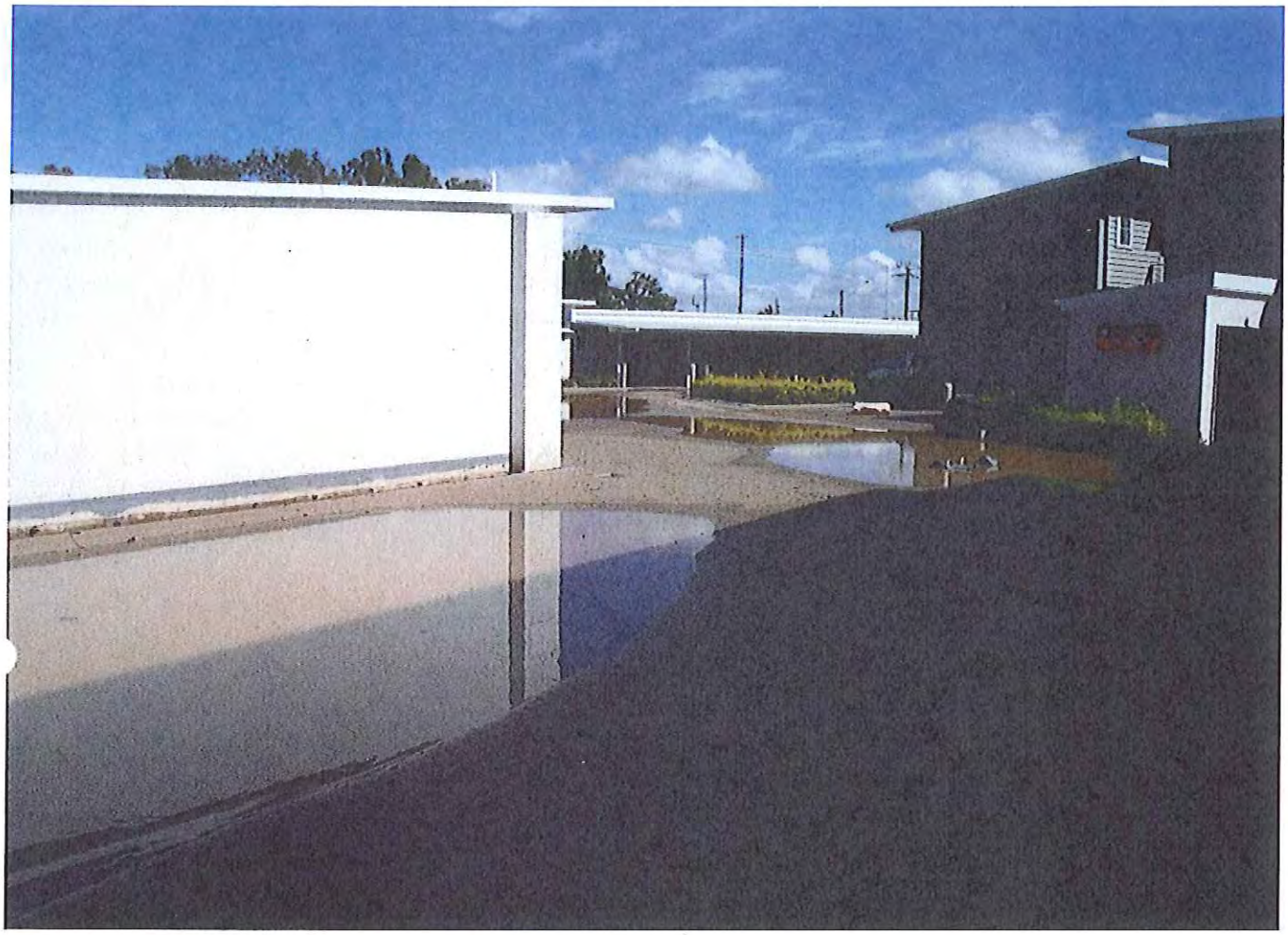

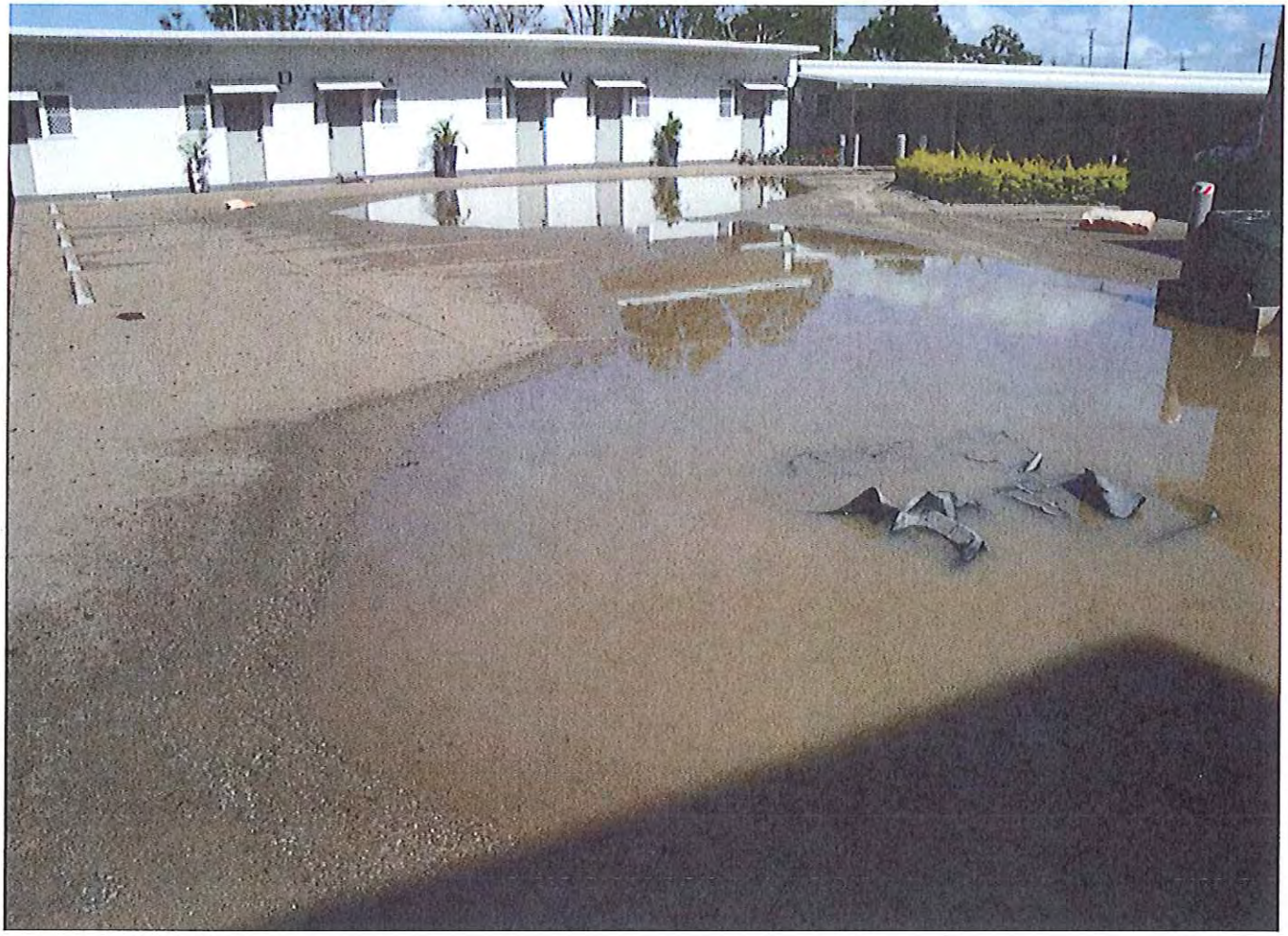

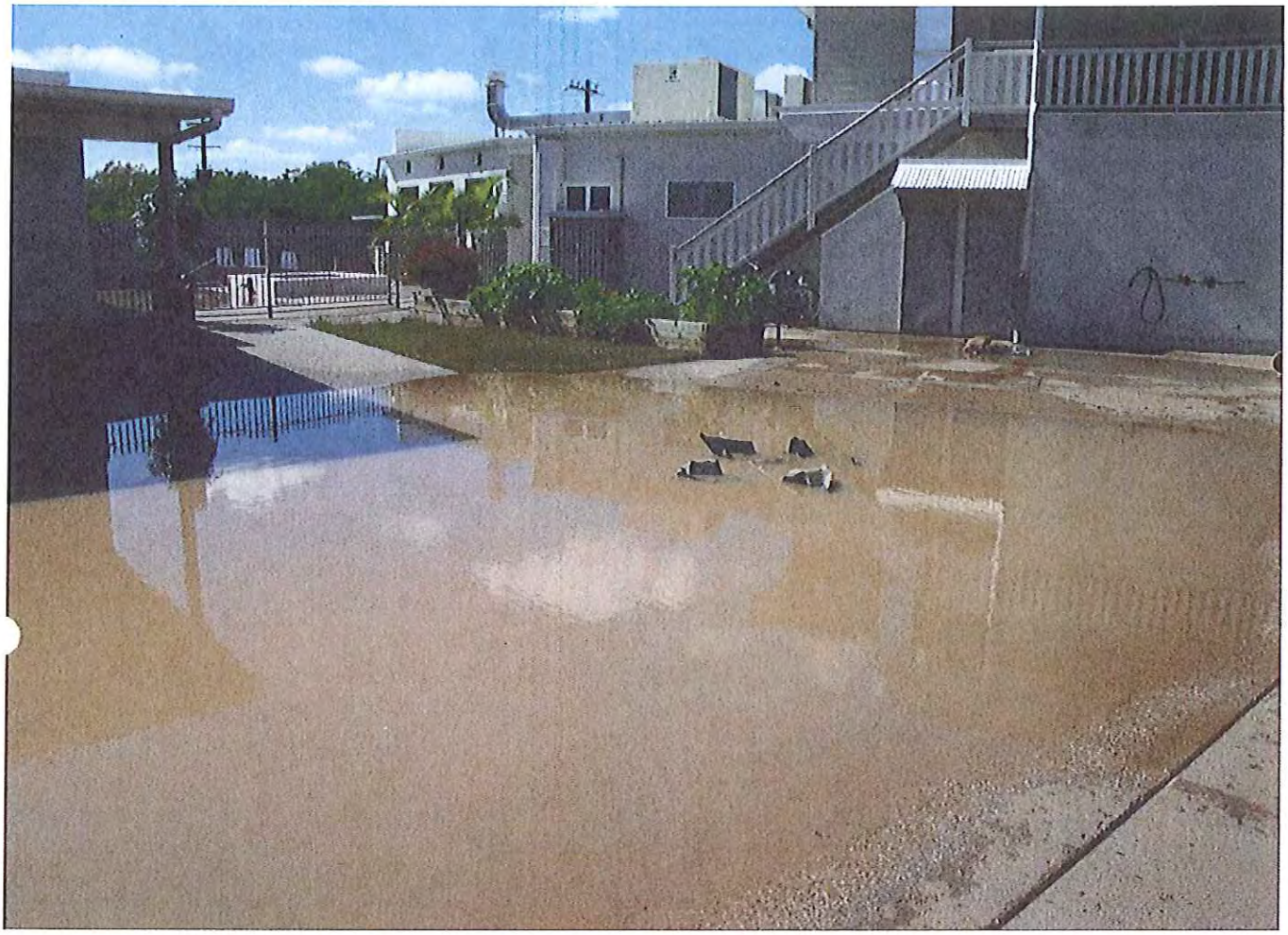

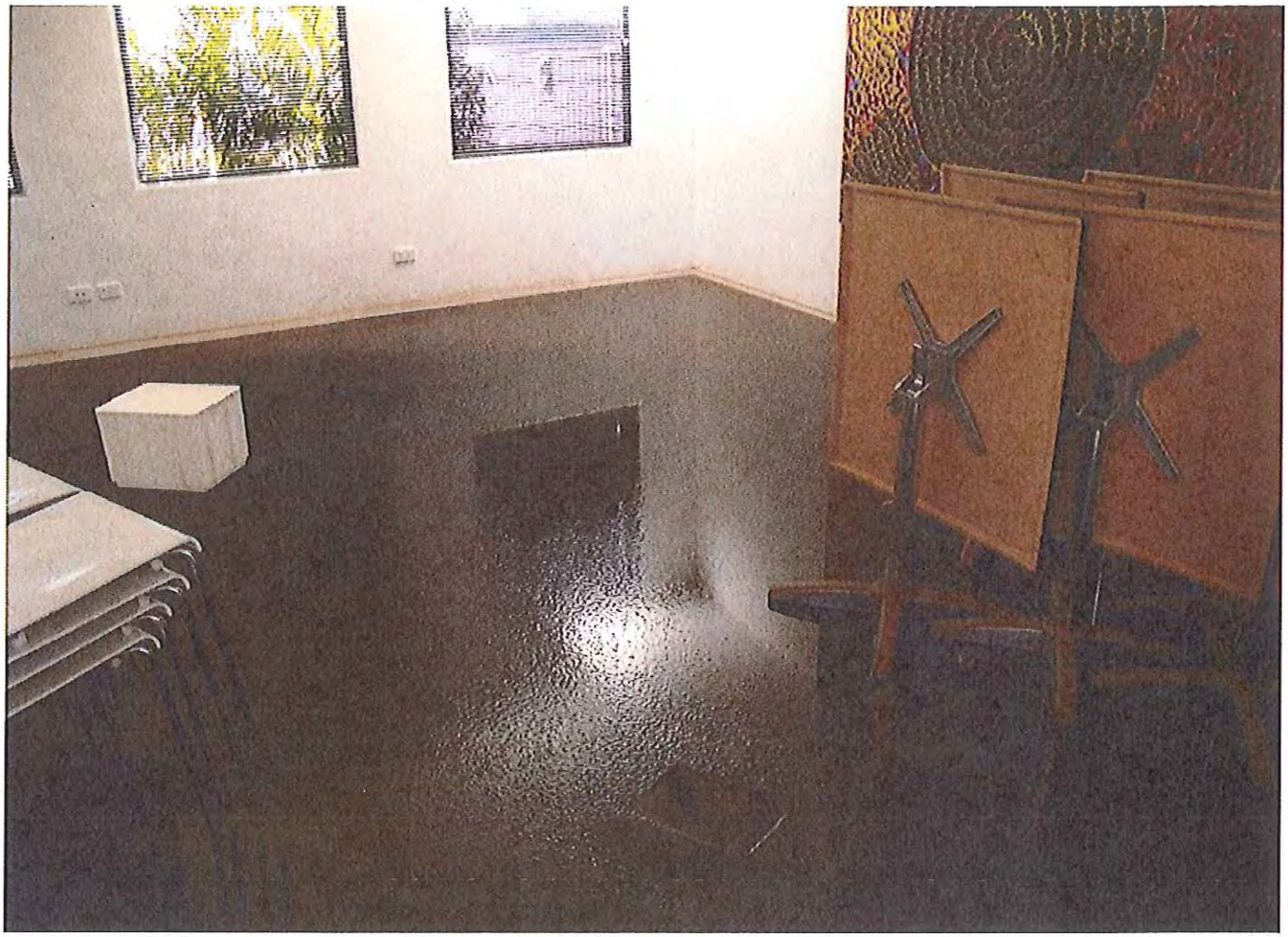


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HIGH VOLTAGE


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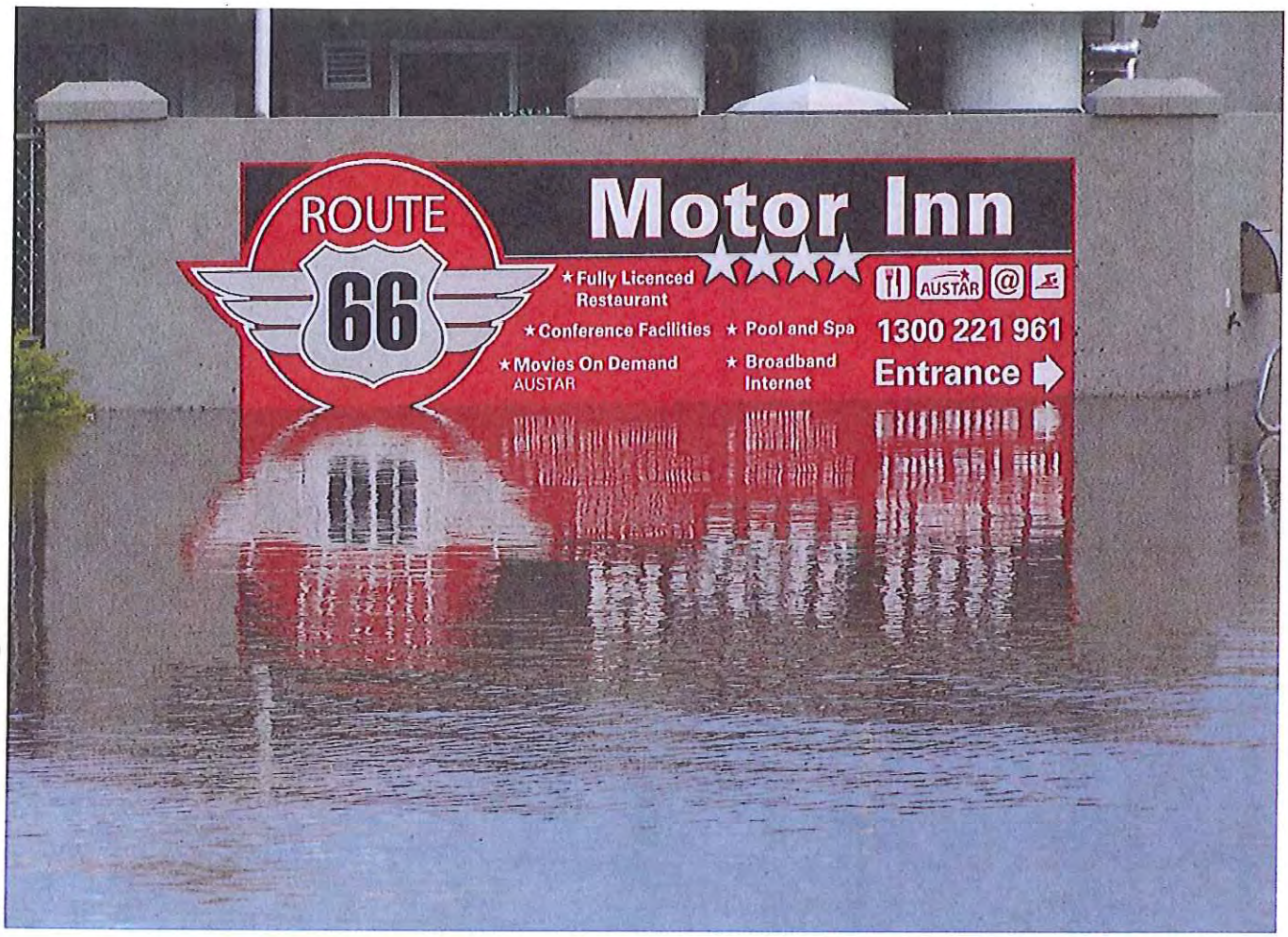
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