

In the matter of the
Commissions Of Inquiry Act 1950

Commission of Inquiry Order (No. 1) 2011

QUEENSLAND FLOODS COMMISSION OF INQUIRY

CLAYTON UTZ-(Ipswich City Council -
FOOTE)

Response to Req #1731403
#1747416- 1747426 File 539764/1
Volume 1 OF 1 ORIGINAL

Witness Statement of Timothy Clarke Foote

Planner - Ipswich City Council

QFCI

Date: 19/10/11 JM

Exhibit Number: 858

WITNESS STATEMENT OF TIMOTHY CLARKE FOOTE

This written statement is provided in response to a Requirement, dated 23 September 2011, pursuant to section 5(1)(d) of the *Commissions of Inquiry Act 1950* (Qld) to provide a written statement, under oath or affirmation, to the Queensland Floods Commission of Inquiry.

I, Timothy Clarke Foote, Planner of 45 Roderick Street, Ipswich, in the State of Queensland, swear as follows:

Introduction and Qualifications

1. I am employed by Ipswich City Council (ICC) as the Team Coordinator-Development (East team) for the City of Ipswich. I commenced in this role on 15 November 2010. I work in the Development Planning branch of the Planning and Development Department and report to the Development Planning Manager, Ms Joanne Pocock.
2. I hold the following qualifications:
 - Bachelor of Regional and Town Planning with Honours from the University of Queensland (1998);
 - Certificate IV in Business (Frontline Management) (2005).
3. I am a full member of the Planning Institute of Australia.
4. I commenced employment with ICC in October 2001. From November 1998 to October 2001 I worked for Caboolture Shire Council as a Development Planner assessing development applications.
5. Between October 2001 and April 2005 I held positions as a Development Planner and Senior Development Planner in the East development team at ICC. In these capacities I was involved in the assessment of development applications.
6. From April 2005 until November 2010 I was the Team Coordinator-Development for the Citywide team. In that position I had the day-to-day management responsibility for the planners working in the Citywide team and had responsibility for the assessment and determination by the Citywide team of development applications made pursuant to the Ipswich Planning Scheme.
7. In my current role I have the day-to-day management responsibility of the planners working in the East Development team and have responsibility for the assessment and determination by the East team of development applications made pursuant to the Ipswich Planning Scheme.


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8. In 2006, in my capacity as Development Team Coordinator-Citywide I was the Delegated Officer involved in the consideration of a development application (MCU 1727/05) for 45 Alice Street, Goodna. The development planner with primary responsibility for the consideration of the application was [REDACTED] who reported to me. I in turn reported, at that time, to Mr Brendan Nelson as Development Manager.
9. However, at the time of preparation and consideration of the ICC planning assessment memorandum dated 14 July 2006 (attachment TCF-7 to my statement) I was overseas on leave and the assessment was overseen by Mr Noel Doyle as Acting Development Team Coordinator-Citywide.
10. The sources of information for the matters set out in this statement are:
- (a) my personal knowledge and recollection of relevant events; and
 - (b) my review of the relevant ICC development application files, a copy of which I understand have been produced to the Commission pursuant to a Requirement notice dated 9 September 2011.

45 Alice Street, Goodna - Application No. 1727/05/MCU

Application Background and Overview

11. The subject land comprises an area of 2823m² located immediately to the north-west of the intersection of Alice Street and Spalding Crescent at Goodna. The site is situated within a residential area, with the land immediately to the north owned by ICC for drainage purposes and the land to the west of the site (Warren Park) owned by ICC for open space and drainage purposes.
12. From 1958 to 2002 the subject land was used as a sawmill, a use recognised by Council as a lawful non-conforming use.
13. At the time of lodgment of the application (23 March 2005) for a material change of use to two (2) child care centres, the land was located within the Residential Medium Density (RM2) zone of the 2004 Ipswich Planning Scheme and was affected by the development constraint overlay OV5 - 1 in 100 flood line.
14. The RM2 zone is intended to provide for medium density housing with an overall density that does not exceed 50 dwellings per hectare at two (2) storeys in height.
15. The subject land has long been subject to a residential zoning. With respect to Council's historical planning schemes, the subject land was identified as:

[REDACTED]

[REDACTED]
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- (a) Town Plan of Ipswich 1976 - Residential 1 zone;
 - (b) Town Plan of Ipswich 1989 - Residential A;
 - (c) Consolidated Ipswich Planning Scheme 1995 - Residential A;
 - (d) Ipswich Planning Scheme 1999 - Residential Medium Density (RM1) - Eastern Corridor Structure Plan;
 - (e) Ipswich Planning Scheme 2004 - Residential Medium Density (RM2); and
 - (f) Ipswich Planning Scheme 2006 - Residential Medium Density (RM2) - current zoning.
16. The proposed development comprised two (2) adjoining child care centres for a proposed 119 children and the employment of 18 full-time staff. Building "A" located on the southern half of the site was to accommodate 44 children and building "B" located on the northern half of the site was to accommodate 75 children.
17. Twenty eight car parks are centrally located on the site for use by staff and visitors to both centres. Access to the car park is from Spalding Crescent located to the east of the site.
18. A site plan of the proposed development, showing the location of the two (2) centres and the car park is included as part of annexure TCF-6.
19. Council issued a material change of use of premises development permit for a Community Use - two (2) child care centres on 14 August 2006 (annexure TCF-10). The applicant sought (unsuccessfully) to negotiate condition 19 of the permit (infrastructure contributions).
20. A development permit for operational works was approved by Council on 18 February 2008 and a development permit for building works was approved on 24 April 2008. The child care centres were developed and operational at the time of the 2011 flood event.
21. The subject site slopes from RL13.0m AHD to RL11.5m AHD. As a result the land is located above the Q20 flood line (RL10.5m AHD) but below the Q100 flood line (RL14.7m AHD). Council records indicate that the 1974 flood reached a level of 18.6m at this location, and information received from the Queensland Reconstruction Authority indicates a 2011 flood level of approximately 16.5m AHD. I am informed by the owner of the Centre, [REDACTED] that no-one was required to be evacuated from the Centre in connection with the 2011 flood. The children and staff were sent home, and the Centre closed at 2:00pm on Tuesday, 11 January 2011. The Centre was inundated at around 2:40am on Wednesday, 12 January 2011.

22. The subject land adjoins an overland flow path, comprising an unnamed gully/depression which runs through Warren Park to the west of the site. The land is located above the level of the 1 in 100 event (RL11.97m AHD) for local flooding of the adjoining overland flow path. The defined 1 in 100 flood line of 14.7m AHD arises from the backflow impact of a Brisbane River flood. The Brisbane River is located approximately 900 metres to the north of the site.
23. The proposal was an impact assessable application. Forty-four properly made submissions were received during the public notification of the development application. Flooding of the site, together with traffic, parking, need and amenity were raised in a number of the public submissions.
24. The application was not accompanied by a flood report. In its Information Request dated 10 May 2005 (annexure TCF-2) the applicant was requested by Council to submit a site specific flood investigation for the proposal, prepared by a RPEQ experienced in hydraulic engineering, which addressed the potential impact of flood levels. In its Information Request, Council identified the Q100 level for the site as 14.7m AHD. The applicant was also requested to address stormwater issues and to submit preliminary hydraulic calculations prepared by a RPEQ in accordance with QUDM which identified the increase in stormwater runoff generated by the development.
25. A stormwater and flood report prepared by Tabletop Architects Planners Engineers dated 24 February 2006 (annexure TCF-3) was produced by the applicant in response to this request.
26. The flood report assessed the site by reference to the Q100 level for a local flood event and concluded that the site could achieve normal Q100 immunity from local flood events in the adjoining overland flow path through setting appropriate building levels (RL12.15 for building B and RL12.73 for building A) and by constructing a solid wall along the road frontage from the eastern corner, across the south west corner of the property and along the western boundary to the northwest corner. The Tabletop report also noted that mitigation of Brisbane River [Q100] backup flooding could not be achieved at a local level.
27. In assessing the development application against the Zone Code, the Ipswich Planning Scheme (section 4.6.3(5)) seeks that each non-residential use, such as a child care centre:
- (a) fulfils a local community need; and
 - (b) is accessible to the population it serves; and
 - (c) where possible co-locates with other non-residential uses but does not contribute to undesirable commercial ribbon development; and

- (d) does not have a significant detrimental impact on the amenity of nearby residents, including through the generation of odours, noise, waste products, dust, traffic, electrical interference or lighting; and
 - (e) maintains a scale and appearance in keeping with the residential amenity and character of the locality with adequate buffering or screening to nearby residential uses (both existing and proposed).
28. I consider that the development of the child care centres as approved satisfied the specific outcomes of the Planning Scheme. The development:
- (i) fulfils a local community need;
 - (ii) is easily accessible to the surrounding population;
 - (iii) does not contribute to undesirable commercial ribbon development;
 - (iv) does not detrimentally impact upon the amenity for nearby residents; and
 - (v) maintains a scale and appearance that is in keeping with the surrounding residential amenity.
29. In addition, the development as approved:
- (a) constitutes a sensible and non-intrusive development of a site zoned residential medium density and located between the Q20 and Q100 flood lines;
 - (b) represents, having regard to the site having been continuously the subject of a residential zoning for the past 30 years, a better planning outcome, consistent with that zoning, than simply having the site used as a park or for recreational purposes. The planning decision to develop the site as two (2) child care centres represents a superior outcome than having the site rendered effectively sterile; and
 - (c) did not increase the number of people residing on land below the 1 in 100 flood line, as the development was for a non-residential purpose.
30. In terms of the potential adverse impact of flooding at the site, the land use was, in my opinion, appropriate having regard to the proposed use being more harmonious with the amenity of the local area than the historical use of the site (as a sawmill for over 50 years), the potential land uses having regard to the zoning, and the flood characteristics of the site. The conditions imposed on the development as part of the application approval ensured that:
- (a) the buildings were constructed above the 1:100 local flood event;

- (b) flood warning signs were erected in the car park; and
 - (c) a flood escape plan be developed and periodically rehearsed.
31. Moreover:
- (a) the approval conditions provided for hours of operation from 6:30am - 6:30pm Monday to Friday, ensuring children would not be located on the premises at night or on weekends;
 - (b) the site is not subject to local flash flooding. The Tabletop report identified that the time of flood rise from when water first enters the property at the end of the wall in the north-west corner until it peaks at RL11.97 (Q100) is 34 minutes;
 - (c) the backwater flow from a Brisbane River flood event resulting in the Q100 flood line being exceeded (as occurred in the 2011 event) takes approximately 12 hours, with the result that no emergency evacuation would be required for the management of such an event; and
 - (d) access to and egress from the car park is via Spalding Crescent, located to the high side of the site (on the other side of the site from Warren Park as noted in the site plan at annexure TCF-6) ensuring that vehicles can be safely removed from the site in the event of a local Q100 flood event.
32. I am informed by Mr Saridakis that the Centre has a flood evacuation policy and that the staff and children rehearse the evacuation procedure on a monthly basis. This rehearsal involves the children holding onto a rope and being walked up along Alice Street to the top of the hill near the intersection of Alice and Bertha Streets.
33. As part of its assessment process Council prepared a memorandum (annexure TCF-9 to my statement) summarising the response to issues raised by submitters.
34. A Council assessment checklist for Impact Assessable Development was completed by the Development Planner [REDACTED] and the Acting Development Team Coordinator [REDACTED]. A copy of this assessment checklist is annexure TCF-8 to my statement.
35. Attached to my statement are copies of the following key documents in relation to this application:
- TCF-1: Development application dated 11 March 2005 (lodged 23 March 2005)
- TCF-2: ICC Information Request dated 10 May 2005

[REDACTED]

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- TCF-3:** Letter J.B. Goodwin, Midson & Partners to ICC dated 24 February 2006 enclosing Stormwater and Flood report prepared by Tabletop Architects Planners Engineers
- TCF-4:** Letter J.B. Goodwin, Midson & Partners to ICC dated 28 February 2006 enclosing revised site plan
- TCF-5:** Memorandum Assistant Development Engineer to Development Team Coordinator dated 4 May 2006
- TCF-6:** Email J.B. Goodwin, Midson & Partners to ICC dated 1 June 2006 enclosing revised site plans
- TCF-7:** Memorandum Development Planner to Development Team Coordinator dated 14 July 2006
- TCF-8:** ICC Assessment Checklist
- TCF-9:** ICC comment on issues raised by submitters
- TCF-10:** ICC Development Application Decision Notice dated 14 August 2006.

Question 1: The known Q100 and Q20 flood levels at or around the time of the application

36. These levels are:

- Q100 flood level - 14.7m AHD
- Q20 flood level - 10.5m AHD.

Question 2: The known site level or levels

37. The site slopes from approximately RL13m AHD in the south-eastern corner of the site to approximately RL11.5m AHD in the north-western corner of the site. Based on the Council approved operational works plans, the finished pad level for building A (southern building) was RL12.35m AHD and the finished pad level for building B (northern building) was RL12.2m AHD. The plans approved as part of the Building Works development permit by Building Certification Consultants Pty Ltd identify the finished floor level of building A to be RL12.73m AHD and the finished floor level of building B to be RL12.25m AHD.

Question 3: What assessment process was followed specific to flood impacts

38. The subject land was affected by development constraint overlay OV5 - 1 in 100 flood line of the 2004 Ipswich Planning Scheme. Council's Development Engineers were responsible for



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the assessment of flood impacts and for providing information and draft conditions to the assessing officer to inform the decision making process.

39. In assessing the application, Council's Development Engineer identified that the land was affected by the Q100 flood level and proposed that *"a site specific flood investigation should be undertaken for the proposal (prepared by a RPEQ experienced in hydraulic engineering) which addresses the potential impact on flood levels such that there is no detrimental effects on surrounding properties"*.
40. Council's Information Request dated 10 May 2005 (annexure TCF-2) requested that the applicant submit a site specific flood investigation for the proposal. This request identified the Q100 in this location as 14.7m AHD.
41. In response to Council's Information Request the applicant submitted a Stormwater and Flood Report prepared by Tabletop Architects Planners Engineers (RPEQ2210). Council's Development Engineers assessed the submitted report and provided a recommendation that the proposed development be approved, subject to conditions.
42. The Engineering Assessment report was forwarded to the Development Planner, [REDACTED] who prepared the assessment report, including the assessment checklist. A number of conditions from the Engineering Assessment report relating to the mitigation of flooding were included in the planner's recommendation to ensure compliance with section 11.4.7(1)(d) of the Planning Scheme [land situated between the 1 in 20 Development Line and the 1 in 100 Flood Line - Commercial, Industrial and Other Non-Residential Uses] which allows for non-residential uses to be located between the 1 in 20 development line and the 1 in 100 flood line.

Question 4: What consideration was given to:

- (a) the proximity of the site to the Brisbane River and any other local water courses;
 - (b) the flood risk or the potential impact of flooding on the use proposed for the site;
 - (c) the frequency with which flooding has occurred at the site in the past.
- (a) **Proximity to the Brisbane River and other local water courses**
43. The Tabletop flood report identified that the site is impacted by backup flooding from the Brisbane River, located approximately 900 metres to the north of the site, as well as by flooding from the adjoining overland flow path.
44. Council's Development Engineering report dated 4 May 2006 (annexure TCF-5) identified that *"the site was inundated in the 1974 flood, is not below the ARI of 20 years flood level, is not*

subject to an ARI of 20 years overland flow, and is subject to Q100 flooding of the local creek as well as backwater from the Brisbane River".

(b) Potential flood risk

45. The Tabletop flood report identified that Q100 immunity could be achieved for local flood events in the overland flow path to the west of the subject land by adopting the recommendations contained in the report. As such, the report did not identify risk or potential impact on the proposed use from flooding of the adjacent overland flow path.
46. The Tabletop report identified that mitigation of Brisbane River backup flooding could not be achieved at the local level.
47. Council's Development Engineers concurred with the flood report, and in accepting that the site was susceptible to flooding in a defined 1 in 100 flood event, recommended on engineering grounds that the development application be approved subject to the imposition of reasonable and relevant conditions on the development permit.
48. These conditions, which included conditions specific to ensuring the safety of children and others associated with the proposed child care centres, are detailed in my response below to Commission question no. 8.

(c) The frequency of past flooding at the site

49. The submitted flood report contained no details with respect to the frequency of previous flood inundation on the site. Nor was this information obtained or required by Council for assessing the application. Council's Engineering Assessment report identified that the site was inundated in the 1974 flood and was subject to Q100 flooding of the adjoining overland flow path to the west of the site as well as from backwater from the Brisbane River.

(d) The flood warning time at the site

50. Section 4.2.5 of the Tabletop flood report identified that the time of flood rise from "*when water first enters the property at the end of the wall in the north-west corner until it peaks at RL11.97 (Q100) is 34 minutes*". This time is based on a Q100 event for local flooding in the adjoining overland flow path. As the buildings were required to be constructed above the 11.97m level (conditioned to have a base floor level 300mm above this level), there would be additional local flood warning time for evacuation of the centre. I expect that the flood warning time in respect of a backwater flood event from the Brisbane River would be in the order of 12 hours.

51. Also relevant to this question are:

- (a) condition 6 of the development permit which only permitted the centre to operate between 6:30am and 6:30pm (Monday to Friday) and therefore evacuation, if required, would generally be undertaken during day light hours; and
- (b) conditions 27(j) and 27(k) which made express provision for flood warning signs to be erected in the car park and for a flood escape plan to be developed and rehearsed.

Question 5: The measures proposed to mitigate the potential for flooding at the site by reference to the location of proposed habitable floor levels

52. As the development was non-residential in nature (child care centres) the development does not incorporate habitable rooms. However, the Tabletop flood report recommended setting appropriate minimum floor levels (RL12.15 for building B and RL12.73 for building A) which were above the Q100 from flows in the adjoining overland flow path (RL11.97m). The report did not recommend that the floor levels of the proposed buildings be above the Q100 level of RL14.7m as constructing buildings above this level would not have been conducive to a child care centre development where stairs and ramps are generally avoided for safety reasons.
53. The conditions of the development permit (condition 24(i)) required that *"the construction of all buildings or other structures are to be constructed with a base floor level 300mm above the storm level associated with an ARI of 100 years"*. Council thereby imposed a condition that required a slightly higher floor level than that proposed by the applicant's consulting engineer.

Question 6: The measures proposed to mitigate the impact of flooding on the proposed use

54. To achieve Q100 immunity from local flood events in the overland flow path, the flood report recommended:
- (a) setting appropriate minimum floor levels as detailed previously in this statement; and
 - (b) constructing a solid wall along the road frontage from the eastern corner, across the south-west corner of the property and along the western boundary to the north-western corner.
55. Compliance with the flood report recommendations was conditioned as part of Council's development permit along with a number of other conditions related to flooding as detailed in my response to question 8 below, including the buildings being constructed with a base floor level 300mm above the storm level associated with an ARI of 100 years. This condition required the floor level of building B (the northern building) to be built slightly higher than

that proposed to achieve a greater freeboard from potential flooding. Signage was also required to be erected to make visitors to the site aware of the potential for flooding, and an evacuation plan was required to be established and rehearsed.

Question 7: What process the Council used to assess the adequacy of any expert reports

56. The stormwater and flood report by Tabletop Architects Planners Engineers was forwarded upon receipt to Council's engineers for assessment purposes.
57. The Council development engineers accepted the flood report, its contents as to the flood related constraints impacting the site according with the Council engineers' own knowledge of those constraints. No reason was identified for a further report to be obtained from the applicant nor did the Council have any reason, in the circumstances of this application, to commission its own report.
58. The report was assessed by the development engineers in conjunction with undertaking an overall engineering assessment of the application. The engineers subsequently prepared their assessment report dated 4 May 2006.
59. The Engineering Assessment report (annexure TCF-5) recommended that, based on engineering grounds, the development application be approved subject to conditions. The conditions recommended by the engineers, as related to potential flooding issues, included requiring an amended plan of development, complying with the submitted flood report, achieving minimum floor levels, installing signage and developing a flood escape plan.
60. The Engineering Assessment report was forwarded to Council's Development Planner, [REDACTED] for incorporation in an assessment report for the development (annexure TCF-7). The assessment report, including assessment checklist, was prepared by [REDACTED] for review by the Acting Team Coordinator, [REDACTED]. The assessment report identified that:

"The site is affected by flooding (Q100 levels) over the whole of the site. Upon review of the submitted 'Stormwater and Flood Report', Q100 flood immunity can be achieved by constructing a solid wall along the road frontage from the eastern corner, across the south-west corner of the property and along the western boundary to the north-west corner. For safety and aesthetic reasons, it is recommended that the proposed elevated play area (over hanging the Q100 level stormwater flow path area) be deleted from the proposal. It is recommended that all walling/fencing along the south-west corner of the site maintain alignment with the specified Q100 flood immunity level as detailed on 'Wall and Floor Details for Q100 Immunity' plan no. 5946 R01, prepared by Tabletop Architects.

A condition is recommended to require that building levels are a minimum 300mm above the Q100 levels and that elevations and treatment details for the south-west corner of the site

(fronting Alice Street) be submitted to the satisfaction of the Development Manager prior to commencement of any works. An operational works approval will be required in relation to stormwater management on site".

61. As a cross-check, the assessment checklist attached to the assessment report identified that *"Q100 immunity from local flood events in the adjoining waterway can be achieved by;"*.
62. The conditions imposed are consistent with the provisions of section 11.4.7(1)(d) of the Planning Scheme [land situated between the 1 in 20 Development Line and the 1 in 100 Flood Line - Commercial, Industrial and Other Non-Residential Uses] that permits non-residential uses to be located between the 1 in 20 development line and the 1 in 100 flood line.

Question 8: What conditions were included with respect to protection from impacts of flooding

63. Council's development permit included the following relevant conditions:

Condition 2(a)(i) Site Development – this condition required amendments to the plan submitted by Tabletop Architects regarding the flood mitigation measures.

- (a) *Site Plan Job Number 5518 Drawing Number A01 D, drawn by Tabletop Architects and dated 1 June 2006, subject to the following amendment to the satisfaction of the Development Manager:-*

- (i) *The Developer shall submit an amended Site Plan demonstrating that the proposed elevated section for the outdoor play area for proposed Building A has been deleted. All walling/ fencing along the south-western corner boundary shall align with the south-western corner truncation detailed in the submitted 'Wall and Floor Details for Q100 Immunity' Plan No. 5946 R01, prepared by Tabletop Architects. These details shall be submitted prior to application for Operational Works Approval.*

Condition 24(h) Stormwater – this condition required the development to be designed and constructed in accordance with the submitted flooding report prepared by Tabletop Architects Planner Engineers.

- (h) *The proposed Development shall be designed and constructed in accordance with the flooding report prepared by Tabletop Architects Planners Engineers titled 45 Alice Street, Goodna – Stormwater and Flood Report dated February 2006. As illustrated in this report it examines the stormwater and local flooding impacted on the subject site by a storm event with an ARI of 100 years.*

Condition 24(i) Stormwater – this condition required all buildings to be constructed with base floor level 300mm above the storm level with an ARI of 100 years.

- (i) *The construction of all buildings or other structures are to be constructed with the base floor level 300 mm above the storm level associated with an ARI of 100 years.*

Condition 24(j) Stormwater – this condition required the sealed surface to be constructed to convey stormwater flows into the existing drainage channel.

- (j) *The Developer shall install an appropriate sealed surface within the proposed clear flow path located in the south west corner of the subject property. This area is illustrated on Plan No: R01, in the stormwater and flood report prepared by Tabletop Architects Planners Engineers. This area will be used to transfer the stormwater flow into the existing drainage channel, therefore the sealed surface shall be designed to withstand the force of a high velocity flow of water without being removed.*

Condition 27(j) General – this condition required signs to be erected in the car park advising users of flooding.

- (j) *Signs are to be erected in the carpark to advise users that this carpark is subject to some flooding of the local creek due to storms with an ARI of less than 100 years. Also the Brisbane River has backwater flooding for those storms with an ARI in excess of 20 years.*

Condition 27(k) General – this condition required a Flood Escape Plan and procedure to be developed and periodically rehearsed.

- (k) *A Flood Escape Plan and procedure is to be developed and periodically practiced/rehearsed in case of flooding of the site. This plan is to include permanently displayed signs and directions for staff and visitors/parents to follow.*

Question 9: The basis for Council's statement in relation to the 1974 flood "advice"

64. This is a standard clause included in ICC development approvals where the subject site was inundated by the 1974 flood. I refer in that regard to paragraphs 37 - 42 of the witness statement of Ms Joanne Pocock. The advice has been included on development approvals for as long as I have been employed by ICC. I am unable to assist the Commission as to the genesis of the advice.

I make this statement conscientiously believing the same to be true, and by virtue of the provisions of the *Oaths Act 1867* (Qld).

Signed and declared by Timothy Clarke Foote at *Ipswich* in the State of Queensland this *7th* day of October 2011 before me:

.....
Deponent

.....
Witness

Note

The following attachments were referred to by the witness while giving evidence at the Commission's hearing on 19 October 2011.

Annexure TCF-1

Common details

PART A

The completion of this form is a requirement of Part A of the Integrated Planning Act 1997. This form must be completed by the applicant or their agent. Any information provided in this form is provided in accordance with the provisions of the Integrated Planning Act 1997. For further information, consult the following document: **Part A of the Integrated Planning Act 1997**.

Description of site	1. Site address (including street name, lot number, and any other identifying information)
All the information on this form must be provided.	45 Alice Street, Goodna 4300
A description of the land is not required if the land is a public or private road or a public or private water body or watercourse.	2. Name of water body or watercourse (if the development is on a public or private road or water body or watercourse)
A description of the land is not required if the land is a public or private road or a public or private water body or watercourse.	3. Lot or parcel description (as shown on the map or plan) or the lot or parcel number
A description of the land is not required if the land is a public or private road or a public or private water body or watercourse.	Lot 3 on RP 77071 Parish of Goodna County of Stanley
A description of the land is not required if the land is a public or private road or a public or private water body or watercourse.	4. The site description is for the application for: <input checked="" type="checkbox"/> (a) the land on which the development is proposed, or <input type="checkbox"/> (b) the land adjoining the water body or watercourse, within which the development is proposed, or <input type="checkbox"/> (c) the water body or watercourse.
A description of the land is not required if the land is a public or private road or a public or private water body or watercourse.	5. State of land (whether vacant or occupied)
A description of the land is not required if the land is a public or private road or a public or private water body or watercourse.	6. State of land (whether vacant or occupied)
A description of the land is not required if the land is a public or private road or a public or private water body or watercourse.	7. Total area of lot (in square metres)
A description of the land is not required if the land is a public or private road or a public or private water body or watercourse.	2823 square metres
A description of the land is not required if the land is a public or private road or a public or private water body or watercourse.	8. Local government (the name of the local government in which the land is situated)
A description of the land is not required if the land is a public or private road or a public or private water body or watercourse.	Ipswich
A description of the land is not required if the land is a public or private road or a public or private water body or watercourse.	9. Port authority (if the land is a public port land or a public port land on which the development is proposed, the name of the port authority)
A description of the land is not required if the land is a public or private road or a public or private water body or watercourse.	not applicable
A description of the land is not required if the land is a public or private road or a public or private water body or watercourse.	10. Use of the land (as shown on the map or plan)
	mostly vacant land except for a few sheds and trees
	11. Proposed development (the name of the development and a brief description of the development)
	Child care centre to cater for up to 110 children and 16 staff in two separate buildings
Other applicable parts of Part 1	12. Other parts of Form 1 completed as part of this application (see Part D, Part 1)
Part A of Form 1, completed as part of this application, is a requirement of Part A of the Integrated Planning Act 1997.	Part D and referrals checklist

Form 1001 for an application under the Integrated Planning Act 1997
 (Form 1001) (Form 1001)

Applicant details

1. Name of the applicant (if the applicant is a company, the name of the company must be stated in full, including the company number, and the name of the person who is the authorised signatory must be stated.)

2. Address of the applicant (if the applicant is a company, the address of the company must be stated in full, including the company number, and the address of the person who is the authorised signatory must be stated.)

3. Name of the authorised signatory (if the applicant is a company, the name of the authorised signatory must be stated in full, including the company number, and the name of the person who is the authorised signatory must be stated.)

13. Name of the applicant

14. Name of the authorised signatory

cl- J B Goodwin Mison & Partners, PO Box 92 Toorong Qld 4066

15. Name of the applicant

16. Name of the applicant

17. Name of the applicant

18. Name of the applicant

19. Name of the applicant

20. Name of the applicant

21. Name of the applicant

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Land owner's consent to application

22. Name of the land owner (if the land owner is a company, the name of the company must be stated in full, including the company number, and the name of the person who is the authorised signatory must be stated.)

23. Address of the land owner (if the land owner is a company, the address of the company must be stated in full, including the company number, and the address of the person who is the authorised signatory must be stated.)

24. Name of the authorised signatory (if the land owner is a company, the name of the authorised signatory must be stated in full, including the company number, and the name of the person who is the authorised signatory must be stated.)

25. Name of the authorised signatory (if the land owner is a company, the name of the authorised signatory must be stated in full, including the company number, and the name of the person who is the authorised signatory must be stated.)

26. Name of the authorised signatory (if the land owner is a company, the name of the authorised signatory must be stated in full, including the company number, and the name of the person who is the authorised signatory must be stated.)

27. Name of the authorised signatory (if the land owner is a company, the name of the authorised signatory must be stated in full, including the company number, and the name of the person who is the authorised signatory must be stated.)

28. Name of the authorised signatory (if the land owner is a company, the name of the authorised signatory must be stated in full, including the company number, and the name of the person who is the authorised signatory must be stated.)

29. Name of the authorised signatory (if the land owner is a company, the name of the authorised signatory must be stated in full, including the company number, and the name of the person who is the authorised signatory must be stated.)

30. Name of the authorised signatory (if the land owner is a company, the name of the authorised signatory must be stated in full, including the company number, and the name of the person who is the authorised signatory must be stated.)

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35. Name of the authorised signatory (if the land owner is a company, the name of the authorised signatory must be stated in full, including the company number, and the name of the person who is the authorised signatory must be stated.)

22. Name of the land owner

23. Address of the land owner

24. Name of the authorised signatory

25. Name of the authorised signatory

26. Name of the authorised signatory

27. Name of the authorised signatory

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41. Name of the authorised signatory

42. Name of the authorised signatory

SIGNATURE FOR

To come

11/03/08

[illegible]

Personal Contact The following questions must be answered "Yes" or "No" only. Do not check "Don't Know" or "Not Applicable" unless you are sure.	25. Have you ever been charged with a crime? <input checked="" type="checkbox"/> YES <input type="checkbox"/> NO	26. Have you ever been charged with a crime? <input type="checkbox"/> YES <input checked="" type="checkbox"/> NO	27. Have you ever been charged with a crime? <input type="checkbox"/> YES <input checked="" type="checkbox"/> NO
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Plan / Drawing / Report	Plan / Drawing / Report Number	Title	Date
(i) please see attached report			
(ii)			
(iii)			
(iv)			
(v)			
(vi)			
(vii)			
(viii)			
(ix)			
(x)			

The assessment manager may refuse to accept an application that, at the time of lodgement, fails to provide all applicable information required by Part A and any other relevant part of Form 1.

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Form 1 Development Application

idas

Material change of use

assessable against a local government's planning scheme

PART D

Completion of all applicable questions on Part D is **mandatory** for all applications involving assessment of a material change of use (MCU) assessable against a local government's planning scheme.

Nature of the application A development permit authorises development to occur, while a preliminary approval is a step in the approval process and does not authorise development to occur.	1. This application is for: (tick 1 or both if applicable) <input type="checkbox"/> Preliminary approval for a material change of use of premises including conceptual design for any associated works that require approval under the planning scheme (i.e. consideration of the proposal concept) AND / OR <input checked="" type="checkbox"/> Development permit for a material change of use of premises including conceptual design for any associated works that require approval under the planning scheme.
The subject land For the definition of "gross floor area" go to the planning scheme against which the application will be assessed.	2. How the subject land is identified in the planning scheme (name the zone, precinct etc.) Residential Medium Density 3. Existing gross floor area: (if applicable) not applicable 4. Are there any existing easements on the land? <input checked="" type="checkbox"/> NO <input type="checkbox"/> YES - attach plans of the location and details of the purpose of the easement
Material change of use details	5. Details of the change to the use of the land: (eg. vacant land to shopping centre, house to apartment building, vacant land to industry (tyre manufacturing) etc.) vacant land to child care centre 6. Number of employees: 18 7. Operating days and hours: 6am to 6.30pm (12.5 hrs) Mon to Fri (5 days) / week
Associated building works details (if applicable) For the definition of "site cover", "gross floor area" and "storeys" go to the planning scheme against which the application will be assessed.	8. Site cover: 29.5 per cent 9. Gross floor area: 832 square metres 10. Number of on-site car parking spaces: 31 11. Number of storeys / maximum height above natural ground: 1 12. Number of employees 18 13. Hours and days the use will operate 12.5
Associated operational works details (if applicable)	14. Details of associated operational works (eg. landscaping, cut and fill, drainage, road works etc.)

PLEASE NOTE

This application **cannot** be accepted unless accompanied by Part A of Form 1.

The assessment manager may refuse to accept an application that, at the time of lodgement, fails to provide all applicable information requested by Part A and any other relevant part of Form 1.

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DATE RECEIVED		REFERENCE NUMBERS	
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Form 1 Development Application

idas

Referrals checklist

Completion of all questions on the Referrals Checklist is mandatory for all applications, other than those requiring the completion of Parts A & B only. It is the responsibility of the applicant to work with the assessment manager to correctly identify if an application involves referral to an IDAS referral agency for their assessment and determination, or comment and / or the coordination of any information request by the Chief Executive DLGP through the referral coordination process. The checklist contains a number of questions to aid in this determination. If your application does involve referral, the assessment manager will confirm in the acknowledgement notice the referral actions required. To assist you in answering the following questions a series of guides are available free from www.ips.qld.gov.au.

REFERRALS THAT CAN APPLY TO DEVELOPMENT

- other than building work assessable against the Standard Building Regulation 1993

<p>Environmentally relevant activity For more information refer to Guide 4, schedule 8A of the IPA & schedule 2 of the IP Regulation. Unless you answered "none of the above" to Q1, the application requires assessment by the administering authority¹. If an agency other than the administering authority is the assessment manager for the application, the administering authority is a concurrence agency for the application in relation to this matter. <i>Note: An application involving ERA 19 and/or 20 will also require completion of Part K7 of Form 1 for approval where an allocation under the Water Act 2000 is required.</i></p>	<p>1. The application involves (tick applicable box/es) -</p> <p><input type="checkbox"/> (i) an environmentally relevant activity (ERA) for which a code for environmental compliance has <i>not</i> been made- complete Part G of Form 1</p> <p><input type="checkbox"/> (ii) a mobile or temporary ERA for which a code of environmental compliance has <i>not</i> been made - complete Part G of Form 1</p> <p><input checked="" type="checkbox"/> (iii) none of the above</p>
<p>State-controlled road matters For more information refer to Guide 3, schedule 8A of the IPA & schedule 2 of the IP Regulation. Unless you answered "none of the above" to Q2, the application triggers referral to Main Roads as referral agency. In certain circumstances Main Roads will be an advice agency, while in other circumstances Main Roads will be a concurrence agency. Schedule 2 of the IP Regulation will assist you to determine where Main Roads is an advice or concurrence agency for the application.</p>	<p>2. The application involves development on land: (tick applicable box/es) -</p> <p>(a) contiguous² to a State controlled road that is for -</p> <p><input type="checkbox"/> (i) a material change of use assessable against the planning scheme;</p> <p><input type="checkbox"/> (ii) reconfiguring a lot - unless the number of lots does not increase and the number of lots abutting the State-controlled road does not increase;</p> <p><input type="checkbox"/> (iii) operational work not associated with a material change of use assessable against the planning scheme or reconfiguring a lot that-</p> <ul style="list-style-type: none"> • is associated with access to a State-controlled road; • is for filling or excavation; <p><input type="checkbox"/> (iv) operational work or building work (for a non-residential purpose and not associated with an assessable reconfiguration or a material change of use assessable against a planning scheme) that involves the redirection or intensification of site stormwater from the site, through a pipe with a cross-sectional area greater than 250mm² that directs stormwater to a State-controlled road;</p> <p>(b) not contiguous to a State-controlled road that is -</p> <p><input type="checkbox"/> (iv) proposed within a local government area that has a transitional planning scheme and is for development -</p> <ul style="list-style-type: none"> • mentioned in schedule 5 of the IP Regulation and exceeds the thresholds set in that schedule <p><input type="checkbox"/> (v) proposed within a local government area that has an IPA planning scheme and is for development -</p> <ul style="list-style-type: none"> • mentioned in schedule 5 of the IP Regulation and exceeds the thresholds set in that schedule • inconsistent with plans for State-controlled road infrastructure <p>(c) <input checked="" type="checkbox"/> none of the above</p>

¹ The administering authority may be either the Environmental Protection Agency, the relevant local government (for a devolved ERA) or the Queensland Department of Primary Industries and Fisheries (for a delegated ERA).

² Land contiguous to a State-controlled road is defined in schedule 14 of the IP Regulation to mean land if part of the land is within 100m of the State-controlled road or land that is part of a future State-controlled road.

Clearing vegetation

For more information refer to **Guide 12, schedule 8A of the IPA & schedule 2 of the IP Regulation**. Unless you answered "none of the above" to Q3, the application requires assessment by NR&MP. If an agency other than NR&MP is the assessment manager for the application, NR&MP is a concurrence agency for the application in relation to this matter.

3. The application involves: (tick applicable box) -

- ☐ (a) **operational work** for the clearing of native vegetation where the vegetation clearing is made assessable under Schedule 8 of the IPA - complete Part J of Form 1
- ☐ (b) a **material change of use** -
- (i) the lot contains -
- a category 1, 2 or 3 area shown on a property map of assessable vegetation; or
 - if there is no property map of assessable vegetation for the lot - remnant vegetation;
- &
- (ii) the existing use of the land is a rural or environmental use; and
- (iii) the size of the land is 2 hectares or larger - complete Part J of Form 1
- ☐ (c) **reconfiguration of a lot** if -
- (i) the lot contains -
- a category 1, 2 or 3 area shown on a property map of assessable vegetation; or
 - there is no property map of assessable vegetation for the lot - remnant vegetation; &
- (ii) the size of the lot before the reconfiguration is 2 hectares or larger; and
- (iii) 2 or more lots are created; and
- (iv) the size of any lot created is 25 hectares or smaller - complete Part J of Form 1
- ☒ (d) none of the above

Strategic port land

For more information refer to **Guide 11, schedule 8A of the IPA & schedule 2 of the IP Regulation**. If you answered "YES" to Q4, the relevant Port Authority is the assessment manager and Queensland Transport is a concurrence agency for the application.

4. Does the application involve a material change of use on strategic port land that is **inconsistent** with the approved land use plan under the *Transport Infrastructure Act 1994*?

- ☒ NO
- ☐ YES - complete Part I of Form 1

Acid sulfate soils

For more information refer to **Guide 10 & schedule 2 of the IP Regulation**. Unless you answered "none of the above" to Q5, the application requires assessment by NR&MP. If an agency other than NR&MP is the assessment manager for the application, NR&MP is a concurrence agency for the application in relation to this matter.

5. The application involves assessable development (other than building work only assessable against the *Standard Building Regulation*) on land situated in an identified⁴ local government area and where the surface of the land is: (tick applicable box) -

- ☐ (i) below 20m AHD⁵ and the development involves the excavation of 1000m³ or more of soil or sediment at or below 5m AHD; or
- ☐ (ii) at or below 5m AHD and the development involves filling the site with 1000m³ or more of material
- ☒ (iii) none of the above

Major hazard facilities or possible major hazard facilities

For more information refer to **Guide 17, schedule 8A of the IPA & schedule 2 of the IP Regulation**. If you answered "YES" to Q6, the application requires assessment by DES⁶. If an agency other than DES is the assessment manager for the application, DES is a concurrence agency for the application in relation to this matter.

6. Does the application involve a material change of use for a major hazard facility or possible major hazard facility as defined under the *Dangerous Goods Safety Management Act 2000*?

- ☒ NO
- ☐ YES - complete Part L of Form 1

Water related development

For more information about items (i) - (iv), refer to **Guide 16, schedule 8A of the IPA & schedule 2 of the IP Regulation**.

For more information about item (v), refer to **Guide 14 Does my application involve assessment of a referable dam?**, schedule 8A of the IPA & schedule 2 of the IP Regulation.

Unless you answered "none of the above", the application requires assessment by NR&MP. If an agency other than NR&MP is the assessment manager for the application, NR&MP is a concurrence agency for the application in relation to this matter.

7. The application involves:

- ☐ (a) operational work that is: (tick applicable boxes)
- ☐ (i) in a watercourse (eg. a pump, gravity diversion, stream re-direction, weir or dam)
- ☐ (ii) for an artesian bore anywhere in the State, no matter what the use
- ☐ (iii) for a subartesian bore, in declared groundwater area⁷, for use for purposes other than stock and/or domestic use
- ☐ (iv) for a subartesian bore, in certain declared groundwater area, for use for stock and/or domestic purposes
- ☐ (v) for a referable dam⁸
- ☐ (vi) for taking overland flow water;
- ☒ (b) none of the above.

³ Department of Natural Resources and Mines

⁴ The identified local government areas are: Aurukun, Bowen, Brisbane, Broadsound, Bundaberg, Burdekin, Burke, Burnett, Caboolture, Calma, Callopo, Caloundra, Cardwell, Carpentaria, Cook, Coorool, Douglas, Fitzroy, Gladstone, Gold Coast, Hervey Bay, Hinchinbrooke, Isis, Johnstone, Livingstone, Logan, Mackay, Maroochy, Maryborough, Mirum Vale, Murrumbidgee, Noosa, Pine Rivers, Redcliffe, Redland, Rockhampton, Sarina, Thuringowa, Tiaro, Torres, Townsville, Whitsunday.

⁵ Australian Height Datum (AHD)

⁶ Department of Emergency Services

⁷ The declared groundwater areas are listed in **Guide 13 Development in a declared catchment area**

⁸ Referable dam is defined under the *Water Act 2000*

<p>Removal of quarry material from a watercourse</p> <p>For more information refer to <i>Guide 18, schedule 8A of the IPA & schedule 2 of the IP Regulation</i>. If you answered "YES" to Q8, the application requires assessment by NR&M. If an agency other than NR&M is the assessment manager for the application, NR&M is a concurrence agency for the application in relation to this matter.</p> <p><i>Note: Part G of Form 1 is required to be completed as the activity of removing quarry material from a watercourse is also an Environmentally Relevant Activity (ERA).</i></p>	<p>8. Does the application involve development for the removal of quarry material from a watercourse⁹ under an allocation notice given under the <i>Water Act 2000</i>?</p> <p><input checked="" type="checkbox"/> NO <input type="checkbox"/> YES - complete Part K₇ and G of Form 1</p>	
<p>Operational works in a tidal area or coastal management district</p> <p>For more information refer to <i>Guide 18, schedule 8A of the IPA & schedule 2 of the IP Regulation</i>. If you answered "YES" to Q8, the application requires assessment by EPA. If an agency other than EPA is the assessment manager for the application, EPA is a concurrence agency for the application in relation to this matter.</p>	<p>9. Does the application involve operational works in a tidal area or coastal management district as defined under the <i>Coastal Protection and Management Act 1995</i>?</p> <p><input checked="" type="checkbox"/> NO <input type="checkbox"/> YES - complete Part M of Form 1</p>	
<p>Tidal works and coastal management</p> <p>For more information refer to <i>Guide 18, schedule 8A of the IPA & schedule 2 of the IP Regulation</i>. Unless you answered "none of the above", the application triggers referral to QT¹⁰ (Maritime Safety Qld) as concurrence agency.</p>	<p>10. The application involves operational work that is: (tick the applicable box/es)</p> <p><input type="checkbox"/> (i) tidal work¹¹ - complete Part M of Form 1 <input type="checkbox"/> (ii) disposing of dredge spoil or other solid material in tidal water - complete Part M of Form 1 <input type="checkbox"/> (iii) reclaiming land under tidal water - complete Part M of Form 1 <input type="checkbox"/> (iv) constructing a canal¹² if the canal is associated with reconfiguring a lot - complete Part M of Form 1 <input checked="" type="checkbox"/> (v) none of the above.</p>	
<p>Coastal management</p> <p>For more information refer to <i>Guide 18, schedule 8A of the IPA & schedule 2 of the IP Regulation</i>. Unless you answered "none of the above", the application requires assessment by EPA. If an agency other than EPA is the assessment manager for the application, EPA is a concurrence agency for the application in relation to this matter.</p>	<p>11. The application involves: (tick the applicable box/es)</p> <p><input type="checkbox"/> (i) a material change of use involving operational work carried out completely or partly in a coastal management district¹³ and assessable under a planning scheme <input type="checkbox"/> (ii) a material change of use involving building work carried out completely or partly in a coastal management district and assessable under a planning scheme that is - <ul style="list-style-type: none"> the construction of a new premises with a GFA¹⁴ of at least 1000m² the enlargement of the GFA of an existing premises by more than 1000m² <input type="checkbox"/> (iii) assessable reconfiguration of a lot where the land is situated completely or partly in a coastal management district - complete Part M of Form 1 <input type="checkbox"/> (iv) assessable reconfiguration of a lot¹⁵ in connection with the construction of a canal - complete Part M of Form 1 <input checked="" type="checkbox"/> (v) none of the above</p>	
<p>Development below high water mark</p> <p>For more information refer to <i>Guide 18, schedule 8A of the IPA & schedule 2 of the IP Regulation</i>. If you answered "YES" to Q12, the application triggers referral to the Port Authority.</p> <p>The Port Authority is concurrence agency if the development is -</p> <ul style="list-style-type: none"> within 200m of a shipping channel or an entry and exit shipping corridor for the port within 1000m of a swing basin, a commercial shipping wharf, a mooring, anchorage or spoil grounds; within 1000m of a planned port facility identified in a land use plan approved under the <i>Transport Infrastructure Act 1994</i>. <p>In all other situations the Port Authority is advice agency.</p>	<p>12. Does the application involve development below high water mark¹⁶ and within the limits of a port under the <i>Transport Infrastructure Act 1994</i>?</p> <p><input checked="" type="checkbox"/> NO <input type="checkbox"/> YES - complete Part M of Form 1</p>	
<p>Marinas</p> <p>For more information refer to <i>Guide 18, schedule 8A of the IPA & schedule 2 of the IP Regulation</i>. If you answered "YES" to Q13, the application triggers referral to Queensland Fire and Rescue Service as an advice agency.</p>	<p>13. Does the application involve operational work that is tidal work for a marina¹⁷ with more than 6 vessel berths?</p> <p><input checked="" type="checkbox"/> NO <input type="checkbox"/> YES - complete Part M of Form 1</p>	

⁹ Watercourse is defined in sch 10 of the IPA¹⁰ Queensland Transport¹¹ Tidal work is defined in sch 10 of the IPA¹² Canal means canal as defined under the *Coastal Protection and Management Act 1995*¹³ Coastal management district is defined in sch 10 of the IPA and means a coastal management district under the *Coastal Protection and Management Act 1995*, other than an area declared as a coastal management district under section 47(2) of that Act¹⁴ GFA is defined in sch 14 of the IPA to mean the gross floor area. For a definition of how to calculate GFA, go to the planning scheme against which the application is being assessed.¹⁵ Under s117 of the *Coastal Protection and Management Act 1995*, an application for reconfiguration, where the reconfiguration is associated with the construction of an artificial waterway, must be accompanied by the application for the operational works to construct the artificial waterway.¹⁶ High water mark is defined in the *Coastal Protection and Management Act 1995* and means the ordinary high water mark at spring tide¹⁷ Marina is defined in the *Transport Operations (Maritime Pollution) Regulation 1995*

Tidal works in strategic port land tidal areas

For more information refer to Guide 18, schedule 8A of the IPA & schedule 2 of the IP Regulation.
If you answered "YES" to Q14, the relevant port authority is the assessment manager for the application and EPA and Queensland Transport are concurrence agencies for the application.

14. Does the application involve tidal works within the limits of strategic port land tidal areas¹⁸?

- ☒ NO
☐ YES - complete Part M of Form 1

Heritage

For further information refer to Guide 19, schedule 8A of the IPA & schedule 2 of the IP Regulation.
If you answered "YES" to Q15, the application triggers referral to the Queensland Heritage Council as concurrence agency for the application.

15. Does the application involve development in a heritage registered place as defined under the Queensland Heritage Act 1992?

- ☒ NO
☐ YES - complete Part C of Form 1

Declared catchment areas

For more information, including a list of the declared catchment areas within Queensland, refer to Guide 13, schedule 8A of the IPA & schedule 2 of the IP Regulation.

Unless you answered "none of the above", the application requires assessment by NR&M. If an agency other than NR&M is the assessment manager for the application, NR&M is a concurrence agency for the application in relation to this matter.

16. The application involves development in an areas declared to be a catchment area under the Water Act 2000 for: (tick the applicable box/es)

- ☐ (i) reconfiguration of a lot, if any lot resulting from the reconfiguration is less than 16 hectares;
☐ (ii) the establishment or expansion of a waste water disposal system, other than a disposal system for carrying out an environmentally relevant activity under the Environmental Protection Act 1994
☒ (iii) none of the above

Contaminated land

Applications involving material change of use and / or reconfiguring a lot may trigger this referral.

For more information refer to Guide 5, schedule 8A of the IPA & schedule 2 of the IP Regulation.
If you answered "YES" to Q17, the application requires assessment by EPA. If an agency other than EPA is the assessment manager for the application, EPA will be a concurrence agency for the application in relation to this matter.

17. This application involves: (tick the applicable box/es) -

- ☐ (a) **reconfiguring a lot** for which all of part of the premises are -
(i) premises mentioned in the IPA, schedule 8, part 1, table 2 -
• item 5, including the exemption otherwise provided for by paragraph (d);
• item 6, including the exemption otherwise provided for by paragraph (e); or
• item 7,
• including the exemption otherwise provided for a mining activity or petroleum activity;
or
(ii) in an area for which an area management advice has been given for unexploded ordnance - complete Part N of Form 1
☐ (b) a **material change of use** -
(i) made assessable under the IPA, schedule 8, part 1, table 2, items 5 to 7; or
(ii) if all or part of the premises is in an area for which an area management advice has been given for unexploded ordnance - complete Part N of Form 1
☒ (c) none of the above

Electricity Infrastructure

For more information refer to schedule 2 of the IP Regulation.

Unless you answered "none of the above", the application triggers referral to the agency to which the easement is granted in favour of as advice agency.

18. The application involves: (tick the applicable box/es)

- ☐ (i) reconfiguration of a lot where any part of the lot is -
• subject to an easement in favour of a distribution entity or transmission entity under the Electricity Act 1994 and the easement is for a transmission grid or supply network under that Act; or
• situated within 100m of a substation site;
☐ (ii) a material change of use, assessable against a planning scheme and not associated with reconfiguring a lot if -
• any part of the premises is subject to an easement in favour of a distribution entity or transmission entity under the Electricity Act 1994 and the easement is for a transmission grid or supply network under that Act; and
• any structure or work that is the natural and ordinary consequence of the use is, or will be, located wholly or partly in the easement;
☐ (iii) a material change of use, assessable against a planning scheme and not associated with reconfiguring a lot if any part of the premises is situated within 100m of a substation site
☐ (iv) operational work that is filling or excavation, not associated with reconfiguring a lot, if -
• any part of the premises is subject to an easement in favour of a distribution entity or transmission entity under the Electricity Act 1994; and
• the work is located wholly or partly in the easement
☒ (v) none of the above.

¹⁸ Strategic port land tidal areas are the areas generally 50 meters seaward of high water mark adjacent to strategic port land.

Land designated for community infrastructure

Applications involving development on land designated for community infrastructure may trigger this referral.

For more information refer to schedule 2 of the IP Regulation.

If you answered "YES" to Q19, the application requires assessment by the chief executive of the department administering the Act authorising the development for the designated purpose. If an agency other than the designator is the assessment manager for the application, the designating agency will be a concurrence agency for the application in relation to this matter.

19. Does the application involve development on land designated for community infrastructure –

- (i) intended to be supplied by a public sector entity; and
- (ii) on land not owned by or on behalf of the State; and
- (iii) other than development –

- for the designated purpose; or
- carried out by, or on behalf of, the designator

☒ NO
☐ YES

SEQ Regional Plan

For more information refer to schedule 2 of the IP Regulation.

If you answered "YES" to Q20, the application requires assessment by the chief executive of the department administering the IPA.

20. Does the application involve a material change of use for urban purposes¹⁹ in the SEQ Region²⁰, other than for a single dwelling on an existing lot, for which all or part of the premises, the subject of the development, is in the –

- (i) Regional Landscape and Rural Production Area;
- (ii) Rural Living Area;
- (iii) Investigation Area; or
- (iv) Mt Lindesay/North Beaudesert Investigation Area, unless the premises is designated or zoned for urban purposes in the relevant planning scheme.

☒ NO
☐ YES

Referral coordination

An information request requires referral coordination if the application involves –

- (i) 3 or more concurrence agencies; or
- (ii) a facility or area assessable under a planning scheme and prescribed in schedule 7 or 8 of the IP Regulation; or
- (iii) development which is subject to an application for preliminary approval mentioned in section 3.1.6 of the IPA.

For more information go to Guide 2 & Guide 3.

21. Does the application trigger referral coordination?

☒ NO
☐ YES, as the application:

- ☐ (i) triggers 3 or more concurrence agencies;
- ☐ (ii) involves a facility made assessable under a planning scheme and prescribed in schedule 7 of the IP Regulation;
- ☐ (iii) involves development made assessable under a planning scheme and in an area prescribed in schedule 8 of the IP Regulation;
- ☐ (iv) is for a preliminary approval mentioned in section 3.1.6 of the IPA

Referral agency responses prior to lodgement

Under section 3.3.2 of the IPA a referral agency may give a referral agency response on a matter within its jurisdiction about a proposal before an application for the proposal is made to the assessment manager.

This is commonly the case where an application requires referral to a building referral agency (eg. Qld Fire and Rescue Service).

22. Did a referral agency give a referral agency response under s3.3.2 of the IPA before the application was made to the assessment manager?

☒ NO
☐ YES - attach a copy of the referral agency's response/s

PLEASE NOTE: The assessment manager may refuse to accept an application, which, at the time of lodgement, fails to provide the completed Referrals Checklist (if applicable).

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DATE RECEIVED	REFERENCE NUMBER/S
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¹⁹ Urban purposes is defined in schedule 10 of the IPA. To make it clear, urban purposes does not include rural residential purposes as defined in schedule 2 of the Draft South East Queensland Regional Plan.

²⁰ Local Governments within the SEQ Region are identified in the Draft South East Queensland Regional Plan as Beaudesert Shire, Boonah Shire, Brisbane City, Caboolture Shire, Caloundra City, Esk Shire, Gatton Shire, Gold Coast City, Ipswich City, Kilcoy Shire, Laidley Shire, Logan City, Maroochy Shire, Noosa Shire, Pine Rivers Shire, Redcliffe City, Redland Shire and Toowoomba City.

BUILDING REFERRALS (advice only)		
Below is a list of the referrals that can apply to an application involving building work assessable against the Standard Building Regulation. This information is provided for advice purposes only and this section of the referrals checklist is not required to be completed and lodged with an application.		
Fire safety For more information go to schedule 2 of the IP Regulation	1.	An application may trigger referral to Qld Fire and Rescue Services as an advice agency if the building work the subject of the application requires the installation of a fire safety system.
Fire safety for budget accommodation For more information go to schedule 2 of the IP Regulation	2.	An application may trigger referral to Qld Fire and Rescue Services as an advice agency if the building work the subject of the application requires the installation of a fire safety system for a budget accommodation building.
Spray painting For more information go to schedule 2 of the IP Regulation	3.	An application may trigger referral to the Chief Executive under the <i>Workplace Health and Safety Act 1995</i> as a concurrence agency in the application involves a workplace incorporating spray painting.
Retail meat premises For more information go to schedule 2 of the IP Regulation	4.	An application may trigger referral to Safe Food Qld as a concurrence agency if the application involves a retail meat premises.
Private health facilities For more information go to schedule 2 of the IP Regulation	5.	An application may trigger referral to the Chief Executive under the <i>Health Act 1937</i> as a concurrence agency is the application involves a private health facility.
Workplace area less than 2.3m² For more information go to schedule 2 of the IP Regulation	6.	An application may trigger referral to the Chief Executive under the <i>Workplace Health and Safety Act 1995</i> as an advice agency if the application involves a work place area less than 2.3m ² .
Land contiguous to a State-controlled road For more information go to schedule 2 of the IP Regulation	7.	An application may trigger referral to the Chief Executive under the <i>Transport Infrastructure Act 1994</i> as a concurrence agency or advice agency if the application involves land contiguous to a State-controlled road.
Pastoral workers accommodation For more information go to schedule 2 of the IP Regulation	8.	An application may trigger referral to the Chief Executive under the <i>Pastoral Works' Accommodation Act 1980</i> as a concurrence agency is the application involves pastoral workers accommodation.
Child care centre For more information go to schedule 2 of the IP Regulation	9.	An application may trigger referral to the Chief Executive under the <i>Child Care Act 2002</i> as a concurrence agency if the application involves a child care centre.
Coastal development For more information go to schedule 2 of the IP Regulation	10.	An application may trigger referral to the Chief Executive under the <i>Coastal Protection and Management Act 1995</i> as a concurrence agency if the application involves land completely or partly seaward of a coastal building line ²¹ .
Heritage For more information go to schedule 2 of the IP Regulation	11.	An application may trigger referral to the Heritage Council as a concurrence agency if the application involves a heritage registered place.

²¹ Coastal building lines are prescribed under the *Coastal Protection and Management Act 1995*.

**Assessment Report -
45 Alice Street
Goodna Qld 4300**

**Development Application for
Material Change of Use (Child Care Centre)**

**JB GOODWIN MIDSON &
PARTNERS**

**68 Sylvan Road,
Toowong 4066**

(March, 2005)

Prepared for 

Job No. 12563 (a6699.doc)

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1.0 EXECUTIVE SUMMARY

This assessment report has been commissioned on behalf of [REDACTED] This report forms part of and accompanies, the development application for:

- Material Change of Use (Community Use – Child Care Centre).

This application is over land described as Lot 3 on RP77071, Parish of Goodna, County of Stanley, and located at 45 Alice Street, Goodna (see Appendix A – Site Locality Map).

The report reviews the characteristics of the site, its locality, describes the proposed development and evaluates the relevant town planning issues and requirements. The report is an assessment of the facts and conditions pertaining to the site, as the writer knows them at the time of preparation of this report.

As the proposal is generally consistent with the *Ipswich Planning Scheme*, reflects the existing development layout of the surrounding area, and is compatible with the adjacent development, it is considered appropriate that this development application be approved, subject to reasonable and relevant conditions.

1.1 Site Details

<u>Address of the Site:</u>	45 Alice Street Goodna QLD 4300
<u>Real Property Description:</u>	Lot 3 on RP77071 Parish of Goodna, County of Stanley
<u>Total Area of Site:</u>	2823 square metres
<u>Area Designation:</u>	Residential Medium Density (RM1)
<u>Name of Owner(s):</u>	[REDACTED]

1.2 Development Application Details

Application is made for a **Development Permit for a Material Change of Use (Child Care Centre)** to be processed in accordance with Chapter 3 of the *Integrated Planning Act 1997*. The development application is subject to the impact assessment process and the provisions of the *Ipswich Planning Scheme*. Application is made to gain permission to construct two adjacent child care centres with shared access and parking facilities at 45 Alice Street, Goodna.

Under the table of development, this application will require impact assessment (Community Use Type 2 Development).

It is identified that the application will be required to be assessed against the following codes:

- Urban Areas Code (Part 4) – particularly the specific outcomes in section 4.3.3 and the Residential Medium Density Zone (Division 6);
- Community Use Code (Part 12, division 12); and
- Parking Code (Part 12, division 9)

Description of Proposal:

The applicant wishes to construct two adjacent child care centres with shared access and car parking facilities off Spalding Crescent on a site which is currently vacant. It is proposed that the development will cater for up to 119 children on a daily (Monday through Friday) basis and employ approximately 18 full-time equivalent (FTE) staff. The standard daily hours of operation are expected to be from 6:00am to 6:30pm.

The child care facility is proposed to incorporate two separate child care centres in Buildings A and B with indoor and outdoor, covered and uncovered play areas attached to both. A joint car park area with direct access from Spalding Crescent is to be provided between the two adjacent buildings. Plans illustrating the proposed layout and side elevations have been provided by Tabletop Architects (refer to Appendix B – Site Plan and Elevations).

Applicant:

[REDACTED]
C/- J B Goodwin Midson and Partners
PO Box 92
TOOWONG QLD 4066

Contact Person:

[REDACTED]
Ph [REDACTED]
Fax [REDACTED]
Email [REDACTED]

2.0 FURTHER APPLICATION DETAILS

2.1 Prelodgement Meeting Advice

No prelodgement meeting has been held. Discussions with Brendan Nelson, Senior Town Planner and Councillor Paul Tully have occurred in October and November 2005. Issues relating to the suitability of the site and previous backwater flooding were outlined.

2.2 Referral Agencies

As the proposed development is for a child care centre, the application will trigger referral to the Chief Executive under the Child Care Act 2002 as a concurrence agency.

2.3 History of Site

A sawmill previously occupied the site until recent years.

3.0 ASSESSMENT OF THE APPLICATION

3.1 State Planning Policies

There are no State Planning Policies relevant to this development application.

3.2 South East Queensland Regional Plan

According to the South East Queensland Regional Plan, the site is designated as being located within the Urban Footprint, which is described as being land -

"predominantly allocated to provide for the region's urban development needs to 2026. The area includes more than sufficient land to accommodate the full range of normal urban uses, such as housing, industry, business, infrastructure, community facilities and urban open spaces."

3.3 Strategic Plan

Urban Areas Strategy

The Strategic Framework designates the site in the Urban Development Area. The proposed child care centre complies with the Urban Area Strategy by providing a diversity of community facilities and meeting the need of the residents within the residential area.

3.4 Zone Designation

The subject land is classified *Residential Medium Density (RM1)*, as identified in the *Ipswich Planning Scheme*. In summary the overall outcomes sought for the Zone are the following:

- *"A range of residential forms to meet community housing needs for higher intensity living, to the general exclusion of most other uses."*
- *Uses within the (RM1) Zone are provided with full urban services such as reticulated water, sewerage, sealed roads, parks and other community facilities.*
- *Uses and works within the (RM1) Zone are located and designed to maximise the efficient extension and safe operation of infrastructure.*
- *Uses and works within the (RM1) Zone are located, designed and managed to:*
 - *maintain residential amenity and streetscape quality;*
 - *maintain or enhance aspects of local character;*
 - *be compatible with other uses and works;*
 - *maintain the safety of people buildings and works; and*
 - *avoid significant adverse effects on the natural environment."*

The proposed child care centre provides a further urban service to support the surrounding residential uses. The site is very accessible to the surrounding residents and the design ensures no negative impacts on the closest residential neighbours. As the child care centre is a community use complementary to the residential neighbourhood, it is considered that the proposal complies with the intent of the area.

3.5 Planning Scheme Codes

The relevant codes are:

- Urban Areas Code (Part 4) – particularly the specific outcomes in section 4.3.3 and the Residential Medium Density Zone (Division 6);
- Community Use Code (Part 12, division 12); and
- Parking Code (Part 12, division 9)

3.5.1 Urban Areas Code (Part 4) – particularly the specific outcomes in section 4.3.3 and the Residential Medium Density Zone (Division 6)

Responses to the overall outcomes sought for the Urban Areas are listed in Table 1 below.

Table 1: Urban Areas Code (Part 4) Section 4.3.3

Centres			
(a) A network of centres is established (continued).	Not applicable as the proposed facility is located nearby but not within the major centre at Goodna.		Not applicable
(b) Neighbourhood Centres and local shopping areas are designed and located (continued).	Not applicable as the proposed facility is located nearby but not within the major centre at Goodna. The proposed facility is convenient to public transport and easily accessible to the catchment area. It is in keeping with the need to provide community related facilities within centres such as Goodna.		Not applicable
Transport and Access			
(a) & (b)	A Traffic Impact Assessment Report has been commissioned (refer to Appendix C)		Yes
(c)	An Environmental Noise Level Study has been commissioned (refer to Appendix D)		Yes
(d) Car parking is provided in accordance with the demand generated by uses or works and may include shared parking and access arrangements.	Car parking is provided in accordance with the demand generated by uses or works and may include shared parking and access arrangements.		Yes
(e) The design and layout of parking facilities is (continued).	The design and layout of parking facilities is to minimise pedestrian and vehicle conflicts (refer to Appendix C).		Yes
(f) Service and delivery areas (continued).	Deliveries to the proposed facility will be scheduled to occur during non-peak periods and use existing visitor car parking facilities.		Yes

Environmental Management		
(a) The quality of stormwater run-off from a use or site is similar to or better than the established water quality standards for the receiving waters or lawful point of discharge.	Roof water will be managed in accordance with Council requirements. Details will be provided at Building Application stage.	Yes

Responses to the specific outcomes sought for the Residential Medium Density (RM1) Zone are listed below in Table 2.

Table 2: Residential Medium Density Zone (Division 6) Section 4.6.3

Residential Uses – Density and Character		
Uses and works reflect the desired built character, maintain amenity and protect and enhance important townscape and landscape elements within local areas having regard to: (continued).	All aspects of the density and character of the development have been addressed in this report.	Yes
Building Setbacks and Design		
(a) Buildings are setback 6 metres from the street frontage unless an alternative setback does not detrimentally affect the character and amenity of the area and the overall townscape.	The proposed buildings are set back as follows: <ul style="list-style-type: none"> • Building A is setback 7.5m from Alice Street and 11.0m from Spalding Crescent. • Building B is setback 9.3m from Spalding Crescent. 	Yes
(b) (c) (d) (e) (f) & (g)	The proposed buildings are designed to be in keeping with the existing residential nature of the streetscape with articulated frontages and numerous windows for visual surveillance, air circulation and natural light penetration.	Yes
Vegetation and Landscaping		
(a) Appropriate landscaping including street trees is used to soften building outlines and enhance the overall appearance of the area.	Existing significant trees will be retained whilst additional landscaping is proposed (refer to Appendix B)	Yes
(b) Significant vegetation is conserved, where possible.	Existing significant trees will be retained whilst additional landscaping is proposed (refer to Appendix B)	Yes

Non Residential Uses		
Each non-residential use: (a) fulfils a local community need; (b) is accessible to the population it serves; and (c) where possible co-locates with other non residential uses but does not contribute to undesirable commercial ribbon development; and (d) does not have a significant detrimental impact on the amenity of nearby residents (continued) and (e) maintains a scale and appearance in keeping with the residential amenity and character of the locality with adequate buffering or screening to nearby residential uses (both existing and proposed).	<p>It is expected that the proposed development will fulfil a need for convenient and affordable child care facilities that serve the local residents of Goodna and the surrounding area. Other complimentary community uses such as schools, parks and public transport as well as convenience shopping are located nearby.</p> <p>The centre will not have a detrimental impact on the amenity of nearby residents. The possible issues of noise and traffic generation have been studied and addressed in two commissioned reports by independent consultants (refer to Appendices C & D).</p> <p>The two buildings have been designed to be in keeping with the existing residential nature of the streetscape with articulated frontages and numerous windows for visual surveillance, air circulation and natural light penetration. The noise report (refer to Appendix D) proposes screening devices to attenuate for noise for the benefit of both the existing residential uses and the users of the proposed child care facility.</p>	Yes
Operation of Road Network and Access		
Uses and works are located and designed to: (a) ensure the safe and efficient operation of the road network; and (b) avoid multiple access points along major roads.	The impact of the proposed child care facility on the local road network and access to / from the centre to the local street network is addressed in an attached report (refer to Appendix C – Traffic Impact Assessment Report)	Yes
Provision Infrastructure		
Infrastructure (continued).	Sufficient infrastructure exists due to the previous use on the site.	Yes

3.5.2 Community Use Code (Part 12, Division 12)

The overall outcomes of the Code are to ensure that community uses:

- Are undertaken in a manner which does not cause a nuisance or disturbance to the occupiers or users of other nearby land, particularly nearby residents and other sensitive receptors;
- Are integrated and co-located, particularly in Centres, to contribute to a community focal point and reduce multiple trips;
- Are located within areas that are well serviced by existing or proposed public transport;
- Where possible, avoid areas prone to flooding, bushfires or landslip;
- Provide reasonable buffers between incompatible uses and zones or Sub Areas;
- Provide for the convenient, safe and efficient movement of vehicles and pedestrians within the site as well as to and from the site;
- Maintain a safe and secure environment;
- Conserve places of cultural significance or streetscape value;
- Screen unsightly elements;
- Ensure adequate provision is made for waste storage, treatment and disposal; and
- Do not adversely affect the operational airspace of RAAF Base Amberley or Archerfield Aerodrome.

The character, scale, height and intensity of development should be:

- Commensurate with the intent of the zone or Sub Area in which the development is proposed and the operational airspace of RAAF Base Amberley and Archerfield Aerodrome;
- Compatible with the physical characteristics of the site and its surrounds; and
- Compatible with the desired character of the local area.

Table 3: Community Use Code

Effects on Amenity			
1 (a) The community use and its scale, design and character does not impose unreasonable adverse impacts on and is compatible with the existing and likely future amenity of the nearby area having regard to:	For sub-section 1(a) and (c) (a) Building setbacks for community uses conform to those as specified for the relevant zone or Sub Area	Building Setbacks Building A is setback 3.0m from Alice Street and 5.0m from Spalding Crescent. Building B is setback 3.0m from Spalding	Yes

<ul style="list-style-type: none"> Noise Hours of operation Traffic The location and design of parking areas Lighting Signage Visual amenity Privacy; and Odour and emissions 	<p>(b) Where no building setback provisions are specified –</p> <ul style="list-style-type: none"> The frontage boundary setback is consistent with that of buildings on adjoining sites; or The frontage boundary setback is six (6) metres or half the height of the building whichever is greater 	<p>Crescent. The setback is consistent with intensity of the nearby multi unit dwelling complex.</p> <p>Traffic & Parking</p> <p>The effect of an increase in traffic in the immediate area as a result of this development is likely to be minimal (refer to Appendix C – Traffic Impact Assessment Report)</p> <p>Hours of Operation</p> <p>Hours of operation of the proposed use are expected to be from 6.00am to 6.30pm.</p>	
<p>(b) Community uses are provided with convenient pedestrian access from existing and proposed public transport infrastructure and other public areas.</p>		<p>The proposed child care facility is located within:</p> <ul style="list-style-type: none"> 900m walking distance of the Goodna train station; 700m of local Westside bus services; and 100m of hail and ride bus stops on Alice Street. 	<p>Yes</p>
<p>(c) Buildings and temporary structures are sited to maintain a physical and visual separation from the road frontage of the site and from any buildings on adjoining sites.</p>	<p>(c) Landscape buffers of a minimum width of four (4) metres are provided to the side and rear boundaries where the site:</p> <ul style="list-style-type: none"> Abuts land in a Residential zone; and Is used for a gallery, museum or neighbourhood 	<p>Not applicable as the site abuts parkland only.</p>	<p>Not applicable</p>

	centre.		
	<p>(d) Landscape buffers of a minimum width of ten (10) metres are provided to the side and rear boundaries where the site-</p> <ul style="list-style-type: none"> Abuts land in a Residential Zone; and Where the use is other than a use for the purposes outlined in sub section (2)(a) above. 	Not applicable as the site abuts parkland only.	Not applicable
	<p>(e) Landscape buffers include screen fences, walls or mounding where the emission of noise, light or the visual effects of the use warrant additional screening</p>	Not applicable	Not applicable
	<p>(f) Unless otherwise specified in the relevant zone or Sub Area, the hours of operation for the use are from 7.00am to 10.00pm</p>	It is proposed that hours of operation will be from 6am to 6.30pm Monday to Friday. Appendix D – Environmental Noise Level Study demonstrates that there will be no impact on nearby residents as a result of these operating hours.	Specific outcome
(d) Large expanses of blank walls are avoided, particularly where such walls are likely to be visually prominent		Not applicable as the design does not include blank walls.	Not applicable
<p>(e) Ancillary storage of goods or materials in open areas are either –</p> <p>(i) Screened from view from the road or nearby land or</p> <p>(ii) Presented in a manner that does not detract from the</p>		Not applicable as there will be no ancillary storage of goods or materials in open areas.	Not applicable

visual amenity of the area				
Noise				
<p>(3)(a) Unreasonable levels of noise are not transmitted to noise-sensitive places, including existing and future residential areas</p> <p>(b) A reduction in noise impacts is achieved by -</p> <p>(i) Regulating the hours of operation</p> <p>(ii) Locating noisy operations at sufficient distance from noise sensitive places</p> <p>(iii) Orientating access points, carparking, night lit facilities and other major noise sources to minimise impacts on the amenity of nearby areas</p> <p>(iv) Incorporating noise attenuating features into the design, construction and layout of buildings and use areas (eg. Fencing, mounding, minimising openings) and</p> <p>(v) Appropriately locating and enclosing noisy plant and equipment (eg. Air-conditioning)</p>			<p>Noise Levels The development will be able to meet all relevant noise level requirements by incorporating noise attenuating features into the design and layout of the buildings and use areas (refer to Appendix D – Environmental Noise Level Study).</p>	Yes
Outdoor Lighting				
<p>(4)(a) Outdoor lighting is –</p> <p>(i) Designed, installed and operated to maintain the amenity of the area</p> <p>(ii) Located, utilised and focused to efficiently light a desired area while</p>		<p>For sub section (4)</p> <p>5(a) Illumination levels parallel to and at a distance of 1.5 metres outside the boundary of the lot do not exceed 8 lux in either the vertical or horizontal plane for a height of 10 metres above</p>	<p>All outdoor lighting will comply with Australian Standards and Council requirements.</p>	Yes

	minimising lighting overspill	ground level.		
(iii)	Located such that mature planting does not reduce its effectiveness	(b) Security lighting is designed, installed and operated consistent with <i>Australian Standard AS 4282 (1997) – Control of the Obtrusive Effects of Outdoor Lighting</i>		
(iv)	Integrated into the total design with building, landscaping, signage, streetscape and public space design	(c) Principal pedestrian and bicycle movement routes and public spaces are lit to the minimum <i>Australian Standard of AS1158 (Public Lighting Code)</i>		
(v)	Used to illuminate buildings and areas that may be susceptible to criminal activity but avoids light overspill which may detract from the amenity of the nearby areas (particularly residential uses) or contribute to hazardous traffic conditions	(d) Configuration of lights in straight parallel lines 500m – 1000m long, flare plumes, upward shining lights and flashing or sodium (yellow) lighting are avoided within 6km of the RAAF Base Amberley runway		
(vi)	Appropriately placed to avoid shadows and glare which might put pedestrians at risk (eg. Shielded light at eye level)			
(vii)	Not directed onto the street or adjoining properties			
(viii)	Downward directed			
(ix)	Appropriately shielded at its source			
(x)	Provided to vehicular, cyclist and pedestrian movement areas, including roads, paths and carparks, in order to provide visibility and safety at night and			
(xi)	Provided for entry ways and includes point-to-point lighting for pedestrian walkways			

(b) Particular attention is given to the lighting of sites which are situated within 6km of the Amberley Air Base runway, so as not to cause distraction or interference with a pilot's visibility while in control of approaching or departing aircraft				
Public Toilets				
(6)(a) Public Toilet facilities are provided and designed for use by all members of the community, including people with disabilities, parents and young children	<p>(7)(a) Public toilet facilities are provided in accordance with the provisions of the <i>Standard Building Regulation</i></p> <p>(b) Where wall hung urinals are provided, at least one such urinal is to be designed for use by young children and installed in accordance with the manufacturer's specification</p> <p>(c) At least one wash basin, with a rim height not exceeding 600mm, is provided per room for use by young children</p>	<p>Public toilets will not be provided as part of this development.</p> <p>The facilities will be provided in accordance with the provisions of the <i>Standard Building Regulation</i> to meet the needs of young children as per those requirements specified under the probable solutions column for (b) and (c).</p> <p>Other toilets will be made available to adult users of the centre such as staff and parents in accordance with the provisions above. (Refer to Appendix B – Site & Proposal Plans)</p>		Yes
Hearing Aid Loops				
(8)(a) A hearing aid loop system for the benefit of people with impaired hearing is provided where a community use contains an auditorium		Not applicable as no auditorium is to be provided as part of this proposal.		Not applicable

Co-Location, Multi and Joint Use of Community Uses			
<p>(9)(a) Community uses are co-located with, or close to other community uses or with recreation or entertainment uses, to create a community focal point</p> <p>(b) Community uses are located adjacent to established community focal points, including shopping centres and other community facility nodes</p> <p>(c) Community uses are located within areas that are well serviced by existing or proposed public transport</p> <p>(d) Multi use opportunities and joint use arrangements for community use facilities are maximised with consideration to sharing facilities between different user groups and after hours use</p>		<p>The proposed child care centre is to be located within close proximity of local commercial and community uses such as schools, parks, shops and churches (refer to Appendix A – Site Locality Map).</p> <p>The Senior Town Planner and Councillor Paul Tully have expressed their support of this application prior to lodgement.</p> <p>Public transport is available nearby in the form of train services to Ipswich and Brisbane from the Goodna train station as well as services provided by the Westside local bus network.</p>	Yes
Building Height			
<p>(10)(a) The height of buildings and other structures for community uses conform to those as specified for the relevant zone or Sub Area</p>	<p>(11)(a) Where no building height provisions are specified, buildings are limited to one (1) storey in height, unless appropriate with –</p> <ul style="list-style-type: none"> • The scale of adjoining development • The extent of fall across the site • The character and amenity of the area and the overall townscape; and • The operational airspace of RAAF Base Amberley and Archerfield Aerodrome 	<p>The building height of both proposed child care centres will be limited to one (1) storey with an internal ceiling height of 2.7m and a maximum roof height of 5.0m. This will be in keeping with the scale of existing adjoining buildings and retain the character and amenity of the area.</p> <p>The buildings will not impact on the operational airspace of either</p>	Yes

		airfield.	
Carparking			
<p>(12)(a) The design and arrangement of access, carparking and vehicle movements on the site is safe and convenient</p> <p>(b) The carparking area is-</p> <p>(i) Integrated with the public access points of any building on the site; and</p> <p>(ii) Located to provide shared use of carparking areas with adjoining land uses or other community uses, where possible</p>		Refer to Appendix C – Traffic Impact Assessment Report	Yes
Safety and Security			
<p>(13)(a) Community uses and works are designed and managed to ensure that users are aware of how to safely gain access to and move around and within the premises, with a particular emphasis on vulnerable groups, vulnerable elements and vulnerable settings</p> <p>(b) the design of the community use or works increase people's awareness of their environment and potential risks to their safety</p> <p>(c) Buildings, spaces and infrastructure are designed to assist legibility (ie. Orientation and navigation through a site or area), reducing the need to depend on signs in order for a person to find their way around</p> <p>(d) to (v)</p>		The proposed child care centre has been designed in accordance with best practice layout and accepted by the Department of Families. All safety issues for children, parents/guardians and staff are addressed in the design of the child care centre specific to the site.	Yes

Waste Storage and Removal			
<p>(14) Areas and receptacles for the storage and removal of waste are -</p> <p>(a) designed, located and screened, where necessary, so as not to present an unsightly appearance, when viewed from a street or public 'right-of-way'</p> <p>(b) designed and located to facilitate access by the Local Government's waste removal vehicles and</p> <p>(c) covered, contained and managed so as not to attract wildlife (particularly birds or bats), that are likely to affect the operational airspace within 8km of RAAF Base Amberley</p>		Household sized wheelie bins will be kept on the site out of visual sight and placed on the kerb for waste collection.	Yes
Natural Disasters			
<p>(15)(a) Key elements of community infrastructure, including emergency services, hospitals, nursing homes, child care facilities and stores of valuable records or items of historic and cultural significance (eg. Galleries, museums, libraries and archives) -</p> <p>(a) avoid areas prone to flooding, bushfires and landslip (See Part 11); and</p> <p>(b) are able to function effectively during and immediately after natural hazard events</p>	<p>(16)(a) Key elements of community infrastructure are sited and designed to avoid areas prone to flooding, bushfires and landslip as set out in the State Planning Policy and associated Guidelines for Natural Disaster Mitigation</p>	<p>The site is totally covered by the Q100 flood event and is free of the Q20 flood line by a distance of about 1 metre. The site is within the area of the backup flood water from the Brisbane River but is not likely to be subject to flash flooding. In the event of a potential backwater flood, it is expected that sufficient notice (approximately 12 to 24 hours notice) will be available to ensure proper evacuation of the facility.</p>	<p>Acceptable solution based on discussions with Senior Town Planner and Councillor Paul Tully.</p>

3.5.3 Parking Code (Part 12, Division 9)

The overall outcomes sought for the Parking Code are the following:

- (a) provide a safe environment for both pedestrians and vehicles;
- (b) reduce traffic congestion by ensuring adequate off street facilities are provided by developments which are likely to generate traffic;
- (c) ensure that high standards of practicability, personal safety and aesthetic value are incorporated into the construction of off street parking areas and loading and unloading facilities;
- (d) encourage integration with public transport facilities and non-motorised forms of transport and shared use of parking facilities in order to reduce the overall demand for parking facilities for private motor vehicles;
- (e) provide parking facilities for people with disabilities;
- (f) provide facilities for the parking of bicycles and motorcycles; and
- (g) protect the amenity of nearby users, particularly residents.

Table 4: Parking Code - Parking Design and Construction Standards

Site Considerations			
(a) Car parking is provided within the site of the development	31 (18 staff, 13 visitors) car parking spaces to be provided (refer to Appendix C – Traffic Impact Assessment Report)		Acceptable Solution
(b) Long term or all day car parking areas are generally located to the rear or side of the property as to as to be unobtrusive.	Staff (long term) parking is conveniently located alongside visitor parking between the two proposed buildings.		Acceptable Solution
(c) Entrances to car parks are readily identifiable and convenient.	The car park entrance is well located in terms of visibility and convenience off Spalding Crescent between the two proposed buildings.		Yes
(d) Car park site selection takes into account - (i) the type of road frontage...	The siting of the car park takes into account all appropriate considerations such as safety, noise, walking distance and multi-use opportunities.		Yes
General Layout of Parking Areas			
(a) The design provides uncongested traffic flow within the parking area, thereby reducing the potential for vehicle queuing off-site and conflict between vehicles (drivers) trying for the same parking space.	Refer to Appendix C – Traffic Impact Assessment Report		Yes

(b) The design minimises unnecessary areas for parking and manoeuvring, without compromising the safety and convenience of the carpark layout.	The design of the car park layout provides sufficient suitable area for parking and manoeuvring in terms of safety and convenience.	Yes
Design of Parking Modules, Circulation Roadways and Ramps		
Parking modules and associated circulation roadways and ramps are designed to – (a) move traffic to and from the road frontage...	The layout of the car parking area complies with the requirements of Australian Standard AS2890.1 Part 1: Off Street Carparking.	Yes
Access Driveways and Queuing Areas		
(a) Access driveways are located to minimise conflict and designed to operate efficiently and safely taking into account – (i) the size of the parking area...	Access driveways and queuing areas are located and designed in accordance with the provisions of Australian Standard AS2890.1 Part 1: Off Street Carparking	Yes
Public Safety		
The design, location and management of car parks promote public safety by: (a) being designed to optimise informal surveillance and to control inappropriate access (continued).	Informal surveillance is provided from the windows of the adjoining proposed buildings that overlook the carpark area.	Yes
Separation of Pedestrian and Vehicular Circulation		
(a) Pedestrian routes are separated from vehicular circulation to allow protected access for pedestrians via the shortest practical route from the parking area to the use.	Pedestrian access from car park to building entrance is via the car park driveway except for parking bays 19 to 24 which are provided with a pedestrian path between the building and carpark are to the entrance of Building B.	Acceptable Solution
(b) Pedestrian access does not pass through commercial or refuse vehicle reversing or loading areas.	Pedestrian access does not pass through such an area. Servicing of the child care centre is proposed to occur on-street during the regular refuse collection cycle.	Yes
(c) Protection measures for pedestrians are located in areas of high pedestrian/vehicular conflict or high speed (continued).	The car park is not considered to be an area of high pedestrian / vehicular conflict.	Not applicable

Parking Spaces for Motorcycles		
Motorcycle parking spaces have adequate areas and dimensions to meet user needs.	Specific provision of parking for motorcycles has not been provided. It is expected that existing car parking spaces will be adequate to meet the needs of these users.	Acceptable solution
Marking of Spaces		
(a) Parking areas are marked so as to clearly delineate individual parking spaces.	Parking areas are to be permanently line marked in accordance with the provisions of Australian Standard AS2890.1 Part 1: Off Street Carparking and according to plans provided (refer to Appendix B)	Yes
(b) Visitor, disabled, motorcycle and bicycle parking spaces are clearly marked, and their location clearly sign posted.	Two disabled parking spaces will be clearly marked.	Yes
Parts of the Parking Code not addressed in this report		
<ul style="list-style-type: none"> • Commercial Vehicle Facilities and Service Areas • Parking Structures (including enclosed garages and multi-level car parks) • Tandem and Stacked Parking • Parcel Pick-up Areas • Trolley Bays • Speed Humps • Signage • Carpark Lighting • Landscaping • Surface Treatment of Parking Areas • Drainage • Miscellaneous • Parking Spaces for People with Disabilities • Bicycle Parking 	Refer to Appendix C – Traffic Impact Assessment Report	Yes

Parking Demand Standards (section 12.9.5 of the Ipswich Planning Scheme)

Table 12.9.1 of the Ipswich Planning Scheme identifies that the car parking provision for a Community Use (Child Care Centre) is 1 space per staff member (FTE = full time employee) and 1 space per 8 children. Therefore, the requirement for the proposed development, on the basis of 119 children and 18 staff (FTE) is for 33 spaces. It is proposed that the development will have 31 spaces, which is 2 spaces below the requirement of the Parking Code. However, as noted in section 12.9.5a, Council may require the construction of a lesser number of parking spaces if it considers that such modification or dispensation is justified having regard to the particular circumstances. A justification for the relaxation of this Code requirement is given on page 6 of the Traffic Impact Assessment Report (refer to Appendix C).

In summary, the proposal is considered to comply with the relevant specific outcomes within this code and is therefore within the reasonable expectations of development in this locality.

4.0 CONCLUSION

The proposed development is defined by the *Ipswich Planning Scheme* as a 'child care centre' and means the use of premises for the purpose of minding or caring, but not residence, of children for fee or reward. The application for a Material Change of Use, is subject to code assessment, and is consistent with the intent of the Residential Medium Density (RM1) designation under the Ipswich Planning Scheme and other relevant plans and policies.

The proposed development complies with the applicable code (Community Use Code), relevant constraint codes and is considered to be an appropriate development for the site in use, scale and character. It is therefore recommended that Ipswich City Council approve this application subject to reasonable and relevant conditions.



Town Planner



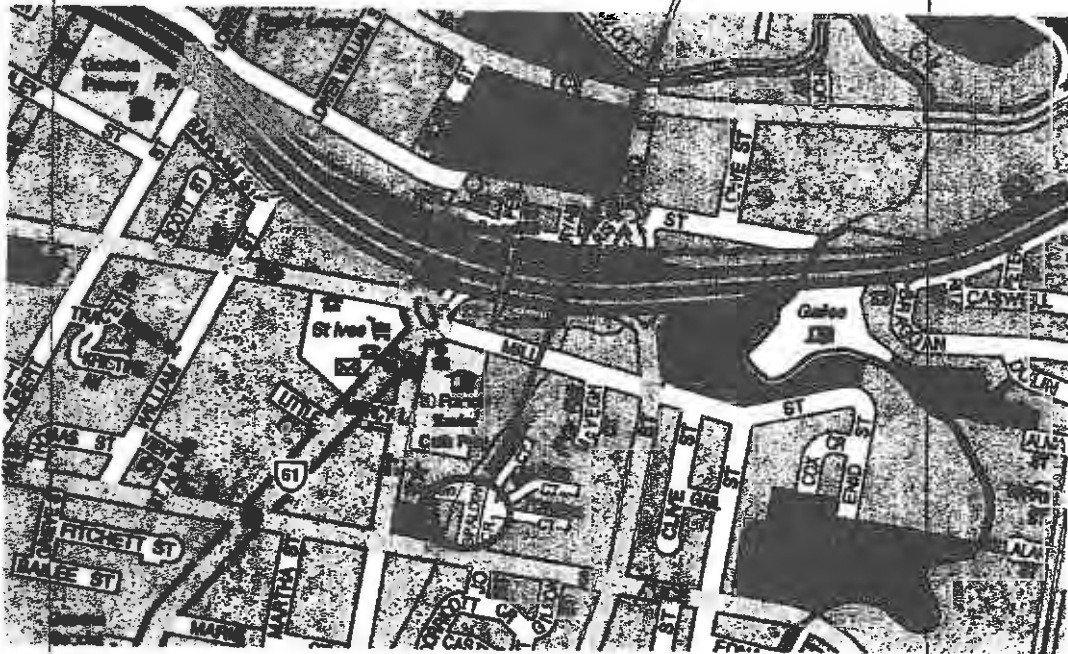
Senior Town Planner

JB Goodwin Midson & Partners
(March, 2005)

APPENDIX A

Site Locality Map

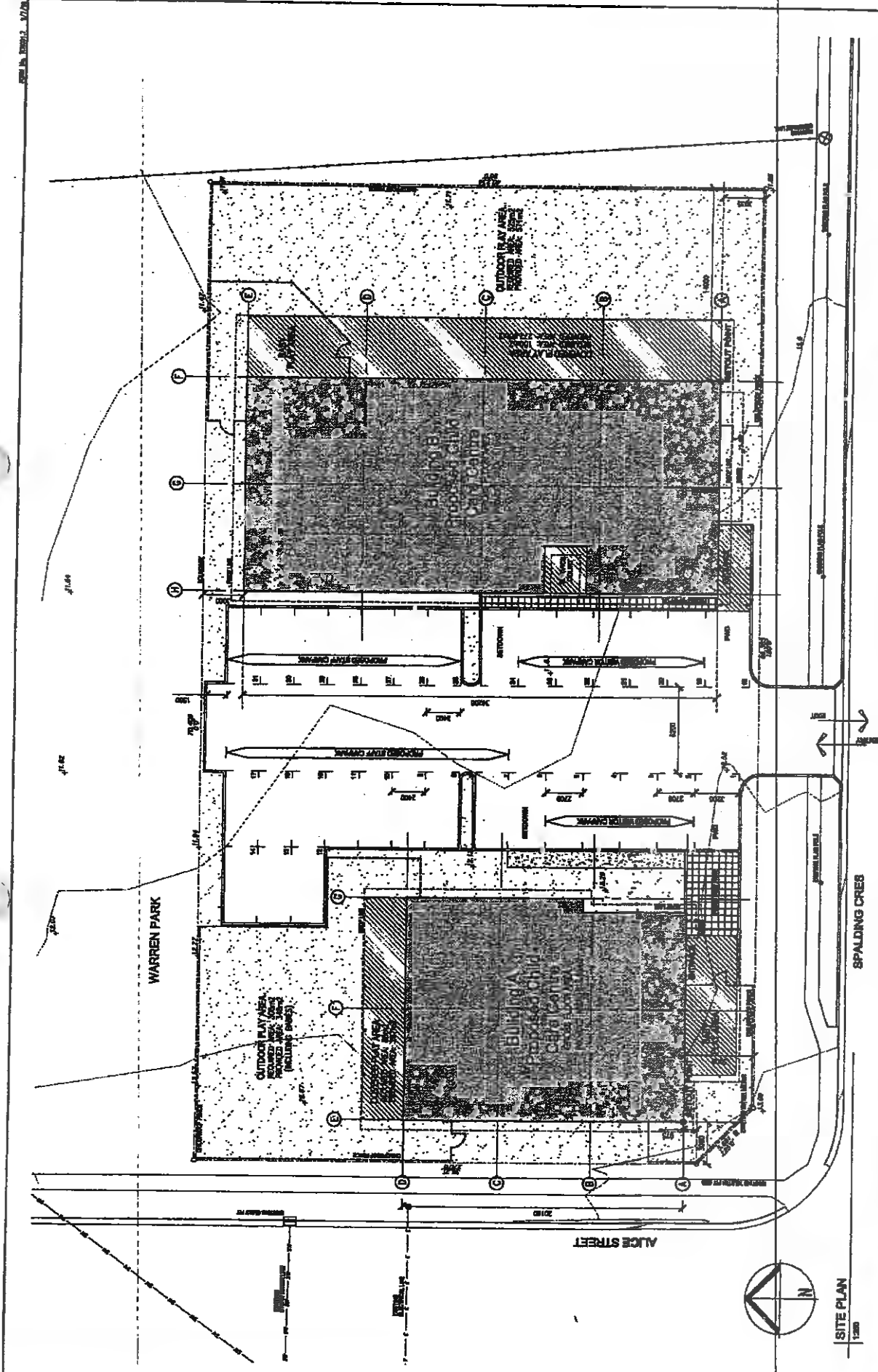
SITE OF PROPOSED CHILD CARE CENTRE AT 45 ALICE STREET, GOODNA



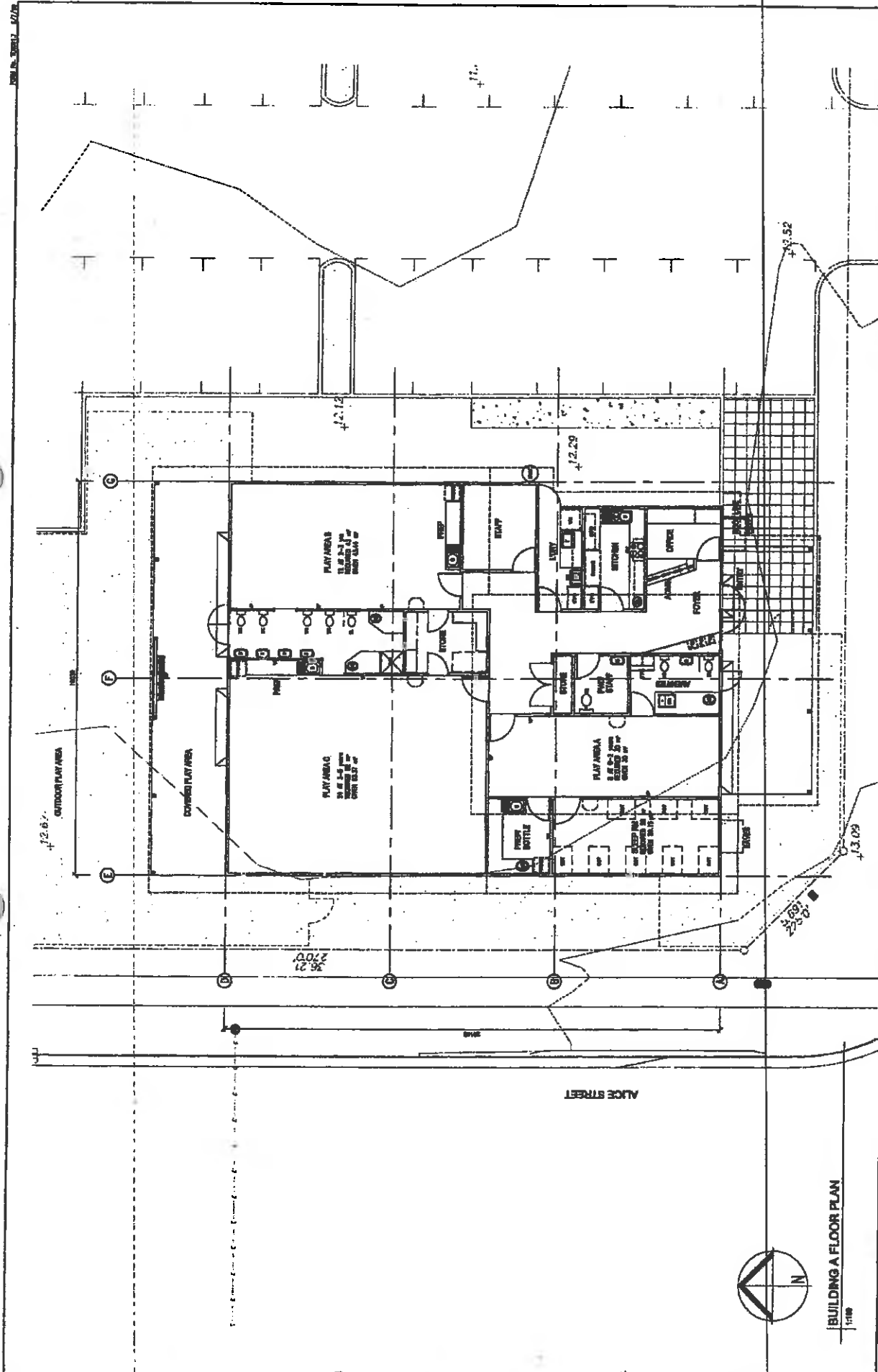
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APPENDIX B

Site & Proposal Plans



	PROPOSED 75 + 44 PLACE CHILDCARE CENTRE ALICE ST - GOODNA		TABLETOP 		SITE PLAN		SCALE 1:1000 DATE 10/10/23
	JOB NO. 5518 DATE 10/10/23		INITIAL ISSUE DATE 10/10/23		REV. A01/B		DATE 10/10/23
PROJECT NAME PROPOSED 75 + 44 PLACE CHILDCARE CENTRE ALICE ST - GOODNA			PROJECT NO. 5518			PROJECT DATE 10/10/23	
PROJECT LOCATION ALICE ST - GOODNA			PROJECT AREA 1.0000			PROJECT PERMITS 1.0000	
PROJECT DESCRIPTION PROPOSED 75 + 44 PLACE CHILDCARE CENTRE ALICE ST - GOODNA			PROJECT STATUS 1.0000			PROJECT COMMENTS 1.0000	
PROJECT TEAM KDW			PROJECT CLIENT KDW			PROJECT CONTACT KDW	
PROJECT APPROVAL 1.0000			PROJECT REVIEW 1.0000			PROJECT SIGNATURE 1.0000	
PROJECT DATE 10/10/23			PROJECT TIME 1.0000			PROJECT LOCATION 1.0000	

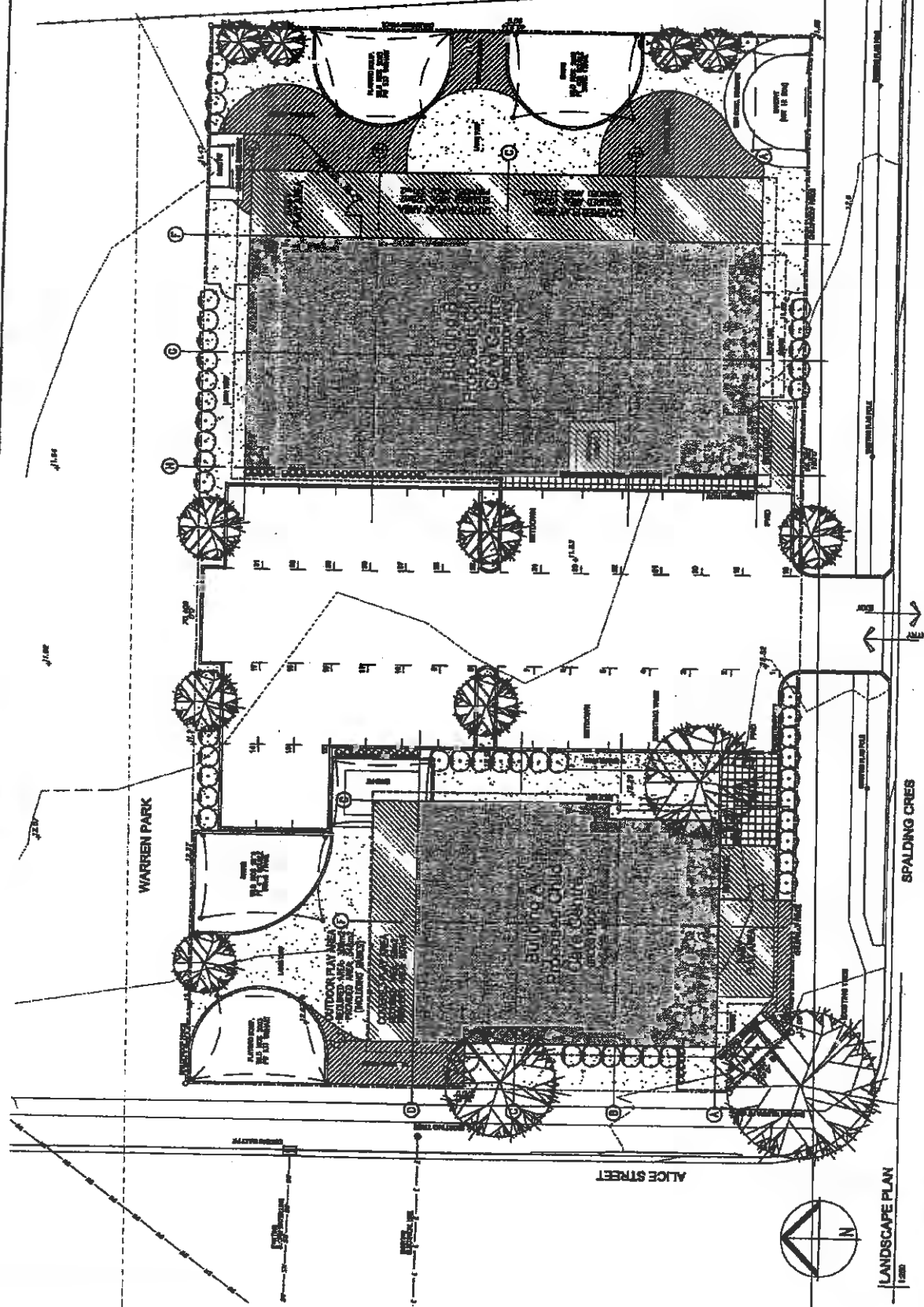


PROPOSED 75 + 44 PLACE CHILDCARE CENTRE ALICE ST - GOODNA		REVISION SCHEDULE NO. DATE COMMENTS		DESIGNER C.P. [] D.W. [] L.A.M./C.P. [] A. []/A. []/A. []/A. []/A. []/A. []/		DATE DESIGNED [] DRAWN [] CHECKED [] APPROVED [] NO. [] DATE []		TABLETOP kdw		BUILDING A FLOOR PLAN ISSUE INITIAL [] DATE []		5518 A02	
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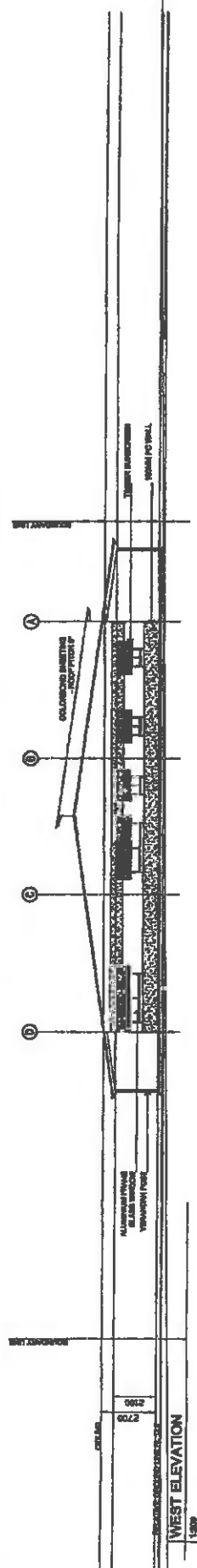
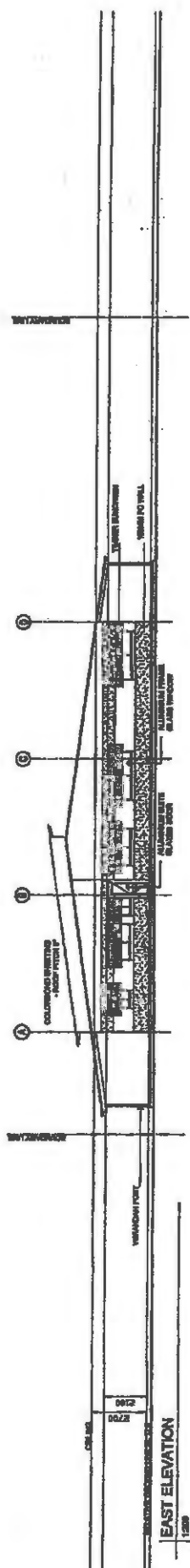
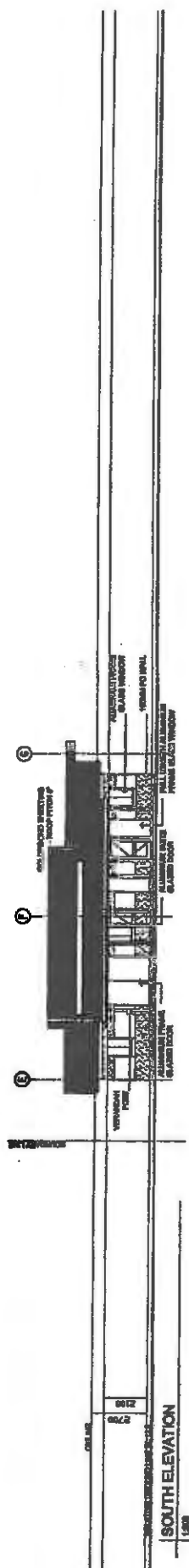
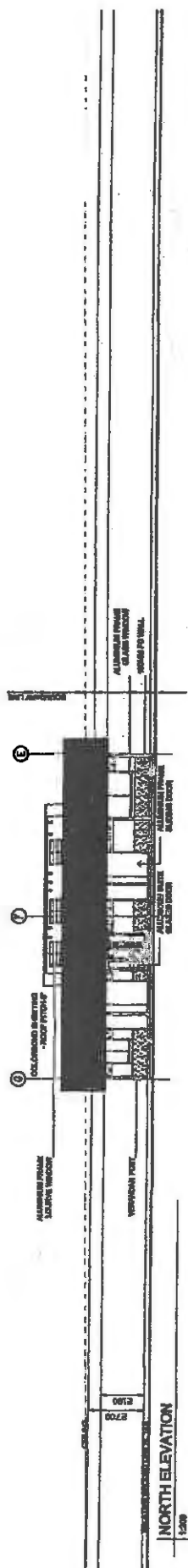


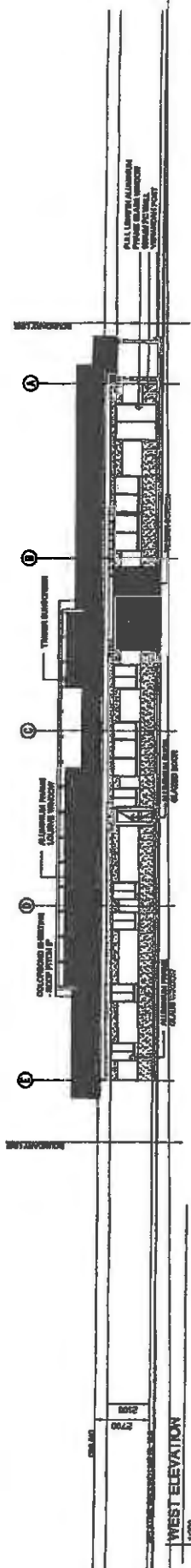
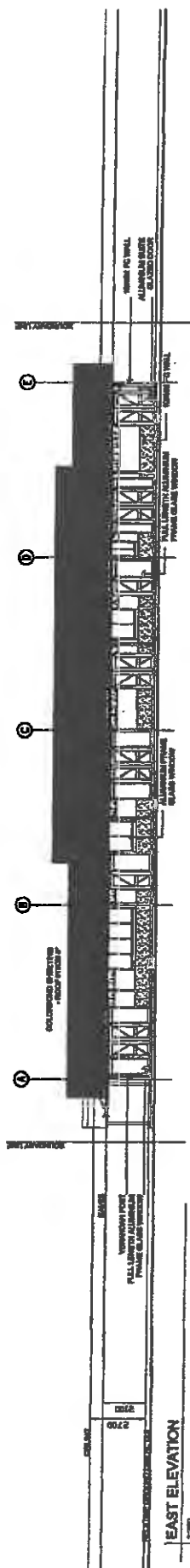
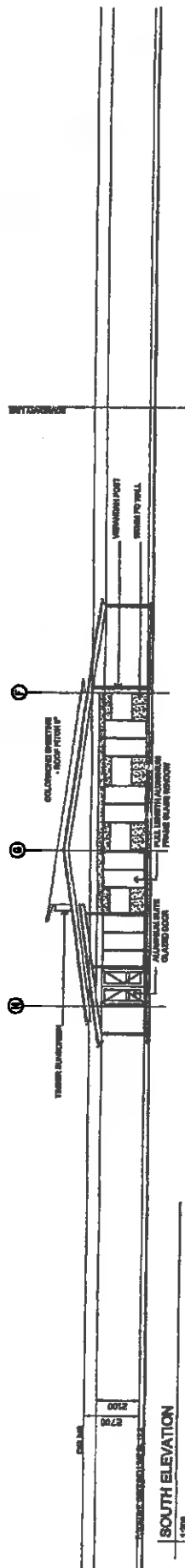
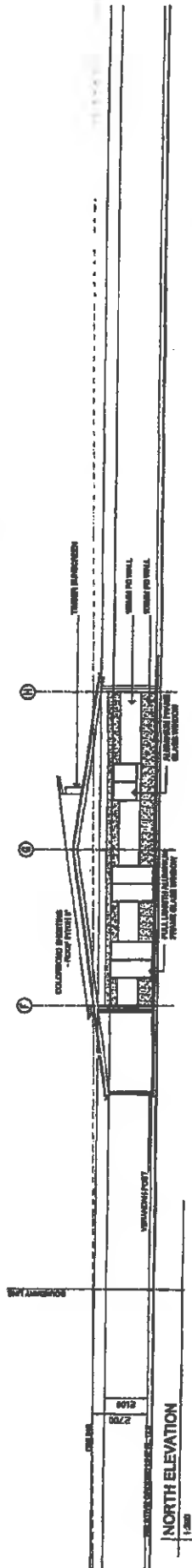
BUILDING A FLOOR PLAN
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PROPOSED 75 + 44 PLACE CHILDCARE CENTRE ALICE ST - GOODWA		LANDSCAPE PLAN		SCALE 1:1000 DATE 10/06	SHEET NO. 5518	PROJECT NO. A05/A
PRELIMINARY		TABLETOP		KDW		
DESIGN SCHEDULE DATE DESIGNER CHECKED APPROVED DATE		C.P. ZONE L.A.M./C.P.D. APPROVED DATE		PRELIMINARY		

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JOB NAME PROPOSED 75 + 44 PLACE CHILDCARE CENTRE ALICE ST - GOODNA		REVISION SCHEDULE NO. DATE DESCRIPTION 1 25/11/2010 DEVELOPMENT APPLICATION 2 01/12/2010 COMMENTS		SCALE DRAWN: C.P. CHECKED: ZMG DESIGNED: LAM/CPD DATE: 25/11/2010		PROJECT NO. 5518		DRAWING NO. A07 A	
PROJECT TITLE BUILDING 8 ELEVATIONS		PROJECT NO. 5518		DRAWING NO. A07 A		PRELIMINARY FOR REVIEW ONLY		SCALE 1:500	
PROJECT LOCATION PROPOSED 75 + 44 PLACE CHILDCARE CENTRE ALICE ST - GOODNA		PROJECT NO. 5518		DRAWING NO. A07 A		PRELIMINARY FOR REVIEW ONLY		SCALE 1:500	

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APPENDIX C

Traffic Impact Assessment Report



LAMBERT & REHBEIN
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DATE 10 February, 2005
CONTACT [REDACTED]

PROPOSED CHILD CARE CENTRE
ALICE STREET, GOODNA
TRAFFIC IMPACT ASSESSMENT
REPORT

For
[REDACTED]



LAMBERT & REHBEIN
ENGINEERS • MANAGERS • SCIENTISTS

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Goodna Child Care Centre
Traffic Impact Assessment Report



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1.0 INTRODUCTION

Lambert and Rehbein was commissioned by [REDACTED] to undertake a traffic impact assessment of a proposed child care facility at 45 Alice Street, Goodna.

This proposal is for the development of a child care facility incorporating two buildings, with a total of 119 child places. The development site is located on a parcel of land that is currently vacant. This report has been undertaken to assess the potential impacts of the proposed development on the external road network.



2.0 CONTEXT OF THE DEVELOPMENT

This section of the report describes the nature of the existing development site, the surrounding area, including land uses and describes the extent of the existing transport system.

2.1 Development Site

The development site is located at 45 Alice Street, Goodna. The site is currently vacant and is located directly adjacent to the Spalding Crescent / Alice Street priority intersection and has frontages to both streets. The existing site has a single unsealed access driveway from Alice Street which is located approximately 5m from the Spalding Crescent Intersection. There is also an existing 1m wide sealed footpath that runs parallel to Spalding Crescent along the entire length of the site frontage.

The proposed development site is located in a predominantly residential environment with both detached and semi detached dwellings in the area. To the north on Spalding Crescent there are three townhouse developments incorporating a total of 74 townhouses. It is noted that to the north west of the proposed development site is the St Ives retail precinct. It is also noted that there are two schools in the vicinity of the subject development site, the Goodna Special School and the St Francis Xavier Catholic Primary School.

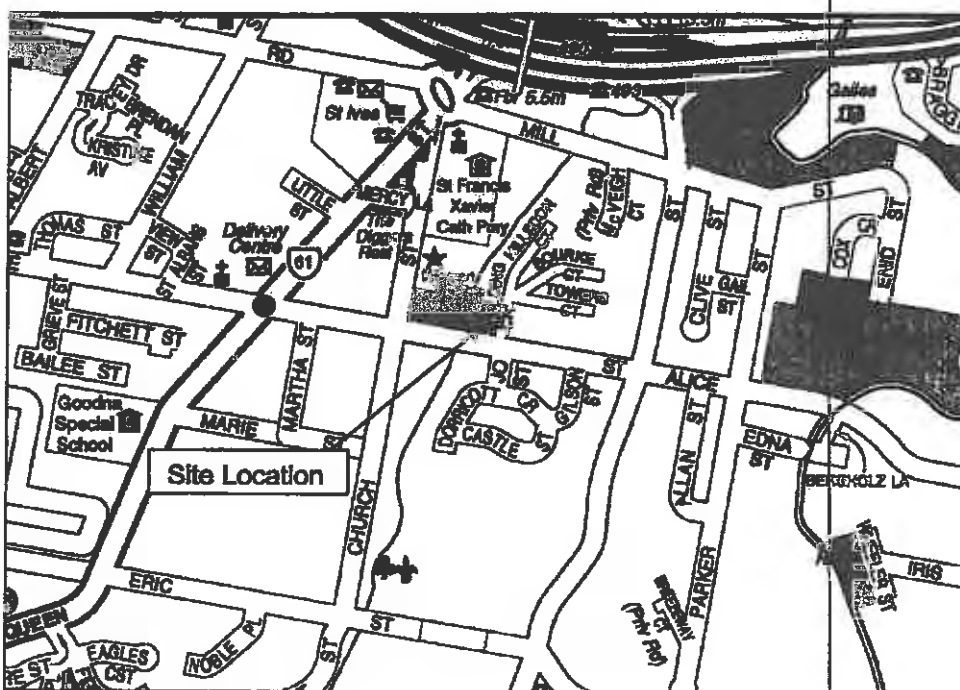


Figure 1 - Site Locality Plan

2.2 Adjacent Road Network

Adjacent to the southern boundary of the subject development site is Alice Street which is designated as a distributor within Ipswich City Council's road hierarchy.



Alice Street is currently at two lane road with a width of approximately 10m, incorporating one through lane in either direction (3m in width) and a non trafficable lane (2m in width) on both sides of the street. There is no posted speed limit in the vicinity of the subject development in Alice Street.

Adjacent to the eastern boundary of the site is Spalding Crescent, which is designated as a local access street within Council's road hierarchy. Spalding Crescent is currently a two lane street with no line marking approximately 6m in width. A paved entry treatment is currently located in Spalding Crescent adjacent to Alice Street.

Spalding Crescent and Alice Street intersect at a priority intersection with Jo Street forming the fourth leg of the intersection. We note that Jo Street and Spalding Street are not directly adjacent to each other, however for the purpose of the traffic analysis undertaken later in this report it has been assumed that the intersection is a four way intersection. Alice Street currently has priority over both Spalding Crescent and Jo Street. There are currently no turning pockets on Alice Street for either Jo Street or Spalding Crescent. A traffic count at the aforementioned intersection was undertaken on Thursday 27 January 2005 during the AM and PM peak periods.

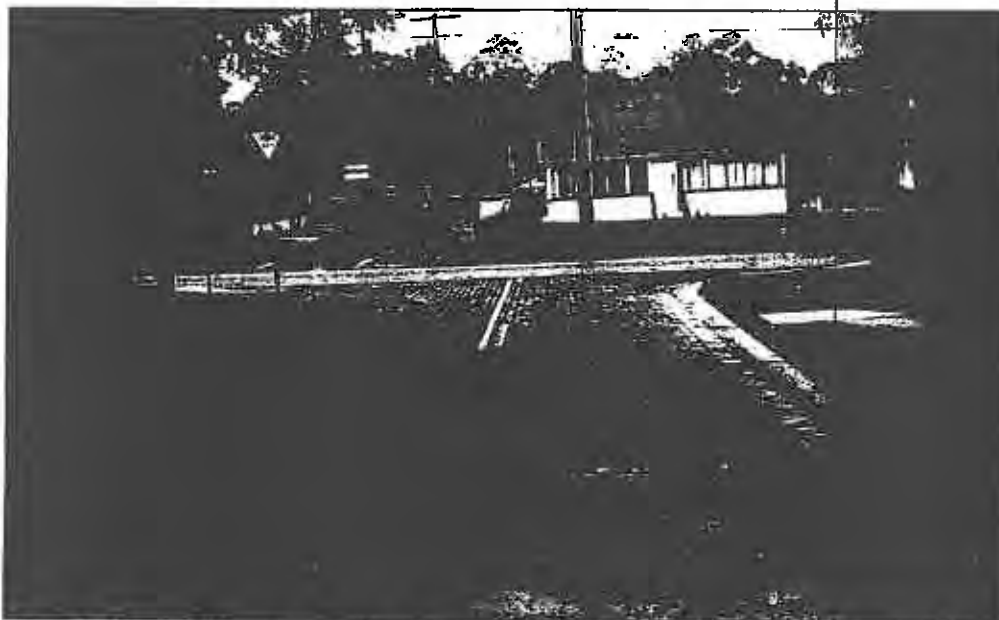


Figure 2 – View southbound on Spalding Crescent to the Spalding Crescent / Alice Street / Jo Street intersection

Site investigations have indicated that Jo Street currently services a limited catchment of residential dwellings and has a carriageway width of approximately 7m.

2.3 Public Transport Services

Approximately 100m to the east of the propose development site on Alice Street there are hail and ride bus stops on either side of the road servicing buses travelling to the east and west of the proposed development.



It is noted that the Goodna train station is located within walking distance to the north of the proposed development. A review of the Brisbane Public Transport Directory has also indicated that a private bus route operated by Westside buses travels along Smiths Road and Mills Road which is within walking distance from the proposed development. This bus route provides passengers with access to other local train stations and Brisbane City Council bus routes to the east of the proposed development.

2.4 Future Road Network Upgrades

Discussions with Council Officer, [REDACTED] have indicated that there are no planned road works in the vicinity of the proposed child care centre on Alice Street



3.0 DETAILS OF THE PROPOSED DEVELOPMENT

This section of the report discusses the details of the proposed development, the proposed internal arrangements including parking, the proposed access arrangements and the traffic generating characteristics of the proposed development.

3.1 Proposed Development

The proposal is for the development of a child care facility to be constructed on the subject site that is currently vacant. The child care facility is proposed to cater for 119 children on a daily basis (Monday to Friday) and approximately 18 staff. It is our understanding that the standard daily hours of operation will be between 6:00am and 6:30pm.

The child care facility is proposed to incorporate two child care centre buildings with indoor and outdoor, covered and uncovered play areas separated by a formalised car parking area with direct access off Spalding Crescent. The proposed layout of the child care facility is shown on the layout plans in Appendix A by Tabletop Architects.

3.2 Access and Internal Arrangements

As a part of the proposed development of the child care facility, 31 car parking spaces will be provided in the car park as shown on the aforementioned plans. It is proposed that 18 of these car parks will be allocated for staff parking and the remaining 13 will be for allocated for visitors. We have assessed the layout plans for the proposed child care centre and note that the staff parking spaces will be provided with space lengths of 5.4m and widths of 2.4m. The visitor parking spaces are proposed to have dimensions of 5.4m long and 2.7m wide.

The parking aisle within the car park also conforms to the Australian Standard 2890.1 Off-Street Car Parking with a width of 6.2m. The majority of the parking bays would be considered as low/medium turnover as they would be allocated as staff parking.

Access to the proposed car parks is to be provided via Spalding Crescent in the form of standard driveway crossover with a width of 6.2m and this is considered to be in accordance with the requirements of Australian Standard 2890.1 Off-Street Car Parking. The proposed driveway replaces the existing crossover on Alice Street which is considered to be too close to the Spalding Street / Alice Street / Jo Street intersection.

The proposed access arrangements are considered to provide a safe and efficient arrangement for all vehicles entering or exiting the subject development site. It is considered that the proposed access is located a sufficient distance from the Alice Street intersection. It is noted that the existing site access to Alice Street is proposed to be closed.

Servicing of the child care centre is proposed to occur on-street during the regular refuse collection cycle.



Parking Requirements:

Table 12.9.1 in the Ipswich City Council planning scheme specifies that for a childcare centre, 1 space per full time employee and 1 space per eight children is required. Therefore, the requirements for the proposed development, on the basis of 119 children and 18 full time staff are:

- Number of staff car spaces required - 18 car spaces
- Number of visitor car spaces required - 15 car spaces

We note that the child care facility is two visitor parking spaces below the requirement of the planning scheme, however the amount of parking is considered appropriate for the following reasons:

- Due to the developments proximity to public transport it is reasonable to assume that some visitors and staff of the child care facility would utilise the existing bus stops in Alice Street.
- It is also considered reasonable to assume that some staff would utilise public transport, be dropped off or would car pool. As such the provision of 1 space per staff member would not be required.
- From our experience in working on numerous other child care centre development it is our understanding that the staff working at the centres work in shifts and that the overlap period between these shifts is often outside the times of peak parking demands. We believe that the staff parking supply (namely 18 spaces) would be unlikely to be fully utilised during peak drop-off and pick-up times and that this would provide additional parking for these periods. This surplus would ensure that excess parking would not occur on-street.
- Due to the nature of child care centres it is expected that the duration of stay for each vehicle in the car park would be between 10 and 15 minutes. Thus, with 13 parking spaces allocated for set down and pick up of children it is estimated that the effective capacity of the car park is between 52 and 78 vehicles per peak hour. With the expected traffic generation of the site during the AM peak hour being 60 vehicles entering and 60 vehicles exiting the development it is considered that there are proposed parking provisions on the site are adequate.
- While not encouraged and considered unlikely, we consider that should up to 2 vehicles park on-street that this would not necessarily have any significant implications for the safe and efficient operation of the road network. Currently Alice Street has kerbside non-trafficable lanes that may cater for any parking overspill. It is considered that the current traffic volumes on Alice Street are not of significant levels and limited on-street parking would not create unsatisfactory operation.

On the basis of the information above we consider that the proposed parking system arrangements are adequate and would not result in any adverse impacts on the local road system. We believe that the parking provisions would be adequate to cater for the potential peak parking demands and as such the proposal would not result in significant amounts of parking that remained dormant for the majority of the time.

3.3 Traffic Generation and Distribution

Appendix 2A of Chapter 2 of Main Roads, Road Planning and Design Manual suggests that for child care centres a daily trip generation rate of 4 trips per child and a peak hour trip generation rate of 1 per child is appropriate. The basis of the proposed child care centre is for approximately 119 children and 18 staff. It is assumed that the staff would arrive/depart outside the peak periods.

On the basis of the above assumptions the following is the estimated trip making to/from the site in the weekday peak periods:

- Total Children - 119
- Trip/Child - 4 daily trips per child
1 trip per child/peak hour
- Total Generation - 476 Vehicle movements per day
119 vehicle movements in each of the peak periods (60 entering / 60 exiting)

Following discussions with Council Officers and a review of the surrounding residential catchment the following distribution of traffic was assumed for all traffic associated with the proposed child care centre:

AM & PM Peak

50% (60 vehicles) will access the site to/from the west of the site on Alice Street

50% (60 vehicles) will access the site to/from the east of the site on Alice Street

Traffic flow diagrams for the Spalding Crescent / Alice Street / Jo Street intersection are attached in Appendix B.

Due to the nature of child care utilisation it could also be assumed that there will be a significant amount of linked/diverted trip making with parents dropping children at the child care centre en-route to employment destinations or schools in the area. We have, however, again taken a conservative approach to this consideration and have assumed that all traffic generated by the child care centre is over and above the existing background traffic. This will generate a worst possible case.

3.4 Design Traffic Scenarios

In assessing external impacts associated with the proposed development, detailed analysis of the following signalised intersection was undertaken:

- Spalding Crescent / Alice Street / Jo Street intersection

In assessing the potential impacts of the proposed child care centre on the surrounding road network the following traffic flow scenarios were adopted:

- 2005 AM & PM Peak (Background Traffic only)
- 2005 AM & PM Peak (Background traffic + Proposed Development Traffic)
- 2015 AM & PM Peak (Background Traffic only)
- 2015 AM & PM Peak (Background traffic + Proposed Development Traffic)



Discussions with Council officers have indicated that a traffic growth rate of 4% per annum would be appropriate for the calculation of 10 year design horizon traffic level. We have adopted this growth rate for the purposes of this analysis. It is also assumed that, due to the developed nature of the catchment which is serviced by Spalding Crescent that there is no growth of vehicles on the Spalding Crescent approach to the subject intersection. In establishing the future year design volumes, the development generated traffic was added to the estimated 2015 background traffic flows.

The traffic flow diagrams for each of the analysis scenarios identified above are shown in Appendix B.

4.0 IMPACT ASSESSMENT

The impact of the proposed child care centre development on the intersection identified in Section 3 was assessed using standard "gap acceptance" parameters as described in AUSTRROADS Part 5 – Intersections at Grade. The assessment included the analysis of the intersection using the intersection analysis package aaSIDRA2.1. A summary of the aaSIDRA output tables is shown in Appendix C.

4.1 Existing Year 2005 – Background Traffic

The operation of the 2005 traffic flows was assessed to establish the baseline operation for the intersection. The intersection was analysed using the existing geometry. The results of the analysis of this intersection are shown in Table 4-1 below.

Table 4-1
Spalding Crescent / Alice Street / Jo Street
Existing Year 2005 - Background Traffic Only

Intersection - Spalding Crescent / Alice Street / Jo Street	Degree of Saturation (%)	Mean Maximum Queue (m)	Average Delay (secs)	LOS
AM Peak Period				
Jo Street	0.016	0	11.2	B
Alice Street (east)	0.188	12	1.9	A
Spalding Crescent	0.040	1	13.1	B
Alice Street (west)	0.179	13	2.1	A
PM Peak Period				
Jo Street	0.14	0	11.7	B
Alice Street (east)	0.191	14	1.7	A
Spalding Crescent	0.024	1	10.4	B
Alice Street (west)	0.158	12	2.8	A

The results indicate that the operation of this intersection is theoretically satisfactory. The results indicate that the intersection of Spalding Crescent, Alice Street and Jo Street operates with a high level of service, and vehicles experience minimal delays associated with the operation of the intersection in its current form with existing traffic volumes.

4.2 Existing Year 2005 – Design Traffic

The impact of the proposed development on the surrounding road network was assessed for the key intersection using the "existing year" (2005) with development scenario. In calculating the traffic for this scenario the development generated traffic was simply added to the background traffic flows. The traffic flow diagram for this scenario is also shown in Appendix B. The subject intersection was assessed with the existing layout and the results of the analysis of the intersection are shown in Table 4-2 below:



Table 4-2
Spalding Crescent / Alice Street / Jo Street
Existing Year 2005 - Background + Development Traffic

Intersection - Spalding Crescent / Alice Street / Jo Street	Degree of Saturation (%)	Mean Maximum Queue (m)	Average Delay (secs)	LOS
AM Peak Period				
Jo Street	0.18	1	11.5	B
Alice Street (east)	0.199	14	2.9	A
Spalding Crescent	0.186	6	15.1	C
Alice Street (west)	0.195	14	2.7	A
PM Peak Period				
Jo Street	0.14	0	12.1	B
Alice Street (east)	0.220	16	2.6	A
Spalding Crescent	0.165	5	14.1	B
Alice Street (west)	0.174	13	3.3	A

The results shown in the above table clearly demonstrate that the development generated traffic would theoretically have little impact on the operation of the Spalding Crescent / Alice Street / Jo Street intersection. The development traffic would theoretically result in minimal increases in delays and queues. On this basis it is our opinion that the development generated traffic would not result in a need to undertake any physical improvement works at the intersection.

4.3 Future Year 2015 – Background Traffic

The operation of the intersection with 2015 traffic flows was modelled to consider performance without the subject development in place. As discussed previously, the traffic volumes at the intersection were derived by applying a 4% per annum growth rate to the 2005 turning movements. The intersection was again analysed using the existing layout. The results of the analysis of this intersection are shown in Table 4-3 below.

Table 4-3
Spalding Crescent / Alice Street / Jo Street
Future Year 2015 - Background Traffic Only

Intersection - Spalding Crescent / Alice Street / Jo Street	Degree of Saturation (%)	Mean Maximum Queue (m)	Average Delay (secs)	LOS
AM Peak Period				
Jo Street	0.029	1	13.5	B
Alice Street (east)	0.249	23	3.5	A
Spalding Crescent	0.068	2	18.4	C
Alice Street (west)	0.263	24	3.8	A
PM Peak Period				
Jo Street	0.32	1	15.7	C
Alice Street (east)	0.282	25	3.0	A
Spalding Crescent	0.033	1	12.4	B
Alice Street (west)	0.234	22	4.4	A

The results of the future year analysis show that the intersection would theoretically continue to experience no operational difficulties for the 2015 background traffic scenario. There would still be spare capacity and the delays would not be significant.



4.4 Future Year 2015 – Design Traffic

The impact of the proposed development on the surrounding road network was assessed for the key intersection using the "future year" (2015) with development scenario. In calculating the traffic for this scenario the development generated traffic was simply added to the background traffic flows. The traffic flow diagram for this scenario is also shown in Appendix B. The subject intersection was assessed with the existing layout and the results of the analysis of the intersection are shown in Table 4-4 below.

Table 4-4
Spalding Crescent / Alice Street / Jo Street
Future Year 2015 - Background + Development Traffic

Intersection - Spalding Crescent / Alice Street / Jo Street	Degree of Saturation (%)	Mean Maximum Queue (m)	Average Delay (secs)	LOS
AM Peak Period				
Jo Street	0.031	1	13.9	B
Alice Street (east)	0.287	28	4.7	A
Spalding Crescent	0.318	11	24.4	C
Alice Street (west)	0.280	28	4.2	A
PM Peak Period				
Jo Street	0.033	1	16.1	C
Alice Street (east)	0.319	31	4.1	A
Spalding Crescent	0.270	9	21.2	C
Alice Street (west)	0.250	24	5.0	A

The results shown in the previous table clearly show that the development generated traffic would theoretically have little impact on the operation of the Spalding Crescent / Alice Street / Jo Street intersection. The development traffic would theoretically result in insignificant increases in delays and queues. On this basis it is our opinion that the development generated traffic would not result in a need to undertake any physical improvement works at the intersection.



5.0 SUMMARY AND CONCLUSIONS

The proposal is for the development of a child care facility located at 45 Alice Street, Goodna. The development is to occupy the site that is currently vacant with an existing unsealed driveway from Alice Street which would be eliminated as part of this proposal. The car parking area associated with the proposed child care facility would be accessed via a driveway from Spalding Crescent.

i. note that the layout of this car parking area is considered acceptable and complies with the requirements of AS2890.1.

It is considered that the access arrangements as proposed would be adequate and would not have any adverse impacts on the general traffic in the local area. It is also considered that access to Spalding Crescent would provide safe and efficient access for all vehicles using the subject development. The separation of this access from the adjacent intersection is considered acceptable. This assessment of the potential impacts of the subject development has been based on assumptions that represent a "worst case" scenario for the development. Even though this is the case the results of our assessment have clearly indicated that the impacts of this development would be insignificant. We note that the layout of this car parking area is considered acceptable and complies with the requirements of Australian Standard AS2890.1.

The traffic generation and distribution assumptions made within this report conclude that the maximum additional traffic associated with the proposed development at the Spalding Crescent / Alice Street / Jo Street Intersection is 60 vehicles per peak hour. It is considered that the addition of a maximum of one vehicle approximately every two minutes to any turning movement at the subject intersection during the peak hours would have an insignificant impact on the operation external road network in the vicinity of the subject development site. The intersection analysis undertaken indicates that the addition of development traffic will theoretically result in insignificant increases to queuing and delays at the aforementioned intersection. The future operation of the intersection was also analysed and the results indicate that the intersection will be operating with acceptable levels of service in the 2015 with development scenario.

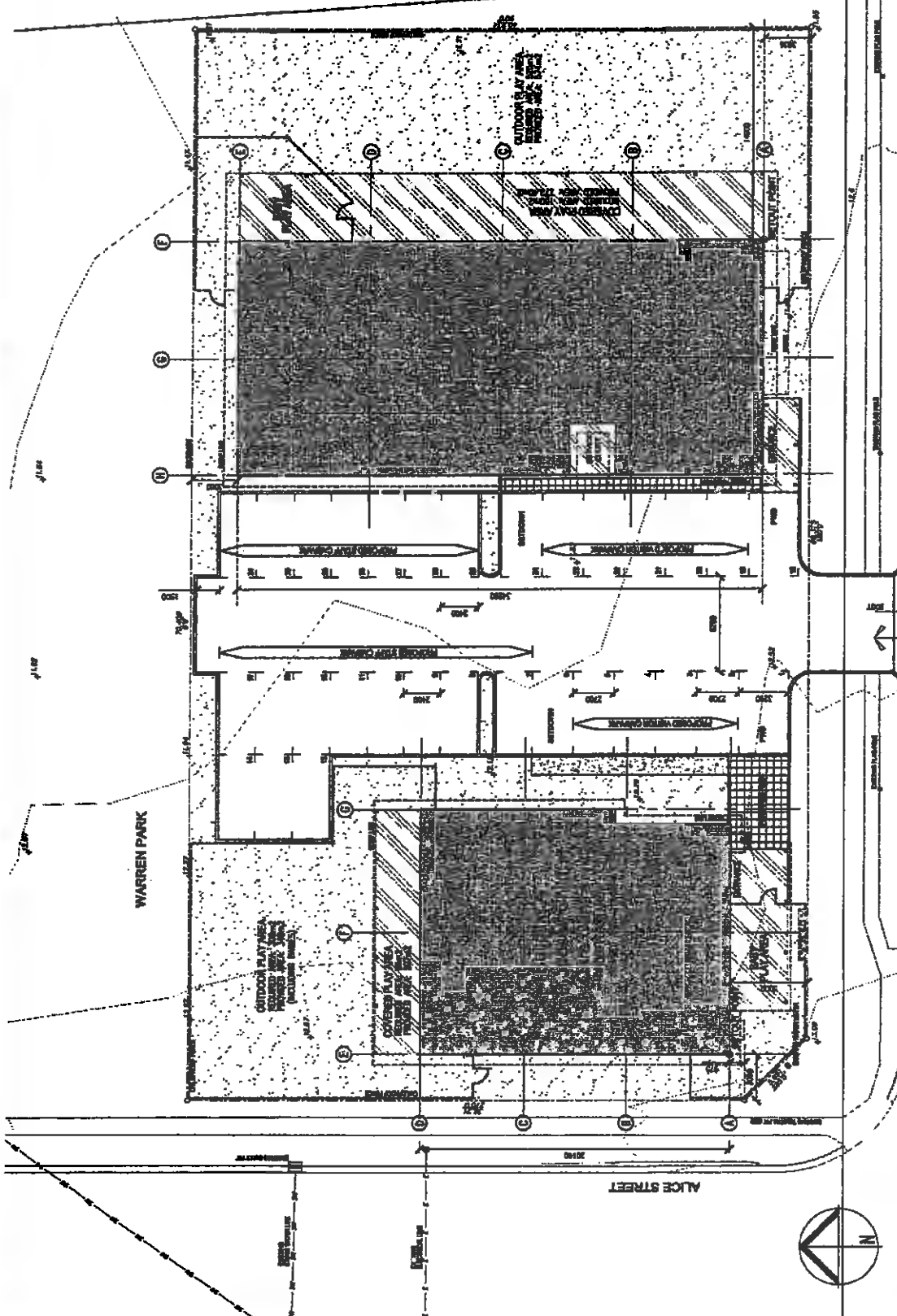
As such it is considered that the proposed development will not have a significant impact of the operation of the external road network in the vicinity of the proposed development.

This assessment of the potential impacts of the subject development has been based on assumptions that represent a "worst case" scenario for the development. Even though this is the case, the results of our assessment have clearly indicated that the impacts of this development would be insignificant.

We consider that on the basis of our assessment there are no traffic related grounds that would preclude approval of the application and that no external works would be required.

Appendix A

Layout Plans



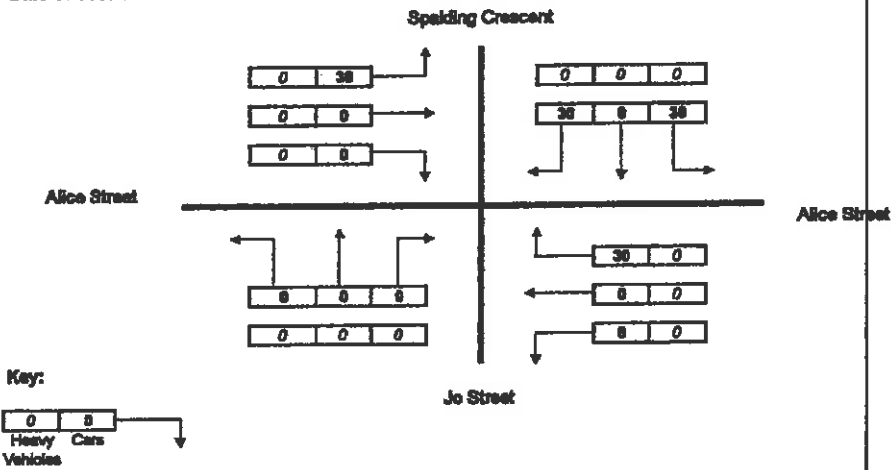
SITE PLAN
1:200

CDM DETAILS [Redacted]	PROPOSED 75 + 44 PLACE CHILDCARE CENTRE ALICE ST - GOODNA		PROJECT SCHEDULE <table border="1"> <tr> <th>DATE</th> <th>REVISION</th> <th>CLP</th> </tr> <tr> <td></td> <td>ISSUED</td> <td>2000</td> </tr> <tr> <td></td> <td>REVISED</td> <td>LAM/CPD</td> </tr> </table>		DATE	REVISION	CLP		ISSUED	2000		REVISED	LAM/CPD	TABLETOP kdw		SITE PLAN SCALE: 1:200 DATE: 10/10/2017 5518		INITIAL ISSUE A01 B									
	DATE	REVISION	CLP																								
	ISSUED	2000																									
	REVISED	LAM/CPD																									
REVISIONS <table border="1"> <tr> <th>NO.</th> <th>DESCRIPTION</th> <th>DATE</th> </tr> <tr> <td>1</td> <td>ISSUED</td> <td>2000</td> </tr> <tr> <td>2</td> <td>REVISED</td> <td>LAM/CPD</td> </tr> </table>		NO.	DESCRIPTION	DATE	1	ISSUED	2000	2	REVISED	LAM/CPD	APPROVALS <table border="1"> <tr> <th>NO.</th> <th>NAME</th> <th>DATE</th> </tr> <tr> <td>1</td> <td>ISSUED</td> <td>2000</td> </tr> <tr> <td>2</td> <td>REVISED</td> <td>LAM/CPD</td> </tr> </table>		NO.	NAME	DATE	1	ISSUED	2000	2	REVISED	LAM/CPD	CDM DETAILS [Redacted]		TABLETOP kdw		INITIAL ISSUE A01 B	
NO.	DESCRIPTION	DATE																									
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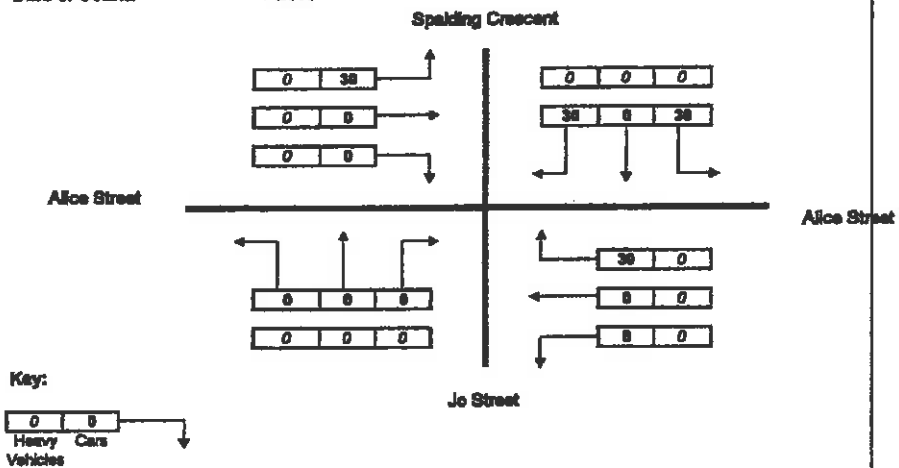
Appendix B

Traffic Flow Diagrams

AM Peak 7:00 to 8:00
Date of Count: 2005



Pm Peak 16:00 to 17:00
Date of Count: 2005



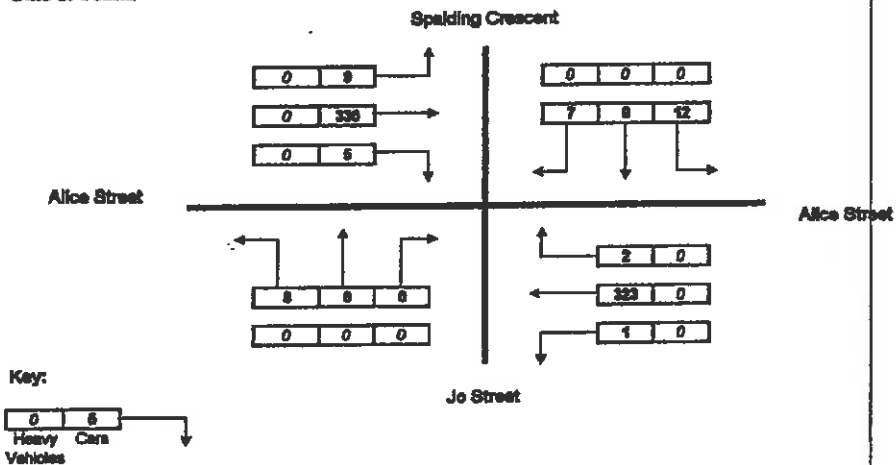
Development Traffic Only
Spalding Crescent / Alice Street / Jo Street Intersection
Figure B1



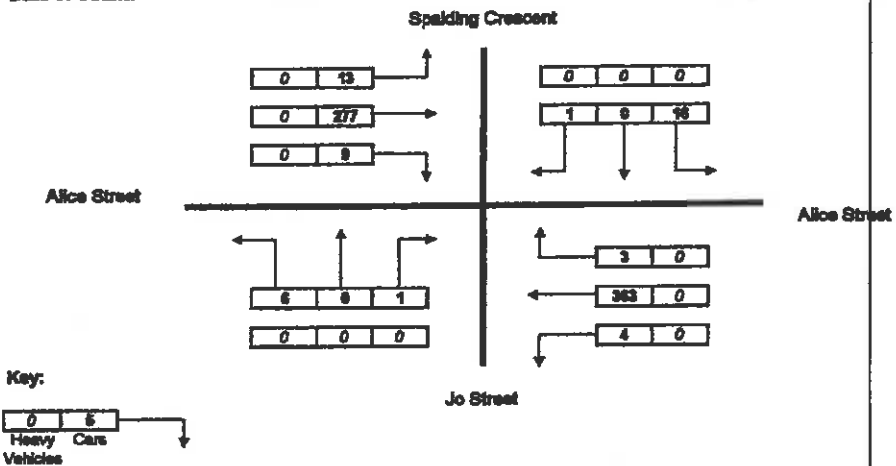
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ENGINEERS • MANAGERS • SCIENTISTS

Project Name: Alice Street Child Care Centre
Project Number: B04634

AM Peak 7:00 to 8:00
Date of Count: 2005



Pm Peak 16:00 to 17:00
Date of Count: 2005



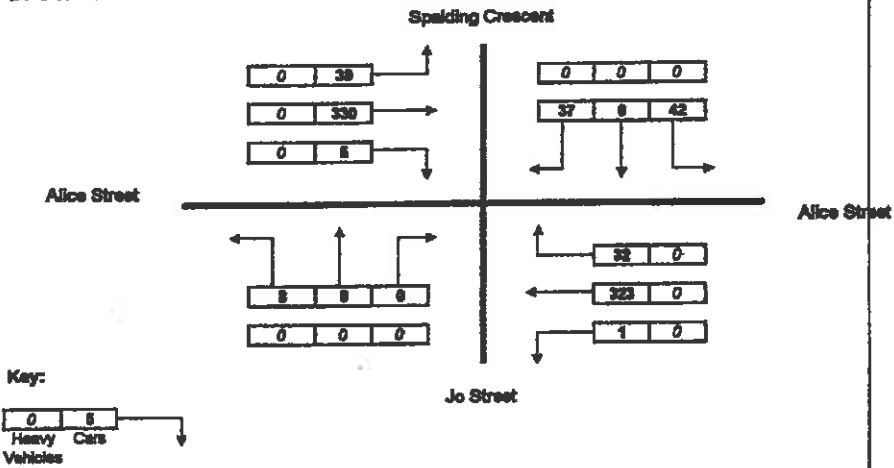
2005 Background Traffic Only
Spalding Crescent / Alice Street / Jo Street Intersection
Figure B2



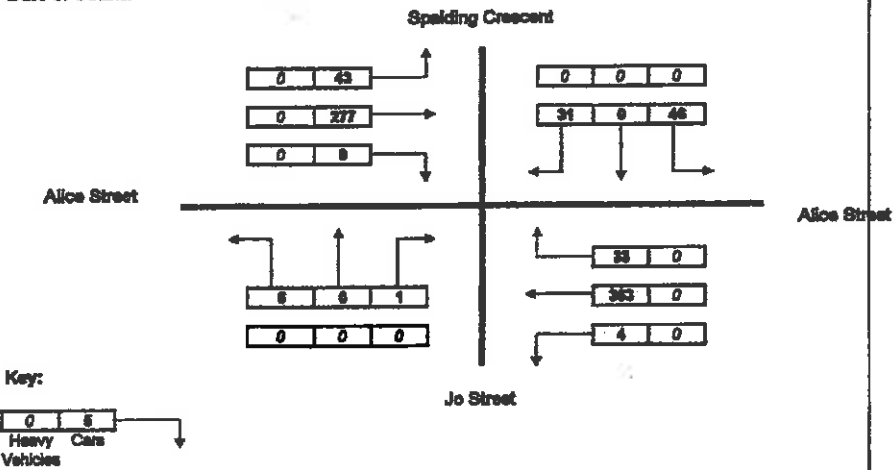
LAMBERT & REHBEIN
ENGINEERS • MANAGERS • SCIENTISTS

Project Name: Alice Street Child Care Centre
Project Number: B04634

AM Peak 7:00 to 8:00
Date of Count: 2005



Pm Peak 16:00 to 17:00
Date of Count: 2005



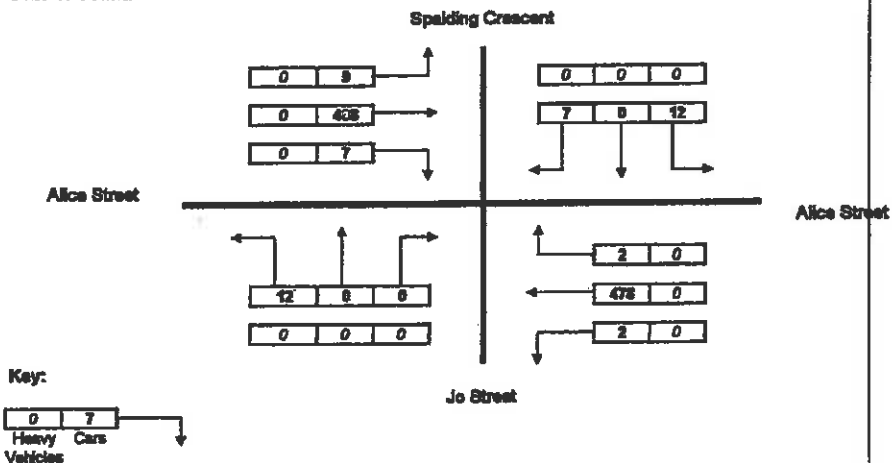
2005 Background + Development Traffic
Spalding Crescent / Alice Street / Jo Street Intersection
Figure B3



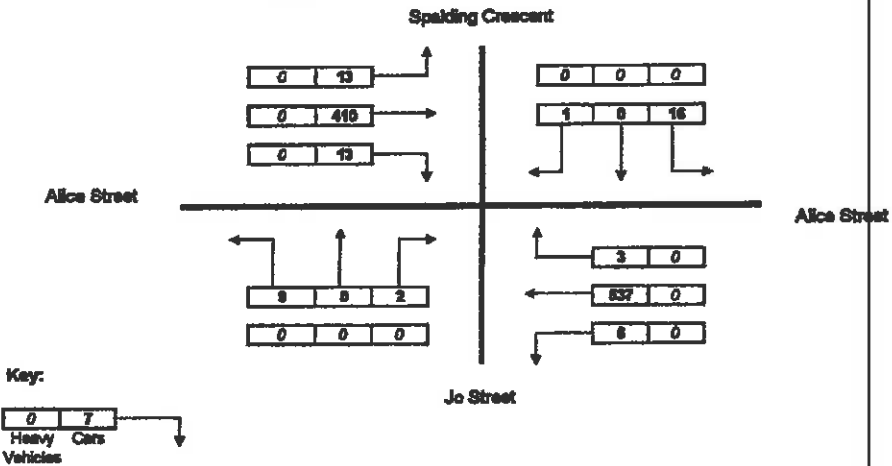
LAMBERT & REHBEIN
ENGINEERS • MANAGERS • SCIENTISTS

Project Name: Alice Street Child Care Centre
Project Number: B04634

AM Peak 7:00 to 8:00
Date of Count: 2015



Pm Peak 16:00 to 17:00
Date of Count: 2015



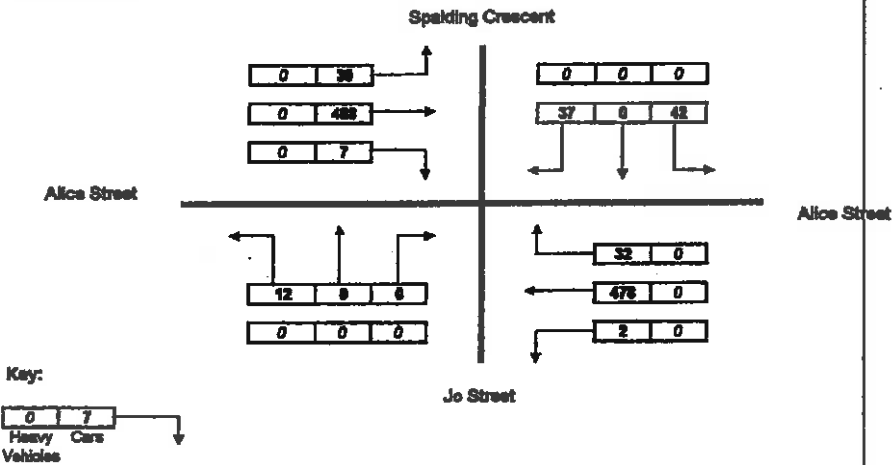
2015 Background Traffic Only
Spalding Crescent / Alice Street / Jo Street Intersection
Figure B4



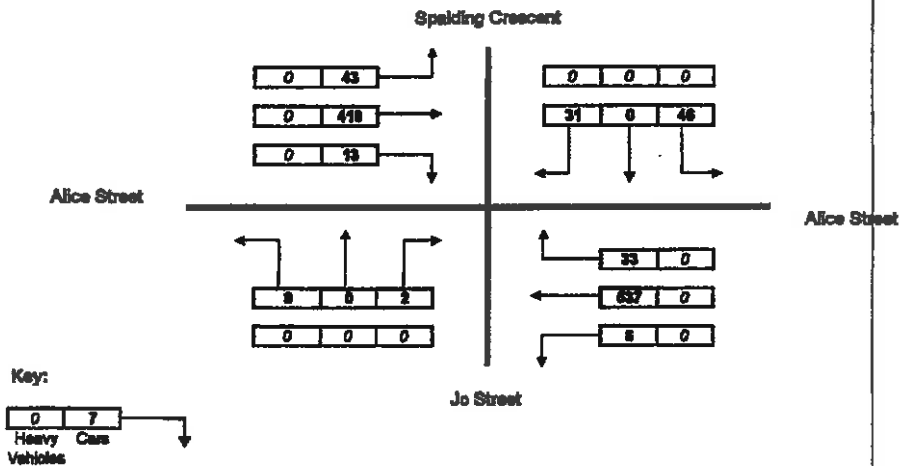
LAMBERT & REHBEIN
ENGINEERS • MANAGERS • SCIENTISTS

Project Name: Alice Street Child Care Centre
Project Number: B04834

AM Peak 7:00 to 8:00
Date of Count: 2015



Pm Peak 16:00 to 17:00
Date of Count: 2015



2015 Background + Development Traffic
Spalding Crescent / Alice Street / Jo Street Intersection
Figure B5



LAMBERT & REHBEIN
ENGINEERS • MANAGERS • SCIENTISTS

Project Name: Alice Street Child Care Centre
Project Number: B04694

Appendix C

aaSIDRA2.1 Summary Output Tables

Movement Summary

Spalding Crescent / Alice Street 2005 AM Background Traffic Only

Give-way

Vehicle Movements

Mov No	Turn	Dem Flow (veh/h)	%HV	Deg of Satn (v/c)	Aver Delay (sec)	Level of Service	95% Back of Queue (m)	Prop. Queued	Eff. Stop Rate	Aver Speed (km/h)
Joe Street										
1	L	8	0.0	0.016	11.3	LOS B	0	0.46	0.66	45.7
2	T	1	0.0	0.016	10.8	LOS B	0	0.46	0.75	46.2
2	R	1	0.0	0.016	10.8	LOS B	0	0.46	0.75	46.2
Approach		10	0.0	0.016	11.2	LOS B	0	0.46	0.67	45.8
Alice Street East										
4	L	1	0.0	0.167	10.0	LOS A	12	0.51	0.32	46.7
5	T	323	0.0	0.168	1.9	LOS A	12	0.51	0.00	53.5
5	R	2	0.0	0.168	1.9	LOS A	12	0.51	0.00	53.5
Approach		326	0.0	0.168	1.9	LOS A	12	0.51	0.01	53.5
Spalding Crescent										
7	L	12	0.0	0.040	13.1	LOS B	1	0.52	0.69	44.1
8	T	1	0.0	0.040	13.2	LOS B	1	0.52	0.83	43.9
8	R	7	0.0	0.040	13.2	LOS B	1	0.52	0.83	43.9
Approach		20	0.0	0.040	13.1	LOS B	1	0.52	0.75	44.0
Alice Street West										
10	L	9	0.0	0.180	9.9	LOS A	13	0.51	0.33	46.8
11	T	330	0.0	0.179	1.9	LOS A	13	0.51	0.01	53.5
11	R	5	0.0	0.179	1.9	LOS A	13	0.51	0.01	53.5
Approach		344	0.0	0.179	2.1	LOS A	13	0.51	0.02	53.3
All Vehicles		700	0.0	0.180	2.4	Not Applicable	13	0.51	0.04	52.9



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Movement Summary

Spalding Crescent / Alice Street 2005 PM Background Traffic Only

Give-way

Vehicle Movements

Mov No	Turn	Dem Flow (veh/h)	%HV	Deg of Satn (v/c)	Aver Delay (sec)	Level of Service	95% Back of Queue (m)	Prop. Queued	Eff. Stop Rate	Aver Speed (km/h)
Joe Street										
1	L	6	0.0	0.014	11.9	LOS B	0	0.49	0.67	45.2
2	T	1	0.0	0.014	11.4	LOS B	0	0.49	0.75	45.6
2	R	1	0.0	0.014	11.4	LOS B	0	0.49	0.75	45.6
Approach		8	0.0	0.014	11.7	LOS B	0	0.49	0.69	45.3
Alice Street East										
4	L	4	0.0	0.190	9.7	LOS A	14	0.48	0.35	46.9
5	T	363	0.0	0.191	1.6	LOS A	14	0.48	0.01	53.8
5	R	3	0.0	0.191	1.6	LOS A	14	0.48	0.01	53.8
Approach		370	0.0	0.191	1.7	LOS A	14	0.48	0.01	53.7
Spalding Crescent										
7	L	16	0.0	0.024	10.5	LOS B	1	0.40	0.66	46.6
8	T	1	0.0	0.024	10.0	LOS A	1	0.40	0.75	47.0
8	R	1	0.0	0.024	10.0	LOS A	1	0.40	0.75	47.0
Approach		18	0.0	0.024	10.4	LOS B	1	0.40	0.67	46.6
Alice Street West										
10	L	13	0.0	0.159	10.2	LOS B	12	0.54	0.31	46.7
11	T	277	0.0	0.158	2.3	LOS A	12	0.54	0.02	53.0
11	R	9	0.0	0.158	2.3	LOS A	12	0.54	0.02	53.0
Approach		299	0.0	0.158	2.6	LOS A	12	0.54	0.04	52.7
All Vehicles		695	0.0	0.191	2.4	Not Applicable	14	0.50	0.05	53.0

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Movement Summary

Spalding Crescent / Alice Street 2005 AM Background + Development

Give-way

Vehicle Movements

Mov No	Turn	Dem Flow (veh/h)	%HV	Deg of Satn (v/c)	Aver Delay (sec)	Level of Service	95% Back of Queue (m)	Prop. Queued	Eff. Stop Rate	Aver Speed (km/h)
Joe Street										
1	L	8	0.0	0.016	11.6	LOS B	1	0.47	0.66	45.4
2	T	1	0.0	0.016	11.1	LOS B	1	0.47	0.76	45.9
2	R	1	0.0	0.016	11.1	LOS B	1	0.47	0.76	45.9
Approach		10	0.0	0.016	11.5	LOS B	1	0.47	0.68	45.5
Alice Street East										
4	L	1	0.0	0.200	10.3	LOS B	14	0.54	0.31	46.6
5	T	323	0.0	0.199	2.9	LOS A	14	0.54	0.07	52.6
5	R	32	0.0	0.199	2.9	LOS A	14	0.54	0.07	52.6
Approach		356	0.0	0.199	2.9	LOS A	14	0.54	0.07	52.5
Spalding Crescent										
7	L	42	0.0	0.187	15.0	LOS C	6	0.59	0.77	42.4
8	T	1	0.0	0.186	15.2	LOS C	6	0.59	0.88	42.2
8	R	37	0.0	0.186	15.2	LOS C	6	0.59	0.88	42.2
Approach		80	0.0	0.186	15.1	LOS C	6	0.59	0.82	42.3
Alice Street West										
10	L	39	0.0	0.195	10.0	LOS A	14	0.53	0.31	46.7
11	T	330	0.0	0.195	1.9	LOS A	14	0.53	0.01	53.2
11	R	5	0.0	0.195	1.9	LOS A	14	0.53	0.01	53.2
Approach		374	0.0	0.195	2.7	LOS A	14	0.53	0.04	52.4
All Vehicles		820	0.0	0.200	4.1	Not Applicable	14	0.54	0.14	51.2



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Movement Summary

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Give-way

Vehicle Movements

Mov No	Turn	Dem Flow (veh/h)	%HV	Deg of Satn (v/c)	Aver Delay (sec)	Level of Service	95% Back of Queue (m)	Prop. Queued	Eff. Stop Rate	Aver Speed (km/h)
Joe Street										
1	L	6	0.0	0.014	12.2	LOS B	0	0.50	0.67	44.9
2	T	1	0.0	0.014	11.7	LOS B	0	0.50	0.76	45.3
2	R	1	0.0	0.014	11.7	LOS B	0	0.50	0.76	45.3
Approach		8	0.0	0.014	12.1	LOS B	0	0.50	0.69	45.0
Alice Street East										
4	L	4	0.0	0.222	10.0	LOS B	16	0.51	0.33	46.8
5	T	363	0.0	0.220	2.5	LOS A	16	0.51	0.06	52.9
5	R	33	0.0	0.220	2.5	LOS A	16	0.51	0.06	52.9
Approach		400	0.0	0.220	2.6	LOS A	16	0.51	0.06	52.8
Spalding Crescent										
7	L	46	0.0	0.165	14.0	LOS B	5	0.54	0.73	43.3
8	T	1	0.0	0.165	14.2	LOS B	5	0.54	0.86	43.0
8	R	31	0.0	0.165	14.2	LOS B	5	0.54	0.86	43.0
Approach		78	0.0	0.165	14.1	LOS B	5	0.54	0.79	43.2
Alice Street West										
10	L	43	0.0	0.174	10.2	LOS B	13	0.56	0.29	46.5
11	T	277	0.0	0.174	2.3	LOS A	13	0.56	0.02	52.7
11	R	9	0.0	0.174	2.3	LOS A	13	0.56	0.02	52.7
Approach		329	0.0	0.174	3.3	LOS A	13	0.56	0.06	51.8
All Vehicles		815	0.0	0.222	4.1	Not Applicable	16	0.54	0.14	51.3

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Give-way

Vehicle Movements

Mov No	Turn	Dem Flow (veh/h)	%HV	Deg of Satn (v/c)	Aver Delay (sec)	Level of Service	95% Back of Queue (m)	Prop. Queued	Eff. Stop Rate	Aver Speed (km/h)
Joe Street										
1	L	12	0.0	0.029	13.5	LOS B	1	0.56	0.74	43.7
2	T	1	0.0	0.029	13.0	LOS B	1	0.56	0.84	44.1
2	R	1	0.0	0.029	13.0	LOS B	1	0.56	0.84	44.1
Approach		14	0.0	0.029	13.5	LOS B	1	0.56	0.76	43.7
Alice Street East										
4	L	2	0.0	0.250	11.7	LOS B	23	0.68	0.21	45.4
5	T	478	0.0	0.249	3.5	LOS A	23	0.68	0.00	51.7
5	R	2	0.0	0.249	3.5	LOS A	23	0.68	0.00	51.7
Approach		482	0.0	0.249	3.5	LOS A	23	0.68	0.00	51.6
Spalding Crescent										
7	L	12	0.0	0.066	18.3	LOS C	2	0.68	0.81	39.8
8	T	1	0.0	0.066	18.4	LOS C	2	0.68	0.90	39.7
8	R	7	0.0	0.066	18.4	LOS C	2	0.68	0.90	39.7
Approach		20	0.0	0.066	18.4	LOS C	2	0.68	0.85	39.8
Alice Street West										
10	L	9	0.0	0.265	11.6	LOS B	24	0.68	0.21	45.5
11	T	488	0.0	0.263	3.5	LOS A	24	0.68	0.01	51.6
11	R	7	0.0	0.263	3.5	LOS A	24	0.68	0.01	51.6
Approach		504	0.0	0.263	3.6	LOS A	24	0.68	0.02	51.5
All Vehicles		1020	0.0	0.265	4.0	Not Applicable	24	0.68	0.04	51.1



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Movement Summary

Spalding Crescent / Alice Street 2015 PM Background Traffic Only

Give-way

Vehicle Movements

Mov No	Turn	Dem Flow (veh/h)	%HV	Deg of Satn (v/c)	Aver Delay (sec)	Level of Service	95% Back of Queue (m)	Prop. Queued	Eff. Stop Rate	Aver Speed (km/h)
Joe Street										
1	L	9	0.0	0.032	15.8	LOS C	1	0.63	0.78	41.8
2	T	1	0.0	0.032	15.5	LOS C	1	0.63	0.88	42.0
2	R	2	0.0	0.032	15.5	LOS C	1	0.63	0.88	42.0
Approach		12	0.0	0.032	15.7	LOS C	1	0.63	0.80	41.9
Alice Street East										
4	L	6	0.0	0.286	11.1	LOS B	25	0.65	0.23	46.0
5	T	537	0.0	0.282	2.9	LOS A	25	0.65	0.00	52.0
5	R	3	0.0	0.282	2.9	LOS A	25	0.65	0.00	52.0
Approach		546	0.0	0.282	3.0	LOS A	25	0.65	0.01	51.9
Spalding Crescent										
7	L	16	0.0	0.033	12.5	LOS B	1	0.52	0.72	44.6
8	T	1	0.0	0.033	12.0	LOS B	1	0.52	0.83	45.0
8	R	1	0.0	0.033	12.0	LOS B	1	0.52	0.83	45.0
Approach		18	0.0	0.033	12.4	LOS B	1	0.52	0.73	44.7
Alice Street West										
10	L	13	0.0	0.232	12.1	LOS B	22	0.70	0.20	45.0
11	T	410	0.0	0.234	4.2	LOS A	22	0.70	0.03	51.3
11	R	13	0.0	0.234	4.2	LOS A	22	0.70	0.03	51.3
Approach		436	0.0	0.234	4.4	LOS A	22	0.70	0.03	51.0
All Vehicles		1012	0.0	0.286	3.9	Not Applicable	25	0.67	0.04	51.2


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Movement Summary

Spalding Crescent / Alice Street 2015 AM Background + Development

Give-way

Vehicle Movements

Mov No	Turn	Dem Flow (veh/h)	%HV	Deg of Satn (v/c)	Aver Delay (sec)	Level of Service	95% Back of Queue (m)	Prop. Queued	Eff. Stop Rate	Aver Speed (km/h)
Joe Street										
1	L	12	0.0	0.031	14.0	LOS B	1	0.57	0.75	43.3
2	T	1	0.0	0.031	13.5	LOS B	1	0.57	0.85	43.7
2	R	1	0.0	0.031	13.5	LOS B	1	0.57	0.85	43.7
Approach		14	0.0	0.031	13.9	LOS B	1	0.57	0.76	43.4
Alice Street East										
4	L	2	0.0	0.286	12.3	LOS B	28	0.71	0.19	44.8
5	T	478	0.0	0.287	4.7	LOS A	28	0.71	0.06	50.9
5	R	32	0.0	0.287	4.7	LOS A	28	0.71	0.06	50.9
Approach		512	0.0	0.287	4.7	LOS A	28	0.71	0.06	50.8
Spalding Crescent										
7	L	42	0.0	0.316	24.2	LOS C	11	0.77	0.98	36.0
8	T	1	0.0	0.317	24.5	LOS C	11	0.77	0.97	35.7
8	R	37	0.0	0.317	24.5	LOS C	11	0.77	0.97	35.7
Approach		80	0.0	0.316	24.4	LOS C	11	0.77	0.98	35.9
Alice Street West										
10	L	39	0.0	0.279	11.6	LOS B	26	0.71	0.19	45.4
11	T	488	0.0	0.280	3.6	LOS A	26	0.71	0.01	51.3
11	R	7	0.0	0.280	3.6	LOS A	26	0.71	0.01	51.3
Approach		534	0.0	0.280	4.2	LOS A	26	0.71	0.03	50.8
All Vehicles		1140	0.0	0.317	5.9	Not Applicable	28	0.71	0.12	49.3



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Movement Summary

Spalding Crescent / Alice Street 2015 PM Background + Development

Give-way

Vehicle Movements

Mov No	Turn	Dem Flow (veh/h)	%HV	Deg of Satn (v/c)	Aver Delay (sec)	Level of Service	95% Back of Queue (m)	Prop. Queued	Eff. Stop Rate	Aver Speed (km/h)
Joe Street										
1	L	9	0.0	0.033	16.1	LOS C	1	0.62	0.77	41.6
1	T	1	0.0	0.033	16.1	LOS C	1	0.62	0.77	41.6
2	R	2	0.0	0.033	16.5	LOS C	1	0.62	0.89	41.2
Approach		12	0.0	0.033	16.1	LOS C	1	0.62	0.79	41.5
Alice Street East										
4	L	6	0.0	0.318	3.6	LOS A	31	0.69	0.00	51.5
4	T	537	0.0	0.318	3.6	LOS A	31	0.69	0.00	51.5
5	R	35	0.0	0.318	11.9	LOS B	31	0.69	0.88	45.1
Approach		578	0.0	0.319	4.1	LOS A	31	0.69	0.06	51.1
Spalding Crescent										
7	L	46	0.0	0.271	21.1	LOS C	9	0.71	0.91	37.9
8	T	1	0.0	0.271	21.3	LOS C	9	0.71	0.94	37.7
8	R	31	0.0	0.271	21.3	LOS C	9	0.71	0.94	37.7
Approach		78	0.0	0.270	21.2	LOS C	9	0.71	0.92	37.8
Alice Street West										
10	L	43	0.0	0.250	12.2	LOS B	24	0.73	0.18	44.9
11	T	410	0.0	0.250	4.3	LOS A	24	0.73	0.03	50.9
11	R	13	0.0	0.250	4.3	LOS A	24	0.73	0.03	50.9
Approach		466	0.0	0.250	5.0	LOS A	24	0.73	0.04	50.3
All Vehicles		1134	0.0	0.318	5.8	Not Applicable	31	0.71	0.12	49.5

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APPENDIX D

Environmental Noise Level Study

David Moore & Associates Pty Ltd
Environmental Acoustic Consultants



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**Environmental Noise Level Study for Proposed Child Care Centre,
45 Alice Street, Goodna**

conducted for

J B Goodwin Midson & Partners

Report No: R06044/D1245/Rev.0/28.02.05

"The Sound Choice in Acoustics"

Report prepared for:

**J B Goodwin Midson & Partners
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c/- J B Goodwin Midson & Partners**

Date of assessment:

Wednesday 16 February 2005

Consultants:

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Our reference:

**[REDACTED] B App Sc, MAAS
R05044/D1245/Rev.0/28.02.05**

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It is proposed to develop the currently vacant site at 45 Alice Street, Goodna, for a child care centre. Based on the consultant's site inspection, this proposed development could be noise impacted by traffic on Alice Street, both with respect to external and internal play areas. Noise from the child care centre (children at play and carpark) could noise impact the closest adjoining neighbours to the north and east.

- **A01 Site Plan**
- **A02 Building A Floor Plan**
- **A03 Building B Floor Plan**
- **A04 Building B Floor Plan**
- **A05 Landscape Plan**
- **A06 Building A Elevations**
- **A07 Building B Elevations.**

DataWorks Document Number: 1247590

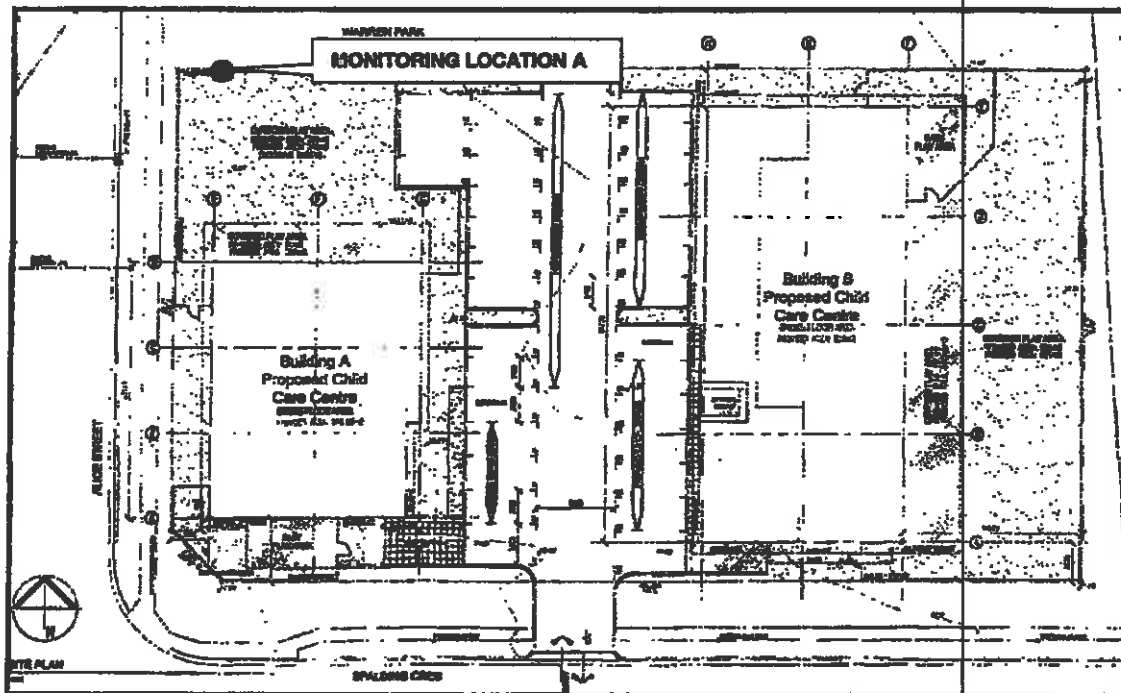


Figure 2
Site Plan and Monitoring Location A

CRITERIA

Noise Level Measurements

All noise level measurements were conducted in accordance with the following:

- general requirements of the Queensland environmental protection legislation;
- Environmental Protection (Noise) Policy 1997;
- Ipswich City Council Local Planning Policy;
- *Road Traffic Noise Management: Code of Practice*, Department of Main Roads, Version 2, January 2000;
- *Noise Measurement Manual*, Queensland Government – Environmental Protection Agency, 3rd Edition, March 2000; and
- Australian Standard AS 1055.1-1997, *Acoustics – Description and Measurement of Environmental Noise*, Part 1, *General Procedures*.

Noise Limits

Department of Main Roads

In accordance with the DMR document, *Road Traffic Noise Management: Code of Practice, Version 2, January 2000*, the relevant traffic noise limits are as follows, for the complete proposed development:

"... B6. Rationale and Criteria: Proposed Residential Developments ...

Educational, Community and Health Buildings,

Classrooms, Meeting or Habitable Rooms:

- 48 dB(A) L_{10} (1 hour) or less, as measured or calculated (in the centre of the room) as an indoor level.*

Parks, Outdoor Educational and Recreational Areas,

Open Space:

- 63 dB(A) L_{10} (12 hour) or less, taking into consideration the full circumstances surrounding the provision and future use of the park or recreational area. ..."*

Ipswich City Council

With respect to traffic noise impact upon the proposed child care centre, Ipswich City Council does not have a specific environmental noise policy. Therefore, the Department of Main Roads criteria will be adopted as the appropriate criteria for traffic noise impact.

For noise from the child care centre – children at play and vehicle activities in the carpark – these noise sources are time-varying. For time-varying noise sources Ipswich City Council has adopted the following noise limits:

"... (b) Noise levels emitted from the development, including:

... (ii) Emissions of noise from the development, when measured inside the most affected sensitive use as the average maximum A-weighted sound pressure level ($L_{Amax,T}$) where T is > or = 15 mins, must not exceed 45 dB(A) between 2200 to 0700.

(iii) Emissions of noise during the day and evening period (0700 – 2200) must not cause;

(a) The L_{A1} and L_{A10} , measured over a period of at least 15 minutes, at the boundary of any sensitive land use, to exceed the ambient L_{A1} and L_{A10} , measured over a period of at least 15 minutes, by more than 3 dB(A)

(b) the average maximum A-weighted sound pressure level ($L_{Amax,T}$) where T is > or = 15 mins, at the boundary of any sensitive land use, to exceed the ambient average maximum A-weighted sound pressure level ($L_{Amax,T}$), measured over a period of at least 15 minutes, by more than 3 dB(A).

{Note: noise events must be clearly identified and comparison of ambient events with predicted events must be related ie. cannot compare noise level of birds/insects to noise level of banging of hammers or grinding}

{Note: Where noise levels stipulated under the Environmental Protection Regulation are more stringent than the above criteria, then it is expected that the more stringent criteria must apply. However, this must be justified and demonstrated through appropriate assessment and modelling} ..."

CHILD CARE CENTRE – TRAFFIC NOISE

Traffic Noise Levels

A 12-hour noise level study was conducted from Monitoring Location A, 3 metres in from the Alice Street boundary of the subject site – refer Figure 2 for details of monitoring location, Appendix A for details of measurement equipment, equipment settings, calibration, monitoring location and atmospheric conditions and Appendix B for all of the results of the noise level measurements.

From Appendix B, the current traffic noise levels at Location A are, relative to the requirements of the Department of Main Roads:

- $L_{A10,12h} = 67.6 \text{ dB(A)}$; and
- $L_{A10,1h} \text{ maximum} = 69.0 \text{ dB(A)}$.

These noise levels were at a separation distance of 13.5 metres from the centre line of the closest lane of traffic on Alice Street.

Traffic Noise Control – External Play Areas

At Monitoring Location A the current traffic noise level is 67.6 dB(A) $L_{A10,12h}$, which exceeds the noise limit. This is at a separation distance of 13.5 m from the closest lane of traffic. In the centre of the closest external play area to Alice Street the traffic noise level will be:

- 67.6 dB(A) $L_{A10,12h} - 1.4$ (increased separation distance) $- 2.1$ (reduced angle of view) $= 64.1 \text{ dB(A)}$ $L_{A10,12h}$.

This exceeds the noise limit by 1.1 dB(A) . Therefore, an acoustic barrier is required to control this noise limit exceedance. The above noise level includes ground attenuation, which is not applicable when an acoustic barrier is introduced. This ground attenuation would be, by calculation in accordance with CORTN88, 2.9 dB(A) . Therefore, the required traffic noise level reduction is $1.1 + 2.9 = 4 \text{ dB(A)}$.

By path difference calculation, a 1.2 metre high acoustic barrier would reduce traffic noise by 6.4 dB(A) . This acoustic barrier must be located as per Figure 3, for both the baby play area and outdoor play area of Building A, be gap free and continuous for its complete length and have a minimum surface area density of 10 kg/m^2 . Examples of suitable materials of construction include:

- reinforced concrete;
- concrete block;
- brick;
- sheet metal at least 2 mm thick;
- minimum 7.5 mm thick fibrous cement sheet;
- hebel panelling;
- lapped timber palings, for example, kiln dried softwood at least 15 mm thick and overlapped a minimum 25 mm or at least 19 mm thick and overlapped a minimum 15 mm;
- earth mound;
- any combination of the above.

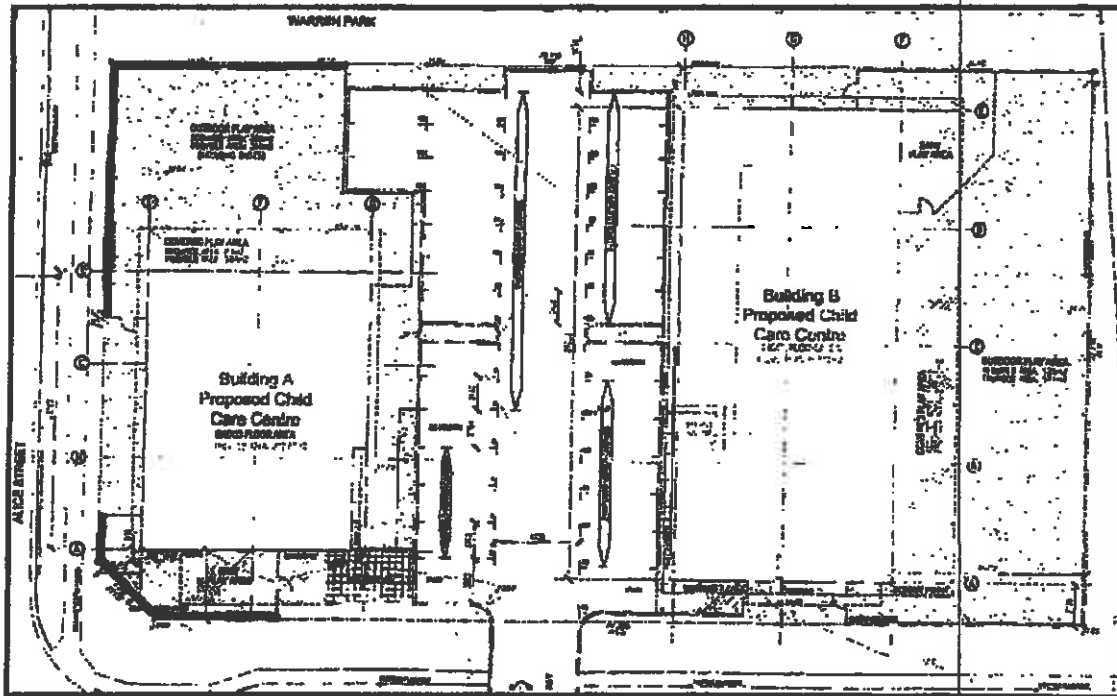


Figure 3
Location of 1200 mm high Acoustic Barriers (bold lines)

The external play areas in Figure 3 with the acoustic barriers are the only external play areas that require traffic noise control.

Traffic Noise Control – Internal Areas – Building A

Play Areas (Internal) A, B and C and the Sleep Area of Building A have the potential to be traffic noise impacted. The internal noise limit is 48 dB(A) $L_{A10,1h}$. For each of the internal areas, traffic noise levels for open windows and doors are calculated below.

Sleep Room

With windows open the noise level of traffic inside this room will be:

- southern wall: 69.0 dB(A) $L_{A10,1h}$ (maximum) – 12 (outside to inside via open windows) = 57 dB(A);
- eastern wall: 69.0 dB(A) $L_{A10,1h}$ (maximum) – 11 (outside to inside via open windows) – 4 (reduced angle of view) – 6.4 (acoustic barrier) = 47.6 dB(A);
- total = 57.5 dB(A) $L_{A10,1h}$, which exceeds the noise limit by 10 dB(A).

To comply with the noise limit inside the Sleep Room all glazing to this area must have a minimum R_w 30 and all windows must be closed.

Play Area A

With the sliding glass door open, the internal traffic noise level will be:

- $69.0 \text{ dB(A)} L_{A10,1h} - 5.6$ (reduced angle of view) $- 6.4$ (acoustic barrier) $- 6$ (outside to inside via open door) $- 1.4$ (increased separation distance) $= 49.6 \text{ dB(A)}$.

This exceeds the noise limit by 1.6 dB(A). To comply with the noise limit, the sliding glass door must be closed. This sliding glass door could be standard glazing to provide adequate noise level reduction.

Play Area B

With the sliding glass door and window open, the internal traffic noise level will be:

- $69 \text{ dB(A)} L_{A10,1h(\max)} - 5.6$ (reduced angle of view) $- 6.4$ (acoustic barrier) $- 2$ (increased separation distance) $- 7$ (outside to inside via open glazing) $= 48 \text{ dB(A)}$.

This complies with the noise limit, with all external openings open.

Play Area C

With the windows and sliding glass door open, the internal traffic noise level will be:

- southern wall: $69 \text{ dB(A)} L_{A10,1h(\max)} - 8$ (outside to inside via open windows) $= 61 \text{ dB(A)}$;
- western wall: $69 \text{ dB(A)} L_{A10,1h(\max)} - 4$ (reduced angle of view) $- 6.4$ (acoustic barrier) $- 1.4$ (increased separation distance) $- 7$ (outside to inside via open windows) $= 50.2 \text{ dB(A)}$;
- total $= 61 \text{ dB(A)}$.

This exceeds the noise limit by 13 dB(A). To control this noise limit exceedances to the internal noise limit, all glazing must be closed and have a minimum Rw 28.

Traffic Noise Control – Internal Areas – Building B

Building B is sufficiently distant from Alice Street, and predominantly shielded by Building A, so that all internal areas would comply with the noise limits, with external openings open.

CHILD CARE CENTRE NOISE AT CLOSEST RESIDENCES

Potential noise impacts from the child care centre are the noise of children at play and vehicle noise from the carpark. The closest residences to the proposed child care centre are to the north and east. The noise level impact to these residences has been calculated.

Source Noise Levels

The consultant has conducted noise levels of children at outdoor play at a 75-child childcare centre. The noise level of these children at play was:

- 65 dB(A) $L_{Amax,T}$;
- 64 dB(A) L_{A1} ;
- 63 dB(A) L_{A10} ;
- 60 dB(A) $L_{Aeq,T}$

at an average separation distance of 10 metres. Based on the one-third octave frequency band analyses of these noise level measurements, the noise of the children at play was slightly tonal, with an appropriate adjustment of +2 dB(A).

With adjustment for tonality, the source noise levels of children at play are:

- | | |
|--------------------|------------------|
| • $L_{Aeq,adj,T}$ | 62 dB(A) @ 10 m; |
| • $L_{A10,adj,T}$ | 65 dB(A) @ 10 m; |
| • $L_{A1,adj,T}$ | 66 dB(A) @ 10 m; |
| • $L_{Amax,adj,T}$ | 67 dB(A) @ 10 m. |

From previous noise level measurements of carparks, typical source noise levels are:

- car driving in carpark: 50 dB(A) $L_{A10,adj,T}$ @ 8 m;
- car door closing: 52 dB(A) $L_{A10,adj,T}$ @ 30 m;
- car engine starting: 52 dB(A) $L_{A10,adj,T}$ @ 30 m.

These are the source noise levels for children at play and carpark that have been adopted in this report.

Noise Level Impact

Noise Impact from Child Care Centre – External Play Areas

From the ambient noise level measurements, the noise levels (without the child care centre) at the closest residence to the east would be, during the daytime (average of the 12 samples):

- $L_{Amax,adj,T} = 81$ dB(A)
- $L_{A1,adj,T} = 73$ dB(A)
- $L_{A10,adj,T} = 68$ dB(A)
- $L_{Aeq,adj,T} = 63$ dB(A)

and, at the closest residence to the north, 12 dB(A) less due to increased separation distance from Alice Street, namely:

- $L_{Amax,adj,T} = 69$ dB(A)
- $L_{A1,adj,T} = 61$ dB(A)
- $L_{A10,adj,T} = 56$ dB(A)
- $L_{Aeq,adj,T} = 51$ dB(A).

Therefore, at the closest residences to the east, the noise limits would be:

- $L_{Amax,adj,T} = 69 + 3 = 72 \text{ dB(A)}$
- $L_{A1,adj,T} = 61 + 3 = 64 \text{ dB(A)}$
- $L_{A10,adj,T} = 56 + 3 = 59 \text{ dB(A)}$
- $L_{Aeq,adj,T} = 51 + 3 = 54 \text{ dB(A)}$

and, at the closest residence to the north, the noise limits would be 6 dB(A) less due to angle of view and separation distance, namely:

- $L_{Amax,adj,T} = 75 + 3 = 78 \text{ dB(A)}$
- $L_{A1,adj,T} = 67 + 3 = 70 \text{ dB(A)}$
- $L_{A10,adj,T} = 62 + 3 = 65 \text{ dB(A)}$
- $L_{Aeq,adj,T} = 57 + 3 = 60 \text{ dB(A)}$

At the closest residence to the north, the noise of children at play in the centre of the closest external play area would be:

- 67 dB(A) $L_{Amax,adj,T} @ 10 \text{ m} - 14 (51 \text{ m separation distance}) = 53 \text{ dB(A)}$
- 66 dB(A) $L_{A1,adj,T} @ 10 \text{ m} - 14 = 52 \text{ dB(A)}$
- 65 dB(A) $L_{A10,adj,T} @ 10 \text{ m} - 14 = 51 \text{ dB(A)}$
- 62 dB(A) $L_{Aeq,adj,T} @ 10 \text{ m} - 14 = 48 \text{ dB(A)}$

All of these noise levels easily comply with the noise limits at the closest residence to the north, with no noise control measures required.

For the closest residences to the east, the noise of children at play in the centre of the closest external play area (Building B, northern side) would be:

- 67 dB(A) $L_{Amax,adj,T} @ 10 \text{ m} - 12 (\text{increased separation distance, } 41 \text{ m}) = 55 \text{ dB(A)}$
- 66 dB(A) $L_{A1,adj,T} @ 10 \text{ m} - 12 = 54 \text{ dB(A)}$
- 65 dB(A) $L_{A10,adj,T} @ 10 \text{ m} - 12 = 53 \text{ dB(A)}$
- 62 dB(A) $L_{Aeq,adj,T} @ 10 \text{ m} - 12 = 50 \text{ dB(A)}$

All of these noise levels easily comply with the noise limits at the closest residences to the east, with no noise control measures required.

Noise Impact from Child Care Centre – Carpark

The carpark only has the potential to noise impact the closest residences on the opposite side of Spalding Crescent. At these residences carpark noise will be:

- car driving in carpark: 50 dB(A) $L_{A10,adj,T} @ 8 \text{ m} - 11 (\text{separation distance of } 30 \text{ m}) = 39 \text{ dB(A)}$;
- car door closing: 52 dB(A) $L_{A10,adj,T} @ 30 \text{ m} - 0 = 52 \text{ dB(A)}$;
- car engine starting: 52 dB(A) $L_{A10,adj,T} @ 30 \text{ m} - 0 = 52 \text{ dB(A)}$.

These carpark noise levels easily comply with the noise limits for $L_{A10,adj,T}$ and would also comply with all other noise limits.

CONCLUSIONS

It is proposed to develop a child care centre at 45 Alice Street, Goodna. This child care centre has the potential to be noise impacted by traffic on Alice Street. Noise from the child care centre – children at play and carpark activities – could noise impact the closest residences to the east and north.

To assess current ambient noise levels and establish traffic noise levels, a 12-hour noise level study was conducted from 3 metres inside the Alice Street boundary of the subject site, on the western boundary. Based on these noise level measurements, traffic noise levels exceed the noise limits for the external play areas (and internal areas) of Building A only. Building B is sufficiently distant that all of the traffic noise limits are complied with. For the external play areas of Building A, the 1.2 metre high acoustic barriers detailed at Figure 3 are required. For the internal play areas, Area B complies with the noise limits with external openings closed, but all other internal play areas (and sleep room) of Building A require windows and/or sliding glass doors to be closed. For those rooms that require external openings to be closed, the minimum Rw requirements for the glazing are:

- Sleep Room windows Rw 30;
- Play Area A sliding glass door Rw 24;
- Play Area C windows and sliding glass doors Rw 28.

The noise of children at play outdoors and carpark activity complies with the noise limits at all of the closest residences, with no noise control measures required.

RECOMMENDATION

It is recommended that, from an environmental noise perspective, the proposed child care centre be approved, provided the noise control measures detailed in this report are incorporated into the development.

APPENDIX A: AMBIENT NOISE LEVEL MEASUREMENT EQUIPMENT

Measurement Equipment

The following equipment was used to conduct the 12-hour ambient noise level study at Monitoring Location A:

- Bruel and Kjaer Type 2260I Modular Precision Sound Analyzer – Observer – Serial No. 2409371, with Type BZ 7220 Software and Prepolarised free-field ½" microphone, Type 4189, Serial No. 2395445;
- Bruel and Kjaer Type 3592 outdoor microphone kit, including Type UA1404 outdoor microphone;
- Bruel and Kjaer Type AO 0442 ten metre microphone extension cable; and
- Bruel and Kjaer Type 4231 Sound Level Calibrator, Serial No. 2292746.

All of the above equipment is Type 1 in accordance with the requirements of Australian Standard AS 1259-1990, *Acoustics – Sound Level Meters*, as required by Australian Standard AS 2702-1984 and AS 1055.1-1997.

Measurement Equipment Settings

The above equipment was used with the following settings:

- Detector: RMS
- Time Weighting: FAST
- Frequency Weighting: A
- Sound Incidence: FRONTAL
- Microphone sensitivity: -26.1 dB
- Range: 20-100 dB.

Calibration

The sound level meter was calibrated to the required value of 93.8 dB at 1000 Hz immediately before and after the noise level measurements were conducted. At no time was an adjustment of more than ± 0.5 dB required. This complies with the requirements of the Australian Standard.

Monitoring Location

Monitoring Location A was on the western boundary of the subject site, 3 metres north of the Alice Street boundary. The microphone was elevated 1.6 metres above ground level. Refer Figure 2 for further details.

Atmospheric Conditions

Throughout the 12-hour period, atmospheric conditions complied with the requirements of the Australian Standard.

APPENDIX B: DETAILED RESULTS OF NOISE LEVEL MEASUREMENTS

Instrument: 2260
Application: BZ7219 version 1.1
16/02/2005 05:52:27
Start Time: AM
16/02/2005 06:00:53
End Time: PM
Elapsed Time: 12:08:26
Bandwidth: 1/1 Octave
Peaks Over: 140.0 dB
Range: 20.1-100.1 dB

	Time	Frequency
Broad-band measurements:	S F I	A C
Broad-band statistics:	F	A
Octave measurements:	F	L

	Logging
Log Rate:	1:00:00
Broadband Parameters:	All
Spectrum Parameters:	Nothing

Instrument Serial Number: 2409371
Microphone Serial Number: 2395445
Input: Microphone
Windscreen Correction: None
S. I. Correction: Frontal

Calibration Time: 13/01/2005 08:44:27
PM
Calibration Level: 94.0 dB
Sensitivity: -26.1 dB
ZF0023: Not used

Start date	Start time	L _{Aeq}	L _A Max	L _A Min	L _A F1	L _A F10	L _A F50	L _A F90	L _A F99
16/02/2005	06:00:00 AM	64.1	86.2	41.5	73.5	68.6	58.2	49.0	44.4
16/02/2005	07:00:00 AM	64.3	79.9	39.8	73.7	68.5	58.9	48.4	43.8
16/02/2005	08:00:00 AM	65.0	79.2	42.7	73.0	69.0	62.0	51.1	45.7
16/02/2005	09:00:00 AM	63.2	80.6	41.1	72.5	67.5	57.6	47.6	43.4
16/02/2005	10:00:00 AM	62.9	88.0	39.2	72.2	66.9	56.1	46.3	42.3
16/02/2005	11:00:00 AM	62.3	81.3	38.8	72.2	66.7	54.6	44.5	41.5
16/02/2005	12:00:00 PM	61.8	79.4	39.1	72.2	66.2	54.1	43.7	41.1
16/02/2005	01:00:00 PM	60.5	76.3	40.1	70.4	65.2	53.0	44.4	41.8
16/02/2005	02:00:00 PM	63.3	81.2	41.1	71.9	67.4	58.3	50.7	44.8
16/02/2005	03:00:00 PM	65.1	83.3	49.6	74.1	68.5	61.6	54.3	51.8
16/02/2005	04:00:00 PM	64.6	81.5	49.7	73.3	68.5	60.8	52.9	50.9
16/02/2005	05:00:00 PM	64.4	78.6	48.5	72.5	68.5	61.0	53.2	50.7

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& Partners
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Hillmir Pty Ltd.)
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Ph/Fax: (07) 5463 1596

J.B. Goodwin, Midson & Partners

Consulting Surveyors, Town Planners and
Development Consultants.

23 March 2005

The Chief Executive Officer
Ipswich City Council
PO Box 191
Ipswich QLD 4305

Dear Sir / Madam:

Re: Material Change of Use (Child Care Centre)
45 Alice Street, Goodna Qld 4300
Lot 3 on RP77071 Parish of Goodna

On behalf of [REDACTED] we hereby apply for a Development Permit for a Material Change of Use (Child Care Centre) for land described as Lot 3 on RP77071, Parish of Goodna, County of Stanley, situated at 45 Alice Street, Goodna.

A detailed explanation of the proposal is included in the accompanying town planning assessment report.

In accordance with Section 3.2.1 of the *Integrated Planning Act 1997* we enclose the following information:

- (i) IDAS Application Forms A, D and the Referrals Checklist;
- (ii) Three (3) copies of the town planning assessment report including plans (A4) and one (1) copy of attached proposal plans (A3); and
- (iii) Cheque in the amount of \$3,825.00 payable to Council as the prescribed application fee.

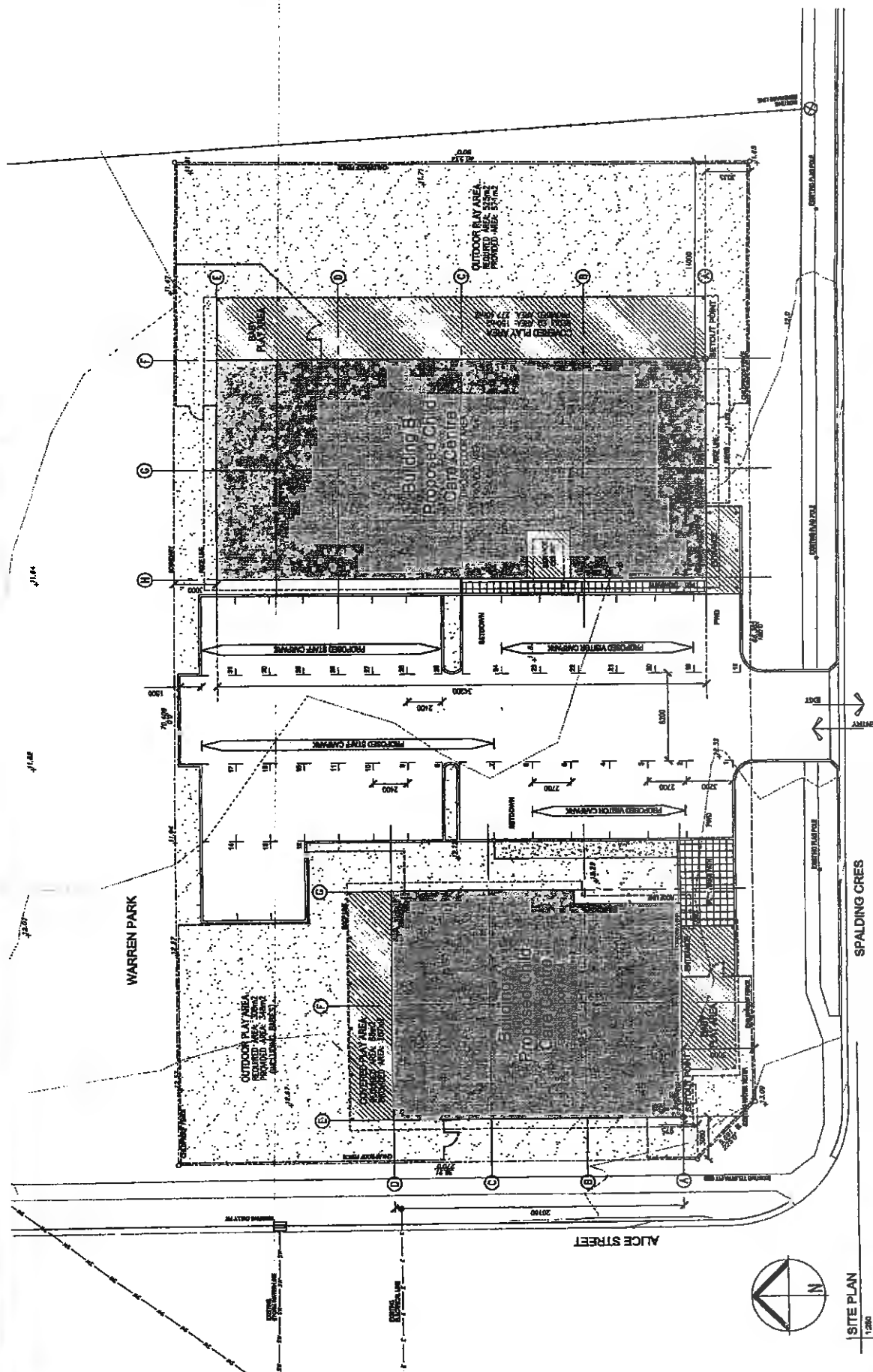
We await Council's favourable and prompt assessment of the application. Should you require any additional information or have any queries please do not hesitate to contact the writer.

Yours faithfully
J B Goodwin Midson & Partners

[REDACTED]
Town Planner

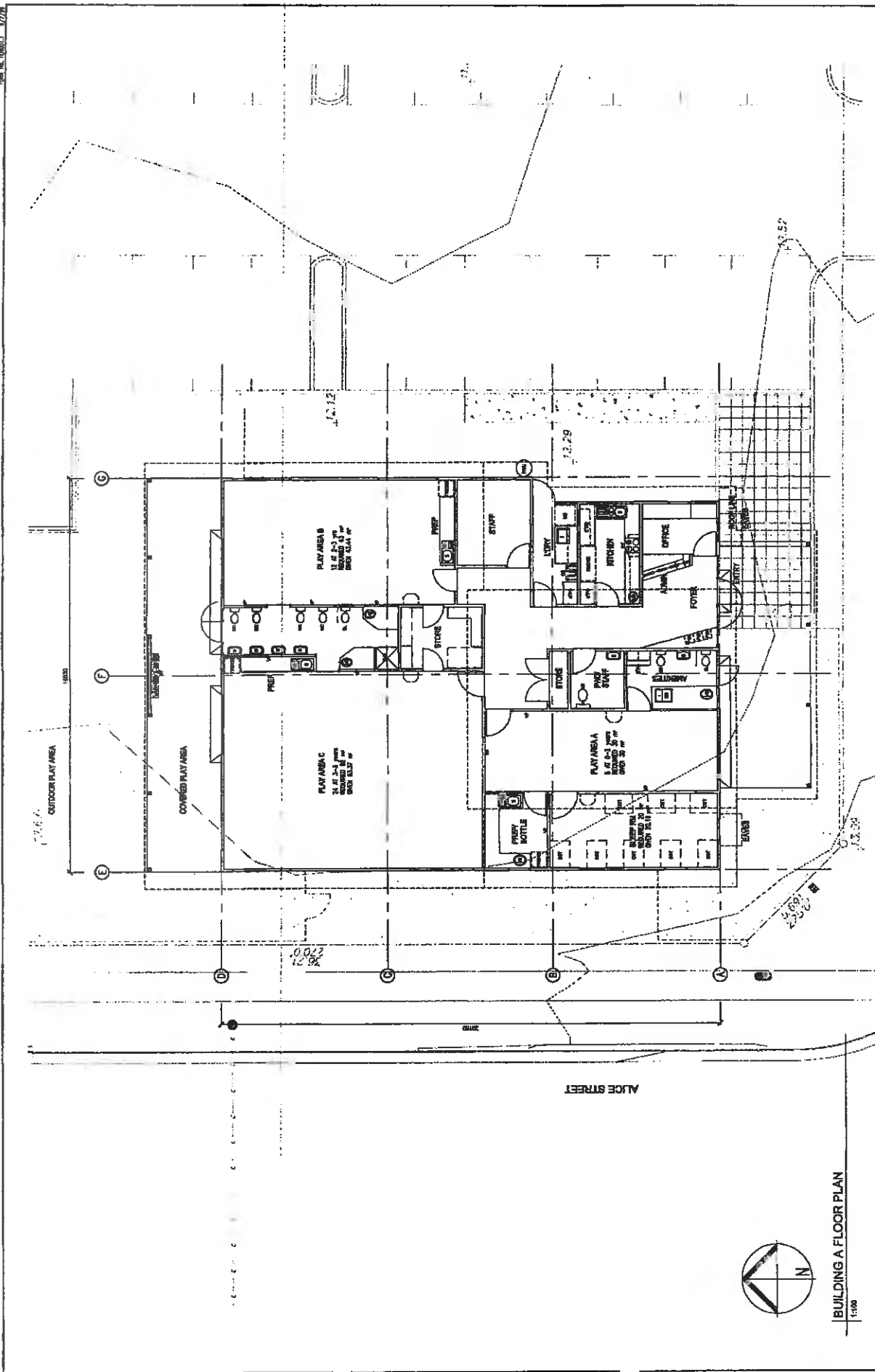
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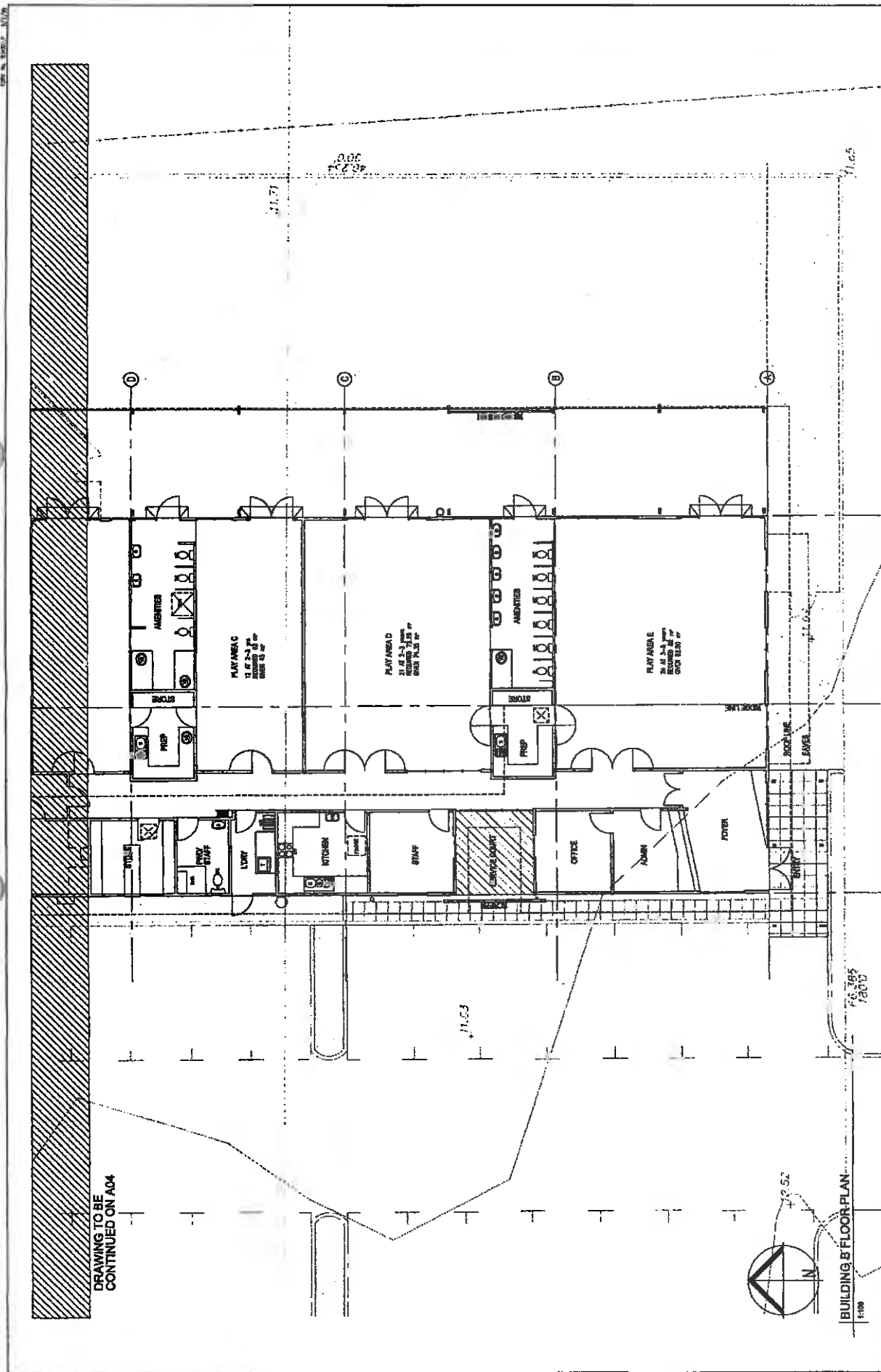


SITE PLAN
1250

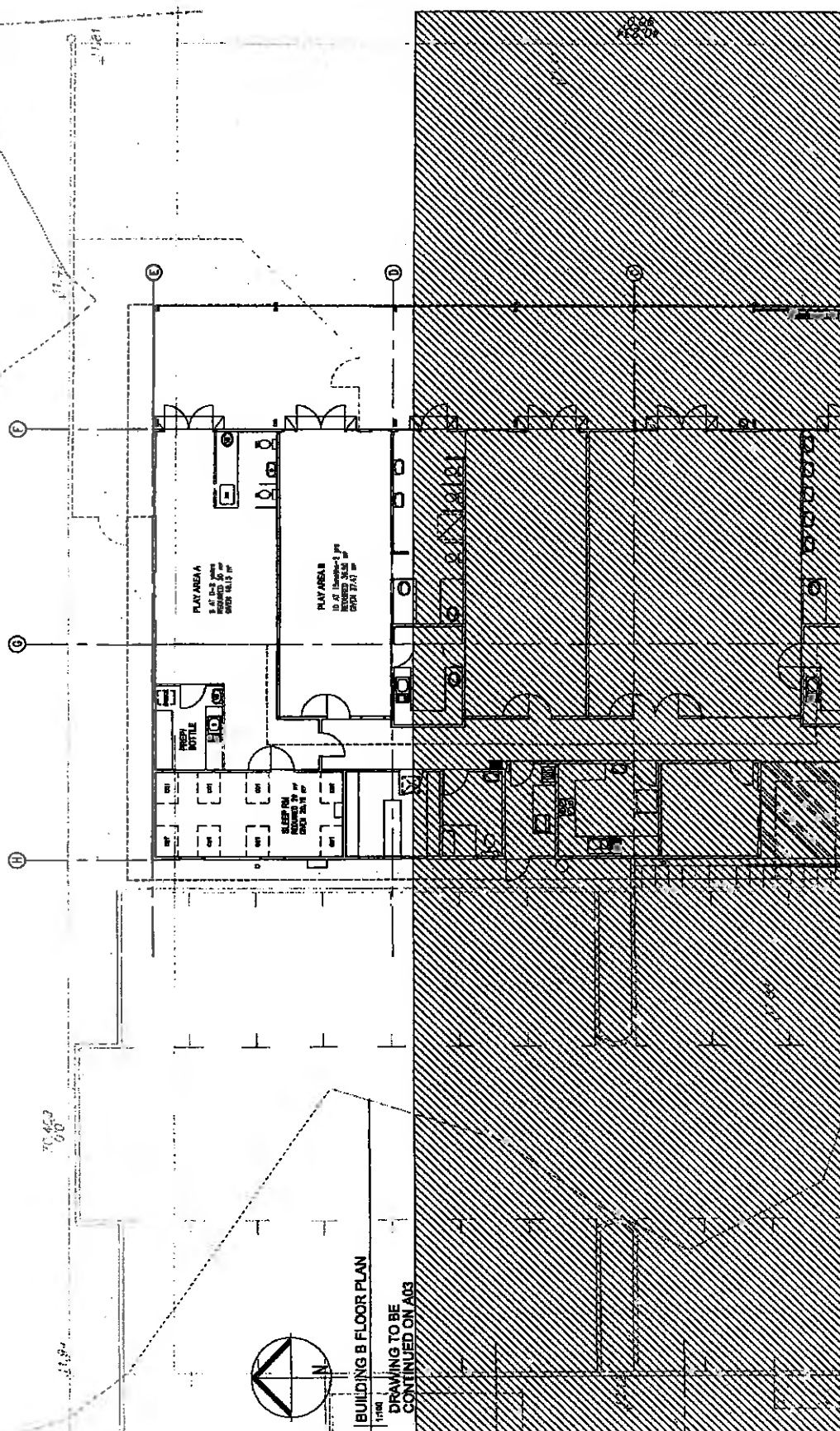
JOB NAME PROPOSED 75 + 44 PLACE CHILDCARE CENTRE ALICE ST - GOODINA	DESIGN NO/2-DIM/2E 		DRAWING TITLE SITE PLAN		SCALE 1" = 10' (1" = 30M)	SHEET NO. 5518	REV. A01 B
	I 18/01/06 DEVELOPMENT APPLICATION ZPC		DRAWING STATUS INITIAL ISSUE				
REV. DATE COMMENTS		INITIALS DATE		DRAWING NUMBER 1 61387 100 1 61388 100 1 61389 100		PROJECT NUMBER 1 613 001/003	
GENERAL NOTES 1. Complete in all dimensions according to the drawings and notes. 2. All dimensions are to be taken from the centre line of the road unless otherwise stated. 3. Dimensions, levels, etc. to be verified on site. 4. Any dimensions to be approved by the Council.		DRAWING NUMBER 1 61387 100 1 61388 100 1 61389 100		PROJECT NUMBER 1 613 001/003		DRAWING STATUS INITIAL ISSUE	
DESIGN NO/2-DIM/2E 		DRAWING TITLE SITE PLAN		SCALE 1" = 10' (1" = 30M)		SHEET NO. 5518	
I 18/01/06 DEVELOPMENT APPLICATION ZPC		DRAWING STATUS INITIAL ISSUE		DRAWING NUMBER 1 61387 100 1 61388 100 1 61389 100		PROJECT NUMBER 1 613 001/003	



JOB NAME PROPOSED 75 + 44 PLACE CHILDCARE CENTRE ALICE ST- GOODNA	SHEET TOTAL 1:100	BUILDING A FLOOR PLAN	TABLETOP	KDW	General notes: 1. Copyright is in documents created by KDW and shall remain the property of KDW. 2. No part of this document may be reproduced without written permission from KDW. 3. Drawings, text, etc. to be verified by the client prior to construction. 4. No responsibility is accepted for any errors or omissions in this document.	DATE	DESIGNED	C.P.	DRWN	ZRC	CHECKED	L.M./J.P.D.	APPROVED	DATE	
						12/01/2011	12/01/2011	12/01/2011	12/01/2011	12/01/2011	12/01/2011	12/01/2011	12/01/2011		
JOB NO. 5518		DRAWING TITLE BUILDING A FLOOR PLAN		KDW		DATE		DESIGNED		C.P.		DRWN		ZRC	
JOB NO. 5518		DRAWING TITLE BUILDING A FLOOR PLAN		KDW		DATE		DESIGNED		C.P.		DRWN		ZRC	
JOB NO. 5518		DRAWING TITLE BUILDING A FLOOR PLAN		KDW		DATE		DESIGNED		C.P.		DRWN		ZRC	



CLIENT NAME PROPOSED 75 + 44 PLACE CHILDCARE CENTRE ALICE ST - GOODNA		REVISION SCHEDULE REV. DATE COMMENTS		DATE 1. 28/11/24 DEVELOPMENT APPLICATION 2. APPROVED 3. METALS		GENERAL NOTES 1. General notes to be provided by the client. 2. All work to be completed prior to the start of construction. 3. Do not work. 4. Check dimensions to be reported in the final report. 5. Final report to be submitted within 10 days of completion.		TABLETOP ARCHITECTURAL DRAWINGS 1:100		DRAWING TITLE BUILDING B FLOOR PLAN		SCALE 0 0.5 1.0 1.5 2.0 2.5 SCALE (M) 1:100 AT A3		DESIGNED STATUS INITIAL ISSUE FOR AMENDS 1 DATE 28/11/24		JOB NO. 5518		REV. A03	
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408 NAME PROPOSED 75 + 44 PLACE CHILDCARE CENTRE ALICE 5T- GOODNA		409 NAME 409 NO. 5518 409 DATE 12/11/04 409 COMMENTS		410 NAME 410 NO. 5518 410 DATE 12/11/04 410 COMMENTS		411 NAME 411 NO. 5518 411 DATE 12/11/04 411 COMMENTS		412 NAME 412 NO. 5518 412 DATE 12/11/04 412 COMMENTS		413 NAME 413 NO. 5518 413 DATE 12/11/04 413 COMMENTS		414 NAME 414 NO. 5518 414 DATE 12/11/04 414 COMMENTS		415 NAME 415 NO. 5518 415 DATE 12/11/04 415 COMMENTS		416 NAME 416 NO. 5518 416 DATE 12/11/04 416 COMMENTS		417 NAME 417 NO. 5518 417 DATE 12/11/04 417 COMMENTS		418 NAME 418 NO. 5518 418 DATE 12/11/04 418 COMMENTS		419 NAME 419 NO. 5518 419 DATE 12/11/04 419 COMMENTS		420 NAME 420 NO. 5518 420 DATE 12/11/04 420 COMMENTS		421 NAME 421 NO. 5518 421 DATE 12/11/04 421 COMMENTS		422 NAME 422 NO. 5518 422 DATE 12/11/04 422 COMMENTS		423 NAME 423 NO. 5518 423 DATE 12/11/04 423 COMMENTS		424 NAME 424 NO. 5518 424 DATE 12/11/04 424 COMMENTS		425 NAME 425 NO. 5518 425 DATE 12/11/04 425 COMMENTS		426 NAME 426 NO. 5518 426 DATE 12/11/04 426 COMMENTS		427 NAME 427 NO. 5518 427 DATE 12/11/04 427 COMMENTS		428 NAME 428 NO. 5518 428 DATE 12/11/04 428 COMMENTS		429 NAME 429 NO. 5518 429 DATE 12/11/04 429 COMMENTS		430 NAME 430 NO. 5518 430 DATE 12/11/04 430 COMMENTS		431 NAME 431 NO. 5518 431 DATE 12/11/04 431 COMMENTS		432 NAME 432 NO. 5518 432 DATE 12/11/04 432 COMMENTS		433 NAME 433 NO. 5518 433 DATE 12/11/04 433 COMMENTS		434 NAME 434 NO. 5518 434 DATE 12/11/04 434 COMMENTS		435 NAME 435 NO. 5518 435 DATE 12/11/04 435 COMMENTS		436 NAME 436 NO. 5518 436 DATE 12/11/04 436 COMMENTS		437 NAME 437 NO. 5518 437 DATE 12/11/04 437 COMMENTS		438 NAME 438 NO. 5518 438 DATE 12/11/04 438 COMMENTS		439 NAME 439 NO. 5518 439 DATE 12/11/04 439 COMMENTS		440 NAME 440 NO. 5518 440 DATE 12/11/04 440 COMMENTS		441 NAME 441 NO. 5518 441 DATE 12/11/04 441 COMMENTS		442 NAME 442 NO. 5518 442 DATE 12/11/04 442 COMMENTS		443 NAME 443 NO. 5518 443 DATE 12/11/04 443 COMMENTS		444 NAME 444 NO. 5518 444 DATE 12/11/04 444 COMMENTS		445 NAME 445 NO. 5518 445 DATE 12/11/04 445 COMMENTS		446 NAME 446 NO. 5518 446 DATE 12/11/04 446 COMMENTS		447 NAME 447 NO. 5518 447 DATE 12/11/04 447 COMMENTS		448 NAME 448 NO. 5518 448 DATE 12/11/04 448 COMMENTS		449 NAME 449 NO. 5518 449 DATE 12/11/04 449 COMMENTS		450 NAME 450 NO. 5518 450 DATE 12/11/04 450 COMMENTS		451 NAME 451 NO. 5518 451 DATE 12/11/04 451 COMMENTS		452 NAME 452 NO. 5518 452 DATE 12/11/04 452 COMMENTS		453 NAME 453 NO. 5518 453 DATE 12/11/04 453 COMMENTS		454 NAME 454 NO. 5518 454 DATE 12/11/04 454 COMMENTS		455 NAME 455 NO. 5518 455 DATE 12/11/04 455 COMMENTS		456 NAME 456 NO. 5518 456 DATE 12/11/04 456 COMMENTS		457 NAME 457 NO. 5518 457 DATE 12/11/04 457 COMMENTS		458 NAME 458 NO. 5518 458 DATE 12/11/04 458 COMMENTS		459 NAME 459 NO. 5518 459 DATE 12/11/04 459 COMMENTS		460 NAME 460 NO. 5518 460 DATE 12/11/04 460 COMMENTS		461 NAME 461 NO. 5518 461 DATE 12/11/04 461 COMMENTS		462 NAME 462 NO. 5518 462 DATE 12/11/04 462 COMMENTS		463 NAME 463 NO. 5518 463 DATE 12/11/04 463 COMMENTS		464 NAME 464 NO. 5518 464 DATE 12/11/04 464 COMMENTS		465 NAME 465 NO. 5518 465 DATE 12/11/04 465 COMMENTS		466 NAME 466 NO. 5518 466 DATE 12/11/04 466 COMMENTS		467 NAME 467 NO. 5518 467 DATE 12/11/04 467 COMMENTS		468 NAME 468 NO. 5518 468 DATE 12/11/04 468 COMMENTS		469 NAME 469 NO. 5518 469 DATE 12/11/04 469 COMMENTS		470 NAME 470 NO. 5518 470 DATE 12/11/04 470 COMMENTS		471 NAME 471 NO. 5518 471 DATE 12/11/04 471 COMMENTS		472 NAME 472 NO. 5518 472 DATE 12/11/04 472 COMMENTS		473 NAME 473 NO. 5518 473 DATE 12/11/04 473 COMMENTS		474 NAME 474 NO. 5518 474 DATE 12/11/04 474 COMMENTS		475 NAME 475 NO. 5518 475 DATE 12/11/04 475 COMMENTS		476 NAME	
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DEVELOPMENT BRANCH FEES – APPLICATIONS

Payee _____	Payee's Address _____
-------------	-----------------------

☐ Prepayments or Application No 1727105/MCU Application Class DA

Property Address 415 ALICE STREET, GOODVA

	Fee Paid	CASHIER'S USE ONLY	
		Reference Number	
BUILDING			14849
Lodgement fee		Receipt Number	1300618
Class 1,2 & 4 buildings		Total Amount Paid	2825.02
Add. Class 1,2 & 4		Date Paid	23.2.5.
Internal Alt. Class 1		Fee Paid	
Class 3 & 5-9 buildings		PLUMBING	
Class 10a buildings		Lodgement fee	
Class 10b Retaining Wall		Assessment/ Plan approval fee	
Class 10b S/Pool A/Ground		Design preparation	
Class 10b S/Pool In/Ground		Inspection fees	
Restumping/Underpinning		Amendment fee	
Inspect. Class 1,2 & 4		O.S.F. Approval	
Inspect. Class 3,5 -9		O.S.F. Assessment	
Inspect. Class 10		O.S.F. Design fee	
Energy efficiency		O.S.F. Permiability test	
Siting Requests		Water Meter (existing service)	
Amenity and Aesthetics		Water Service (new)	
Shop Fronts New		Copies of Drainage Plans (37)	
Shop Fronts Alt.		Building Over or near Sewers	
Shop Awnings		TOWN PLANNING	
Shop or Office Fitout		ERA	
Hoardings/Scaffolding/Gantry		Area Development Plan	
Temporary Building		MCU -- Code Assess Impact	C or E 3825.00
Change of Class. 2-10 to 1		Reconfiguration of a Lot	C or E
Change of Class. Other		Operational Works	
Amend. Class 1,2 & 4 Major		Change/Canc. Cond./Mod	C or E
Amend. Class 1,2 & 4 Minor		Other Development	C or E
Amend. Class 3,5 -9 Major		Signing of Survey Plan	C or E
Amend. Class 3,5 -9 Minor		Valuation fee	
Change of Builder		Preparation of Legal Documents	C or E
Extension of Time Class 1 & 10		Admin fee Outstanding Works bond	
Extension of Time Class 2-9		Bond	
Pool Fence Compliance		MISCELLANEOUS	
Handling Fee QFRA		Town Planning Documents (610)	
Private Certifier Lodge. Cl. 1&10		Planning Studies (710)	
Private Certifier Lodge. Cl. 2-9		Planning Policies (718)	
Private Cert. Info. Request		GIS Maps (443)	
Admin fee (Ext. Cert.) (45)		Eng. Works Manual/Stand Draw. (84)	
Building Certification General (45)		Town Planning Certificates (702)	
Build Search/Copies of Plans (36)		Town Planning Compliance Check (444)	
		Approval Lists/ Photocopying (22)	
		QBSA Contracts (86)	
SIGNS		HEADWORKS/CONTRIBUTIONS	
Class 10b Signs		Water	WT-
Advertising Sign - Local Law		Sewerage	SW-
Sign Licence fee		Roads/Traffic	RD-
		Open Space/Parks - Level 1	PK-
REMOVAL/DEMOLITION		Open Space/Parks - Level 2	PK-
Demolition/Removal Class 1&10		Open Space/Parks - Level 3	PK-
Demolition/Removal Class 2-9		Social/Community - Level 1	SI-
Preliminary Inspection		Social/Community - Level 2	SI-
Escort fee		Social/Community - Level 3	SI-
Road Bond		Streetscaping	ST-
Site Bond		Footpath	FT -
Water Disconnection Bond		Other	
Sewer Disconnection Bond			
Performance Bond (Trust)			
Admin. fee performance bond		Sub Total	\$
		TOTAL	\$3825.00
Sub Total	\$		

Annexure TCF-2

10 May 2005

Dear Sir/Madam

Re: Development Application Information Request (Section 3.3.6)
Application Number: 1727/05
Proposal: Community Use: Child Care Centre
Property Location: 45 Alice Street, Goodna

Upon review of the abovementioned Development Approval Application and supporting information we require further information to satisfactorily assess this application. The information requested is set-out below.

1. Access


The Applicant is requested to identify the largest anticipated vehicle (eg. refuse collection vehicle) to access the site and demonstrate that this vehicle can enter and exit the site in a forward gear. The turning paths of the largest anticipated vehicle should be in accordance with the Australian Standards (2890 series) and clearly shown on the development plan.

2. Flooding

The Applicant is requested to submit a site specific flood investigation for the proposal (prepared by a RPEQ experienced in hydraulic engineering) which addresses the potential impacts on flood levels such that there is no detrimental effects on surrounding properties. The level of the Q100 in this location is RL14.7m AHD.

3. Stormwater

The Applicant is requested to submit preliminary hydraulic calculations prepared by an RPEQ in accordance with QUDM which identifies the increase in stormwater runoff generated by



C/- JB Goodwin Midson & Partners
PO Box 92
TOOWONG QLD 4066

the proposal and the location and treatment of discharge points such that the proposed development will not adversely effect the down stream properties. The stormwater discharge from the proposed development should be maintained at pre development flows. The Developer should identify the proposed method of stormwater detention.

4. Noise

The Applicant is requested to supply an acoustic report, prepared by an independent and appropriately qualified Acoustic Consultant, which demonstrates that noise levels received by the development and those generated by the development do not exceed:

- (a) for noise in a steady state, indoors, 45dB(A) Leq (1 hour); and
- (b) outdoors, a range of 55-60 dB(A) L10 (1 hour), when measured at 1.5m above the ground in the centre of any outdoor play area.

5. Air Quality

The Applicant is requested to supply an air quality & health impact assessment report that demonstrates that the site will not be subjected to unacceptable air quality and that the risks of adverse health impacts are insignificant. Of particular concern in this regard is the proximity of the site to Alice Street, Goodna and its the potential air quality impact on child health.

6. Waste

The Applicant is requested to supply amended plans showing the location of waste storage and collection areas. The plan must clearly demonstrate that access to the waste storage and collection areas shall allow forward motion entry to the waste containers and forward motion entry and exit to and from the site. The following dimensions are given as a minimum of front-, rear- and side- loading truck dimensions for a guide to design for the adequate emptying of the bin and manoeuvring of the truck:

	Front/Load	Rear/Load	Side/Load
Length overall	10.9 m	8.2 m	8.7 m
Length when loading	12.6 m	9.5 m	3.0 m
Travelling overhead clearance required	4.0 m	3.0 m	3.5 m
Loading overhead clearance required	6.5m x 10m*	3.0 m	3.0 m
Access width required	3.8 m	3.8 m	4.0 m
Turning radius	9.0 m	9.0 m	9.0 m
Gross vehicle mass (GVM)	28 tonne	13.6 t	13.6 t

*from the back of the bin

It should be noted in this regard that wheelie bins are not an appropriate receptacle for the volume of waste likely to be produced from the subject site. As a result, the above should make provision for the location and use of bulk bins on the subject site as opposed to wheelie bins.

Under the provisions of the *Integrated Planning Act 1997*, the applicant has three (3) options available in response to this Information Request. The Applicant must give the Development Manager and each Referral Agency (if applicable):

1. all of the information requested; or
2. part of the information requested together with a notice asking the Development Manager and each Referral Agency (if applicable) to proceed with the assessment of the application; or
3. a notice:
 - (a) stating that the applicant does not intend to supply any of the information requested; and
 - (b) asking the Development Manager and each Referral Agency (if applicable) to proceed with the assessment of the application.

Response to this Information Request should be forwarded to:-

The Development Manager
Development Branch
Ipswich City Council
PO Box 191
IPSWICH QLD 4305

Yours faithfully


**ACTING DEVELOPMENT TEAM CO-
ORDINATOR - EAST**

Annexure TCF-3

J.B. Goodwin, Midson
& Partners
(Business name of
Hillmir Pty. Ltd.)
ABN 75 009 728 634

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a4219.doc
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2 Park Street Boonah
Ph/Fax: (07) 5463 1596

J.B. Goodwin, Midson & Partners

Consulting Surveyors, Town Planners and
Development Consultants.

24 February 2006

The Chief Executive Officer
Ipswich City Council
PO Box 191
Ipswich QLD 4305

J.B. Goodwin, Midson & Partners 27 FEB 2006	
Doc. No.	
App'd. No.	1727/05
Action	

Attention: [REDACTED] (Town Planning Assessment Officer)

Dear Sir / Madam:

Re: Material Change of Use (Child Care Centre)
45 Alice Street, Goodna Qld 4300
Lot 3 on RP77071 Parish of Goodna

In response to your information request dated 10 May 2005, I have enclosed four (4) copies of the Stormwater and Flood Report prepared by Tabletop in response to those issues as identified by Council. Further information in response to Access and Waste issues will be forwarded to Council early next week.

Meanwhile, please proceed with the assessment of the application and if you have any queries regarding any of the above, please don't hesitate to contact me on 3870 2161.

Yours faithfully
J B Goodwin Midson & Partners

Town Planner

Encl.

GM+P



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STORMWATER AND FLOOD REPORT

45 Alice Street, Goodna

1.0 THE SITE

This report examines stormwater and flooding impacts on a proposed development site at 45 Alice Street, Goodna. The site location and general views of the surrounding area are illustrated in the aerial photographs (Figures A-1 and A-2).

The site is adjacent to a local waterway channel. The waterway channel is uniformly shaped and in generally good condition.

The site is impacted by backup flooding from the nearby Brisbane River as well as by flooding from the adjoining waterway. Figure A-3 is a part print of a Council plan showing areas flooded by Brisbane River backup.

This report examines local flooding from the adjoining waterway only and assess available site mitigation measures. Mitigation of Brisbane River backup flooding cannot be achieved at a local level.

2.0 DEVELOPMENT PROPOSAL

The development proposed is a 75 + 44 place child-care centre. The development is two separate buildings of slab on ground construction together with car parking, external play areas and landscaping.

3.0 REPORT OBJECTS

This report addresses two hydraulic issues raised in Council's information request of May 2005:

- Flooding - the impact on the site of flooding in the adjoining waterway, particularly with respect to the time of rise of floodwaters during large events and consequential evacuation times;
- Stormwater discharge rates - methods to reduce peak discharge rates from the site.

4.0 FLOODING

4.1 Hydrology

Since the time of flood rise on the site is an issue, it was necessary to generate flow hydrographs so that the rate of rise could be assessed. Rational Method procedures do not provide hydrographs so catchment hydrology was estimated using the RORB catchment model.

Full details of the hydrologic analysis (including typical flow hydrographs) are provided in Appendix B.

From the generated hydrographs for the various standard Average Recurrence Interval events, it was determined that design peak flow rates for the catchment to Alice Street are as follows:

- Q1 - 11.3 m³/s
- Q2 - 16.0 m³/s
- Q5 - 24.0 m³/s
- Q10 - 28.5 m³/s
- Q20 - 35.9 m³/s
- Q50 - 45.9 m³/s
- Q100 - 54.1 m³/s

4.2 Hydraulics

4.2.1 Model Setup

A detailed survey of the waterway extending from Alice Street to Mill Street (downstream) was carried out. Cross sections at appropriate locations were extracted from the resulting DTM and used to set up a HEC-RAS model of the waterway. The survey and section locations are detailed in Appendix C together with details of the HEC-RAS model and results.

4.2.2 General Topography

The waterway between Alice and Mill Streets is very uniform and hydraulically efficient.

On the eastern side of the waterway downstream of the subject site, a timber picket fence is constructed paralleling the waterway centreline in a position which suggests it may impact on flow profiles.

At both Alice and Mill Streets, relatively low capacity box culverts are constructed under the roadways. It appears that higher ARI events overtop the roadways. At Alice Street, the low point in the road floodway is located partially in front of the subject site rather than being centred on the channel and culverts 30 metres to the west.

4.2.3 Initial Analysis – Existing Conditions

An initial analysis was carried out to determine the waterway flow which first enters the site and to identify the extent of inundation of the site for the larger ARI events. The analysis indicated that floodwater first reaches the site (at the north west corner) when the waterway flow is about 24 m³/s. This is equivalent to the Q5 event.

The site is substantially inundated (although to relatively shallow depths) with the Q50 and Q100 events. Whilst the water profile during overtopping events slopes down quickly from the Alice Street floodway into the waterway channel itself, it is clear that overtopping flows on Alice Street would enter the subject property along the road frontage before crossing the property diagonally north west to the waterway.

4.2.4 Mitigation

Examination of the calculated water levels for the larger ARI events showed that a judicious selection of floor levels for the buildings, together with a low wall along part of the western boundary of the site, can achieve Q100 immunity for the proposed development from flows in the adjoining waterway.

To prevent overtopping flows on Alice Street entering the site, it is necessary to construct a wall along the road frontage. The effects of a partial wall along the street frontage were examined. It was found that a wall along the property boundary extending to 10 metres from the west corner and then angled north west across the property towards the waterway prevents flows from entering property without impacting on water levels upstream. The following tabulation compares the calculated levels at the relevant sections.

ARI	Calculated Water Level (m)					
	North Side of Alice Street		South Side of Alice Street		Section 18 (refer Figure C-1)	
	Exist	Post Development	Exist	Post Development	Exist	Post Development
Q1					12.45	12.45
Q2					12.79	12.79
Q5	13.16	13.16	13.20	13.20	13.20	13.20
Q10	13.21	13.24	13.30	13.30	13.30	13.30
Q20	13.29	13.34	13.41	13.41	13.41	13.41
Q50	13.39	13.45	13.54	13.51	13.54	13.51
Q100	13.44	13.54	13.61	13.59	13.61	13.59

TABLE 1

The angled part of the wall allows floodwater overtopping Alice Street to cross the southwest corner of the property towards the waterway. Any development on this part of the property will need to be elevated on piers above the calculated Q100 water levels to allow floodwaters unhindered passage below.

Schematic details of the proposed building floor levels and the wall location and levels are shown on drawing number 5946-R01.

4.2.5 Time of Flood Rise

Although the initial object of the analysis was to determine the time of flood rise so that appropriate evacuation plans could be prepared, the analysis has determined that it is actually possible to provide the site with acceptable immunity for Q100 local events. The time of floodwater rise is therefore not really relevant.

Notwithstanding this, the modelled hydrographs show that the time from when water first enters the property at the end of the wall in the north west corner until it peaks at RL 11.97 (Q100) is 34 minutes.

4.3 Summary

A detailed hydrologic and hydraulic analysis has shown that the site can achieve normal Q100 immunity from local flood events in the adjoining waterway by:

- Setting appropriate minimum building levels (RL 12.15 for building B and RL 12.73 for building A); and

- Constructing a solid wall along the road frontage from the eastern corner, across the south west corner of the property and along the western boundary to the north west corner. Development on the property above the cutoff southwest corner should be suspended above ground level to allow free passage of flood flows below. Slabs and beams in the suspended area must have a minimum RL of 13.54.

5.0 STORMWATER DISCHARGE RATES

The development will result in a higher proportion of impermeable area than existed under the original use. Council requires that stormwater flows post development not exceed those experienced under existing conditions.

The site area, topography and development layout are not really suited to a stormwater detention arrangement.

To reduce stormwater discharges from the developed site, the impacts of stormwater reuse for toilet flush and irrigation were examined. Typically a reuse strategy has dual benefits in reducing stormwater discharges as well as reducing demand on the potable supply.

The site is presently undeveloped but was previously developed. The extent of previous development (and hence percentage of impermeable area) is not known. For the purposes of this analysis, existing condition parameters were calculated on the basis of an undeveloped site. The results are therefore conservative.

The analysis was carried out using MUSIC software. The model setup and basic parameters are in accordance with Brisbane City Council's "Guidelines for Pollutant Export Modelling in Brisbane" - version 7. The model adopted Brisbane City Council's preferred historical rainfall data sequence from 1980 to 1990 in 6 minute time steps.

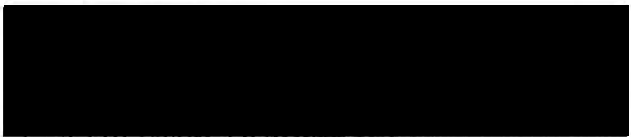
Likely toilet flush demand was estimated using first principles based on the anticipated occupancy of the centre. Irrigation usage was ignored and so the results are likely to be conservative. An average demand (toilet flush) for the centre of 860 L per day (for five days per week) was calculated.

The following tabulation compares flow statistics from the MUSIC model for existing and post development conditions:

Flow Characteristic		Undeveloped	Post Development	
Stormwater Discharge (L/s)	peak	165	10kL re-use tank	15kL re-use tank
	mean	6.0	169	169
	median	3.1	3.0	3.0
Toilet Flush Re-Use	90 percentile	1.4	1.4	1.4
	% of demand	6.3	6.3	6.3
		-	85.4%	92.5%

The analysis shows that connecting all roof downpipes to a minimum 10 kL reuse tank supplying all toilet cisterns in the centre will substantially reduce expected stormwater flows off site from the development as well as substantially reducing the centre's demand on Council's potable supply.

Yours faithfully

A large black rectangular box redacting the signature of the person.

for TABLETOP ARCHITECTS PLANNERS ENGINEERS

APPENDIX A
SITE LOCATION

**T A B L E T O P
A R C H I T E C T S
P L A N N E R S
E N G I N E E R S**

ABN 60 067 321 117

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Figure A-1



Figure A-2

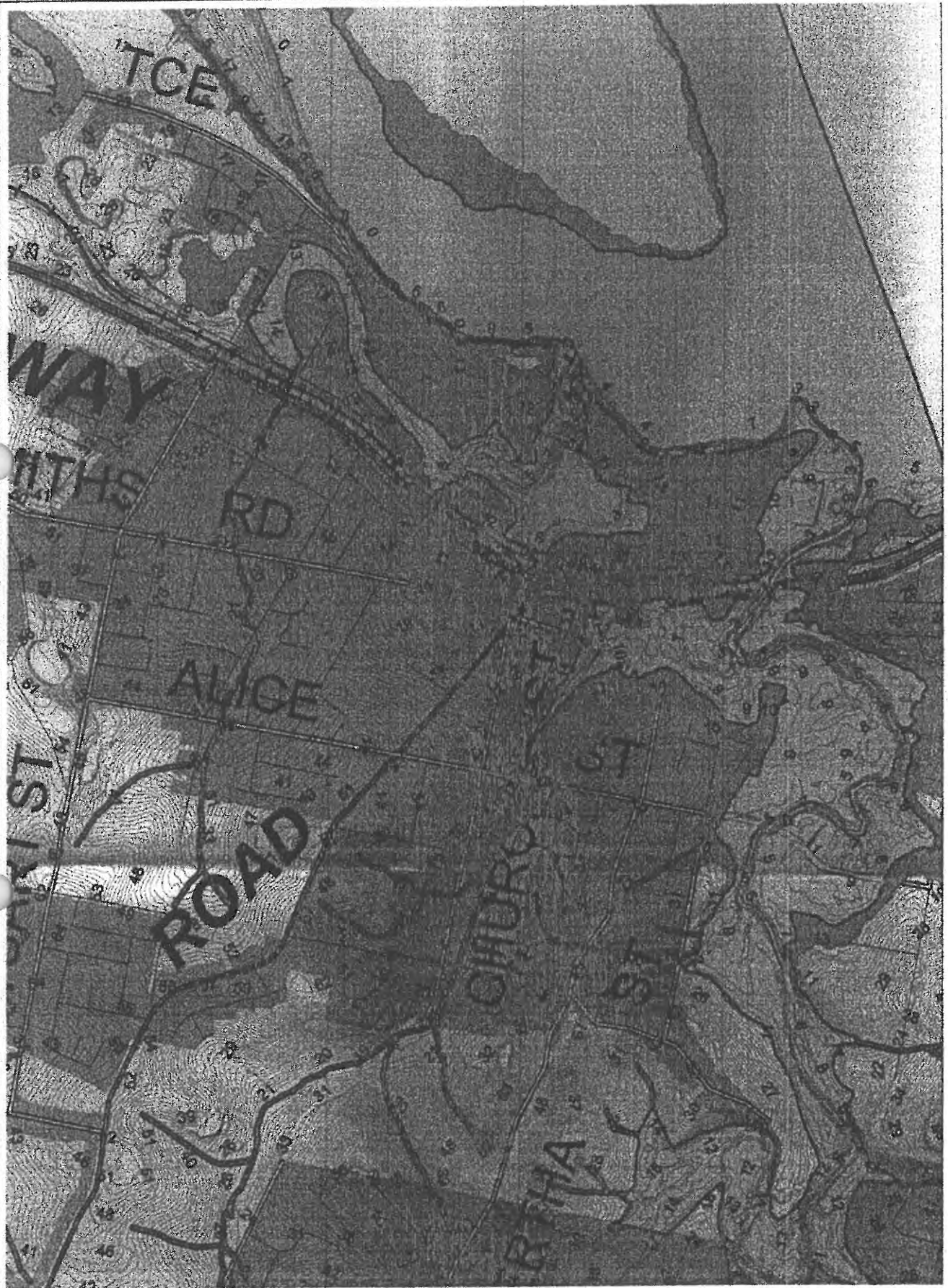


Figure A-3

APPENDIX B
HYDROLOGIC ANALYSIS

**TABLETOP
ARCHITECTS
PLANNERS
ENGINEERS**

ABN 60 067 321 117

1.0 CATCHMENT MODEL

The RORB catchment model was adopted so that flow hydrographs could be produced to enable assessment of the time of rise of floodwaters.

The overall catchment and subcatchments making up the RORB model are detailed in Figure B-1.

2.0 RAINFALL

Standard storm burst patterns from Australian Rainfall and Runoff for storm burst durations ranging from 10 minutes to 6 hours were calculated using the methods outlined in AR&R.

The initial loss/continuing loss model was adopted for rainfall losses.

3.0 CALIBRATION

Since no historical records of recorded flows in the catchment are available, the RORB model was calibrated by comparing hydrograph peak discharges with peak discharges calculated for the catchment using the Rational Method. An initial loss of 35mm and continuing loss of 2 mm/hr, were found to produce comparable results to the Rational Method.

4.0 DESIGN FLOWS

From the generated hydrographs for the various standard Average Recurrence Interval events, it was determined that design peak flow rates for the catchment to Alice Street are as follows:

- Q1 - 11.3 m³/s
- Q2 - 16.0 m³/s
- Q5 - 24.0 m³/s
- Q10 - 28.5 m³/s
- Q20 - 35.9 m³/s
- Q50 - 45.9 m³/s
- Q100 - 54.1 m³/s

Hydrographs of a selection of the calculated Q100, Q50 and Q20 standard storm burst events are attached.

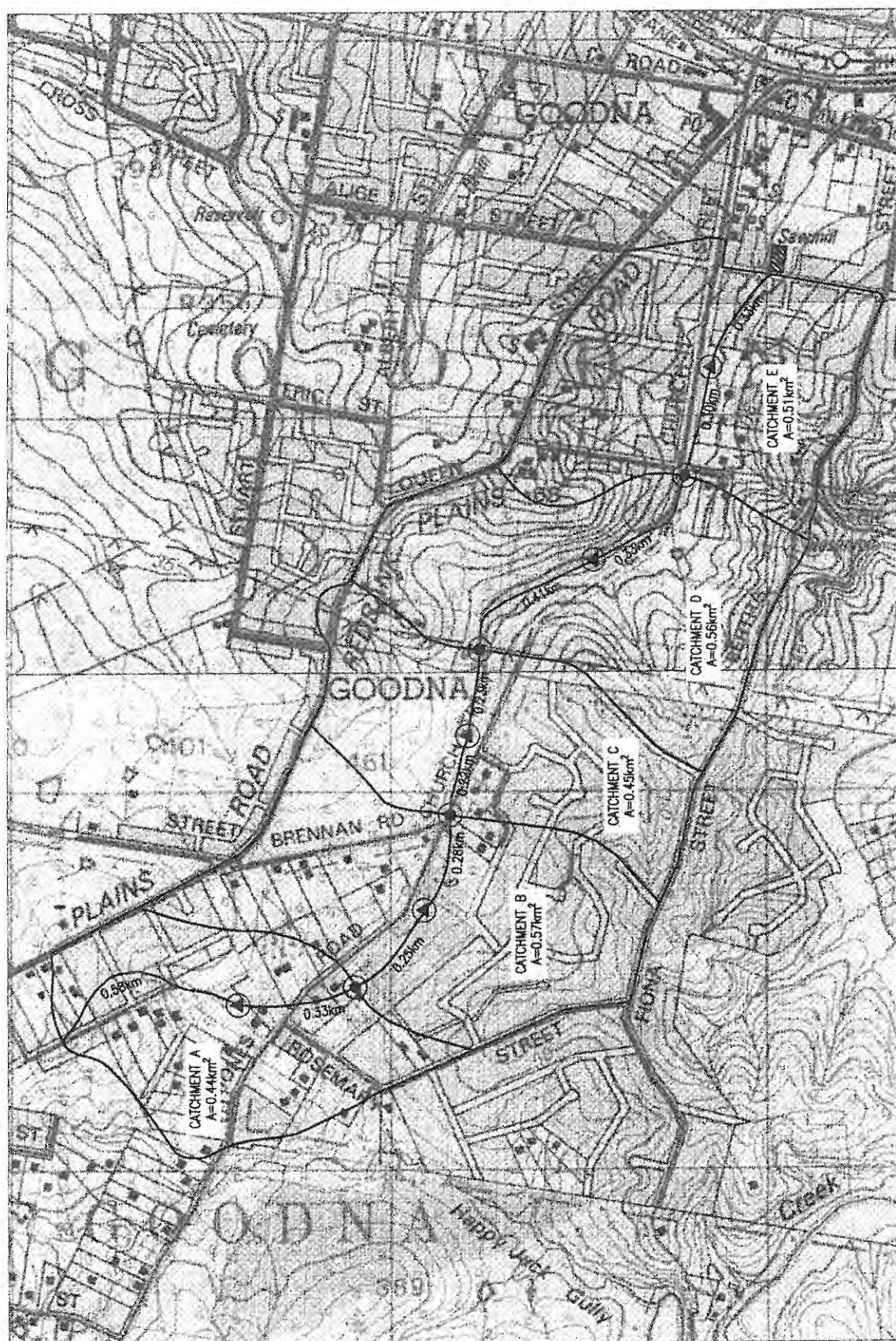
Catchment Plan
and RORB model

Figure B-1

MODEL STORAGE

① NODE



Calculated Hydrographs - Q20

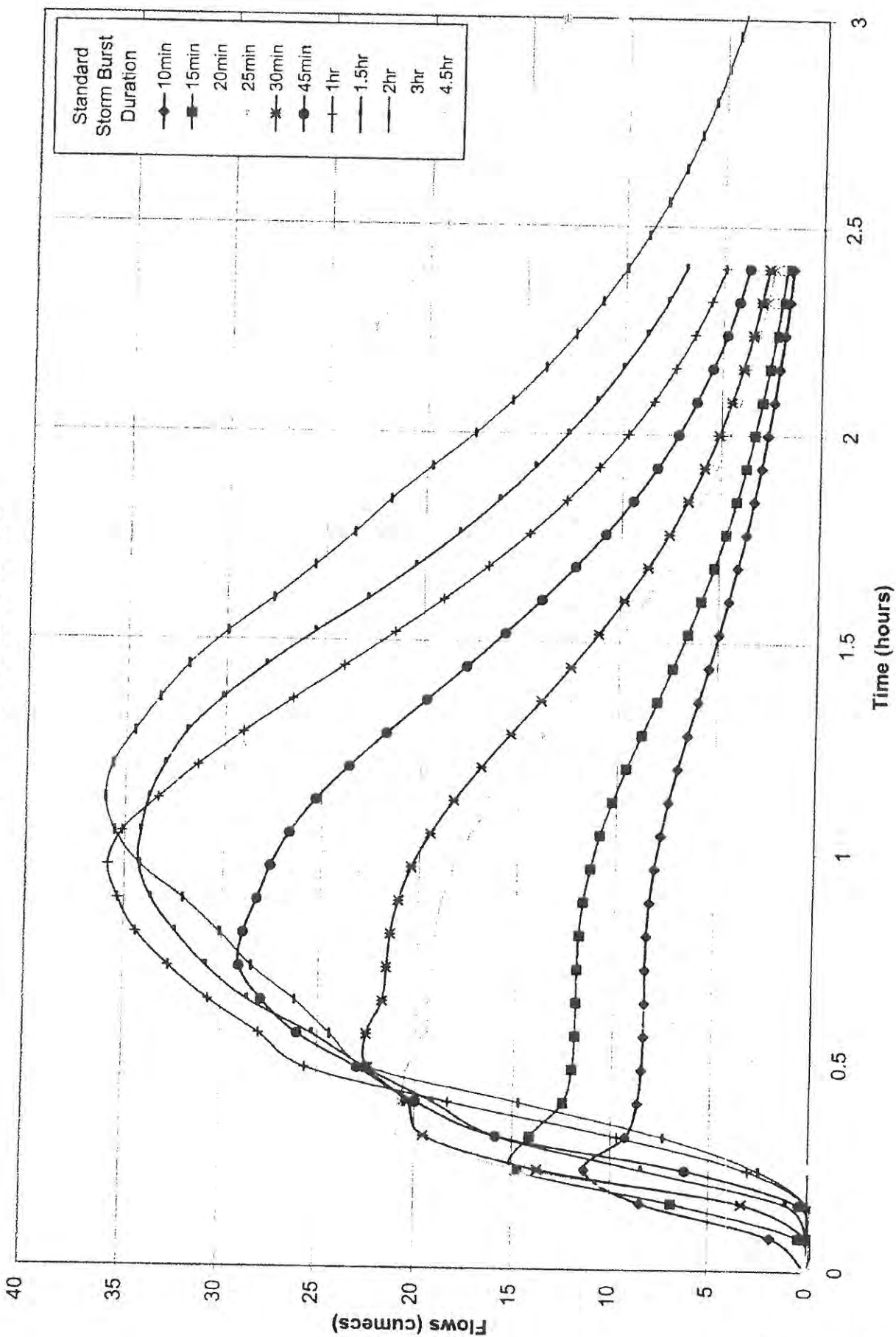


Figure B-2

Calculated Hydrograph - Q50

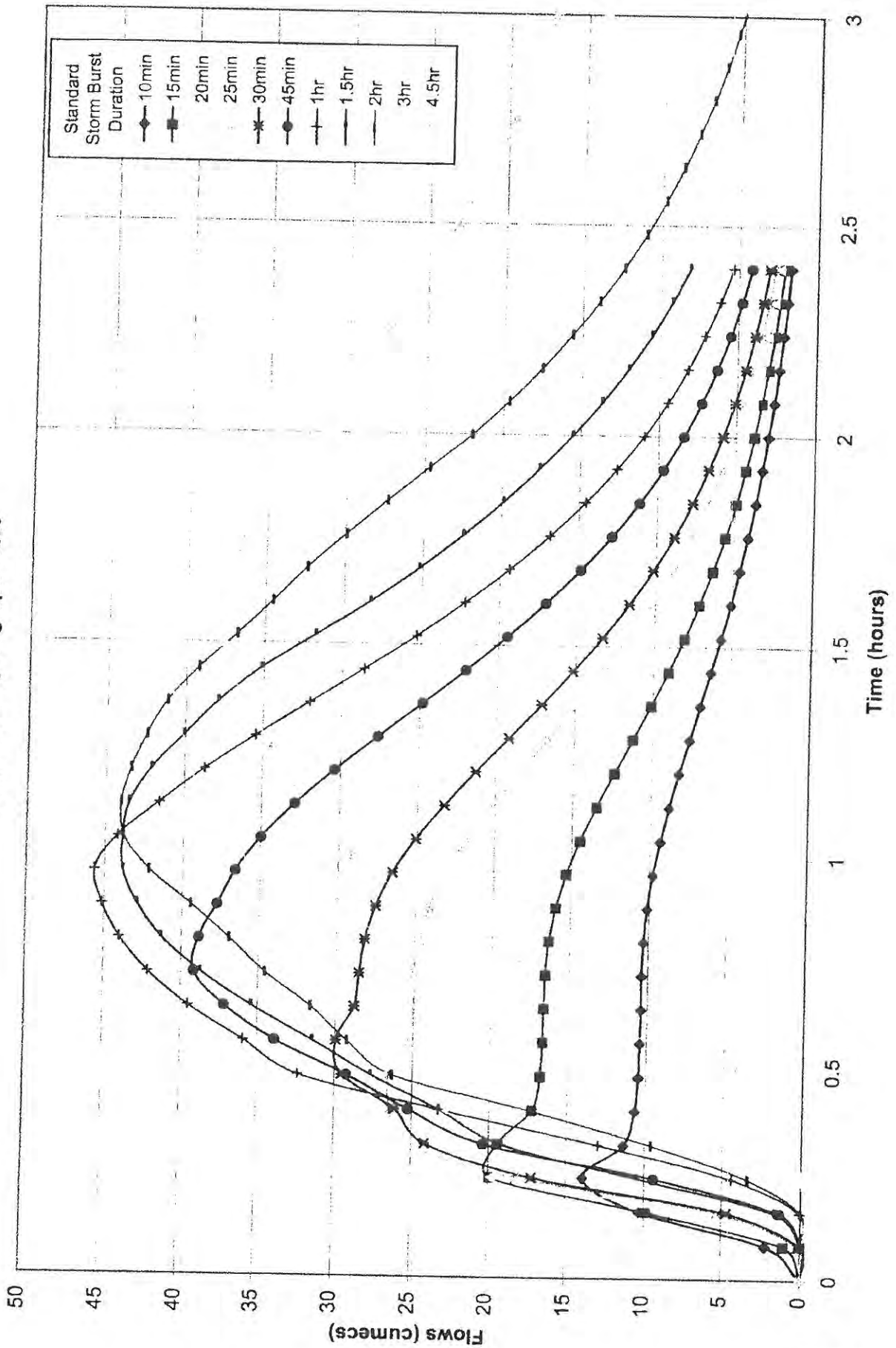


Figure B-3

Calculated Hydrograph - Q100

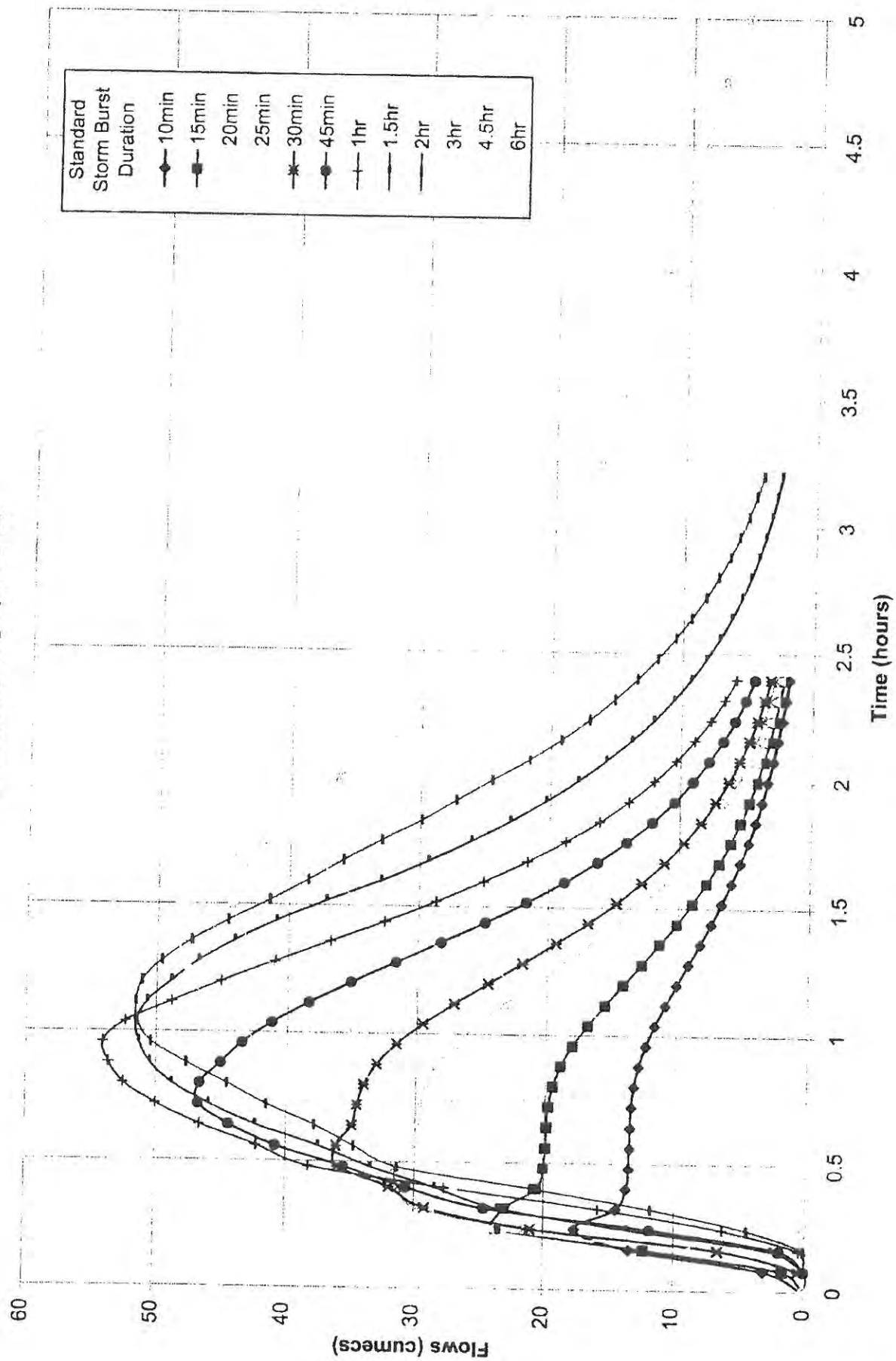


Figure B-4

APPENDIX C
WATERWAY HYDRAULICS

**TABLETOP
ARCHITECTS
PLANNERS
ENGINEERS**

ABN 60 067 321 117

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1.0 SURVEY

A detailed survey of the waterway extending from Alice Street to Mill Street (downstream) was carried out. Cross-sections at appropriate locations were extracted from the resulting DTM and used to set up a HEC-RAS model of the waterway. The survey and section locations are detailed in Figure C-1.

2.0 GENERAL TOPOGRAPHY

The waterway is very uniform and hydraulically efficient. Low, well tended grass cover extends over almost all the waterway. On the eastern side of the waterway downstream of the subject site, a picket fence is constructed paralleling the waterway centreline.

A Mannings "n" of 0.03 was adopted over the entire waterway. The downstream fence was treated as a "blocked obstruction".

3.0 START DEPTH

At both Alice and Mill Streets, relatively low capacity box culverts are constructed under the roadways. Calculations were commenced at the downstream end of the model at Mill Street assuming that the culvert/floodway combination was the control. Sensitivity analysis confirmed that calculated water levels in the vicinity of the subject property were not influenced by any errors in the starting assumptions.

4.0 MODEL CALCULATIONS

After calibration and verification, the model was run to establish waterway water levels under existing conditions for events up to Q100. Detailed output is provided in Appendix C-1.

Various mitigation options were then examined and modelled.

Whilst the water profile during overtopping events on the Alice St roadway slopes down quickly from the roadway into the waterway channel itself, it is clear that overtopping flows on Alice Street would enter the subject property along the road frontage before crossing the property diagonally to the waterway.

The effects of a partial wall along the street frontage to stop overtopping flows on Alice Street entering the site, were examined. It was found that a wall along the property boundary extending to 10 metres from the west corner and then angled northwest across the property towards the waterway will prevent flows from entering the property without impacting on water levels upstream. The following tabulation compares the calculated levels at the relevant sections.

Detailed output is provided in Appendix C-2.

ARI	Calculated Water Level (m)					
	North Side of Alice Street		South Side of Alice Street		Section 18 (refer Figure C-1)	
	Exist	Post Development	Exist	Post Development	Exist	Post Development
Q1					12.45	12.45
Q2					12.79	12.79
Q5	13.16	13.16	13.20	13.20	13.20	13.20
Q10	13.21	13.24	13.30	13.30	13.30	13.30
Q20	13.29	13.34	13.41	13.41	13.41	13.41
Q50	13.39	13.45	13.54	13.51	13.54	13.51
Q100	13.44	13.54	13.61	13.59	13.61	13.59

It was determined that the site can achieve normal immunity to local waterway flooding up to the Q100 events by:

- setting appropriate minimum building levels; and
- constructing a solid wall along the road frontage from the eastern corner, across the southwest corner of the property and along the western boundary to the northwest corner. Any development on the property above the cut-off southwest corner must be suspended above ground level to allow free passage of flow flows below. Slabs and beams in the suspended area must have a minimum RL of 13.54

5.0 TIME OF FLOW RISE

Although the initial object of the analysis was to determine the time of flow rise so that appropriate evacuation plans could be prepared, the analysis has determined that is possible to provide the site with acceptable immunity for Q100 local events. The time of floodwater rise is therefore not really relevant.

Notwithstanding this, an examination of the modelled hydrographs shows that the time for the water level at the north west corner (HEC-RAS model section 13) to rise from when it first enters the property at R. L. 11.59 (24 m³/s - Q5) to R. L. 11.97 (54 m³/s - Q100) is approximately 34 minutes. Note that this level is still some 153 millimetres below the recommended minimum building level.

Survey and
HEC-RAS
section
locations

Figure C-1



1" = 100'
SCALE

APPENDIX C-1
DETAILED HEC-RAS OUTPUT
EXISTING CONDITIONS

TABLETOP
ARCHITECTS
PLANNERS
ENGINEERS

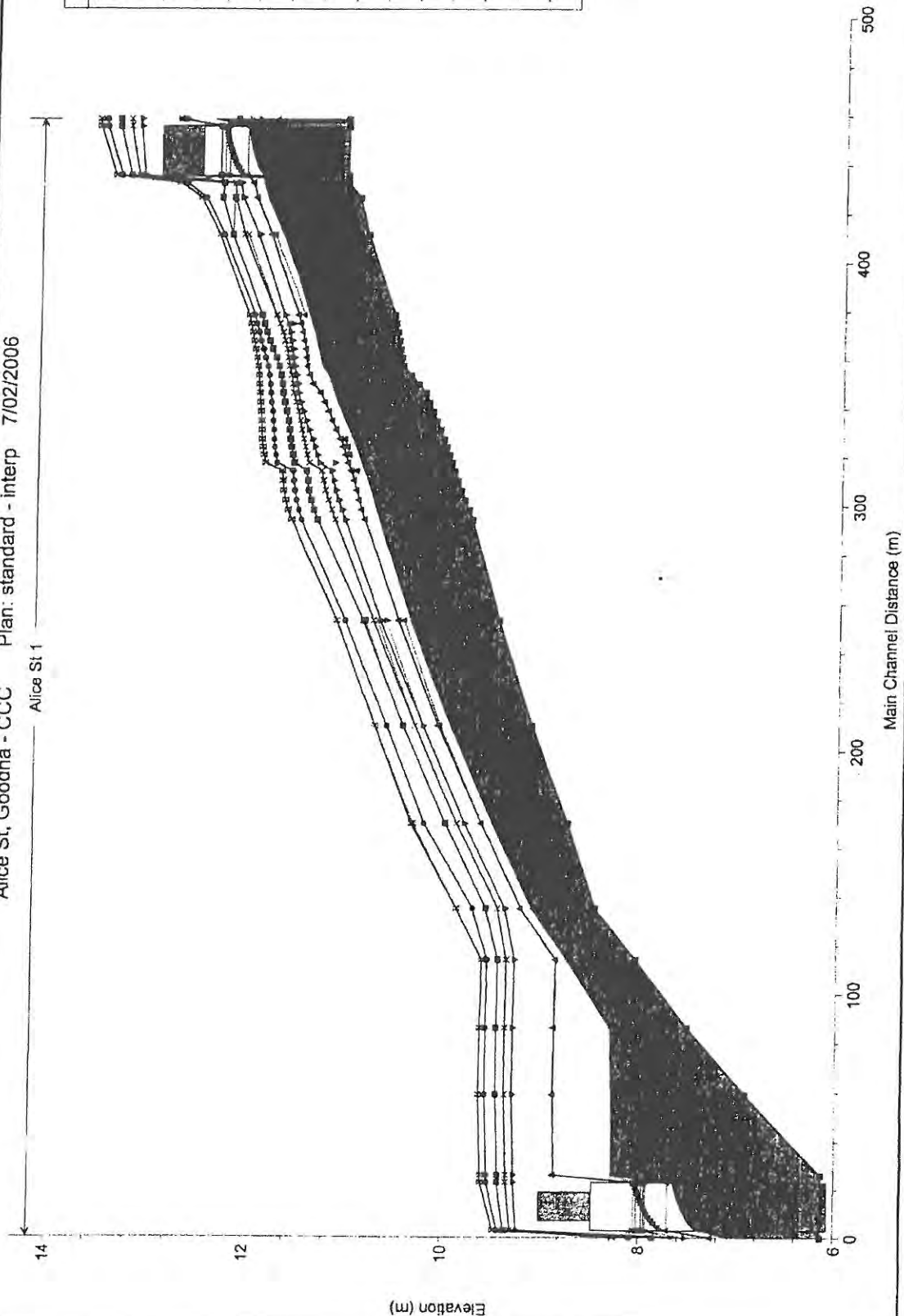
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Alice St, Goodna - CCC Plan: standard - interp 7/02/2006

Alice St 1

Legend
WS Q100
Crit Q100
WS Q50
Crit Q50
WS Q20
Crit Q20
WS Q10
Crit Q10
WS Q5
Crit Q5
WS Q2
Crit Q2
WS Q1
Crit Q1
Ground



HEC-RAS Plan: Interp River: Alice St Reach: 1

Station	Depth	W.S. Elev	Cut W.S.	B.G. Elev	F.S. Slope	Vel. Conc	Flow Area	Top Width	Friction # Cft
11.30	11.09	12.45	11.68	12.48	0.000481	0.74	15.21	14.05	0.23
18.00	11.09	12.79	11.80	12.81	0.001107	0.82	26.00	31.99	0.30
24.00	11.09	13.20	11.99	13.21	0.000275	0.45	53.12	71.22	0.17
28.50	11.09	13.30	12.08	13.31	0.000260	0.47	60.34	73.81	0.18
35.90	11.09	13.41	12.22	13.42	0.000283	0.53	68.60	77.40	0.17
45.90	11.09	13.54	12.74	13.55	0.000308	0.59	78.79	81.13	0.19
54.10	11.09	13.61	12.80	13.63	0.000348	0.85	84.39	83.12	0.20
Culvert									
11.30	11.09	11.94		12.03	0.002838	1.33	8.48	12.57	0.52
18.00	11.09	12.05		12.19	0.003588	1.82	9.88	12.91	0.59
24.00	11.09	12.18		12.40	0.004904	2.07	11.59	13.25	0.71
28.50	11.09	12.24		12.51	0.005678	2.30	12.37	13.40	0.77
35.90	11.09	12.36		12.70	0.006277	2.57	13.96	13.79	0.82
45.90	11.09	12.74	12.74	12.95	0.013989	2.03	22.59	40.12	1.06
54.10	11.09	12.80	12.80	13.01	0.012194	2.06	26.32	42.15	1.01
11.30	10.96	11.90		12.01	0.004593	1.47	7.71	14.58	0.64
18.00	10.96	12.01		12.18	0.005398	1.71	9.38	15.97	0.71
24.00	10.96	12.18		12.37	0.008427	2.02	11.87	17.88	0.79
28.50	10.96	12.23		12.47	0.008763	2.15	13.24	18.82	0.82
35.90	10.96	12.37	12.24	12.63	0.009073	2.24	16.03	20.84	0.92
45.90	10.96	12.53	12.53	12.74	0.012224	2.02	22.73	25.63	1.01
54.10	10.96	12.58	12.58	12.81	0.011619	2.12	25.55	28.00	1.00
11.30	10.88	11.73	11.70	11.90	0.010440	1.84	8.16	15.45	0.93
18.00	10.88	11.88	11.82	12.05	0.009806	1.94	8.24	17.85	0.91
24.00	10.88	11.99	11.97	12.24	0.010656	2.23	10.74	20.39	0.98
28.50	10.88	12.14	12.10	12.34	0.009893	1.99	14.35	20.80	0.93
35.90	10.88	12.28	12.28	12.44	0.011921	1.90	18.86	29.70	0.99
45.90	10.88	12.34	12.34	12.53	0.011903	1.91	23.97	32.58	0.99
54.10	10.88	12.39	12.39	12.60	0.011885	2.00	26.99	35.60	1.00
11.30	10.59	11.45		11.59	0.008182	1.65	6.85	16.78	0.82
18.00	10.59	11.58	11.51	11.73	0.008979	1.73	9.27	22.80	0.86
24.00	10.59	11.71		11.89	0.009306	1.88	12.74	28.25	0.90
28.50	10.59	11.80	11.79	11.97	0.011905	1.82	15.69	34.32	0.97
35.90	10.59	11.94		12.08	0.007240	1.51	23.70	40.53	0.77
45.90	10.59	12.02		12.15	0.007148	1.63	28.21	44.11	0.79
54.10	10.59	12.08		12.22	0.006777	1.68	32.22	47.13	0.77
11.30	10.58	11.43		11.56	0.007934	1.51	7.00	17.36	0.81
18.00	10.58	11.55		11.70	0.008827	1.88	9.52	24.10	0.85
24.00	10.58	11.68	11.64	11.86	0.008932	1.86	12.87	28.12	0.88
28.50	10.58	11.76		11.94	0.009454	1.88	15.31	35.04	0.90
35.90	10.58	11.92		12.03	0.007366	1.51	23.75	41.88	0.79
45.90	10.58	11.99		12.12	0.007114	1.61	28.45	45.30	0.78
54.10	10.58	12.06		12.20	0.006563	1.65	32.73	48.14	0.76
11.30	10.56	11.40		11.53	0.007650	1.57	7.19	18.04	0.80
18.00	10.56	11.53		11.66	0.008168	1.62	9.86	24.79	0.82
24.00	10.56	11.66		11.83	0.007576	1.81	13.24	28.65	0.82
28.50	10.56	11.73		11.91	0.009206	1.86	15.31	34.34	0.89
35.90	10.56	11.89		12.01	0.007596	1.52	23.69	42.89	0.79
45.90	10.56	11.97		12.10	0.007094	1.60	28.69	46.51	0.78
54.10	10.56	12.04		12.17	0.006327	1.62	33.30	49.25	0.75
11.30	10.54	11.38		11.50	0.007384	1.53	7.40	18.93	0.78
18.00	10.54	11.51		11.63	0.007320	1.55	10.29	25.45	0.78
24.00	10.54	11.64		11.80	0.006663	1.73	13.84	27.05	0.77
28.50	10.54	11.70		11.88	0.008076	1.83	15.54	32.29	0.84
35.90	10.54	11.86		11.98	0.008011	1.53	23.44	43.58	0.81
45.90	10.54	11.94		12.07	0.007068	1.59	28.93	47.73	0.77
54.10	10.54	12.02		12.15	0.006062	1.59	33.97	50.48	0.73
11.30	10.53	11.36		11.47	0.007361	1.48	7.65	20.54	0.77
18.00	10.53	11.49		11.60	0.008359	1.47	10.85	26.14	0.73
24.00	10.53	11.63		11.77	0.005783	1.65	14.57	27.61	0.72
28.50	10.53	11.69		11.84	0.006718	1.77	16.14	30.89	0.78
35.90	10.53	11.83		11.95	0.008771	1.57	22.92	44.33	0.84
45.90	10.53	11.92		12.05	0.007034	1.57	29.19	49.00	0.77
54.10	10.53	12.00		12.12	0.005753	1.58	34.78	51.77	0.71
11.30	10.51	11.34		11.44	0.007254	1.42	7.96	22.39	0.76
18.00	10.51	11.48		11.59	0.005379	1.39	11.53	26.85	0.68
24.00	10.51	11.62		11.74	0.004919	1.56	15.42	28.28	0.67
28.50	10.51	11.67		11.82	0.005991	1.89	16.91	31.85	0.74
35.90	10.51	11.79		11.92	0.009207	1.61	22.25	41.91	0.86
45.90	10.51	11.90		12.02	0.006997	1.58	29.45	47.28	0.77
54.10	10.51	11.98		12.10	0.005419	1.52	35.88	51.14	0.69
11.30	10.50	11.32		11.41	0.007014	1.38	8.32	24.39	0.74

HEC-RAS Plan: Interp River Alice St Reach: 1 (Continued)

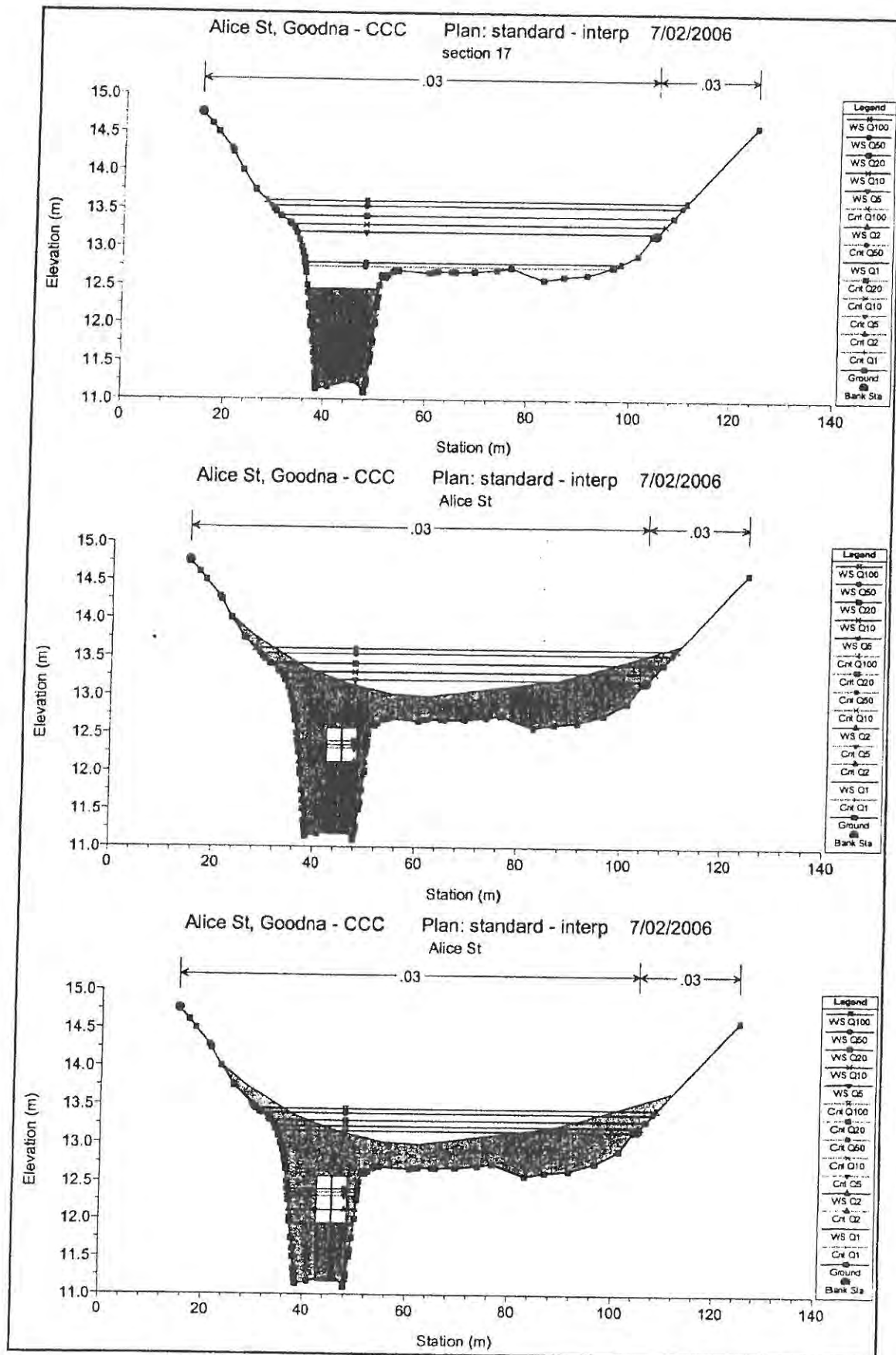
Reach	Profile	Top of Bank	Min Ch B	Max Elev	Ch W.S.	E.G. Elev	E.G. Slope	Vel Cont	Flow Area	Top Width	Froude # Ch
1	Q1	18.00	10.50	11.47		11.56	0.004464	1.30	12.30	27.59	0.82
1	Q2	24.00	10.50	11.61		11.72	0.004182	1.47	18.35	28.94	0.82
1	Q3	28.50	10.50	11.66		11.79	0.005370	1.61	17.73	33.08	0.70
1	Q4	35.90	10.50	11.76		11.90	0.006092	1.62	22.14	55.51	0.82
1	Q5	45.90	10.50	11.88		12.00	0.006901	1.54	29.79	71.58	0.78
1	Q6	54.10	10.50	11.97		12.08	0.005046	1.47	36.72	74.59	0.87
1	Q7	11.30	10.42	11.26		11.36	0.006620	1.55	7.27	17.05	0.78
1	Q8	16.00	10.42	11.44		11.54	0.005125	1.35	11.84	27.84	0.68
1	Q9	24.00	10.42	11.59		11.70	0.005534	1.48	18.17	34.79	0.69
1	Q10	28.50	10.42	11.64		11.77	0.007373	1.59	17.91	43.07	0.79
1	Q11	35.90	10.42	11.74		11.86	0.007596	1.56	23.08	58.75	0.79
1	Q12	45.90	10.42	11.88		11.97	0.005632	1.47	31.24	72.00	0.71
1	Q13	54.10	10.42	11.96		12.06	0.004278	1.40	38.89	75.14	0.82
1	Q14	11.30	10.34	11.22		11.35	0.006988	1.60	7.07	16.20	0.77
1	Q15	16.00	10.34	11.41		11.51	0.006290	1.44	11.14	27.67	0.72
1	Q16	24.00	10.34	11.58		11.68	0.007077	1.41	16.99	47.40	0.75
1	Q17	28.50	10.34	11.62		11.73	0.007081	1.48	19.23	49.93	0.76
1	Q18	35.90	10.34	11.73		11.83	0.006078	1.46	24.59	58.24	0.72
1	Q19	45.90	10.34	11.85		11.95	0.005001	1.39	32.96	72.40	0.68
1	Q20	54.10	10.34	11.95		12.04	0.003820	1.33	40.81	73.77	0.58
1	Q21	11.30	10.26	11.19		11.33	0.006958	1.62	6.98	15.60	0.77
1	Q22	16.00	10.26	11.33		11.48	0.006475	1.71	9.37	22.45	0.84
1	Q23	24.00	10.26	11.57		11.65	0.005895	1.29	18.57	50.29	0.68
1	Q24	28.50	10.26	11.61		11.71	0.005572	1.38	20.99	51.90	0.68
1	Q25	35.90	10.26	11.72		11.81	0.004667	1.38	26.48	57.46	0.64
1	Q26	45.90	10.26	11.84		11.93	0.004181	1.32	34.86	72.92	0.61
1	Q27	54.10	10.26	11.95		12.03	0.003062	1.28	43.06	76.40	0.53
1	Q28	11.30	10.22	11.16		11.30	0.007203	1.68	6.82	15.10	0.79
1	Q29	16.00	10.22	11.29		11.45	0.006995	1.77	9.02	17.61	0.79
1	Q30	24.00	10.22	11.54		11.63	0.005839	1.31	18.39	49.98	0.69
1	Q31	28.50	10.22	11.59		11.68	0.005495	1.38	21.00	51.45	0.68
1	Q32	35.90	10.22	11.70		11.79	0.005364	1.33	28.92	66.80	0.67
1	Q33	45.90	10.22	11.83		11.91	0.003702	1.27	36.12	72.64	0.58
1	Q34	54.10	10.22	11.94		12.02	0.002734	1.22	44.52	76.30	0.51
1	Q35	11.30	10.18	11.12		11.27	0.007544	1.70	6.64	14.83	0.81
1	Q36	16.00	10.18	11.25		11.42	0.007422	1.83	8.74	17.05	0.82
1	Q37	24.00	10.18	11.51		11.60	0.006065	1.32	18.15	49.75	0.70
1	Q38	28.50	10.18	11.57		11.66	0.005413	1.35	21.05	51.14	0.67
1	Q39	35.90	10.18	11.68		11.77	0.004903	1.30	27.63	68.37	0.64
1	Q40	45.90	10.18	11.82		11.90	0.003270	1.23	37.45	72.44	0.54
1	Q41	54.10	10.18	11.94		12.01	0.002464	1.17	46.05	78.76	0.46
1	Q42	11.30	10.15	11.08		11.24	0.007933	1.75	6.47	14.20	0.83
1	Q43	16.00	10.15	11.21		11.40	0.007782	1.88	8.49	16.42	0.84
1	Q44	24.00	10.15	11.48		11.57	0.006318	1.34	17.89	49.49	0.71
1	Q45	28.50	10.15	11.54		11.64	0.005477	1.35	21.15	52.20	0.68
1	Q46	35.90	10.15	11.66		11.74	0.004419	1.26	28.48	66.08	0.61
1	Q47	45.90	10.15	11.81		11.88	0.002894	1.18	38.84	72.40	0.52
1	Q48	54.10	10.15	11.93		12.00	0.002171	1.14	47.61	75.82	0.46
1	Q49	11.30	10.11	11.04		11.21	0.008481	1.81	6.26	13.75	0.85
1	Q50	16.00	10.11	11.17		11.37	0.008427	1.95	8.21	16.01	0.87
1	Q51	24.00	10.11	11.45		11.54	0.006661	1.37	17.57	49.18	0.73
1	Q52	28.50	10.11	11.52		11.61	0.006001	1.33	21.48	58.02	0.70
1	Q53	35.90	10.11	11.65		11.72	0.003955	1.22	29.39	65.90	0.58
1	Q54	45.90	10.11	11.81		11.87	0.002570	1.14	40.29	72.58	0.49
1	Q55	54.10	10.11	11.93		11.99	0.001920	1.10	49.17	74.91	0.43
1	Q56	11.30	10.07	11.00	10.95	11.18	0.009197	1.88	6.02	13.24	0.89
1	Q57	16.00	10.07	11.13	11.08	11.34	0.009304	2.03	7.89	15.59	0.91
1	Q58	24.00	10.07	11.41		11.51	0.007444	1.40	17.17	50.46	0.77
1	Q59	28.50	10.07	11.50		11.59	0.005781	1.30	21.93	59.38	0.68
1	Q60	35.90	10.07	11.64		11.71	0.003454	1.17	30.61	65.90	0.55
1	Q61	45.90	10.07	11.80		11.86	0.002289	1.10	41.81	72.96	0.48
1	Q62	54.10	10.07	11.92		11.98	0.001707	1.07	50.72	74.05	0.41
1	Q63	11.30	10.04	10.97	10.92	11.15	0.009388	1.87	6.04	13.54	0.90
1	Q64	16.00	10.04	11.10	11.06	11.30	0.009255	2.01	7.96	15.87	0.91
1	Q65	24.00	10.04	11.39		11.49	0.007311	1.39	17.28	50.50	0.76
1	Q66	28.50	10.04	11.48		11.57	0.005156	1.29	22.14	55.97	0.65
1	Q67	35.90	10.04	11.63		11.70	0.003188	1.16	30.87	63.07	0.53
1	Q68	45.90	10.04	11.79		11.85	0.002044	1.10	41.81	68.12	0.44
1	Q69	54.10	10.04	11.91		11.97	0.001615	1.09	49.67	67.28	0.40
1	Q70	11.30	10.02	10.94	10.89	11.11	0.009530	1.87	6.06	13.83	0.90
1	Q71	16.00	10.02	11.07	11.03	11.27	0.009691	1.94	8.26	16.37	0.92
1	Q72	24.00	10.02	11.36		11.46	0.006868	1.39	17.23	47.34	0.74
1	Q73	28.50	10.02	11.46		11.55	0.004830	1.29	22.05	52.74	0.64

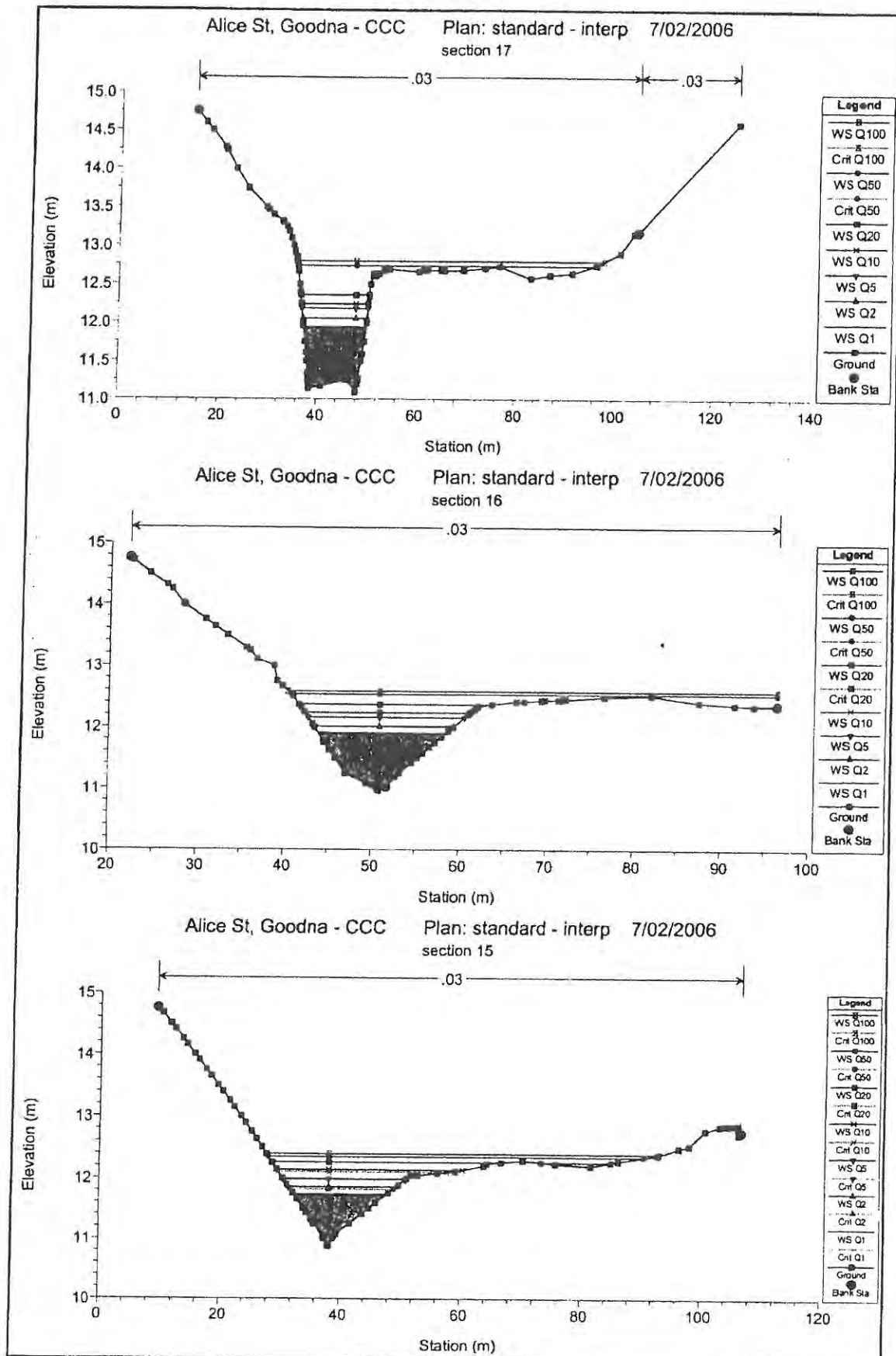
HEC-RAS Plan: Interp River Alice St Reach: 1 (Continued)

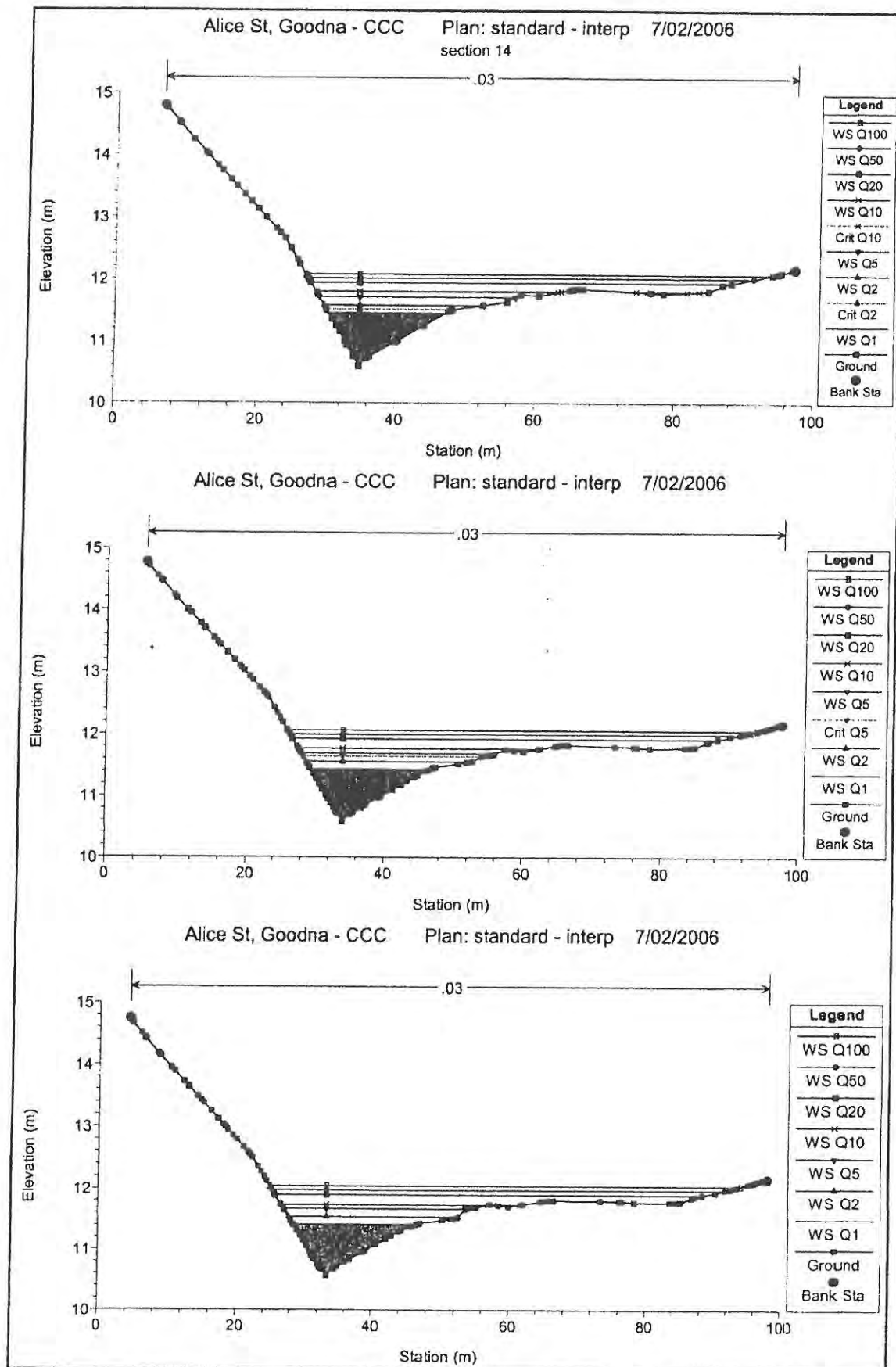
Reach	Flow Rate	Profile	Q Total (cfs)	Min Chl (ft)	W.S. Elev. (ft)	Cut W.S. (ft)	E.G. Elev. (ft)	E.G. Slope	Vel Chl (ft/s)	Flow Area (sq ft)	Top Width (ft)	Froude # Chl
1	24.0	Q10	35.90	10.02	11.62		11.68	0.002870	1.17	30.71	57.72	0.51
1	24.0	Q10	45.90	10.02	11.78		11.85	0.001981	1.14	40.37	59.28	0.44
1	24.0	Q10	54.10	10.02	11.90		11.97	0.001818	1.14	47.59	60.42	0.41
1	24.0	Q10										
1	24.0	Q10	11.30	9.99	10.91	10.87	11.08	0.009833	1.83	6.17	14.81	0.91
1	24.0	Q10	16.00	9.99	11.05		11.23	0.008924	1.89	8.45	18.00	0.88
1	24.0	Q10	24.00	9.99	11.34	11.18	11.44	0.008852	1.42	18.86	44.34	0.74
1	24.0	Q10	28.50	9.99	11.44		11.53	0.004879	1.32	21.66	49.21	0.83
1	24.0	Q10	35.90	9.99	11.60		11.67	0.002729	1.21	29.66	50.62	0.51
1	24.0	Q10	45.90	9.99	11.78		11.84	0.002012	1.20	38.19	52.45	0.45
1	24.0	Q10	54.10	9.99	11.88		11.96	0.001722	1.21	44.55	53.50	0.42
1	24.0	Q10										
1	24.0	Q10	11.30	9.98	10.88	10.84	11.05	0.009505	1.83	6.17	14.44	0.89
1	24.0	Q10	16.00	9.98	11.02	10.95	11.20	0.008788	1.92	8.35	17.28	0.88
1	24.0	Q10	24.00	9.98	11.22		11.41	0.008054	1.93	12.48	23.97	0.85
1	24.0	Q10	28.50	9.98	11.31		11.50	0.008798	1.91	14.91	25.47	0.80
1	24.0	Q10	35.90	9.98	11.48		11.65	0.005422	1.91	18.62	27.06	0.73
1	24.0	Q10	45.90	9.98	11.61		11.81	0.005015	2.01	22.84	29.52	0.72
1	24.0	Q10	54.10	9.98	11.71		11.94	0.004846	2.09	25.88	29.55	0.71
1	24.0	Q10										
1	24.0	Q10	11.30	9.92	10.84	10.79	11.01	0.009160	1.81	6.24	14.44	0.88
1	24.0	Q10	16.00	9.92	10.99		11.16	0.008826	1.87	8.55	18.08	0.87
1	24.0	Q10	24.00	9.92	11.19		11.37	0.007177	1.87	12.83	21.83	0.81
1	24.0	Q10	28.50	9.92	11.29		11.47	0.006096	1.85	15.38	25.35	0.76
1	24.0	Q10	35.90	9.92	11.45		11.62	0.004878	1.85	19.39	26.94	0.70
1	24.0	Q10	45.90	9.92	11.60		11.79	0.004498	1.95	23.56	28.40	0.68
1	24.0	Q10	54.10	9.92	11.70		11.91	0.004395	2.04	25.58	29.38	0.68
1	24.0	Q10										
1	24.0	Q10	11.30	9.88	10.81		10.97	0.008855	1.77	6.38	14.89	0.86
1	24.0	Q10	16.00	9.88	10.95		11.12	0.007879	1.82	8.79	18.06	0.83
1	24.0	Q10	24.00	9.88	11.17		11.34	0.006442	1.83	13.08	22.88	0.77
1	24.0	Q10	28.50	9.88	11.27		11.44	0.005885	1.82	15.67	25.23	0.74
1	24.0	Q10	35.90	9.88	11.44		11.60	0.004428	1.80	19.93	26.66	0.67
1	24.0	Q10	45.90	9.88	11.59		11.77	0.004136	1.90	24.12	28.30	0.66
1	24.0	Q10	54.10	9.88	11.69		11.89	0.004071	1.99	27.13	29.22	0.66
1	24.0	Q10										
1	24.0	Q10	11.30	9.84	10.78		10.93	0.008082	1.72	6.56	14.91	0.83
1	24.0	Q10	16.00	9.84	10.93		11.09	0.007021	1.77	9.02	17.70	0.79
1	24.0	Q10	24.00	9.84	11.14		11.31	0.005991	1.83	13.08	21.65	0.75
1	24.0	Q10	28.50	9.84	11.24		11.41	0.005885	1.84	15.46	25.03	0.75
1	24.0	Q10	35.90	9.84	11.42		11.58	0.004341	1.79	20.00	26.71	0.66
1	24.0	Q10	45.90	9.84	11.57		11.75	0.004058	1.90	24.19	28.12	0.65
1	24.0	Q10	54.10	9.84	11.67		11.87	0.004007	1.99	27.17	29.01	0.66
1	24.0	Q10										
1	24.0	Q10	11.30	9.80	10.75		10.89	0.007267	1.68	6.71	14.57	0.79
1	24.0	Q10	16.00	9.80	10.90		11.06	0.006498	1.78	9.09	17.01	0.77
1	24.0	Q10	24.00	9.80	11.10		11.28	0.005779	1.86	12.90	20.33	0.75
1	24.0	Q10	28.50	9.80	11.21		11.39	0.005406	1.89	15.06	22.02	0.73
1	24.0	Q10	35.90	9.80	11.39		11.56	0.004603	1.83	19.58	26.49	0.68
1	24.0	Q10	45.90	9.80	11.54		11.73	0.004200	1.92	23.87	27.92	0.66
1	24.0	Q10	54.10	9.80	11.65		11.85	0.004136	2.02	26.82	28.77	0.67
1	24.0	Q10										
1	24.0	Q10	11.30	9.76	10.72		10.86	0.006740	1.67	6.75	13.98	0.77
1	24.0	Q10	16.00	9.76	10.87		11.03	0.006282	1.78	8.99	16.11	0.76
1	24.0	Q10	24.00	9.76	11.07		11.25	0.005657	1.92	12.49	18.93	0.75
1	24.0	Q10	28.50	9.76	11.17		11.36	0.005574	1.97	14.46	20.32	0.75
1	24.0	Q10	35.90	9.76	11.35		11.54	0.005387	1.93	18.59	26.19	0.73
1	24.0	Q10	45.90	9.76	11.51		11.71	0.004719	2.00	22.93	27.63	0.70
1	24.0	Q10	54.10	9.76	11.61		11.83	0.004592	2.09	25.88	28.47	0.70
1	24.0	Q10										
1	24.0	Q10	11.30	9.47	10.38		10.56	0.008088	1.86	6.07	12.24	0.84
1	24.0	Q10	16.00	9.47	10.51	10.45	10.73	0.008453	2.07	7.72	13.71	0.88
1	24.0	Q10	24.00	9.47	10.69	10.63	10.98	0.008479	2.30	10.44	15.89	0.91
1	24.0	Q10	28.50	9.47	10.77	10.72	11.07	0.008852	2.44	11.87	18.77	0.93
1	24.0	Q10	35.90	9.47	10.87	10.85	11.23	0.009548	2.67	13.48	17.93	0.98
1	24.0	Q10	45.90	9.47	11.05	11.05	11.42	0.010183	2.69	17.05	23.55	1.01
1	24.0	Q10	54.10	9.47	11.13	11.13	11.55	0.010182	2.84	19.02	24.12	1.02
1	24.0	Q10										
1	24.0	Q10	11.30	9.13	9.96	9.94	10.18	0.010476	1.98	5.71	12.81	0.95
1	24.0	Q10	16.00	9.13	10.09	10.07	10.32	0.010420	2.16	7.42	14.54	0.96
1	24.0	Q10	24.00	9.13	10.24	10.24	10.54	0.010966	2.43	9.87	16.80	1.01
1	24.0	Q10	28.50	9.13	10.32	10.32	10.65	0.010722	2.52	11.29	17.87	1.01
1	24.0	Q10	35.90	9.13	10.45	10.45	10.80	0.010280	2.64	13.59	19.46	1.01
1	24.0	Q10	45.90	9.13	10.62	10.62	10.98	0.010473	2.66	17.26	24.83	1.02
1	24.0	Q10	54.10	9.13	10.74	10.74	11.09	0.010174	2.84	20.50	29.23	1.01
1	24.0	Q10										
1	24.0	Q10	11.30	8.76	9.52	9.51	9.72	0.011420	2.01	5.62	13.15	0.98
1	24.0	Q10	16.00	8.76	9.63	9.63	9.88	0.011618	2.22	7.21	14.72	1.01
1	24.0	Q10	24.00	8.76	9.80	9.80	10.10	0.010962	2.41	9.94	17.11	1.01
1	24.0	Q10	28.50	8.76	9.88	9.88	10.20	0.010704	2.50	11.39	18.23	1.01
1	24.0	Q10	35.90	8.76	10.00	10.00	10.36	0.010521	2.64	13.60	19.88	1.02
1	24.0	Q10	45.90	8.76	10.22	10.22	10.51	0.010808	2.41	19.03	32.54	1.01
1	24.0	Q10	54.10	8.76	10.35	10.33	10.60	0.010638	2.21	24.53	47.44	0.98

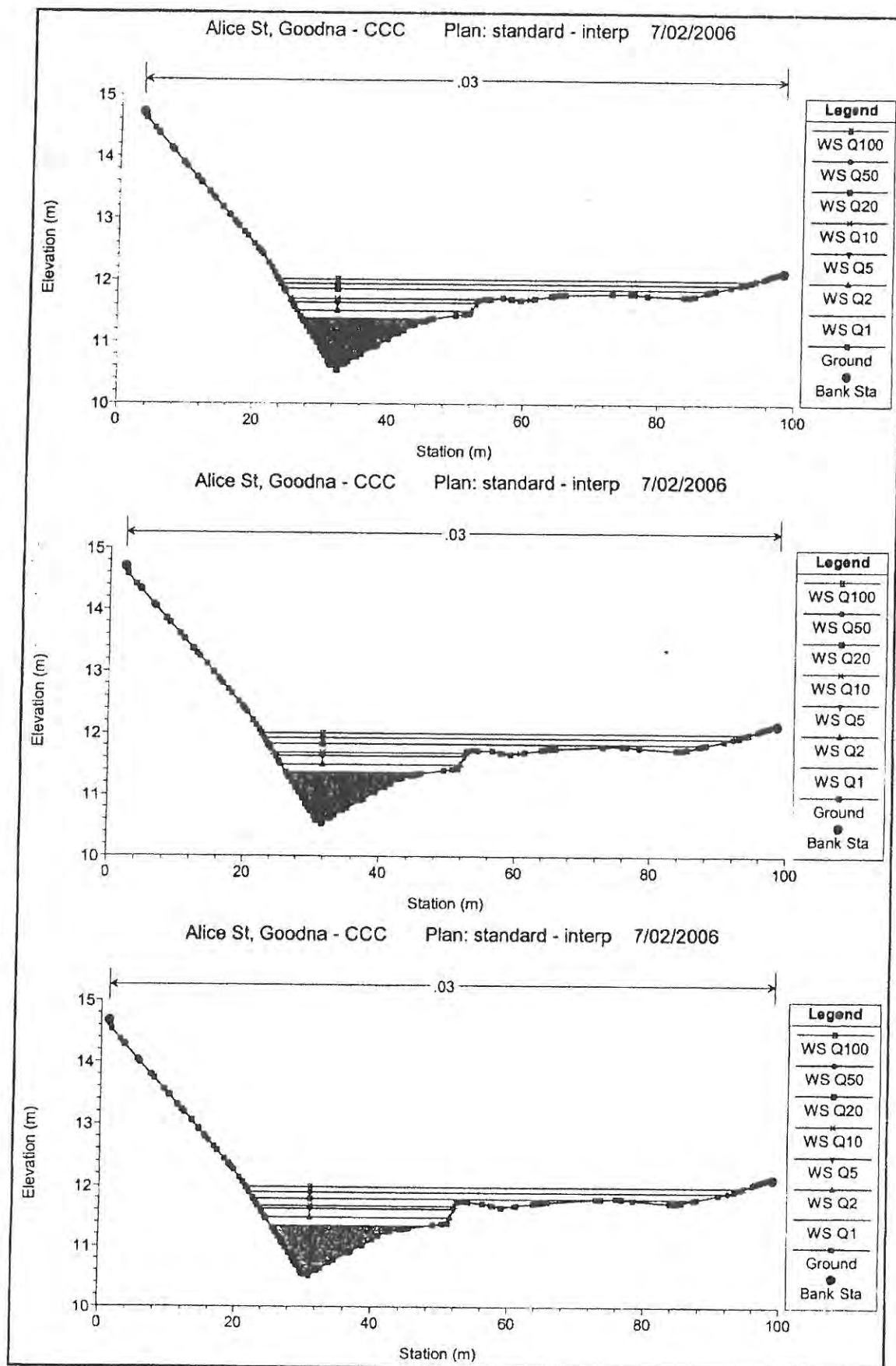
HEC-RAS Plan Interp River Alice St Reach 1 (Continued)

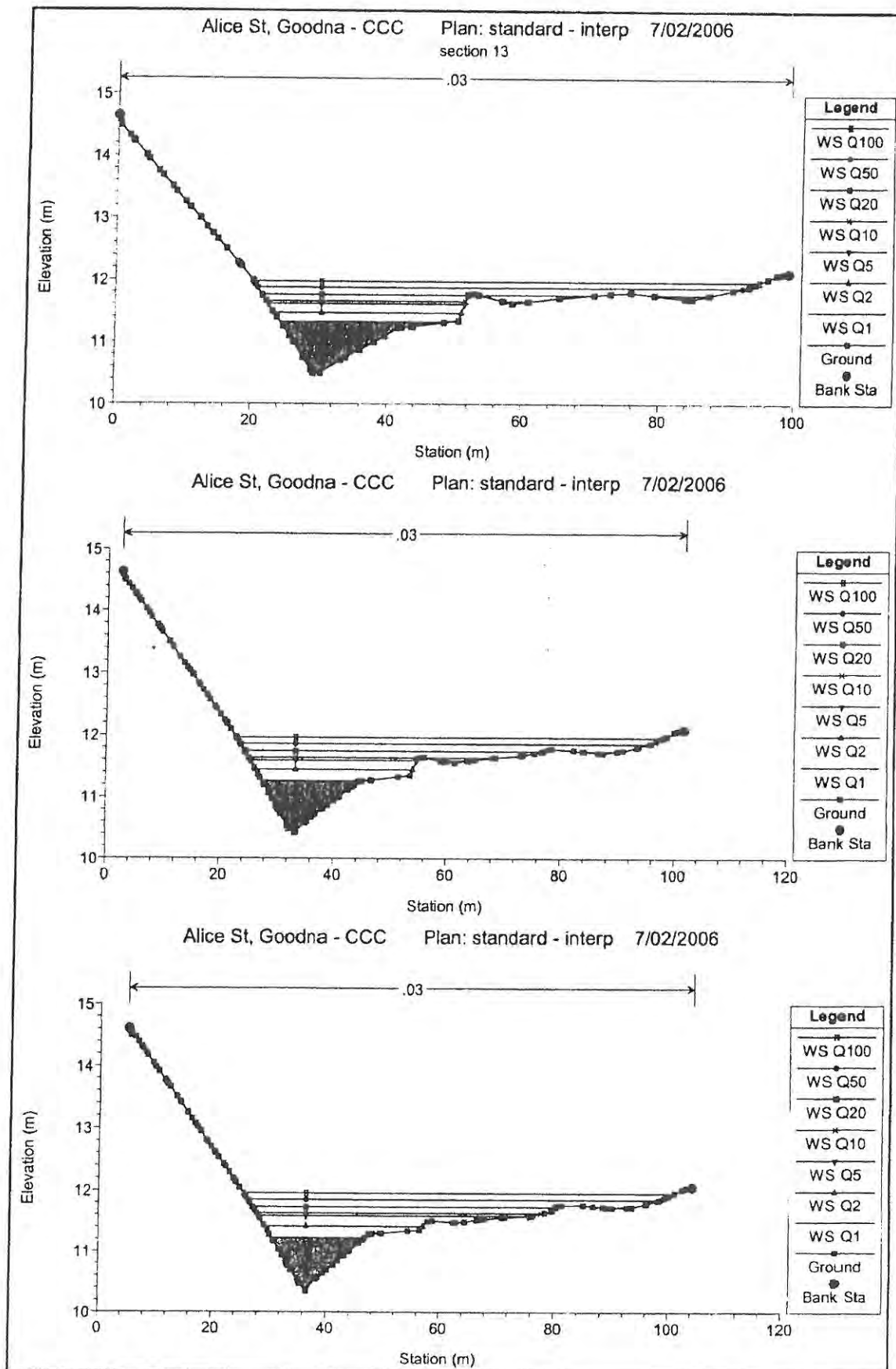
Reach	Profile	Dist	W.S. Elev	Ch W.S.	E.G. Elev	F.O. Slope	Vel Chs	Flow Area	Top Width	Profile
(ft)	(ft)	(ft)	(ft)	(ft)	(ft)	(ft)	(ft/s)	(sq ft)	(ft)	(ft)
11.30	8.47	9.10	9.10	9.31	0.012438	1.99	5.69	14.49	1.01	
16.00	8.47	9.22	9.22	9.46	0.011719	2.17	7.36	15.82	1.01	
24.00	8.47	9.38	9.38	9.67	0.010804	2.40	10.01	17.25	1.00	
28.50	8.47	9.45	9.45	9.77	0.010655	2.51	11.34	18.02	1.01	
35.90	8.47	9.58	9.58	9.93	0.010198	2.83	13.66	19.83	1.01	
45.90	8.47	9.71	9.71	10.11	0.010296	2.79	16.46	21.78	1.02	
54.10	8.47	9.88	9.88	10.23	0.010112	2.82	20.87	29.77	1.00	
11.30	8.06	8.74	8.74	8.94	0.012602	1.97	5.73	14.87	1.01	
16.00	8.06	8.85	8.85	9.09	0.011847	2.16	7.42	16.09	1.01	
24.00	8.06	9.27	9.27	9.40	0.003464	1.58	15.14	20.86	0.59	
28.50	8.06	9.35	9.35	9.50	0.004137	1.89	16.90	24.02	0.64	
35.90	8.06	9.44	9.44	9.62	0.004707	1.88	19.11	25.45	0.69	
45.90	8.06	9.55	9.55	9.78	0.005040	2.09	21.98	28.27	0.73	
54.10	8.06	9.61	9.61	9.88	0.005792	2.31	23.41	26.65	0.79	
11.30	7.53	8.31	8.31	8.51	0.012498	2.01	5.62	14.08	1.02	
16.00	7.53	8.87	8.87	8.92	0.001441	1.04	15.36	20.41	0.38	
24.00	7.53	9.29	9.29	9.33	0.000878	0.98	25.01	25.82	0.31	
28.50	7.53	9.37	9.37	9.42	0.000984	1.05	27.11	26.56	0.33	
35.90	7.53	9.45	9.45	9.53	0.001227	1.22	29.51	27.40	0.37	
45.90	7.53	9.58	9.58	9.67	0.001514	1.41	32.57	28.40	0.42	
54.10	7.53	9.62	9.62	9.75	0.001823	1.58	34.22	28.85	0.46	
11.30	6.92	8.28	8.28	8.33	0.001077	0.94	12.05	14.83	0.33	
16.00	6.92	8.87	8.87	8.89	0.000439	0.73	22.00	20.19	0.22	
24.00	6.92	9.28	9.28	9.31	0.000521	0.73	32.89	33.91	0.24	
28.50	6.92	9.38	9.38	9.39	0.000711	0.80	35.67	41.28	0.27	
35.90	6.92	9.45	9.45	9.49	0.000967	0.91	39.84	47.96	0.32	
45.90	6.92	9.56	9.56	9.61	0.001250	1.01	45.65	57.31	0.38	
54.10	6.92	9.62	9.62	9.69	0.001374	1.10	49.25	58.08	0.38	
11.30	6.13	8.27	7.08	8.30	0.000393	0.77	14.65	10.45	0.21	
16.00	6.13	8.85	7.26	8.88	0.000350	0.73	21.89	15.84	0.20	
24.00	6.13	9.28	7.53	9.28	0.000948	0.70	34.52	80.38	0.29	
28.50	6.13	9.34	7.68	9.36	0.001009	0.72	39.43	68.41	0.30	
35.90	6.13	9.42	7.85	9.45	0.001057	0.79	45.56	71.89	0.32	
45.90	6.13	9.53	8.09	9.57	0.001065	0.85	53.83	75.88	0.32	
54.10	6.13	9.60	8.26	9.64	0.001143	0.92	58.55	77.10	0.34	
Culvert										
11.30	6.13	7.08	7.08	7.41	0.011297	2.55	4.43	6.84	1.01	
16.00	6.13	7.26	7.26	7.66	0.010682	2.80	5.72	7.22	1.00	
24.00	6.13	7.52	7.52	8.01	0.010271	3.10	7.74	6.06	1.01	
28.50	6.13	7.66	7.66	8.19	0.010022	3.22	8.84	6.48	1.01	
35.90	6.13	7.85	7.85	8.44	0.009751	3.40	10.56	9.11	1.01	
45.90	6.13	8.09	8.09	8.74	0.009437	3.59	12.78	9.86	1.01	
54.10	6.13	8.25	8.25	8.97	0.009333	3.74	14.47	10.39	1.01	

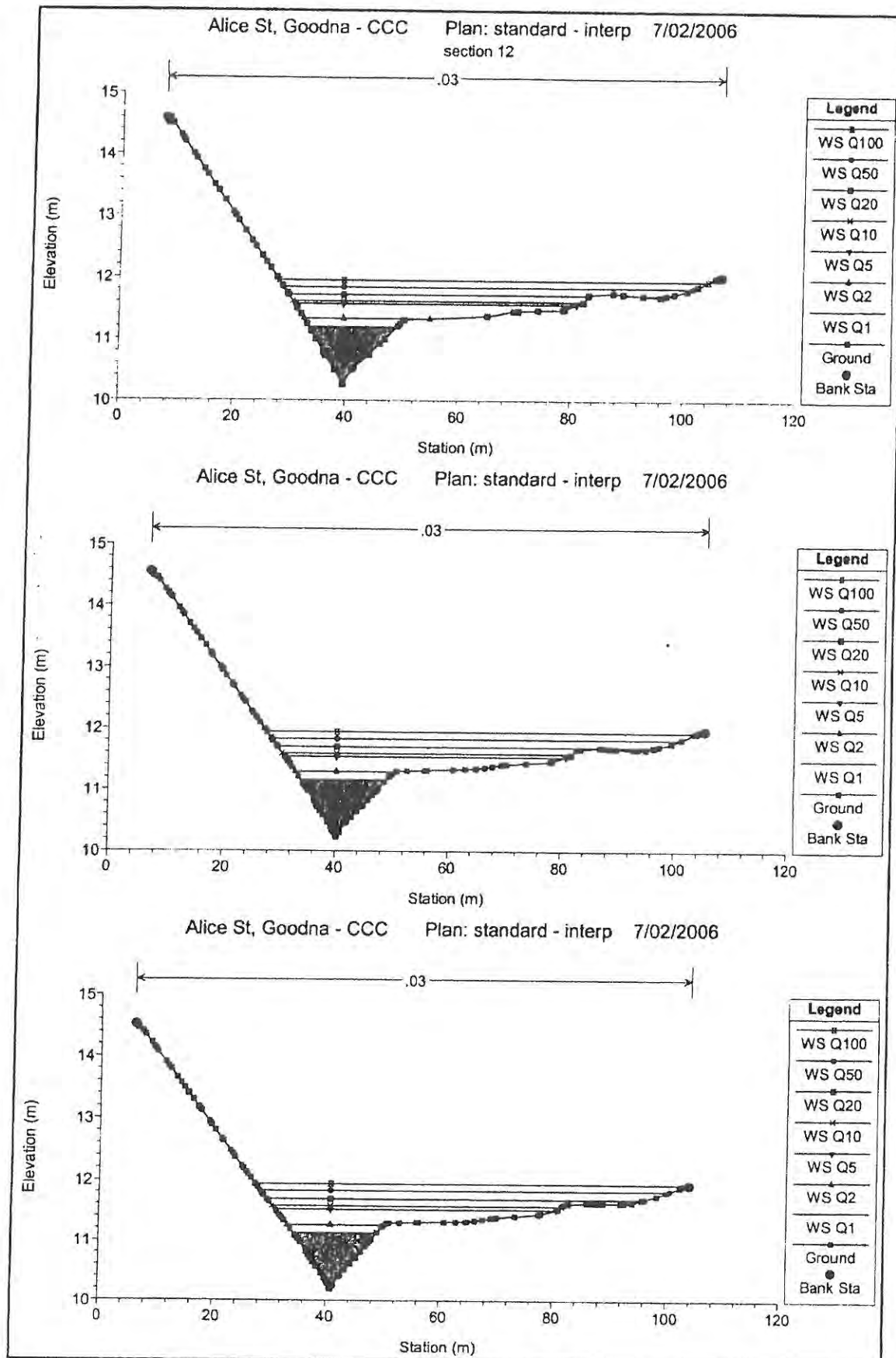


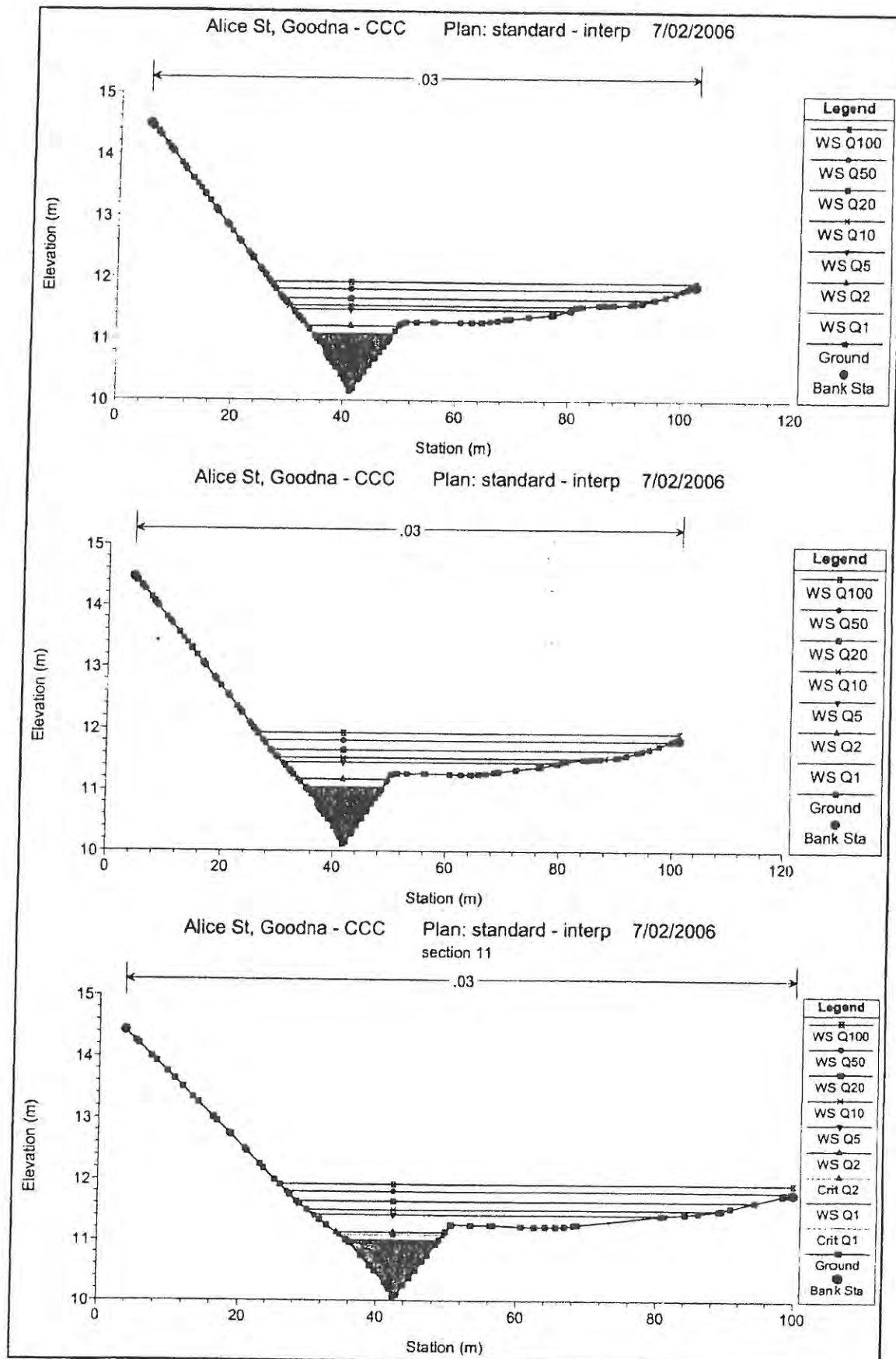


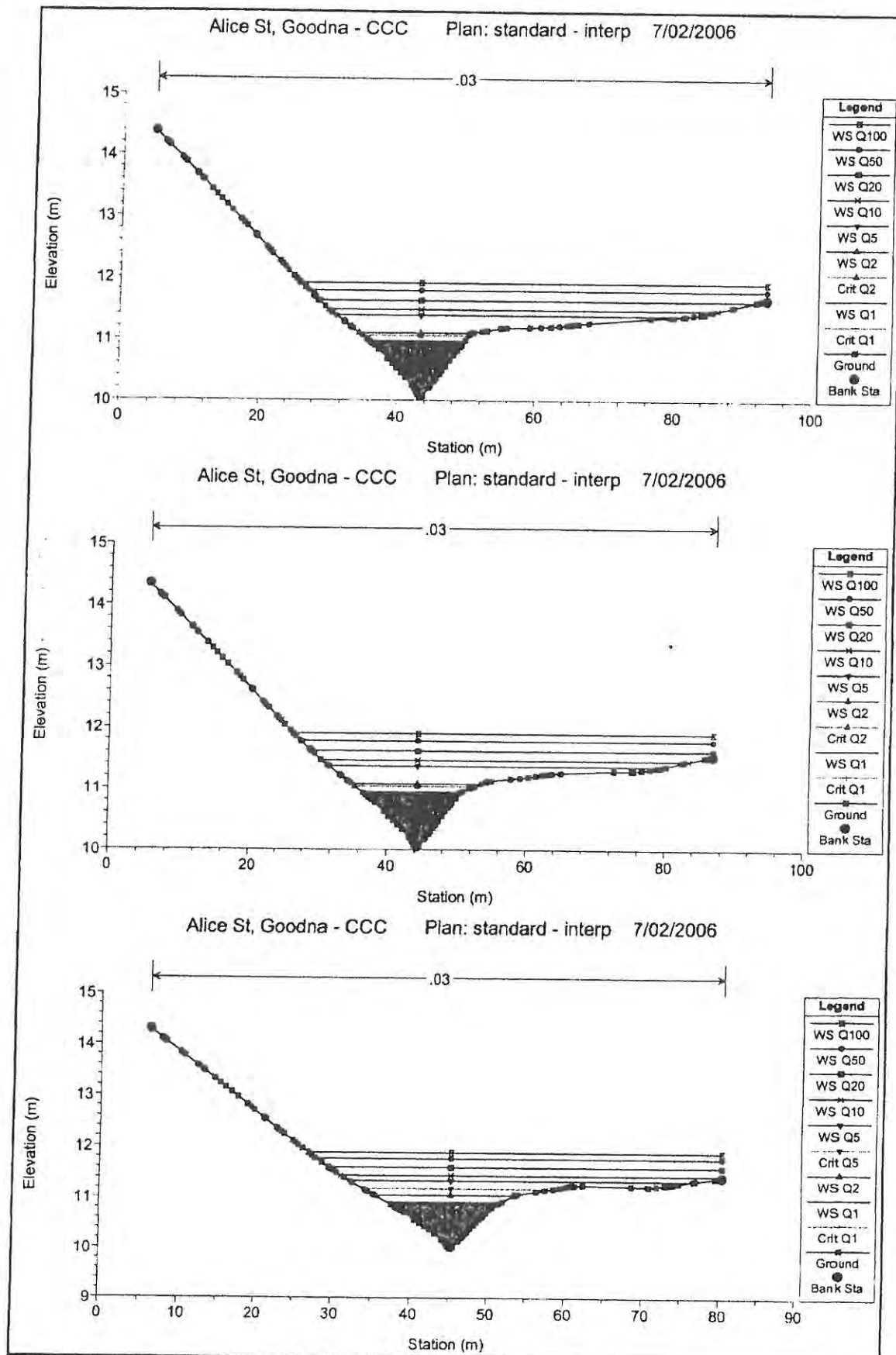


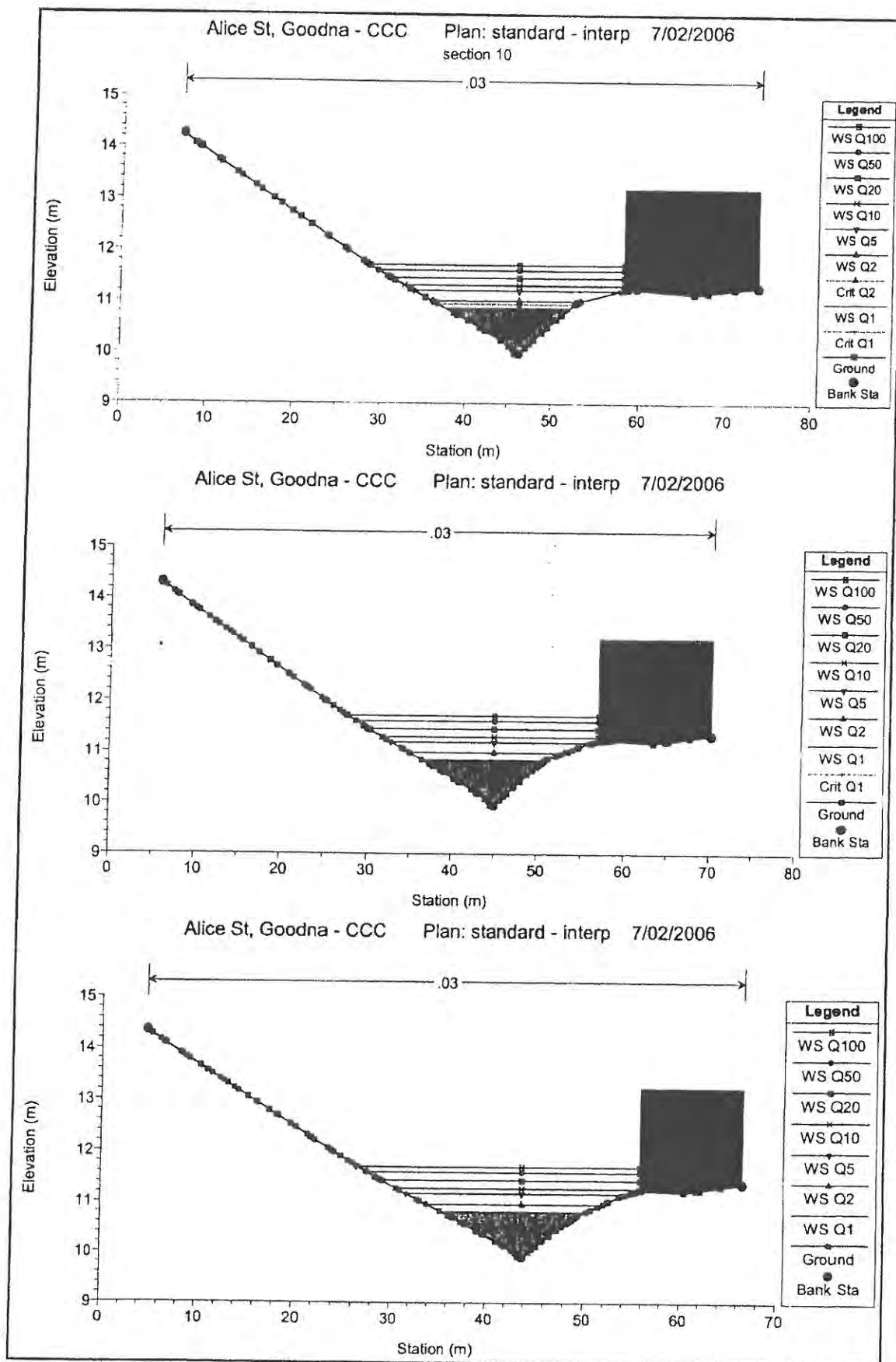


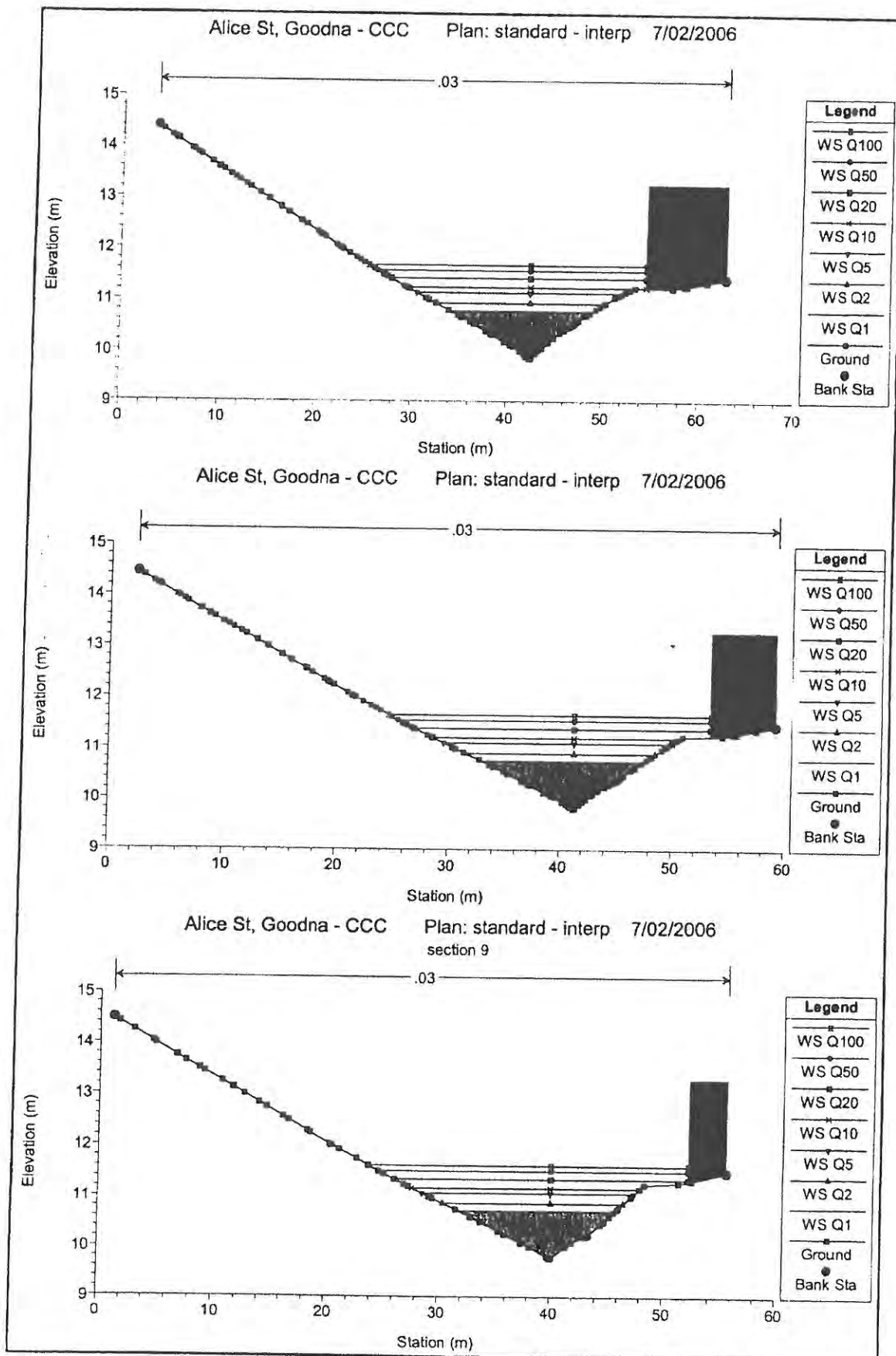












Plan: Interp Alice St 1 RS: 419 Culv Group: Culvert #1 Profile: Q1

Q Culv Group (m3/s)	11.30	Culv Full Len (m)	
# Barrels	2	Culv Vel US (m/s)	2.16
Q Barrel (m3/s)	5.65	Culv Vel DS (m/s)	2.66
E.G. US (m)	12.48	Culv Inlet Elev (m)	11.17
W.S. US (m)	12.45	Culv Inlet Dm (m)	11.17
E.G. DS (m)	12.03	Culv Frict Ls (m)	0.06
W.S. DS (m)	11.94	Culv Exit Elev (m)	0.27
Delta EG (m)	0.44	Culv Exit Dm (m)	0.12
Delta WS (m)	0.51	Q Weir (m3/s)	
E.G. CC (m)	12.38	Weir Start Ls (m)	
E.G. IC (m)	12.48	Weir Stop Rgt (m)	
Culv Control	Outlet	Weir Summ	
Culv WS Inlet (m)	12.12	Weir Max Depth (m)	
Culv WS Outlet (m)	11.94	Weir Avg Depth (m)	
Culv Min Depth (m)		Weir Flow Area (m2)	
Culv Crt Depth (m)	0.75	Min El Weir Flow (m)	13.00

Plan: Interp Alice St 1 RS: 419 Culv Group: Culvert #1 Profile: Q2

Q Culv Group (m3/s)	16.00	Culv Full Len (m)	
# Barrels	2	Culv Vel US (m/s)	2.47
Q Barrel (m3/s)	8.00	Culv Vel DS (m/s)	3.06
E.G. US (m)	12.81	Culv Inlet Elev (m)	11.17
W.S. US (m)	12.79	Culv Inlet Dm (m)	11.17
E.G. DS (m)	12.19	Culv Frict Ls (m)	0.06
W.S. DS (m)	12.05	Culv Exit Elev (m)	0.41
Delta EG (m)	0.63	Culv Exit Dm (m)	0.16
Delta WS (m)	0.74	Q Weir (m3/s)	
E.G. CC (m)	12.71	Weir Start Ls (m)	
E.G. IC (m)	12.81	Weir Stop Rgt (m)	
Culv Control	Outlet	Weir Summ	
Culv WS Inlet (m)	12.35	Weir Max Depth (m)	
Culv WS Outlet (m)	12.12	Weir Avg Depth (m)	
Culv Min Depth (m)		Weir Flow Area (m2)	
Culv Crt Depth (m)	0.95	Min El Weir Flow (m)	13.00

Plan: Interp Alice St 1 RS: 419 Culv Group: Culvert #1 Profile: Q5

Q Culv Group (m3/s)	20.87	Culv Full Len (m)	
# Barrels	2	Culv Vel US (m/s)	2.73
Q Barrel (m3/s)	10.43	Culv Vel DS (m/s)	3.34
E.G. US (m)	13.21	Culv Inlet Elev (m)	11.17
W.S. US (m)	13.20	Culv Inlet Dm (m)	11.17
E.G. DS (m)	12.40	Culv Frict Ls (m)	0.07
W.S. DS (m)	12.18	Culv Exit Elev (m)	0.47
Delta EG (m)	0.81	Culv Exit Dm (m)	0.27
Delta WS (m)	1.02	Q Weir (m3/s)	3.13
E.G. CC (m)	13.21	Weir Start Ls (m)	43.80
E.G. IC (m)	13.20	Weir Stop Rgt (m)	88.54
Culv Control	Inlet	Weir Summ	0.00
Culv WS Inlet (m)	12.56	Weir Max Depth (m)	0.23
Culv WS Outlet (m)	12.31	Weir Avg Depth (m)	0.13
Culv Min Depth (m)		Weir Flow Area (m2)	5.79
Culv Crt Depth (m)	1.14	Min El Weir Flow (m)	13.00

Plan: interp Alice St 1 RS: 419 Culv Group: Culvert #1 Profile: Q10

Q Culv Group (m3/s)	22.09	Culv Full Len (m)	6.02
# Borehole	2	Culv Vel US (m/s)	2.87
Q Barrel (m3/s)	11.04	Culv Vel DS (m/s)	3.40
E.G. IS (m)	13.31	Culv Inlet El (m)	11.17
W.S. US (m)	13.30	Culv Inlet D (m)	11.17
E.G. DS (m)	12.51	Culv Front El (m)	0.16
W.S. DS (m)	12.24	Culv Exit El (m)	0.43
D. Inlet (m)	0.80	Culv Exit D (m)	0.21
D. Outlet (m)	1.06	Culv Exit D (m)	6.41
E.G. IS (m)	13.31	W.S. IS (m)	40.54
E.G. DS (m)	13.29	W.S. DS (m)	93.08
Culv Inlet	Inlet	W.S. IS (m)	0.00
Culv Inlet D (m)	12.57	W.S. DS (m)	0.31
Culv Inlet Depth (m)	12.35	W.S. DS (m)	0.19
Culv Inlet Depth (m)		W.S. DS (m)	9.74
Culv Inlet Depth (m)	1.18	W.S. DS (m)	13.00

Plan: interp Alice St 1 RS: 419 Culv Group: Culvert #1 Profile: Q20

Q Culv Group (m3/s)	23.37	Culv Full Len (m)	12.12
# Borehole	2	Culv Vel US (m/s)	3.04
Q Barrel (m3/s)	11.69	Culv Vel DS (m/s)	3.47
E.G. IS (m)	13.42	Culv Inlet El (m)	11.17
W.S. US (m)	13.41	Culv Inlet D (m)	11.17
E.G. DS (m)	12.70	Culv Front El (m)	0.18
W.S. DS (m)	12.36	Culv Exit El (m)	0.31
D. Inlet (m)	0.73	Culv Exit D (m)	0.23
D. Outlet (m)	1.05	Culv Exit D (m)	12.53
E.G. IS (m)	13.42	W.S. IS (m)	36.78
E.G. DS (m)	13.40	W.S. DS (m)	98.65
Culv Inlet	Inlet	W.S. IS (m)	0.00
Culv Inlet D (m)	12.57	W.S. DS (m)	0.42
Culv Inlet Depth (m)	12.40	W.S. DS (m)	0.26
Culv Inlet Depth (m)		W.S. DS (m)	15.99
Culv Inlet Depth (m)	1.23	W.S. DS (m)	13.00

Plan: interp Alice St 1 RS: 419 Culv Group: Culvert #1 Profile: Q50

Q Culv Group (m3/s)	23.33	Culv Full Len (m)	20.00
# Borehole	2	Culv Vel US (m/s)	3.03
Q Barrel (m3/s)	11.66	Culv Vel DS (m/s)	3.03
E.G. IS (m)	13.56	Culv Inlet El (m)	11.17
W.S. US (m)	13.54	Culv Inlet D (m)	11.17
E.G. DS (m)	12.95	Culv Front El (m)	0.12
W.S. DS (m)	12.74	Culv Exit El (m)	0.26
D. Inlet (m)	0.61	Culv Exit D (m)	0.23
D. Outlet (m)	0.80	Q Weir (m3/s)	22.57
E.G. IS (m)	13.53	Weir Slo El (m)	33.46
E.G. DS (m)	13.56	Weir Slo Rd (m)	105.30
Culv Inlet	Outlet	Weir Submrg	0.00
Culv WS Inlet (m)	12.57	Weir Max Depth (m)	0.55
Culv WS Outlet (m)	12.57	Weir Avg Depth (m)	0.35
Culv Inlet Depth (m)		Weir Flow Area (m2)	24.83
Culv Inlet Depth (m)	1.22	Min El Weir Flow (m)	13.00

Plan: interp Alice St 1 RS: 419 Culv Group: Culvert #1 Profile: Q100

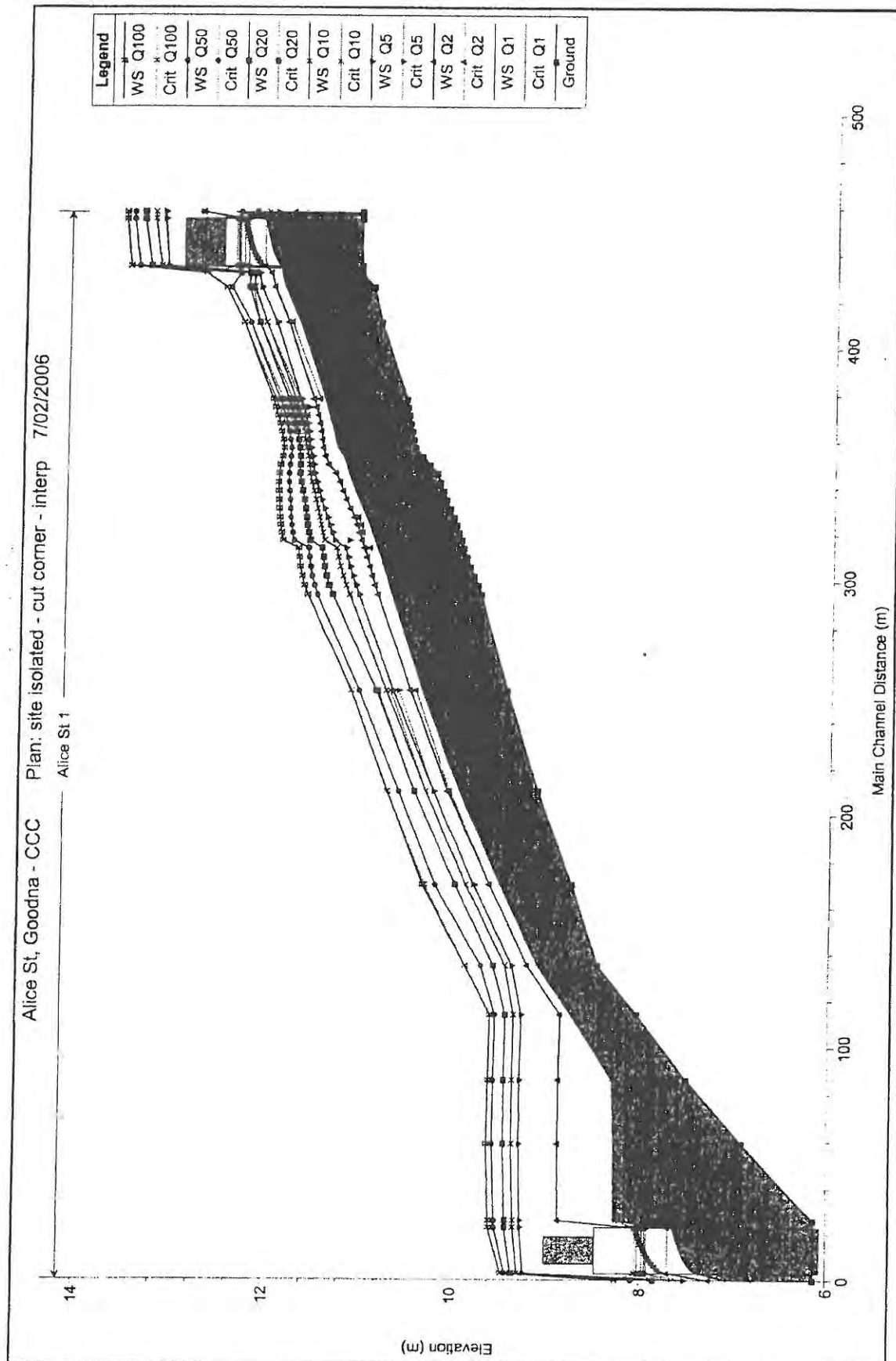
Q Culv Group (m3/s)	23.48	Culv Full Len (m)	20.00
# Pipes	2	Culv Vel (ft/s)	3.05
Q Box (cfs)	11.74	Culv Vel (m/s)	3.05
E Box (m)	13.63	Culv In Elev (m)	11.17
W.S. US (m)	13.61	Culv In Elev (ft)	11.17
E Box (m)	13.01	Culv Head (m)	0.12
W.S. US (m)	12.80	Culv Head (ft)	0.26
D Box (m)	0.61	Culv Exit Elev (m)	0.24
D Box (ft)	0.81	Culv Exit Elev (ft)	30.62
E Box (m)	13.60	W.S. US (m)	31.33
E Box (ft)	13.63	W.S. US (ft)	109.57
Culv Exit Elev (m)	Outlet	Culv Exit Elev (ft)	0.00
Culv Exit Elev (ft)	12.57	Culv Exit Elev (m)	0.63
Culv Exit Elev (m)	12.57	Culv Exit Elev (ft)	0.40
Culv Exit Elev (ft)		Culv Exit Elev (m)	31.19
Culv Exit Elev (m)	1.23	Culv Exit Elev (ft)	13.00

APPENDIX C-2
DETAILED HEC-RAS OUTPUT
POST DEVELOPMENT

TABLETOP
ARCHITECTS
PLANNERS
ENGINEERS

ABN 60 067 321 117

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HEC-RAS Plan: cut cor-int River Alice St Reach: 1

Station	Bank	Top of Bank	Min. Ch. El.	W.S. Elev.	Cut W.S.	E.G. Elev.	E.G. Slope	Vel. Const.	Flow Area	Top Width	Exposure E.C.N.
11.30		11.09	12.45	11.88	12.48	0.000481		0.74	15.21	14.05	0.23
16.00		11.09	12.79	11.80	12.81	0.001107		0.82	26.00	61.99	0.30
24.00		11.09	13.20	11.99	13.21	0.000275		0.45	53.12	71.22	0.17
28.50		11.09	13.30	12.08	13.31	0.000280		0.47	60.34	73.61	0.18
35.90		11.09	13.41	12.21	13.42	0.000283		0.53	68.80	77.40	0.17
45.90		11.09	13.51	12.39	13.53	0.000333		0.80	78.58	80.34	0.19
54.10		11.09	13.58	12.80	13.61	0.000363		0.86	83.18	82.69	0.20
Culvert											
11.30		11.09	11.94		12.03	0.002838		1.33	8.48	12.57	0.52
16.00		11.09	12.05		12.19	0.003568		1.62	9.88	12.91	0.59
24.00		11.09	12.18		12.40	0.004903		2.07	11.59	13.25	0.71
28.50		11.09	12.24		12.51	0.005893		2.31	12.36	13.40	0.77
35.90		11.09	12.29	12.22	12.88	0.007801		2.77	12.96	13.55	0.90
45.90		11.09	12.39	12.38	12.91	0.008479		3.20	14.33	13.87	1.01
54.10		11.09	12.76	12.76	13.09	0.011701		2.54	21.27	34.93	1.04
11.30		10.98	11.90		12.01	0.004583		1.47	7.71	14.58	0.84
16.00		10.98	12.01		12.10	0.005388		1.71	9.38	15.97	0.71
24.00		10.98	12.16		12.37	0.006424		2.02	11.88	17.86	0.79
28.50		10.98	12.23		12.47	0.008400		2.18	13.21	18.80	0.82
35.90		10.98	12.29	12.25	12.61	0.008515		2.49	14.42	19.80	0.93
45.90		10.98	12.49	12.49	12.78	0.010403		2.40	19.11	31.93	0.99
54.10		10.98	12.54	12.54	12.88	0.010909		2.59	20.91	32.31	1.03
11.30		10.88	11.73	11.70	11.90	0.010440		1.84	8.16	15.45	0.93
16.00		10.88	11.86	11.82	12.05	0.009606		1.94	8.24	17.85	0.91
24.00		10.88	11.99	11.97	12.24	0.010885		2.24	10.73	20.38	0.98
28.50		10.88	12.10	12.10	12.33	0.011406		2.18	13.21	27.84	1.00
35.90		10.88	12.17	12.17	12.45	0.011784		2.32	15.44	29.74	1.03
45.90		10.88	12.27	12.27	12.58	0.011179		2.50	18.38	30.42	1.03
54.10		10.88	12.34	12.34	12.69	0.010808		2.62	20.63	30.93	1.03
11.30		10.58	11.45		11.59	0.008182		1.65	8.85	18.78	0.82
16.00		10.58	11.58	11.51	11.73	0.008979		1.73	9.27	22.80	0.86
24.00		10.58	11.71		11.89	0.009289		1.89	12.72	28.99	0.90
28.50		10.58	11.76	11.72	11.97	0.009211		2.01	14.20	28.36	0.91
35.90		10.58	11.84	11.80	12.09	0.009145		2.18	18.48	28.77	0.92
45.90		10.58	11.94	11.90	12.23	0.009274		2.40	19.15	29.26	0.95
54.10		10.58	12.01	11.98	12.34	0.009159		2.53	21.34	29.55	0.95
11.30		10.58	11.43		11.56	0.007934		1.61	7.00	17.36	0.81
16.00		10.58	11.55		11.70	0.008827		1.68	9.52	24.10	0.85
24.00		10.58	11.68	11.63	11.86	0.008974		1.87	12.85	28.10	0.88
28.50		10.58	11.73	11.69	11.94	0.009007		1.96	14.32	28.30	0.90
35.90		10.58	11.81	11.77	12.05	0.008931		2.16	18.61	28.33	0.91
45.90		10.58	11.91	11.87	12.19	0.009099		2.38	19.29	29.42	0.94
54.10		10.58	11.98	11.94	12.30	0.008950		2.51	21.53	29.82	0.94
11.30		10.56	11.40		11.53	0.007650		1.57	7.19	18.04	0.80
16.00		10.56	11.53		11.68	0.008166		1.62	9.88	24.79	0.82
24.00		10.56	11.66		11.83	0.007820		1.82	13.21	26.04	0.82
28.50		10.56	11.71	11.65	11.90	0.008572		1.96	14.58	28.08	0.88
35.90		10.56	11.79	11.74	12.02	0.008549		2.13	16.86	29.10	0.89
45.90		10.56	11.88	11.83	12.16	0.008784		2.35	19.54	29.60	0.92
54.10		10.56	11.96	11.91	12.27	0.008821		2.48	21.83	30.02	0.93
11.30		10.54	11.38		11.50	0.007384		1.53	7.40	18.03	0.78
16.00		10.54	11.51		11.63	0.007320		1.55	10.29	25.45	0.78
24.00		10.54	11.64		11.80	0.006707		1.74	13.81	27.04	0.78
28.50		10.54	11.69		11.87	0.007335		1.90	15.02	27.57	0.82
35.90		10.54	11.76	11.70	11.98	0.007977		2.08	17.25	29.31	0.87
45.90		10.54	11.85	11.80	12.12	0.008300		2.30	19.91	29.81	0.90
54.10		10.54	11.93	11.87	12.23	0.008150		2.43	22.25	30.25	0.90
11.30		10.53	11.36		11.47	0.007361		1.48	7.85	20.54	0.77
16.00		10.53	11.49		11.60	0.006359		1.47	10.85	26.14	0.73
24.00		10.53	11.63		11.77	0.005805		1.65	14.54	27.60	0.73
28.50		10.53	11.67		11.84	0.006456		1.81	15.71	28.05	0.77
35.90		10.53	11.75		11.95	0.007205		2.01	17.83	29.55	0.83
45.90		10.53	11.83	11.78	12.09	0.007638		2.24	20.47	30.06	0.87
54.10		10.53	11.91	11.84	12.20	0.007523		2.37	22.86	30.52	0.87
11.30		10.51	11.34		11.44	0.007254		1.42	7.96	22.39	0.76
16.00		10.51	11.48		11.58	0.005379		1.39	11.53	26.65	0.68
24.00		10.51	11.62		11.74	0.004957		1.56	15.39	28.25	0.67
28.50		10.51	11.68		11.81	0.005588		1.72	16.54	28.65	0.72
35.90		10.51	11.73		11.92	0.006181		1.93	18.82	29.35	0.77
45.90		10.51	11.82		12.06	0.006855		2.16	21.22	30.35	0.83
54.10		10.51	11.90		12.16	0.006794		2.29	23.66	30.82	0.83
11.30		10.50	11.32		11.41	0.007014		1.36	8.32	24.39	0.74

HEC-RAS Plan: cut cor-int River: Alice St. Reach: 1 (Continued)

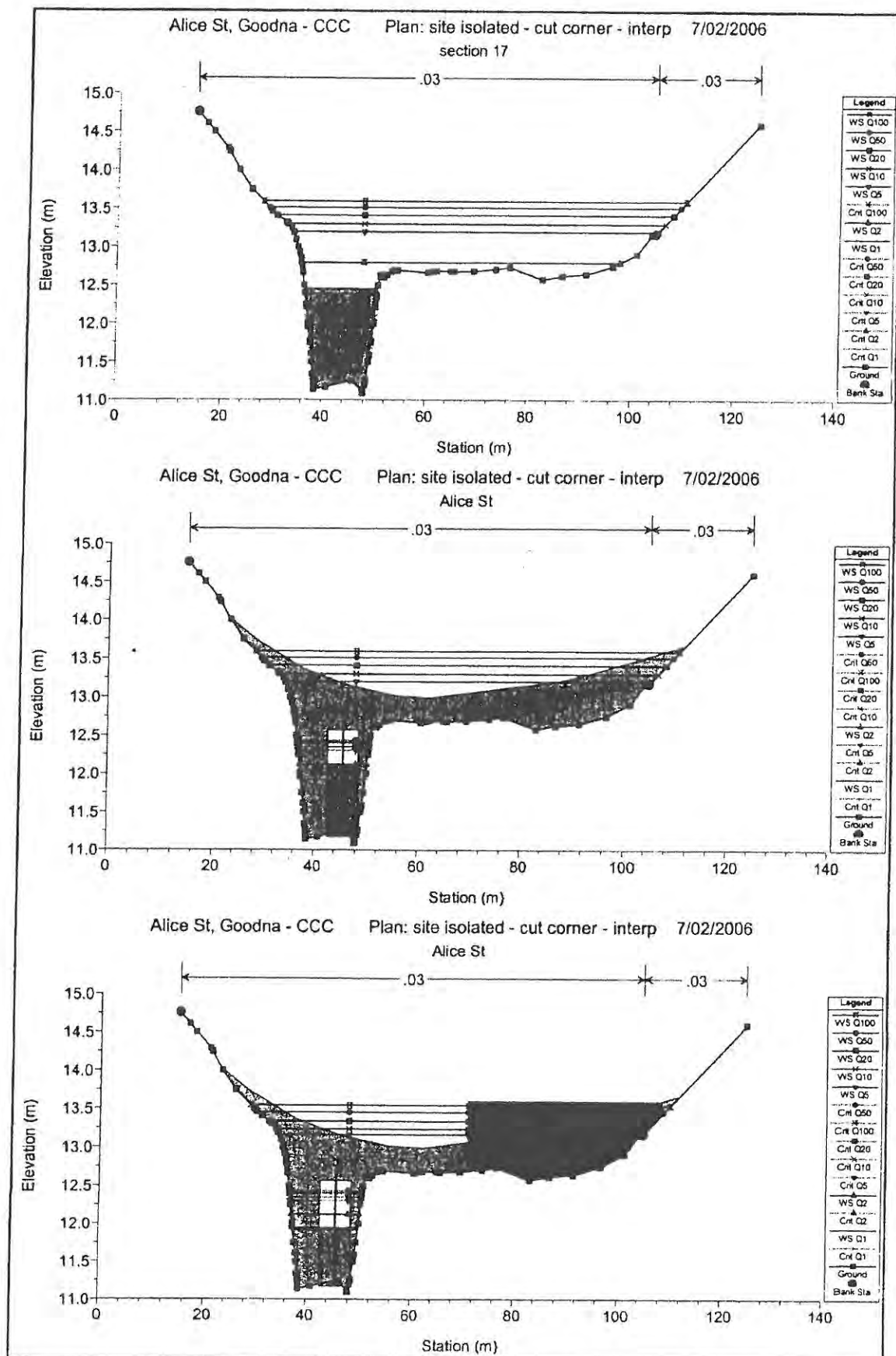
Reach	Station	Profile	Q (Total)	W.S. E	W.S. B	C/S W.S.	E.S. B	E.S. S	Vel. Cnt	Flow Area	Top Width	Friction Cnt
			(cfs)	(ft)	(ft)	(ft)	(ft)	(ft)	(ft/s)	(sq ft)	(ft)	(ft)
1	297.00	Q2	18.00	10.50	11.47		11.53	0.004494	1.30	12.30	27.56	0.82
1	297.00	Q5	24.00	10.50	11.61		11.72	0.004213	1.47	16.31	28.93	0.83
1	297.00	Q10	28.50	10.50	11.65		11.79	0.004836	1.63	17.44	29.30	0.88
1	297.00	Q15	35.90	10.50	11.72		11.89	0.005420	1.84	19.54	29.97	0.73
1	297.00	Q20	45.90	10.50	11.81		12.02	0.006044	2.07	22.13	30.68	0.78
1	297.00	Q100	54.10	10.50	11.89		12.13	0.006030	2.20	24.62	31.14	0.79
1	297.00	Q1										
1	297.00	Q2	11.30	10.42	11.26		11.38	0.006820	1.55	7.27	17.05	0.78
1	297.00	Q5	18.00	10.42	11.44		11.54	0.005125	1.35	11.84	27.84	0.88
1	297.00	Q10	24.00	10.42	11.56		11.70	0.005293	1.49	16.08	33.18	0.88
1	297.00	Q15	28.50	10.42	11.63		11.78	0.006364	1.64	17.42	35.68	0.75
1	297.00	Q20	35.90	10.42	11.71		11.87	0.008277	1.74	20.59	38.10	0.76
1	297.00	Q25	45.90	10.42	11.81		11.99	0.006022	1.89	24.35	38.73	0.78
1	297.00	Q100	54.10	10.42	11.90		12.09	0.005392	1.93	27.98	39.33	0.73
1	297.00	Q1										
1	297.00	Q2	11.30	10.34	11.22		11.35	0.006888	1.80	7.07	16.20	0.77
1	297.00	Q5	18.00	10.34	11.41		11.51	0.006290	1.44	11.14	27.67	0.72
1	297.00	Q10	24.00	10.34	11.58		11.68	0.006717	1.42	16.94	45.18	0.74
1	297.00	Q15	28.50	10.34	11.62		11.74	0.006804	1.51	18.93	45.49	0.74
1	297.00	Q20	35.90	10.34	11.71		11.84	0.005415	1.55	23.23	46.14	0.70
1	297.00	Q25	45.90	10.34	11.82		11.96	0.004712	1.62	26.27	46.89	0.67
1	297.00	Q100	54.10	10.34	11.92		12.06	0.003995	1.64	33.02	47.63	0.63
1	297.00	Q1										
1	297.00	Q2	11.30	10.26	11.19		11.33	0.006958	1.62	6.98	15.60	0.77
1	297.00	Q5	18.00	10.26	11.33		11.48	0.008475	1.71	9.37	22.45	0.84
1	297.00	Q10	24.00	10.26	11.57		11.65	0.005895	1.29	18.57	50.29	0.68
1	297.00	Q15	28.50	10.26	11.81		11.71	0.005572	1.36	20.99	51.90	0.68
1	297.00	Q20	35.90	10.26	11.71		11.81	0.004319	1.36	26.33	53.43	0.62
1	297.00	Q25	45.90	10.26	11.83		11.93	0.003611	1.41	32.61	55.10	0.58
1	297.00	Q100	54.10	10.26	11.93		12.04	0.002967	1.41	38.43	55.89	0.54
1	297.00	Q1										
1	297.00	Q2	11.30	10.22	11.16		11.30	0.007203	1.88	8.82	15.10	0.79
1	297.00	Q5	18.00	10.22	11.29		11.45	0.006995	1.77	9.02	17.61	0.79
1	297.00	Q10	24.00	10.22	11.54		11.63	0.005839	1.31	18.39	49.98	0.69
1	297.00	Q15	28.50	10.22	11.59		11.68	0.005495	1.38	21.00	51.45	0.68
1	297.00	Q20	35.90	10.22	11.70		11.79	0.005394	1.33	26.92	66.80	0.67
1	297.00	Q25	45.90	10.22	11.83		11.91	0.003702	1.27	36.12	72.64	0.58
1	297.00	Q100	54.10	10.22	11.94		12.02	0.002734	1.22	44.52	78.30	0.51
1	297.00	Q1										
1	297.00	Q2	11.30	10.18	11.12		11.27	0.007544	1.70	8.64	14.53	0.81
1	297.00	Q5	18.00	10.18	11.25		11.42	0.007422	1.83	8.74	17.05	0.82
1	297.00	Q10	24.00	10.18	11.51		11.60	0.006065	1.32	18.15	49.75	0.70
1	297.00	Q15	28.50	10.18	11.57		11.68	0.005413	1.35	21.05	51.14	0.67
1	297.00	Q20	35.90	10.18	11.68		11.77	0.004903	1.30	27.63	66.37	0.64
1	297.00	Q25	45.90	10.18	11.82		11.90	0.003270	1.23	37.45	72.44	0.54
1	297.00	Q100	54.10	10.18	11.94		12.01	0.002464	1.17	46.05	76.78	0.48
1	297.00	Q1										
1	297.00	Q2	11.30	10.15	11.08		11.24	0.007933	1.75	8.47	14.20	0.83
1	297.00	Q5	18.00	10.15	11.21		11.40	0.007782	1.88	8.49	16.42	0.84
1	297.00	Q10	24.00	10.15	11.48		11.57	0.006318	1.34	17.89	49.49	0.71
1	297.00	Q15	28.50	10.15	11.54		11.64	0.005477	1.35	21.15	52.20	0.68
1	297.00	Q20	35.90	10.15	11.68		11.74	0.004419	1.26	28.46	66.08	0.61
1	297.00	Q25	45.90	10.15	11.81		11.88	0.002894	1.18	38.84	72.40	0.52
1	297.00	Q100	54.10	10.15	11.93		12.00	0.002171	1.14	47.61	75.32	0.46
1	297.00	Q1										
1	297.00	Q2	11.30	10.11	11.04		11.21	0.008481	1.81	6.26	13.75	0.85
1	297.00	Q5	18.00	10.11	11.17		11.37	0.008427	1.95	8.21	16.01	0.87
1	297.00	Q10	24.00	10.11	11.45		11.54	0.006661	1.37	17.57	49.18	0.73
1	297.00	Q15	28.50	10.11	11.52		11.61	0.006001	1.33	21.48	58.02	0.70
1	297.00	Q20	35.90	10.11	11.65		11.72	0.003855	1.22	29.39	65.90	0.58
1	297.00	Q25	45.90	10.11	11.81		11.87	0.002570	1.14	40.29	72.58	0.49
1	297.00	Q100	54.10	10.11	11.93		11.99	0.001920	1.10	49.17	74.91	0.43
1	297.00	Q1										
1	297.00	Q2	11.30	10.07	11.00	10.95	11.18	0.009197	1.88	6.02	13.24	0.89
1	297.00	Q5	18.00	10.07	11.13	11.08	11.34	0.009304	2.03	7.89	15.58	0.91
1	297.00	Q10	24.00	10.07	11.41		11.51	0.007444	1.40	17.17	50.46	0.77
1	297.00	Q15	28.50	10.07	11.50		11.59	0.005761	1.30	21.93	59.38	0.68
1	297.00	Q20	35.90	10.07	11.64		11.71	0.003454	1.17	30.61	65.90	0.55
1	297.00	Q25	45.90	10.07	11.80		11.88	0.002289	1.10	41.61	72.96	0.46
1	297.00	Q100	54.10	10.07	11.92		11.98	0.001707	1.07	50.72	74.65	0.41
1	297.00	Q1										
1	297.00	Q2	11.30	10.04	10.97	10.92	11.15	0.009388	1.87	6.04	13.54	0.90
1	297.00	Q5	18.00	10.04	11.10	11.06	11.30	0.009255	2.01	7.96	15.07	0.91
1	297.00	Q10	24.00	10.04	11.39		11.49	0.007311	1.39	17.28	50.50	0.76
1	297.00	Q15	28.50	10.04	11.48		11.57	0.005158	1.29	22.14	55.07	0.65
1	297.00	Q20	35.90	10.04	11.63		11.70	0.003168	1.16	30.87	63.07	0.53
1	297.00	Q25	45.90	10.04	11.79		11.85	0.002044	1.10	41.61	66.72	0.44
1	297.00	Q100	54.10	10.04	11.91		11.97	0.001615	1.08	48.67	67.28	0.40
1	297.00	Q1										
1	294.5	Q1	11.30	10.02	10.94	10.89	11.11	0.009530	1.87	6.06	13.63	0.90
1	294.5	Q2	18.00	10.02	11.07	11.03	11.27	0.009891	1.94	8.26	18.57	0.92
1	294.5	Q5	24.00	10.02	11.35		11.46	0.006868	1.39	17.23	47.64	0.74
1	294.5	Q10	28.50	10.02	11.48		11.55	0.004830	1.29	22.05	52.74	0.64

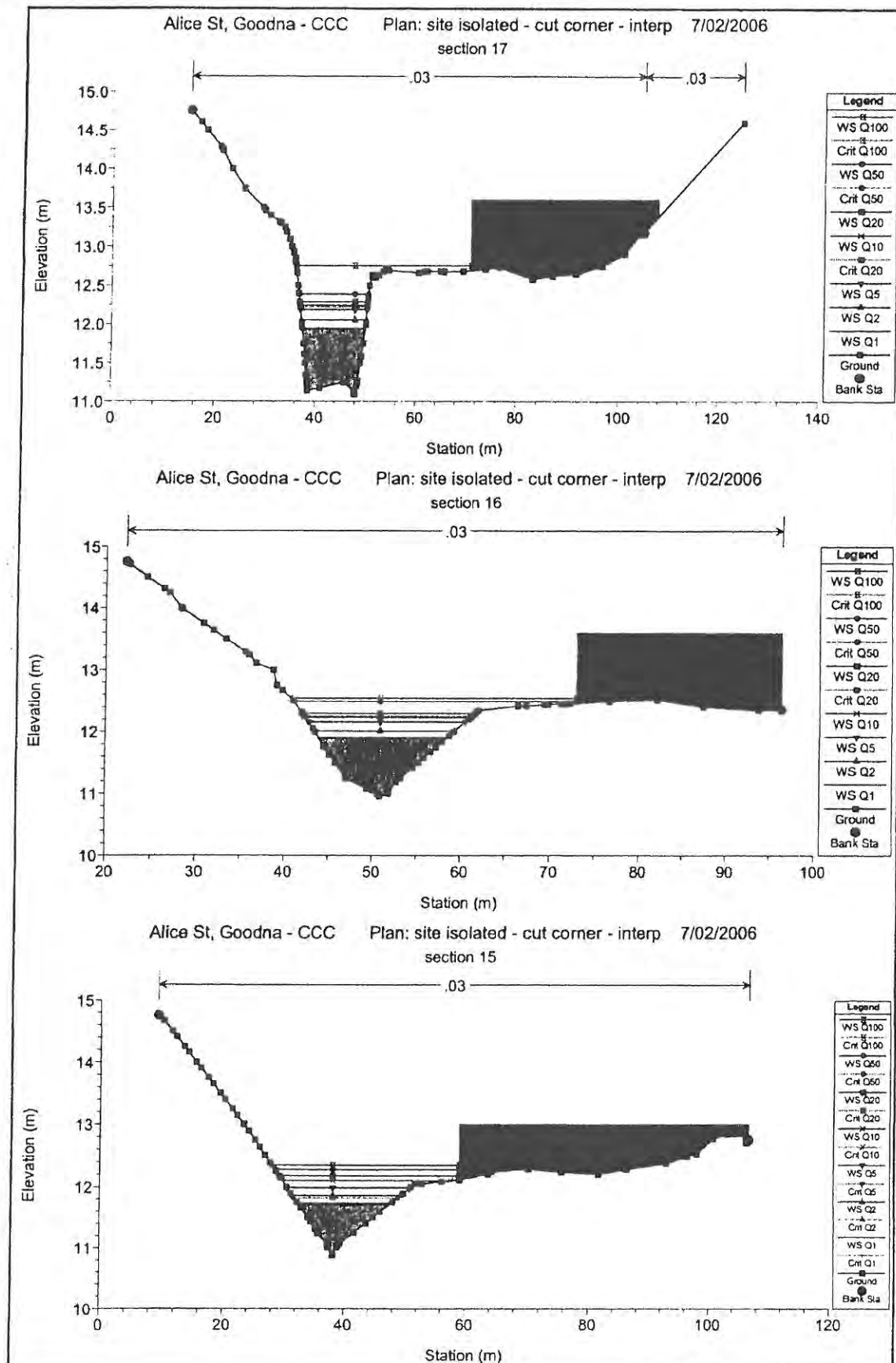
HEC-RAS Plan cut cor-int River Alice St Reach: 1 (Continued)

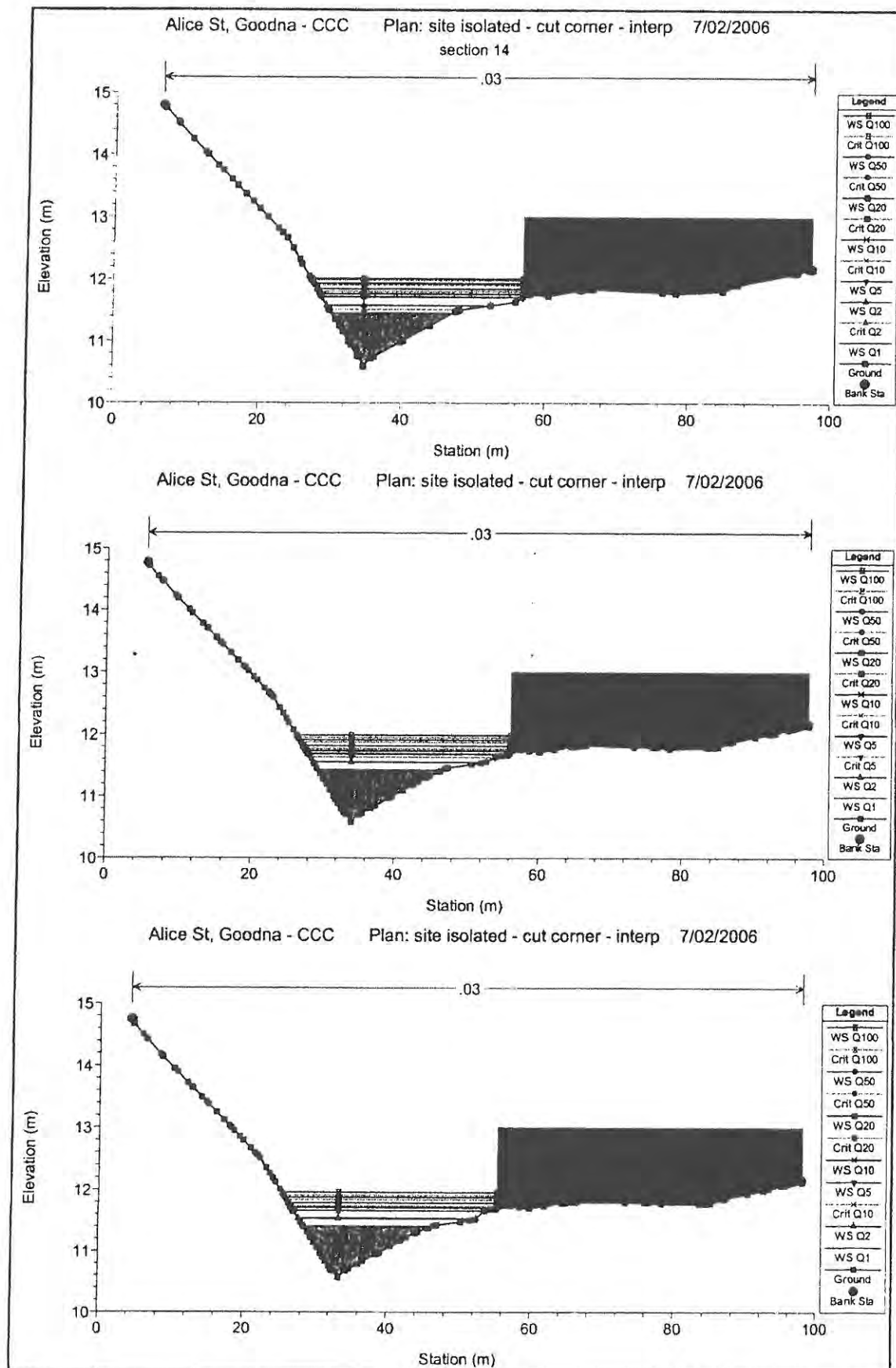
Profile	Water Surface	Channel Bottom	Q Total	Min Ch B	Vel. Bw	Cross Vel.	EC Bw	EC Min	Vel. Ch	Flow Area	Top Width	Friction Co
1	35.90	10.02	11.62		11.88	0.002870	1.17	30.71	57.72	0.51		
1	45.90	10.02	11.78		11.85	0.001981	1.14	40.37	58.28	0.44		
1	54.10	10.02	11.90		11.97	0.001818	1.14	47.59	60.42	0.41		
1	11.30	9.99	10.91	10.87	11.08	0.009833	1.83	8.17	14.51	0.91		
1	16.00	9.99	11.05		11.23	0.008924	1.89	8.45	18.00	0.88		
1	24.00	9.99	11.34	11.18	11.44	0.008552	1.42	15.86	44.34	0.74		
1	28.50	9.99	11.44		11.53	0.004879	1.32	21.88	49.21	0.63		
1	35.90	9.99	11.80		11.87	0.002729	1.21	29.86	50.82	0.51		
1	45.90	9.99	11.78		11.84	0.002012	1.20	38.19	52.45	0.45		
1	54.10	9.99	11.88		11.98	0.001722	1.21	44.55	53.50	0.42		
1	11.30	9.96	10.88	10.84	11.05	0.009505	1.83	8.17	14.44	0.89		
1	16.00	9.96	11.02	10.95	11.20	0.008738	1.92	8.35	17.26	0.88		
1	24.00	9.96	11.22		11.41	0.008054	1.93	12.46	23.97	0.85		
1	28.50	9.96	11.31		11.50	0.006798	1.91	14.91	25.47	0.80		
1	35.90	9.96	11.48		11.65	0.005422	1.91	18.82	27.06	0.73		
1	45.90	9.96	11.81		11.81	0.005015	2.01	22.84	28.52	0.72		
1	54.10	9.96	11.71		11.94	0.004846	2.09	25.86	29.55	0.71		
1	11.30	9.92	10.84	10.79	11.01	0.009160	1.81	8.24	14.44	0.88		
1	16.00	9.92	10.99		11.18	0.008628	1.87	8.55	18.08	0.87		
1	24.00	9.92	11.19		11.37	0.007177	1.87	12.83	23.63	0.81		
1	28.50	9.92	11.29		11.47	0.006098	1.85	15.38	25.35	0.78		
1	35.90	9.92	11.45		11.62	0.004878	1.85	19.39	26.94	0.70		
1	45.90	9.92	11.80		11.79	0.004498	1.95	23.56	28.40	0.68		
1	54.10	9.92	11.70		11.91	0.004395	2.04	26.58	29.38	0.68		
1	11.30	9.88	10.81		10.97	0.008855	1.77	8.38	14.88	0.86		
1	16.00	9.88	10.95		11.12	0.007879	1.82	8.79	18.06	0.83		
1	24.00	9.88	11.17		11.34	0.006442	1.83	13.08	22.88	0.77		
1	28.50	9.88	11.27		11.44	0.005685	1.82	15.67	25.23	0.74		
1	35.90	9.88	11.44		11.60	0.004428	1.80	19.93	26.88	0.67		
1	45.90	9.88	11.59		11.77	0.004136	1.90	24.12	28.30	0.66		
1	54.10	9.88	11.69		11.89	0.004071	1.99	27.13	29.22	0.68		
1	11.30	9.84	10.78		10.93	0.008082	1.72	8.56	14.91	0.83		
1	16.00	9.84	10.93		11.09	0.007021	1.77	9.02	17.70	0.79		
1	24.00	9.84	11.14		11.31	0.005991	1.83	13.08	21.85	0.75		
1	28.50	9.84	11.24		11.41	0.005885	1.84	15.46	25.03	0.75		
1	35.90	9.84	11.42		11.58	0.004341	1.79	20.00	26.71	0.66		
1	45.90	9.84	11.57		11.75	0.004058	1.90	24.19	28.12	0.65		
1	54.10	9.84	11.67		11.87	0.004007	1.99	27.17	29.01	0.68		
1	11.30	9.80	10.75		10.89	0.007287	1.68	8.71	14.57	0.79		
1	16.00	9.80	10.90		11.08	0.006498	1.76	9.09	17.01	0.77		
1	24.00	9.80	11.10		11.28	0.005779	1.86	12.90	20.33	0.75		
1	28.50	9.80	11.21		11.39	0.005408	1.89	15.06	22.02	0.73		
1	35.90	9.80	11.39		11.56	0.004603	1.83	19.58	26.49	0.68		
1	45.90	9.80	11.54		11.73	0.004200	1.92	23.87	27.82	0.66		
1	54.10	9.80	11.65		11.85	0.004138	2.02	26.82	28.77	0.67		
1	11.30	9.76	10.72		10.86	0.006740	1.67	8.75	13.98	0.77		
1	16.00	9.76	10.87		11.03	0.006282	1.78	8.99	16.11	0.76		
1	24.00	9.76	11.07		11.25	0.005857	1.92	12.49	18.93	0.75		
1	28.50	9.76	11.17		11.38	0.005574	1.97	14.48	20.32	0.75		
1	35.90	9.76	11.35		11.54	0.005387	1.93	18.59	26.19	0.73		
1	45.90	9.76	11.51		11.71	0.004719	2.00	22.93	27.83	0.70		
1	54.10	9.76	11.61		11.83	0.004592	2.09	25.86	28.47	0.70		
1	11.30	9.47	10.38		10.56	0.008088	1.88	8.07	12.24	0.84		
1	16.00	9.47	10.51	10.45	10.73	0.008453	2.07	7.72	13.71	0.88		
1	24.00	9.47	10.89	10.83	10.96	0.008479	2.30	10.44	15.89	0.91		
1	28.50	9.47	10.77	10.72	11.07	0.008852	2.44	11.87	16.77	0.93		
1	35.90	9.47	10.87	10.85	11.23	0.008548	2.87	13.48	17.93	0.98		
1	45.90	9.47	11.05	11.05	11.42	0.010183	2.89	17.05	23.55	1.01		
1	54.10	9.47	11.13	11.13	11.55	0.010182	2.84	19.02	24.12	1.02		
1	11.30	9.13	9.96	9.94	10.16	0.010475	1.98	5.71	12.81	0.95		
1	16.00	9.13	10.09	10.07	10.32	0.010420	2.16	7.42	14.54	0.96		
1	24.00	9.13	10.24	10.24	10.54	0.010966	2.43	9.87	16.80	1.01		
1	28.50	9.13	10.32	10.32	10.65	0.010722	2.52	11.29	17.87	1.01		
1	35.90	9.13	10.45	10.45	10.80	0.010280	2.84	13.59	19.46	1.01		
1	45.90	9.13	10.82	10.82	10.98	0.010473	2.86	17.26	24.83	1.02		
1	54.10	9.13	10.74	10.74	11.09	0.010174	2.84	20.50	29.23	1.01		
1	11.30	8.76	9.52	9.51	9.72	0.011420	2.01	5.62	13.15	0.98		
1	16.00	8.76	9.83	9.83	9.88	0.011618	2.22	7.21	14.72	1.01		
1	24.00	8.76	9.80	9.80	10.10	0.010962	2.41	9.94	17.11	1.01		
1	28.50	8.76	9.89	9.88	10.20	0.010704	2.50	11.39	18.23	1.01		
1	35.90	8.76	10.00	10.00	10.36	0.010521	2.64	13.60	19.96	1.02		
1	45.90	8.76	10.22	10.22	10.51	0.010808	2.41	19.03	32.54	1.01		
1	54.10	8.76	10.35	10.33	10.80	0.010636	2.21	24.53	47.44	0.98		

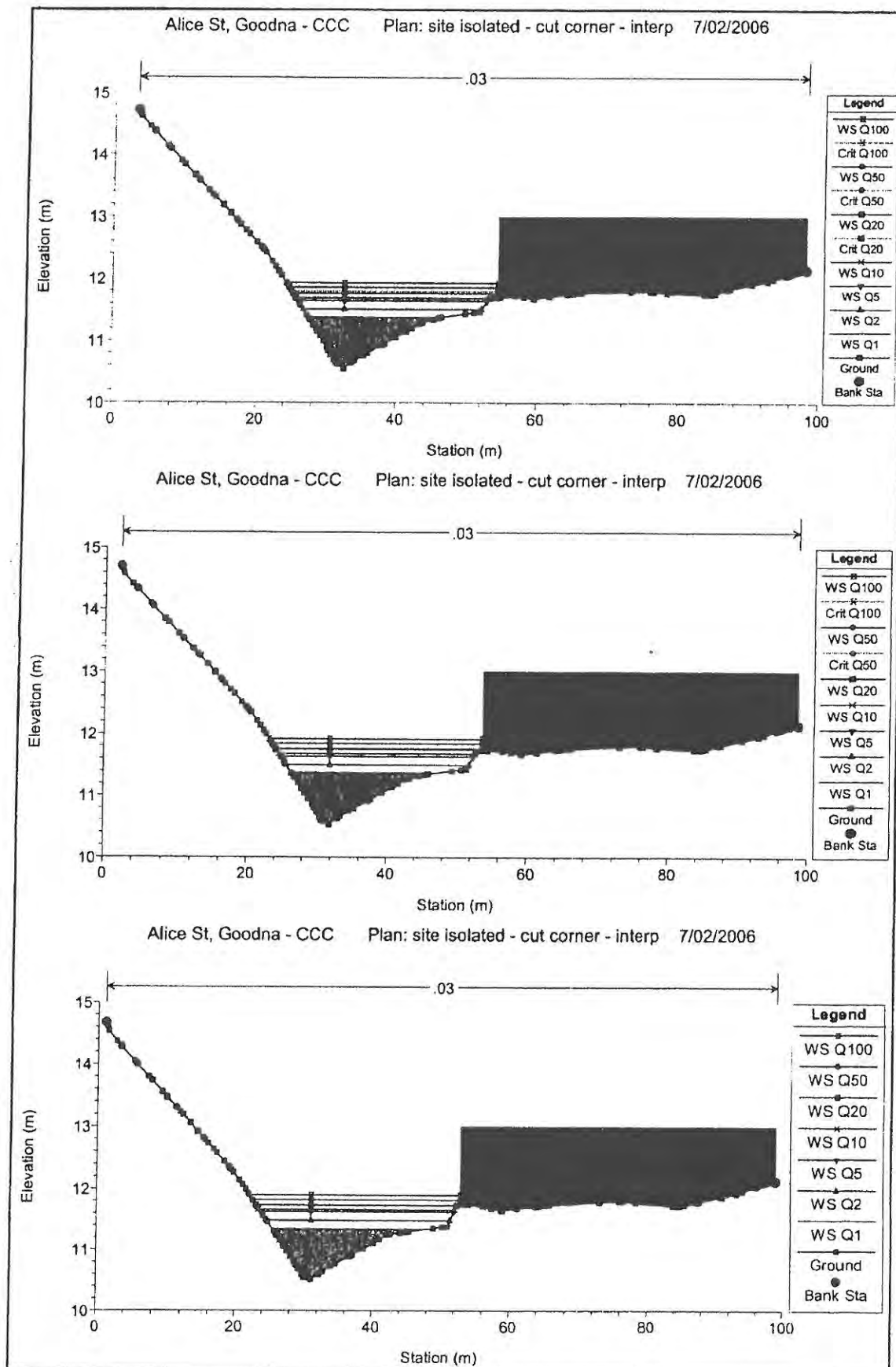
HEC-RAS Plan: cut cor-int River: Alice St Reach: 1 (Continued)

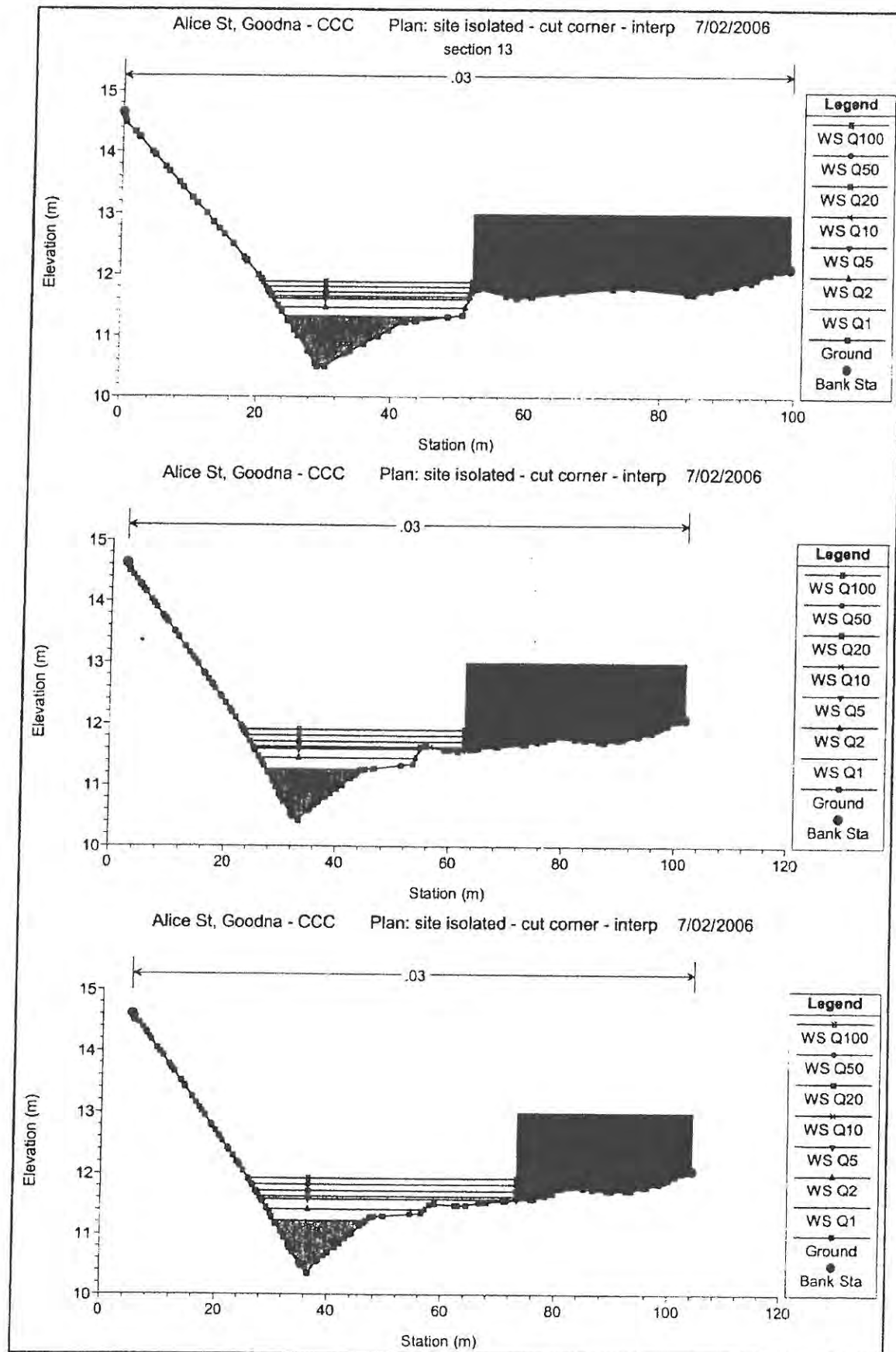
Reaches	Channel	Profile	Q Total (cfs)	Max Ch Br (ft)	W.S. Elev (ft)	R Ch W.S. (ft)	R.O. Elev (ft)	E.G. Slope (ft/ft)	Vel Dist (ft/s)	Cham Area (sq ft)	Top Width (ft)	Profile # Ch
			11.30	8.47	9.10	9.10	9.31	0.012438	1.99	5.89	14.48	1.01
			16.00	8.47	9.22	9.22	9.48	0.011719	2.17	7.36	15.82	1.01
			24.00	8.47	9.38	9.38	9.67	0.010804	2.40	10.01	17.25	1.00
			28.50	8.47	9.45	9.45	9.77	0.010655	2.51	11.34	18.02	1.01
			35.90	8.47	9.58	9.58	9.93	0.010198	2.83	13.86	19.83	1.01
			45.90	8.47	9.71	9.71	10.11	0.010298	2.79	18.48	21.78	1.02
			54.10	8.47	9.88	9.88	10.23	0.010112	2.62	20.87	29.77	1.00
			11.30	8.06	8.74	8.74	8.94	0.012802	1.97	5.73	14.87	1.01
			16.00	8.06	8.85	8.85	9.09	0.011847	2.16	7.42	18.09	1.01
			24.00	8.06	9.27		9.40	0.003484	1.58	15.14	20.88	0.59
			28.50	8.06	9.35		9.50	0.004137	1.89	18.90	24.02	0.84
			35.90	8.06	9.44		9.82	0.004707	1.88	19.11	25.45	0.89
			45.90	8.06	9.55		9.78	0.005040	2.09	21.98	28.27	0.73
			54.10	8.06	9.81		9.88	0.005792	2.31	23.41	28.85	0.79
			11.30	7.53	8.31	8.31	8.51	0.012496	2.01	5.62	14.08	1.02
			16.00	7.53	8.87		8.92	0.001441	1.04	15.38	20.41	0.38
			24.00	7.53	9.29		9.33	0.000878	0.98	25.01	25.82	0.31
			28.50	7.53	9.37		9.42	0.000984	1.05	27.11	26.58	0.33
			35.90	7.53	9.45		9.53	0.001227	1.22	29.51	27.40	0.37
			45.90	7.53	9.56		9.67	0.001514	1.41	32.57	28.40	0.42
			54.10	7.53	9.82		9.75	0.001823	1.58	34.22	28.85	0.48
			11.30	8.92	8.28		8.33	0.001077	0.94	12.05	14.83	0.33
			16.00	8.92	8.87		8.88	0.000439	0.73	22.00	20.19	0.22
			24.00	8.92	9.28		9.31	0.000521	0.73	32.69	32.91	0.24
			28.50	8.92	9.38		9.39	0.000711	0.80	35.87	41.28	0.27
			35.90	8.92	9.45		9.49	0.000987	0.91	39.64	47.96	0.32
			45.90	8.92	9.56		9.61	0.001250	1.01	45.85	57.31	0.36
			54.10	8.92	9.82		9.69	0.001374	1.10	49.25	58.08	0.38
			11.30	8.13	8.27	7.08	8.30	0.000393	0.77	14.65	10.45	0.21
			16.00	8.13	8.85	7.26	8.88	0.000350	0.73	21.89	15.84	0.20
			24.00	8.13	9.26	7.53	9.28	0.000948	0.70	34.52	80.38	0.29
			28.50	8.13	9.34	7.68	9.38	0.001009	0.72	39.43	88.41	0.30
			35.90	8.13	9.42	7.85	9.45	0.001057	0.79	45.58	71.89	0.32
			45.90	8.13	9.53	8.09	9.57	0.001065	0.85	53.83	75.88	0.32
			54.10	8.13	9.80	8.28	9.84	0.001143	0.92	58.55	77.10	0.34
			Culvert									
			11.30	8.13	7.08	7.08	7.41	0.011297	2.55	4.43	8.84	1.01
			16.00	8.13	7.26	7.26	7.68	0.010882	2.80	5.72	7.22	1.00
			24.00	8.13	7.52	7.52	8.01	0.010271	3.10	7.74	8.06	1.01
			28.50	8.13	7.68	7.68	8.19	0.010022	3.22	8.84	8.48	1.01
			35.90	8.13	7.85	7.85	8.44	0.009751	3.40	10.58	9.11	1.01
			45.90	8.13	8.09	8.09	8.74	0.009437	3.59	12.78	9.88	1.01
			54.10	8.13	8.25	8.25	8.97	0.009333	3.74	14.47	10.39	1.01

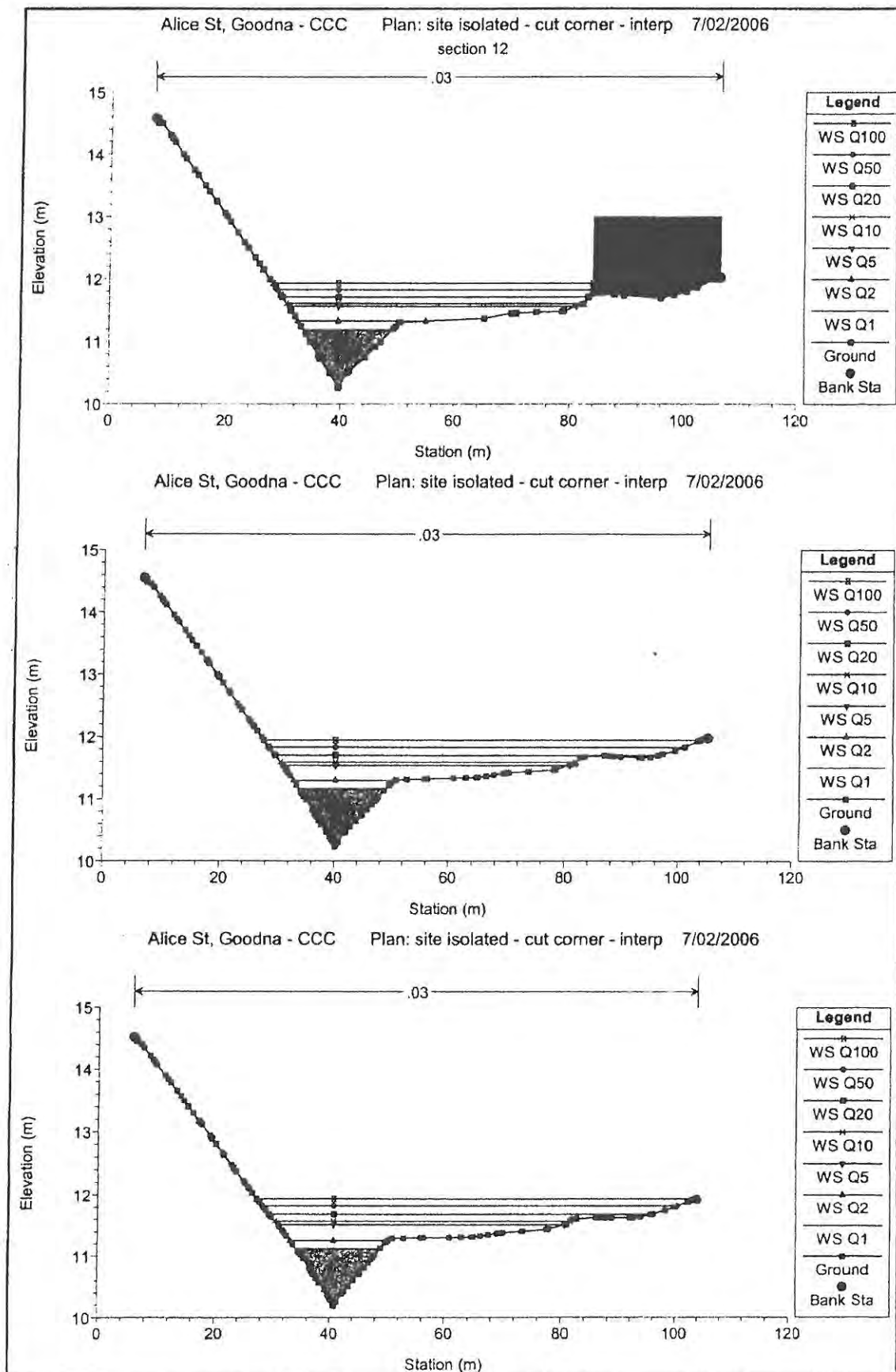


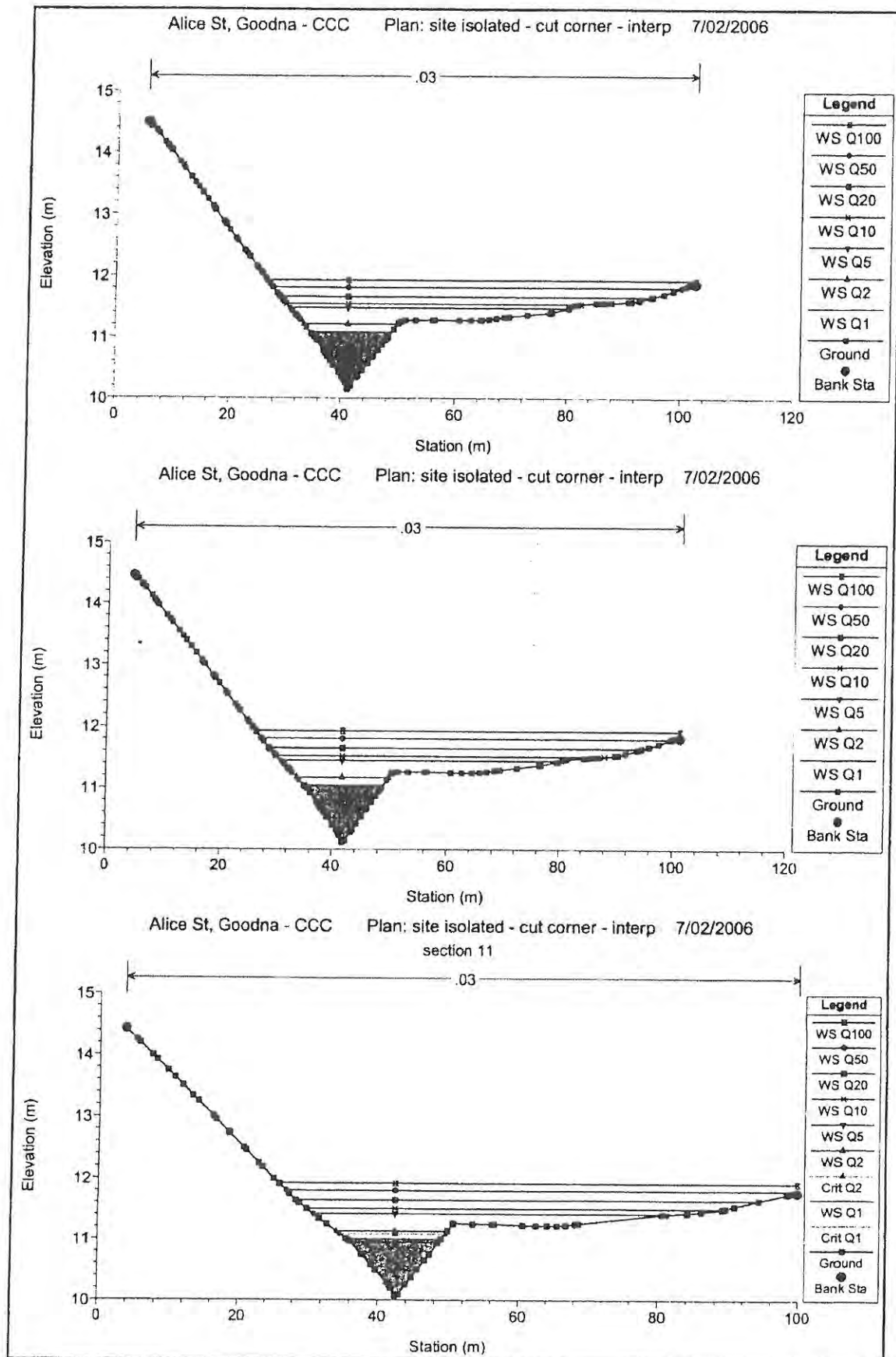


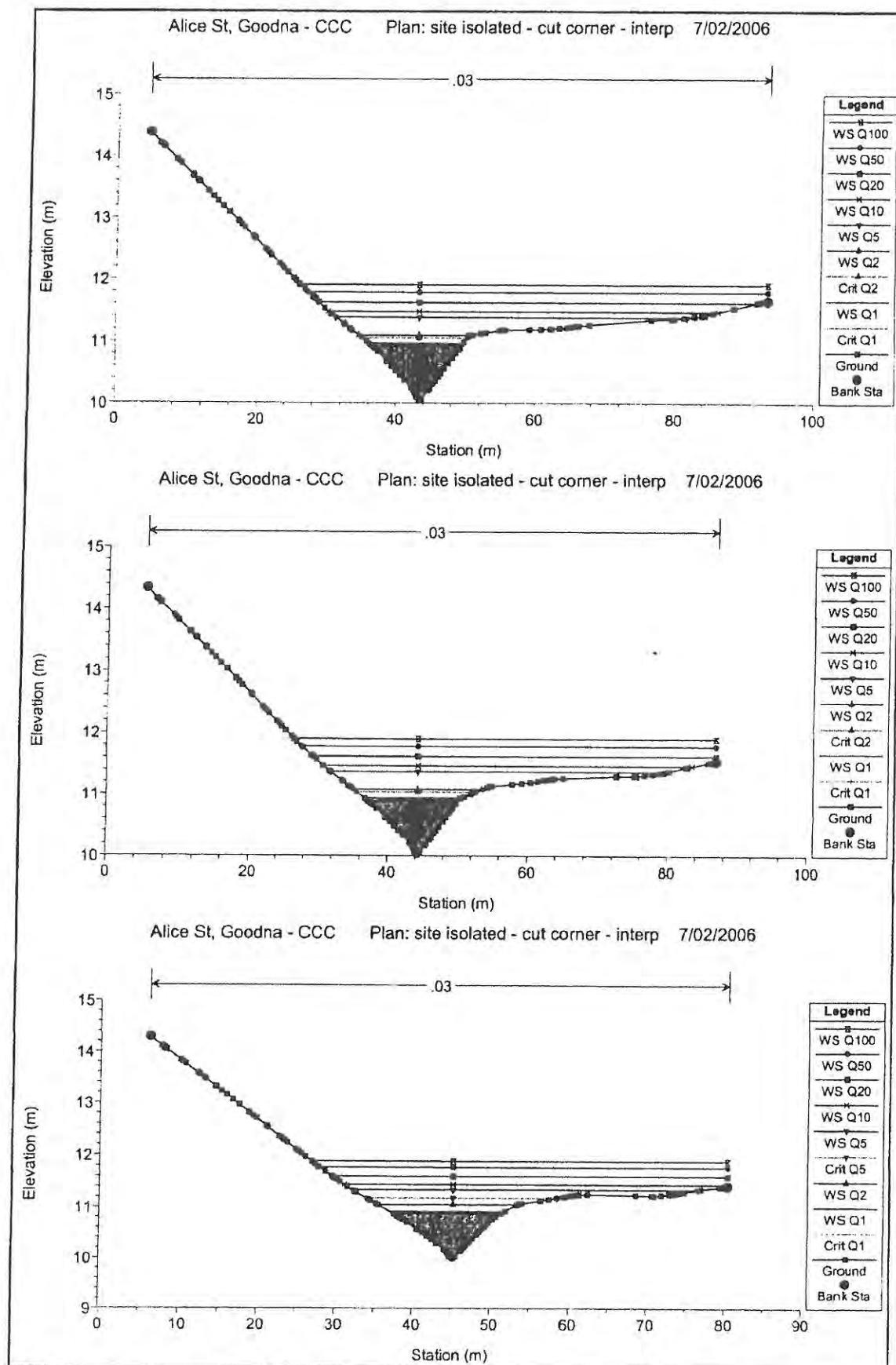


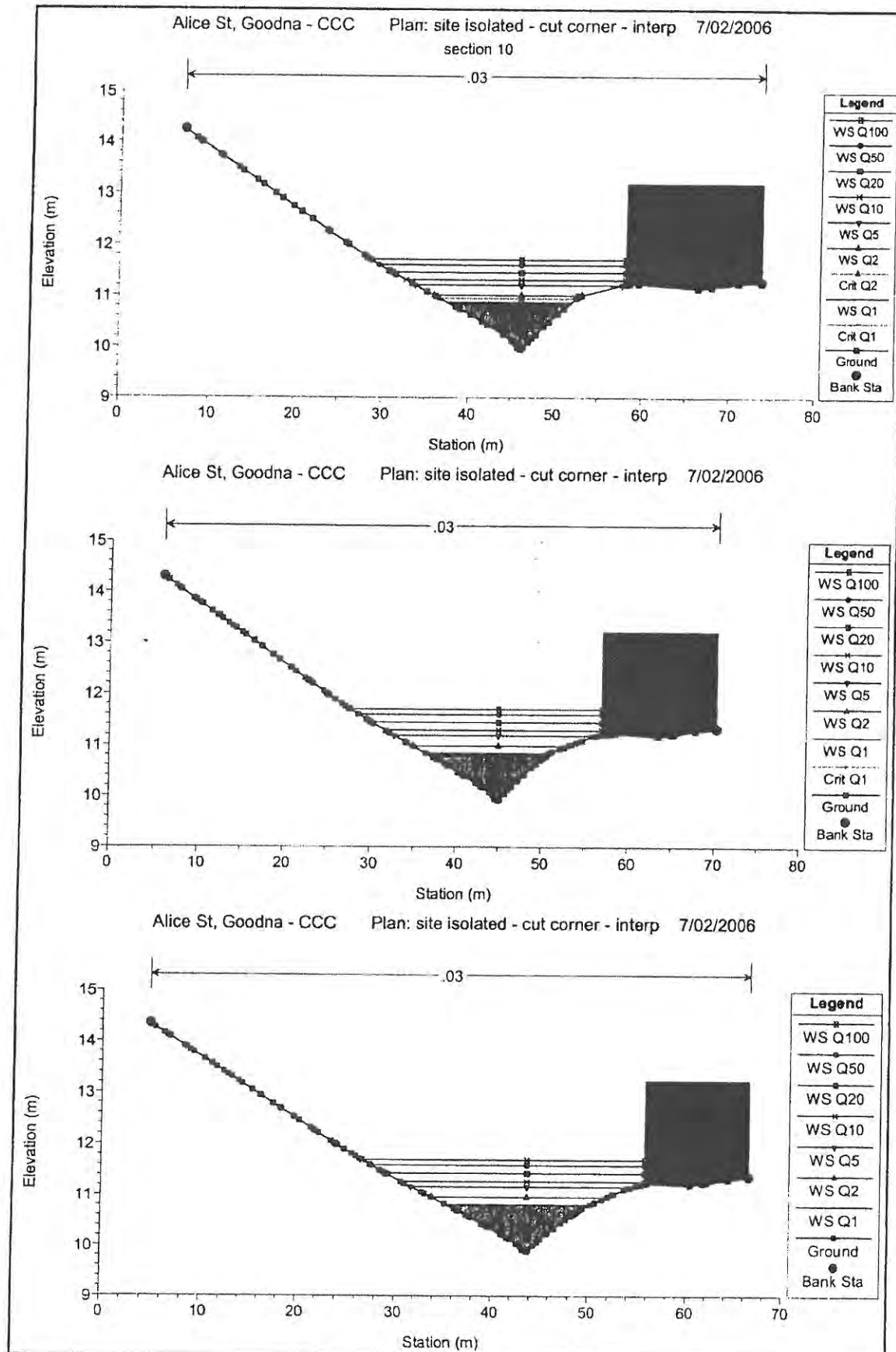


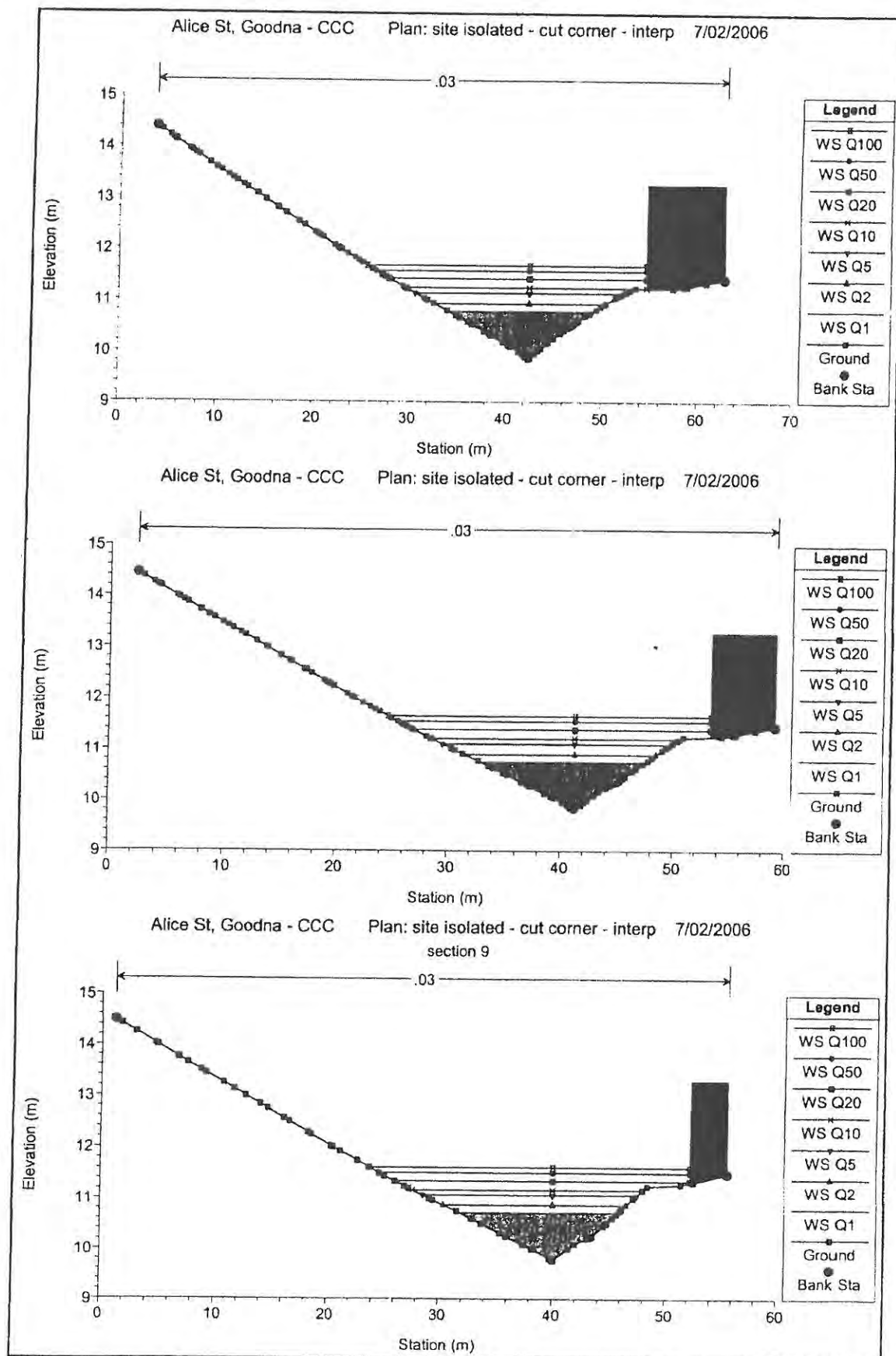












Plan: cut cor-int Alice St 1 RS: 419 Culv Group: Culvert #1 Profile: Q1

Q Culv Group (m³/s)	11.30	Culv Full Len (m)	
# Barrels	2	Culv Vel US (m/s)	2.16
D Barrel (m)	5.65	Culv Vel US (m/s)	2.66
E.G. US (m)	12.48	Culv Inlet Elev (m)	11.17
W.S. US (m)	12.45	Culv Inlet Dn (m)	11.17
E.G. DS (m)	12.03	Culv Floor Elev (m)	0.06
W.S. DS (m)	11.94	Culv Exit Elev (m)	0.27
D Exit (m)	0.44	Culv Exit Dn (m)	0.12
D Barrel (m)	0.51	Culv Len (m)	
E.G. US (m)	12.38	Weir Sta Lft (m)	
E.G. DS (m)	12.48	Weir Sta Rgt (m)	
Culv Inlet	Outlet	Weir Submrg	
Culv Inlet Depth (m)	12.12	Weir Max Depth (m)	
Culv Inlet Depth (m)	11.94	Weir Avg Depth (m)	
Culv Inlet Depth (m)		Weir Flow Area (m²)	
Culv Exit Depth (m)	0.75	Min El Weir Flow (m)	13.00

Plan: cut cor-int Alice St 1 RS: 419 Culv Group: Culvert #1 Profile: Q2

Q Culv Group (m³/s)	16.00	Culv Full Len (m)	
# Barrels	2	Culv Vel US (m/s)	2.47
D Barrel (m)	8.00	Culv Vel US (m/s)	3.06
E.G. US (m)	12.81	Culv Inlet Elev (m)	11.17
W.S. US (m)	12.79	Culv Inlet Dn (m)	11.17
E.G. DS (m)	12.19	Culv Floor Elev (m)	0.06
W.S. DS (m)	12.05	Culv Exit Elev (m)	0.41
D Exit (m)	0.63	Culv Exit Dn (m)	0.16
D Barrel (m)	0.74	Culv Len (m)	
E.G. US (m)	12.71	Weir Sta Lft (m)	
E.G. DS (m)	12.81	Weir Sta Rgt (m)	
Culv Inlet	Outlet	Weir Submrg	
Culv Inlet Depth (m)	12.35	Weir Max Depth (m)	
Culv Inlet Depth (m)	12.12	Weir Avg Depth (m)	
Culv Inlet Depth (m)		Weir Flow Area (m²)	
Culv Exit Depth (m)	0.95	Min El Weir Flow (m)	13.00

Plan: cut cor-int Alice St 1 RS: 419 Culv Group: Culvert #1 Profile: Q5

Q Culv Group (m³/s)	20.87	Culv Full Len (m)	
# Barrels	2	Culv Vel US (m/s)	2.73
D Barrel (m)	10.43	Culv Vel US (m/s)	3.34
E.G. US (m)	13.21	Culv Inlet Elev (m)	11.17
W.S. US (m)	13.20	Culv Inlet Dn (m)	11.17
E.G. DS (m)	12.40	Culv Floor Elev (m)	0.07
W.S. DS (m)	12.18	Culv Exit Elev (m)	0.47
D Exit (m)	0.81	Culv Exit Dn (m)	0.27
D Barrel (m)	1.02	Culv Len (m)	3.13
E.G. US (m)	13.21	Weir Sta Lft (m)	43.80
E.G. DS (m)	13.20	Weir Sta Rgt (m)	88.54
Culv Inlet	Inlet	Weir Submrg	0.00
Culv W.S. Inlet (m)	12.56	Weir Max Depth (m)	0.23
Culv W.S. Outlet (m)	12.31	Weir Avg Depth (m)	0.13
Culv Inlet Depth (m)		Weir Flow Area (m²)	5.79
Culv Exit Depth (m)	1.14	Min El Weir Flow (m)	13.00

Plan: cut cor-int Alice St 1 RS: 419 Culv Group: Culvert #1 Profile: Q10

Q Culv Group (m³/s)	22.09	Culv Full Len (m)	6.02
# Barrels	2	Culv Vel US (m/s)	2.87
Q Barrel (m³/s)	11.04	Culv Vel DS (m/s)	3.40
E.C. US (m)	13.31	Culv Inv E Up (m)	11.17
W.S. US (m)	13.30	Culv Inv E Dn (m)	11.17
E.C. DS (m)	12.51	Culv Frict Loss (m)	0.16
W.S. DS (m)	12.24	Culv Exit Loss (m)	0.43
Delta E.G. (m)	0.80	Culv Exit Loss (m)	0.21
Delta V/S (m)	1.06	Q Weir (m³/s)	6.41
E.G. IC (m)	13.31	Weir Sta Crt (m)	40.54
E.G. DC (m)	13.29	Weir Sta Rot (m)	93.08
Culvert Control	Inlet	Weir Submerg	0.00
Culv WS Inlet (m)	12.57	Weir Max Depth (m)	0.31
Culv WS Outlet (m)	12.35	Weir Avg Depth (m)	0.19
Culv Nom Depth (m)		Weir Flow Area (m²)	9.74
Culv Crit Depth (m)	1.18	Min El Weir Flow (m)	13.00

Plan: cut cor-int Alice St 1 RS: 419 Culv Group: Culvert #1 Profile: Q20

Q Culv Group (m³/s)	23.37	Culv Full Len (m)	12.12
# Barrels	2	Culv Vel US (m/s)	3.04
Q Barrel (m³/s)	11.69	Culv Vel DS (m/s)	3.47
E.C. US (m)	13.42	Culv Inv E Up (m)	11.17
W.S. US (m)	13.41	Culv Inv E Dn (m)	11.17
E.C. DS (m)	12.68	Culv Frict Loss (m)	0.18
W.S. DS (m)	12.29	Culv Exit Loss (m)	0.33
Delta E.G. (m)	0.75	Culv Exit Loss (m)	0.23
Delta V/S (m)	1.12	Q Weir (m³/s)	12.53
E.G. IC (m)	13.42	Weir Sta Crt (m)	36.78
E.G. DC (m)	13.40	Weir Sta Rot (m)	98.65
Culvert Control	Inlet	Weir Submerg	0.00
Culv WS Inlet (m)	12.57	Weir Max Depth (m)	0.42
Culv WS Outlet (m)	12.40	Weir Avg Depth (m)	0.26
Culv Nom Depth (m)		Weir Flow Area (m²)	15.99
Culv Crit Depth (m)	1.23	Min El Weir Flow (m)	13.00

Plan: cut cor-int Alice St 1 RS: 419 Culv Group: Culvert #1 Profile: Q50

Q Culv Group (m³/s)	24.52	Culv Full Len (m)	
# Barrels	2	Culv Vel US (m/s)	3.19
Q Barrel (m³/s)	12.26	Culv Vel DS (m/s)	3.98
E.C. US (m)	13.53	Culv Inv E Up (m)	11.17
W.S. US (m)	13.51	Culv Inv E Dn (m)	11.17
E.C. DS (m)	12.91	Culv Frict Loss (m)	0.17
W.S. DS (m)	12.39	Culv Exit Loss (m)	0.19
Delta E.G. (m)	0.62	Culv Exit Loss (m)	0.26
Delta V/S (m)	1.12	Q Weir (m³/s)	21.60
E.G. IC (m)	13.53	Weir Sta Crt (m)	33.75
E.G. DC (m)	13.44	Weir Sta Rot (m)	104.73
Culvert Control	Inlet	Weir Submerg	0.00
Culv WS Inlet (m)	12.57	Weir Max Depth (m)	0.54
Culv WS Outlet (m)	12.29	Weir Avg Depth (m)	0.34
Culv Nom Depth (m)		Weir Flow Area (m²)	24.02
Culv Crit Depth (m)	1.27	Min El Weir Flow (m)	13.00

Plan: cut cor-int Alice St 1 RS: 419 Culv Group: Culvert #1 Profile: Q100

Q Culv Group (m3/s)	23.90	Culv Full Len (m)	20.00
# Boxes	2	Culv Vert US (m)	3.10
Q Bank (m3/s)	11.95	Culv Vert DS (m)	3.10
EC US (m)	13.61	Culv Inlet US (m)	11.17
VS US (m)	13.59	Culv Inlet DS (m)	11.17
EC DS (m)	13.09	Culv Frict Loss (m)	0.12
VS DS (m)	12.76	Culv Entrance (m)	0.16
DB Loss (m)	0.53	Culv Exit Loss (m)	0.25
DB Loss (m)	0.83	Q Weir (m3/s)	30.20
EC (m)	13.61	Area (m2)	31.44
EC (m)	13.61	Wet Area (m2)	109.37
Culv Inlet (m)	Outlet	Wet Area (m2)	0.00
Culv Inlet (m)	12.57	Wet Area (m2)	0.63
Culv Inlet (m)	12.57	Wet Area (m2)	0.40
Culv Inlet (m)		Wet Area (m2)	30.87
SL (m)	1.24	Wet Area (m2)	13.00

APPENDIX D

**REQUIRED BUILDING AND
WALL DETAILS**

**TABLETOP
ARCHITECTS
PLANNERS
ENGINEERS**

ABN 60 067 321 117

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Annexure TCF-5

1727/2005 [REDACTED]

4 May, 2006

MEMORANDUM

TO: DEVELOPMENT TEAM CO-ORDINATOR - EAST
FROM: ASSISTANT DEVELOPMENT ENGINEER - [REDACTED]
RE: **DEVELOPMENT APPLICATION**
INTEGRATED PLANNING ACT 1997 - SECTION 3.2.1(1)
ENGINEERING ASSESSMENT REPORT

Appn No: 1727/05

Applicant: [REDACTED]

Property Location: 45 Alice Street, Goodna Qld 4300

Proposal	Development	Approval Type
Child Care Centre	Carrying out building work Carrying out plumbing or drainage work Carrying out operational work Making a material change of use of premises Reconfiguring a lot	N/A. N/A. N/A. Development Permit. N/A.

Date Received: 23 March 2005

The following comments are made in respect of the above proposed development.

1. APPLICABLE CODES

This application has been assessed against the following codes:-

- (a) Ipswich Planning Scheme (Parts 1-6, including Strategic Plan and Zoning Scheme);
- (b) Ipswich Eastern Corridor Structure Plan;
- (c) Commercial and Industrial Development Code;
- (d) Parking Code;
- (e) Landscaping and Fencing Code;
- (f) Planning Scheme Policy for Water Supply and Sewerage Infrastructure Contributions;
- (g) Planning Scheme Policy for Ipswich Roadworks Infrastructure Contributions;
- (h) Planning Scheme Policy for Ipswich Drainage Contributions;
- (i) Planning Scheme Policy for Warranty and Maintenance;
- (j) Planning Scheme Policy for Flood Liable or Drainage Problem Land;
- (k) Ipswich City Council Engineering Works Manual;

- (l) Queensland Urban Drainage Manual;
- (m) Australian Rainfall and Runoff (The Institution of Engineers, Australia);
- (n) Queensland Streets;
- (o) Austroads Guide to Traffic Engineering Practice - Intersections at Grade;
- (p) Ipswich City Council Standards Drawings;
- (q) Manual of Uniform Traffic Control Devices (Department of Main Roads);
- (r) Australian Standard 2890.1 - Off-Street Car Parking;
- (s) Australian Standard 2890.2 - Commercial Vehicle Facilities;
- (t) Policy Guidelines for Earthworks (including allotment filling);
Sewerage and Water Supply Act;

The proposal generally complies with or has been conditioned to comply with the above codes.

2. EXISTING CONDITIONS AND COMMENTS

(a) Background

There is no significant history to this site from an engineering point of view.

(b) Outstanding Matters Relating to Previous Approvals

There are no previous approvals over the subject site.

(c) Allotments

The subject land is described as Lot3 RP77071 with an area of 2,823m and a general slope from South to North. The subject property is mostly vacant land, except for a few sheds and trees. The entire property was inundated by the Q100 flood line. The Developer proposes to construct two (2) adjacent Child Care Centres with shared access and car parking facilities.

(d) Roads/Traffic/Parking

(i) External

The subject property has frontage to the following two roads:

- Alice Street is approximately 11.2m wide asphaltic concrete sealed pavement with concrete kerb and channel on both sides
- Spalding Crescent is approximately 6.0m wide bituminous carriageway with concrete kerb and channel on both sides

A concrete/bitumen footpath 1.2 m wide exists along Alice Street and Spalding Crescent for the full frontage of the subject site side of the road.

(ii) Internal

The Developer proposes to construct thirty-one (31) carparks and vehicle manoeuvring area for the proposed development.

(iii) Access

The Developer proposes to provide a 6.0m wide driveway access point, which is in accordance with AS2890.

(iv) Future Road System

Based on the Ipswich City Road Transportation Study, it is unlikely that any part of the land will be required for any future road system.

(v) Pathways

Not applicable

(e) Stormwater

The site was inundated in the 1974 flood, is not below the ARI of 20 years flood level, is not subject to an ARI of 20 years overland flow, and is subject to Q100 flooding of the local creek as well as backwater from the Brisbane River.

(f) Sewerage

The Property is in a sewerage area. An existing 150mm diameter sewer main exists within the Council's property at the southern end of the subject site.

(g) Water Supply

The Property is in a water supply area. An existing 300mm water main runs along the northern side of Alice Street and there is also an existing 100mm diameter water main which runs along the western side of Spalding Crescent.

(h) Energex and Street Lighting

Overhead power is available in the area.

(i) Mining

Council records indicate that the subject site is located within an area that has not been undermined.

(j) Others

(i) Easements

Not applicable.

(ii) Oil/Gas Pipelines

Not applicable.

(iii) Service Corridors

Not applicable.

(k) **General**

Not Applicable.

3. CONTRIBUTIONS

(a)

Headworks Contributions

Application Type:

Material Use of Change

1. Existing Equivalent Persons (the greater of)

Deemed Credit

Town Planning Zone:	Residential Medium Density
Category:	Urban Areas
Water Rate:	3.300 per lot
Sewerage Rate:	3.300 per lot
Road Rate:	3.100 per lot
Public Parks Infrastructure Rate:	3.080 per lot
Local Community Facilities Rate:	3.080 per lot
Number of lots:	1.000
Water EPs:	3.300
Sewerage EPs:	3.300
Road EPs:	3.100
Public Parks Infrastructure EPs:	3.080
Local Community Facilities EPs:	3.080

Land Use

1. Land Use:	Vacant
Water Rate:	0.000 EPs per lot
Sewerage Rate:	0.000 EPs per lot
Road Rate:	0.000 EPs per lot
Public Parks Infrastructure Rate:	0.000 EPs per lot
Local Community Facilities Rate:	0.000 EPs per lot
Number of Lots:	1.000
EPs for Water:	0.000
EPs for Sewerage:	0.000
EPs for Roads:	0.000
EPs for Public Parks Infrastructure:	0.000
EPs for Local Community Facilities:	0.000
Total Water EPs:	0.000
Total Sewerage EPs:	0.000
Total Road EP:	0.000

Total Public Parks Infrastructure EP:	0.000
Total Local Community Facilities EP:	0.000

Previous Contributions

Previous Contributions For Water & Sewerage:	No
Previous Contributions For Roads:	No

Deemed Credit Exempt For Water:	No
Deemed Credit Exempt For Sewerage:	No
Deemed Credit Exempt For Roads:	No

Existing Credit EPs for Water:	3.300
Existing Credit EPs for Sewerage:	3.300
Existing Credit EPs for Roads:	3.100
Existing Credit EPs for Public Parks Infra.:	3.080
Existing Credit EPs for Local Community Fac:	3.080

2. Proposed Equivalent Persons

Proposed Land Use

1. Land Use:	Community Use - Child Care Centre
Water Rate:	0.150 EPs per person
Sewerage Rate:	0.150 EPs per person
Road Rate:	0.580 EPs per person
Total Public Parks Infrastructure:	0.000 EPs per person
Total Local Community Facilities:	0.000 EPs per person
Number of Staff and Children:	137.000
Proposed EPs for Water:	20.550
Proposed EPs for Sewerage:	20.550
Proposed EPs for Roads:	79.460
Proposed EPs for Public Parks Infra.:	0.000
Proposed EPs for Local Community Fac.:	0.000

Total Water EPs:	20.550
Total Sewerage EPs:	20.550
Total Road EP:	79.460
Total Public Parks Infrastructure EP:	0.000
Total Local Community Facilities EP:	0.000

3. Headworks Charges

Difference in Equivalent Persons:	(Proposed Equivalent Persons + Existing Land Use EP) - Existing Credit EP
Water EPs:	17.250
Sewerage EPs:	17.250
Road EPs =	76.360
Public Parks Infrastructure EPs =	-3.080
Public Parks Infrastructure contributions are not applicable in this instance.	

Local Community Facilities EPs = -3.080
Local Community Facilities contributions are not applicable in this instance.

Water

Water Zone: Goodna (inc Redbank Industrial) Water Zone
Unit Charge: 1.088
Contribution per EP: \$587.03
Water Headworks Charge: \$11,017.00 (WT-TL1)

Sewerage

Sewerage Catchment: Goodna Catchment (excluding Springfield)
Unit Charge: 1.088
Contribution per EP: \$629.36
Sewerage Headworks Charge: \$11,811.00 (SW-RC2)

Roads

Headworks Road: No

Road Contribution Sector: Goodna
Unit Charge: 1.026
Contribution per EP: \$1,437.77
Road Headworks Charge: \$112,642.00 (RD-WAQ)

4. OTHER DEVELOPMENT APPROVALS REQUIRED

From an engineering perspective, further Development Permits, as required by the *Integrated Planning Act 1997*, shall be obtained in respect of any Operational Works in relation to this approval before any such works are commenced.

RECOMMENDATION

- A. Based on engineering grounds only, it is recommended that the application for Impact Assessment - Development Permit - Material Change Of Use of land at 45 Alice Street, Goodna Qld 4300 as proposed by [REDACTED] and detailed on plan number A01 revision C, dated 28 March 2006, be approved, subject to the following terms and conditions being completed by the Developer, to the satisfaction of the Senior Development Engineer:
1. Terms
 - (a) RPEQ - A Registered Professional Engineer of Queensland, suitably qualified and experienced in the particular area of expertise required. Furthermore, the RPEQ required for the analysis and reporting for mining shall be experienced in the analysis of underground and surface mining within the Ipswich area.
 - (b) QUDM - The Queensland Urban Drainage Manual, produced by the Queensland Department of Primary Industries.

- (c) Queensland Streets - The Design Guidelines for Subdivisional Street Works, prepared for the Institute of Municipal Engineers of Australia (QLD).
- (d) AMCORD - The Australian Model Code of Residential Development produced by the Commonwealth Department of Housing and Regional Development.
- (f) MUTCD - The Manual of Uniform Traffic Control Devices, published by DMR.
- (g) Ipswich Water - Commercial Business Unit of Ipswich City Council providing water and sewerage services.

2. Roadworks

- (a) All traffic signs and delineation shall be installed in accordance with MUTCD.
- (b) The Developer shall extend the 1.2 m wide concrete footpath on the western side of Spalding Crescent to match into the existing 1.2m wide concrete footpath on the northern side of Alice Street.

The construction of footpaths shall be in accordance with Council's Standard Drawing SR.19. The concrete footpaths shall be on the same side as the street lights, and the maximum longitudinal grade shall not exceed 1:8.

- (c) Kerb ramps are to be constructed in accordance with Council's Standard Drawing SR.18 at all intersections and at additional locations where required to connect the concrete pathways and cycleways. Generally at "T" intersections, 4 kerb ramps are required.
- (d) The Developer shall reinstate the existing driveway access located on the Alice Street frontage with new concrete kerb and channelling, which will match the existing kerb and channelling in Alice Street.

3. Access/Parking

- (a) Provision shall be made for pedestrian access directly from each child care centre building to footpath in Spalding Crescent such that no child will need to get to the street level by passing through the carparking areas that may become flooded.
- (b) Design and construction of all access and parking shall be in accordance with the provisions of the Ipswich City Council Parking Code and the Australian Standards (2890 series).
- (c) Parking and manoeuvring areas shall accommodate the largest anticipated vehicle to use the site.
- (d) Adequate facilities for servicing the development shall be provided on site to ensure loading and/or unloading activities do not occur on-street.
- (e) Provision shall be made for all vehicles to enter and exit the site in forward gear.

- (f) All parking, access and manoeuvring areas shall be constructed of concrete, bitumen or pavers and shall be linemarked in accordance with the relevant Australian Standard.
- (g) A concrete driveway shall be constructed from the existing layback for proposed Lot to the property boundary in accordance with Council's Standard Drawings SR.13 and SR.14.
- (h) Carparking spaces shall be provided on site for the proposed development. All parking areas shall be used exclusively for parking and shall be accessible to both staff and customers during any approved hours of operation. The car park shall be appropriately signposted at all entries to the satisfaction of the Senior Development Engineer (eg. Staff and Customer Parking). The car park shall also be maintained to the satisfaction of the Senior Development Engineer.

Unless otherwise indicated on the approved plan of development or approved by the Development Manager, parking shall not be exclusively used for staff parking or customer parking at the expense of the other.

4. Water

- (a) All works on live water mains are to be carried out by Council in accordance with Council's policy, and at the Developer's expense.
- (b) Where concrete footpaths are to be constructed, the Developer shall provide 100 mm diameter conduits under the footpath and in line with the conduits under the road, for future ease of installing the individual water services. The letter "W" shall be embossed in the concrete to mark the location of the conduit.
- (c) The Developer shall lodge a private works request on the prescribed Council form, for Council to supply a cost estimate to:
 - (i) provide a suitable metered water connection for each proposed allotment;
 - (ii) amend the existing connection if necessary; and
 - (iii) seal off any existing water connections if necessary.

The appropriate fees are to be paid prior to Council signing any plan of survey.

5. Stormwater

- (a) The Developer shall provide all necessary stormwater drainage (both internal and external to the development) and such drainage works (except for roofwater systems) shall be designed and constructed in accordance with QUDM such that the overall drainage system caters for a storm event with an ARI of 100 years.

Overland flow paths shall be suitably designed to cater for the water from a storm event with an ARI of 100 years. In the case where the piped system is carrying part of the flow, the overland flow paths shall be designed to cater for that volume which is represented by the difference between the predicted volume from the storm event with an ARI of 100 years and the capacity of the pipe system, noting the requirements of QUDM.

- (c) No ponding or redirection of stormwater shall occur onto adjoining land unless specifically approved by Council in consultation with the owner of the adjoining land.
 - (d) Due consideration shall be given in the design and construction of the development in relation to the effect of the developed catchment flows on the downstream discharge receival areas. Suitable stormwater control devices are to be provided to ensure that there is no increase in flow in watercourses. Such control devices are to be designed so as to integrate the landscaping, recreational, infrastructural and drainage roles of watercourses.
 - (e) All stormwater runoff from the development shall be discharged in a manner and to a point to be approved by the Senior Development Engineer. In this instance, stormwater discharge from all impervious areas shall be directed to the drainage channel to the west of the property in lot 420 SL5041.
 - (f) Stormwater drainage plans and calculations are to be submitted and approved by the Senior Development Engineer, in conjunction with the submission of an Operational Works application.
 - (g) The Developer shall provide a stormwater detention basin (or system) on the subject land, which shall be designed and constructed in accordance with QUDM. The detention basin (or system) shall be constructed to ensure that flows, at any point downstream in the catchment, are not increased by the development for any combination of frequency and duration from the storm event with an ARI of 2 years up to and including the storm event with an ARI of 100 years.
 - (h) The proposed Development shall be designed and constructed in accordance with the flooding report prepared by Tabletop Architects Planners Engineers titled 45 Alice Street, Goodna – Stormwater and Flood Report dated February 2006. As illustrated in this report it examines the stormwater and local flooding impacted on the subject site by a storm event with an ARI of 100 years.
 - (i) The construction of all buildings or other structures are to be constructed with the base floor level 300mm above the storm level associated with an ARI of 100 years.
 - (j) The Developer shall install an appropriate sealed surface within the proposed clear flow path located in the south west corner of the subject property. This area is illustrated on Plan No: R01, in the stormwater and flood report prepared by Tabletop Architects Planners Engineers. This area will be used to transfer the stormwater flow into the existing drainage channel, therefore the sealed surface shall be designed to withstand the force of a high velocity flow of water without being removed.
 - (k) Pollutant control devices shall be installed in the stormwater system. Locations and types of the devices shall be approved by the Senior Development Engineer.
6. Erosion & Silt Management
- (a) The Developer shall be responsible for the installation and maintenance of silt management facilities from the time of commencement of construction until the completion of all works on site. All silt management facilities are to be in accordance with the document "Soil

Erosion and Sediment Control" published by the Institution of Engineers Australia, or equivalent.

- (b) If the Senior Development Engineer determines that silt damage has occurred on the site, or the downstream drainage system has become silted, the Developer shall be responsible for restoration. Such restoration shall be completed in the time determined by the Senior Development Engineer. Should the Developer fail to complete the works determined by the Senior Development Engineer within the specified time, Council shall complete the work and recover all costs from the Developer associated with that work.

7. Operational Works – Municipal Works
(ie Works being handed over to Council)

- (a) Plans relating to all civil engineering works shall be prepared and submitted for review by Council under the cover of Form 1 - Part A (Common details for all applications) and Form 1 - Part E (Planning Scheme Works). The plans shall show full construction details, layout dimensions, and finished surface levels and shall be submitted together with the appropriate fees for Council approval, prior to the commencement of construction on site.
- (b) The Developer shall comply with the requirements of the documents entitled "Planning Scheme Policy 3 - General Works" and "Standard Drawings".
- (c) All engineering drawings submitted to Council shall be in accordance with Council's Planning Scheme Policy 3 - General Works and Standard Drawings, and shall include as a minimum the following:
 - (i) Engineering drawings shall be marked as confirmation that they have been checked and approved by a RPEQ;
 - (ii) The drawings shall be submitted as three A3 size sets and one full size set; and
 - (iii) A "Certificate of Design" shall be submitted by a RPEQ, certifying that the design is in accordance with all relevant engineering standards, Council's requirements and standards, relevant development conditions of approval, and sound engineering practice.
- (d) Municipal works shall require a detailed design certified by a RPEQ, the design approved by Council Engineers with appropriate fees payable, a works pre-start meeting on-site and various detailed construction and audit inspections by Council Officers. A twelve month maintenance period is applicable for the works as well as the payment of a maintenance security deposit.
- (e) All works shall be supervised by a RPEQ competent in civil works and shall be undertaken by a nominated principal contractor experienced in the construction of municipal works. Council reserves the right to request evidence of the principal contractor's competency. Should it be deemed by the Senior Development Engineer that the contractor does not have the necessary competency or has constructed substandard works for Council in the past, Council reserves the right to reject the nominated contractor.
- (f) Municipal works shall be accepted "On Maintenance" prior to commencement of use. A maintenance bond equal to 5% of the construction cost (minimum of \$1,000.00) shall be

retained by Council for a minimum period of twelve months, or until such time as the works are accepted "Off Maintenance" by Council.

- (g) "As Constructed" plans for municipal works shall be submitted to Council and approved prior to the formal acceptance of the works "On Maintenance".
 - (h) On completion of the works a certificate shall be submitted to Council by a RPEQ certifying that the works have been constructed in accordance with Council's construction standards and in compliance with the approved plans and specification. It is expected that the RPEQ will undertake the necessary inspections to make this certification.
 - (i) Council reserves the right to require further amendments and/or additions at a later date, should design errors or omissions become apparent in regard to the works relevant to the Operational Works approval.
 - (j) Prior to the commencement of any municipal works associated with developments other than the subdivision of land, Council shall require the provision of a bond equivalent to not less than 10% (minimum of \$1,000.00) of the value of the works as security for the performance of the various construction obligations (including the provision of engineering certification and "As Constructed" information). The bond shall be reduced to an amount of not less than 5% of the value of the works upon formal acceptance of the works "On Maintenance" and shall be retained by Council during the maintenance period as security for the performance of the maintenance obligations. The bond shall be returned upon formal acceptance of the works "Off Maintenance".
8. Operational Works – Internal Works
(ie Works not being handed over to Council)
- (a) Plans relating to all civil engineering works shall be prepared and submitted for review by Council under the cover of Form 1 - Part A (Common details for all applications) and Form 1 - Part E (Planning Scheme Works). The plans shall show full construction details, layout dimensions, and finished surface levels and shall be submitted together with the appropriate fees for Council approval, prior to the commencement of construction on site.
 - (b) Engineering drawings shall be marked as confirmation that they have been checked and approved by a RPEQ.
 - (c) The drawings shall be submitted as three A3 size sets and one full size set. Where municipal works are also being undertaken, it is usually appropriate to make a combined submission.
 - (d) A "Certificate of Design" shall be submitted by a RPEQ, certifying that the design is in accordance with all relevant engineering standards, Council's requirements and standards, relevant development conditions of approval, and sound engineering practice.
 - (e) Council reserves the right to require further amendments and/or additions at a later date, should design errors or omissions become apparent.
 - (f) A certificate shall be submitted to Council by a RPEQ certifying that the completed works have been constructed in accordance with Council's requirements and standards and in

compliance with the approved plans and specification. It is expected that the RPEQ will undertake the necessary inspections to make this certification.

9. Contributions

- (a) In accordance with the current Council Policies in relation to headworks contributions, the Developer shall pay, prior to the commencement of use, the following monies to Council:
- (i) Water headworks = \$11,017.00 (WT-TL1)
 - (ii) Sewerage headworks = \$11,811.00 (SW-RC2)
 - (ii) Road contribution = \$112,642.00 (RD-WAQ)

Calculations of headworks and contributions are based on the infrastructure contribution rates applicable at the date the development application was lodged with Council. The contributions above shall be applicable for a period of twelve months from the date of the development approval, and thereafter shall be based on the infrastructure contribution rates applicable at the date when payment is made.

10. General

- (a) All disturbed verge areas and allotments shall be graded, grassed and left in a mowable condition. The grass cover shall be obtained as early as possible during the development and an acceptable grass cover shall be achieved before the development can be accepted "Off Maintenance".
- (b) With reference to any works, on land under other private ownership, written permission for the works shall be obtained and forwarded to Council. Similarly, written clearances shall be obtained after the works are completed, unless otherwise accepted by the Senior Development Engineer.
- (c) All works required for this development shall take due regard of any and all existing services and, if considered necessary by the relevant authority or the Senior Development Engineer, such works shall be altered at the cost of the Developer.
- (d) Any allotment filling for a greater depth than 800 mm to provide for building platforms shall be conducted in accordance with Australian Standard 3798. Test results as required by Australian Standard 3798, and a certificate of quality and uniformity of fill shall be provided by a RPEQ. The level of responsibility shall be Level 1.
- (e) A certificate from a RPEQ shall be issued to Council certifying that any retaining wall greater than 800 mm in height is structurally sound and capable of withstanding any likely surcharge loads. Retaining walls greater than 1.0 m in height are to be provided with railings or other barriers to provide pedestrian safety.
- (f) Retaining walls shall be designed so that there are no imposed loads placed upon Council's underground services. This may include extending the footing to a level 300 mm below the invert of the pipe.

- (g) All imported and exported materials shall be transported only on routes approved by the Senior Development Engineer.
- (h) For batters resulting from cutting and filling of the site and producing slopes greater than 1:6, Council requires a RPEQ to certify that they are stable and properly drained.
- (i) Approval of the Senior Development Engineer is required for any fill intended to be placed over Council's underground services.
- (j) Signs are to be erected in the carpark to advise users that this carpark is subject to some flooding of the local creek due to storms with an ARI of less than 100 years. Also the Brisbane River has backwater flooding for those storms with an ARI in excess of 20 years.
- (k) A Flood Escape Plan and procedure is to be developed and periodically practiced/rehearsed in case of flooding of the site. This plan is to include permanently displayed signs and directions for staff and visitors/parents to follow.

11. Compliance with conditions

Unless otherwise stated, all Condition numbers shall be completed prior to commencement of use.

B. Further Advice

1. The subject site was fully inundated in the 1974 flood. Council, and its servants and agents, accept no liability or responsibility for any loss or damage to person or property of whatever nature or however caused as the direct or indirect consequence of the granting of the approval herein contained. Such approval has been granted at the request of the Developer and in reliance of information submitted by the Developer in support thereof.

2. Portable Long Service Leave

From 1 January 2000, the Building and Construction Industry (Portable Long Service Leave) Levy must be paid prior to the issue of a development permit where one is required for the 'Building and Construction Industry'. This applies to Building Works, Operational Works and Plumbing and Drainage Works applications, as defined under the *Integrated Planning Act 1997*, where the works are \$80 000 or more and matching the definition of 'Building and Construction Industry' under the *Building and Construction Industry (Portable Long Service Leave) Act 1991*.

Council will not be able to issue a Decision Notice without receipt of details that the Levy has been paid. Should you require clarification in regard to the amendments to the *Building and Construction Industry (Portable Long Service Leave) Act 1991*, you should contact QLeave on 1800 803 481 (free call) or (07) 3212 6855.

3. That the applicant be advised that from an engineering perspective, further Development Permits, as required by the *Integrated Planning Act 1997*, shall be obtained in respect of any Operational Works in relation to this approval before any such works are commenced.

[REDACTED]

ASSISTANT DEVELOPMENT ENGINEER

ENDORSED BY:

[REDACTED]

SENIOR DEVELOPMENT ENGINEER

Annexure TCF-7

1727/05

14 July 2006

MEMORANDUM

TO: DEVELOPMENT TEAM CO-ORDINATOR - CITYWIDE
FROM: DEVELOPMENT PLANNER -
RE: DEVELOPMENT APPLICATION - IMPACT ASSESSMENT
INTEGRATED PLANNING ACT 1997 - SECTION 3.2.1(1)

Appn No: 1727/05
Applicant:
Real Property Description:
Property Location: 45 Alice Street, Goodna
Division: 2

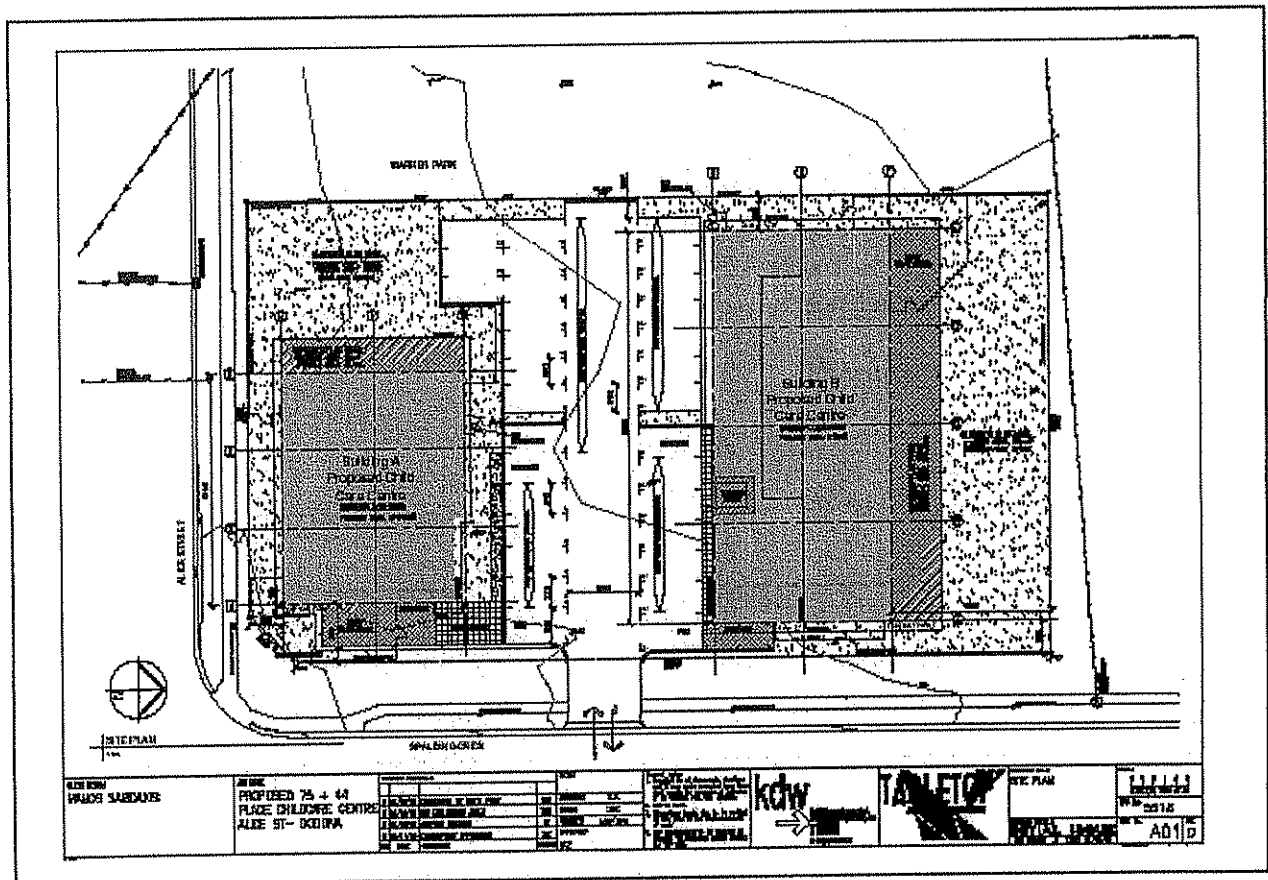
Proposal	Development	Approval Type Requested
Community Use – Two (2) Child Care Centres (Total 119 Children)	Making a Material Change of Use of Premises	Development Permit.

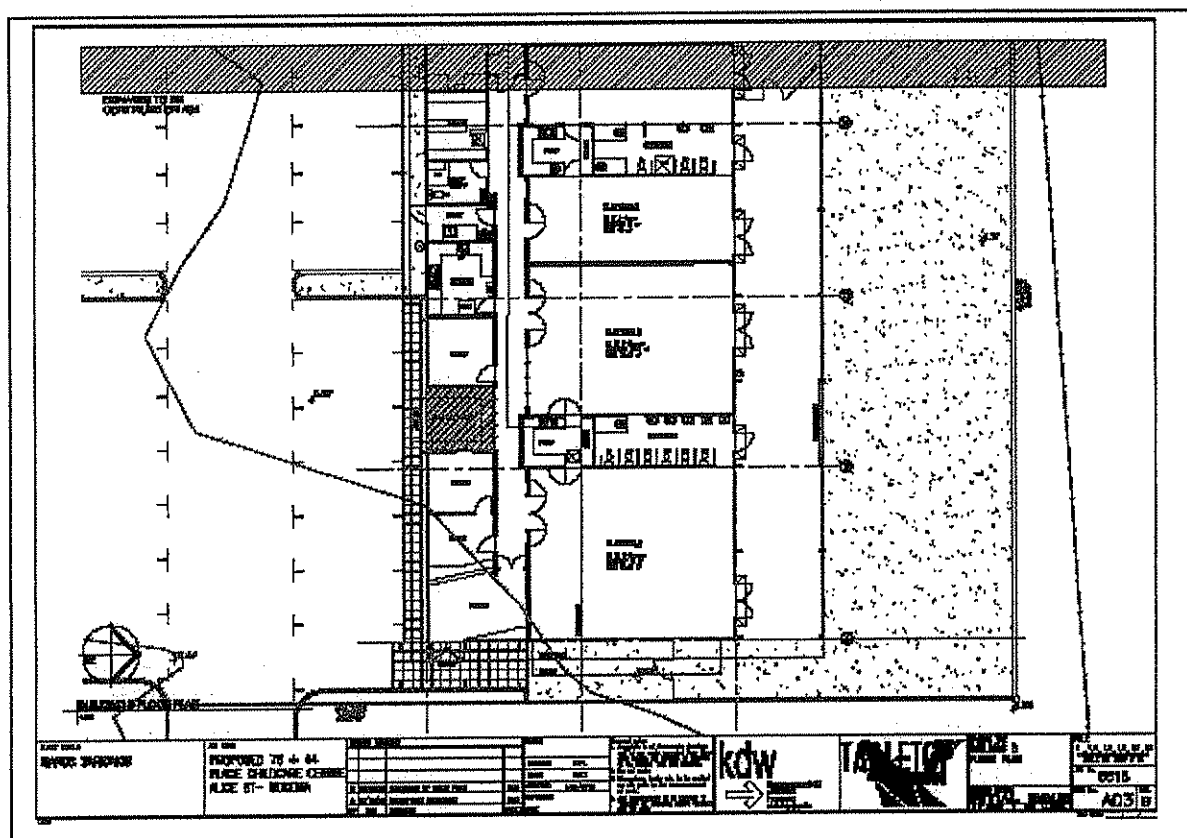
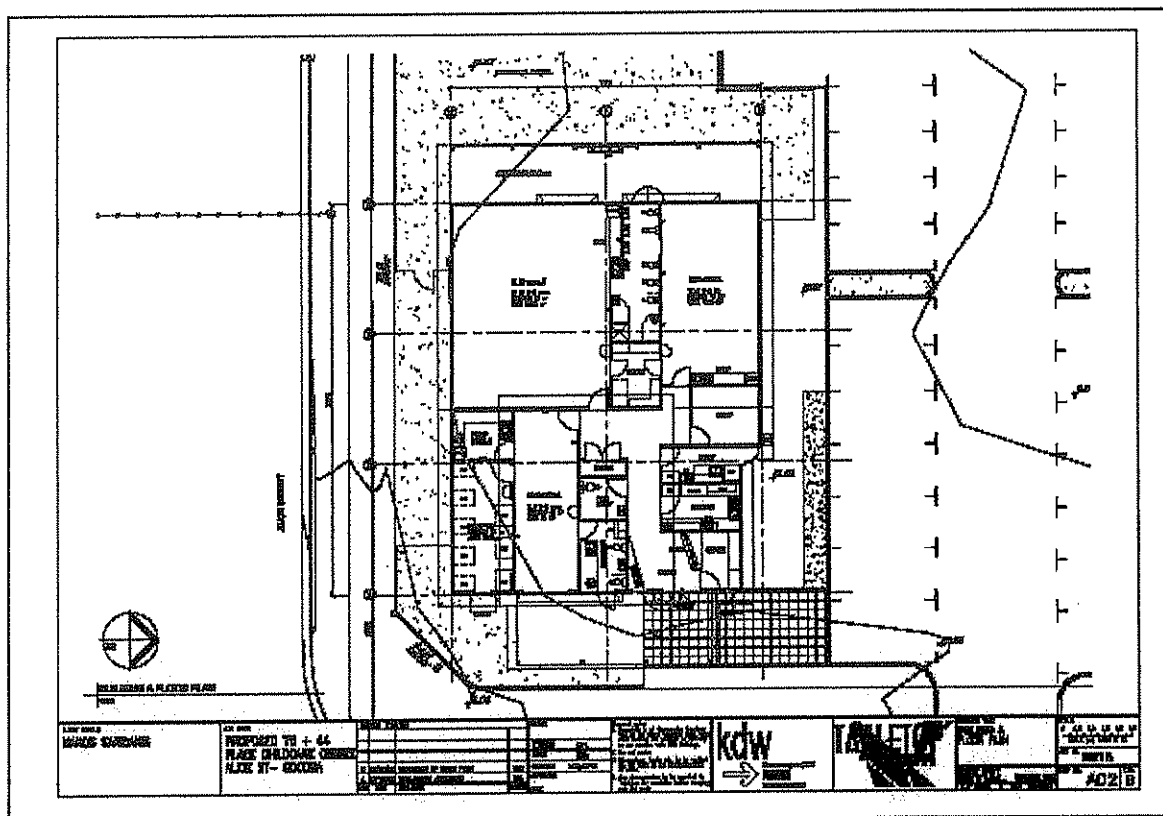
Date Received: 23 March 2005
Start Date for Decision Stage: 10 July 2006 (the date that further detailed elevation plans were submitted for assessment)
Stat. Date for Determination: 7 August 2006
Site Area: 2,823 m²
Zone: Residential Medium Density (RM2)

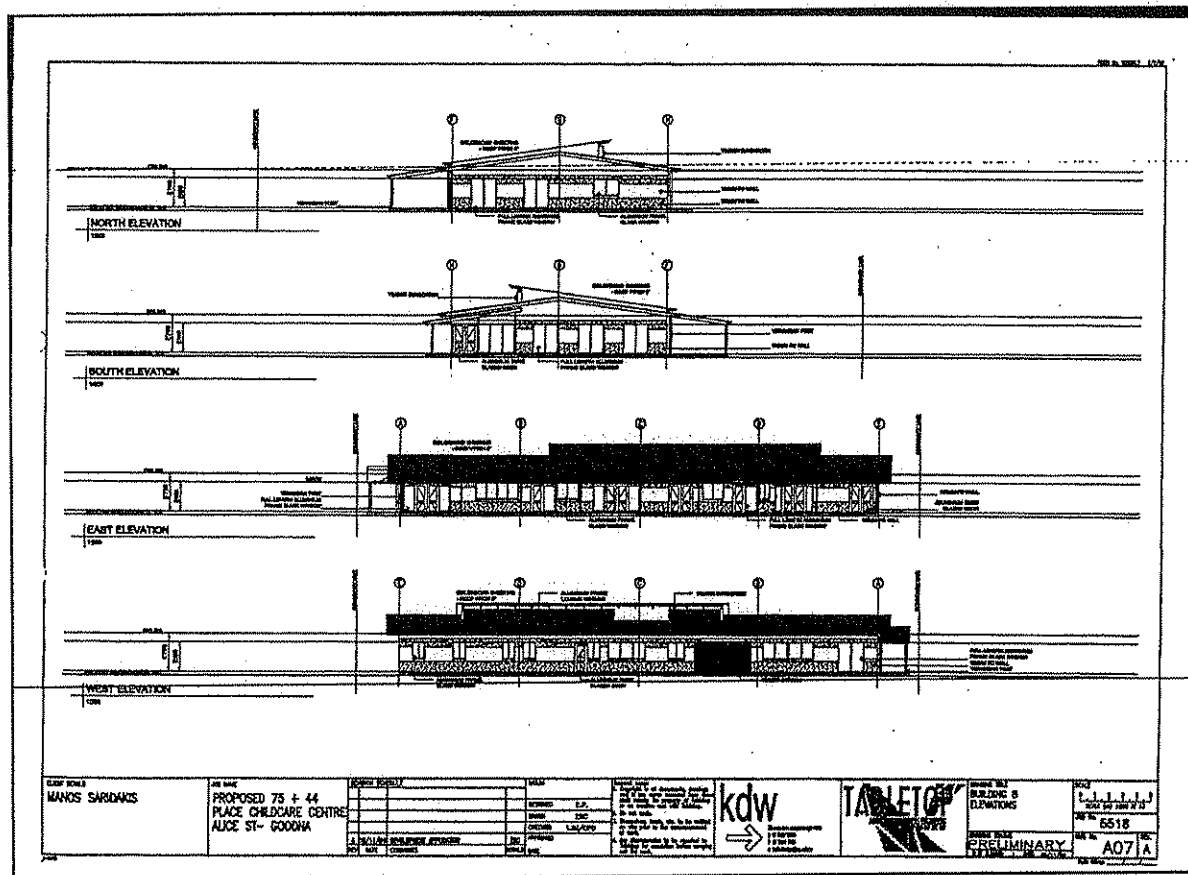
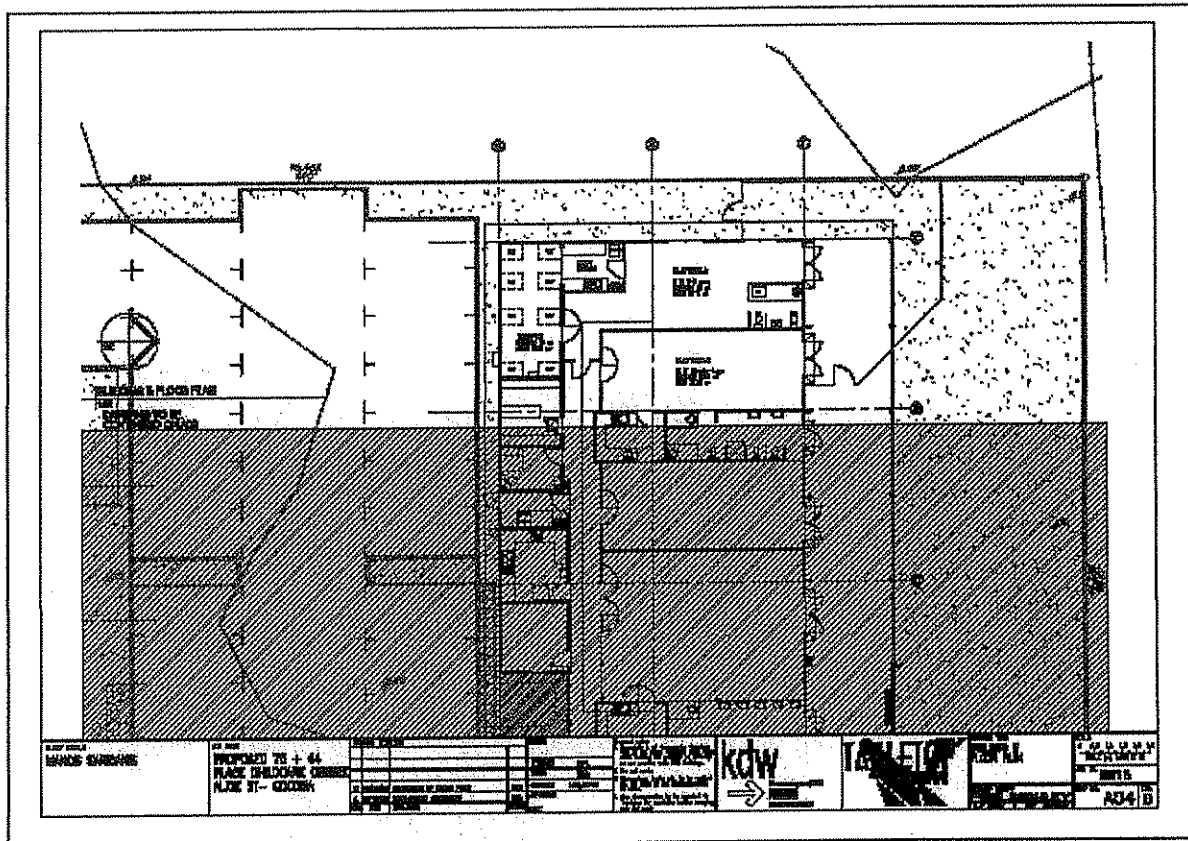
SITE LOCATION



PROPOSAL PLAN









This application is for the development of a Community Use [two (2) Child Care Centres] on land located at 45 Alice Street, Goodna. The subject site is a corner allotment totalling 2,823 m² in area and included in the Residential Medium Density (RM2) zone pursuant to the Planning Scheme. The northern boundary of the site adjoins land within *Ipswich City Council Program 23* (i.e. 9,170 m² vacant land reserved for drainage purposes), whilst the western boundary of the site adjoins land within *Ipswich City Council Program 30* (i.e. 1.012 hectares of parkland). The eastern and southern boundaries of the subject site front Spalding Crescent (66.3 m) and Alice Street (36.2 m) respectively. The subject site is predominantly vacant with the exception of a few sheds and trees.

A carpark for thirty-one (31) car spaces is to be located centrally between proposed Building 'A' and Building 'B'. Access is proposed from Spalding Crescent only. Proposed hours of operation are from 6:00 a.m. to 6:30 p.m. Monday to Friday.

The provision of 31 parking spaces for the proposed 119 children and 18 staff is two (2) parking spaces less than that required by the Parking Code. However, given the site's proximity and connectivity to the Major Centre zone and public transport modes (i.e. bus, train and pedestrian network), it is considered that adequate parking facilities are provided in this instance. It is further recommended that the approval be limited to 119 children and 18 employees only.

A condition is included for hours of operation to be from 6:30 a.m. to 6:30 p.m. Monday to Friday. Such hours are consistent with previously approved child care centres and maintain residential amenity (e.g. noise). Conditions are included in relation to waste storage and collection, lighting and noise (including construction of a 2.0m high acoustic barrier along the south-western and south-eastern corners of the property in accordance with the submitted 'Environmental Noise Level Study').

It is noted that the subject site was previously used for sawmill operations. It is further noted that sawmill operations may result in chemical contamination of land. The subject site is not listed on any contaminated land register pursuant to the Environmental Protection Act. However, given the possibility that chemical contamination of the subject land may be present (and not included on an official record), a condition is included for the Developer to contract a qualified environmental consultant to undertake soil sampling on site to test for chemical contamination. Rehabilitation of the land will be required should any contamination be identified.

The site is affected by flooding (Q100 levels) over the whole of the site. Upon review of the submitted 'Stormwater and Flood Report', Q100 flood immunity can be achieved by constructing a solid wall along the road frontage from the eastern corner, across the southwest corner of the property and along the western boundary to the northwest corner. For safety and aesthetic reasons, it is recommended that the proposed elevated play area (overhanging the Q100 level stormwater flowpath area) be deleted from the proposal. It is recommended that all walling/ fencing along the south-west corner of the site maintain alignment with the specified Q100 flood immunity level as detailed on 'Wall and Floor Details for Q100 Immunity' Plan No. 5946 R01, prepared by Tabletop Architects.

A condition is recommended to require that building levels are a minimum 300mm above the Q100 levels and that elevations and treatment details for the southwest corner of the site (fronting Alice Street) be submitted to the satisfaction of the Development Manager prior to commencement of any works. An operational works approval will be required in relation to stormwater management on site.

It is recommended that the Developer extend the 1.2m wide concrete footpath on the western side of Spalding Crescent to match into the existing 1.2m wide concrete footpath on the northern side of Alice Street. Infrastructure contributions have been requested from the Developer in relation to water, sewer and roadworks.

Overall, the proposal generally supports the intent of the Residential Medium Density zone and subject to the conditions in the recommendation, is consistent with the Parking Code and Community Use Code. There are no concurrence or advice agencies applicable to this proposal and referral co-ordination was not required in this instance.

Public notification of the proposal has been carried out in accordance with the *Integrated Planning Act 1997* and forty-four (44) properly made submissions were received. The predominant issues raised in the submissions include:

- Increased levels of traffic and on-street parking along Spalding Crescent and Alice Street;
- Safety concerns for drivers (due to increased traffic levels) and children crossing roads;
- Air quality and possible site contamination impacts on the Child Care Centre;
- Noise impacts on the amenity of surrounding residences;
- Perception that there is no need for an additional child care centre and that there are plenty of vacancies within those existing in the area; and
- Flooding concerns.

In summary, it is considered that the proposal to permit the development of a Community Use – Two (2) Child Care Centres (Total 119 Children) is suitable for the subject site and should be approved, subject to the conditions detailed below.

RECOMMENDATION

- A. That the Developer be advised that Development Application No. 1727/05 is determined as outlined in the table below and is subject to the conditions specified below.

Proposal	Development	Decision	Approval Type
Community Use – Two (2) Child Care Centres (Total 119 Children)	Making a Material Change of Use of Premises	Approved	Development Permit.
	Carrying out Operational Work	Approved	Preliminary Approval.
	Carrying out Building Work	Approved	Preliminary Approval.

Further Development Permits Required

Further Development Permits, as required by the *Integrated Planning Act 1997*, shall be obtained in respect of any Operational Works, Building Works and Plumbing Works in relation to this approval before any such works are commenced.

Conditions of Assessment Manager (Ipswich City Council)

1. **Basis of Approval**

Subject to these conditions, the facts and circumstances set out in the application and all relevant Council Local Laws and/or Planning Scheme Policies shall be adhered to.

2. **Site Development**

The proposed development of the subject site shall be undertaken generally in accordance with the following plans:

- (a) Site Plan Job Number 5518 Drawing Number A01 D, drawn by Tabletop Architects and dated 1 June 2006, subject to the following amendment to the satisfaction of the Development Manager:-

- (i) The Developer shall submit an amended Site Plan demonstrating that the proposed elevated section for the outdoor play area for proposed Building A has been deleted. All walling/ fencing along the south-western corner boundary shall align with the south-western corner truncation detailed in the submitted 'Wall and Floor Details for Q100 Immunity' Plan No. 5946 R01, prepared by Tabletop Architects. These details shall be submitted prior to application for Operational Works Approval.
- (b) Building A Floor Plan Job Number 5518 Drawing Number A02 B, drawn by Tabletop Architects and dated 1 June 2006;
- (c) Building B Floor Plan Job Number 5518 Drawing Number A03 B, drawn by Tabletop Architects and dated 1 June 2006;
- (d) Building B Floor Plan Job Number 5518 Drawing Number A04 B, drawn by Tabletop Architects and dated 1 June 2006;
- (e) Landscape Plan Job Number 5518 Drawing Number A05 B, drawn by Tabletop Architects and dated 1 June 2006, subject to the following amendment to the satisfaction of the Development Manager:-
 - (i) The Developer shall incorporate into the Landscape Master Plan the necessary amendments required to comply with Condition 3(a)(i), at the time of its submission to Council (please refer to Condition 11 for further detail on landscaping conditions).
- (f) Building A Elevations Job Number 5518 Drawing Number A06 A, drawn by Tabletop Architects and dated 5 November 2004; and
- (g) Building B Elevations Job Number 5518 Drawing Number A07 A, drawn by Tabletop Architects and dated 5 November 2004.

3. Particular Use

This approval is for the particular use of a Community Use (Child Care Centre) for a maximum of 119 children and 18 employees and does not imply approval for other similar or more intensive uses. To this end, the use of any of the proposed structures associated with the Child Care Centre inclusive of car parking and any associated outdoor areas on site, are not permitted for any other purpose, unless, in the opinion of the Development Manager, such use is ancillary and incidental to the predominant use of the site for a Child Care Centre.

4. Limits to Approval

Preliminary Approval for the carrying out of Building Works and Operational Works is approved in respect of those aspects of the application to which the Planning Scheme applies.

5. Hours of Construction

Unless otherwise approved in writing by the Development Manager, hours of construction shall be:

Monday to Saturday 6.30 a.m. to 6.30 p.m.

Work or business shall not be conducted from or on the premises outside the above hours or on Sundays or public holidays.

6. Hours of Operation

Unless otherwise approved in writing by the Development Manager, hours of operation shall be:

Monday to Friday 6.30 a.m. to 6.30 p.m.

Work or business shall not be conducted from the premises outside the above hours or on Sundays or Public Holidays.

7. Carparking - Use and Maintenance

- (a) A minimum of thirty-one (31) car parking spaces shall be provided on site for the proposed development.
- (b) Unless otherwise indicated on the approved plan of development or approved by the Development Manager, parking areas shall not be:
 - (i) exclusively used for staff parking at the expense of general public/customer parking; or
 - (ii) exclusively used for general public/customer parking at the expense of staff parking.
- (c) All parking areas shall be:
 - (i) kept exclusively for parking;
 - (ii) used exclusively for parking;
 - (iii) accessible to both staff and the general public/customer during any approved hours of operation;
 - (iv) appropriately signposted at the entry/entries to the carpark, to the satisfaction of the Development Manager (eg. "Staff and Customer Parking"), in accordance with AS1742; and
 - (v) maintained to the satisfaction of the Development Manager.

8. Advertising Signage

No signage is approved as part of this application. A separate application (under cover of Form E) for Advertising Devices will be required detailing the proposed signage on the subject site.

9. Locality References

- (a) Any place name or estate name used by the developer (excluding a reference to a building, structure or the like and excluding minor, subsidiary signage within a development) shall make reference to the relevant, approved place name under the *Place Names Act 1994*.

- (b) Any reference to the regional location of the site or the development shall not refer to the place or estate as being located in Brisbane or a Brisbane suburb or in the metropolitan area or in the western suburbs (excluding the western suburbs of Ipswich as determined by Council in writing from time to time).

10. Landscaping Plan

- (a) A Landscape Master Plan, which conforms to the approved development plan, Section 27 of Ipswich City Council's Planning Scheme Policy 2, Council's Street Tree Strategy and the relevant Planning Scheme Development Code/s, shall be submitted to Council for approval prior to the commencement of the use. Such plan shall include, amongst other necessary items, the following features:

- (i) extent of landscaped areas;
- (ii) location and name of existing trees;
- (iii) soil type;
- (iv) location of drainage, sewerage and other underground services and overhead powerlines;
- (v) details of landscaping structures;
- (vi) contours and spot levels;
- (vii) proposed surface treatments;
- (viii) means of drainage and irrigation;
- (ix) fence size and type of material ;
- (x) schedule of plant species size (see Note 1 below), densities (see Note 2 below) and attributes;
- (xi) exclude the use of environmental weeds. Consideration shall be given to utilising Council's Vegetation Communities Rehabilitation Guide No. 4 *Open Forests and Woodlands*, where applicable.

Note 1: Planting sizes are at least as follows

Street and features trees	45L
Other trees	300mm
Larger shrubs	200mm
Groundcovers	150mm

Note 2: Planting at approximately the following density rates:

	<i>As street trees</i>	<i>For buffer planting</i>	<i>All Other instances</i>
<i>Trees</i>	1 per allotment frontage	at 2m centres	at 5m centres
<i>Large shrubs</i>	NA	at 1m centres	at 2m centres
<i>Groundcovers</i>	NA	at 0.5-1m centres	at 0.5-1m centres

- (b) The Developer shall complete landscaping and fencing works in accordance with the approved landscape plans to the satisfaction of the Development Manager prior to the commencement of the use of the land unless Council determines otherwise. Such landscaping and fencing shall be maintained in perpetuity to Council's satisfaction by the existing or future owners and occupiers of the property.
- (c) Such landscaping, where possible, should minimise areas of potential concealment.

11. Health and Environmental Protection Requirements

Conditions 12 – 18 unless otherwise stated, shall be completed to the satisfaction of the Environmental Health Protection Manager.

12. Waste Storage & Collection

- (a) An adequate refuse collection service shall be provided to the premises.
- (b) Unless otherwise specifically agreed to in writing by the Health and Environmental Protection Manager, Ipswich City Council, all refuse collection shall occur on site:
 - (i) The area on which the bin is to be accessed by refuse collection vehicles shall be screened, level, concreted and constructed in conjunction with the driveway surface with no intervening step, ledge, kerb or other obstruction.
 - (ii) The waste storage and collection areas shall allow forward motion entry to the waste containers and forward motion entry and exit to and from the site. The following dimensions are given as a minimum of front-, rear- and side- loading truck dimensions for a guide to design for the adequate emptying of the bin and manoeuvring of the truck:

	Front/Load	Rear/Load	Side/Load
Length overall	10.9 m	8.2 m	8.7 m
Length when loading	12.6 m	9.5 m	3.0 m
Travelling overhead clearance required	4.0 m	3.0 m	3.5 m
Loading overhead clearance required	6.5m x 10m*	3.0 m	3.0 m
Access width required	3.8 m	3.8 m	4.0 m
Turning radius	14 m	8.0 m	11.1 m
Gross vehicle mass (GVM)	28 tonne	13.6 t	13.6 t

*from the back of the bin

- (c) Prior to the commencement of the use, submit to the Health and Environmental Protection Manager certification from a Civil Engineer (RPEQ) which demonstrates that the necessary access, as required above, has been incorporated into the development.
- (d) A bin washdown facility shall be provided. The facility shall be designed such that all wash down waters are appropriately treated and discharged to sewer subject to a Trade Waste approval. No wash down waters are permitted to flow to a roadway, gutter, stormwater drain or natural waterway.

13. Incineration

No incineration of waste, including cleared vegetation, is permitted. All cleared vegetation must be chipped/mulched and spread on site or removed from site within two (2) days of being felled/cleared.

14. Lighting

- (a) The provision of advertising, security and flood lighting shall be so designed, constructed, located and maintained in accordance with Australian Standard 4282 – 1997 (Control of the obtrusive effects of outdoor lighting) as not to cause nuisance to

the occupants of nearby properties or passing traffic.

- (b) Certification from a qualified and experienced lighting consultant, demonstrating compliance with the above condition, shall be submitted to the Manager for Health and Environmental Protection, prior to the commencement of the use.

15. Noise

- (a) All mechanical plant and equipment, including but not limited to air conditioning plant, for the southern child care centre (Building A) shall be located adjacent to the northern or western façades of the building.
- (b) All mechanical plant and equipment, including but not limited to air conditioning plant, for the northern child care centre (Building B) shall be located adjacent to the southern or western façades of the building.
- (c) Prior to the commencement of the use, the Developer shall erect a 2.0 metre high acoustic barrier along the south western and south eastern corners of the property as shown in Figure 3 of the acoustic report entitled "Environmental Noise Level Study for Proposed Child Care Centre, 45 Alice Street, Goodna" prepared by David Moore & Associates Pty Ltd (Report No: R05044/D1245/Rev.0/28.02.05). The acoustic barrier shall be:
- continuous and gap free;
 - constructed of a material with a surface density not less than 12 kg/m^2 ; and
 - consist of an aesthetically pleasing weather-resistant material such as earth, timber, fibre cement or brick.
- (d) Service vehicle movements to and from the site, including delivery and waste collection vehicles, shall be limited to 7.00 a.m. to 6.00 p.m. Monday to Friday.
- (e) There shall be no openings in the southern façade of the southern building (Building 'A'). All windows on the southern side/façade of the building shall be unable to be opened and the glazing shall have minimum Rw requirements of Rw 30.
- (f) Prior to the commencement of the use, the Developer shall submit to the Health and Environmental Protection Manager certification from an independent and appropriately qualified acoustic consultant which demonstrates that the necessary design and construction requirements have been incorporated into the development and achieve the noise criteria.

16. Stormwater Quality

- (a) At the time of submitting the Operational Works application, the applicant shall also submit a Detailed Design Stormwater Quality Management Plan (SQMP) to the satisfaction of both the Senior Development Engineer and the Health and Environmental Protection Manager. The plan must be prepared by a suitably qualified and experienced professional and must demonstrate, through appropriate pollutant export modelling (eg AQUALM or MUSIC), that the pollutant levels in the stormwater discharged from the site comply with the pollutant levels identified in Table 1 below. The plan must also provide a detailed drawing showing the location of the stormwater quality treatment train /catchment boundaries and design drawings of the stormwater quality treatment measures eg. GPTs, bioswales etc.

TABLE 1

Oils and grease ⁽³⁾	no visible films or odour
Suspended solids	15mg/L for combined wet and dry periods ⁽¹⁾ 90% ile < 100mg/L for wet weather periods ⁽²⁾
Litter/gross pollutants ⁽⁴⁾	No anthropogenic (man-made) material greater than 5mm in any dimension

1. Derived from the Draft Queensland Water Quality Guidelines (EPA, 1998)
2. Derived from local and interstate information. A wet weather period is defined as "any period where stormwater runoff leaves the site".
3. Taken from Australian Water Quality Guidelines for Fresh and Marine Waters (ANZECC, 1992).
4. An interpretation of what is acceptable to the community in terms of visual impact. Litter definition derived from information provided by the CRC for Catchment.

- Levels are upper limits for median values or ranges in which medians should lie, unless otherwise stated.
- If a parameter relevant to a particular activity is not given in the above table please refer to the latest Australian Water Quality Guidelines for Fresh and Marine Waters (ANZECC).

- (b) Prior to the commencement of the use, the Developer shall submit to the Health and Environmental Protection Manager certification from a Civil Engineer (RPEQ) which demonstrates that the physical stormwater quality improvement measures, as required above, have been incorporated into the development.

17. Access for People with a Disability

- (a) The Developer shall provide adequate access for people in wheelchairs by means of an unimpeded continuous path of travel from any adjacent roadway, other public lands and from any car parking bay allocated for use by people with a disability, to all parts of the development which are normally open to the public.
- (b) The Developer shall provide sanitary facilities for people with a disability. Access to them shall be provided in accordance with the provisions of Australian Standard 1428.1 - 1993 (or any standard in substitution thereof).

18. Contamination of Land

Prior to the submission of an application for Operational Works approval, the Developer shall contract a suitably qualified Environmental Consultant to undertake soil sampling on the subject land to test for chemical contamination. The results of this testing shall be submitted to Council's Development Manager in conjunction with the Operational Works application. Should any contamination of the subject land be identified, rehabilitation of the site shall be undertaken to the satisfaction of the Development Manager and Health and Environmental Protection Manager.

19. Infrastructure Contributions

In accordance with the current Council Policies in relation to infrastructure contributions, the Developer shall pay, prior to the commencement of use, the following monies to Council:

Contribution	Sector	Rate	Proposal	Calculation
Water Supply	Goodna (including Redbank Industrial) Water Zone	\$587.03/EP Unit Charge = 1.088 Total = \$638.68/EP	Number of Staff and Children: 137.000 @ 0.150 EP Existing Credit of 3.3 EP Proposal = 17.25 EP	\$638.68 x 17.25 = \$11,017.00 Total = \$11,017.00
Sewerage Catchment	Goodna (excluding Springfield) Catchment	\$629.36/EP Unit Charge = 1.088 Total = \$684.74/EP	Number of Staff and Children: 137.000 @ 0.150 EP Existing Credit of 3.3 EP Proposal = 17.25 EP	\$684.74 x 17.25 = \$11,812.00 Total = \$11,812.00
Road Contributions	Goodna	\$1,437.77/EP Unit Charge = 1.026 Total = \$1,475.15/EP	Number of Staff and Children: 137.000 @ 0.580 EP Existing Credit of 6.8 EP Proposal = 72.66 EP	\$1,475.15 x 72.66 = \$107,184.00 Total = \$107,184.00
Total for Development				\$130,013.00

The contributions above shall be applicable for a period of twelve months from the date of the development approval, and thereafter shall be based on the infrastructure contribution rates applicable at the date when payment is made.

20. Engineering Requirements

The following engineering requirements, detailed in Conditions 21 – 26, shall be completed to the satisfaction of the Senior Development Engineer.

Terms

- RPEQ - A Registered Professional Engineer of Queensland, suitably qualified and experienced in the particular area of expertise required.
- QUDM - The Queensland Urban Drainage Manual, produced by the Queensland Department of Primary Industries.
- Queensland Streets - The Design Guidelines for Subdivisional Street Works, prepared for the Institute of Municipal Engineers of Australia (QLD).
- AMCORD - The Australian Model Code of Residential Development produced by the Commonwealth Department of Housing and Regional Development.

- (f) MUTCD - The Manual of Uniform Traffic Control Devices, published by DMR.
- (g) Ipswich Water - Commercial Business Unit of Ipswich City Council providing water and sewerage services.

21. Roadworks

- (a) All traffic signs and delineation shall be installed in accordance with MUTCD.
- (b) The Developer shall extend the 1.2 m wide concrete footpath on the western side of Spalding Crescent to match into the existing 1.2 m wide concrete footpath on the northern side of Alice Street.

The construction of footpaths shall be in accordance with Council's Standard Drawing SR.19. The concrete footpaths shall be on the same side as the street lights, and the maximum longitudinal grade shall not exceed 1:8.

- (c) The Developer shall provide additional kerb ramps at Spalding Crescent and Alice Street intersection (including the southern side of Alice Street) in order to comply with minimum 4 kerb ramps at the Tee intersection. Kerb ramps are to be constructed in accordance with Council's Standard Drawing SR.18.
- (d) The Developer shall remove the existing driveway access located on the Alice Street frontage by reinstating new concrete kerb and channelling, which will match the existing kerb and channelling in Alice Street.
- (e) The Developer shall provide to the satisfaction of the Senior Development Engineer linemarking, RRPM's and street signage (eg. No Standing) etc along Alice Street frontage and within the existing pavement in order to provide a left turn deceleration lane at Spalding Crescent intersection for the east bound traffic. The Developer shall also provide street signage along Spalding Street frontage to restrict on-street parking, and where necessary remove existing linemarking in Alice Street.

22. Access/Parking

- (a) Provision shall be made for pedestrian access directly from each child care centre building to the footpath in Spalding Crescent such that no child will need to get to the street level by passing through the carparking areas.
- (b) Design and construction of all access and parking shall be in accordance with the provisions of the Ipswich City Council Parking Code and the Australian Standards (2890 series).
- (c) Parking and manoeuvring areas shall accommodate the largest anticipated vehicle to use the site.
- (d) Adequate facilities for servicing the development shall be provided on site to ensure loading and/or unloading activities do not occur on-street.
- (e) Provision shall be made for all vehicles to enter and exit the site in forward gear.

- (f) All parking, access and manoeuvring areas shall be constructed of concrete, bitumen or pavers and shall be linemarked in accordance with the relevant Australian Standard.
- (g) A concrete driveway shall be constructed from the existing layback to the property boundary in accordance with Council's Standard Drawings SR.13 and SR.14.

23. Water

- (a) All works on live water mains are to be carried out by Council in accordance with Council's policy, and at the Developer's expense.
- (b) Where concrete footpaths are to be constructed, the Developer shall provide 100 mm diameter conduits under the footpath and in line with the conduits under the road, for future ease of installing the individual water services. The letter "W" shall be embossed in the concrete to mark the location of the conduit.
- (c) The Developer shall amend and/or seal off any existing water connections if necessary.

24. Stormwater

- (a) The Developer shall provide all necessary stormwater drainage (both internal and external to the development) and such drainage works (except for roofwater systems) shall be designed and constructed in accordance with QUDM such that the overall drainage system caters for a storm event with an ARI of 100 years.

Overland flow paths shall be suitably designed to cater for the water from a storm event with an ARI of 100 years. In the case where the piped system is carrying part of the flow, the overland flow paths shall be designed to cater for that volume which is represented by the difference between the predicted volume from the storm event with an ARI of 100 years and the capacity of the pipe system, noting the requirements of QUDM.

- (c) No ponding or redirection of stormwater shall occur onto adjoining land unless specifically approved by Council in consultation with the owner of the adjoining land.
- (d) Due consideration shall be given in the design and construction of the development in relation to the effect of the developed catchment flows on the downstream discharge receival areas. Suitable stormwater control devices are to be provided to ensure that there is no increase in flow in watercourses. Such control devices are to be designed so as to integrate the landscaping, recreational, infrastructural and drainage roles of watercourses.
- (e) All stormwater runoff from the development shall be discharged in a manner and to a point to be approved by the Senior Development Engineer. In this instance, stormwater discharge from all impervious areas shall be directed to the drainage channel to the west of the property in Lot 420 SL 5041.
- (f) Stormwater drainage plans and calculations are to be submitted and approved by the Senior Development Engineer, in conjunction with the submission of an Operational Works application.

- (g) The Developer shall provide a stormwater detention basin (or system) on the subject land, which shall be designed and constructed in accordance with QUDM. The detention basin (or system) shall be constructed to ensure that flows, at any point downstream in the catchment, are not increased by the development for any combination of frequency and duration from the storm event with an ARI of 2 years up to and including the storm event with an ARI of 100 years.
- (h) The proposed Development shall be designed and constructed in accordance with the flooding report prepared by Tabletop Architects Planners Engineers titled 45 Alice Street, Goodna – Stormwater and Flood Report dated February 2006. As illustrated in this report it examines the stormwater and local flooding impacted on the subject site by a storm event with an ARI of 100 years.
- (i) The construction of all buildings or other structures are to be constructed with the base floor level 300 mm above the storm level associated with an ARI of 100 years.
- (j) The Developer shall install an appropriate sealed surface within the proposed clear flow path located in the south west corner of the subject property. This area is illustrated on Plan No: R01, in the stormwater and flood report prepared by Tabletop Architects Planners Engineers. This area will be used to transfer the stormwater flow into the existing drainage channel, therefore the sealed surface shall be designed to withstand the force of a high velocity flow of water without being removed.
- (k) Pollutant control devices shall be installed where applicable for the proposed stormwater management system. The proposed locations and types of devices shall be approved by the Development Manager.

25. Erosion & Silt Management

- (a) The Developer shall be responsible for the installation and maintenance of silt management facilities from the time of commencement of construction until the completion of all works on site. All silt management facilities are to be in accordance with the document "Soil Erosion and Sediment Control" published by the Institution of Engineers Australia, or equivalent.
- (b) If the Senior Development Engineer determines that silt damage has occurred on the site, or the downstream drainage system has become silted, the Developer shall be responsible for restoration. Such restoration shall be completed in the time determined by the Senior Development Engineer. Should the Developer fail to complete the works determined by the Senior Development Engineer within the specified time, Council shall complete the work and recover all costs from the Developer associated with that work.

26. Operational Works – Internal Works (Stormwater and Car Parking)
(i.e. Works not being handed over to Council)

- (a) Plans relating to all civil engineering works shall be prepared and submitted for review by Council under the cover of Form 1 - Part A (Common details for all applications) and Form 1 - Part E (Planning Scheme Works). The plans shall show full construction details, layout dimensions, and finished surface levels and shall be submitted together with the appropriate fees for Council approval, prior to the commencement of construction on site.

- (b) Engineering drawings shall be marked as confirmation that they have been checked and approved by a RPEQ.
- (c) The drawings shall be submitted as three A3 size sets and one full size set. Where municipal works are also being undertaken, it is usually appropriate to make a combined submission.
- (d) A "Certificate of Design" shall be submitted by a RPEQ, certifying that the design is in accordance with all relevant engineering standards, Council's requirements and standards, relevant development conditions of approval, and sound engineering practice.
- (e) Council reserves the right to require further amendments and/or additions at a later date, should design errors or omissions become apparent.
- (f) A certificate shall be submitted to Council by a RPEQ certifying that the completed works have been constructed in accordance with Council's requirements and standards and in compliance with the approved plans and specification. It is expected that the RPEQ will undertake the necessary inspections to make this certification.

27. General

- (a) All disturbed verge areas and allotments shall be graded, grassed and left in a mowable condition. The grass cover shall be obtained as early as possible during the development and an acceptable grass cover shall be achieved before the development can be accepted "Off Maintenance".
- (b) With reference to any works, on land under other private ownership, written permission for the works shall be obtained and forwarded to Council. Similarly, written clearances shall be obtained after the works are completed, unless otherwise accepted by the Senior Development Engineer.
- (c) All works required for this development shall take due regard of any and all existing services and, if considered necessary by the relevant authority or the Senior Development Engineer, such works shall be altered at the cost of the Developer.
- (d) Any allotment filling for a greater depth than 800 mm to provide for building platforms shall be conducted in accordance with Australian Standard 3798. Test results as required by Australian Standard 3798, and a certificate of quality and uniformity of fill shall be provided by a RPEQ. The level of responsibility shall be Level 1.
- (e) A certificate from a RPEQ shall be issued to Council certifying that any retaining wall greater than 800 mm in height is structurally sound and capable of withstanding any likely surcharge loads. Retaining walls greater than 1.0 m in height are to be provided with railings or other barriers to provide pedestrian safety.
- (f) Retaining walls shall be designed so that there are no imposed loads placed upon Council's underground services. This may include extending the footing to a level 300 mm below the invert of the pipe.

- (g) All imported and exported materials shall be transported only on routes approved by the Senior Development Engineer.
- (h) For batters resulting from cutting and filling of the site and producing slopes greater than 1:6, Council requires a RPEQ to certify that they are stable and properly drained.
- (i) Approval of the Senior Development Engineer is required for any fill intended to be placed over Council's underground services.
- (j) Signs are to be erected in the carpark to advise users that this carpark is subject to some flooding of the local creek due to storms with an ARI of less than 100 years. Also the Brisbane River has backwater flooding for those storms with an ARI in excess of 20 years.
- (k) A Flood Escape Plan and procedure is to be developed and periodically practiced/rehearsed in case of flooding of the site. This plan is to include permanently displayed signs and directions for staff and visitors/parents to follow.

28. Compliance with Conditions

- (a) Unless otherwise stated, all conditions shall be completed prior to commencement of use.
- (b) All conditions shall be completed to the satisfaction of the Development Manager.

29. Minor Alterations

Notwithstanding the requirements detailed in this approval, any other minor alterations and/or modifications acceptable to the Development Manager will suffice.

30. When Approval Takes Effect

This approval has effect in accordance with the provisions of Section 3.5.19 of the *Integrated Planning Act 1997* as follows:

- (a) If the applicant does not appeal the decision to the court - when the submitter's appeal period ends; or
- (b) If an appeal is made to the court - subject to the decision of the court, when the appeal is finally decided.

31. When Approval Lapses

- (a) This approval lapses:
 - (i) At the end of the relevant period, unless the change of use happens before the end of the relevant period. The relevant period for this approval is 4 years starting the day the approval takes effect; and
 - (ii) Where the change of use of any premises established pursuant to the development approval has ceased for a period of at least 12 months.

- (b) An extended relevant period may be agreed upon, pursuant to Section 3.5.22 of the *Integrated Planning Act 1997*, provided a written notice to Council is made before the end of the relevant period. Such written notice is to be on Council's approved form, accompanied by the owner's consent and the prescribed fee in Council's Register of General Charges.

B. The Developer be further advised of the following:-

1. Food Hygiene Licence and Registration

Where a premises used for the sale or preparation, packing, storing, handling, serving or, supplying of food or drink takes up tenancy at the site, Food Hygiene Licence and Registration must be obtained under the provisions of the Food Hygiene Regulation 1989. For further advice on this matter, please contact Council's Health and Environmental Protection Department on (07) 3810 6822.

2. Flooding

The subject site was fully inundated in the 1974 flood. Council, and its servants and agents, accept no liability or responsibility for any loss or damage to person or property of whatever nature or however caused as the direct or indirect consequence of the granting of the approval herein contained. Such approval has been granted at the request of the Developer and in reliance of information submitted by the Developer in support thereof.

3. Portable Long Service Leave

From 1 January 2001, the Building and Construction Industry (Portable Long Service Leave) Levy must be paid prior to the issue of a development permit where one is required for the 'Building and Construction Industry'. This applies to Building Works, Operational Works and Plumbing and Drainage Works applications, as defined under the *Integrated Planning Act 1997*, where the works are \$80 000 or more and matching the definition of 'Building and Construction Industry' under the *Building and Construction Industry (Portable Long Service Leave) Act 1991*.

Council will not be able to issue a Decision Notice without receipt of details that the Levy has been paid. Should you require clarification in regard to the amendments to the *Building and Construction Industry (Portable Long Service Leave) Act 1991*, you should contact QLeave on 1800 803 481 (free call) or (07) 3212 6855.

4. Fire Ants

In accordance with the *Plant Protection Act 1989* and the Plant Protection Regulation 1990, a quarantine notice has been issued for the State of Queensland to prevent the spread of the Red Imported Fire Ant (ant species *Solenopsis invicta*) and to eradicate it from the State.

It is the legal obligation of the land owner or any consultant or contractor employed by the land owner to report the presence or suspicion of Fire Ants to the Queensland Department of Primary Industries on 132523 within 24 hours of becoming aware of the presence or suspicion, and to advise in writing within seven days to:

Director General

Department of Primary Industries
GPO Box 46, Brisbane QLD 4001

It should be noted that the movement of Fire Ants is prohibited, unless under the conditions of an Inspectors Approval. More information can be obtained from the Queensland Department of Primary Industries website www.dpi.qld.gov.au. The land over which you have made a development application is within a suburb known to have Fire Ants and as such is within a "Restricted Area". The presence of Fire Ants on the site may affect the nature, form and extent of works permitted on the site. In view of this it will be necessary for you to contact the Department of Primary Industries to investigate the site and for you to implement any necessary matters required by that Department prior to the commencement of any works.

C. That the Decision Notice advise the Developer that there were forty-four (44) properly made submissions received with respect to this application. Details of the submitters are as follows:

1. [REDACTED]
[REDACTED] Spalding Crescent
GOODNA QLD 4300

2. [REDACTED]
[REDACTED] Alice Street
GOODNA QLD 4300

3. [REDACTED]
[REDACTED] Alice Street
GOODNA QLD 4300

4. [REDACTED]
[REDACTED] Alice Street
GOODNA QLD 4300

5. [REDACTED]
[REDACTED] Spalding Crescent
GOODNA QLD 4300

6. [REDACTED]
[REDACTED] Alice Street
GOODNA QLD 4300

7. [REDACTED]
[REDACTED] Alice Street
GOODNA QLD 4300

8. [REDACTED]
[REDACTED] Spalding Crescent
GOODNA QLD 4300

9. [REDACTED]
[REDACTED] Spalding Crescent
GOODNA QLD 4300

10. [REDACTED]
[REDACTED] Spalding Crescent
GOODNA QLD 4300

11. [REDACTED]
[REDACTED] Spalding Crescent
GOODNA QLD 4300

12. [REDACTED]
[REDACTED] Spalding Crescent
GOODNA QLD 4300

13. [REDACTED]
[REDACTED] Spalding Crescent
GOODNA QLD 4300

14. [REDACTED]
[REDACTED] Spalding Crescent
GOODNA QLD 4300

15. [REDACTED]
[REDACTED] Spalding Crescent
GOODNA QLD 4300

16. [REDACTED]
[REDACTED] Spalding Crescent
GOODNA QLD 4300

17. [REDACTED]
[REDACTED] Spalding Crescent
GOODNA QLD 4300

18. [REDACTED]
[REDACTED] Alice Street
GOODNA QLD 4300

19. [REDACTED]
[REDACTED] Spalding Crescent
GOODNA QLD 4300

20. [REDACTED]
[REDACTED] Spalding Crescent
GOODNA QLD 4300

21. [REDACTED]
[REDACTED] Spalding Crescent
GOODNA QLD 4300

22. [REDACTED]
[REDACTED] Spalding Crescent
GOODNA QLD 4300

23. [REDACTED]
[REDACTED] Spalding Crescent
GOODNA QLD 4300

24. [REDACTED]
[REDACTED] Spalding Crescent
GOODNA QLD 4300

25. [REDACTED]
[REDACTED] Spalding Crescent
GOODNA QLD 4300

26. [REDACTED]
[REDACTED] Spalding Crescent
GOODNA QLD 4300

27. [REDACTED]
[REDACTED] Spalding Crescent
GOODNA QLD 4300

28. [REDACTED]
[REDACTED] Spalding Crescent
GOODNA QLD 4300

29. [REDACTED]
[REDACTED] Spalding Crescent
GOODNA QLD 4300

30. [REDACTED]
[REDACTED] Spalding Crescent
GOODNA QLD 4300

31. [REDACTED]
[REDACTED] Spalding Crescent
GOODNA QLD 4300

32. [REDACTED]
[REDACTED] Spalding Crescent
GOODNA QLD 4300

33. [REDACTED]
[REDACTED] Spalding Crescent
GOODNA QLD 4300

34. [REDACTED]
[REDACTED] Spalding Crescent
GOODNA QLD 4300

35. [REDACTED]
[REDACTED] Spalding Crescent
GOODNA QLD 4300

36. [REDACTED]
[REDACTED] Spalding Crescent
GOODNA QLD 4300
37. [REDACTED]
[REDACTED] Spalding Crescent
GOODNA QLD 4300
38. [REDACTED]
[REDACTED] Spalding Crescent
GOODNA QLD 4300
39. [REDACTED]
[REDACTED] Spalding Crescent
GOODNA QLD 4300
40. [REDACTED]
[REDACTED] Spalding Crescent
GOODNA QLD 4300
41. [REDACTED]
[REDACTED] Spalding Crescent
GOODNA QLD 4300
42. [REDACTED]
[REDACTED] Spalding Crescent
GOODNA QLD 4300
43. [REDACTED]
[REDACTED] Spalding Crescent
GOODNA QLD 4300
43. [REDACTED]
Goodna Community Child Care Centre
[REDACTED] Stuart Street
GOODNA QLD 4300
44. [REDACTED]
[REDACTED] Spalding Crescent
GOODNA QLD 4300

[REDACTED]
DEVELOPMENT PLANNER

I have this day adopted the recommendation specified in this report.

Such action was taken pursuant to the delegation entitled "Determination of a Development Application, including Negotiated Decisions" granted to me by the Chief Executive Officer dated 16 August 2001 and 22 August 2001.


ACTING DEVELOPMENT TEAM
CO-ORDINATOR - CITYWIDE
Date:



Assessment Checklist

Impact Assessable Development

A. Application Details

Appln No.: 1727/05

Division: 2

B. Preamble Assessment

1. Are the real property description and location details provided on the Application Form correct? ☒ Yes ☐ No
2. Has the 'consent of owner' been correctly obtained? ☒ Yes ☐ No
3. Has the correct fee been paid? ☒ Yes ☐ No

C. Supporting Information

1. (a) Was any supporting material lodged with the application? ☒ Yes ☐ No

Comment: IDAS Forms A and D, Site Plan, Elevation Plans, Floor Plans, Planning Assessment Report, Cover Letter, Stormwater and Flood Report.

- (b) Are there any planning issues associated with this material? ☒ Yes ☐ No

Preliminary assessment of the proposal identified concerns in relation to access (e.g. refuse collection), flooding (e.g. impact of Q100 flooding), stormwater (e.g. management and quality), noise levels, air quality and waste storage and collection.

C. Supporting Information

2. (a) Is there a need for an Information Request?

☒ Yes ☐ No

By letter dated 10 May 2005, a request for further information was issued to the Developer in relation to the above noted issues. The Developer responded with an amended site plan detailing the location, enclosure and storage of waste facilities; a stormwater and flood report and a letter of response from an acoustic consultant in relation to noise levels. All of the above information was submitted to Council by 1 March 2006 to the satisfaction of the assessing officer.

{Note: Further assessment by the ICC Health and Environmental Department determined that the proposal did not trigger (due to traffic levels) the necessity for an Air Quality Report to be submitted by the Applicant.}

- (b) Are there any outstanding issues associated with the Information Response?

☒ Yes ☐ No ☐ N/A

Given the concerns raised by submitters and the possibility that the subject site may have previously used chemicals during sawmill operations on site, the Developer shall contract a suitably qualified Environmental Consultant to instigate soil sampling on the subject land to test for chemical contamination. Should any contamination of the subject land be identified, rehabilitation of the site shall be undertaken to the satisfaction of the Development Manager and Health and Environmental Protection Manager prior to application for Operational Works or Building Works Approval.

D. Referral / Advice Agencies

1. Are there any referral or advice agencies applicable to this development?

☐ Yes ☒ No

The subject application was initially referred to the Environmental Protection Agency (EPA) for concurrence assessment. However, because the subject site is not included on any contaminated land register and no recorded history or background indicates that contamination is present on the subject site, the EPA notified Council that referral to themselves is not triggered in this instance. Consequently, an amended Acknowledgement Notice dated 8 April 2005 was issued to the Applicant without the requirement for referral to the EPA as concurrence agency.

2. Are there any issues associated with advice received from a Referral / Advice Agency?

☒ Yes ☐ No ☐ N/A

Please refer to notes in Section D (1) above.

E. State Planning Policies (SPP's)

1. Are there any SPP's applicable to this development? ☐ Yes ☒ No
2. Does the development comply with any relevant SPP's? ☐ Yes ☐ No ☒ N/A

F. Zone Code

1. What is the relevant zone code(s) for this development?

Urban Areas - Division 6 - Residential Medium Density Zone

2. (a) Does the development require impact assessment under the relevant assessment table for the zone? ☒ Yes ☐ No

- (b) Is the development consistent with the outcomes sought for the zone? ☒ Yes ☐ No

Section 4.6.5 (2) of the Ipswich Planning Scheme classifies 'community use' as consistent with the outcomes of the Residential Medium Density Zone if of a type and scale appropriate for the prevailing nature of the area and the particular circumstances of the site and its surrounds.

In response to the above, the proposed development is considered to be of an adequate type and scale to:-

- 1) be provided with sufficient infrastructure and services as required;
- 2) fulfil a local community need; and
- 3) minimise adverse impact on the amenity of nearby residents.

Furthermore, the proposed development is considered to be consistent with Section 4.6.3 (5) of the Planning Scheme (i.e. *Non Residential Uses - Specific Outcomes* under the Residential Medium Density Zone) given that the non-residential use:-

- (a) fulfils a community need;
- (b) is accessible to the population it serves;
- (c) is located in close proximity with other non-residential uses;
- (d) does not have a significant detrimental impact on the amenity of nearby residents;
- (e) maintains a scale and appearance in keeping with the residential amenity and character of the locality with adequate buffering or screening to nearby residential uses.

It is worth mention that in relation to (d) above, the nearest residence will be located 26 metres from the proposed development. This is because the site directly adjoins drainage and park land along the northern and western boundaries, and Alice Street and Spalding Crescent along the southern and eastern boundaries respectively.

F. Zone Code

3. (a) Are there any overall or specific outcomes for the locality which apply to the development?

☒ Yes ☐ No

Please refer to Section F(2b) notes above.

- (b) Does the development comply with any relevant overall or specific outcomes for the locality?

☒ Yes ☐ No ☐ N/A

4. Does the development comply with the overall outcomes for the zone?

☒ Yes ☐ No ☐ N/A

5. Does the development comply with the "Effects of Development – General" (including the specific outcomes and any applicable probable solutions or acceptable solutions) for the zone?

☒ Yes ☐ No ☐ N/A

6. (a) Are there any Sub Area or Precinct provisions within the zone which apply to this development?

☒ Yes ☐ No

The subject site is included in Sub Area RM2 - Residential Medium Density: 2 storeys. The specific outcomes and probable solutions for this sub area predominantly apply to residential dwellings, however, the provision of a low rise urban profile (i.e. two storeys), is supported by the proposed elevations for the development (highest point of roof form is five metres from ground level).

- (b) Does the development comply with these provisions?

☒ Yes ☐ No ☐ N/A

G. Codes for a Stated Purpose or of a Stated Type (refer Part 12 of the Planning Scheme)

1. Are there any codes under Part 12 of the Planning Scheme applicable to the development?

☒ Yes ☐ No

Comment: Community Use Code; and
Parking Code

2. Does the development comply with these codes?

☒ Yes ☐ No ☐ N/A

H. Overlays (refer Part 11 of the Planning Scheme)

1. (a) Is the site affected by a Character Places Overlay?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
(b) Is the assessment category changed (refer Table 11.3.2)?	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A
(c) Does the development comply with the Character Places Overlay Code and the Character Code?	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A
2. (a) Is the site affected by a Development Constraints Overlay? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	
<p>The site is affected by flooding (Q100 level) over the whole of the site. This was a major issue for the proposed development, and a 'Stormwater and Flood Report' was necessitated for further submission by the Applicant. The submitted report concluded that Q100 immunity from local flood events in the adjoining waterway can be achieved by:-</p> <ul style="list-style-type: none">- setting minimum building levels of RL 12.15 for Building 'B' and RL 12.73 for Building 'A';- constructing a solid wall along the road frontage from the south-eastern corner, across the south-west corner of the property and along the western boundary to the north-west corner of the property; and- suspension of development above ground level (min. RL 13.54) in the south-west corner of the site to allow for free passage of flood flows below. <p>Upon review of the submitted stormwater and flood report, Council are satisfied that Q100 flood immunity can be achieved on site. Notwithstanding, conditions are included in the Recommendation to ensure stormwater and flood management are undertaken for the development in accordance with the <i>Queensland Urban Drainage Manual</i>. Stormwater quality conditions are also included in the Recommendation to ensure that stormwater quality measures are incorporated into the development.</p>	
(b) Is the assessment category changed (refer Table 11.4.3 and 11.4.4)?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A
(c) Does the development comply with the relevant provisions of the Development Constraints Overlay Code?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A

I. Other Relevant Matters

1. (a) Are there any Planning Scheme Policy provisions which specifically apply to this development?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
(b) Does the development comply with these provisions?	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A

I. Other Relevant Matters

2. (a) Are there any Implementation Guidelines which specifically apply to this development? ☐ Yes ☒ No
- (b) Does the development comply with these Guidelines? ☐ Yes ☐ No ☒ N/A
3. Are there any other relevant matters which pertain to this development? ☐ Yes ☒ No ☐ N/A
4. Infrastructure Contributions – Calculation Sheet attached to this checklist? ☒ Yes ☐ No ☐ N/A

J. Public Notification

1. Was the public notification carried out in accordance with the *Integrated Planning Act* requirements? ☒ Yes ☐ No

Written notice has been received from the applicant confirming public notification of the proposal correctly identified the application as a proposal for a Child Care Centre and included publishing a notice in the Queensland Times on 6 March 2006. Such notice confirmed that the actual notification period of 15 business days complies with Section 3.4.5 of the *Integrated Planning Act 1997* which states that the notification period for the application is 15 business days. The public notification of the proposal has been carried out in accordance with the *Integrated Planning Act 1997*.

2. Were any submissions received? ☒ Yes ☐ No

Forty-four (44) 'properly made' submissions and four (4) 'not properly made' submissions have been received. Please refer to Appendix A for a detailed summary of submitter issues and an assessment of these issues.

K. Summary

1. Recommended for:

- ☒ Approval - Subject to Conditions
- ☐ Refusal
- ☐ Part Refusal / Part Approval -
Subject to conditions

2. Comment: The proposal is generally in compliance with the requirements of the *Ipswich Planning Scheme 2004*.

DEVELOPMENT PLANNER

Date:

**ACTING DEVELOPMENT TEAM
CO-ORDINATOR - CITYWIDE**

Date:

Infrastructure Contributions Calculation Sheet for DA 1727/2005/MCU

Headworks Contributions

Application Type:

Material Use of Change

1. Existing Equivalent Persons (the greater of)

Deemed Credit

Town Planning Zone:	Residential Medium Density
Category:	Urban Areas
Water Rate:	3.300 per lot
Sewerage Rate:	3.300 per lot
Road Rate:	3.100 per lot
Public Parks Infrastructure Rate:	3.080 per lot
Local Community Facilities Rate:	3.080 per lot
Number of lots:	1.000
Water EPs:	3.300
Sewerage EPs:	3.300
Road EPs:	3.100
Public Parks Infrastructure EPs:	3.080
Local Community Facilities EPs:	3.080

Land Use

1. Land Use:	Special Industry
Water Rate:	0.750 EPs per 100m ²
Sewerage Rate:	0.750 EPs per 100m ²
Road Rate:	1.700 EPs per 100m ²
Public Parks Infrastructure Rate:	0.000 EPs per 100m ²
Local Community Facilities Rate:	0.000 EPs per 100m ²
Gross Floor Area (m ²):	400.000
EPs for Water:	3.000
EPs for Sewerage:	3.000
EPs for Roads:	6.800
EPs for Public Parks Infrastructure:	0.000
EPs for Local Community Facilities:	0.000

Total Water EPs:	3.000
Total Sewerage EPs:	3.000
Total Road EP:	6.800
Total Public Parks Infrastructure EP:	0.000
Total Local Community Facilities EP:	0.000

Previous Contributions

Previous Contributions For Water & Sewerage: No

Previous Contributions For Roads: No

Deemed Credit Exempt For Water: No

Deemed Credit Exempt For Sewerage: No

Deemed Credit Exempt For Roads: No

Existing Credit EPs for Water: 3.300

Existing Credit EPs for Sewerage:	3.300
Existing Credit EPs for Roads:	6.800
Existing Credit EPs for Public Parks Infra.:	3.080
Existing Credit EPs for Local Community Fac:	3.080

2. Proposed Equivalent Persons

Proposed Land Use

1. Land Use:	Community Use - Child Care Centre
Water Rate:	0.150 EPs per person
Sewerage Rate:	0.150 EPs per person
Road Rate:	0.580 EPs per person
Total Public Parks Infrastructure:	0.000 EPs per person
Total Local Community Facilities:	0.000 EPs per person
Number of Staff and Children:	137.000
Proposed EPs for Water:	20.550
Proposed EPs for Sewerage:	20.550
Proposed EPs for Roads:	79.460
Proposed EPs for Public Parks Infra.:	0.000
Proposed EPs for Local Community Fac.:	0.000
Total Water EPs:	20.550
Total Sewerage EPs:	20.550
Total Road EP:	79.460
Total Public Parks Infrastructure EP:	0.000
Total Local Community Facilities EP:	0.000

3. Headworks Charges

Difference in Equivalent Persons:	Proposed Equivalent Persons - Existing Credit EP
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Note: The existing structure is being demolished.

Water EPs:	17.250
Sewerage EPs:	17.250
Road EPs =	72.660
Public Parks Infrastructure EPs =	-3.080

Public Parks Infrastructure contributions are not applicable in this instance.

Local Community Facilities EPs =	-3.080
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Local Community Facilities contributions are not applicable in this instance.

Water

Water Zone:	Goodna (inc Redbank Industrial) Water Zone
Unit Charge:	1.088
Contribution per EP:	\$587.03
Water Headworks Charge:	\$11,017.00 (WT-TL1)

Sewerage

Sewerage Catchment:	Goodna Catchment (excluding Springfield)
Unit Charge:	1.088
Contribution per EP:	\$629.36
Sewerage Headworks Charge:	\$11,811.00 (SW-RC2)

Roads

Headworks Road:

No

Road Contribution Sector:

Goodna

Unit Charge:

1.026

Contribution per EP:

\$1,437.77

Road Headworks Charge:

\$107,184.00 (RD-WAQ)

Annexure TCF-10

14 August 2006

INTEGRATED PLANNING ACT 1997
DEVELOPMENT APPLICATION DECISION NOTICE

Application Details

Application No:	1727/05
Real Property Description:	[REDACTED]
Property Location:	45 Alice Street, Goodna
Names and Addresses of all Referral Agencies:	N/A
Decision Date:	14 August 2006
Decision:	Approved subject to the conditions detailed below.
Decision Authority:	Team Co-ordinator - Citywide

Approval Details:

Proposal	Development	Decision	Approval Type
Community Use - Two (2) Child Care Centres (Total 119 Children)	Making a material change of use of premises	Approved	Development Permit.
	Carrying out operational work	Approved	Preliminary Approval.
	Carrying out building work	Approved	Preliminary Approval.

Further Development Permits Required

Further Development Permits, as required by the *Integrated Planning Act 1997*, shall be obtained in respect of any Operational Works, Building Works and Plumbing Works in relation to this approval before any such works are commenced.

Conditions***Assessment Manager (Ipswich City Council)***

Conditions applicable to this approval under Integrated Planning Act:

Conditions of Assessment Manager (Ipswich City Council)1. Basis of Approval

Subject to these conditions, the facts and circumstances set out in the application and all relevant Council Local Laws and/or Planning Scheme Policies shall be adhered to.

2. Site Development

The proposed development of the subject site shall be undertaken generally in accordance with the following plans:

- (a) Site Plan Job Number 5518 Drawing Number A01 D, drawn by Tabletop Architects and dated 1 June 2006, subject to the following amendment to the satisfaction of the Development Manager:-
 - (i) The Developer shall submit an amended Site Plan demonstrating that the proposed elevated section for the outdoor play area for proposed Building A has been deleted. All walling/ fencing along the south-western corner boundary shall align with the south-western corner truncation detailed in the submitted 'Wall and Floor Details for Q100 Immunity' Plan No. 5946 R01, prepared by Tabletop Architects. These details shall be submitted prior to application for Operational Works Approval.
 - (b) Building A Floor Plan Job Number 5518 Drawing Number A02 B, drawn by Tabletop Architects and dated 1 June 2006;
 - (c) Building B Floor Plan Job Number 5518 Drawing Number A03 B, drawn by Tabletop Architects and dated 1 June 2006;

- (d) Building B Floor Plan Job Number 5518 Drawing Number A04 B, drawn by Tabletop Architects and dated 1 June 2006;
- (e) Landscape Plan Job Number 5518 Drawing Number A05 B, drawn by Tabletop Architects and dated 1 June 2006, subject to the following amendment to the satisfaction of the Development Manager:-
 - (i) The Developer shall incorporate into the Landscape Master Plan the necessary amendments required to comply with Condition 3(a)(i), at the time of its submission to Council (please refer to Condition 11 for further detail on landscaping conditions).
- (f) Building A Elevations Job Number 5518 Drawing Number A06 A, drawn by Tabletop Architects and dated 5 November 2004; and
- (g) Building B Elevations Job Number 5518 Drawing Number A07 A, drawn by Tabletop Architects and dated 5 November 2004.

3. Particular Use

This approval is for the particular use of a Community Use (Child Care Centre) for a maximum of 119 children and 18 employees and does not imply approval for other similar or more intensive uses. To this end, the use of any of the proposed structures associated with the Child Care Centre inclusive of car parking and any associated outdoor areas on site, are not permitted for any other purpose, unless, in the opinion of the Development Manager, such use is ancillary and incidental to the predominant use of the site for a Child Care Centre.

4. Limits to Approval

Preliminary Approval for the carrying out of Building Works and Operational Works is approved in respect of those aspects of the application to which the Planning Scheme applies.

5. Hours of Construction

Unless otherwise approved in writing by the Development Manager, hours of construction shall be:

Monday to Saturday 6.30 a.m. to 6.30 p.m.

Work or business shall not be conducted from or on the premises outside the above hours or on Sundays or public holidays.

6. Hours of Operation

Unless otherwise approved in writing by the Development Manager, hours of operation shall be:

Monday to Friday 6.30 a.m. to 6.30 p.m.

Work or business shall not be conducted from the premises outside the above hours or on Sundays or Public Holidays.

7. Carparking - Use and Maintenance

- (a) A minimum of thirty-one (31) car parking spaces shall be provided on site for the proposed development.
- (b) Unless otherwise indicated on the approved plan of development or approved by the Development Manager, parking areas shall not be:
 - (i) exclusively used for staff parking at the expense of general public/customer parking; or
 - (ii) exclusively used for general public/customer parking at the expense of staff parking.
- (c) All parking areas shall be:
 - (i) kept exclusively for parking;
 - (ii) used exclusively for parking;
 - (iii) accessible to both staff and the general public/customer during any approved hours of operation;
 - (iv) appropriately signposted at the entry/entries to the carpark, to the satisfaction of the Development Manager (eg. "Staff and Customer Parking"), in accordance with AS1742; and
 - (v) maintained to the satisfaction of the Development Manager.

8. Advertising Signage

No signage is approved as part of this application. A separate application (under cover of Form E) for Advertising Devices will be required detailing the proposed signage on the subject site.

9. Locality References

- (a) Any place name or estate name used by the developer (excluding a reference to a building, structure or the like and excluding minor, subsidiary signage within a development) shall make reference to the relevant, approved place name under the *Place Names Act 1994*.
- (b) Any reference to the regional location of the site or the development shall not refer to the place or estate as being located in Brisbane or a Brisbane suburb or in the metropolitan area or in the western suburbs (excluding the western suburbs of Ipswich as determined by Council in writing from time to time).

10. Landscaping Plan

- (a) A Landscape Master Plan, which conforms to the approved development plan, Section 27 of Ipswich City Council's Planning Scheme Policy 2, Council's Street Tree Strategy and the relevant Planning Scheme Development Code/s, shall be submitted to Council for approval prior to the commencement of the use. Such plan shall include, amongst other necessary items, the following features:

- (i) extent of landscaped areas;
- (ii) location and name of existing trees;
- (iii) soil type;
- (iv) location of drainage, sewerage and other underground services and overhead powerlines;
- (v) details of landscaping structures;
- (vi) contours and spot levels;
- (vii) proposed surface treatments;
- (viii) means of drainage and irrigation;
- (ix) fence size and type of material;
- (x) schedule of plant species size (see Note 1 below), densities (see Note 2 below) and attributes;
- (xi) exclude the use of environmental weeds. Consideration shall be given to utilising Council's Vegetation Communities Rehabilitation Guide No. 4 *Open Forests and Woodlands*, where applicable.

Note 1: Planting sizes are at least as follows

Street and features trees	45L
Other trees	300mm
Larger shrubs	200mm
Groundcovers	150mm

Note 2: Planting at approximately the following density rates:

	<i>As street trees</i>	<i>For buffer planting</i>	<i>All Other instances</i>
<i>Trees</i>	1 per allotment frontage	at 2m centres	at 5m centres
<i>Large shrubs</i>	NA	at 1m centres	at 2m centres
<i>Groundcovers</i>	NA	at 0.5-1m centres	at 0.5-1m centres

- (b) The Developer shall complete landscaping and fencing works in accordance with the approved landscape plans to the satisfaction of the Development Manager prior to the commencement of the use of the land unless Council determines otherwise. Such landscaping and fencing shall be maintained in perpetuity to Council's satisfaction by the existing or future owners and occupiers of the property.
- (c) Such landscaping, where possible, should minimise areas of potential concealment.

11. Health and Environmental Protection Requirements

Conditions 12 – 18 unless otherwise stated, shall be completed to the satisfaction of the Environmental Health Protection Manager.

12. Waste Storage & Collection

- (a) An adequate refuse collection service shall be provided to the premises.
- (b) Unless otherwise specifically agreed to in writing by the Health and Environmental Protection Manager, Ipswich City Council, all refuse collection shall occur on site:
 - (i) The area on which the bin is to be accessed by refuse collection vehicles shall be screened, level, concreted and constructed in conjunction with the driveway surface with no intervening step, ledge, kerb or other obstruction.
 - (ii) The waste storage and collection areas shall allow forward motion entry to the waste containers and forward motion entry and exit to and from the site. The following dimensions are given as a minimum of front-, rear- and side- loading truck dimensions for a guide to design for the adequate emptying of the bin and manoeuvring of the truck:

	Front/Load	Rear/Load	Side/Load
Length overall	10.9 m	8.2 m	8.7 m
Length when loading	12.6 m	9.5 m	3.0 m
Travelling overhead clearance required	4.0 m	3.0 m	3.5 m
Loading overhead clearance required	6.5m x 10m*	3.0 m	3.0 m
Access width required	3.8 m	3.8 m	4.0 m
Turning radius	14 m	8.0 m	11.1 m
Gross vehicle mass (GVM)	28 tonne	13.6 t	13.6 t

*from the back of the bin

- (c) Prior to the commencement of the use, submit to the Health and Environmental Protection Manager certification from a Civil Engineer (RPEQ) which demonstrates that the necessary access, as required above, has been incorporated into the development.
 - (d) A bin washdown facility shall be provided. The facility shall be designed such that all wash down waters are appropriately treated and discharged to sewer subject to a Trade Waste approval. No wash down waters are permitted to flow to a roadway, gutter, stormwater drain or natural waterway.
- ### 13. Incineration

No incineration of waste, including cleared vegetation, is permitted. All cleared vegetation must be chipped/mulched and spread on site or removed from site within two (2) days of being felled/cleared.

14. Lighting

- (a) The provision of advertising, security and flood lighting shall be so designed, constructed, located and maintained in accordance with Australian Standard 4282 – 1997 (Control of the obtrusive effects of outdoor lighting) as not to cause nuisance to the occupants of nearby properties or passing traffic.
- (b) Certification from a qualified and experienced lighting consultant, demonstrating compliance with the above condition, shall be submitted to the Manager for Health and Environmental Protection, prior to the commencement of the use.

15. Noise

- (a) All mechanical plant and equipment, including but not limited to air conditioning plant, for the southern child care centre (Building A) shall be located adjacent to the northern or western façades of the building.
 - (b) All mechanical plant and equipment, including but not limited to air conditioning plant, for the northern child care centre (Building B) shall be located adjacent to the southern or western façades of the building.
 - (c) Prior to the commencement of the use, the Developer shall erect a 2.0 metre high acoustic barrier along the south western and south eastern corners of the property as shown in Figure 3 of the acoustic report entitled “Environmental Noise Level Study for Proposed Child Care Centre, 45 Alice Street, Goodna” prepared by David Moore & Associates Pty Ltd (Report No: R05044/D1245/Rev.0/28.02.05). The acoustic barrier shall be:
 - continuous and gap free;
 - constructed of a material with a surface density not less than 12 kg/m²; and
 - consist of an aesthetically pleasing weather-resistant material such as earth, timber, fibre cement or brick.
 - (d) Service vehicle movements to and from the site, including delivery and waste collection vehicles, shall be limited to 7.00 a.m. to 6.00 p.m. Monday to Friday.
 - (e) There shall be no openings in the southern façade of the southern building (Building ‘A’). All windows on the southern side/façade of the building shall be unable to be opened and the glazing shall have minimum Rw requirements of Rw 30.
 - (f) Prior to the commencement of the use, the Developer shall submit to the Health and Environmental Protection Manager certification from an independent and appropriately qualified acoustic consultant which demonstrates that the necessary design and construction requirements have been incorporated into the development and achieve the noise criteria.
16. Stormwater Quality
- (a) At the time of submitting the Operational Works application, the applicant shall also submit a Detailed Design Stormwater Quality Management Plan (SQMP) to the satisfaction of both the Senior Development Engineer and the Health and Environmental Protection Manager.

The plan must be prepared by a suitably qualified and experienced professional and must demonstrate, through appropriate pollutant export modelling (eg AQUALM or MUSIC), that the pollutant levels in the stormwater discharged from the site comply with the pollutant levels identified in Table 1 below. The plan must also provide a detailed drawing showing the location of the stormwater quality treatment train /catchment boundaries and design drawings of the stormwater quality treatment measures eg. GPTs, bioswales etc.

TABLE 1

Oils and grease ⁽³⁾	no visible films or odour
Suspended solids	15mg/L for combined wet and dry periods ⁽¹⁾ 90% ile < 100mg/L for wet weather periods ⁽²⁾
Litter/gross pollutants ⁽⁴⁾	No anthropogenic (man-made) material greater than 5mm in any dimension

1. Derived from the Draft Queensland Water Quality Guidelines (EPA, 1998)
2. Derived from local and interstate information. A wet weather period is defined as "any period where stormwater runoff leaves the site".
3. Taken from Australian Water Quality Guidelines for Fresh and Marine Waters (ANZECC, 1992).
4. An interpretation of what is acceptable to the community in terms of visual impact. Litter definition derived from information provided by the CRC for Catchment.

- Levels are upper limits for median values or ranges in which medians should lie, unless otherwise stated.
 - If a parameter relevant to a particular activity is not given in the above table please refer to the latest Australian Water Quality Guidelines for Fresh and Marine Waters (ANZECC).
- (b) Prior to the commencement of the use, the Developer shall submit to the Health and Environmental Protection Manager certification from a Civil Engineer (RPEQ) which demonstrates that the physical stormwater quality improvement measures, as required above, have been incorporated into the development.

17. Access for People with a Disability

- (a) The Developer shall provide adequate access for people in wheelchairs by means of an unimpeded continuous path of travel from any adjacent roadway, other public lands and from any car parking bay allocated for use by people with a disability, to all parts of the development which are normally open to the public.
- (b) The Developer shall provide sanitary facilities for people with a disability. Access to them shall be provided in accordance with the provisions of Australian Standard 1428.1 - 1993 (or any standard in substitution thereof).

18. Contamination of Land

Prior to the submission of an application for Operational Works approval, the Developer shall contract a suitably qualified Environmental Consultant to undertake soil sampling on the subject land to test for chemical contamination. The results of this testing shall be submitted to Council's Development Manager in conjunction with the Operational Works application. Should any contamination of the subject land be identified, rehabilitation of the site shall be undertaken to the satisfaction of the Development Manager and Health and Environmental Protection Manager.

19. Infrastructure Contributions

In accordance with the current Council Policies in relation to infrastructure contributions, the Developer shall pay, prior to the commencement of use, the following monies to Council:

Contribution	Sector	Rate	Proposal	Calculation
Water Supply	Goodna (including Redbank Industrial) Water Zone	\$587.03/EP Unit Charge = 1.088 Total = \$638.68/EP	Number of Staff and Children: 137.000 @ 0.150 EP Existing Credit of 3.3 EP Proposal = 17.25 EP	\$638.68 x 17.25 = \$11,017.00 Total = \$11,017.00
Sewerage Catchment	Goodna (excluding Springfield) Catchment	\$629.36/EP Unit Charge = 1.088 Total = \$684.74/EP	Number of Staff and Children: 137.000 @ 0.150 EP Existing Credit of 3.3 EP Proposal = 17.25 EP	\$684.74 x 17.25 = \$11,812.00 Total = \$11,812.00
Road Contributions	Goodna	\$1,437.77/EP Unit Charge = 1.026 Total = \$1,475.15/EP	Number of Staff and Children: 137.000 @ 0.580 EP Existing Credit of 6.8 EP Proposal = 72.66 EP	\$1,475.15 x 72.66 = \$107,184.00 Total = \$107,184.00
Total for Development				\$130,013.00

The contributions above shall be applicable for a period of twelve months from the date of the development approval, and thereafter shall be based on the infrastructure contribution rates applicable at the date when payment is made.

20. Engineering Requirements

The following engineering requirements, detailed in Conditions 21 – 26, shall be completed to the satisfaction of the Senior Development Engineer.

Terms

- (a) RPEQ - A Registered Professional Engineer of Queensland, suitably qualified and experienced in the particular area of expertise required.
- (b) QUDM - The Queensland Urban Drainage Manual, produced by the Queensland Department of Primary Industries.

- (c) Queensland Streets - The Design Guidelines for Subdivisional Street Works, prepared for the Institute of Municipal Engineers of Australia (QLD).
- (d) AMCORD - The Australian Model Code of Residential Development produced by the Commonwealth Department of Housing and Regional Development.
- (f) MUTCD - The Manual of Uniform Traffic Control Devices, published by DMR.
- (g) Ipswich Water - Commercial Business Unit of Ipswich City Council providing water and sewerage services.

21. Roadworks

- (a) All traffic signs and delineation shall be installed in accordance with MUTCD.
- (b) The Developer shall extend the 1.2 m wide concrete footpath on the western side of Spalding Crescent to match into the existing 1.2 m wide concrete footpath on the northern side of Alice Street.

The construction of footpaths shall be in accordance with Council's Standard Drawing SR.19. The concrete footpaths shall be on the same side as the street lights, and the maximum longitudinal grade shall not exceed 1:8.

- (c) The Developer shall provide additional kerb ramps at Spalding Crescent and Alice Street intersection (including the southern side of Alice Street) in order to comply with minimum 4 kerb ramps at the Tee intersection. Kerb ramps are to be constructed in accordance with Council's Standard Drawing SR.18.
- (d) The Developer shall remove the existing driveway access located on the Alice Street frontage by reinstating new concrete kerb and channelling, which will match the existing kerb and channelling in Alice Street.
- (e) The Developer shall provide to the satisfaction of the Senior Development Engineer linemarking, RRPM's and street signage (eg. No Standing) etc along Alice Street frontage and within the existing pavement in order to provide a left turn deceleration lane at Spalding Crescent intersection for the east bound traffic. The Developer shall also provide street signage along Spalding Street frontage to restrict on-street parking, and where necessary remove existing linemarking in Alice Street.

22. Access/Parking

- (a) Provision shall be made for pedestrian access directly from each child care centre building to the footpath in Spalding Crescent such that no child will need to get to the street level by passing through the carparking areas.
- (b) Design and construction of all access and parking shall be in accordance with the provisions of the Ipswich City Council Parking Code and the Australian Standards (2890 series).
- (c) Parking and manoeuvring areas shall accommodate the largest anticipated vehicle to use the site.

- (d) Adequate facilities for servicing the development shall be provided on site to ensure loading and/or unloading activities do not occur on-street.
- (e) Provision shall be made for all vehicles to enter and exit the site in forward gear.
- (f) All parking, access and manoeuvring areas shall be constructed of concrete, bitumen or pavers and shall be linemarked in accordance with the relevant Australian Standard.
- (g) A concrete driveway shall be constructed from the existing layback to the property boundary in accordance with Council's Standard Drawings SR.13 and SR.14.

23. Water

- (a) All works on live water mains are to be carried out by Council in accordance with Council's policy, and at the Developer's expense.
- (b) Where concrete footpaths are to be constructed, the Developer shall provide 100 mm diameter conduits under the footpath and in line with the conduits under the road, for future ease of installing the individual water services. The letter "W" shall be embossed in the concrete to mark the location of the conduit.
- (c) The Developer shall amend and/or seal off any existing water connections if necessary.

24. Stormwater

- (a) The Developer shall provide all necessary stormwater drainage (both internal and external to the development) and such drainage works (except for roofwater systems) shall be designed and constructed in accordance with QUDM such that the overall drainage system caters for a storm event with an ARI of 100 years.
- (b) Overland flow paths shall be suitably designed to cater for the water from a storm event with an ARI of 100 years. In the case where the piped system is carrying part of the flow, the overland flow paths shall be designed to cater for that volume which is represented by the difference between the predicted volume from the storm event with an ARI of 100 years and the capacity of the pipe system, noting the requirements of QUDM.
- (c) No ponding or redirection of stormwater shall occur onto adjoining land unless specifically approved by Council in consultation with the owner of the adjoining land.
- (d) Due consideration shall be given in the design and construction of the development in relation to the effect of the developed catchment flows on the downstream discharge receival areas. Suitable stormwater control devices are to be provided to ensure that there is no increase in flow in watercourses. Such control devices are to be designed so as to integrate the landscaping, recreational, infrastructural and drainage roles of watercourses.
- (e) All stormwater runoff from the development shall be discharged in a manner and to a point to be approved by the Senior Development Engineer. In this instance, stormwater discharge from all impervious areas shall be directed to the drainage channel to the west of the property in [REDACTED]

- (f) Stormwater drainage plans and calculations are to be submitted and approved by the Senior Development Engineer, in conjunction with the submission of an Operational Works application.
- (g) The Developer shall provide a stormwater detention basin (or system) on the subject land, which shall be designed and constructed in accordance with QUDM. The detention basin (or system) shall be constructed to ensure that flows, at any point downstream in the catchment, are not increased by the development for any combination of frequency and duration from the storm event with an ARI of 2 years up to and including the storm event with an ARI of 100 years.
- (h) The proposed Development shall be designed and constructed in accordance with the flooding report prepared by Tabletop Architects Planners Engineers titled 45 Alice Street, Goodna – Stormwater and Flood Report dated February 2006. As illustrated in this report it examines the stormwater and local flooding impacted on the subject site by a storm event with an ARI of 100 years.
- (i) The construction of all buildings or other structures are to be constructed with the base floor level 300 mm above the storm level associated with an ARI of 100 years.
- (j) The Developer shall install an appropriate sealed surface within the proposed clear flow path located in the south west corner of the subject property. This area is illustrated on Plan No: R01, in the stormwater and flood report prepared by Tabletop Architects Planners Engineers. This area will be used to transfer the stormwater flow into the existing drainage channel, therefore the sealed surface shall be designed to withstand the force of a high velocity flow of water without being removed.
- (k) Pollutant control devices shall be installed where applicable for the proposed stormwater management system. The proposed locations and types of devices shall be approved by the Development Manager.

25. Erosion & Silt Management

- (a) The Developer shall be responsible for the installation and maintenance of silt management facilities from the time of commencement of construction until the completion of all works on site. All silt management facilities are to be in accordance with the document "Soil Erosion and Sediment Control" published by the Institution of Engineers Australia, or equivalent.
- (b) If the Senior Development Engineer determines that silt damage has occurred on the site, or the downstream drainage system has become silted, the Developer shall be responsible for restoration. Such restoration shall be completed in the time determined by the Senior Development Engineer. Should the Developer fail to complete the works determined by the Senior Development Engineer within the specified time, Council shall complete the work and recover all costs from the Developer associated with that work.

26. Operational Works – Internal Works (Stormwater and Car Parking)
(i.e. Works not being handed over to Council)

- (a) Plans relating to all civil engineering works shall be prepared and submitted for review by Council under the cover of Form 1 - Part A (Common details for all applications) and Form 1 - Part E (Planning Scheme Works). The plans shall show full construction details, layout dimensions, and finished surface levels and shall be submitted together with the appropriate fees for Council approval, prior to the commencement of construction on site.
- (b) Engineering drawings shall be marked as confirmation that they have been checked and approved by a RPEQ.
- (c) The drawings shall be submitted as three A3 size sets and one full size set. Where municipal works are also being undertaken, it is usually appropriate to make a combined submission.
- (d) A "Certificate of Design" shall be submitted by a RPEQ, certifying that the design is in accordance with all relevant engineering standards, Council's requirements and standards, relevant development conditions of approval, and sound engineering practice.
- (e) Council reserves the right to require further amendments and/or additions at a later date, should design errors or omissions become apparent.
- (f) A certificate shall be submitted to Council by a RPEQ certifying that the completed works have been constructed in accordance with Council's requirements and standards and in compliance with the approved plans and specification. It is expected that the RPEQ will undertake the necessary inspections to make this certification.

27. General

- (a) All disturbed verge areas and allotments shall be graded, grassed and left in a mowable condition. The grass cover shall be obtained as early as possible during the development and an acceptable grass cover shall be achieved before the development can be accepted "Off Maintenance".
- (b) With reference to any works, on land under other private ownership, written permission for the works shall be obtained and forwarded to Council. Similarly, written clearances shall be obtained after the works are completed, unless otherwise accepted by the Senior Development Engineer.
- (c) All works required for this development shall take due regard of any and all existing services and, if considered necessary by the relevant authority or the Senior Development Engineer, such works shall be altered at the cost of the Developer.
- (d) Any allotment filling for a greater depth than 800 mm to provide for building platforms shall be conducted in accordance with Australian Standard 3798. Test results as required by Australian Standard 3798, and a certificate of quality and uniformity of fill shall be provided by a RPEQ. The level of responsibility shall be Level 1.
- (e) A certificate from a RPEQ shall be issued to Council certifying that any retaining wall greater than 800 mm in height is structurally sound and capable of withstanding any likely surcharge loads. Retaining walls greater than 1.0 m in height are to be provided with railings or other barriers to provide pedestrian safety.

- (f) Retaining walls shall be designed so that there are no imposed loads placed upon Council's underground services. This may include extending the footing to a level 300 mm below the invert of the pipe.
- (g) All imported and exported materials shall be transported only on routes approved by the Senior Development Engineer.
- (h) For batters resulting from cutting and filling of the site and producing slopes greater than 1:6, Council requires a RPEQ to certify that they are stable and properly drained.
- (i) Approval of the Senior Development Engineer is required for any fill intended to be placed over Council's underground services.
- (j) Signs are to be erected in the carpark to advise users that this carpark is subject to some flooding of the local creek due to storms with an ARI of less than 100 years. Also the Brisbane River has backwater flooding for those storms with an ARI in excess of 20 years.
- (k) A Flood Escape Plan and procedure is to be developed and periodically practiced/rehearsed in case of flooding of the site. This plan is to include permanently displayed signs and directions for staff and visitors/parents to follow.

28. Compliance with Conditions

- (a) Unless otherwise stated, all conditions shall be completed prior to commencement of use.
- (b) All conditions shall be completed to the satisfaction of the Development Manager.

29. Minor Alterations

Notwithstanding the requirements detailed in this approval, any other minor alterations and/or modifications acceptable to the Development Manager will suffice.

30. When Approval Takes Effect

This approval has effect in accordance with the provisions of Section 3.5.19 of the *Integrated Planning Act 1997* as follows:

- (a) If the applicant does not appeal the decision to the court - when the submitter's appeal period ends; or
- (b) If an appeal is made to the court - subject to the decision of the court, when the appeal is finally decided.

31. When Approval Lapses

- (a) This approval lapses:
 - (i) At the end of the relevant period, unless the change of use happens before the end of the relevant period. The relevant period for this approval is 4 years starting the day the approval takes effect; and

- (ii) Where the change of use of any premises established pursuant to the development approval has ceased for a period of at least 12 months.
- (b) An extended relevant period may be agreed upon, pursuant to Section 3.5.22 of the *Integrated Planning Act 1997*, provided a written notice to Council is made before the end of the relevant period. Such written notice is to be on Council's approved form, accompanied by the owner's consent and the prescribed fee in Council's Register of General Charges.

Advice

***The following advices are offered for your information only
and should not be viewed as mandatory conditions of this approval.***

Assessment Manager (Ipswich City Council)

1. Food Hygiene Licence and Registration

Where a premises used for the sale or preparation, packing, storing, handling, serving or, supplying of food or drink takes up tenancy at the site, Food Hygiene Licence and Registration must be obtained under the provisions of the Food Hygiene Regulation 1989. For further advice on this matter, please contact Council's Health and Environmental Protection Department on (07) 3810 6822.

2. Flooding

The subject site was fully inundated in the 1974 flood. Council, and its servants and agents, accept no liability or responsibility for any loss or damage to person or property of whatever nature or however caused as the direct or indirect consequence of the granting of the approval herein contained. Such approval has been granted at the request of the Developer and in reliance of information submitted by the Developer in support thereof.

3. Portable Long Service Leave

From 1 January 2001, the Building and Construction Industry (Portable Long Service Leave) Levy must be paid prior to the issue of a development permit where one is required for the 'Building and Construction Industry'. This applies to Building Works, Operational Works and Plumbing and Drainage Works applications, as defined under the *Integrated Planning Act 1997*, where the works are \$80 000 or more and matching the definition of 'Building and Construction Industry' under the *Building and Construction Industry (Portable Long Service Leave) Act 1991*.

Council will not be able to issue a Decision Notice without receipt of details that the Levy has been paid. Should you require clarification in regard to the amendments to the *Building and Construction Industry (Portable Long Service Leave) Act 1991*, you should contact QLeave on 1800 803 481 (free call) or (07) 3212 6855.

4. Fire Ants

In accordance with the *Plant Protection Act 1989* and the Plant Protection Regulation 1990, a quarantine notice has been issued for the State of Queensland to prevent the spread of the Red Imported Fire Ant (ant species *Solenopsis invicta*) and to eradicate it from the State.

It is the legal obligation of the land owner or any consultant or contractor employed by the land owner to report the presence or suspicion of Fire Ants to the Queensland Department of Primary Industries on 132523 within 24 hours of becoming aware of the presence or suspicion, and to advise in writing within seven days to:

Director General
Department of Primary Industries
GPO Box 46, Brisbane QLD 4001

It should be noted that the movement of Fire Ants is prohibited, unless under the conditions of an Inspectors Approval. More information can be obtained from the Queensland Department of Primary Industries website www.dpi.qld.gov.au.

The land over which you have made a development application is within a suburb known to have Fire Ants and as such is within a "Restricted Area". The presence of Fire Ants on the site may affect the nature, form and extent of works permitted on the site. In view of this it will be necessary for you to contact the Department of Primary Industries to investigate the site and for you to implement any necessary matters required by that Department prior to the commencement of any works.

There were forty-four (44) properly made submissions received with respect to this application. Details of the submitters are as follows:

1. [REDACTED]
[REDACTED] Spalding Crescent
GOODNA QLD 4300

2. [REDACTED]
[REDACTED] Alice Street
GOODNA QLD 4300

3. [REDACTED]
[REDACTED] Alice Street
GOODNA QLD 4300

4. [REDACTED]
[REDACTED] Alice Street
GOODNA QLD 4300

5. [REDACTED]
[REDACTED] Spalding Crescent
GOODNA QLD 4300

6. [REDACTED]
[REDACTED] Alice Street
GOODNA QLD 4300

7. [REDACTED]
[REDACTED] Alice Street
GOODNA QLD 4300

8. [REDACTED]
[REDACTED] Spalding Crescent
GOODNA QLD 4300
9. [REDACTED]
[REDACTED] Spalding Crescent
GOODNA QLD 4300
10. [REDACTED]
[REDACTED] Spalding Crescent
GOODNA QLD 4300
11. [REDACTED]
[REDACTED] Spalding Crescent
GOODNA QLD 4300
12. [REDACTED]
[REDACTED] Spalding Crescent
GOODNA QLD 4300
13. [REDACTED]
[REDACTED] Spalding Crescent
GOODNA QLD 4300
14. [REDACTED]
[REDACTED] Spalding Crescent
GOODNA QLD 4300
15. [REDACTED]
[REDACTED] Spalding Crescent
GOODNA QLD 4300
16. [REDACTED]
[REDACTED] Spalding Crescent
GOODNA QLD 4300
17. [REDACTED]
[REDACTED] Spalding Crescent
GOODNA QLD 4300
18. [REDACTED]
[REDACTED] Alice Street
GOODNA QLD 4300
19. [REDACTED]
[REDACTED] Spalding Crescent
GOODNA QLD 4300

20. [REDACTED]
[REDACTED] Spalding Crescent
GOODNA QLD 4300

21. [REDACTED]
[REDACTED] Spalding Crescent
GOODNA QLD 4300

22. [REDACTED]
[REDACTED] Spalding Crescent
GOODNA QLD 4300

23. [REDACTED]
[REDACTED] Spalding Crescent
GOODNA QLD 4300

24. [REDACTED]
[REDACTED] Spalding Crescent
GOODNA QLD 4300

25. [REDACTED]
[REDACTED] Spalding Crescent
GOODNA QLD 4300

26. [REDACTED]
[REDACTED] Spalding Crescent
GOODNA QLD 4300

27. [REDACTED]
[REDACTED] Spalding Crescent
GOODNA QLD 4300

28. [REDACTED]
[REDACTED] Spalding Crescent
GOODNA QLD 4300

29. [REDACTED]
[REDACTED] Spalding Crescent
GOODNA QLD 4300

30. [REDACTED]
[REDACTED] Spalding Crescent
GOODNA QLD 4300

31. [REDACTED]
[REDACTED] Spalding Crescent
GOODNA QLD 4300

32. [REDACTED]
[REDACTED] Spalding Crescent
GOODNA QLD 4300

33. [REDACTED]
[REDACTED] Spalding Crescent
GOODNA QLD 4300

34. [REDACTED]
[REDACTED] Spalding Crescent
GOODNA QLD 4300

35. [REDACTED]
[REDACTED] Spalding Crescent
GOODNA QLD 4300

36. [REDACTED]
[REDACTED] Spalding Crescent
GOODNA QLD 4300

37. [REDACTED]
[REDACTED] Spalding Crescent
GOODNA QLD 4300

38. [REDACTED]
[REDACTED] Spalding Crescent
GOODNA QLD 4300

39. [REDACTED]
[REDACTED] Spalding Crescent
GOODNA QLD 4300

40. [REDACTED]
[REDACTED] Spalding Crescent
GOODNA QLD 4300

41. [REDACTED]
[REDACTED] Spalding Crescent
GOODNA QLD 4300

42. [REDACTED]
[REDACTED] Spalding Crescent
GOODNA QLD 4300

43. [REDACTED]
[REDACTED] Spalding Crescent
GOODNA QLD 4300

44. [REDACTED]
[REDACTED]
[REDACTED] Stuart Street
GOODNA QLD 4300

45. [REDACTED]
[REDACTED] Spalding Crescent
GOODNA QLD 4300

Pursuant to the provisions of the *Integrated Planning Act 1997*, I also enclose herewith a copy of Section 4.1.27 concerning the institution of an appeal.

Yours faithfully

Brendan Nelson
DEVELOPMENT MANAGER

Annexure TCF-1

<p>The following are (1) - (4) mandatory if a letter is included in the report (2) or (3) optional.</p> <p>The following are (5) - (8) optional if a letter is included in the report (2) or (3) optional.</p>	<p>(1) Name of the report/assembly (2) - (3)</p> <p>(4) Date of the report/assembly</p> <p>(5) Location of the report/assembly</p> <p>(6) Signature of the report/assembly</p> <p>(7) Date</p>	<p>(8) Date of the report/assembly</p>
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<p>Section 2: General Information</p> <p>The following information is requested for all applicants. Please provide the following information in the space provided.</p>	<p>2. Is the applicant a U.S. citizen or permanent resident?</p> <p><input checked="" type="checkbox"/> YES</p> <p><input type="checkbox"/> NO - If applicant is not a U.S. citizen or permanent resident, please provide the applicant's country of birth and date of birth.</p>
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Plan / Drawing / Report	Title	Date
(i) please see attached report		
(ii)		
(iii)		
(iv)		
(v)		
(vi)		
(vii)		
(viii)		
(ix)		
(x)		

The assessment manager may refuse to accept an application that, at the time of lodgement, fails to provide all applicable information required by Part A and any other relevant part of Form 1.

OFFICE USE ONLY (applicable to access point managers)

							1727 / OS
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Form 1 Development Application

idas

Material change of use

assessable against a local government's planning scheme

PART D

Completion of all applicable questions on Part D is **mandatory** for all applications involving assessment of a material change of use (MCU) assessable against a local government's planning scheme.

Nature of the application A development permit authorises development to occur, while a preliminary approval is a step in the approval process and does not authorise development to occur.	1. This application is for: (tick 1 or both if applicable) <input type="checkbox"/> Preliminary approval for a material change of use of premises including conceptual design for any associated works that require approval under the planning scheme (i.e. consideration of the proposal concept) AND / OR <input checked="" type="checkbox"/> Development permit for a material change of use of premises including conceptual design for any associated works that require approval under the planning scheme.
The subject land For the definition of "gross floor area" go to the planning scheme against which the application will be assessed.	2. How the subject land is identified in the planning scheme (name the zone, precinct etc.) Residential Medium Density 3. Existing gross floor area: (if applicable) not applicable 4. Are there any existing easements on the land? <input checked="" type="checkbox"/> NO <input type="checkbox"/> YES - attach plans of the location and details of the purpose of the easement
Material change of use details	5. Details of the change to the use of the land: (eg. vacant land to shopping centre, house to apartment building, vacant land to industry (tyre manufacturing) etc.) vacant land to child care centre 6. Number of employees: 18 7. Operating days and hours: 6am to 6.30pm (12.5 hrs) Mon to Fri (5 days) / week
Associated building works details (if applicable) For the definition of "site cover", "gross floor area" and "storeys" go to the planning scheme against which the application will be assessed.	8. Site cover: 29.5 per cent 9. Gross floor area: 832 square metres 10. Number of on-site car parking spaces: 31 11. Number of storeys / maximum height above natural ground: 1 12. Number of employees 18 13. Hours and days the use will operate 12.5
Associated operational works details (if applicable)	14. Details of associated operational works (eg. landscaping, cut and fill, drainage, road works etc.)

PLEASE NOTE

This application **cannot** be accepted unless accompanied by Part A of Form 1.

The assessment manager may refuse to accept an application that, at the time of lodgement, fails to provide all applicable information requested by Part A and any other relevant part of Form 1.

OFFICE USE ONLY (applicable to assessment manager)

DATE RECEIVED		REFERENCE NUMBERS	
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Form 1 Development Application

idas

Referrals checklist

Completion of all questions on the Referrals Checklist is mandatory for all applications, other than those requiring the completion of Parts A & B only. It is the responsibility of the applicant to work with the assessment manager to correctly identify if an application involves referral to an IDAS referral agency for their assessment and determination, or comment and / or the coordination of any information request by the Chief Executive DLGP through the referral coordination process. The checklist contains a number of questions to aid in this determination. If your application does involve referral, the assessment manager will confirm in the acknowledgement notice the referral actions required. To assist you in answering the following questions a series of guides are available free from www.ipa.qld.gov.au.

REFERRALS THAT CAN APPLY TO DEVELOPMENT

- other than building work assessable against the Standard Building Regulation 1993

<p>Environmentally relevant activity For more information refer to Guide 4, schedule 8A of the IPA & schedule 2 of the IP Regulation. Unless you answered "none of the above" to Q1, the application requires assessment by the administering authority¹. If an agency other than the administering authority is the assessment manager for the application, the administering authority is a concurrence agency for the application in relation to this matter. <i>Note: An application involving ERA 19 and/or 20 will also require completion of Part K7 of Form 1 for approval where an allocation under the Water Act 2000 is required.</i></p>	<p>1. The application involves (tick applicable box/es) -</p> <p><input type="checkbox"/> (i) an environmentally relevant activity (ERA) for which a code for environmental compliance has <i>not</i> been made- complete Part G of Form 1</p> <p><input type="checkbox"/> (ii) a mobile or temporary ERA for which a code of environmental compliance has <i>not</i> been made - complete Part G of Form 1</p> <p><input checked="" type="checkbox"/> (iii) none of the above</p>
<p>State-controlled road matters For more information refer to Guide 3, schedule 8A of the IPA & schedule 2 of the IP Regulation. Unless you answered "none of the above" to Q2, the application triggers referral to Main Roads as referral agency. In certain circumstances Main Roads will be an advice agency, while in other circumstances Main Roads will be a concurrence agency. Schedule 2 of the IP Regulation will assist you to determine where Main Roads is an advice or concurrence agency for the application.</p>	<p>2. The application involves development on land: (tick applicable box/es) -</p> <p>(a) contiguous² to a State controlled road that is for -</p> <p><input type="checkbox"/> (i) a material change of use assessable against the planning scheme;</p> <p><input type="checkbox"/> (ii) reconfiguring a lot - unless the number of lots does not increase and the number of lots abutting the State-controlled road does not increase;</p> <p><input type="checkbox"/> (iii) operational work not associated with a material change of use assessable against the planning scheme or reconfiguring a lot that-</p> <ul style="list-style-type: none"> • is associated with access to a State-controlled road; • is for filling or excavation; <p><input type="checkbox"/> (iv) operational work or building work (for a non-residential purpose and not associated with an assessable reconfiguration or a material change of use assessable against a planning scheme) that involves the redirection or intensification of site stormwater from the site, through a pipe with a cross-sectional area greater than 250mm² that directs stormwater to a State-controlled road;</p> <p>(b) not contiguous to a State-controlled road that is -</p> <p><input type="checkbox"/> (iv) proposed within a local government area that has a transitional planning scheme and is for development -</p> <ul style="list-style-type: none"> • mentioned in schedule 5 of the IP Regulation and exceeds the thresholds set in that schedule <p><input type="checkbox"/> (v) proposed within a local government area that has an IPA planning scheme and is for development -</p> <ul style="list-style-type: none"> • mentioned in schedule 5 of the IP Regulation and exceeds the thresholds set in that schedule • inconsistent with plans for State-controlled road infrastructure <p>(c) <input checked="" type="checkbox"/> none of the above</p>

¹ The administering authority may be either the Environmental Protection Agency, the relevant local government (for a devolved ERA) or the Queensland Department of Primary Industries and Fisheries (for a delegated ERA).

² Land contiguous to a State-controlled road is defined in schedule 14 of the IP Regulation to mean land if part of the land is within 100m of the State-controlled road or land that is part of a future State-controlled road.

Clearing vegetation

For more information refer to **Guide 12, schedule 8A of the IPA & schedule 2 of the IP Regulation**. Unless you answered "none of the above" to Q3, the application requires assessment by NR&MP. If an agency other than NR&MP is the assessment manager for the application, NR&MP is a concurrence agency for the application in relation to this matter.

3. The application involves: (tick applicable box) -

- ☐ (a) **operational work** for the clearing of native vegetation where the vegetation clearing is made assessable under Schedule 8 of the IPA - complete Part J of Form 1
- ☐ (b) a **material change of use** -
- (i) the lot contains -
- a category 1, 2 or 3 area shown on a property map of assessable vegetation; or
 - if there is no property map of assessable vegetation for the lot - remnant vegetation;
- &
- (ii) the existing use of the land is a rural or environmental use; and
- (iii) the size of the land is 2 hectares or larger - complete Part J of Form 1
- ☐ (c) **reconfiguration of a lot** if -
- (i) the lot contains -
- a category 1, 2 or 3 area shown on a property map of assessable vegetation; or
 - there is no property map of assessable vegetation for the lot - remnant vegetation; &
- (ii) the size of the lot before the reconfiguration is 2 hectares or larger; and
- (iii) 2 or more lots are created; and
- (iv) the size of any lot created is 25 hectares or smaller - complete Part J of Form 1
- ☒ (d) none of the above

Strategic port land

For more information refer to **Guide 11, schedule 8A of the IPA & schedule 2 of the IP Regulation**. If you answered "YES" to Q4, the relevant Port Authority is the assessment manager and Queensland Transport is a concurrence agency for the application.

4. Does the application involve a material change of use on strategic port land that is **inconsistent** with the approved land use plan under the *Transport Infrastructure Act 1994*?

- ☒ NO
- ☐ YES - complete Part I of Form 1

Acid sulfate soils

For more information refer to **Guide 10 & schedule 2 of the IP Regulation**. Unless you answered "none of the above" to Q5, the application requires assessment by NR&MP. If an agency other than NR&MP is the assessment manager for the application, NR&MP is a concurrence agency for the application in relation to this matter.

5. The application involves assessable development (other than building work only assessable against the *Standard Building Regulation*) on land situated in an identified⁴ local government area and where the surface of the land is: (tick applicable box) -

- ☐ (i) below 20m AHD⁵ and the development involves the excavation of 1000m³ or more of soil or sediment at or below 5m AHD; or
- ☐ (ii) at or below 5m AHD and the development involves filling the site with 1000m³ or more of material
- ☒ (iii) none of the above

Major hazard facilities or possible major hazard facilities

For more information refer to **Guide 17, schedule 8A of the IPA & schedule 2 of the IP Regulation**. If you answered "YES" to Q6, the application requires assessment by DES⁶. If an agency other than DES is the assessment manager for the application, DES is a concurrence agency for the application in relation to this matter.

6. Does the application involve a material change of use for a major hazard facility or possible major hazard facility as defined under the *Dangerous Goods Safety Management Act 2000*?

- ☒ NO
- ☐ YES - complete Part L of Form 1

Water related development

For more information about items (i) - (iv), refer to **Guide 16, schedule 8A of the IPA & schedule 2 of the IP Regulation**.

For more information about item (v), refer to **Guide 14 Does my application involve assessment of a referable dam?**, schedule 8A of the IPA & schedule 2 of the IP Regulation.

Unless you answered "none of the above", the application requires assessment by NR&MP. If an agency other than NR&MP is the assessment manager for the application, NR&MP is a concurrence agency for the application in relation to this matter.

7. The application involves:

- ☐ (a) operational work that is: (tick applicable boxes)
- ☐ (i) in a watercourse (eg. a pump, gravity diversion, stream re-direction, weir or dam)
- ☐ (ii) for an artesian bore anywhere in the State, no matter what the use
- ☐ (iii) for a subartesian bore, in declared groundwater area⁷, for use for purposes other than stock and/or domestic use
- ☐ (iv) for a subartesian bore, in certain declared groundwater area, for use for stock and/or domestic purposes
- ☐ (v) for a referable dam⁸
- ☐ (vi) for taking overland flow water;
- ☒ (b) none of the above.

³ Department of Natural Resources and Mines

⁴ The identified local government areas are: Ayrshire, Bowen, Brisbane, Broadbeach, Bundaberg, Burdekin, Burke, Burnett, Caboolture, Calma, Callopy, Caloundra, Cardwell, Carpentaria, Cook, Coorool, Douglas, Fitzroy, Gladstone, Gold Coast, Hervey Bay, Hinchinbrooke, Isis, Johnstone, Livingstone, Logan, Mackay, Maroochy, Maryborough, Mirum Vale, Murrumbidgee, Noosa, Pine Rivers, Redcliffe, Redland, Rockhampton, Sarina, Thuringowa, Taro, Torres, Townsville, Whitsunday.

⁵ Australian Height Datum (AHD)

⁶ Department of Emergency Services

⁷ The declared groundwater areas are listed in **Guide 13 Development in a declared catchment area**

⁸ Referable dam is defined under the *Water Act 2000*

<p>Removal of quarry material from a watercourse</p> <p>For more information refer to <i>Guide 18, schedule 8A of the IPA & schedule 2 of the IP Regulation</i>. If you answered "YES" to Q8, the application requires assessment by NR&M. If an agency other than NR&M is the assessment manager for the application, NR&M is a concurrence agency for the application in relation to this matter.</p> <p><i>Note: Part G of Form 1 is required to be completed as the activity of removing quarry material from a watercourse is also an Environmentally Relevant Activity (ERA).</i></p>	<p>8. Does the application involve development for the removal of quarry material from a watercourse⁹ under an allocation notice given under the <i>Water Act 2000</i>?</p> <p><input checked="" type="checkbox"/> NO <input type="checkbox"/> YES - complete Part K₇ and G of Form 1</p>	
<p>Operational works in a tidal area or coastal management district</p> <p>For more information refer to <i>Guide 18, schedule 8A of the IPA & schedule 2 of the IP Regulation</i>. If you answered "YES" to Q8, the application requires assessment by EPA. If an agency other than EPA is the assessment manager for the application, EPA is a concurrence agency for the application in relation to this matter.</p>	<p>9. Does the application involve operational works in a tidal area or coastal management district as defined under the <i>Coastal Protection and Management Act 1995</i>?</p> <p><input checked="" type="checkbox"/> NO <input type="checkbox"/> YES - complete Part M of Form 1</p>	
<p>Tidal works and coastal management</p> <p>For more information refer to <i>Guide 18, schedule 8A of the IPA & schedule 2 of the IP Regulation</i>. Unless you answered "none of the above", the application triggers referral to QT¹⁰ (Maritime Safety Qld) as concurrence agency.</p>	<p>10. The application involves operational work that is: (tick the applicable box/es)</p> <p><input type="checkbox"/> (i) tidal work¹¹ - complete Part M of Form 1 <input type="checkbox"/> (ii) disposing of dredge spoil or other solid material in tidal water - complete Part M of Form 1 <input type="checkbox"/> (iii) reclaiming land under tidal water - complete Part M of Form 1 <input type="checkbox"/> (iv) constructing a canal¹² if the canal is associated with reconfiguring a lot - complete Part M of Form 1 <input checked="" type="checkbox"/> (v) none of the above.</p>	
<p>Coastal management</p> <p>For more information refer to <i>Guide 18, schedule 8A of the IPA & schedule 2 of the IP Regulation</i>. Unless you answered "none of the above", the application requires assessment by EPA. If an agency other than EPA is the assessment manager for the application, EPA is a concurrence agency for the application in relation to this matter.</p>	<p>11. The application involves: (tick the applicable box/es)</p> <p><input type="checkbox"/> (i) a material change of use involving operational work carried out completely or partly in a coastal management district¹³ and assessable under a planning scheme <input type="checkbox"/> (ii) a material change of use involving building work carried out completely or partly in a coastal management district and assessable under a planning scheme that is - <ul style="list-style-type: none"> the construction of a new premises with a GFA¹⁴ of at least 1000m² the enlargement of the GFA of an existing premises by more than 1000m² <input type="checkbox"/> (iii) assessable reconfiguration of a lot where the land is situated completely or partly in a coastal management district - complete Part M of Form 1 <input type="checkbox"/> (iv) assessable reconfiguration of a lot¹⁵ in connection with the construction of a canal - complete Part M of Form 1 <input checked="" type="checkbox"/> (v) none of the above</p>	
<p>Development below high water mark</p> <p>For more information refer to <i>Guide 18, schedule 8A of the IPA & schedule 2 of the IP Regulation</i>. If you answered "YES" to Q12, the application triggers referral to the Port Authority.</p> <p>The Port Authority is concurrence agency if the development is -</p> <ul style="list-style-type: none"> within 200m of a shipping channel or an entry and exit shipping corridor for the port within 1000m of a swing basin, a commercial shipping wharf, a mooring, anchorage or spoil grounds; within 1000m of a planned port facility identified in a land use plan approved under the <i>Transport Infrastructure Act 1994</i>. <p>In all other situations the Port Authority is advice agency.</p>	<p>12. Does the application involve development below high water mark¹⁶ and within the limits of a port under the <i>Transport Infrastructure Act 1994</i>?</p> <p><input checked="" type="checkbox"/> NO <input type="checkbox"/> YES - complete Part M of Form 1</p>	
<p>Marinas</p> <p>For more information refer to <i>Guide 18, schedule 8A of the IPA & schedule 2 of the IP Regulation</i>. If you answered "YES" to Q13, the application triggers referral to Queensland Fire and Rescue Service as an advice agency.</p>	<p>13. Does the application involve operational work that is tidal work for a marina¹⁷ with more than 6 vessel berths?</p> <p><input checked="" type="checkbox"/> NO <input type="checkbox"/> YES - complete Part M of Form 1</p>	

⁹ Watercourse is defined in sch 10 of the IPA¹⁰ Queensland Transport¹¹ Tidal work is defined in sch 10 of the IPA¹² Canal means canal as defined under the *Coastal Protection and Management Act 1995*¹³ Coastal management district is defined in sch 10 of the IPA and means a coastal management district under the *Coastal Protection and Management Act 1995*, other than an area declared as a coastal management district under section 47(2) of that Act¹⁴ GFA is defined in sch 14 of the IPA to mean the gross floor area. For a definition of how to calculate GFA, go to the planning scheme against which the application is being assessed.¹⁵ Under s117 of the *Coastal Protection and Management Act 1995*, an application for reconfiguration, where the reconfiguration is associated with the construction of an artificial waterway, must be accompanied by the application for the operational works to construct the artificial waterway.¹⁶ High water mark is defined in the *Coastal Protection and Management Act 1995* and means the ordinary high water mark at spring tide¹⁷ Marina is defined in the *Transport Operations (Maritime Pollution) Regulation 1995*

Tidal works in strategic port land tidal areas

For more information refer to Guide 18, schedule 8A of the IPA & schedule 2 of the IP Regulation. If you answered "YES" to Q14, the relevant port authority is the assessment manager for the application and EPA and Queensland Transport are concurrence agencies for the application.

14. Does the application involve tidal works within the limits of strategic port land tidal areas¹⁸?

- ☒ NO
☐ YES - complete Part M of Form 1

Heritage

For further information refer to Guide 19, schedule 8A of the IPA & schedule 2 of the IP Regulation. If you answered "YES" to Q15, the application triggers referral to the Queensland Heritage Council as concurrence agency for the application.

15. Does the application involve development in a heritage registered place as defined under the Queensland Heritage Act 1992?

- ☒ NO
☐ YES - complete Part C of Form 1

Declared catchment areas

For more information, including a list of the declared catchment areas within Queensland, refer to Guide 13, schedule 8A of the IPA & schedule 2 of the IP Regulation.

Unless you answered "none of the above", the application requires assessment by NR&M. If an agency other than NR&M is the assessment manager for the application, NR&M is a concurrence agency for the application in relation to this matter.

16. The application involves development in an areas declared to be a catchment area under the Water Act 2000 for: (tick the applicable box/es)

- ☐ (i) reconfiguration of a lot, if any lot resulting from the reconfiguration is less than 16 hectares;
☐ (ii) the establishment or expansion of a waste water disposal system, other than a disposal system for carrying out an environmentally relevant activity under the *Environmental Protection Act 1994*
☒ (iii) none of the above

Contaminated land

Applications involving material change of use and / or reconfiguring a lot may trigger this referral.

For more information refer to Guide 5, schedule 8A of the IPA & schedule 2 of the IP Regulation.

If you answered "YES" to Q17, the application requires assessment by EPA. If an agency other than EPA is the assessment manager for the application, EPA will be a concurrence agency for the application in relation to this matter.

17. This application involves: (tick the applicable box/es) -

- ☐ (a) **reconfiguring a lot** for which all of part of the premises are -
 (i) premises mentioned in the IPA, schedule 8, part 1, table 2 -
 • item 5, including the exemption otherwise provided for by paragraph (d);
 • item 6, including the exemption otherwise provided for by paragraph (e); or
 • item 7,
 • including the exemption otherwise provided for a mining activity or petroleum activity;
 or
 (ii) in an area for which an area management advice has been given for unexploded ordnance - complete Part N of Form 1
☐ (b) a **material change of use** -
 (i) made assessable under the IPA, schedule 8, part 1, table 2, items 5 to 7; or
 (ii) if all or part of the premises is in an area for which an area management advice has been given for unexploded ordnance - complete Part N of Form 1
☒ (c) none of the above

Electricity Infrastructure

For more information refer to schedule 2 of the IP Regulation.

Unless you answered "none of the above", the application triggers referral to the agency to which the easement is granted in favour of as advice agency.

18. The application involves: (tick the applicable box/es)

- ☐ (i) reconfiguration of a lot where any part of the lot is -
 • subject to an easement in favour of a distribution entity or transmission entity under the *Electricity Act 1994* and the easement is for a transmission grid or supply network under that Act; or
 • situated within 100m of a substation site;
☐ (ii) a material change of use, assessable against a planning scheme and not associated with reconfiguring a lot if -
 • any part of the premises is subject to an easement in favour of a distribution entity or transmission entity under the *Electricity Act 1994* and the easement is for a transmission grid or supply network under that Act; and
 • any structure or work that is the natural and ordinary consequence of the use is, or will be, located wholly or partly in the easement;
☐ (iii) a material change of use, assessable against a planning scheme and not associated with reconfiguring a lot if any part of the premises is situated within 100m of a substation site
☐ (iv) operational work that is filling or excavation, not associated with reconfiguring a lot, if -
 • any part of the premises is subject to an easement in favour of a distribution entity or transmission entity under the *Electricity Act 1994*; and
 • the work is located wholly or partly in the easement
☒ (v) none of the above.

¹⁸ Strategic port land tidal areas are the areas generally 50 meters seaward of high water mark adjacent to strategic port land.

Land designated for community infrastructure

Applications involving development on land designated for community infrastructure may trigger this referral.

For more information refer to schedule 2 of the IP Regulation.

If you answered "YES" to Q19, the application requires assessment by the chief executive of the department administering the Act authorising the development for the designated purpose. If an agency other than the designator is the assessment manager for the application, the designating agency will be a concurrence agency for the application in relation to this matter.

19. Does the application involve development on land designated for community infrastructure –

- (i) intended to be supplied by a public sector entity; and
- (ii) on land not owned by or on behalf of the State; and
- (iii) other than development –

- for the designated purpose; or
- carried out by, or on behalf of, the designator

☒ NO
☐ YES

SEQ Regional Plan

For more information refer to schedule 2 of the IP Regulation.

If you answered "YES" to Q20, the application requires assessment by the chief executive of the department administering the IPA.

20. Does the application involve a material change of use for urban purposes¹⁹ in the SEQ Region²⁰, other than for a single dwelling on an existing lot, for which all or part of the premises, the subject of the development, is in the –

- (i) Regional Landscape and Rural Production Area;
- (ii) Rural Living Area;
- (iii) Investigation Area; or
- (iv) Mt Lindesay/North Beaudesert Investigation Area, unless the premises is designated or zoned for urban purposes in the relevant planning scheme.

☒ NO
☐ YES

Referral coordination

An information request requires referral coordination if the application involves –

- (i) 3 or more concurrence agencies; or
- (ii) a facility or area assessable under a planning scheme and prescribed in schedule 7 or 8 of the IP Regulation; or
- (iii) development which is subject to an application for preliminary approval mentioned in section 3.1.6 of the IPA.

For more information go to Guide 2 & Guide 3.

21. Does the application trigger referral coordination?

☒ NO
☐ YES, as the application:

- ☐ (i) triggers 3 or more concurrence agencies;
- ☐ (ii) involves a facility made assessable under a planning scheme and prescribed in schedule 7 of the IP Regulation;
- ☐ (iii) involves development made assessable under a planning scheme and in an area prescribed in schedule 8 of the IP Regulation;
- ☐ (iv) is for a preliminary approval mentioned in section 3.1.6 of the IPA

Referral agency responses prior to lodgement

Under section 3.3.2 of the IPA a referral agency may give a referral agency response on a matter within its jurisdiction about a proposal before an application for the proposal is made to the assessment manager.

This is commonly the case where an application requires referral to a building referral agency (eg. Qld Fire and Rescue Service).

22. Did a referral agency give a referral agency response under s3.3.2 of the IPA before the application was made to the assessment manager?

☒ NO
☐ YES - attach a copy of the referral agency's response/s

PLEASE NOTE: The assessment manager may refuse to accept an application, which, at the time of lodgement, fails to provide the completed Referrals Checklist (if applicable).

OFFICE USE ONLY (applicable to assessment manager)

DATE RECEIVED	REFERENCE NUMBER/S
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¹⁹ Urban purposes is defined in schedule 10 of the IPA. To make it clear, urban purposes does not include rural residential purposes as defined in schedule 2 of the Draft South East Queensland Regional Plan.

²⁰ Local Governments within the SEQ Region are identified in the Draft South East Queensland Regional Plan as Beaudesert Shire, Boonah Shire, Brisbane City, Caboolture Shire, Caloundra City, Esk Shire, Gatton Shire, Gold Coast City, Ipswich City, Kilcoy Shire, Laidley Shire, Logan City, Maroochy Shire, Noosa Shire, Pine Rivers Shire, Redcliffe City, Redland Shire and Toowoomba City.

BUILDING REFERRALS (advice only)		
Below is a list of the referrals that can apply to an application involving building work assessable against the Standard Building Regulation. This information is provided for advice purposes only and this section of the referrals checklist is not required to be completed and lodged with an application.		
Fire safety For more information go to schedule 2 of the IP Regulation	1.	An application may trigger referral to Qld Fire and Rescue Services as an advice agency if the building work the subject of the application requires the installation of a fire safety system.
Fire safety for budget accommodation For more information go to schedule 2 of the IP Regulation	2.	An application may trigger referral to Qld Fire and Rescue Services as an advice agency if the building work the subject of the application requires the installation of a fire safety system for a budget accommodation building.
Spray painting For more information go to schedule 2 of the IP Regulation	3.	An application may trigger referral to the Chief Executive under the <i>Workplace Health and Safety Act 1995</i> as a concurrence agency in the application involves a workplace incorporating spray painting.
Retail meat premises For more information go to schedule 2 of the IP Regulation	4.	An application may trigger referral to Safe Food Qld as a concurrence agency if the application involves a retail meat premises.
Private health facilities For more information go to schedule 2 of the IP Regulation	5.	An application may trigger referral to the Chief Executive under the <i>Health Act 1937</i> as a concurrence agency is the application involves a private health facility.
Workplace area less than 2.3m² For more information go to schedule 2 of the IP Regulation	6.	An application may trigger referral to the Chief Executive under the <i>Workplace Health and Safety Act 1995</i> as an advice agency if the application involves a work place area less than 2.3m ² .
Land contiguous to a State-controlled road For more information go to schedule 2 of the IP Regulation	7.	An application may trigger referral to the Chief Executive under the <i>Transport Infrastructure Act 1994</i> as a concurrence agency or advice agency if the application involves land contiguous to a State-controlled road.
Pastoral workers accommodation For more information go to schedule 2 of the IP Regulation	8.	An application may trigger referral to the Chief Executive under the <i>Pastoral Works' Accommodation Act 1980</i> as a concurrence agency is the application involves pastoral workers accommodation.
Child care centre For more information go to schedule 2 of the IP Regulation	9.	An application may trigger referral to the Chief Executive under the <i>Child Care Act 2002</i> as a concurrence agency if the application involves a child care centre.
Coastal development For more information go to schedule 2 of the IP Regulation	10.	An application may trigger referral to the Chief Executive under the <i>Coastal Protection and Management Act 1995</i> as a concurrence agency if the application involves land completely or partly seaward of a coastal building line ²¹ .
Heritage For more information go to schedule 2 of the IP Regulation	11.	An application may trigger referral to the Heritage Council as a concurrence agency if the application involves a heritage registered place.

²¹ Coastal building lines are prescribed under the *Coastal Protection and Management Act 1995*.

**Assessment Report -
45 Alice Street
Goodna Qld 4300**

**Development Application for
Material Change of Use (Child Care Centre)**

**JB GOODWIN MIDSON &
PARTNERS**

**68 Sylvan Road,
Toowong 4066**

(March, 2005)

Prepared for: [REDACTED]

Job No. 12563 (a6699.doc)

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APPENDIX A – SITE LOCALITY MAP

APPENDIX B – SITE & PROPOSAL PLANS

APPENDIX C – TRAFFIC IMPACT ASSESSMENT REPORT

APPENDIX D – ENVIRONMENTAL NOISE LEVEL STUDY

1.0 EXECUTIVE SUMMARY

This assessment report has been commissioned on behalf of [REDACTED] This report forms part of and accompanies, the development application for:

- Material Change of Use (Community Use – Child Care Centre).

This application is over land described as Lot 3 on RP77071, Parish of Goodna, County of Stanley, and located at 45 Alice Street, Goodna (see Appendix A – Site Locality Map).

The report reviews the characteristics of the site, its locality, describes the proposed development and evaluates the relevant town planning issues and requirements. The report is an assessment of the facts and conditions pertaining to the site, as the writer knows them at the time of preparation of this report.

As the proposal is generally consistent with the *Ipswich Planning Scheme*, reflects the existing development layout of the surrounding area, and is compatible with the adjacent development, it is considered appropriate that this development application be approved, subject to reasonable and relevant conditions.

1.1 Site Details

<u>Address of the Site:</u>	45 Alice Street Goodna QLD 4300
<u>Real Property Description:</u>	Lot 3 on RP77071 Parish of Goodna, County of Stanley
<u>Total Area of Site:</u>	2823 square metres
<u>Area Designation:</u>	Residential Medium Density (RM1)
<u>Name of Owner(s):</u>	Manos Saridakis

1.2 Development Application Details

Application is made for a **Development Permit for a Material Change of Use (Child Care Centre)** to be processed in accordance with Chapter 3 of the *Integrated Planning Act 1997*. The development application is subject to the impact assessment process and the provisions of the *Ipswich Planning Scheme*. Application is made to gain permission to construct two adjacent child care centres with shared access and parking facilities at 45 Alice Street, Goodna.

Under the table of development, this application will require impact assessment (Community Use Type 2 Development).

It is identified that the application will be required to be assessed against the following codes:

- Urban Areas Code (Part 4) – particularly the specific outcomes in section 4.3.3 and the Residential Medium Density Zone (Division 6);
- Community Use Code (Part 12, division 12); and
- Parking Code (Part 12, division 9)

Description of Proposal:

The applicant wishes to construct two adjacent child care centres with shared access and car parking facilities off Spalding Crescent on a site which is currently vacant. It is proposed that the development will cater for up to 119 children on a daily (Monday through Friday) basis and employ approximately 18 full-time equivalent (FTE) staff. The standard daily hours of operation are expected to be from 6:00am to 6:30pm.

The child care facility is proposed to incorporate two separate child care centres in Buildings A and B with indoor and outdoor, covered and uncovered play areas attached to both. A joint car park area with direct access from Spalding Crescent is to be provided between the two adjacent buildings. Plans illustrating the proposed layout and side elevations have been provided by Tabletop Architects (refer to Appendix B – Site Plan and Elevations).

Applicant:

[REDACTED]
C/- J B Goodwin Midson and Partners
PO Box 92
TOOWONG QLD 4066

Contact Person:

[REDACTED]

2.0 FURTHER APPLICATION DETAILS

2.1 Prelodgement Meeting Advice

No prelodgement meeting has been held. Discussions with Brendan Nelson, Senior Town Planner and Councillor Paul Tully have occurred in October and November 2005. Issues relating to the suitability of the site and previous backwater flooding were outlined.

2.2 Referral Agencies

As the proposed development is for a child care centre, the application will trigger referral to the Chief Executive under the Child Care Act 2002 as a concurrence agency.

2.3 History of Site

A sawmill previously occupied the site until recent years.

3.0 ASSESSMENT OF THE APPLICATION

3.1 State Planning Policies

There are no State Planning Policies relevant to this development application.

3.2 South East Queensland Regional Plan

According to the South East Queensland Regional Plan, the site is designated as being located within the Urban Footprint, which is described as being land -

"predominantly allocated to provide for the region's urban development needs to 2026. The area includes more than sufficient land to accommodate the full range of normal urban uses, such as housing, industry, business, infrastructure, community facilities and urban open spaces."

3.3 Strategic Plan

Urban Areas Strategy

The Strategic Framework designates the site in the Urban Development Area. The proposed child care centre complies with the Urban Area Strategy by providing a diversity of community facilities and meeting the need of the residents within the residential area.

3.4 Zone Designation

The subject land is classified *Residential Medium Density (RM1)*, as identified in the *Ipswich Planning Scheme*. In summary the overall outcomes sought for the Zone are the following:

- *"A range of residential forms to meet community housing needs for higher intensity living, to the general exclusion of most other uses."*
- *Uses within the (RM1) Zone are provided with full urban services such as reticulated water, sewerage, sealed roads, parks and other community facilities.*
- *Uses and works within the (RM1) Zone are located and designed to maximise the efficient extension and safe operation of infrastructure.*
- *Uses and works within the (RM1) Zone are located, designed and managed to:*
 - *maintain residential amenity and streetscape quality;*
 - *maintain or enhance aspects of local character;*
 - *be compatible with other uses and works;*
 - *maintain the safety of people buildings and works; and*
 - *avoid significant adverse effects on the natural environment."*

The proposed child care centre provides a further urban service to support the surrounding residential uses. The site is very accessible to the surrounding residents and the design ensures no negative impacts on the closest residential neighbours. As the child care centre is a community use complementary to the residential neighbourhood, it is considered that the proposal complies with the intent of the area.

3.5 Planning Scheme Codes

The relevant codes are:

- Urban Areas Code (Part 4) – particularly the specific outcomes in section 4.3.3 and the Residential Medium Density Zone (Division 6);
- Community Use Code (Part 12, division 12); and
- Parking Code (Part 12, division 9)

3.5.1 Urban Areas Code (Part 4) – particularly the specific outcomes in section 4.3.3 and the Residential Medium Density Zone (Division 6)

Responses to the overall outcomes sought for the Urban Areas are listed in Table 1 below.

Table 1: Urban Areas Code (Part 4) Section 4.3.3

Centres			
(a) A network of centres is established (continued).	Not applicable as the proposed facility is located nearby but not within the major centre at Goodna.		Not applicable
(b) Neighbourhood Centres and local shopping areas are designed and located (continued).	Not applicable as the proposed facility is located nearby but not within the major centre at Goodna. The proposed facility is convenient to public transport and easily accessible to the catchment area. It is in keeping with the need to provide community related facilities within centres such as Goodna.		Not applicable
Transport and Access			
(a) & (b)	A Traffic Impact Assessment Report has been commissioned (refer to Appendix C)		Yes
(c)	An Environmental Noise Level Study has been commissioned (refer to Appendix D)		Yes
(d) Car parking is provided in accordance with the demand generated by uses or works and may include shared parking and access arrangements.	Car parking is provided in accordance with the demand generated by uses or works and may include shared parking and access arrangements.		Yes
(e) The design and layout of parking facilities is (continued).	The design and layout of parking facilities is to minimise pedestrian and vehicle conflicts (refer to Appendix C).		Yes
(f) Service and delivery areas (continued).	Deliveries to the proposed facility will be scheduled to occur during non-peak periods and use existing visitor car parking facilities.		Yes

Environmental Management		
(a) The quality of stormwater run-off from a use or site is similar to or better than the established water quality standards for the receiving waters or lawful point of discharge.	Roof water will be managed in accordance with Council requirements. Details will be provided at Building Application stage.	Yes

Responses to the specific outcomes sought for the Residential Medium Density (RM1) Zone are listed below in Table 2.

Table 2: Residential Medium Density Zone (Division 6) Section 4.6.3

Residential Uses – Density and Character		
Uses and works reflect the desired built character, maintain amenity and protect and enhance important townscape and landscape elements within local areas having regard to: (continued).	All aspects of the density and character of the development have been addressed in this report.	Yes
Building Setbacks and Design		
(a) Buildings are setback 6 metres from the street frontage unless an alternative setback does not detrimentally affect the character and amenity of the area and the overall townscape.	The proposed buildings are set back as follows: <ul style="list-style-type: none"> • Building A is setback 7.5m from Alice Street and 11.0m from Spalding Crescent. • Building B is setback 9.3m from Spalding Crescent. 	Yes
(b) (c) (d) (e) (f) & (g)	The proposed buildings are designed to be in keeping with the existing residential nature of the streetscape with articulated frontages and numerous windows for visual surveillance, air circulation and natural light penetration.	Yes
Vegetation and Landscaping		
(a) Appropriate landscaping including street trees is used to soften building outlines and enhance the overall appearance of the area.	Existing significant trees will be retained whilst additional landscaping is proposed (refer to Appendix B)	Yes
(b) Significant vegetation is conserved, where possible.	Existing significant trees will be retained whilst additional landscaping is proposed (refer to Appendix B)	Yes

Non Residential Uses		
Each non-residential use: (a) fulfils a local community need; (b) is accessible to the population it serves; and (c) where possible co-locates with other non residential uses but does not contribute to undesirable commercial ribbon development; and (d) does not have a significant detrimental impact on the amenity of nearby residents (continued) and (e) maintains a scale and appearance in keeping with the residential amenity and character of the locality with adequate buffering or screening to nearby residential uses (both existing and proposed).	<p>It is expected that the proposed development will fulfil a need for convenient and affordable child care facilities that serve the local residents of Goodna and the surrounding area. Other complimentary community uses such as schools, parks and public transport as well as convenience shopping are located nearby.</p> <p>The centre will not have a detrimental impact on the amenity of nearby residents. The possible issues of noise and traffic generation have been studied and addressed in two commissioned reports by independent consultants (refer to Appendices C & D).</p> <p>The two buildings have been designed to be in keeping with the existing residential nature of the streetscape with articulated frontages and numerous windows for visual surveillance, air circulation and natural light penetration. The noise report (refer to Appendix D) proposes screening devices to attenuate for noise for the benefit of both the existing residential uses and the users of the proposed child care facility.</p>	Yes
Operation of Road Network and Access		
Uses and works are located and designed to: (a) ensure the safe and efficient operation of the road network; and (b) avoid multiple access points along major roads.	The impact of the proposed child care facility on the local road network and access to / from the centre to the local street network is addressed in an attached report (refer to Appendix C – Traffic Impact Assessment Report)	Yes
Provision Infrastructure		
Infrastructure (continued).	Sufficient infrastructure exists due to the previous use on the site.	Yes

3.5.2 Community Use Code (Part 12, Division 12)

The overall outcomes of the Code are to ensure that community uses:

- Are undertaken in a manner which does not cause a nuisance or disturbance to the occupiers or users of other nearby land, particularly nearby residents and other sensitive receptors;
- Are integrated and co-located, particularly in Centres, to contribute to a community focal point and reduce multiple trips;
- Are located within areas that are well serviced by existing or proposed public transport;
- Where possible, avoid areas prone to flooding, bushfires or landslip;
- Provide reasonable buffers between incompatible uses and zones or Sub Areas;
- Provide for the convenient, safe and efficient movement of vehicles and pedestrians within the site as well as to and from the site;
- Maintain a safe and secure environment;
- Conserve places of cultural significance or streetscape value;
- Screen unsightly elements;
- Ensure adequate provision is made for waste storage, treatment and disposal; and
- Do not adversely affect the operational airspace of RAAF Base Amberley or Archerfield Aerodrome.

The character, scale, height and intensity of development should be:

- Commensurate with the intent of the zone or Sub Area in which the development is proposed and the operational airspace of RAAF Base Amberley and Archerfield Aerodrome;
- Compatible with the physical characteristics of the site and its surrounds; and
- Compatible with the desired character of the local area.

Table 3: Community Use Code

Effects on Amenity			
1 (a) The community use and its scale, design and character does not impose unreasonable adverse impacts on and is compatible with the existing and likely future amenity of the nearby area having regard to:	For sub-section 1(a) and (c) (a) Building setbacks for community uses conform to those as specified for the relevant zone or Sub Area	Building Setbacks Building A is setback 3.0m from Alice Street and 5.0m from Spalding Crescent. Building B is setback 3.0m from Spalding	Yes

<ul style="list-style-type: none"> Noise Hours of operation Traffic The location and design of parking areas Lighting Signage Visual amenity Privacy; and Odour and emissions 	<p>(b) Where no building setback provisions are specified –</p> <ul style="list-style-type: none"> The frontage boundary setback is consistent with that of buildings on adjoining sites; or The frontage boundary setback is six (6) metres or half the height of the building whichever is greater 	<p>Crescent. The setback is consistent with intensity of the nearby multi unit dwelling complex.</p> <p>Traffic & Parking</p> <p>The effect of an increase in traffic in the immediate area as a result of this development is likely to be minimal (refer to Appendix C – Traffic Impact Assessment Report)</p> <p>Hours of Operation</p> <p>Hours of operation of the proposed use are expected to be from 6.00am to 6.30pm.</p>	
<p>(b) Community uses are provided with convenient pedestrian access from existing and proposed public transport infrastructure and other public areas.</p>		<p>The proposed child care facility is located within:</p> <ul style="list-style-type: none"> 900m walking distance of the Goodna train station; 700m of local Westside bus services; and 100m of hail and ride bus stops on Alice Street. 	<p>Yes</p>
<p>(c) Buildings and temporary structures are sited to maintain a physical and visual separation from the road frontage of the site and from any buildings on adjoining sites.</p>	<p>(c) Landscape buffers of a minimum width of four (4) metres are provided to the side and rear boundaries where the site:</p> <ul style="list-style-type: none"> Abuts land in a Residential zone; and Is used for a gallery, museum or neighbourhood 	<p>Not applicable as the site abuts parkland only.</p>	<p>Not applicable</p>

	centre.		
	<p>(d) Landscape buffers of a minimum width of ten (10) metres are provided to the side and rear boundaries where the site-</p> <ul style="list-style-type: none"> Abuts land in a Residential Zone; and Where the use is other than a use for the purposes outlined in sub section (2)(a) above. 	Not applicable as the site abuts parkland only.	Not applicable
	<p>(e) Landscape buffers include screen fences, walls or mounding where the emission of noise, light or the visual effects of the use warrant additional screening</p>	Not applicable	Not applicable
	<p>(f) Unless otherwise specified in the relevant zone or Sub Area, the hours of operation for the use are from 7.00am to 10.00pm</p>	It is proposed that hours of operation will be from 6am to 6.30pm Monday to Friday. Appendix D – Environmental Noise Level Study demonstrates that there will be no impact on nearby residents as a result of these operating hours.	Specific outcome
(d) Large expanses of blank walls are avoided, particularly where such walls are likely to be visually prominent		Not applicable as the design does not include blank walls.	Not applicable
<p>(e) Ancillary storage of goods or materials in open areas are either –</p> <p>(i) Screened from view from the road or nearby land or</p> <p>(ii) Presented in a manner that does not detract from the</p>		Not applicable as there will be no ancillary storage of goods or materials in open areas.	Not applicable

visual amenity of the area				
Noise				
<p>(3)(a) Unreasonable levels of noise are not transmitted to noise-sensitive places, including existing and future residential areas</p> <p>(b) A reduction in noise impacts is achieved by -</p> <p>(i) Regulating the hours of operation</p> <p>(ii) Locating noisy operations at sufficient distance from noise sensitive places</p> <p>(iii) Orientating access points, carparking, night lit facilities and other major noise sources to minimise impacts on the amenity of nearby areas</p> <p>(iv) Incorporating noise attenuating features into the design, construction and layout of buildings and use areas (eg. Fencing, mounding, minimising openings) and</p> <p>(v) Appropriately locating and enclosing noisy plant and equipment (eg. Air-conditioning)</p>			<p>Noise Levels The development will be able to meet all relevant noise level requirements by incorporating noise attenuating features into the design and layout of the buildings and use areas (refer to Appendix D – Environmental Noise Level Study).</p>	Yes
Outdoor Lighting				
<p>(4)(a) Outdoor lighting is –</p> <p>(i) Designed, installed and operated to maintain the amenity of the area</p> <p>(ii) Located, utilised and focused to efficiently light a desired area while</p>		<p>For sub section (4)</p> <p>5(a) Illumination levels parallel to and at a distance of 1.5 metres outside the boundary of the lot do not exceed 8 lux in either the vertical or horizontal plane for a height of 10 metres above</p>	<p>All outdoor lighting will comply with Australian Standards and Council requirements.</p>	Yes

	minimising lighting overspill	ground level.		
(iii)	Located such that mature planting does not reduce its effectiveness	(b) Security lighting is designed, installed and operated consistent with <i>Australian Standard AS 4282 (1997) – Control of the Obtrusive Effects of Outdoor Lighting</i>		
(iv)	Integrated into the total design with building, landscaping, signage, streetscape and public space design	(c) Principal pedestrian and bicycle movement routes and public spaces are lit to the minimum <i>Australian Standard of AS1158 (Public Lighting Code)</i>		
(v)	Used to illuminate buildings and areas that may be susceptible to criminal activity but avoids light overspill which may detract from the amenity of the nearby areas (particularly residential uses) or contribute to hazardous traffic conditions	(d) Configuration of lights in straight parallel lines 500m – 1000m long, flare plumes, upward shining lights and flashing or sodium (yellow) lighting are avoided within 6km of the RAAF Base Amberley runway		
(vi)	Appropriately placed to avoid shadows and glare which might put pedestrians at risk (eg. Shielded light at eye level)			
(vii)	Not directed onto the street or adjoining properties			
(viii)	Downward directed			
(ix)	Appropriately shielded at its source			
(x)	Provided to vehicular, cyclist and pedestrian movement areas, including roads, paths and carparks, in order to provide visibility and safety at night and			
(xi)	Provided for entry ways and includes point-to-point lighting for pedestrian walkways			

(b) Particular attention is given to the lighting of sites which are situated within 6km of the Amberley Air Base runway, so as not to cause distraction or interference with a pilot's visibility while in control of approaching or departing aircraft				
Public Toilets				
(6)(a) Public Toilet facilities are provided and designed for use by all members of the community, including people with disabilities, parents and young children	<p>(7)(a) Public toilet facilities are provided in accordance with the provisions of the <i>Standard Building Regulation</i></p> <p>(b) Where wall hung urinals are provided, at least one such urinal is to be designed for use by young children and installed in accordance with the manufacturer's specification</p> <p>(c) At least one wash basin, with a rim height not exceeding 600mm, is provided per room for use by young children</p>	<p>Public toilets will not be provided as part of this development.</p> <p>The facilities will be provided in accordance with the provisions of the <i>Standard Building Regulation</i> to meet the needs of young children as per those requirements specified under the probable solutions column for (b) and (c).</p> <p>Other toilets will be made available to adult users of the centre such as staff and parents in accordance with the provisions above. (Refer to Appendix B – Site & Proposal Plans)</p>		Yes
Hearing Aid Loops				
(8)(a) A hearing aid loop system for the benefit of people with impaired hearing is provided where a community use contains an auditorium		Not applicable as no auditorium is to be provided as part of this proposal.		Not applicable

Co-Location, Multi and Joint Use of Community Uses			
<p>(9)(a) Community uses are co-located with, or close to other community uses or with recreation or entertainment uses, to create a community focal point</p> <p>(b) Community uses are located adjacent to established community focal points, including shopping centres and other community facility nodes</p> <p>(c) Community uses are located within areas that are well serviced by existing or proposed public transport</p> <p>(d) Multi use opportunities and joint use arrangements for community use facilities are maximised with consideration to sharing facilities between different user groups and after hours use</p>		<p>The proposed child care centre is to be located within close proximity of local commercial and community uses such as schools, parks, shops and churches (refer to Appendix A – Site Locality Map).</p> <p>The Senior Town Planner and Councillor Paul Tully have expressed their support of this application prior to lodgement.</p> <p>Public transport is available nearby in the form of train services to Ipswich and Brisbane from the Goodna train station as well as services provided by the Westside local bus network.</p>	Yes
Building Height			
<p>(10)(a) The height of buildings and other structures for community uses conform to those as specified for the relevant zone or Sub Area</p>	<p>(11)(a) Where no building height provisions are specified, buildings are limited to one (1) storey in height, unless appropriate with –</p> <ul style="list-style-type: none"> • The scale of adjoining development • The extent of fall across the site • The character and amenity of the area and the overall townscape; and • The operational airspace of RAAF Base Amberley and Archerfield Aerodrome 	<p>The building height of both proposed child care centres will be limited to one (1) storey with an internal ceiling height of 2.7m and a maximum roof height of 5.0m. This will be in keeping with the scale of existing adjoining buildings and retain the character and amenity of the area.</p> <p>The buildings will not impact on the operational airspace of either</p>	Yes

		airfield.	
Carparking			
<p>(12)(a) The design and arrangement of access, carparking and vehicle movements on the site is safe and convenient</p> <p>(b) The carparking area is-</p> <p>(i) Integrated with the public access points of any building on the site; and</p> <p>(ii) Located to provide shared use of carparking areas with adjoining land uses or other community uses, where possible</p>		Refer to Appendix C – Traffic Impact Assessment Report	Yes
Safety and Security			
<p>(13)(a) Community uses and works are designed and managed to ensure that users are aware of how to safely gain access to and move around and within the premises, with a particular emphasis on vulnerable groups, vulnerable elements and vulnerable settings</p> <p>(b) the design of the community use or works increase people's awareness of their environment and potential risks to their safety</p> <p>(c) Buildings, spaces and infrastructure are designed to assist legibility (ie. Orientation and navigation through a site or area), reducing the need to depend on signs in order for a person to find their way around</p> <p>(d) to (v)</p>		The proposed child care centre has been designed in accordance with best practice layout and accepted by the Department of Families. All safety issues for children, parents/guardians and staff are addressed in the design of the child care centre specific to the site.	Yes

Waste Storage and Removal			
<p>(14) Areas and receptacles for the storage and removal of waste are -</p> <p>(a) designed, located and screened, where necessary, so as not to present an unsightly appearance, when viewed from a street or public 'right-of-way'</p> <p>(b) designed and located to facilitate access by the Local Government's waste removal vehicles and</p> <p>(c) covered, contained and managed so as not to attract wildlife (particularly birds or bats), that are likely to affect the operational airspace within 8km of RAAF Base Amberley</p>		Household sized wheelie bins will be kept on the site out of visual sight and placed on the kerb for waste collection.	Yes
Natural Disasters			
<p>(15)(a) Key elements of community infrastructure, including emergency services, hospitals, nursing homes, child care facilities and stores of valuable records or items of historic and cultural significance (eg. Galleries, museums, libraries and archives) -</p> <p>(a) avoid areas prone to flooding, bushfires and landslip (See Part 11); and</p> <p>(b) are able to function effectively during and immediately after natural hazard events</p>	<p>(16)(a) Key elements of community infrastructure are sited and designed to avoid areas prone to flooding, bushfires and landslip as set out in the State Planning Policy and associated Guidelines for Natural Disaster Mitigation</p>	<p>The site is totally covered by the Q100 flood event and is free of the Q20 flood line by a distance of about 1 metre. The site is within the area of the backup flood water from the Brisbane River but is not likely to be subject to flash flooding. In the event of a potential backwater flood, it is expected that sufficient notice (approximately 12 to 24 hours notice) will be available to ensure proper evacuation of the facility.</p>	<p>Acceptable solution based on discussions with Senior Town Planner and Councillor Paul Tully.</p>

3.5.3 Parking Code (Part 12, Division 9)

The overall outcomes sought for the Parking Code are the following:

- (a) provide a safe environment for both pedestrians and vehicles;
- (b) reduce traffic congestion by ensuring adequate off street facilities are provided by developments which are likely to generate traffic;
- (c) ensure that high standards of practicability, personal safety and aesthetic value are incorporated into the construction of off street parking areas and loading and unloading facilities;
- (d) encourage integration with public transport facilities and non-motorised forms of transport and shared use of parking facilities in order to reduce the overall demand for parking facilities for private motor vehicles;
- (e) provide parking facilities for people with disabilities;
- (f) provide facilities for the parking of bicycles and motorcycles; and
- (g) protect the amenity of nearby users, particularly residents.

Table 4: Parking Code - Parking Design and Construction Standards

Site Considerations			
(a) Car parking is provided within the site of the development	31 (18 staff, 13 visitors) car parking spaces to be provided (refer to Appendix C – Traffic Impact Assessment Report)		Acceptable Solution
(b) Long term or all day car parking areas are generally located to the rear or side of the property as to as to be unobtrusive.	Staff (long term) parking is conveniently located alongside visitor parking between the two proposed buildings.		Acceptable Solution
(c) Entrances to car parks are readily identifiable and convenient.	The car park entrance is well located in terms of visibility and convenience off Spalding Crescent between the two proposed buildings.		Yes
(d) Car park site selection takes into account - (i) the type of road frontage...	The siting of the car park takes into account all appropriate considerations such as safety, noise, walking distance and multi-use opportunities.		Yes
General Layout of Parking Areas			
(a) The design provides uncongested traffic flow within the parking area, thereby reducing the potential for vehicle queuing off-site and conflict between vehicles (drivers) trying for the same parking space.	Refer to Appendix C – Traffic Impact Assessment Report		Yes

(b) The design minimises unnecessary areas for parking and manoeuvring, without compromising the safety and convenience of the carpark layout.	The design of the car park layout provides sufficient suitable area for parking and manoeuvring in terms of safety and convenience.	Yes
Design of Parking Modules, Circulation Roadways and Ramps		
Parking modules and associated circulation roadways and ramps are designed to – (a) move traffic to and from the road frontage...	The layout of the car parking area complies with the requirements of Australian Standard AS2890.1 Part 1: Off Street Carparking.	Yes
Access Driveways and Queuing Areas		
(a) Access driveways are located to minimise conflict and designed to operate efficiently and safely taking into account – (i) the size of the parking area...	Access driveways and queuing areas are located and designed in accordance with the provisions of Australian Standard AS2890.1 Part 1: Off Street Carparking	Yes
Public Safety		
The design, location and management of car parks promote public safety by: (a) being designed to optimise informal surveillance and to control inappropriate access (continued).	Informal surveillance is provided from the windows of the adjoining proposed buildings that overlook the carpark area.	Yes
Separation of Pedestrian and Vehicular Circulation		
(a) Pedestrian routes are separated from vehicular circulation to allow protected access for pedestrians via the shortest practical route from the parking area to the use.	Pedestrian access from car park to building entrance is via the car park driveway except for parking bays 19 to 24 which are provided with a pedestrian path between the building and carpark are to the entrance of Building B.	Acceptable Solution
(b) Pedestrian access does not pass through commercial or refuse vehicle reversing or loading areas.	Pedestrian access does not pass through such an area. Servicing of the child care centre is proposed to occur on-street during the regular refuse collection cycle.	Yes
(c) Protection measures for pedestrians are located in areas of high pedestrian/vehicular conflict or high speed (continued).	The car park is not considered to be an area of high pedestrian / vehicular conflict.	Not applicable

Parking Spaces for Motorcycles		
Motorcycle parking spaces have adequate areas and dimensions to meet user needs.	Specific provision of parking for motorcycles has not been provided. It is expected that existing car parking spaces will be adequate to meet the needs of these users.	Acceptable solution
Marking of Spaces		
(a) Parking areas are marked so as to clearly delineate individual parking spaces.	Parking areas are to be permanently line marked in accordance with the provisions of Australian Standard AS2890.1 Part 1: Off Street Carparking and according to plans provided (refer to Appendix B)	Yes
(b) Visitor, disabled, motorcycle and bicycle parking spaces are clearly marked, and their location clearly sign posted.	Two disabled parking spaces will be clearly marked.	Yes
Parts of the Parking Code not addressed in this report		
<ul style="list-style-type: none"> • Commercial Vehicle Facilities and Service Areas • Parking Structures (including enclosed garages and multi-level car parks) • Tandem and Stacked Parking • Parcel Pick-up Areas • Trolley Bays • Speed Humps • Signage • Carpark Lighting • Landscaping • Surface Treatment of Parking Areas • Drainage • Miscellaneous • Parking Spaces for People with Disabilities • Bicycle Parking 	Refer to Appendix C – Traffic Impact Assessment Report	Yes

Parking Demand Standards (section 12.9.5 of the Ipswich Planning Scheme)

Table 12.9.1 of the Ipswich Planning Scheme identifies that the car parking provision for a Community Use (Child Care Centre) is 1 space per staff member (FTE = full time employee) and 1 space per 8 children. Therefore, the requirement for the proposed development, on the basis of 119 children and 18 staff (FTE) is for 33 spaces. It is proposed that the development will have 31 spaces, which is 2 spaces below the requirement of the Parking Code. However, as noted in section 12.9.5a, Council may require the construction of a lesser number of parking spaces if it considers that such modification or dispensation is justified having regard to the particular circumstances. A justification for the relaxation of this Code requirement is given on page 6 of the Traffic Impact Assessment Report (refer to Appendix C).

In summary, the proposal is considered to comply with the relevant specific outcomes within this code and is therefore within the reasonable expectations of development in this locality.

4.0 CONCLUSION

The proposed development is defined by the *Ipswich Planning Scheme* as a 'child care centre' and means the use of premises for the purpose of minding or caring, but not residence, of children for fee or reward. The application for a Material Change of Use, is subject to code assessment, and is consistent with the intent of the Residential Medium Density (RM1) designation under the Ipswich Planning Scheme and other relevant plans and policies.

The proposed development complies with the applicable code (Community Use Code), relevant constraint codes and is considered to be an appropriate development for the site in use, scale and character. It is therefore recommended that Ipswich City Council approve this application subject to reasonable and relevant conditions.



Town Planner



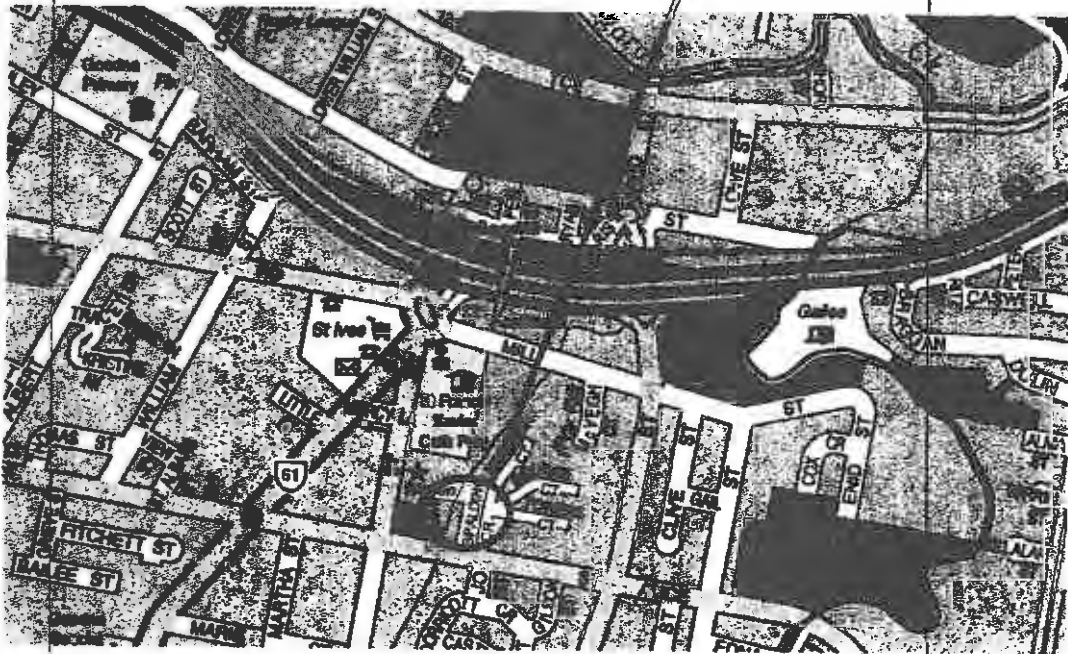
Senior Town Planner

JB Goodwin Midson & Partners
(March, 2005)

APPENDIX A

Site Locality Map

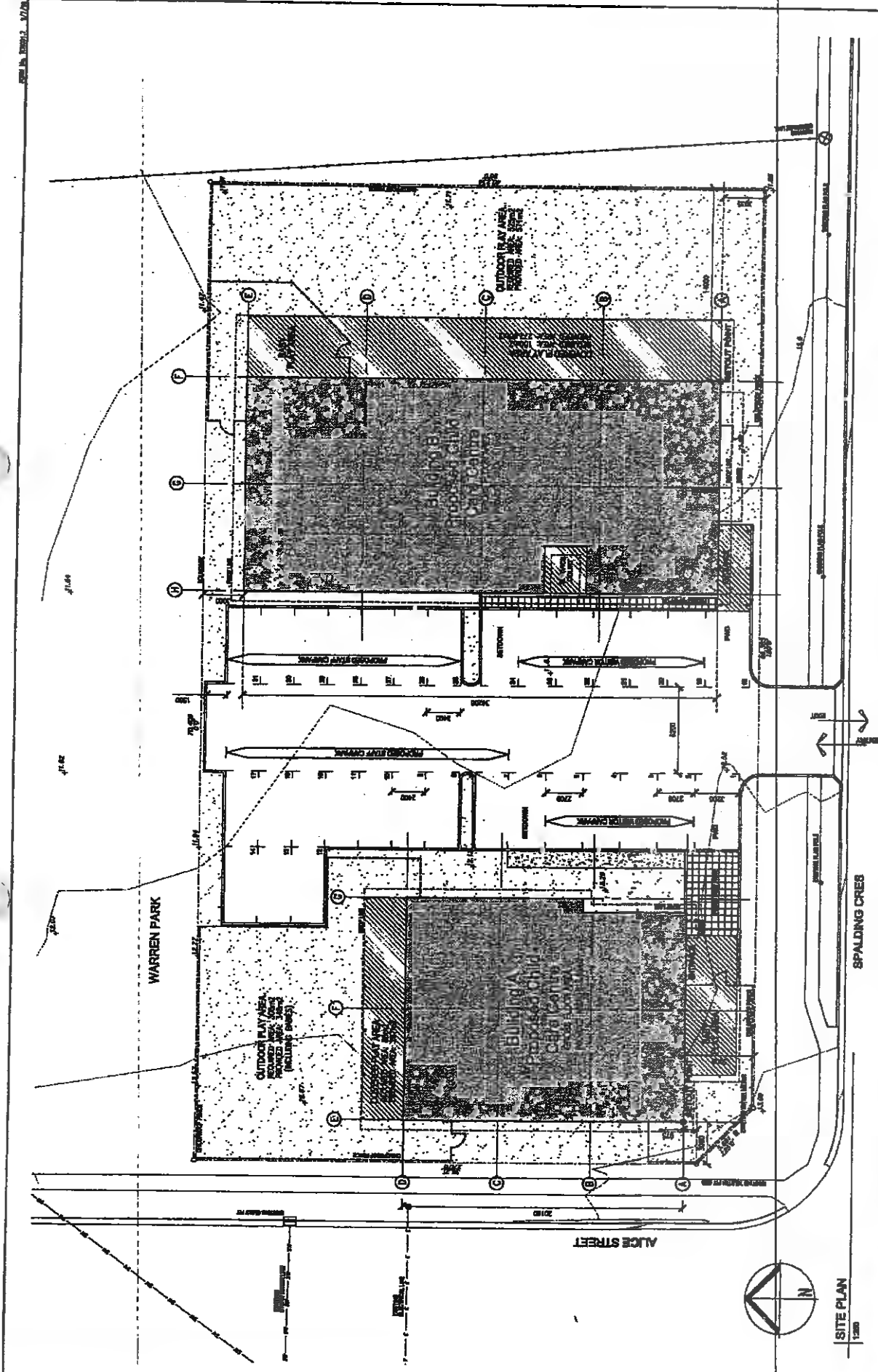
SITE OF PROPOSED CHILD CARE CENTRE AT 45 ALICE STREET, GOODNA



(Source: Map reproduced with permission of UBD. Copyright Universal Press Pty Ltd. DG 03/02)

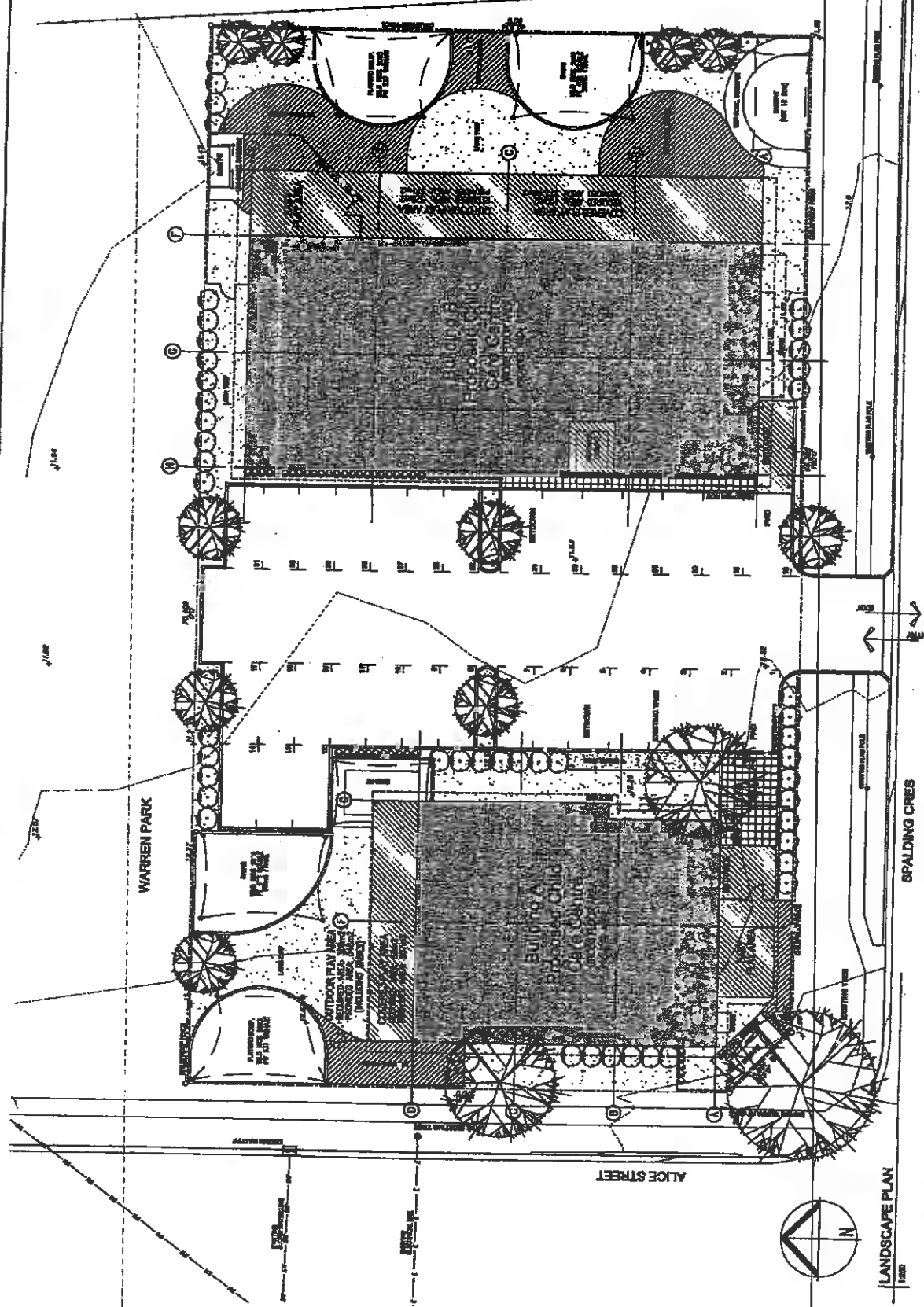
APPENDIX B

Site & Proposal Plans

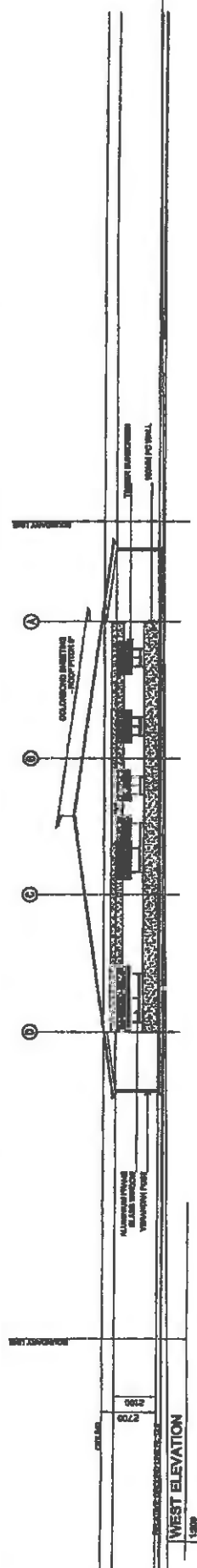
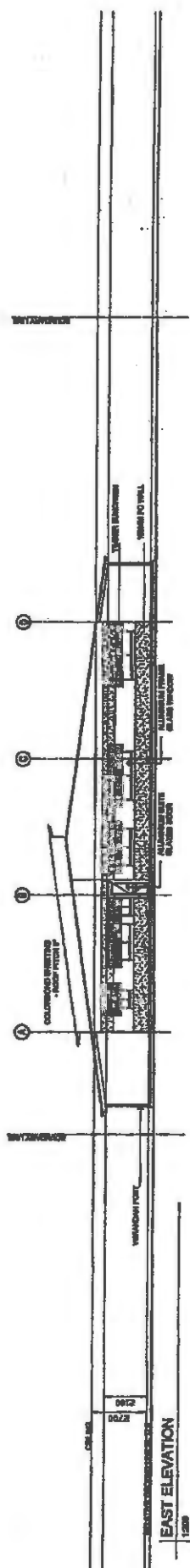
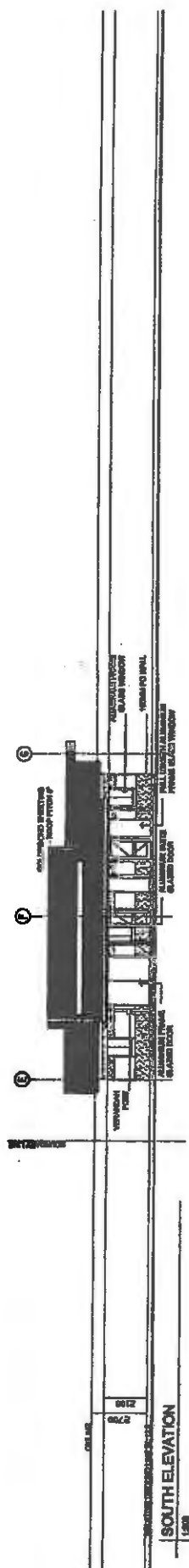
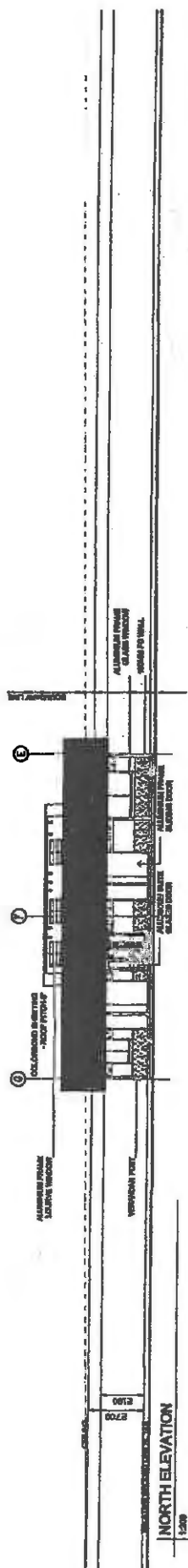


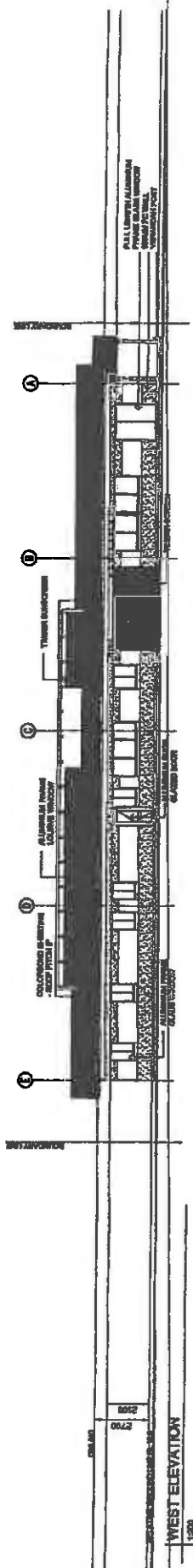
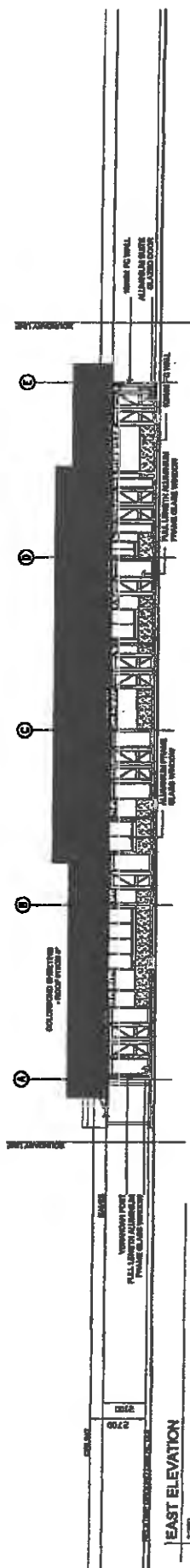
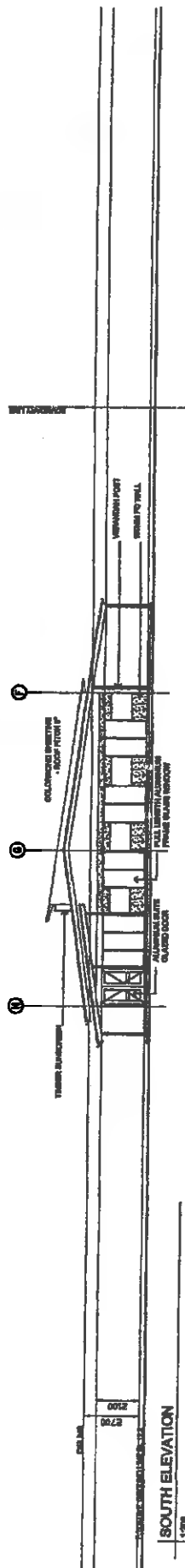
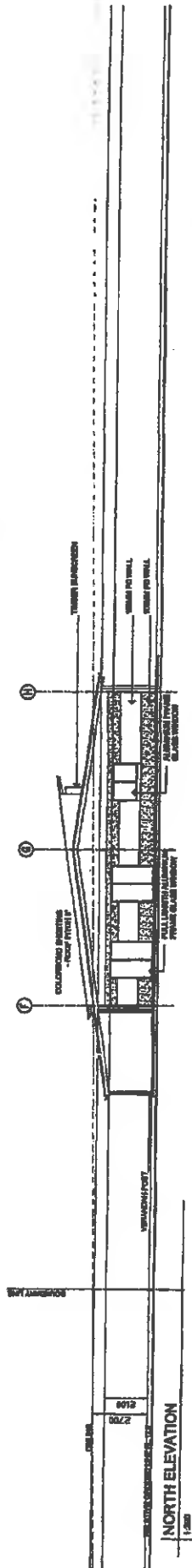
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		REVISIONS NO. DATE COMMENTS		DESIGN DESIGNED: [] CHECKED: [] APPROVED: []							

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PRELIMINARY												5518		A07 A		5518		A07 A	

APPENDIX C

Traffic Impact Assessment Report



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DATE 10 February, 2005
CONTACT [REDACTED]

PROPOSED CHILD CARE CENTRE
ALICE STREET, GOODNA
TRAFFIC IMPACT ASSESSMENT
REPORT

For
[REDACTED]



LAMBERT & REHBEIN
ENGINEERS • MANAGERS • SCIENTISTS

Document Control Page

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Goodna Child Care Centre
Traffic Impact Assessment Report



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1.0 INTRODUCTION

Lambert and Rehbein was commissioned by [REDACTED] to undertake a traffic impact assessment of a proposed child care facility at 45 Alice Street, Goodna.

This proposal is for the development of a child care facility incorporating two buildings, with a total of 119 child places. The development site is located on a parcel of land that is currently vacant. This report has been undertaken to assess the potential impacts of the proposed development on the external road network.



2.0 CONTEXT OF THE DEVELOPMENT

This section of the report describes the nature of the existing development site, the surrounding area, including land uses and describes the extent of the existing transport system.

2.1 Development Site

The development site is located at 45 Alice Street, Goodna. The site is currently vacant and is located directly adjacent to the Spalding Crescent / Alice Street priority intersection and has frontages to both streets. The existing site has a single unsealed access driveway from Alice Street which is located approximately 5m from the Spalding Crescent Intersection. There is also an existing 1m wide sealed footpath that runs parallel to Spalding Crescent along the entire length of the site frontage.

The proposed development site is located in a predominantly residential environment with both detached and semi detached dwellings in the area. To the north on Spalding Crescent there are three townhouse developments incorporating a total of 74 townhouses. It is noted that to the north west of the proposed development site is the St Ives retail precinct. It is also noted that there are two schools in the vicinity of the subject development site, the Goodna Special School and the St Francis Xavier Catholic Primary School.

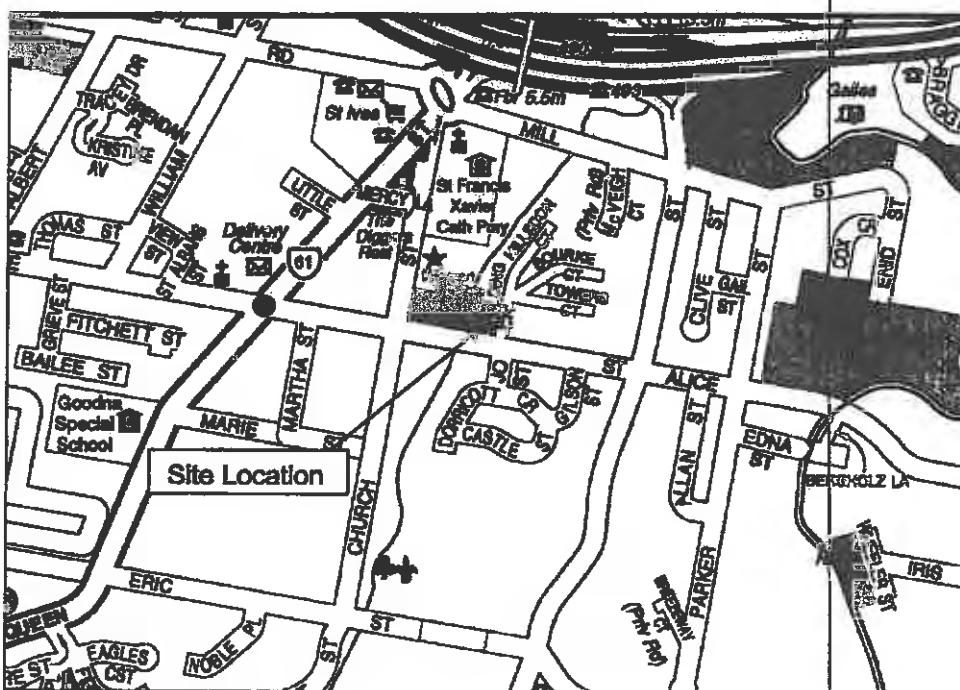


Figure 1 - Site Locality Plan

2.2 Adjacent Road Network

Adjacent to the southern boundary of the subject development site is Alice Street which is designated as a distributor within Ipswich City Council's road hierarchy.



Alice Street is currently at two lane road with a width of approximately 10m, incorporating one through lane in either direction (3m in width) and a non trafficable lane (2m in width) on both sides of the street. There is no posted speed limit in the vicinity of the subject development in Alice Street.

Adjacent to the eastern boundary of the site is Spalding Crescent, which is designated as a local access street within Council's road hierarchy. Spalding Crescent is currently a two lane street with no line marking approximately 6m in width. A paved entry treatment is currently located in Spalding Crescent adjacent to Alice Street.

Spalding Crescent and Alice Street intersect at a priority intersection with Jo Street forming the fourth leg of the intersection. We note that Jo Street and Spalding Street are not directly adjacent to each other, however for the purpose of the traffic analysis undertaken later in this report it has been assumed that the intersection is a four way intersection. Alice Street currently has priority over both Spalding Crescent and Jo Street. There are currently no turning pockets on Alice Street for either Jo Street or Spalding Crescent. A traffic count at the aforementioned intersection was undertaken on Thursday 27 January 2005 during the AM and PM peak periods.

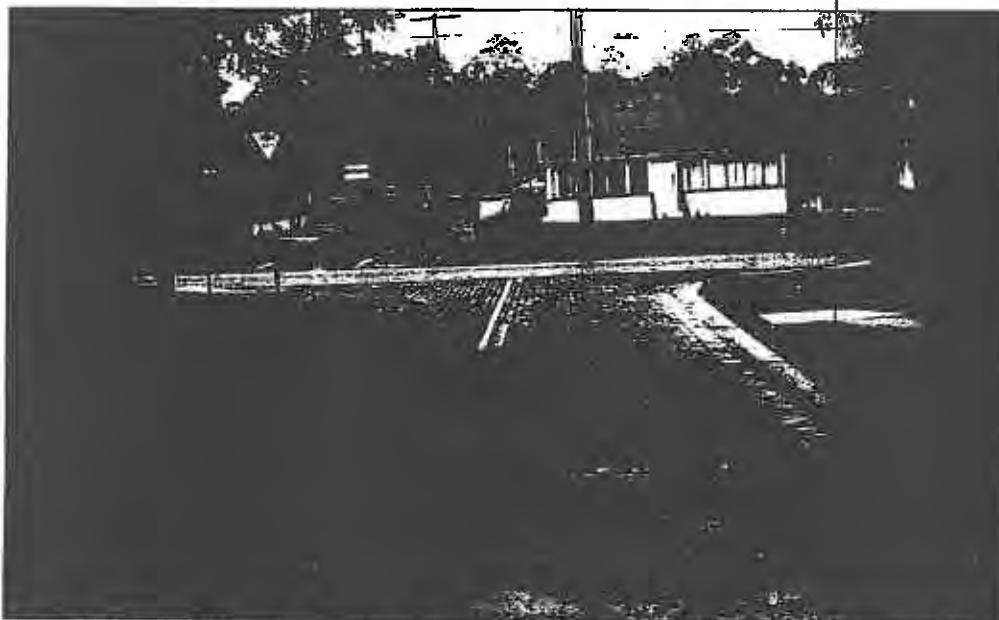


Figure 2 – View southbound on Spalding Crescent to the Spalding Crescent / Alice Street / Jo Street intersection

Site investigations have indicated that Jo Street currently services a limited catchment of residential dwellings and has a carriageway width of approximately 7m.

2.3 Public Transport Services

Approximately 100m to the east of the propose development site on Alice Street there are hail and ride bus stops on either side of the road servicing buses travelling to the east and west of the proposed development.



It is noted that the Goodna train station is located within walking distance to the north of the proposed development. A review of the Brisbane Public Transport Directory has also indicated that a private bus route operated by Westside buses travels along Smiths Road and Mills Road which is within walking distance from the proposed development. This bus route provides passengers with access to other local train stations and Brisbane City Council bus routes to the east of the proposed development.

2.4 Future Road Network Upgrades

Discussions with Council Officer, Mr Nick Prasser have indicated that there are no planned road works in the vicinity of the proposed child care centre on Alice Street



3.0 DETAILS OF THE PROPOSED DEVELOPMENT

This section of the report discusses the details of the proposed development, the proposed internal arrangements including parking, the proposed access arrangements and the traffic generating characteristics of the proposed development.

3.1 Proposed Development

The proposal is for the development of a child care facility to be constructed on the subject site that is currently vacant. The child care facility is proposed to cater for 119 children on a daily basis (Monday to Friday) and approximately 18 staff. It is our understanding that the standard daily hours of operation will be between 6:00am and 6:30pm.

The child care facility is proposed to incorporate two child care centre buildings with indoor and outdoor, covered and uncovered play areas separated by a formalised car parking area with direct access off Spalding Crescent. The proposed layout of the child care facility is shown on the layout plans in Appendix A by Tabletop Architects.

3.2 Access and Internal Arrangements

As a part of the proposed development of the child care facility, 31 car parking spaces will be provided in the car park as shown on the aforementioned plans. It is proposed that 18 of these car parks will be allocated for staff parking and the remaining 13 will be for allocated for visitors. We have assessed the layout plans for the proposed child care centre and note that the staff parking spaces will be provided with space lengths of 5.4m and widths of 2.4m. The visitor parking spaces are proposed to have dimensions of 5.4m long and 2.7m wide.

The parking aisle within the car park also conforms to the Australian Standard 2890.1 Off-Street Car Parking with a width of 6.2m. The majority of the parking bays would be considered as low/medium turnover as they would be allocated as staff parking.

Access to the proposed car parks is to be provided via Spalding Crescent in the form of standard driveway crossover with a width of 6.2m and this is considered to be in accordance with the requirements of Australian Standard 2890.1 Off-Street Car Parking. The proposed driveway replaces the existing crossover on Alice Street which is considered to be too close to the Spalding Street / Alice Street / Jo Street intersection.

The proposed access arrangements are considered to provide a safe and efficient arrangement for all vehicles entering or exiting the subject development site. It is considered that the proposed access is located a sufficient distance from the Alice Street intersection. It is noted that the existing site access to Alice Street is proposed to be closed.

Servicing of the child care centre is proposed to occur on-street during the regular refuse collection cycle.



Parking Requirements:

Table 12.9.1 in the Ipswich City Council planning scheme specifies that for a childcare centre, 1 space per full time employee and 1 space per eight children is required. Therefore, the requirements for the proposed development, on the basis of 119 children and 18 full time staff are:

- Number of staff car spaces required - 18 car spaces
- Number of visitor car spaces required - 15 car spaces

We note that the child care facility is two visitor parking spaces below the requirement of the planning scheme, however the amount of parking is considered appropriate for the following reasons:

- Due to the developments proximity to public transport it is reasonable to assume that some visitors and staff of the child care facility would utilise the existing bus stops in Alice Street.
- It is also considered reasonable to assume that some staff would utilise public transport, be dropped off or would car pool. As such the provision of 1 space per staff member would not be required.
- From our experience in working on numerous other child care centre development it is our understanding that the staff working at the centres work in shifts and that the overlap period between these shifts is often outside the times of peak parking demands. We believe that the staff parking supply (namely 18 spaces) would be unlikely to be fully utilised during peak drop-off and pick-up times and that this would provide additional parking for these periods. This surplus would ensure that excess parking would not occur on-street.
- Due to the nature of child care centres it is expected that the duration of stay for each vehicle in the car park would be between 10 and 15 minutes. Thus, with 13 parking spaces allocated for set down and pick up of children it is estimated that the effective capacity of the car park is between 52 and 78 vehicles per peak hour. With the expected traffic generation of the site during the AM peak hour being 60 vehicles entering and 60 vehicles exiting the development it is considered that there are proposed parking provisions on the site are adequate.
- While not encouraged and considered unlikely, we consider that should up to 2 vehicles park on-street that this would not necessarily have any significant implications for the safe and efficient operation of the road network. Currently Alice Street has kerbside non-trafficable lanes that may cater for any parking overspill. It is considered that the current traffic volumes on Alice Street are not of significant levels and limited on-street parking would not create unsatisfactory operation.

On the basis of the information above we consider that the proposed parking system arrangements are adequate and would not result in any adverse impacts on the local road system. We believe that the parking provisions would be adequate to cater for the potential peak parking demands and as such the proposal would not result in significant amounts of parking that remained dormant for the majority of the time.

3.3 Traffic Generation and Distribution

Appendix 2A of Chapter 2 of Main Roads, Road Planning and Design Manual suggests that for child care centres a daily trip generation rate of 4 trips per child and a peak hour trip generation rate of 1 per child is appropriate. The basis of the proposed child care centre is for approximately 119 children and 18 staff. It is assumed that the staff would arrive/depart outside the peak periods.

On the basis of the above assumptions the following is the estimated trip making to/from the site in the weekday peak periods:

- Total Children - 119
- Trip/Child - 4 daily trips per child
1 trip per child/peak hour
- Total Generation - 476 Vehicle movements per day
119 vehicle movements in each of the peak periods (60 entering / 60 exiting)

Following discussions with Council Officers and a review of the surrounding residential catchment the following distribution of traffic was assumed for all traffic associated with the proposed child care centre:

AM & PM Peak

50% (60 vehicles) will access the site to/from the west of the site on Alice Street

50% (60 vehicles) will access the site to/from the east of the site on Alice Street

Traffic flow diagrams for the Spalding Crescent / Alice Street / Jo Street intersection are attached in Appendix B.

Due to the nature of child care utilisation it could also be assumed that there will be a significant amount of linked/diverted trip making with parents dropping children at the child care centre en-route to employment destinations or schools in the area. We have, however, again taken a conservative approach to this consideration and have assumed that all traffic generated by the child care centre is over and above the existing background traffic. This will generate a worst possible case.

3.4 Design Traffic Scenarios

In assessing external impacts associated with the proposed development, detailed analysis of the following signalised intersection was undertaken:

- Spalding Crescent / Alice Street / Jo Street intersection

In assessing the potential impacts of the proposed child care centre on the surrounding road network the following traffic flow scenarios were adopted:

- 2005 AM & PM Peak (Background Traffic only)
- 2005 AM & PM Peak (Background traffic + Proposed Development Traffic)
- 2015 AM & PM Peak (Background Traffic only)
- 2015 AM & PM Peak (Background traffic + Proposed Development Traffic)



Discussions with Council officers have indicated that a traffic growth rate of 4% per annum would be appropriate for the calculation of 10 year design horizon traffic level. We have adopted this growth rate for the purposes of this analysis. It is also assumed that, due to the developed nature of the catchment which is serviced by Spalding Crescent that there is no growth of vehicles on the Spalding Crescent approach to the subject intersection. In establishing the future year design volumes, the development generated traffic was added to the estimated 2015 background traffic flows.

The traffic flow diagrams for each of the analysis scenarios identified above are shown in Appendix B.

4.0 IMPACT ASSESSMENT

The impact of the proposed child care centre development on the intersection identified in Section 3 was assessed using standard "gap acceptance" parameters as described in AUSTRROADS Part 5 – Intersections at Grade. The assessment included the analysis of the intersection using the intersection analysis package aaSIDRA2.1. A summary of the aaSIDRA output tables is shown in Appendix C.

4.1 Existing Year 2005 – Background Traffic

The operation of the 2005 traffic flows was assessed to establish the baseline operation for the intersection. The intersection was analysed using the existing geometry. The results of the analysis of this intersection are shown in Table 4-1 below.

Table 4-1
Spalding Crescent / Alice Street / Jo Street
Existing Year 2005 - Background Traffic Only

Intersection - Spalding Crescent / Alice Street / Jo Street	Degree of Saturation (%)	Mean Maximum Queue (m)	Average Delay (secs)	LOS
AM Peak Period				
Jo Street	0.016	0	11.2	B
Alice Street (east)	0.188	12	1.9	A
Spalding Crescent	0.040	1	13.1	B
Alice Street (west)	0.179	13	2.1	A
PM Peak Period				
Jo Street	0.14	0	11.7	B
Alice Street (east)	0.191	14	1.7	A
Spalding Crescent	0.024	1	10.4	B
Alice Street (west)	0.158	12	2.8	A

The results indicate that the operation of this intersection is theoretically satisfactory. The results indicate that the intersection of Spalding Crescent, Alice Street and Jo Street operates with a high level of service, and vehicles experience minimal delays associated with the operation of the intersection in its current form with existing traffic volumes.

4.2 Existing Year 2005 – Design Traffic

The impact of the proposed development on the surrounding road network was assessed for the key intersection using the "existing year" (2005) with development scenario. In calculating the traffic for this scenario the development generated traffic was simply added to the background traffic flows. The traffic flow diagram for this scenario is also shown in Appendix B. The subject intersection was assessed with the existing layout and the results of the analysis of the intersection are shown in Table 4-2 below:



Table 4-2
Spalding Crescent / Alice Street / Jo Street
Existing Year 2005 - Background + Development Traffic

Intersection - Spalding Crescent / Alice Street / Jo Street	Degree of Saturation (%)	Mean Maximum Queue (m)	Average Delay (secs)	LOS
AM Peak Period				
Jo Street	0.18	1	11.5	B
Alice Street (east)	0.199	14	2.9	A
Spalding Crescent	0.186	6	15.1	C
Alice Street (west)	0.195	14	2.7	A
PM Peak Period				
Jo Street	0.14	0	12.1	B
Alice Street (east)	0.220	16	2.6	A
Spalding Crescent	0.165	5	14.1	B
Alice Street (west)	0.174	13	3.3	A

The results shown in the above table clearly demonstrate that the development generated traffic would theoretically have little impact on the operation of the Spalding Crescent / Alice Street / Jo Street intersection. The development traffic would theoretically result in minimal increases in delays and queues. On this basis it is our opinion that the development generated traffic would not result in a need to undertake any physical improvement works at the intersection.

4.3 Future Year 2015 – Background Traffic

The operation of the intersection with 2015 traffic flows was modelled to consider performance without the subject development in place. As discussed previously, the traffic volumes at the intersection were derived by applying a 4% per annum growth rate to the 2005 turning movements. The intersection was again analysed using the existing layout. The results of the analysis of this intersection are shown in Table 4-3 below.

Table 4-3
Spalding Crescent / Alice Street / Jo Street
Future Year 2015 - Background Traffic Only

Intersection - Spalding Crescent / Alice Street / Jo Street	Degree of Saturation (%)	Mean Maximum Queue (m)	Average Delay (secs)	LOS
AM Peak Period				
Jo Street	0.029	1	13.5	B
Alice Street (east)	0.249	23	3.5	A
Spalding Crescent	0.068	2	18.4	C
Alice Street (west)	0.263	24	3.8	A
PM Peak Period				
Jo Street	0.32	1	15.7	C
Alice Street (east)	0.282	25	3.0	A
Spalding Crescent	0.033	1	12.4	B
Alice Street (west)	0.234	22	4.4	A

The results of the future year analysis show that the intersection would theoretically continue to experience no operational difficulties for the 2015 background traffic scenario. There would still be spare capacity and the delays would not be significant.



4.4 Future Year 2015 – Design Traffic

The impact of the proposed development on the surrounding road network was assessed for the key intersection using the "future year" (2015) with development scenario. In calculating the traffic for this scenario the development generated traffic was simply added to the background traffic flows. The traffic flow diagram for this scenario is also shown in Appendix B. The subject intersection was assessed with the existing layout and the results of the analysis of the intersection are shown in Table 4-4 below.

Table 4-4
Spalding Crescent / Alice Street / Jo Street
Future Year 2015 - Background + Development Traffic

Intersection - Spalding Crescent / Alice Street / Jo Street	Degree of Saturation (%)	Mean Maximum Queue (m)	Average Delay (secs)	LOS
AM Peak Period				
Jo Street	0.031	1	13.9	B
Alice Street (east)	0.287	28	4.7	A
Spalding Crescent	0.318	11	24.4	C
Alice Street (west)	0.280	28	4.2	A
PM Peak Period				
Jo Street	0.033	1	16.1	C
Alice Street (east)	0.319	31	4.1	A
Spalding Crescent	0.270	9	21.2	C
Alice Street (west)	0.250	24	5.0	A

The results shown in the previous table clearly show that the development generated traffic would theoretically have little impact on the operation of the Spalding Crescent / Alice Street / Jo Street intersection. The development traffic would theoretically result in insignificant increases in delays and queues. On this basis it is our opinion that the development generated traffic would not result in a need to undertake any physical improvement works at the intersection.



5.0 SUMMARY AND CONCLUSIONS

The proposal is for the development of a child care facility located at 45 Alice Street, Goodna. The development is to occupy the site that is currently vacant with an existing unsealed driveway from Alice Street which would be eliminated as part of this proposal. The car parking area associated with the proposed child care facility would be accessed via a driveway from Spalding Crescent.

i. note that the layout of this car parking area is considered acceptable and complies with the requirements of AS2890.1.

It is considered that the access arrangements as proposed would be adequate and would not have any adverse impacts on the general traffic in the local area. It is also considered that access to Spalding Crescent would provide safe and efficient access for all vehicles using the subject development. The separation of this access from the adjacent intersection is considered acceptable. This assessment of the potential impacts of the subject development has been based on assumptions that represent a "worst case" scenario for the development. Even though this is the case the results of our assessment have clearly indicated that the impacts of this development would be insignificant. We note that the layout of this car parking area is considered acceptable and complies with the requirements of Australian Standard AS2890.1.

The traffic generation and distribution assumptions made within this report conclude that the maximum additional traffic associated with the proposed development at the Spalding Crescent / Alice Street / Jo Street Intersection is 60 vehicles per peak hour. It is considered that the addition of a maximum of one vehicle approximately every two minutes to any turning movement at the subject intersection during the peak hours would have an insignificant impact on the operation external road network in the vicinity of the subject development site. The intersection analysis undertaken indicates that the addition of development traffic will theoretically result in insignificant increases to queuing and delays at the aforementioned intersection. The future operation of the intersection was also analysed and the results indicate that the intersection will be operating with acceptable levels of service in the 2015 with development scenario.

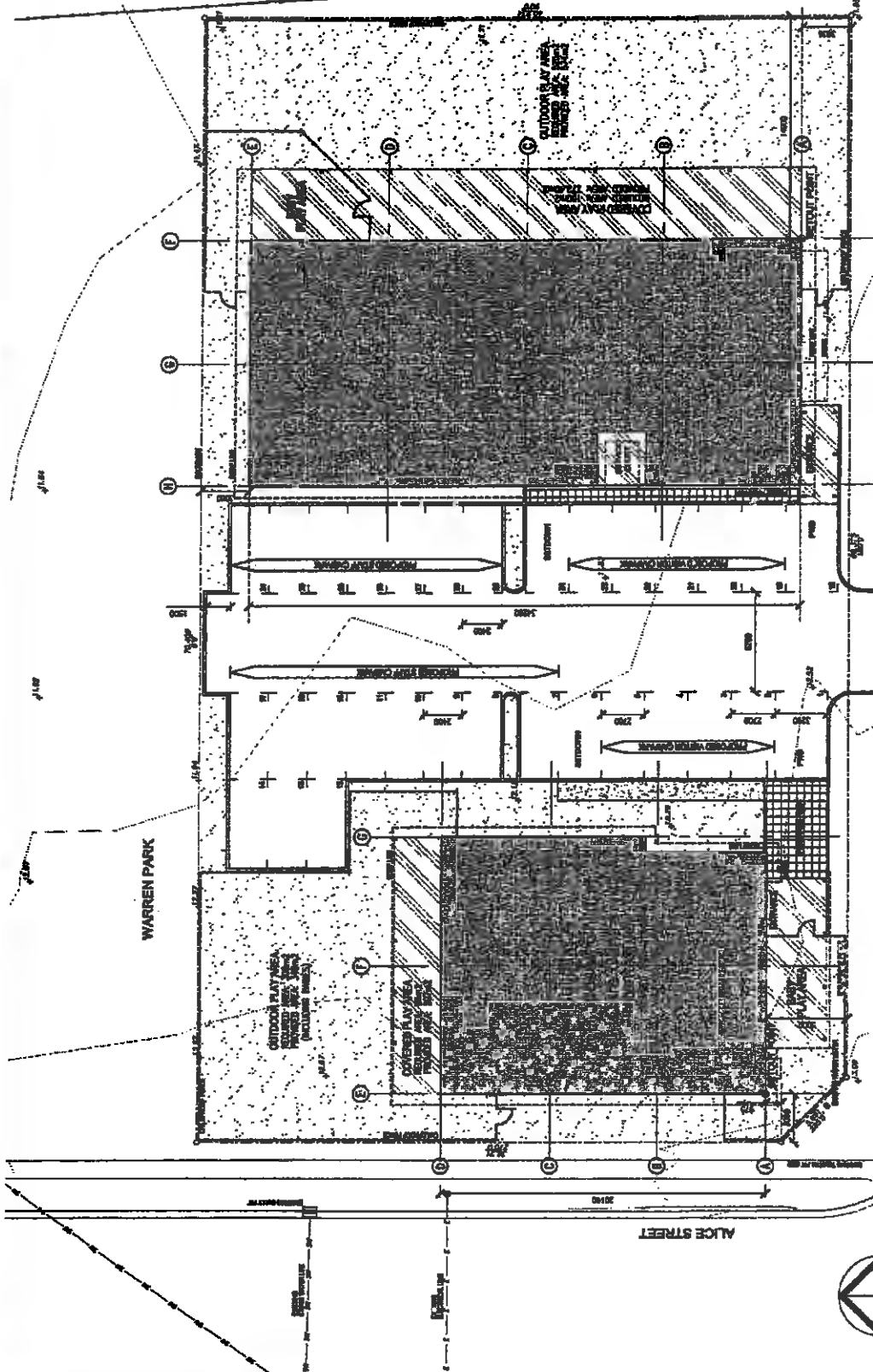
As such it is considered that the proposed development will not have a significant impact of the operation of the external road network in the vicinity of the proposed development.

This assessment of the potential impacts of the subject development has been based on assumptions that represent a "worst case" scenario for the development. Even though this is the case, the results of our assessment have clearly indicated that the impacts of this development would be insignificant.

We consider that on the basis of our assessment there are no traffic related grounds that would preclude approval of the application and that no external works would be required.

Appendix A

Layout Plans



SITE PLAN

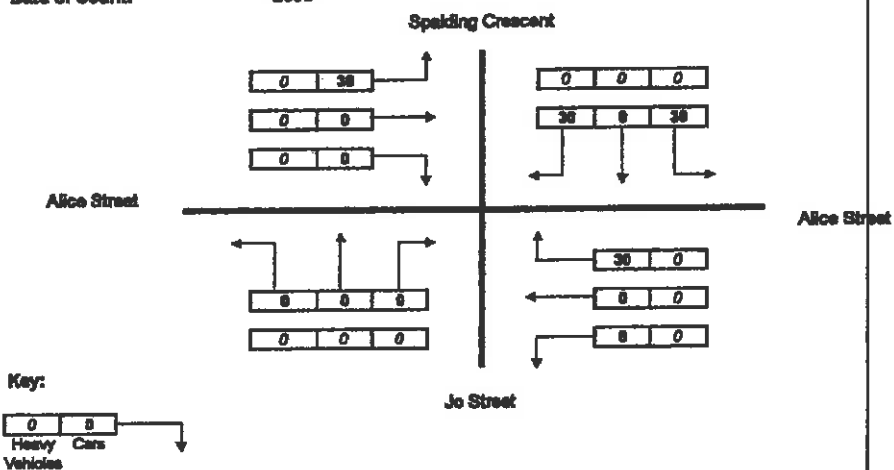
SPALDING CRES

<p>CLIENT NAME</p> <p>PROPOSED 75 + 44 PLACE CHILDCARE CENTRE</p> <p>ALICE ST - GOODNA</p>	<p>PROJECT SCHEDULE</p> <table border="1"> <tr> <th>DATE</th> <th>REVISION</th> <th>CLP</th> </tr> <tr> <td></td> <td>ISSUED</td> <td>2000</td> </tr> <tr> <td></td> <td>REVISED</td> <td>LAM/CPD</td> </tr> </table>		DATE	REVISION	CLP		ISSUED	2000		REVISED	LAM/CPD	<p>TABLETOP</p> <p>kdw</p> <p>↑</p> <p>REVISIONS</p> <p>1. REVISION: CHILDCARE CENTRE</p> <p>2. REVISION: CHILDCARE CENTRE</p> <p>3. REVISION: CHILDCARE CENTRE</p>	<p>PROJECT NO.</p> <p>5518</p>	<p>SCALE</p> <p>1:200</p>
	DATE	REVISION	CLP											
	ISSUED	2000												
	REVISED	LAM/CPD												
<p>DATE</p> <p>10/10/2017</p>														
<p>PROJECT NAME</p> <p>PROPOSED 75 + 44 PLACE CHILDCARE CENTRE</p>		<p>PROJECT NO.</p> <p>5518</p>		<p>SCALE</p> <p>1:200</p>										
<p>PROJECT NO.</p> <p>5518</p>		<p>PROJECT NO.</p> <p>5518</p>		<p>SCALE</p> <p>1:200</p>										
<p>PROJECT NO.</p> <p>5518</p>		<p>PROJECT NO.</p> <p>5518</p>		<p>SCALE</p> <p>1:200</p>										

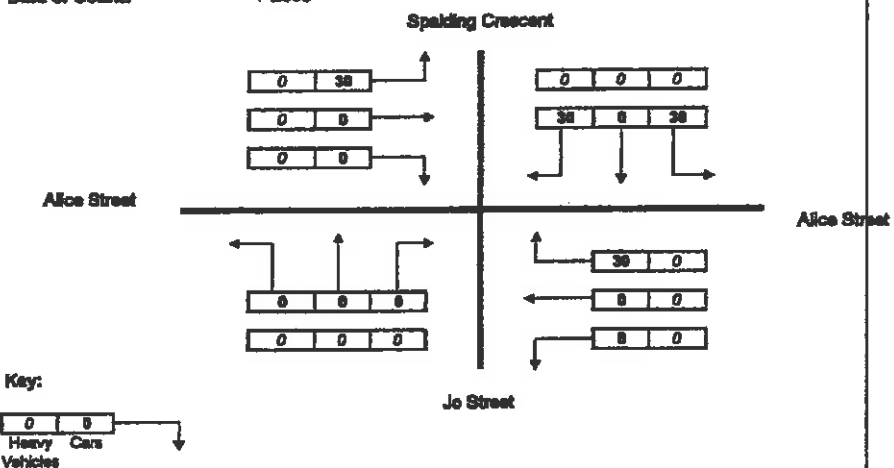
Appendix B

Traffic Flow Diagrams

AM Peak 7:00 to 8:00
Date of Count: 2005



Pm Peak 16:00 to 17:00
Date of Count: 2005



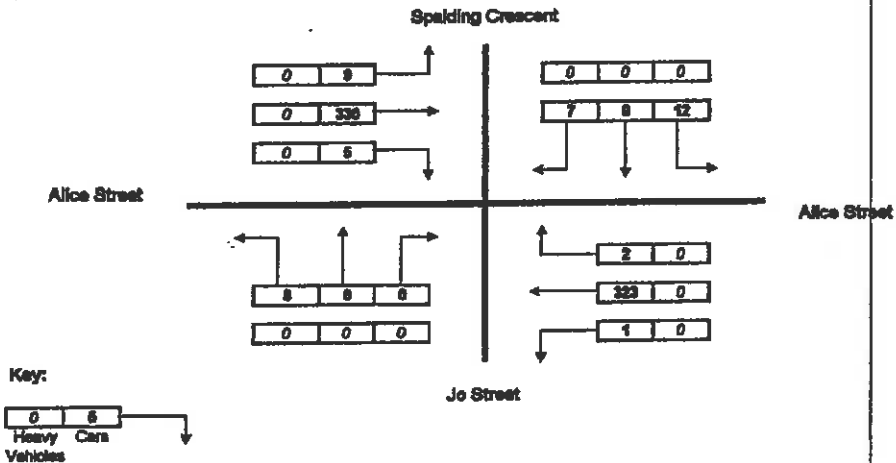
Development Traffic Only
Spalding Crescent / Alice Street / Jo Street Intersection
Figure B1



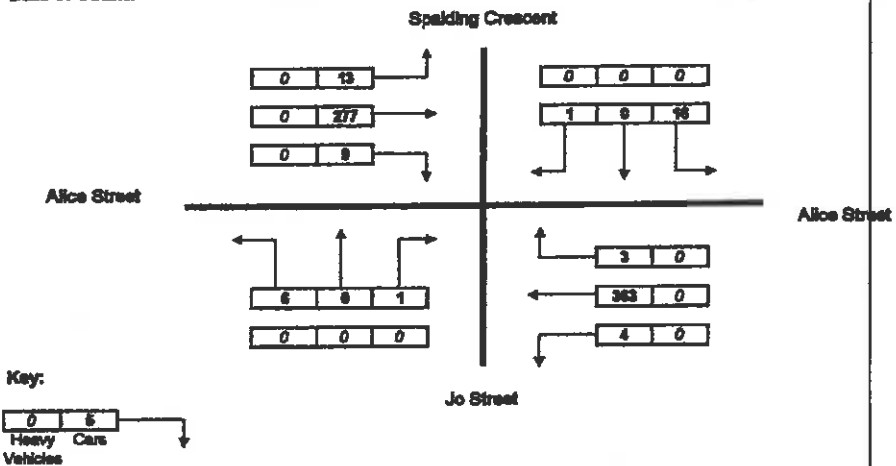
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Project Name: Alice Street Child Care Centre
Project Number: B04634

AM Peak 7:00 to 8:00
Date of Count: 2005



Pm Peak 16:00 to 17:00
Date of Count: 2005



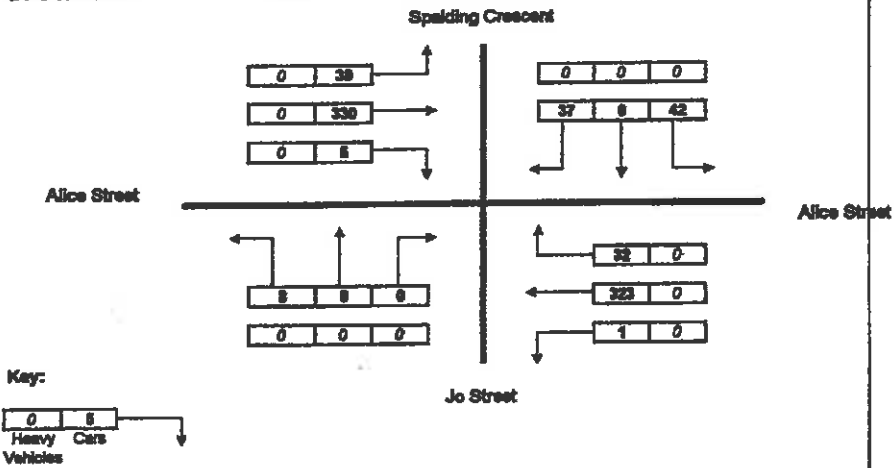
2005 Background Traffic Only
Spalding Crescent / Alice Street / Jo Street Intersection
Figure B2



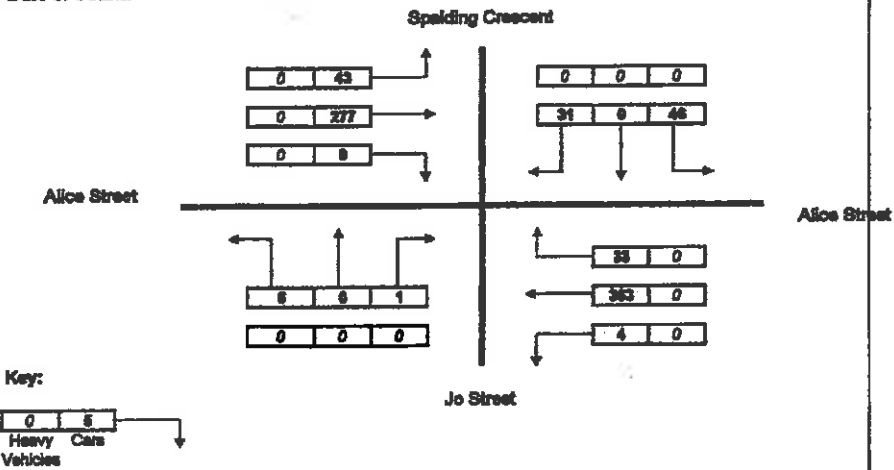
LAMBERT & REHBEIN
ENGINEERS • MANAGERS • SCIENTISTS

Project Name: Alice Street Child Care Centre
Project Number: B04634

AM Peak 7:00 to 8:00
Date of Count: 2005



Pm Peak 16:00 to 17:00
Date of Count: 2005



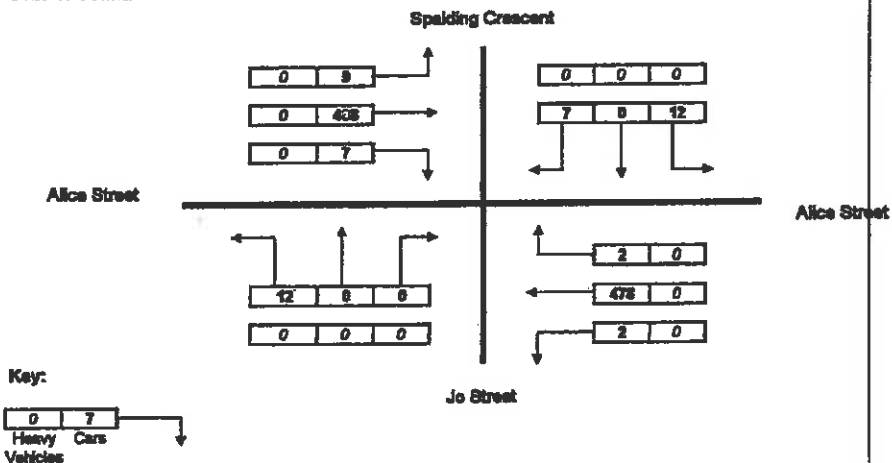
2005 Background + Development Traffic
 Spalding Crescent / Alice Street / Jo Street Intersection
 Figure B3



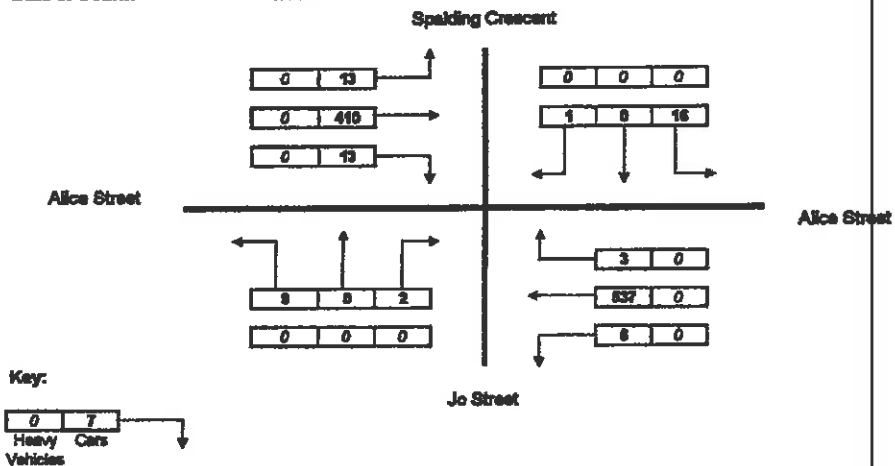
LAMBERT & REHBEIN
 ENGINEERS • MANAGERS • SCIENTISTS

Project Name: Alice Street Child Care Centre
 Project Number: B04634

AM Peak 7:00 to 8:00
Date of Count: 2015



Pm Peak 16:00 to 17:00
Date of Count: 2015



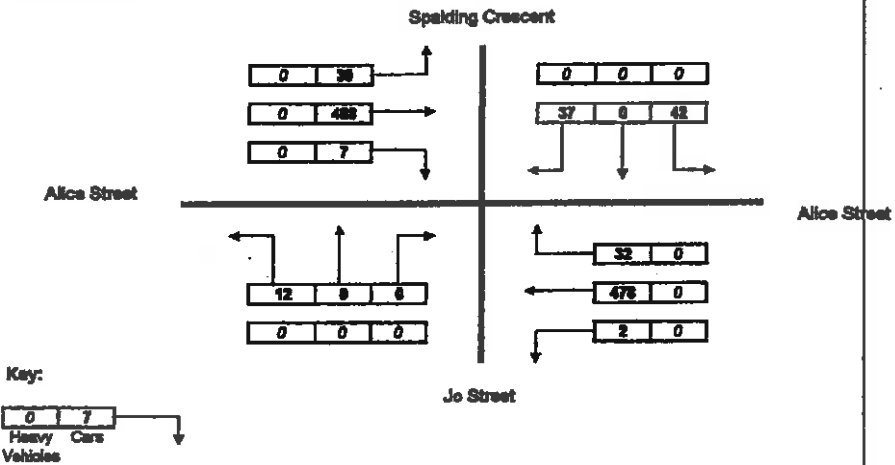
2015 Background Traffic Only
Spalding Crescent / Alice Street / Jo Street Intersection
Figure B4



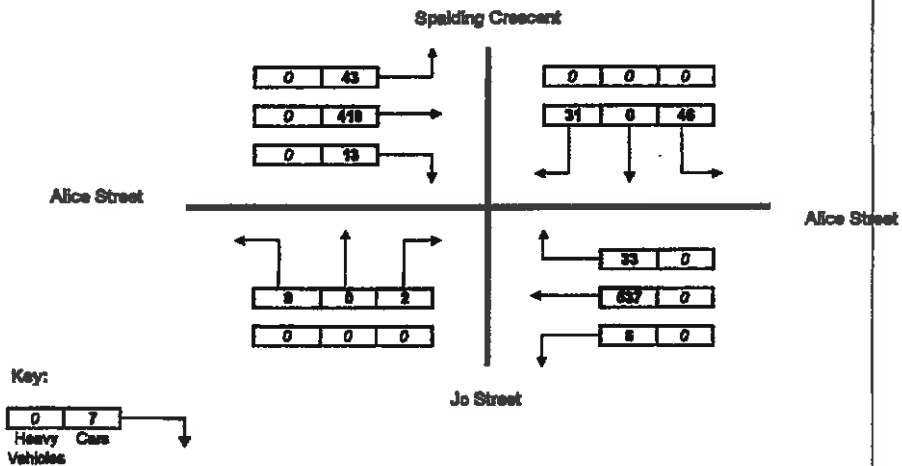
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ENGINEERS • MANAGERS • SCIENTISTS

Project Name: Alice Street Child Care Centre
Project Number: B04834

AM Peak 7:00 to 8:00
Date of Count: 2015



Pm Peak 16:00 to 17:00
Date of Count: 2015



2015 Background + Development Traffic
Spalding Crescent / Alice Street / Jo Street Intersection
Figure B5



LAMBERT & REHBEIN
ENGINEERS • MANAGERS • SCIENTISTS

Project Name: Alice Street Child Care Centre
Project Number: B04694

Appendix C

aaSIDRA2.1 Summary Output Tables

Movement Summary

Spalding Crescent / Alice Street 2005 AM Background Traffic Only

Give-way

Vehicle Movements

Mov No	Turn	Dem Flow (veh/h)	%HV	Deg of Satn (v/c)	Aver Delay (sec)	Level of Service	95% Back of Queue (m)	Prop. Queued	Eff. Stop Rate	Aver Speed (km/h)
Joe Street										
1	L	8	0.0	0.016	11.3	LOS B	0	0.46	0.66	45.7
2	T	1	0.0	0.016	10.8	LOS B	0	0.46	0.75	46.2
2	R	1	0.0	0.016	10.8	LOS B	0	0.46	0.75	46.2
Approach		10	0.0	0.016	11.2	LOS B	0	0.46	0.67	45.8
Alice Street East										
4	L	1	0.0	0.167	10.0	LOS A	12	0.51	0.32	46.7
5	T	323	0.0	0.168	1.9	LOS A	12	0.51	0.00	53.5
5	R	2	0.0	0.168	1.9	LOS A	12	0.51	0.00	53.5
Approach		326	0.0	0.168	1.9	LOS A	12	0.51	0.01	53.5
Spalding Crescent										
7	L	12	0.0	0.040	13.1	LOS B	1	0.52	0.69	44.1
8	T	1	0.0	0.040	13.2	LOS B	1	0.52	0.83	43.9
8	R	7	0.0	0.040	13.2	LOS B	1	0.52	0.83	43.9
Approach		20	0.0	0.040	13.1	LOS B	1	0.52	0.75	44.0
Alice Street West										
10	L	9	0.0	0.180	9.9	LOS A	13	0.51	0.33	46.8
11	T	330	0.0	0.179	1.9	LOS A	13	0.51	0.01	53.5
11	R	5	0.0	0.179	1.9	LOS A	13	0.51	0.01	53.5
Approach		344	0.0	0.179	2.1	LOS A	13	0.51	0.02	53.3
All Vehicles		700	0.0	0.180	2.4	Not Applicable	13	0.51	0.04	52.9



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Movement Summary

Spalding Crescent / Alice Street 2005 PM Background Traffic Only

Give-way

Vehicle Movements

Mov No	Turn	Dem Flow (veh/h)	%HV	Deg of Satn (v/c)	Aver Delay (sec)	Level of Service	95% Back of Queue (m)	Prop. Queued	Eff. Stop Rate	Aver Speed (km/h)
Joe Street										
1	L	6	0.0	0.014	11.9	LOS B	0	0.49	0.67	45.2
2	T	1	0.0	0.014	11.4	LOS B	0	0.49	0.75	45.6
2	R	1	0.0	0.014	11.4	LOS B	0	0.49	0.75	45.6
Approach		8	0.0	0.014	11.7	LOS B	0	0.49	0.69	45.3
Alice Street East										
4	L	4	0.0	0.190	9.7	LOS A	14	0.48	0.35	46.9
5	T	363	0.0	0.191	1.6	LOS A	14	0.48	0.01	53.8
5	R	3	0.0	0.191	1.6	LOS A	14	0.48	0.01	53.8
Approach		370	0.0	0.191	1.7	LOS A	14	0.48	0.01	53.7
Spalding Crescent										
7	L	16	0.0	0.024	10.5	LOS B	1	0.40	0.66	46.6
8	T	1	0.0	0.024	10.0	LOS A	1	0.40	0.75	47.0
8	R	1	0.0	0.024	10.0	LOS A	1	0.40	0.75	47.0
Approach		18	0.0	0.024	10.4	LOS B	1	0.40	0.67	46.6
Alice Street West										
10	L	13	0.0	0.159	10.2	LOS B	12	0.54	0.31	46.7
11	T	277	0.0	0.158	2.3	LOS A	12	0.54	0.02	53.0
11	R	9	0.0	0.158	2.3	LOS A	12	0.54	0.02	53.0
Approach		299	0.0	0.158	2.6	LOS A	12	0.54	0.04	52.7
All Vehicles		695	0.0	0.191	2.4	Not Applicable	14	0.50	0.05	53.0

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Movement Summary

Spalding Crescent / Alice Street 2005 AM Background + Development

Give-way

Vehicle Movements

Mov No	Turn	Dem Flow (veh/h)	%HV	Deg of Satn (v/c)	Aver Delay (sec)	Level of Service	95% Back of Queue (m)	Prop. Queued	Eff. Stop Rate	Aver Speed (km/h)
Joe Street										
1	L	8	0.0	0.016	11.6	LOS B	1	0.47	0.66	45.4
2	T	1	0.0	0.016	11.1	LOS B	1	0.47	0.76	45.9
2	R	1	0.0	0.016	11.1	LOS B	1	0.47	0.76	45.9
Approach		10	0.0	0.016	11.5	LOS B	1	0.47	0.68	45.5
Alice Street East										
4	L	1	0.0	0.200	10.3	LOS B	14	0.54	0.31	46.6
5	T	323	0.0	0.199	2.9	LOS A	14	0.54	0.07	52.6
5	R	32	0.0	0.199	2.9	LOS A	14	0.54	0.07	52.6
Approach		356	0.0	0.199	2.9	LOS A	14	0.54	0.07	52.5
Spalding Crescent										
7	L	42	0.0	0.187	15.0	LOS C	6	0.59	0.77	42.4
8	T	1	0.0	0.186	15.2	LOS C	6	0.59	0.88	42.2
8	R	37	0.0	0.186	15.2	LOS C	6	0.59	0.88	42.2
Approach		80	0.0	0.186	15.1	LOS C	6	0.59	0.82	42.3
Alice Street West										
10	L	39	0.0	0.195	10.0	LOS A	14	0.53	0.31	46.7
11	T	330	0.0	0.195	1.9	LOS A	14	0.53	0.01	53.2
11	R	5	0.0	0.195	1.9	LOS A	14	0.53	0.01	53.2
Approach		374	0.0	0.195	2.7	LOS A	14	0.53	0.04	52.4
All Vehicles		820	0.0	0.200	4.1	Not Applicable	14	0.54	0.14	51.2



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Movement Summary

Spalding Crescent / Alice Street 2005 PM Background + Development

Give-way

Vehicle Movements

Mov No	Turn	Dem Flow (veh/h)	%HV	Deg of Satn (v/c)	Aver Delay (sec)	Level of Service	95% Back of Queue (m)	Prop. Queued	Eff. Stop Rate	Aver Speed (km/h)
Joe Street										
1	L	6	0.0	0.014	12.2	LOS B	0	0.50	0.67	44.9
2	T	1	0.0	0.014	11.7	LOS B	0	0.50	0.76	45.3
2	R	1	0.0	0.014	11.7	LOS B	0	0.50	0.76	45.3
Approach		8	0.0	0.014	12.1	LOS B	0	0.50	0.69	45.0
Alice Street East										
4	L	4	0.0	0.222	10.0	LOS B	16	0.51	0.33	46.8
5	T	363	0.0	0.220	2.5	LOS A	16	0.51	0.06	52.9
5	R	33	0.0	0.220	2.5	LOS A	16	0.51	0.06	52.9
Approach		400	0.0	0.220	2.6	LOS A	16	0.51	0.06	52.8
Spalding Crescent										
7	L	46	0.0	0.165	14.0	LOS B	5	0.54	0.73	43.3
8	T	1	0.0	0.165	14.2	LOS B	5	0.54	0.86	43.0
8	R	31	0.0	0.165	14.2	LOS B	5	0.54	0.86	43.0
Approach		78	0.0	0.165	14.1	LOS B	5	0.54	0.79	43.2
Alice Street West										
10	L	43	0.0	0.174	10.2	LOS B	13	0.56	0.29	46.5
11	T	277	0.0	0.174	2.3	LOS A	13	0.56	0.02	52.7
11	R	9	0.0	0.174	2.3	LOS A	13	0.56	0.02	52.7
Approach		329	0.0	0.174	3.3	LOS A	13	0.56	0.06	51.8
All Vehicles		815	0.0	0.222	4.1	Not Applicable	16	0.54	0.14	51.3

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Movement Summary

Spalding Crescent / Alice Street 2015 AM Background Traffic Only

Give-way

Vehicle Movements

Mov No	Turn	Dem Flow (veh/h)	%HV	Deg of Satn (v/c)	Aver Delay (sec)	Level of Service	95% Back of Queue (m)	Prop. Queued	Eff. Stop Rate	Aver Speed (km/h)
Joe Street										
1	L	12	0.0	0.029	13.5	LOS B	1	0.56	0.74	43.7
2	T	1	0.0	0.029	13.0	LOS B	1	0.56	0.84	44.1
2	R	1	0.0	0.029	13.0	LOS B	1	0.56	0.84	44.1
Approach		14	0.0	0.029	13.5	LOS B	1	0.56	0.76	43.7
Alice Street East										
4	L	2	0.0	0.250	11.7	LOS B	23	0.68	0.21	45.4
5	T	478	0.0	0.249	3.5	LOS A	23	0.68	0.00	51.7
5	R	2	0.0	0.249	3.5	LOS A	23	0.68	0.00	51.7
Approach		482	0.0	0.249	3.5	LOS A	23	0.68	0.00	51.6
Spalding Crescent										
7	L	12	0.0	0.066	18.3	LOS C	2	0.68	0.81	39.8
8	T	1	0.0	0.066	18.4	LOS C	2	0.68	0.90	39.7
8	R	7	0.0	0.066	18.4	LOS C	2	0.68	0.90	39.7
Approach		20	0.0	0.066	18.4	LOS C	2	0.68	0.85	39.8
Alice Street West										
10	L	9	0.0	0.265	11.6	LOS B	24	0.68	0.21	45.5
11	T	488	0.0	0.263	3.5	LOS A	24	0.68	0.01	51.6
11	R	7	0.0	0.263	3.5	LOS A	24	0.68	0.01	51.6
Approach		504	0.0	0.263	3.6	LOS A	24	0.68	0.02	51.5
All Vehicles		1020	0.0	0.265	4.0	Not Applicable	24	0.68	0.04	51.1



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Movement Summary

Spalding Crescent / Alice Street 2015 PM Background Traffic Only

Give-way

Vehicle Movements

Mov No	Turn	Dem Flow (veh/h)	%HV	Deg of Satn (v/c)	Aver Delay (sec)	Level of Service	95% Back of Queue (m)	Prop. Queued	Eff. Stop Rate	Aver Speed (km/h)
Joe Street										
1	L	9	0.0	0.032	15.8	LOS C	1	0.63	0.78	41.8
2	T	1	0.0	0.032	15.5	LOS C	1	0.63	0.88	42.0
2	R	2	0.0	0.032	15.5	LOS C	1	0.63	0.88	42.0
Approach		12	0.0	0.032	15.7	LOS C	1	0.63	0.80	41.9
Alice Street East										
4	L	6	0.0	0.286	11.1	LOS B	25	0.65	0.23	46.0
5	T	537	0.0	0.282	2.9	LOS A	25	0.65	0.00	52.0
5	R	3	0.0	0.282	2.9	LOS A	25	0.65	0.00	52.0
Approach		546	0.0	0.282	3.0	LOS A	25	0.65	0.01	51.9
Spalding Crescent										
7	L	16	0.0	0.033	12.5	LOS B	1	0.52	0.72	44.6
8	T	1	0.0	0.033	12.0	LOS B	1	0.52	0.83	45.0
8	R	1	0.0	0.033	12.0	LOS B	1	0.52	0.83	45.0
Approach		18	0.0	0.033	12.4	LOS B	1	0.52	0.73	44.7
Alice Street West										
10	L	13	0.0	0.232	12.1	LOS B	22	0.70	0.20	45.0
11	T	410	0.0	0.234	4.2	LOS A	22	0.70	0.03	51.3
11	R	13	0.0	0.234	4.2	LOS A	22	0.70	0.03	51.3
Approach		436	0.0	0.234	4.4	LOS A	22	0.70	0.03	51.0
All Vehicles		1012	0.0	0.286	3.9	Not Applicable	25	0.67	0.04	51.2


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Movement Summary

Spalding Crescent / Alice Street 2015 AM Background + Development

Give-way

Vehicle Movements

Mov No	Turn	Dem Flow (veh/h)	%HV	Deg of Satn (v/c)	Aver Delay (sec)	Level of Service	95% Back of Queue (m)	Prop. Queued	Eff. Stop Rate	Aver Speed (km/h)
Joe Street										
1	L	12	0.0	0.031	14.0	LOS B	1	0.57	0.75	43.3
2	T	1	0.0	0.031	13.5	LOS B	1	0.57	0.85	43.7
2	R	1	0.0	0.031	13.5	LOS B	1	0.57	0.85	43.7
Approach		14	0.0	0.031	13.9	LOS B	1	0.57	0.76	43.4
Alice Street East										
4	L	2	0.0	0.286	12.3	LOS B	28	0.71	0.19	44.8
5	T	478	0.0	0.287	4.7	LOS A	28	0.71	0.06	50.9
5	R	32	0.0	0.287	4.7	LOS A	28	0.71	0.06	50.9
Approach		512	0.0	0.287	4.7	LOS A	28	0.71	0.06	50.8
Spalding Crescent										
7	L	42	0.0	0.316	24.2	LOS C	11	0.77	0.98	36.0
8	T	1	0.0	0.317	24.5	LOS C	11	0.77	0.97	35.7
8	R	37	0.0	0.317	24.5	LOS C	11	0.77	0.97	35.7
Approach		80	0.0	0.316	24.4	LOS C	11	0.77	0.98	35.9
Alice Street West										
10	L	39	0.0	0.279	11.6	LOS B	26	0.71	0.19	45.4
11	T	488	0.0	0.280	3.6	LOS A	26	0.71	0.01	51.3
11	R	7	0.0	0.280	3.6	LOS A	26	0.71	0.01	51.3
Approach		534	0.0	0.280	4.2	LOS A	26	0.71	0.03	50.8
All Vehicles		1140	0.0	0.317	5.9	Not Applicable	28	0.71	0.12	49.3



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Movement Summary

Spalding Crescent / Alice Street 2015 PM Background + Development

Give-way

Vehicle Movements

Mov No	Turn	Dem Flow (veh/h)	%HV	Deg of Satn (v/c)	Aver Delay (sec)	Level of Service	95% Back of Queue (m)	Prop. Queued	Eff. Stop Rate	Aver Speed (km/h)
Joe Street										
1	L	9	0.0	0.033	16.1	LOS C	1	0.62	0.77	41.6
1	T	1	0.0	0.033	16.1	LOS C	1	0.62	0.77	41.6
2	R	2	0.0	0.033	16.5	LOS C	1	0.62	0.89	41.2
Approach		12	0.0	0.033	16.1	LOS C	1	0.62	0.79	41.5
Alice Street East										
4	L	6	0.0	0.318	3.6	LOS A	31	0.69	0.00	51.5
4	T	537	0.0	0.318	3.6	LOS A	31	0.69	0.00	51.5
5	R	35	0.0	0.318	11.9	LOS B	31	0.69	0.88	45.1
Approach		578	0.0	0.319	4.1	LOS A	31	0.69	0.06	51.1
Spalding Crescent										
7	L	46	0.0	0.271	21.1	LOS C	9	0.71	0.91	37.9
8	T	1	0.0	0.271	21.3	LOS C	9	0.71	0.94	37.7
8	R	31	0.0	0.271	21.3	LOS C	9	0.71	0.94	37.7
Approach		78	0.0	0.270	21.2	LOS C	9	0.71	0.92	37.8
Alice Street West										
10	L	43	0.0	0.250	12.2	LOS B	24	0.73	0.18	44.9
11	T	410	0.0	0.250	4.3	LOS A	24	0.73	0.03	50.9
11	R	13	0.0	0.250	4.3	LOS A	24	0.73	0.03	50.9
Approach		466	0.0	0.250	5.0	LOS A	24	0.73	0.04	50.3
All Vehicles		1134	0.0	0.318	5.8	Not Applicable	31	0.71	0.12	49.5

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APPENDIX D

Environmental Noise Level Study

David Moore & Associates Pty Ltd
Environmental Acoustic Consultants



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**Environmental Noise Level Study for Proposed Child Care Centre,
45 Alice Street, Goodna**

conducted for

J B Goodwin Midson & Partners

Report No: R06044/D1245/Rev.0/28.02.05

"The Sound Choice in Acoustics"

Report prepared for:

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c/- J B Goodwin Midson & Partners

Date of assessment:

Wednesday 16 February 2005

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Our reference:

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R05044/D1245/Rev.0/28.02.05**

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INTRODUCTION

It is proposed to develop the currently vacant site at 45 Alice Street, Goodna, for a child care centre. Based on the consultant's site inspection, this proposed development could be noise impacted by traffic on Alice Street, both with respect to external and internal play areas. Noise from the child care centre (children at play and carpark) could noise impact the closest adjoining neighbours to the north and east.

To assess current ambient noise levels for the proposed hours of operation of the child care centre, a 12-hour study was conducted, from 6 am to 6 pm on Wednesday 18 February 2005. This report details the results of this noise level study, noise limits, noise level impact and any required noise control measures. In preparing this report the following drawings, prepared by Tabletop Architects Planners Engineers Pty Ltd, Job No.5518, were referenced:

- A01 Site Plan
- A02 Building A Floor Plan
- A03 Building B Floor Plan
- A04 Building B Floor Plan
- A05 Landscape Plan
- A06 Building A Elevations
- A07 Building B Elevations.

Refer Figure 1 for locality plan and Figure 2 for site plan and monitoring location A.

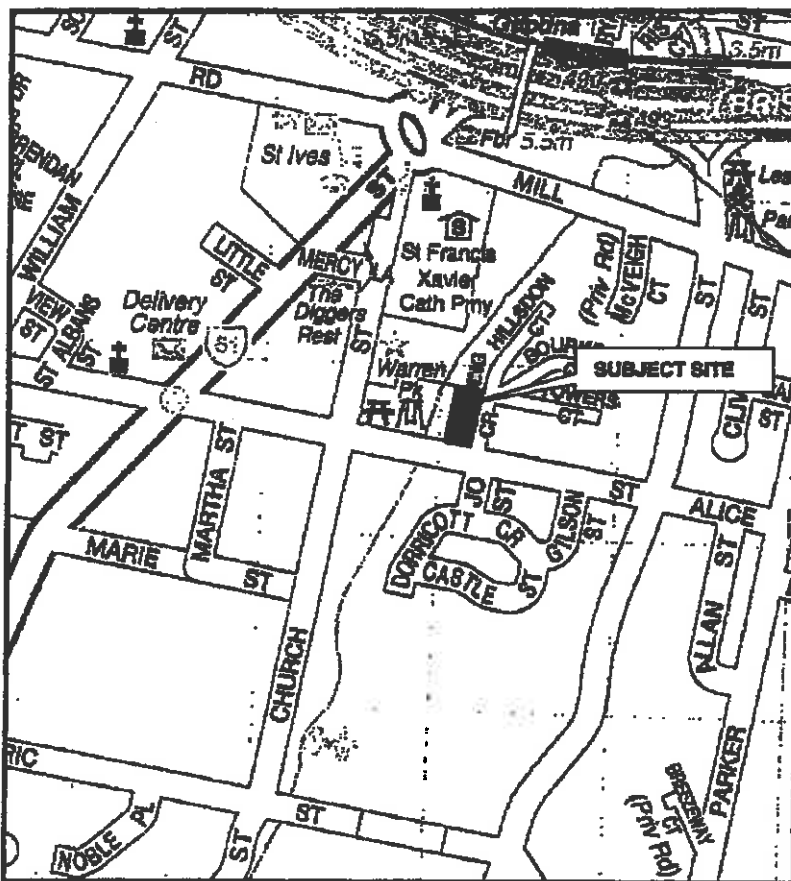


Figure 1
Locality Plan

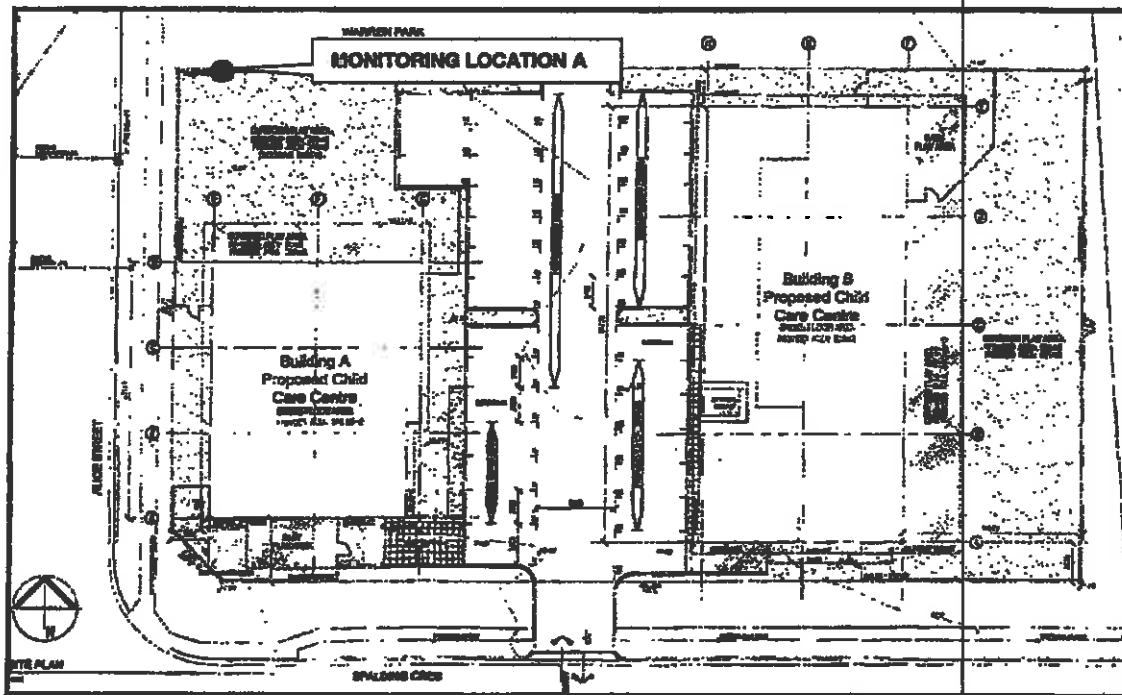


Figure 2
Site Plan and Monitoring Location A

CRITERIA

Noise Level Measurements

All noise level measurements were conducted in accordance with the following:

- general requirements of the Queensland environmental protection legislation;
- Environmental Protection (Noise) Policy 1997;
- Ipswich City Council Local Planning Policy;
- *Road Traffic Noise Management: Code of Practice*, Department of Main Roads, Version 2, January 2000;
- *Noise Measurement Manual*, Queensland Government – Environmental Protection Agency, 3rd Edition, March 2000; and
- Australian Standard AS 1055.1-1997, *Acoustics – Description and Measurement of Environmental Noise*, Part 1, *General Procedures*.

Noise Limits

Department of Main Roads

In accordance with the DMR document, *Road Traffic Noise Management: Code of Practice, Version 2, January 2000*, the relevant traffic noise limits are as follows, for the complete proposed development:

"... B6. Rationale and Criteria: Proposed Residential Developments ...

Educational, Community and Health Buildings,

Classrooms, Meeting or Habitable Rooms:

- 48 dB(A) L_{10} (1 hour) or less, as measured or calculated (in the centre of the room) as an indoor level.*

Parks, Outdoor Educational and Recreational Areas,

Open Space:

- 63 dB(A) L_{10} (12 hour) or less, taking into consideration the full circumstances surrounding the provision and future use of the park or recreational area. ..."*

Ipswich City Council

With respect to traffic noise impact upon the proposed child care centre, Ipswich City Council does not have a specific environmental noise policy. Therefore, the Department of Main Roads criteria will be adopted as the appropriate criteria for traffic noise impact.

For noise from the child care centre – children at play and vehicle activities in the carpark – these noise sources are time-varying. For time-varying noise sources Ipswich City Council has adopted the following noise limits:

"... (b) Noise levels emitted from the development, including:

... (ii) Emissions of noise from the development, when measured inside the most affected sensitive use as the average maximum A-weighted sound pressure level ($L_{Amax,T}$) where T is > or = 15 mins, must not exceed 45 dB(A) between 2200 to 0700.

(iii) Emissions of noise during the day and evening period (0700 – 2200) must not cause;

(a) The L_{A1} and L_{A10} , measured over a period of at least 15 minutes, at the boundary of any sensitive land use, to exceed the ambient L_{A1} and L_{A10} , measured over a period of at least 15 minutes, by more than 3 dB(A)

(b) the average maximum A-weighted sound pressure level ($L_{Amax,T}$) where T is > or = 15 mins, at the boundary of any sensitive land use, to exceed the ambient average maximum A-weighted sound pressure level ($L_{Amax,T}$), measured over a period of at least 15 minutes, by more than 3 dB(A).

{Note: noise events must be clearly identified and comparison of ambient events with predicted events must be related ie. cannot compare noise level of birds/insects to noise level of banging of hammers or grinding}

{Note: Where noise levels stipulated under the Environmental Protection Regulation are more stringent than the above criteria, then it is expected that the more stringent criteria must apply. However, this must be justified and demonstrated through appropriate assessment and modelling} ..."

CHILD CARE CENTRE – TRAFFIC NOISE

Traffic Noise Levels

A 12-hour noise level study was conducted from Monitoring Location A, 3 metres in from the Alice Street boundary of the subject site – refer Figure 2 for details of monitoring location, Appendix A for details of measurement equipment, equipment settings, calibration, monitoring location and atmospheric conditions and Appendix B for all of the results of the noise level measurements.

From Appendix B, the current traffic noise levels at Location A are, relative to the requirements of the Department of Main Roads:

- $L_{A10,12h} = 67.6 \text{ dB(A)}$; and
- $L_{A10,1h} \text{ maximum} = 69.0 \text{ dB(A)}$.

These noise levels were at a separation distance of 13.5 metres from the centre line of the closest lane of traffic on Alice Street.

Traffic Noise Control – External Play Areas

At Monitoring Location A the current traffic noise level is 67.6 dB(A) $L_{A10,12h}$, which exceeds the noise limit. This is at a separation distance of 13.5 m from the closest lane of traffic. In the centre of the closest external play area to Alice Street the traffic noise level will be:

- 67.6 dB(A) $L_{A10,12h} - 1.4$ (increased separation distance) $- 2.1$ (reduced angle of view) $= 64.1 \text{ dB(A)}$ $L_{A10,12h}$.

This exceeds the noise limit by 1.1 dB(A) . Therefore, an acoustic barrier is required to control this noise limit exceedance. The above noise level includes ground attenuation, which is not applicable when an acoustic barrier is introduced. This ground attenuation would be, by calculation in accordance with CORTN88, 2.9 dB(A) . Therefore, the required traffic noise level reduction is $1.1 + 2.9 = 4 \text{ dB(A)}$.

By path difference calculation, a 1.2 metre high acoustic barrier would reduce traffic noise by 6.4 dB(A) . This acoustic barrier must be located as per Figure 3, for both the baby play area and outdoor play area of Building A, be gap free and continuous for its complete length and have a minimum surface area density of 10 kg/m^2 . Examples of suitable materials of construction include:

- reinforced concrete;
- concrete block;
- brick;
- sheet metal at least 2 mm thick;
- minimum 7.5 mm thick fibrous cement sheet;
- hebel panelling;
- lapped timber palings, for example, kiln dried softwood at least 15 mm thick and overlapped a minimum 25 mm or at least 19 mm thick and overlapped a minimum 15 mm;
- earth mound;
- any combination of the above.

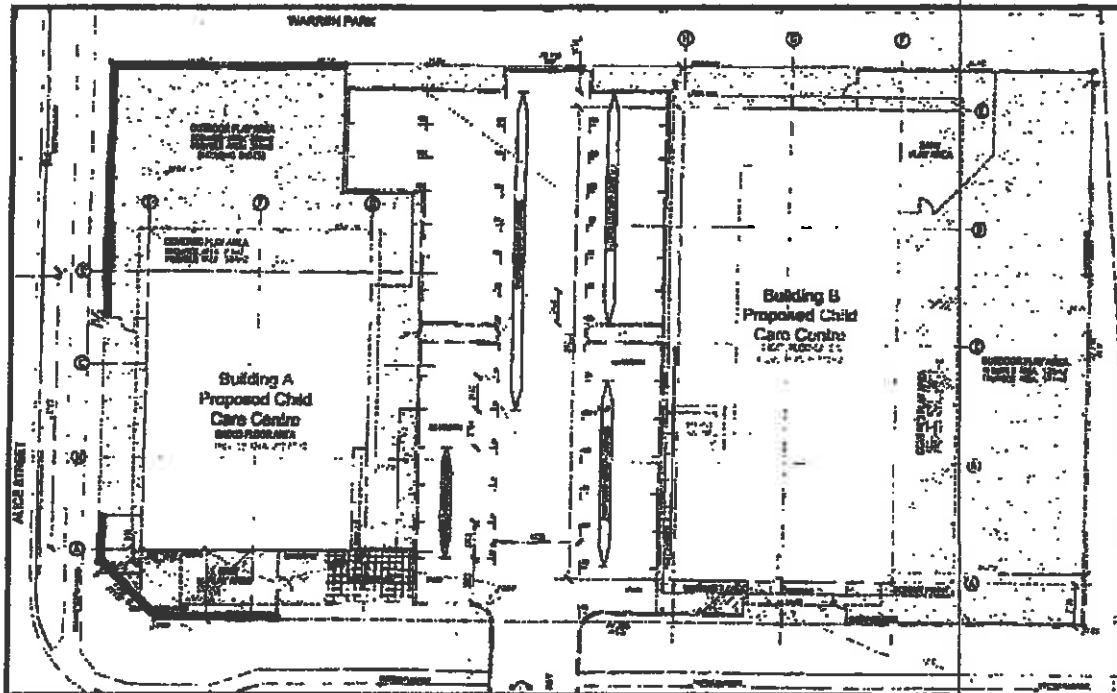


Figure 3
Location of 1200 mm high Acoustic Barriers (bold lines)

The external play areas in Figure 3 with the acoustic barriers are the only external play areas that require traffic noise control.

Traffic Noise Control – Internal Areas – Building A

Play Areas (Internal) A, B and C and the Sleep Area of Building A have the potential to be traffic noise impacted. The internal noise limit is 48 dB(A) $L_{A10,1h}$. For each of the internal areas, traffic noise levels for open windows and doors are calculated below.

Sleep Room

With windows open the noise level of traffic inside this room will be:

- southern wall: 69.0 dB(A) $L_{A10,1h}$ (maximum) – 12 (outside to inside via open windows) = 57 dB(A);
- eastern wall: 69.0 dB(A) $L_{A10,1h}$ (maximum) – 11 (outside to inside via open windows) – 4 (reduced angle of view) – 6.4 (acoustic barrier) = 47.6 dB(A);
- total = 57.5 dB(A) $L_{A10,1h}$, which exceeds the noise limit by 10 dB(A).

To comply with the noise limit inside the Sleep Room all glazing to this area must have a minimum R_w 30 and all windows must be closed.

Play Area A

With the sliding glass door open, the internal traffic noise level will be:

- $69.0 \text{ dB(A)} L_{A10,1h} - 5.6 \text{ (reduced angle of view)} - 6.4 \text{ (acoustic barrier)} - 6 \text{ (outside to inside via open door)} - 1.4 \text{ (increased separation distance)} = 49.6 \text{ dB(A)}$.

This exceeds the noise limit by 1.6 dB(A). To comply with the noise limit, the sliding glass door must be closed. This sliding glass door could be standard glazing to provide adequate noise level reduction.

Play Area B

With the sliding glass door and window open, the internal traffic noise level will be:

- $69 \text{ dB(A)} L_{A10,1h(\max)} - 5.6 \text{ (reduced angle of view)} - 6.4 \text{ (acoustic barrier)} - 2 \text{ (increased separation distance)} - 7 \text{ (outside to inside via open glazing)} = 48 \text{ dB(A)}$.

This complies with the noise limit, with all external openings open.

Play Area C

With the windows and sliding glass door open, the internal traffic noise level will be:

- southern wall: $69 \text{ dB(A)} L_{A10,1h(\max)} - 8 \text{ (outside to inside via open windows)} = 61 \text{ dB(A)}$;
- western wall: $69 \text{ dB(A)} L_{A10,1h(\max)} - 4 \text{ (reduced angle of view)} - 6.4 \text{ (acoustic barrier)} - 1.4 \text{ (increased separation distance)} - 7 \text{ (outside to inside via open windows)} = 50.2 \text{ dB(A)}$;
- total = 61 dB(A).

This exceeds the noise limit by 13 dB(A). To control this noise limit exceedances to the internal noise limit, all glazing must be closed and have a minimum Rw 28.

Traffic Noise Control – Internal Areas – Building B

Building B is sufficiently distant from Alice Street, and predominantly shielded by Building A, so that all internal areas would comply with the noise limits, with external openings open.

CHILD CARE CENTRE NOISE AT CLOSEST RESIDENCES

Potential noise impacts from the child care centre are the noise of children at play and vehicle noise from the carpark. The closest residences to the proposed child care centre are to the north and east. The noise level impact to these residences has been calculated.

Source Noise Levels

The consultant has conducted noise levels of children at outdoor play at a 75-child childcare centre. The noise level of these children at play was:

- 65 dB(A) $L_{Amax,T}$;
- 64 dB(A) L_{A1} ;
- 63 dB(A) L_{A10} ;
- 60 dB(A) $L_{Aeq,T}$

at an average separation distance of 10 metres. Based on the one-third octave frequency band analyses of these noise level measurements, the noise of the children at play was slightly tonal, with an appropriate adjustment of +2 dB(A).

With adjustment for tonality, the source noise levels of children at play are:

- | | |
|--------------------|------------------|
| • $L_{Aeq,adj,T}$ | 62 dB(A) @ 10 m; |
| • $L_{A10,adj,T}$ | 65 dB(A) @ 10 m; |
| • $L_{A1,adj,T}$ | 66 dB(A) @ 10 m; |
| • $L_{Amax,adj,T}$ | 67 dB(A) @ 10 m. |

From previous noise level measurements of carparks, typical source noise levels are:

- car driving in carpark: 50 dB(A) $L_{A10,adj,T}$ @ 8 m;
- car door closing: 52 dB(A) $L_{A10,adj,T}$ @ 30 m;
- car engine starting: 52 dB(A) $L_{A10,adj,T}$ @ 30 m.

These are the source noise levels for children at play and carpark that have been adopted in this report.

Noise Level Impact

Noise Impact from Child Care Centre – External Play Areas

From the ambient noise level measurements, the noise levels (without the child care centre) at the closest residence to the east would be, during the daytime (average of the 12 samples):

- $L_{Amax,adj,T} = 81$ dB(A)
- $L_{A1,adj,T} = 73$ dB(A)
- $L_{A10,adj,T} = 68$ dB(A)
- $L_{Aeq,adj,T} = 63$ dB(A)

and, at the closest residence to the north, 12 dB(A) less due to increased separation distance from Alice Street, namely:

- $L_{Amax,adj,T} = 69$ dB(A)
- $L_{A1,adj,T} = 61$ dB(A)
- $L_{A10,adj,T} = 56$ dB(A)
- $L_{Aeq,adj,T} = 51$ dB(A).

Therefore, at the closest residences to the east, the noise limits would be:

- $L_{Amax,adj,T} = 69 + 3 = 72 \text{ dB(A)}$
- $L_{A1,adj,T} = 61 + 3 = 64 \text{ dB(A)}$
- $L_{A10,adj,T} = 56 + 3 = 59 \text{ dB(A)}$
- $L_{Aeq,adj,T} = 51 + 3 = 54 \text{ dB(A)}$

and, at the closest residence to the north, the noise limits would be 6 dB(A) less due to angle of view and separation distance, namely:

- $L_{Amax,adj,T} = 75 + 3 = 78 \text{ dB(A)}$
- $L_{A1,adj,T} = 67 + 3 = 70 \text{ dB(A)}$
- $L_{A10,adj,T} = 62 + 3 = 65 \text{ dB(A)}$
- $L_{Aeq,adj,T} = 57 + 3 = 60 \text{ dB(A)}$

At the closest residence to the north, the noise of children at play in the centre of the closest external play area would be:

- 67 dB(A) $L_{Amax,adj,T} @ 10 \text{ m} - 14 (51 \text{ m separation distance}) = 53 \text{ dB(A)}$
- 66 dB(A) $L_{A1,adj,T} @ 10 \text{ m} - 14 = 52 \text{ dB(A)}$
- 65 dB(A) $L_{A10,adj,T} @ 10 \text{ m} - 14 = 51 \text{ dB(A)}$
- 62 dB(A) $L_{Aeq,adj,T} @ 10 \text{ m} - 14 = 48 \text{ dB(A)}$

All of these noise levels easily comply with the noise limits at the closest residence to the north, with no noise control measures required.

For the closest residences to the east, the noise of children at play in the centre of the closest external play area (Building B, northern side) would be:

- 67 dB(A) $L_{Amax,adj,T} @ 10 \text{ m} - 12 (\text{increased separation distance, } 41 \text{ m}) = 55 \text{ dB(A)}$
- 66 dB(A) $L_{A1,adj,T} @ 10 \text{ m} - 12 = 54 \text{ dB(A)}$
- 65 dB(A) $L_{A10,adj,T} @ 10 \text{ m} - 12 = 53 \text{ dB(A)}$
- 62 dB(A) $L_{Aeq,adj,T} @ 10 \text{ m} - 12 = 50 \text{ dB(A)}$

All of these noise levels easily comply with the noise limits at the closest residences to the east, with no noise control measures required.

Noise Impact from Child Care Centre – Carpark

The carpark only has the potential to noise impact the closest residences on the opposite side of Spalding Crescent. At these residences carpark noise will be:

- car driving in carpark: 50 dB(A) $L_{A10,adj,T} @ 8 \text{ m} - 11 (\text{separation distance of } 30 \text{ m}) = 39 \text{ dB(A)}$;
- car door closing: 52 dB(A) $L_{A10,adj,T} @ 30 \text{ m} - 0 = 52 \text{ dB(A)}$;
- car engine starting: 52 dB(A) $L_{A10,adj,T} @ 30 \text{ m} - 0 = 52 \text{ dB(A)}$.

These carpark noise levels easily comply with the noise limits for $L_{A10,adj,T}$ and would also comply with all other noise limits.

CONCLUSIONS

It is proposed to develop a child care centre at 45 Alice Street, Goodna. This child care centre has the potential to be noise impacted by traffic on Alice Street. Noise from the child care centre – children at play and carpark activities – could noise impact the closest residences to the east and north.

To assess current ambient noise levels and establish traffic noise levels, a 12-hour noise level study was conducted from 3 metres inside the Alice Street boundary of the subject site, on the western boundary. Based on these noise level measurements, traffic noise levels exceed the noise limits for the external play areas (and internal areas) of Building A only. Building B is sufficiently distant that all of the traffic noise limits are complied with. For the external play areas of Building A, the 1.2 metre high acoustic barriers detailed at Figure 3 are required. For the internal play areas, Area B complies with the noise limits with external openings closed, but all other internal play areas (and sleep room) of Building A require windows and/or sliding glass doors to be closed. For those rooms that require external openings to be closed, the minimum Rw requirements for the glazing are:

- Sleep Room windows Rw 30;
- Play Area A sliding glass door Rw 24;
- Play Area C windows and sliding glass doors Rw 28.

The noise of children at play outdoors and carpark activity complies with the noise limits at all of the closest residences, with no noise control measures required.

RECOMMENDATION

It is recommended that, from an environmental noise perspective, the proposed child care centre be approved, provided the noise control measures detailed in this report are incorporated into the development.

APPENDIX A: AMBIENT NOISE LEVEL MEASUREMENT EQUIPMENT

Measurement Equipment

The following equipment was used to conduct the 12-hour ambient noise level study at Monitoring Location A:

- Bruel and Kjaer Type 22601 Modular Precision Sound Analyzer – Observer – Serial No. 2409371, with Type BZ 7220 Software and Prepolarised free-field ½" microphone, Type 4189, Serial No. 2395445;
- Bruel and Kjaer Type 3592 outdoor microphone kit, including Type UA1404 outdoor microphone;
- Bruel and Kjaer Type AO 0442 ten metre microphone extension cable; and
- Bruel and Kjaer Type 4231 Sound Level Calibrator, Serial No. 2292746.

All of the above equipment is Type 1 in accordance with the requirements of Australian Standard AS 1259-1990, *Acoustics – Sound Level Meters*, as required by Australian Standard AS 2702-1984 and AS 1055.1-1997.

Measurement Equipment Settings

The above equipment was used with the following settings:

- Detector: RMS
- Time Weighting: FAST
- Frequency Weighting: A
- Sound Incidence: FRONTAL
- Microphone sensitivity: -26.1 dB
- Range: 20-100 dB.

Calibration

The sound level meter was calibrated to the required value of 93.8 dB at 1000 Hz immediately before and after the noise level measurements were conducted. At no time was an adjustment of more than ±0.5 dB required. This complies with the requirements of the Australian Standard.

Monitoring Location

Monitoring Location A was on the western boundary of the subject site, 3 metres north of the Alice Street boundary. The microphone was elevated 1.6 metres above ground level. Refer Figure 2 for further details.

Atmospheric Conditions

Throughout the 12-hour period, atmospheric conditions complied with the requirements of the Australian Standard.

APPENDIX B: DETAILED RESULTS OF NOISE LEVEL MEASUREMENTS

Instrument: 2260
Application: BZ7219 version 1.1
16/02/2005 05:52:27
Start Time: AM
16/02/2005 06:00:53
End Time: PM
Elapsed Time: 12:08:26
Bandwidth: 1/1 Octave
Peaks Over: 140.0 dB
Range: 20.1-100.1 dB

	Time	Frequency
Broad-band measurements:	S F I	A C
Broad-band statistics:	F	A
Octave measurements:	F	L

	Logging
Log Rate:	1:00:00
Broadband Parameters:	All
Spectrum Parameters:	Nothing

Instrument Serial Number: 2409371
Microphone Serial Number: 2395445
Input: Microphone
Windscreen Correction: None
S. I. Correction: Frontal

Calibration Time: 13/01/2005 08:44:27
PM
Calibration Level: 94.0 dB
Sensitivity: -26.1 dB
ZF0023: Not used

Start date	Start time	L _{Aeq}	L _{AF} Max	L _{AF} Min	L _{AF} 1	L _{AF} 10	L _{AF} 50	L _{AF} 90	L _{AF} 99
16/02/2005	06:00:00 AM	64.1	86.2	41.5	73.5	68.6	58.2	49.0	44.4
16/02/2005	07:00:00 AM	64.3	79.9	39.8	73.7	68.5	58.9	48.4	43.8
16/02/2005	08:00:00 AM	65.0	79.2	42.7	73.0	69.0	62.0	51.1	45.7
16/02/2005	09:00:00 AM	63.2	80.6	41.1	72.5	67.5	57.6	47.6	43.4
16/02/2005	10:00:00 AM	62.9	88.0	39.2	72.2	66.9	56.1	46.3	42.3
16/02/2005	11:00:00 AM	62.3	81.3	38.8	72.2	66.7	54.6	44.5	41.5
16/02/2005	12:00:00 PM	61.8	79.4	39.1	72.2	66.2	54.1	43.7	41.1
16/02/2005	01:00:00 PM	60.5	76.3	40.1	70.4	65.2	53.0	44.4	41.8
16/02/2005	02:00:00 PM	63.3	81.2	41.1	71.9	67.4	58.3	50.7	44.8
16/02/2005	03:00:00 PM	65.1	83.3	49.6	74.1	68.5	61.6	54.3	51.8
16/02/2005	04:00:00 PM	64.6	81.5	49.7	73.3	68.5	60.8	52.9	50.9
16/02/2005	05:00:00 PM	64.4	78.6	48.5	72.5	68.5	61.0	53.2	50.7

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& Partners
(Business name of
Hillmir Pty Ltd.)
ABN 75 009 728 634

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Associates

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Ph: (07) 5493 1707
Fax: (07) 5493 4860
2 Park Street Boonah
Ph/Fax: (07) 5463 1596

J.B. Goodwin, Midson & Partners

Consulting Surveyors, Town Planners and
Development Consultants.

23 March 2005

The Chief Executive Officer
Ipswich City Council
PO Box 191
Ipswich QLD 4305

Dear Sir / Madam:

Re: Material Change of Use (Child Care Centre)
45 Alice Street, Goodna Qld 4300
Lot 3 on RP77071 Parish of Goodna

On behalf of [REDACTED] we hereby apply for a Development Permit for a Material Change of Use (Child Care Centre) for land described as Lot 3 on RP77071, Parish of Goodna, County of Stanley, situated at 45 Alice Street, Goodna.

A detailed explanation of the proposal is included in the accompanying town planning assessment report.

In accordance with Section 3.2.1 of the *Integrated Planning Act 1997* we enclose the following information:

- (i) IDAS Application Forms A, D and the Referrals Checklist;
- (ii) Three (3) copies of the town planning assessment report including plans (A4) and one (1) copy of attached proposal plans (A3); and
- (iii) Cheque in the amount of \$3,825.00 payable to Council as the prescribed application fee.

We await Council's favourable and prompt assessment of the application. Should you require any additional information or have any queries please do not hesitate to contact the writer.

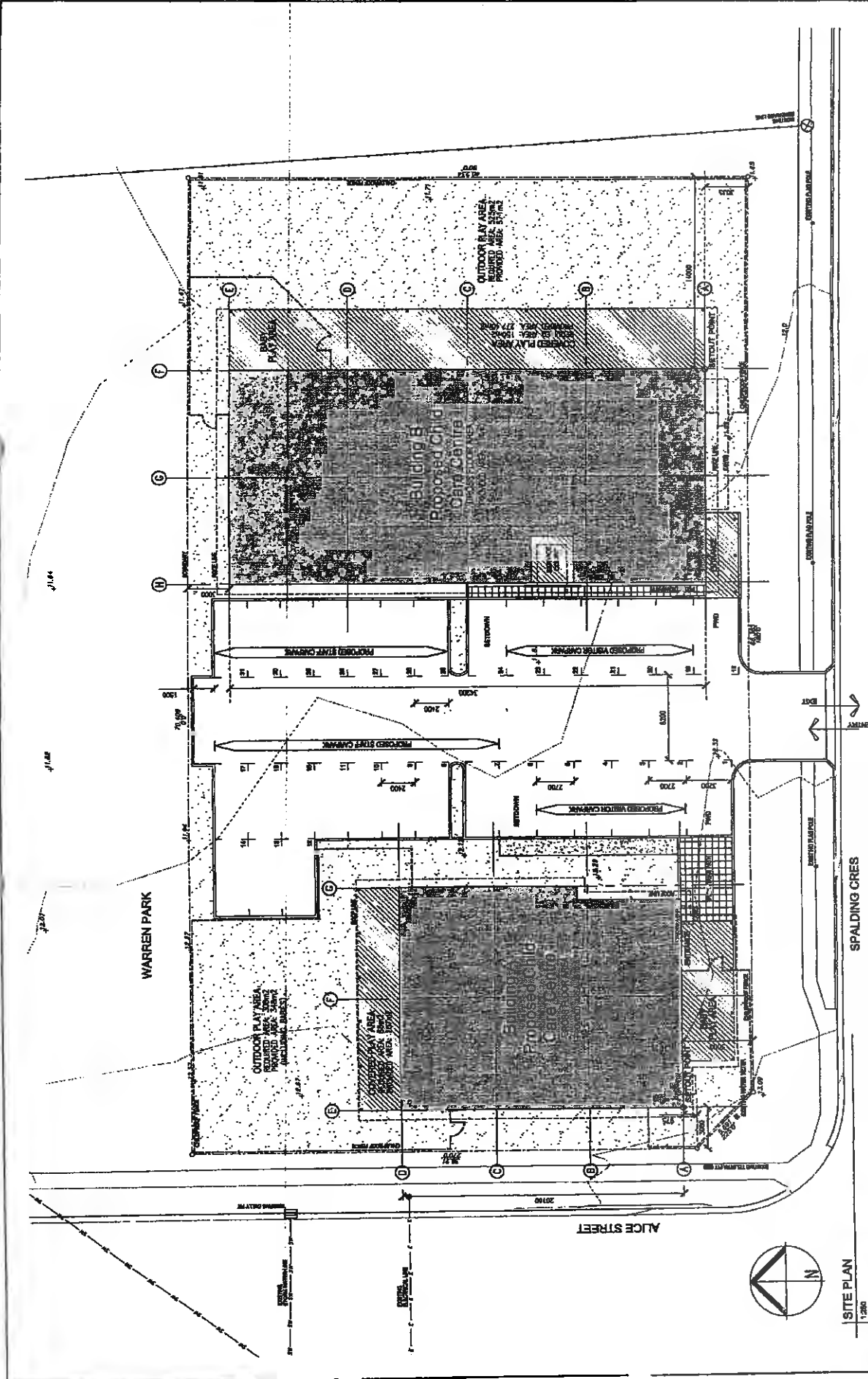
Yours faithfully
J B Goodwin Midson & Partners

[REDACTED]
Town Planner

GM+P

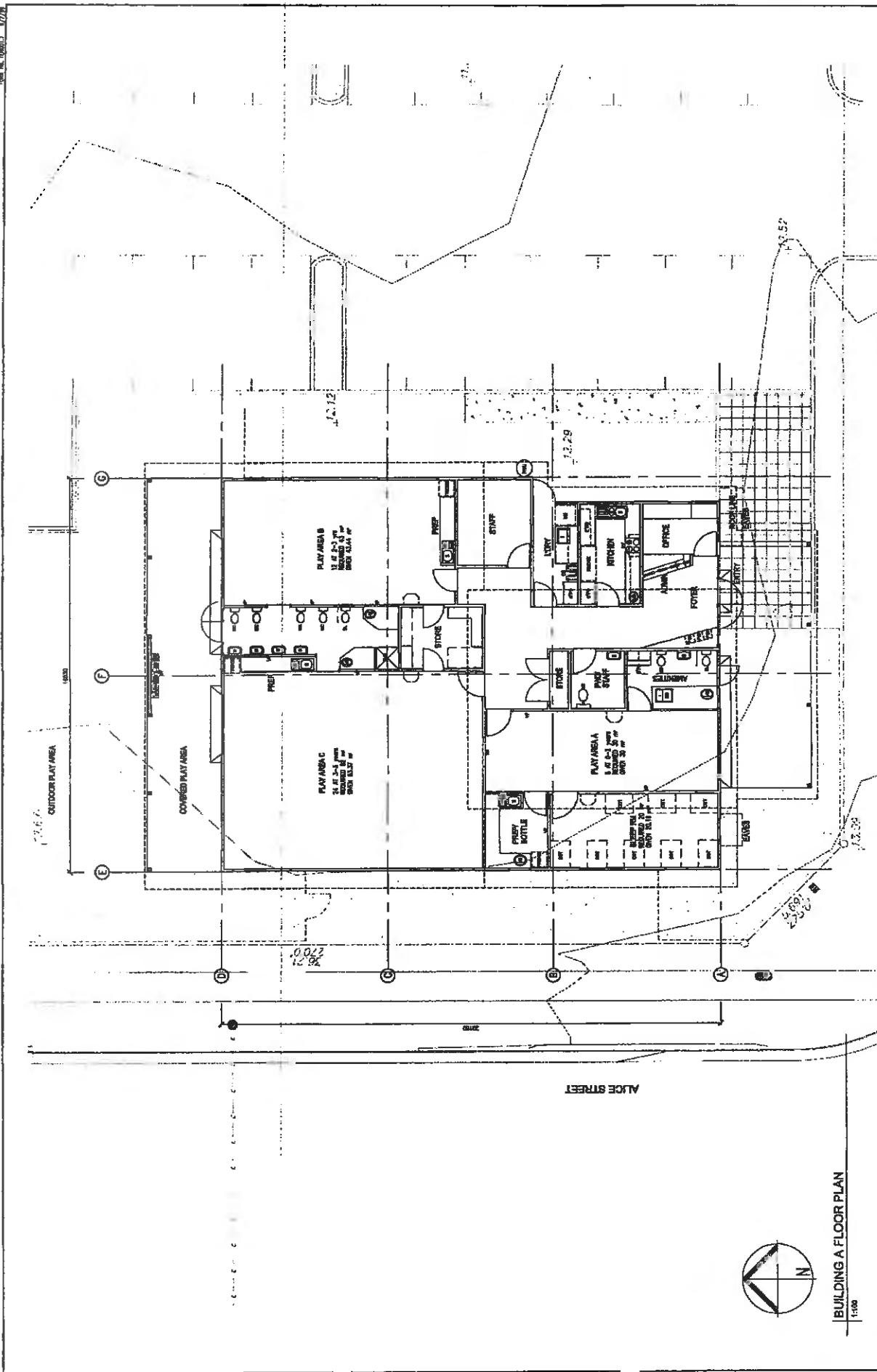


FORM NO. 200012 - 01/17/00



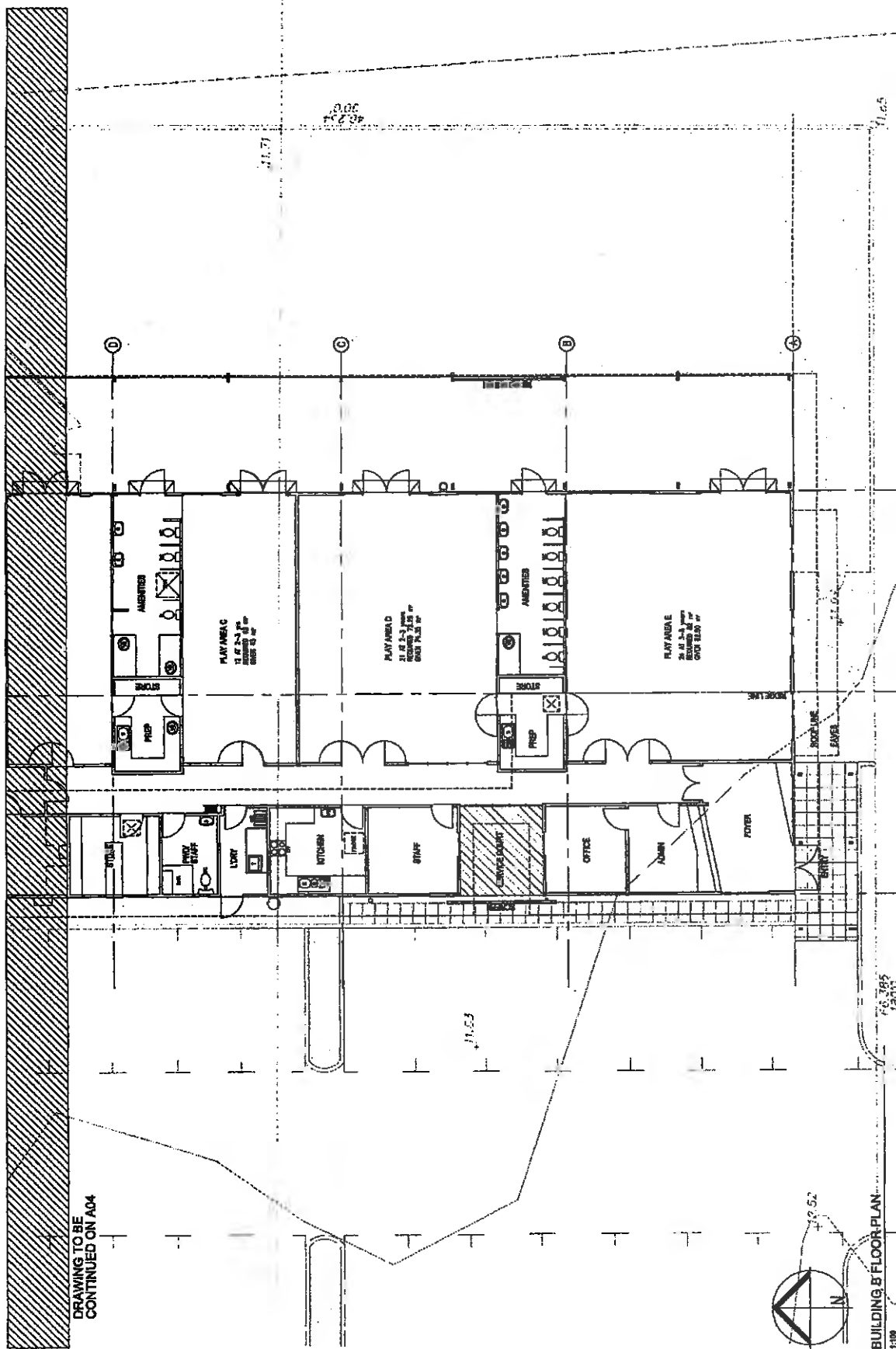
SITE PLAN
1:250

<p>PROPOSED 75 + 44 PLACE CHILDCARE CENTRE ALICE ST - GOODNA</p>		<p>REVISION SCHEDULE</p> <table border="1"> <thead> <tr> <th>NO.</th> <th>DATE</th> <th>DESCRIPTION</th> </tr> </thead> <tbody> <tr> <td>1</td> <td>08-20-20</td> <td>CHANGING AMENDED</td> </tr> <tr> <td>2</td> <td>08-20-20</td> <td>CHANGING AMENDED</td> </tr> </tbody> </table>		NO.	DATE	DESCRIPTION	1	08-20-20	CHANGING AMENDED	2	08-20-20	CHANGING AMENDED	<p>STATUS</p> <table border="1"> <thead> <tr> <th>DESIGNED</th> <th>C.D.</th> <th>APPROVED</th> <th>DATE</th> </tr> </thead> <tbody> <tr> <td>08-20-20</td> <td>08-20-20</td> <td>08-20-20</td> <td>08-20-20</td> </tr> </tbody> </table>		DESIGNED	C.D.	APPROVED	DATE	08-20-20	08-20-20	08-20-20	08-20-20	<p>GENERAL NOTES</p> <ol style="list-style-type: none"> Copyright in all documents, drawings, plans, specifications, etc., is the property of KdW Engineering and shall remain the property of KdW Engineering. Do not scale. Do not copy, reproduce, or otherwise use in any way without the written consent of KdW Engineering. For use in connection with the project, the user shall be responsible for obtaining all necessary permits and approvals from the relevant authorities. 		<p>TABLETOP</p> <p>KdW</p> <p>ENGINEERING</p>		<p>DRAWING TITLE</p> <p>SITE PLAN</p>		<p>SCALE</p> <p>1:250 (AS SHOWN AT A)</p>		<p>JOB No. 5518</p> <p>DATE 08/17/20</p> <p>REV. A01 B</p>	
NO.	DATE	DESCRIPTION																														
1	08-20-20	CHANGING AMENDED																														
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DESIGNED	C.D.	APPROVED	DATE																													
08-20-20	08-20-20	08-20-20	08-20-20																													



BUILDING A FLOOR PLAN
1:100

[illegible]



**DRAWING TO BE
CONTINUED ON A04**

BUILDING B FLOOR PLAN

5-15-1955

STIMCO CLIENT DETAILS

JOB NAME
PROPOSED 75 + 44
PLACE CHILDCARE CENTRE
ALICE ST- GOODNA

REVISION SCHEDULE

[illegible]

General notes
Comcast! in all documents. Archived

KdW

1

TABLETOP
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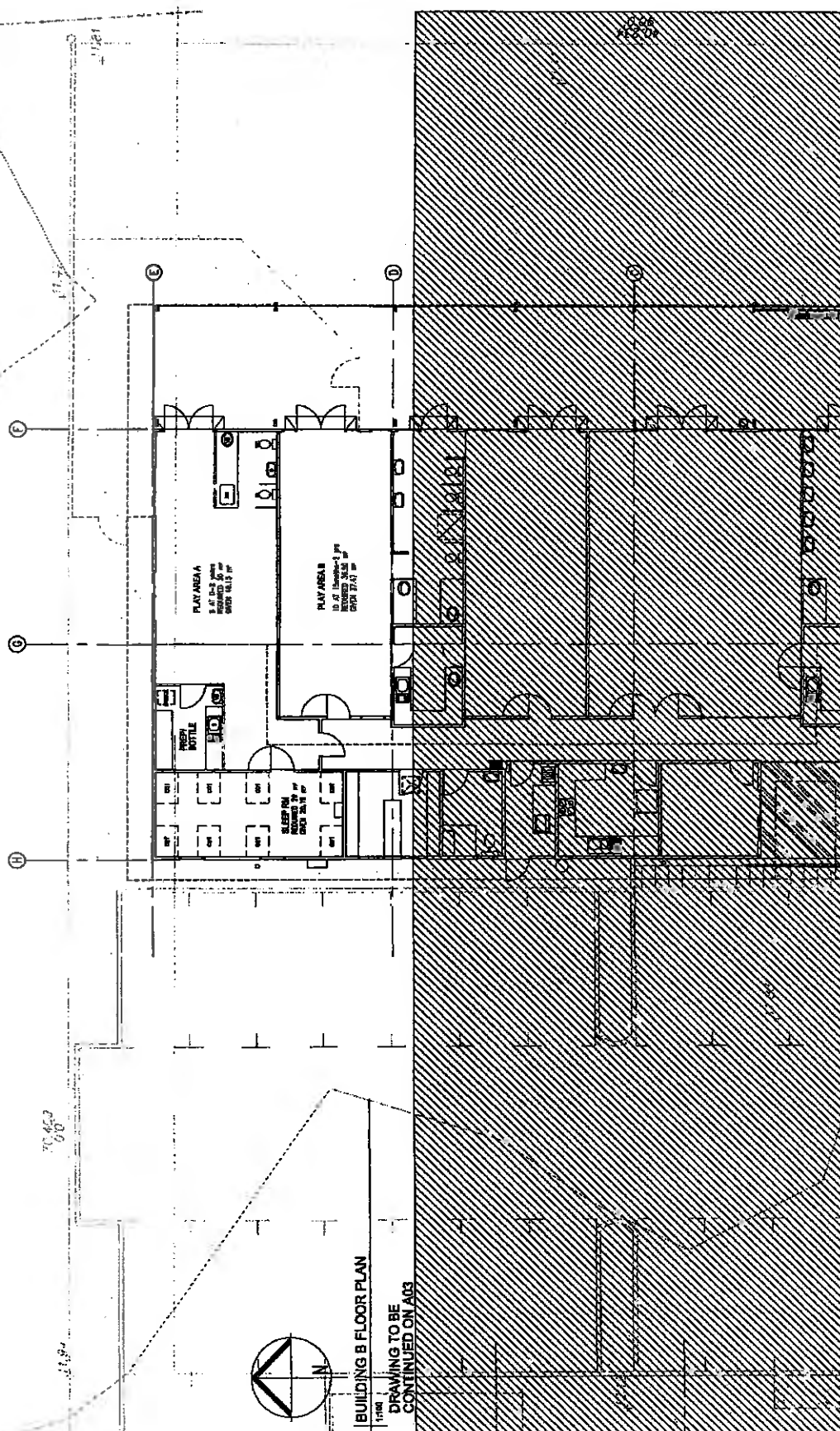
DRAWING TITLE
BUILDING B
FLOOR PLAN

124

SCALE	1	2	3	4	5	6	7	8	9	10
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BUILDING B FLOOR PLAN
DRAWING TO BE
CONTINUED ON A03

DRAWING TO BE
CONTINUED ON A03[illegible]

DEVELOPMENT BRANCH FEES – APPLICATIONS

Payee _____	Payee's Address _____
-------------	-----------------------

☐ Prepayments or Application No 1727105/MCU Application Class DA

Property Address 415 ALICE STREET, GOODVA

	Fee Paid	CASHIER'S USE ONLY	
		Reference Number	
BUILDING			14849
Lodgement fee		Receipt Number	1300618
Class 1,2 & 4 buildings		Total Amount Paid	2825.02
Add. Class 1,2 & 4		Date Paid	23.2.5.
Internal Alt. Class 1		Fee Paid	
Class 3 & 5-9 buildings		PLUMBING	
Class 10a buildings		Lodgement fee	
Class 10b Retaining Wall		Assessment/ Plan approval fee	
Class 10b S/Pool A/Ground		Design preparation	
Class 10b S/Pool In/Ground		Inspection fees	
Restumping/Underpinning		Amendment fee	
Inspect. Class 1,2 & 4		O.S.F. Approval	
Inspect. Class 3,5 -9		O.S.F. Assessment	
Inspect. Class 10		O.S.F. Design fee	
Energy efficiency		O.S.F. Permiability test	
Siting Requests		Water Meter (existing service)	
Amenity and Aesthetics		Water Service (new)	
Shop Fronts New		Copies of Drainage Plans (37)	
Shop Fronts Alt.		Building Over or near Sewers	
Shop Awnings		TOWN PLANNING	
Shop or Office Fitout		ERA	
Hoardings/Scaffolding/Gantry		Area Development Plan	
Temporary Building		MCU -- Code Assess Impact	C or E 3825.00
Change of Class. 2-10 to 1		Reconfiguration of a Lot	C or E
Change of Class. Other		Operational Works	
Amend. Class 1,2 & 4 Major		Change/Canc. Cond./Mod	C or E
Amend. Class 1,2 & 4 Minor		Other Development	C or E
Amend. Class 3,5 -9 Major		Signing of Survey Plan	C or E
Amend. Class 3,5 -9 Minor		Valuation fee	
Change of Builder		Preparation of Legal Documents	C or E
Extension of Time Class 1 & 10		Admin fee Outstanding Works bond	
Extension of Time Class 2-9		Bond	
Pool Fence Compliance		MISCELLANEOUS	
Handling Fee OFRA		Town Planning Documents (610)	
Private Certifier Lodge. Cl. 1&10		Planning Studies (710)	
Private Certifier Lodge. Cl. 2-9		Planning Policies (718)	
Private Cert. Info. Request		GIS Maps (443)	
Admin fee (Ext. Cert.) (45)		Eng. Works Manual/Stand Draw. (84)	
Building Certification General (45)		Town Planning Certificates (702)	
Build Search/Copies of Plans (36)		Town Planning Compliance Check (444)	
		Approval Lists/ Photocopying (22)	
		QBSA Contracts (86)	
SIGNS		HEADWORKS/CONTRIBUTIONS	
Class 10b Signs		Water	WT-
Advertising Sign - Local Law		Sewerage	SW-
Sign Licence fee		Roads/Traffic	RD-
		Open Space/Parks - Level 1	PK-
REMOVAL/DEMOLITION		Open Space/Parks - Level 2	PK-
Demolition/Removal Class 1&10		Open Space/Parks - Level 3	PK-
Demolition/Removal Class 2-9		Social/Community - Level 1	SI-
Preliminary Inspection		Social/Community - Level 2	SI-
Escort fee		Social/Community - Level 3	SI-
Road Bond		Streetscaping	ST-
Site Bond		Footpath	FT -
Water Disconnection Bond		Other	
Sewer Disconnection Bond			
Performance Bond (Trust)			
Admin. fee performance bond		Sub Total	\$
		TOTAL	\$3825.00
Sub Total	\$		

Annexure TCF-2

10 May 2005

Dear Sir/Madam

Re: Development Application Information Request (Section 3.3.6)
Application Number: 1727/05
Proposal: Community Use: Child Care Centre
Property Location: 45 Alice Street, Goodna

Upon review of the abovementioned Development Approval Application and supporting information we require further information to satisfactorily assess this application. The information requested is set-out below.

1. Access


The Applicant is requested to identify the largest anticipated vehicle (eg. refuse collection vehicle) to access the site and demonstrate that this vehicle can enter and exit the site in a forward gear. The turning paths of the largest anticipated vehicle should be in accordance with the Australian Standards (2890 series) and clearly shown on the development plan.

2. Flooding

The Applicant is requested to submit a site specific flood investigation for the proposal (prepared by a RPEQ experienced in hydraulic engineering) which addresses the potential impacts on flood levels such that there is no detrimental effects on surrounding properties. The level of the Q100 in this location is RL14.7m AHD.

3. Stormwater

The Applicant is requested to submit preliminary hydraulic calculations prepared by an RPEQ in accordance with QUDM which identifies the increase in stormwater runoff generated by


C/- JB Goodwin Midson & Partners
PO Box 92
TOOWONG QLD 4066

the proposal and the location and treatment of discharge points such that the proposed development will not adversely effect the down stream properties. The stormwater discharge from the proposed development should be maintained at pre development flows. The Developer should identify the proposed method of stormwater detention.

4. Noise

The Applicant is requested to supply an acoustic report, prepared by an independent and appropriately qualified Acoustic Consultant, which demonstrates that noise levels received by the development and those generated by the development do not exceed:

- (a) for noise in a steady state, indoors, 45dB(A) Leq (1 hour); and
- (b) outdoors, a range of 55-60 dB(A) L10 (1 hour), when measured at 1.5m above the ground in the centre of any outdoor play area.

5. Air Quality

The Applicant is requested to supply an air quality & health impact assessment report that demonstrates that the site will not be subjected to unacceptable air quality and that the risks of adverse health impacts are insignificant. Of particular concern in this regard is the proximity of the site to Alice Street, Goodna and its the potential air quality impact on child health.

6. Waste

The Applicant is requested to supply amended plans showing the location of waste storage and collection areas. The plan must clearly demonstrate that access to the waste storage and collection areas shall allow forward motion entry to the waste containers and forward motion entry and exit to and from the site. The following dimensions are given as a minimum of front-, rear- and side- loading truck dimensions for a guide to design for the adequate emptying of the bin and manoeuvring of the truck:

	Front/Load	Rear/Load	Side/Load
Length overall	10.9 m	8.2 m	8.7 m
Length when loading	12.6 m	9.5 m	3.0 m
Travelling overhead clearance required	4.0 m	3.0 m	3.5 m
Loading overhead clearance required	6.5m x 10m*	3.0 m	3.0 m
Access width required	3.8 m	3.8 m	4.0 m
Turning radius	9.0 m	9.0 m	9.0 m
Gross vehicle mass (GVM)	28 tonne	13.6 t	13.6 t

*from the back of the bin

It should be noted in this regard that wheelie bins are not an appropriate receptacle for the volume of waste likely to be produced from the subject site. As a result, the above should make provision for the location and use of bulk bins on the subject site as opposed to wheelie bins.

Under the provisions of the *Integrated Planning Act 1997*, the applicant has three (3) options available in response to this Information Request. The Applicant must give the Development Manager and each Referral Agency (if applicable):

1. all of the information requested; or
2. part of the information requested together with a notice asking the Development Manager and each Referral Agency (if applicable) to proceed with the assessment of the application; or
3. a notice:
 - (a) stating that the applicant does not intend to supply any of the information requested; and
 - (b) asking the Development Manager and each Referral Agency (if applicable) to proceed with the assessment of the application.

Response to this Information Request should be forwarded to:-

The Development Manager
Development Branch
Ipswich City Council
PO Box 191
IPSWICH QLD 4305

Yours faithfully


**ACTING DEVELOPMENT TEAM CO-
ORDINATOR - EAST**

Annexure TCF-3

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& Partners
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Ph/Fax: (07) 5463 1596

J.B. Goodwin, Midson & Partners

Consulting Surveyors, Town Planners and
Development Consultants.

24 February 2006

The Chief Executive Officer
Ipswich City Council
PO Box 191
Ipswich QLD 4305

J.B. Goodwin, Midson & Partners	
27 FEB 2006	
Doc. No.	
App'd. No.	1727/05
Action	

Attention: [REDACTED] (Town Planning Assessment Officer)

Dear Sir / Madam:

Re: Material Change of Use (Child Care Centre)
45 Alice Street, Goodna Qld 4300
Lot 3 on RP77071 Parish of Goodna

In response to your information request dated 10 May 2005, I have enclosed four (4) copies of the Stormwater and Flood Report prepared by Tabletop in response to those issues as identified by Council. Further information in response to Access and Waste issues will be forwarded to Council early next week.

Meanwhile, please proceed with the assessment of the application and if you have any queries regarding any of the above, please don't hesitate to contact me on [REDACTED]

Yours faithfully
J B Goodwin Midson & Partners

Town Planner

Encl.

GM+P



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STORMWATER AND FLOOD REPORT

45 Alice Street, Goodna

1.0 THE SITE

This report examines stormwater and flooding impacts on a proposed development site at 45 Alice Street, Goodna. The site location and general views of the surrounding area are illustrated in the aerial photographs (Figures A-1 and A-2).

The site is adjacent to a local waterway channel. The waterway channel is uniformly shaped and in generally good condition.

The site is impacted by backup flooding from the nearby Brisbane River as well as by flooding from the adjoining waterway. Figure A-3 is a part print of a Council plan showing areas flooded by Brisbane River backup.

This report examines local flooding from the adjoining waterway only and assess available site mitigation measures. Mitigation of Brisbane River backup flooding cannot be achieved at a local level.

2.0 DEVELOPMENT PROPOSAL

The development proposed is a 75 + 44 place child-care centre. The development is two separate buildings of slab on ground construction together with car parking, external play areas and landscaping.

3.0 REPORT OBJECTS

This report addresses two hydraulic issues raised in Council's information request of May 2005:

- Flooding - the impact on the site of flooding in the adjoining waterway, particularly with respect to the time of rise of floodwaters during large events and consequential evacuation times;
- Stormwater discharge rates - methods to reduce peak discharge rates from the site.

4.0 FLOODING

4.1 Hydrology

Since the time of flood rise on the site is an issue, it was necessary to generate flow hydrographs so that the rate of rise could be assessed. Rational Method procedures do not provide hydrographs so catchment hydrology was estimated using the RORB catchment model.

Full details of the hydrologic analysis (including typical flow hydrographs) are provided in Appendix B.

From the generated hydrographs for the various standard Average Recurrence Interval events, it was determined that design peak flow rates for the catchment to Alice Street are as follows:

- Q1 - 11.3 m³/s
- Q2 - 16.0 m³/s
- Q5 - 24.0 m³/s
- Q10 - 28.5 m³/s
- Q20 - 35.9 m³/s
- Q50 - 45.9 m³/s
- Q100 - 54.1 m³/s

4.2 Hydraulics

4.2.1 Model Setup

A detailed survey of the waterway extending from Alice Street to Mill Street (downstream) was carried out. Cross sections at appropriate locations were extracted from the resulting DTM and used to set up a HEC-RAS model of the waterway. The survey and section locations are detailed in Appendix C together with details of the HEC-RAS model and results.

4.2.2 General Topography

The waterway between Alice and Mill Streets is very uniform and hydraulically efficient.

On the eastern side of the waterway downstream of the subject site, a timber picket fence is constructed paralleling the waterway centreline in a position which suggests it may impact on flow profiles.

At both Alice and Mill Streets, relatively low capacity box culverts are constructed under the roadways. It appears that higher ARI events overtop the roadways. At Alice Street, the low point in the road floodway is located partially in front of the subject site rather than being centred on the channel and culverts 30 metres to the west.

4.2.3 Initial Analysis – Existing Conditions

An initial analysis was carried out to determine the waterway flow which first enters the site and to identify the extent of inundation of the site for the larger ARI events. The analysis indicated that floodwater first reaches the site (at the north west corner) when the waterway flow is about 24 m³/s. This is equivalent to the Q5 event.

The site is substantially inundated (although to relatively shallow depths) with the Q50 and Q100 events. Whilst the water profile during overtopping events slopes down quickly from the Alice Street floodway into the waterway channel itself, it is clear that overtopping flows on Alice Street would enter the subject property along the road frontage before crossing the property diagonally north west to the waterway.

4.2.4 Mitigation

Examination of the calculated water levels for the larger ARI events showed that a judicious selection of floor levels for the buildings, together with a low wall along part of the western boundary of the site, can achieve Q100 immunity for the proposed development from flows in the adjoining waterway.

To prevent overtopping flows on Alice Street entering the site, it is necessary to construct a wall along the road frontage. The effects of a partial wall along the street frontage were examined. It was found that a wall along the property boundary extending to 10 metres from the west corner and then angled north west across the property towards the waterway prevents flows from entering property without impacting on water levels upstream. The following tabulation compares the calculated levels at the relevant sections.

ARI	Calculated Water Level (m)					
	North Side of Alice Street		South Side of Alice Street		Section 18 (refer Figure C-1)	
	Exist	Post Development	Exist	Post Development	Exist	Post Development
Q1					12.45	12.45
Q2					12.79	12.79
Q5	13.16	13.16	13.20	13.20	13.20	13.20
Q10	13.21	13.24	13.30	13.30	13.30	13.30
Q20	13.29	13.34	13.41	13.41	13.41	13.41
Q50	13.39	13.45	13.54	13.51	13.54	13.51
Q100	13.44	13.54	13.61	13.59	13.61	13.59

TABLE 1

The angled part of the wall allows floodwater overtopping Alice Street to cross the southwest corner of the property towards the waterway. Any development on this part of the property will need to be elevated on piers above the calculated Q100 water levels to allow floodwaters unhindered passage below.

Schematic details of the proposed building floor levels and the wall location and levels are shown on drawing number 5946-R01.

4.2.5 Time of Flood Rise

Although the initial object of the analysis was to determine the time of flood rise so that appropriate evacuation plans could be prepared, the analysis has determined that it is actually possible to provide the site with acceptable immunity for Q100 local events. The time of floodwater rise is therefore not really relevant.

Notwithstanding this, the modelled hydrographs show that the time from when water first enters the property at the end of the wall in the north west corner until it peaks at RL 11.97 (Q100) is 34 minutes.

4.3 Summary

A detailed hydrologic and hydraulic analysis has shown that the site can achieve normal Q100 immunity from local flood events in the adjoining waterway by:

- Setting appropriate minimum building levels (RL 12.15 for building B and RL 12.73 for building A); and

- Constructing a solid wall along the road frontage from the eastern corner, across the south west corner of the property and along the western boundary to the north west corner. Development on the property above the cutoff southwest corner should be suspended above ground level to allow free passage of flood flows below. Slabs and beams in the suspended area must have a minimum RL of 13.54.

5.0 STORMWATER DISCHARGE RATES

The development will result in a higher proportion of impermeable area than existed under the original use. Council requires that stormwater flows post development not exceed those experienced under existing conditions.

The site area, topography and development layout are not really suited to a stormwater detention arrangement.

To reduce stormwater discharges from the developed site, the impacts of stormwater reuse for toilet flush and irrigation were examined. Typically a reuse strategy has dual benefits in reducing stormwater discharges as well as reducing demand on the potable supply.

The site is presently undeveloped but was previously developed. The extent of previous development (and hence percentage of impermeable area) is not known. For the purposes of this analysis, existing condition parameters were calculated on the basis of an undeveloped site. The results are therefore conservative.

The analysis was carried out using MUSIC software. The model setup and basic parameters are in accordance with Brisbane City Council's "Guidelines for Pollutant Export Modelling in Brisbane" - version 7. The model adopted Brisbane City Council's preferred historical rainfall data sequence from 1980 to 1990 in 6 minute time steps.


Likely toilet flush demand was estimated using first principles based on the anticipated occupancy of the centre. Irrigation usage was ignored and so the results are likely to be conservative. An average demand (toilet flush) for the centre of 860 L per day (for five days per week) was calculated.

The following tabulation compares flow statistics from the MUSIC model for existing and post development conditions:

Flow Characteristic		Undeveloped	Post Development	
Stormwater Discharge (L/s)	peak	165	10kL re-use tank	15kL re-use tank
	mean	6.0	169	169
	median	3.1	3.0	3.0
Toilet Flush Re-Use	90 percentile	1.4	1.4	1.4
	% of demand	6.3	6.3	6.3
		-	85.4%	92.5%

The analysis shows that connecting all roof downpipes to a minimum 10 kL reuse tank supplying all toilet cisterns in the centre will substantially reduce expected stormwater flows off site from the development as well as substantially reducing the centre's demand on Council's potable supply.

Yours faithfully

A large black rectangular box redacting the signature of the person.

for TABLETOP ARCHITECTS PLANNERS ENGINEERS

APPENDIX A
SITE LOCATION

**T A B L E T O P
A R C H I T E C T S
P L A N N E R S
E N G I N E E R S**

ABN 60 067 321 117

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Figure A-1



Figure A-2

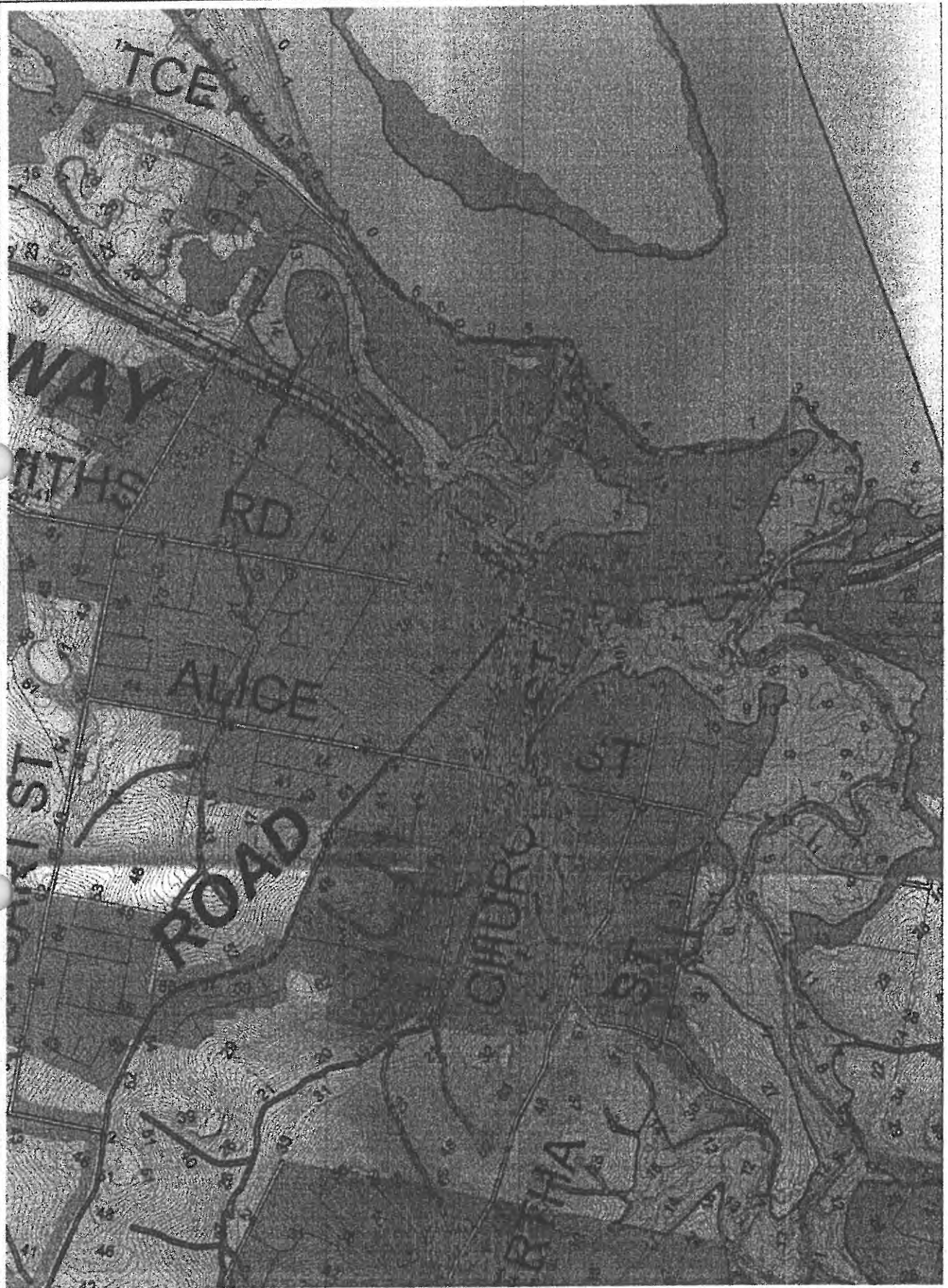


Figure A-3

APPENDIX B
HYDROLOGIC ANALYSIS

TABLETOP
ARCHITECTS
PLANNERS
ENGINEERS

ABN 60 067 321 117

1.0 CATCHMENT MODEL

The RORB catchment model was adopted so that flow hydrographs could be produced to enable assessment of the time of rise of floodwaters.

The overall catchment and subcatchments making up the RORB model are detailed in Figure B-1.

2.0 RAINFALL

Standard storm burst patterns from Australian Rainfall and Runoff for storm burst durations ranging from 10 minutes to 6 hours were calculated using the methods outlined in AR&R.

The initial loss/continuing loss model was adopted for rainfall losses.

3.0 CALIBRATION

Since no historical records of recorded flows in the catchment are available, the RORB model was calibrated by comparing hydrograph peak discharges with peak discharges calculated for the catchment using the Rational Method. An initial loss of 35mm and continuing loss of 2 mm/hr, were found to produce comparable results to the Rational Method.

4.0 DESIGN FLOWS

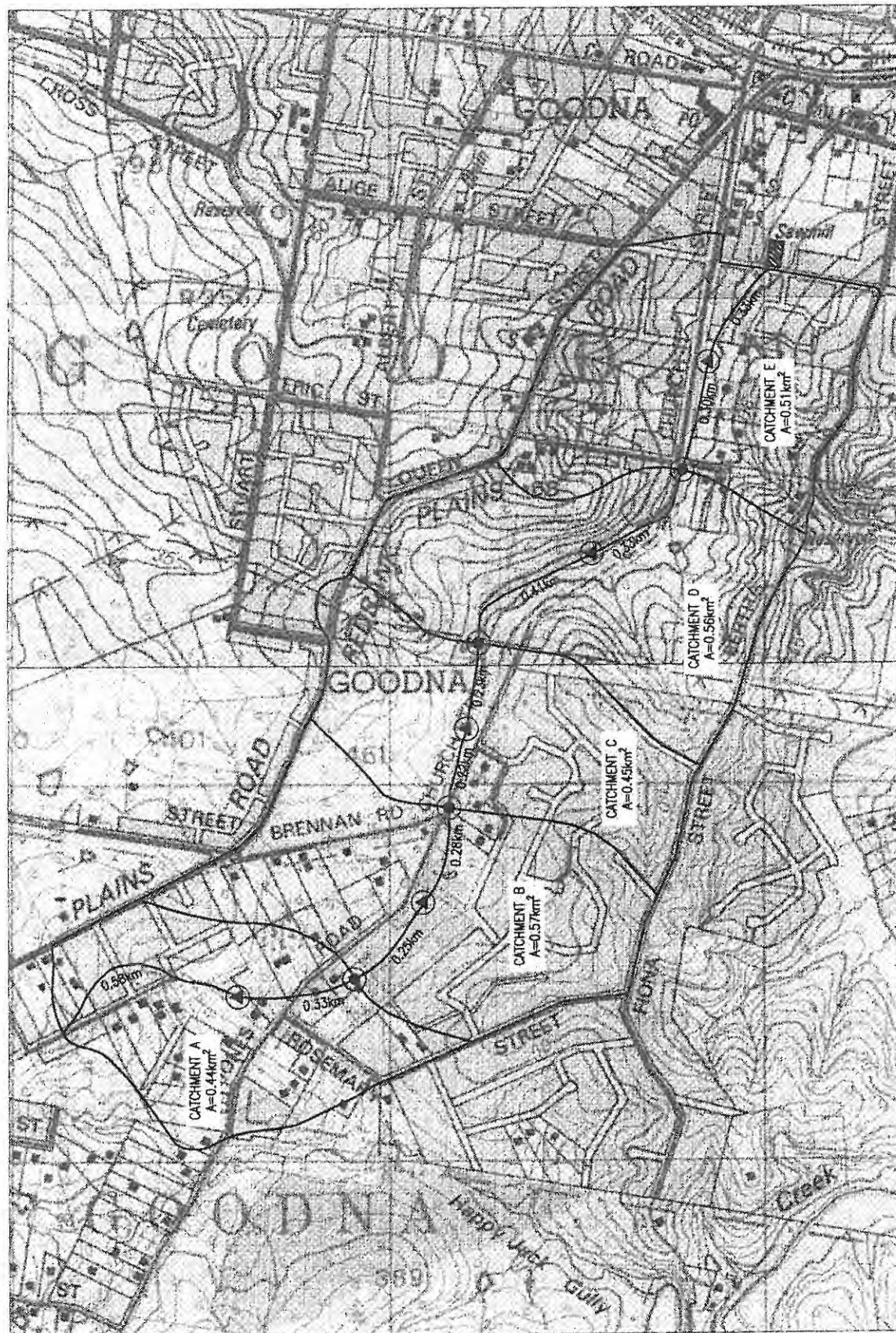
From the generated hydrographs for the various standard Average Recurrence Interval events, it was determined that design peak flow rates for the catchment to Alice Street are as follows:

- Q1 - 11.3 m³/s
- Q2 - 16.0 m³/s
- Q5 - 24.0 m³/s
- Q10 - 28.5 m³/s
- Q20 - 35.9 m³/s
- Q50 - 45.9 m³/s
- Q100 - 54.1 m³/s

Hydrographs of a selection of the calculated Q100, Q50 and Q20 standard storm burst events are attached.

Catchment Plan
and RORB model

Figure B-1



0 50 100 150 200
SCALE (m) 1:2000 N

▲ MODEL STORAGE
● NODE

Calculated Hydrographs - Q20

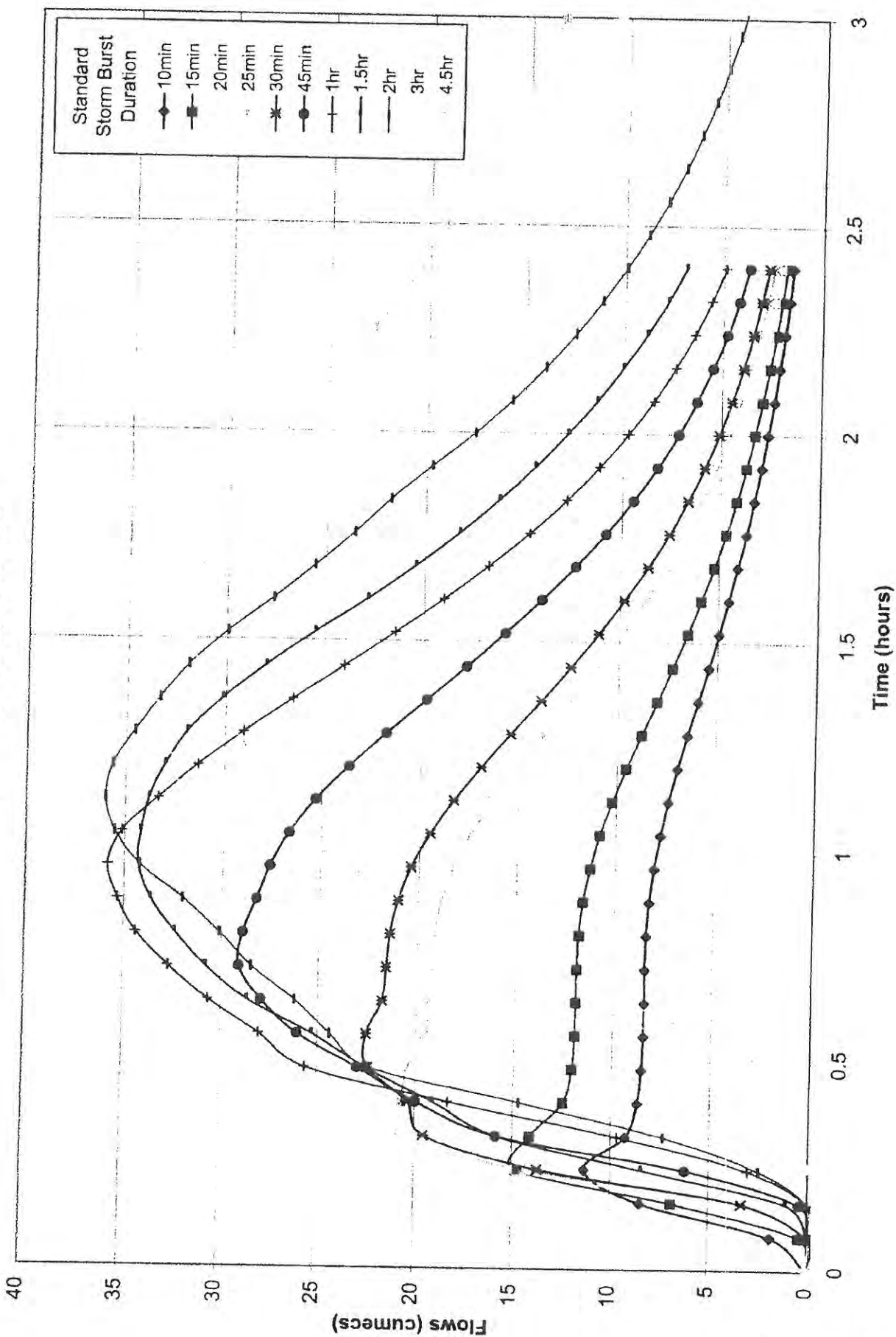


Figure B-2

Calculated Hydrograph - Q50

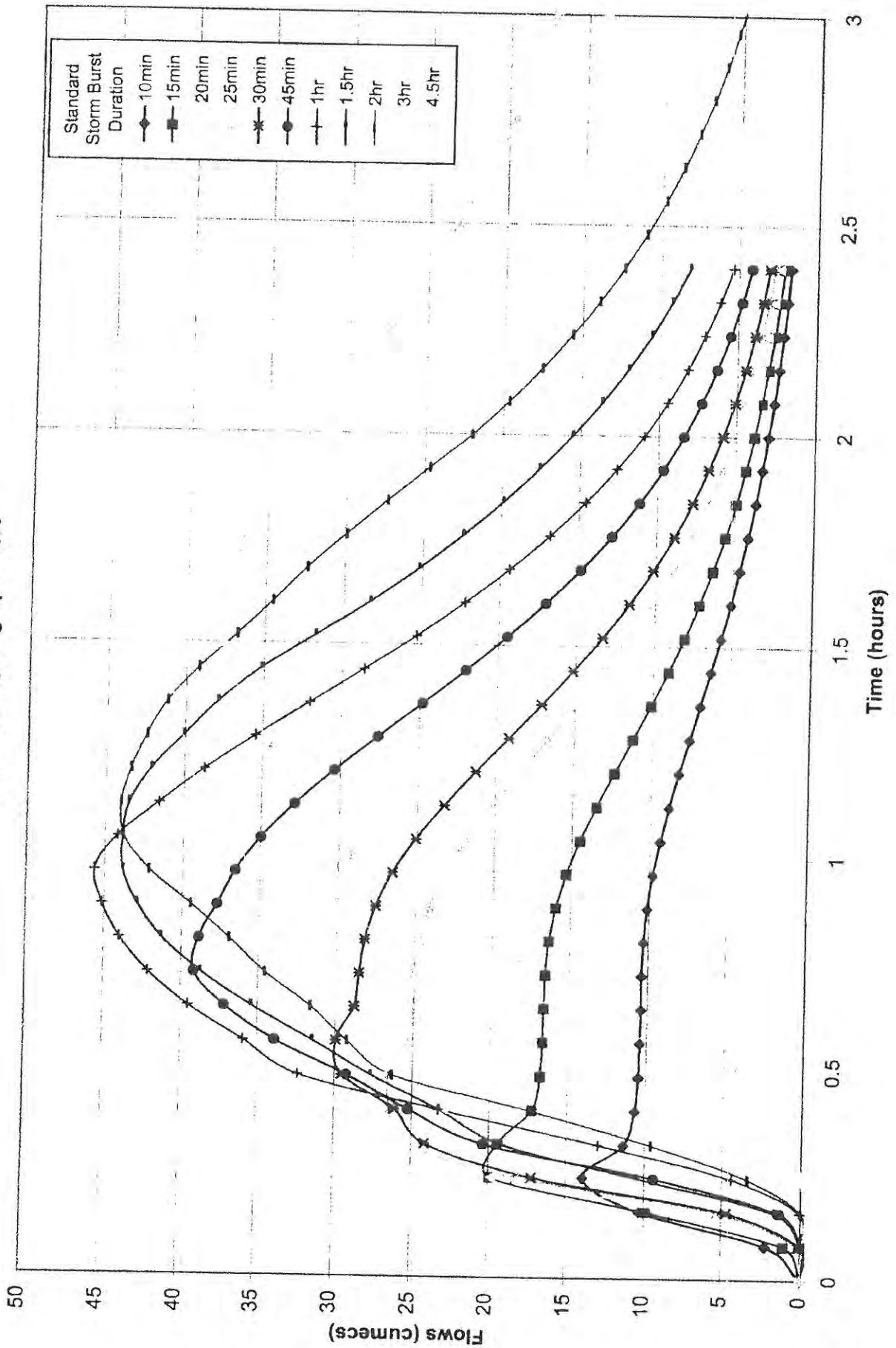


Figure B-3

Calculated Hydrograph - Q100

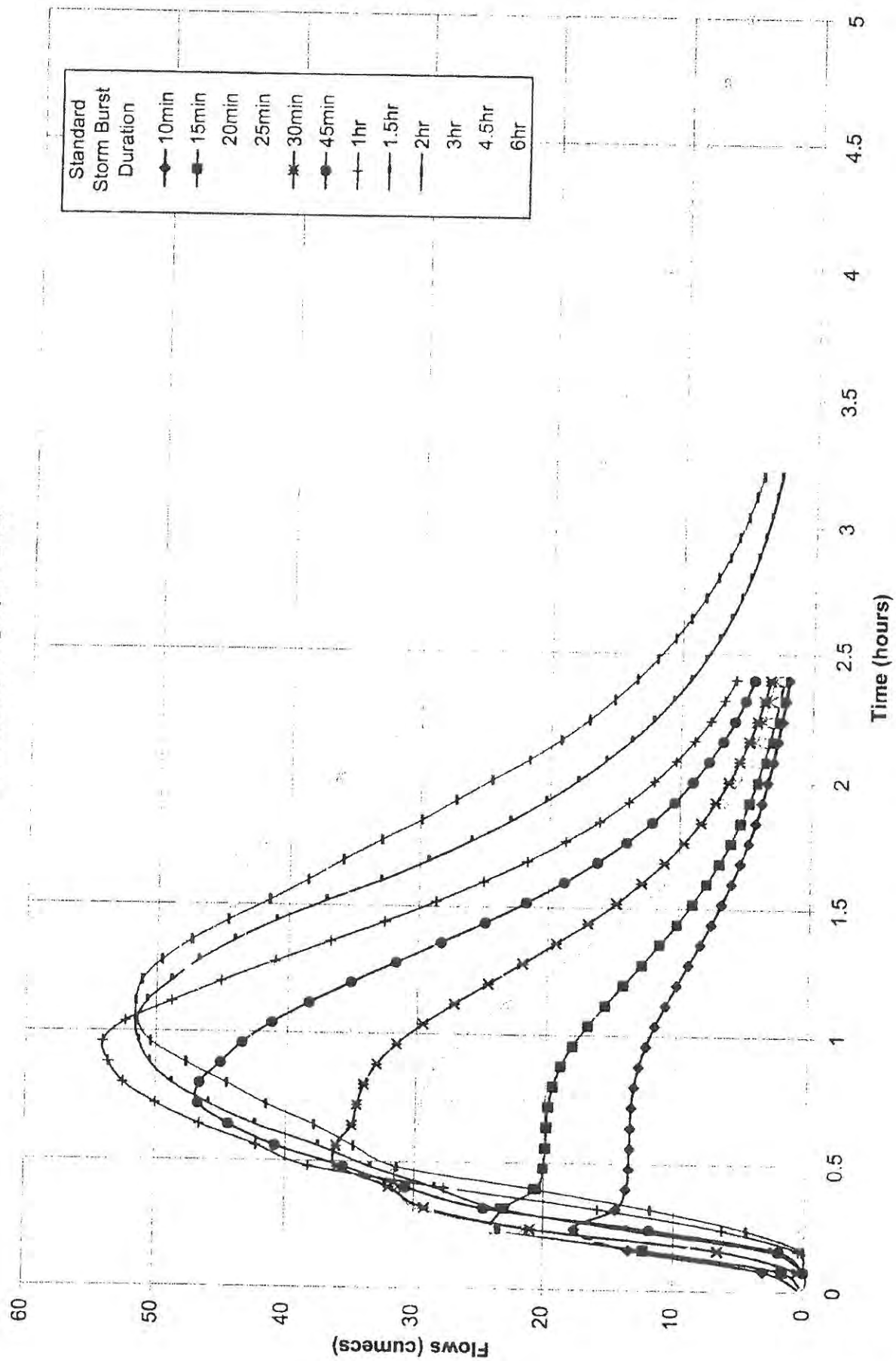


Figure B-4

APPENDIX C
WATERWAY HYDRAULICS

**TABLETOP
ARCHITECTS
PLANNERS
ENGINEERS**

ABN 60 067 321 117

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1.0 SURVEY

A detailed survey of the waterway extending from Alice Street to Mill Street (downstream) was carried out. Cross-sections at appropriate locations were extracted from the resulting DTM and used to set up a HEC-RAS model of the waterway. The survey and section locations are detailed in Figure C-1.

2.0 GENERAL TOPOGRAPHY

The waterway is very uniform and hydraulically efficient. Low, well tended grass cover extends over almost all the waterway. On the eastern side of the waterway downstream of the subject site, a picket fence is constructed paralleling the waterway centreline.

A Mannings "n" of 0.03 was adopted over the entire waterway. The downstream fence was treated as a "blocked obstruction".

3.0 START DEPTH

At both Alice and Mill Streets, relatively low capacity box culverts are constructed under the roadways. Calculations were commenced at the downstream end of the model at Mill Street assuming that the culvert/floodway combination was the control. Sensitivity analysis confirmed that calculated water levels in the vicinity of the subject property were not influenced by any errors in the starting assumptions.

4.0 MODEL CALCULATIONS

After calibration and verification, the model was run to establish waterway water levels under existing conditions for events up to Q100. Detailed output is provided in Appendix C-1.

Various mitigation options were then examined and modelled.

Whilst the water profile during overtopping events on the Alice St roadway slopes down quickly from the roadway into the waterway channel itself, it is clear that overtopping flows on Alice Street would enter the subject property along the road frontage before crossing the property diagonally to the waterway.

The effects of a partial wall along the street frontage to stop overtopping flows on Alice Street entering the site, were examined. It was found that a wall along the property boundary extending to 10 metres from the west corner and then angled northwest across the property towards the waterway will prevent flows from entering the property without impacting on water levels upstream. The following tabulation compares the calculated levels at the relevant sections.

Detailed output is provided in Appendix C-2.

ARI	Calculated Water Level (m)					
	North Side of Alice Street		South Side of Alice Street		Section 18 (refer Figure C-1)	
	Exist	Post Development	Exist	Post Development	Exist	Post Development
Q1					12.45	12.45
Q2					12.79	12.79
Q5	13.16	13.16	13.20	13.20	13.20	13.20
Q10	13.21	13.24	13.30	13.30	13.30	13.30
Q20	13.29	13.34	13.41	13.41	13.41	13.41
Q50	13.39	13.45	13.54	13.51	13.54	13.51
Q100	13.44	13.54	13.61	13.59	13.61	13.59

It was determined that the site can achieve normal immunity to local waterway flooding up to the Q100 events by:

- setting appropriate minimum building levels; and
- constructing a solid wall along the road frontage from the eastern corner, across the southwest corner of the property and along the western boundary to the northwest corner. Any development on the property above the cut-off southwest corner must be suspended above ground level to allow free passage of flow flows below. Slabs and beams in the suspended area must have a minimum RL of 13.54

5.0 TIME OF FLOW RISE

Although the initial object of the analysis was to determine the time of flow rise so that appropriate evacuation plans could be prepared, the analysis has determined that is possible to provide the site with acceptable immunity for Q100 local events. The time of floodwater rise is therefore not really relevant.

Notwithstanding this, an examination of the modelled hydrographs shows that the time for the water level at the north west corner (HEC-RAS model section 13) to rise from when it first enters the property at R. L. 11.59 (24 m³/s - Q5) to R. L. 11.97 (54 m³/s - Q100) is approximately 34 minutes. Note that this level is still some 153 millimetres below the recommended minimum building level.

Survey and
HEC-RAS
section
locations

Figure C-1



APPENDIX C-1
DETAILED HEC-RAS OUTPUT
EXISTING CONDITIONS

TABLETOP
ARCHITECTS
PLANNERS
ENGINEERS

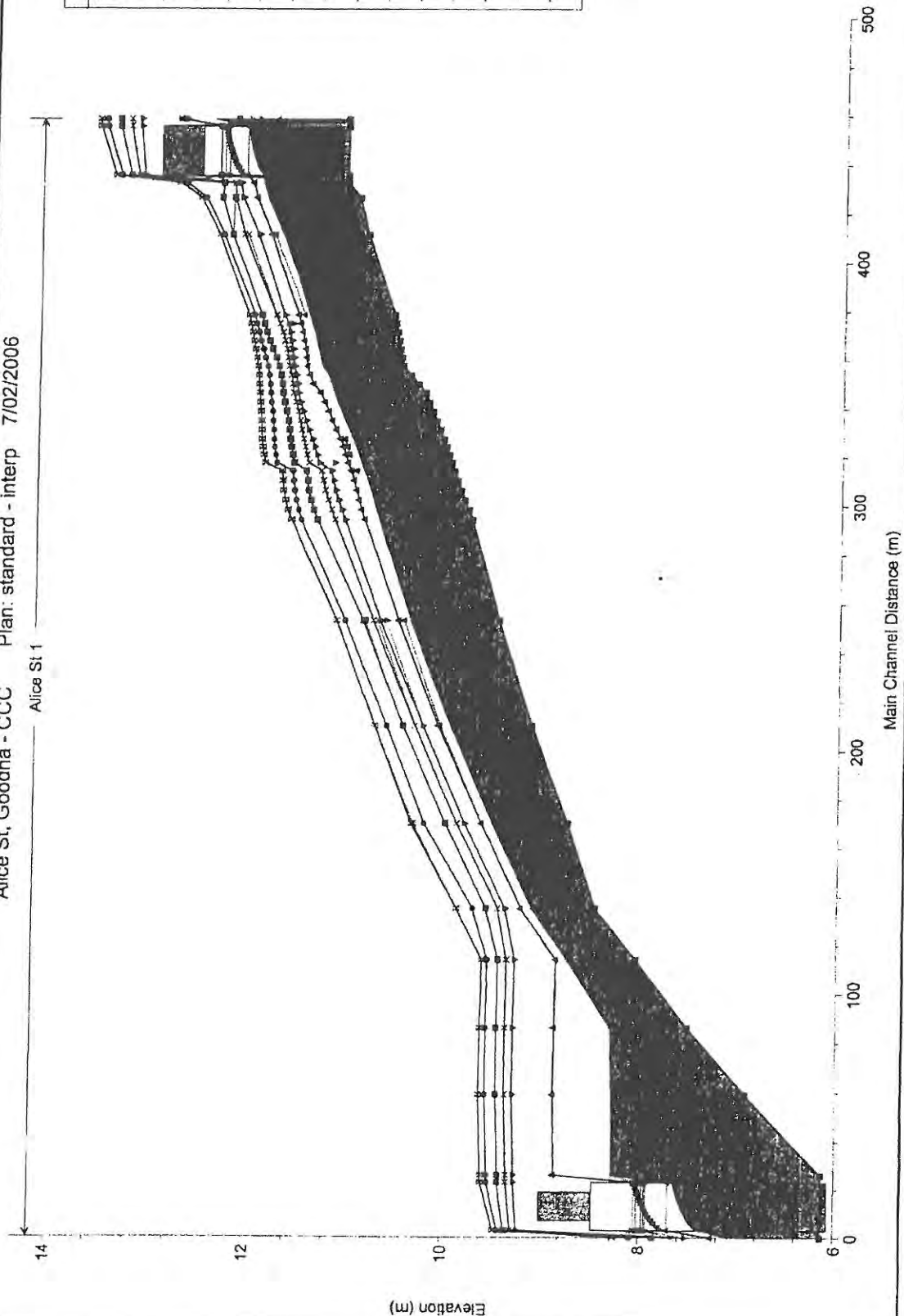
ABN 60 067 321 117

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Alice St, Goodna - CCC Plan: standard - interp 7/02/2006

Alice St 1

Legend
WS Q100
Crit Q100
WS Q50
Crit Q50
WS Q20
Crit Q20
WS Q10
Crit Q10
WS Q5
Crit Q5
WS Q2
Crit Q2
WS Q1
Crit Q1
Ground



HEC-RAS Plan: Interp River: Alice St Reach: 1

Station	Depth	W.S. Elev	Cut W.S.	B.G. Elev	F.S. Slope	Vel Cmf	Flow Area	Top Width	Froude # Cbf
11.30	11.09	12.45	11.68	12.48	0.000481	0.74	15.21	14.05	0.23
18.00	11.09	12.79	11.80	12.81	0.001107	0.82	26.00	31.99	0.30
24.00	11.09	13.20	11.99	13.21	0.000275	0.45	53.12	71.22	0.17
28.50	11.09	13.30	12.08	13.31	0.000260	0.47	60.34	73.81	0.18
35.90	11.09	13.41	12.22	13.42	0.000283	0.53	68.60	77.40	0.17
45.90	11.09	13.54	12.74	13.55	0.000308	0.59	78.79	81.13	0.19
54.10	11.09	13.61	12.80	13.63	0.000348	0.85	84.39	83.12	0.20
Culvert									
11.30	11.09	11.94		12.03	0.002838	1.33	8.48	12.57	0.52
18.00	11.09	12.05		12.19	0.003588	1.82	9.88	12.91	0.59
24.00	11.09	12.18		12.40	0.004904	2.07	11.59	13.25	0.71
28.50	11.09	12.24		12.51	0.005678	2.30	12.37	13.40	0.77
35.90	11.09	12.36		12.70	0.006277	2.57	13.96	13.79	0.82
45.90	11.09	12.74	12.74	12.95	0.013089	2.03	22.59	40.12	1.06
54.10	11.09	12.80	12.80	13.01	0.012194	2.06	26.32	42.15	1.01
11.30	10.96	11.90		12.01	0.004593	1.47	7.71	14.58	0.64
18.00	10.96	12.01		12.18	0.005398	1.71	9.38	15.97	0.71
24.00	10.96	12.16		12.37	0.008427	2.02	11.87	17.88	0.79
28.50	10.96	12.23		12.47	0.008763	2.15	13.24	18.82	0.82
35.90	10.96	12.37	12.24	12.63	0.009073	2.24	16.03	20.84	0.92
45.90	10.96	12.53	12.53	12.74	0.012224	2.02	22.73	35.63	1.01
54.10	10.96	12.58	12.58	12.81	0.011619	2.12	25.55	38.00	1.00
11.30	10.88	11.73	11.70	11.90	0.010440	1.84	8.16	15.45	0.93
18.00	10.88	11.88	11.82	12.05	0.009806	1.94	8.24	17.85	0.91
24.00	10.88	11.99	11.97	12.24	0.010656	2.23	10.74	20.39	0.98
28.50	10.88	12.14	12.10	12.34	0.009893	1.99	14.35	20.80	0.93
35.90	10.88	12.26	12.28	12.44	0.011921	1.90	18.86	29.70	0.99
45.90	10.88	12.34	12.34	12.53	0.011903	1.91	23.97	42.58	0.99
54.10	10.88	12.39	12.39	12.60	0.011885	2.00	26.99	45.60	1.00
11.30	10.59	11.45		11.59	0.008182	1.65	6.85	16.78	0.82
18.00	10.59	11.58	11.51	11.73	0.008979	1.73	9.27	22.80	0.86
24.00	10.59	11.71		11.89	0.009306	1.88	12.74	28.25	0.90
28.50	10.59	11.80	11.79	11.97	0.011905	1.82	15.69	44.32	0.97
35.90	10.59	11.94		12.08	0.007240	1.51	23.70	60.53	0.77
45.90	10.59	12.02		12.15	0.007146	1.63	28.21	64.11	0.79
54.10	10.59	12.08		12.22	0.006777	1.68	32.22	67.13	0.77
11.30	10.58	11.43		11.56	0.007934	1.51	7.00	17.36	0.81
18.00	10.58	11.55		11.70	0.008827	1.88	9.52	24.10	0.85
24.00	10.58	11.68	11.64	11.86	0.008932	1.86	12.87	28.12	0.88
28.50	10.58	11.76		11.94	0.009454	1.88	15.31	35.04	0.90
35.90	10.58	11.92		12.03	0.007366	1.51	23.75	61.86	0.78
45.90	10.58	11.99		12.12	0.007114	1.61	28.45	65.30	0.78
54.10	10.58	12.06		12.20	0.006563	1.65	32.73	68.14	0.76
11.30	10.56	11.40		11.53	0.007650	1.57	7.19	18.04	0.80
18.00	10.56	11.53		11.66	0.008168	1.62	9.86	24.79	0.82
24.00	10.56	11.66		11.83	0.007576	1.81	13.24	28.65	0.82
28.50	10.56	11.73		11.91	0.009206	1.86	15.31	34.34	0.89
35.90	10.56	11.89		12.01	0.007566	1.52	23.69	62.89	0.79
45.90	10.56	11.97		12.10	0.007094	1.60	28.69	66.51	0.78
54.10	10.56	12.04		12.17	0.006327	1.62	33.30	69.25	0.75
11.30	10.54	11.38		11.50	0.007384	1.53	7.40	18.93	0.78
18.00	10.54	11.51		11.63	0.007320	1.55	10.29	25.45	0.78
24.00	10.54	11.64		11.80	0.006663	1.73	13.84	27.05	0.77
28.50	10.54	11.70		11.88	0.008076	1.83	15.54	32.29	0.84
35.90	10.54	11.86		11.98	0.008011	1.53	23.44	63.58	0.81
45.90	10.54	11.94		12.07	0.007068	1.59	28.93	67.73	0.77
54.10	10.54	12.02		12.15	0.006062	1.59	33.97	70.48	0.73
11.30	10.53	11.36		11.47	0.007361	1.48	7.65	20.54	0.77
18.00	10.53	11.49		11.60	0.008359	1.47	10.85	26.14	0.73
24.00	10.53	11.63		11.77	0.005763	1.65	14.57	27.61	0.72
28.50	10.53	11.69		11.84	0.006718	1.77	16.14	30.89	0.78
35.90	10.53	11.83		11.95	0.008771	1.57	22.92	64.33	0.84
45.90	10.53	11.92		12.05	0.007034	1.57	29.19	69.00	0.77
54.10	10.53	12.00		12.12	0.005753	1.58	34.76	71.77	0.71
11.30	10.51	11.34		11.44	0.007254	1.42	7.96	22.39	0.76
18.00	10.51	11.48		11.59	0.005379	1.39	11.53	26.85	0.68
24.00	10.51	11.62		11.74	0.004919	1.56	15.42	28.26	0.67
28.50	10.51	11.67		11.82	0.005991	1.89	16.91	31.85	0.74
35.90	10.51	11.79		11.92	0.009207	1.61	22.25	61.91	0.86
45.90	10.51	11.90		12.02	0.006997	1.56	29.45	73.28	0.77
54.10	10.51	11.98		12.10	0.005419	1.52	35.88	73.14	0.69
11.30	10.50	11.32		11.41	0.007014	1.38	8.32	24.39	0.74

HEC-RAS Plan: Interp River Alice St Reach: 1 (Continued)

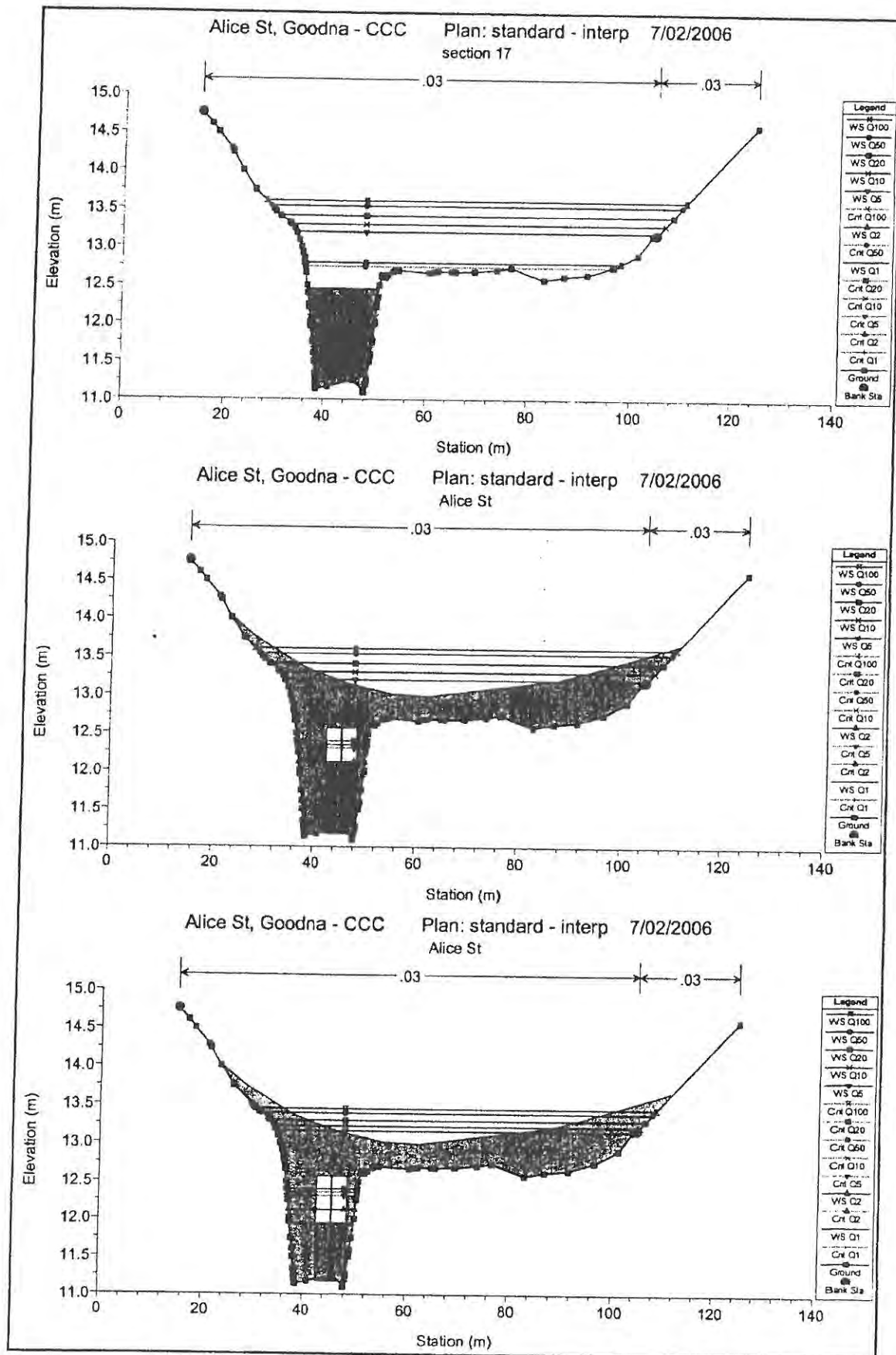
Reach	Profile	Top of Bank	Min Ch B	Max Elev	Ch W.S.	E.G. Elev	E.G. Slope	Vel Cont	Flow Area	Top Width	Froude # Ch
1	Q1	18.00	10.50	11.47		11.56	0.004464	1.30	12.30	27.59	0.82
1	Q2	24.00	10.50	11.61		11.72	0.004182	1.47	18.36	28.94	0.82
1	Q3	28.50	10.50	11.66		11.79	0.005370	1.61	17.73	33.08	0.70
1	Q4	35.90	10.50	11.76		11.90	0.006092	1.62	22.14	55.51	0.82
1	Q5	45.90	10.50	11.88		12.00	0.006901	1.54	29.79	71.58	0.78
1	Q6	54.10	10.50	11.97		12.08	0.005046	1.47	36.72	74.59	0.87
1	Q7	11.30	10.42	11.26		11.36	0.006620	1.55	7.27	17.05	0.78
1	Q8	16.00	10.42	11.44		11.54	0.005125	1.35	11.84	27.84	0.68
1	Q9	24.00	10.42	11.59		11.70	0.005534	1.48	18.17	34.79	0.69
1	Q10	28.50	10.42	11.64		11.77	0.007373	1.59	17.91	43.07	0.79
1	Q11	35.90	10.42	11.74		11.86	0.007596	1.56	23.08	58.75	0.79
1	Q12	45.90	10.42	11.88		11.97	0.005632	1.47	31.24	72.00	0.71
1	Q13	54.10	10.42	11.96		12.06	0.004278	1.40	38.89	75.14	0.82
1	Q14	11.30	10.34	11.22		11.35	0.006988	1.60	7.07	16.20	0.77
1	Q15	16.00	10.34	11.41		11.51	0.006290	1.44	11.14	27.67	0.72
1	Q16	24.00	10.34	11.58		11.68	0.007077	1.41	16.99	47.40	0.75
1	Q17	28.50	10.34	11.62		11.73	0.007081	1.48	19.23	49.93	0.76
1	Q18	35.90	10.34	11.73		11.83	0.006078	1.46	24.59	58.24	0.72
1	Q19	45.90	10.34	11.85		11.95	0.005001	1.39	32.96	72.40	0.68
1	Q20	54.10	10.34	11.95		12.04	0.003820	1.33	40.81	73.77	0.58
1	Q21	11.30	10.26	11.19		11.33	0.006958	1.62	6.98	15.60	0.77
1	Q22	16.00	10.26	11.33		11.48	0.006475	1.71	9.37	22.45	0.84
1	Q23	24.00	10.26	11.57		11.65	0.005895	1.29	18.57	50.29	0.68
1	Q24	28.50	10.26	11.61		11.71	0.005572	1.38	20.99	51.90	0.68
1	Q25	35.90	10.26	11.72		11.81	0.004667	1.38	26.48	57.46	0.64
1	Q26	45.90	10.26	11.84		11.93	0.004181	1.32	34.86	72.92	0.61
1	Q27	54.10	10.26	11.95		12.03	0.003062	1.28	43.06	76.40	0.53
1	Q28	11.30	10.22	11.16		11.30	0.007203	1.68	6.82	15.10	0.79
1	Q29	16.00	10.22	11.29		11.45	0.006995	1.77	9.02	17.61	0.79
1	Q30	24.00	10.22	11.54		11.63	0.005839	1.31	18.39	49.98	0.69
1	Q31	28.50	10.22	11.59		11.68	0.005495	1.38	21.00	51.45	0.68
1	Q32	35.90	10.22	11.70		11.79	0.005364	1.33	28.92	66.80	0.67
1	Q33	45.90	10.22	11.83		11.91	0.003702	1.27	36.12	72.64	0.58
1	Q34	54.10	10.22	11.94		12.02	0.002734	1.22	44.52	76.30	0.51
1	Q35	11.30	10.18	11.12		11.27	0.007544	1.70	6.64	14.83	0.81
1	Q36	16.00	10.18	11.25		11.42	0.007422	1.83	8.74	17.05	0.82
1	Q37	24.00	10.18	11.51		11.60	0.006065	1.32	18.15	49.75	0.70
1	Q38	28.50	10.18	11.57		11.66	0.005413	1.35	21.05	51.14	0.67
1	Q39	35.90	10.18	11.68		11.77	0.004903	1.30	27.63	68.37	0.64
1	Q40	45.90	10.18	11.82		11.90	0.003270	1.23	37.45	72.44	0.54
1	Q41	54.10	10.18	11.94		12.01	0.002464	1.17	46.05	78.76	0.46
1	Q42	11.30	10.15	11.08		11.24	0.007933	1.75	6.47	14.20	0.83
1	Q43	16.00	10.15	11.21		11.40	0.007782	1.88	8.49	16.42	0.84
1	Q44	24.00	10.15	11.48		11.57	0.006318	1.34	17.89	49.49	0.71
1	Q45	28.50	10.15	11.54		11.64	0.005477	1.35	21.15	52.20	0.68
1	Q46	35.90	10.15	11.66		11.74	0.004419	1.26	28.48	66.08	0.61
1	Q47	45.90	10.15	11.81		11.88	0.002894	1.18	38.84	72.40	0.52
1	Q48	54.10	10.15	11.93		12.00	0.002171	1.14	47.61	75.82	0.46
1	Q49	11.30	10.11	11.04		11.21	0.008481	1.81	6.26	13.75	0.85
1	Q50	16.00	10.11	11.17		11.37	0.008427	1.95	8.21	16.01	0.87
1	Q51	24.00	10.11	11.45		11.54	0.006661	1.37	17.57	49.18	0.73
1	Q52	28.50	10.11	11.52		11.61	0.006001	1.33	21.48	58.02	0.70
1	Q53	35.90	10.11	11.65		11.72	0.003955	1.22	29.39	65.90	0.58
1	Q54	45.90	10.11	11.81		11.87	0.002570	1.14	40.29	72.58	0.49
1	Q55	54.10	10.11	11.93		11.99	0.001920	1.10	49.17	74.91	0.43
1	Q56	11.30	10.07	11.00	10.95	11.18	0.009197	1.88	6.02	13.24	0.89
1	Q57	16.00	10.07	11.13	11.08	11.34	0.009304	2.03	7.89	15.59	0.91
1	Q58	24.00	10.07	11.41		11.51	0.007444	1.40	17.17	50.46	0.77
1	Q59	28.50	10.07	11.50		11.59	0.005781	1.30	21.93	59.38	0.68
1	Q60	35.90	10.07	11.64		11.71	0.003454	1.17	30.61	65.90	0.55
1	Q61	45.90	10.07	11.80		11.86	0.002289	1.10	41.81	72.96	0.48
1	Q62	54.10	10.07	11.92		11.98	0.001707	1.07	50.72	74.05	0.41
1	Q63	11.30	10.04	10.97	10.92	11.15	0.009388	1.87	6.04	13.54	0.90
1	Q64	16.00	10.04	11.10	11.06	11.30	0.009255	2.01	7.96	15.87	0.91
1	Q65	24.00	10.04	11.39		11.49	0.007311	1.39	17.28	50.50	0.76
1	Q66	28.50	10.04	11.48		11.57	0.005156	1.29	22.14	55.97	0.65
1	Q67	35.90	10.04	11.63		11.70	0.003188	1.16	30.87	63.07	0.53
1	Q68	45.90	10.04	11.79		11.85	0.002044	1.10	41.81	68.12	0.44
1	Q69	54.10	10.04	11.91		11.97	0.001615	1.09	49.67	67.28	0.40
1	Q70	11.30	10.02	10.94	10.89	11.11	0.009530	1.87	6.06	13.83	0.90
1	Q71	16.00	10.02	11.07	11.03	11.27	0.009691	1.94	8.26	16.37	0.92
1	Q72	24.00	10.02	11.36		11.46	0.006868	1.39	17.23	47.94	0.74
1	Q73	28.50	10.02	11.46		11.55	0.004830	1.29	22.05	52.74	0.64

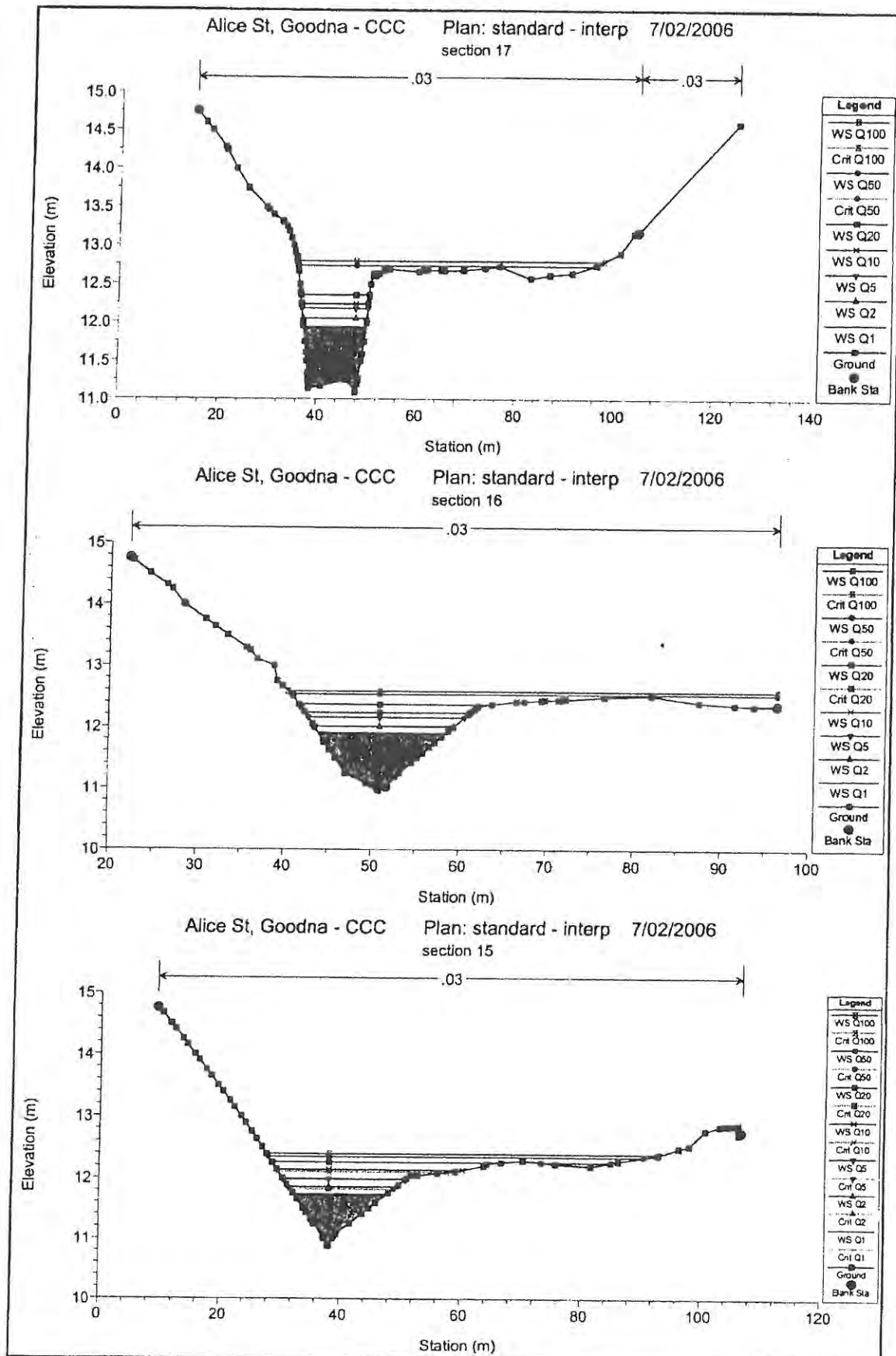
HEC-RAS Plan: Interp River Alice St Reach: 1 (Continued)

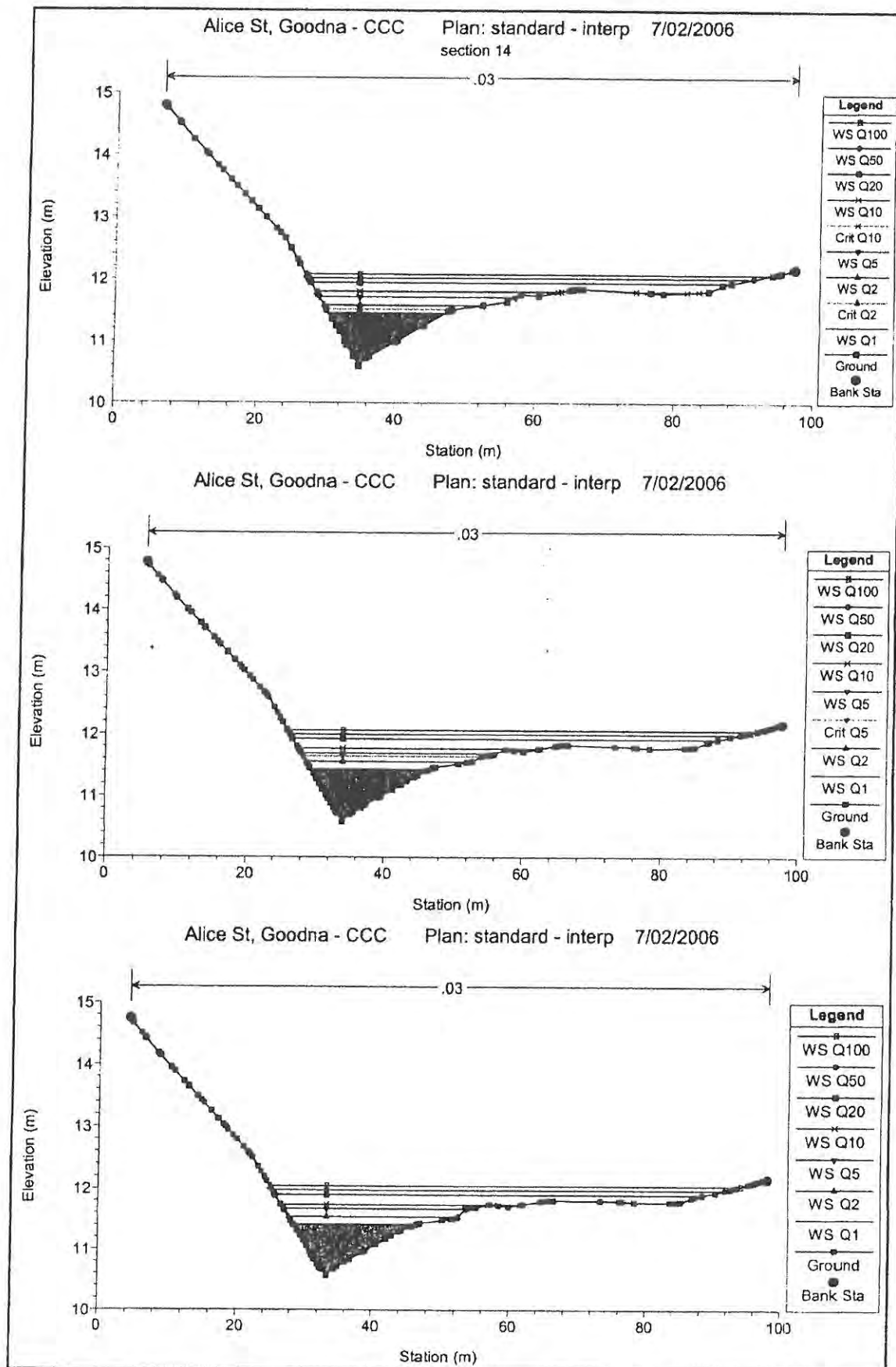
Reach	Flow Rate	Profile	Q Total (cfs)	Min Chl (ft)	W.S. Elev. (ft)	Cut W.S. (ft)	E.G. Elev. (ft)	E.G. Slope (ft/ft)	Yat Chl (ft)	Flow Area (sq ft)	Top Width (ft)	Froude # Ch
1	24.0	Q10	35.90	10.02	11.62		11.68	0.002870	1.17	30.71	57.72	0.51
1	24.0	Q10	45.90	10.02	11.78		11.85	0.001981	1.14	40.37	59.28	0.44
1	24.0	Q10	54.10	10.02	11.90		11.97	0.001818	1.14	47.59	60.42	0.41
1	24.0	Q10										
1	24.0	Q10	11.30	9.99	10.91	10.87	11.08	0.009833	1.83	6.17	14.81	0.91
1	24.0	Q10	16.00	9.99	11.05		11.23	0.008924	1.89	8.45	18.00	0.88
1	24.0	Q10	24.00	9.99	11.34	11.18	11.44	0.008852	1.42	18.86	44.34	0.74
1	24.0	Q10	28.50	9.99	11.44		11.53	0.004879	1.32	21.66	49.21	0.83
1	24.0	Q10	35.90	9.99	11.60		11.67	0.002729	1.21	29.66	50.62	0.51
1	24.0	Q10	45.90	9.99	11.78		11.84	0.002012	1.20	38.19	52.45	0.45
1	24.0	Q10	54.10	9.99	11.88		11.96	0.001722	1.21	44.55	53.50	0.42
1	24.0	Q10										
1	24.0	Q10	11.30	9.98	10.88	10.84	11.05	0.009505	1.83	6.17	14.44	0.89
1	24.0	Q10	16.00	9.98	11.02	10.95	11.20	0.008788	1.92	8.35	17.28	0.88
1	24.0	Q10	24.00	9.98	11.22		11.41	0.008054	1.93	12.48	23.97	0.85
1	24.0	Q10	28.50	9.98	11.31		11.50	0.008798	1.91	14.91	25.47	0.80
1	24.0	Q10	35.90	9.98	11.48		11.65	0.005422	1.91	18.62	27.06	0.73
1	24.0	Q10	45.90	9.98	11.61		11.81	0.005015	2.01	22.84	29.52	0.72
1	24.0	Q10	54.10	9.98	11.71		11.94	0.004846	2.09	25.88	29.55	0.71
1	24.0	Q10										
1	24.0	Q10	11.30	9.92	10.84	10.79	11.01	0.009160	1.81	6.24	14.44	0.88
1	24.0	Q10	16.00	9.92	10.99		11.16	0.008826	1.87	8.55	18.08	0.87
1	24.0	Q10	24.00	9.92	11.19		11.37	0.007177	1.87	12.83	23.83	0.81
1	24.0	Q10	28.50	9.92	11.29		11.47	0.006096	1.85	15.38	25.35	0.76
1	24.0	Q10	35.90	9.92	11.45		11.62	0.004878	1.85	19.39	26.94	0.70
1	24.0	Q10	45.90	9.92	11.60		11.79	0.004498	1.95	23.56	28.40	0.68
1	24.0	Q10	54.10	9.92	11.70		11.91	0.004395	2.04	25.58	29.38	0.68
1	24.0	Q10										
1	24.0	Q10	11.30	9.88	10.81		10.97	0.008855	1.77	6.36	14.89	0.86
1	24.0	Q10	16.00	9.88	10.95		11.12	0.007879	1.82	8.79	18.06	0.83
1	24.0	Q10	24.00	9.88	11.17		11.34	0.006442	1.83	13.08	22.88	0.77
1	24.0	Q10	28.50	9.88	11.27		11.44	0.005885	1.82	15.67	25.23	0.74
1	24.0	Q10	35.90	9.88	11.44		11.60	0.004428	1.80	19.93	26.66	0.67
1	24.0	Q10	45.90	9.88	11.59		11.77	0.004136	1.90	24.12	28.30	0.66
1	24.0	Q10	54.10	9.88	11.69		11.89	0.004071	1.99	27.13	29.22	0.66
1	24.0	Q10										
1	24.0	Q10	11.30	9.84	10.78		10.93	0.008082	1.72	6.56	14.91	0.83
1	24.0	Q10	16.00	9.84	10.93		11.09	0.007021	1.77	9.02	17.70	0.79
1	24.0	Q10	24.00	9.84	11.14		11.31	0.005991	1.83	13.08	21.65	0.75
1	24.0	Q10	28.50	9.84	11.24		11.41	0.005885	1.84	15.46	25.03	0.75
1	24.0	Q10	35.90	9.84	11.42		11.58	0.004341	1.79	20.00	26.71	0.66
1	24.0	Q10	45.90	9.84	11.57		11.75	0.004058	1.90	24.19	28.12	0.65
1	24.0	Q10	54.10	9.84	11.67		11.87	0.004007	1.99	27.17	29.01	0.66
1	24.0	Q10										
1	24.0	Q10	11.30	9.80	10.75		10.89	0.007267	1.68	6.71	14.57	0.79
1	24.0	Q10	16.00	9.80	10.90		11.06	0.006498	1.78	9.09	17.01	0.77
1	24.0	Q10	24.00	9.80	11.10		11.28	0.005779	1.86	12.90	20.33	0.75
1	24.0	Q10	28.50	9.80	11.21		11.39	0.005406	1.89	15.06	22.02	0.73
1	24.0	Q10	35.90	9.80	11.39		11.56	0.004603	1.83	19.58	26.49	0.68
1	24.0	Q10	45.90	9.80	11.54		11.73	0.004200	1.92	23.87	27.92	0.66
1	24.0	Q10	54.10	9.80	11.65		11.85	0.004136	2.02	26.82	28.77	0.67
1	24.0	Q10										
1	24.0	Q10	11.30	9.76	10.72		10.86	0.006740	1.67	6.75	13.98	0.77
1	24.0	Q10	16.00	9.76	10.87		11.03	0.006282	1.78	8.99	16.11	0.76
1	24.0	Q10	24.00	9.76	11.07		11.25	0.005657	1.92	12.49	18.93	0.75
1	24.0	Q10	28.50	9.76	11.17		11.36	0.005574	1.97	14.46	20.32	0.75
1	24.0	Q10	35.90	9.76	11.35		11.54	0.005387	1.93	18.59	26.19	0.73
1	24.0	Q10	45.90	9.76	11.51		11.71	0.004719	2.00	22.93	27.63	0.70
1	24.0	Q10	54.10	9.76	11.61		11.83	0.004592	2.09	25.88	28.47	0.70
1	24.0	Q10										
1	24.0	Q10	11.30	9.47	10.38		10.56	0.008088	1.86	6.07	12.24	0.84
1	24.0	Q10	16.00	9.47	10.51	10.45	10.73	0.008453	2.07	7.72	13.71	0.88
1	24.0	Q10	24.00	9.47	10.69	10.63	10.98	0.008479	2.30	10.44	15.89	0.91
1	24.0	Q10	28.50	9.47	10.77	10.72	11.07	0.008852	2.44	11.87	18.77	0.93
1	24.0	Q10	35.90	9.47	10.87	10.85	11.23	0.009548	2.67	13.48	17.93	0.98
1	24.0	Q10	45.90	9.47	11.05	11.05	11.42	0.010183	2.69	17.05	23.55	1.01
1	24.0	Q10	54.10	9.47	11.13	11.13	11.55	0.010182	2.84	19.02	24.12	1.02
1	24.0	Q10										
1	24.0	Q10	11.30	9.13	9.96	9.94	10.18	0.010476	1.98	5.71	12.81	0.95
1	24.0	Q10	16.00	9.13	10.09	10.07	10.32	0.010420	2.16	7.42	14.54	0.96
1	24.0	Q10	24.00	9.13	10.24	10.24	10.54	0.010966	2.43	9.87	16.80	1.01
1	24.0	Q10	28.50	9.13	10.32	10.32	10.65	0.010722	2.52	11.29	17.87	1.01
1	24.0	Q10	35.90	9.13	10.45	10.45	10.80	0.010280	2.64	13.59	19.46	1.01
1	24.0	Q10	45.90	9.13	10.62	10.62	10.98	0.010473	2.66	17.26	24.83	1.02
1	24.0	Q10	54.10	9.13	10.74	10.74	11.09	0.010174	2.84	20.50	29.23	1.01
1	24.0	Q10										
1	24.0	Q10	11.30	8.76	9.52	9.51	9.72	0.011420	2.01	5.62	13.15	0.98
1	24.0	Q10	16.00	8.76	9.63	9.63	9.88	0.011618	2.22	7.21	14.72	1.01
1	24.0	Q10	24.00	8.76	9.80	9.80	10.10	0.010962	2.41	9.94	17.11	1.01
1	24.0	Q10	28.50	8.76	9.88	9.88	10.20	0.010704	2.50	11.39	18.23	1.01
1	24.0	Q10	35.90	8.76	10.00	10.00	10.36	0.010521	2.64	13.60	19.88	1.02
1	24.0	Q10	45.90	8.76	10.22	10.22	10.51	0.010808	2.41	19.03	32.54	1.01
1	24.0	Q10	54.10	8.76	10.35	10.33	10.60	0.010638	2.21	24.53	47.44	0.98

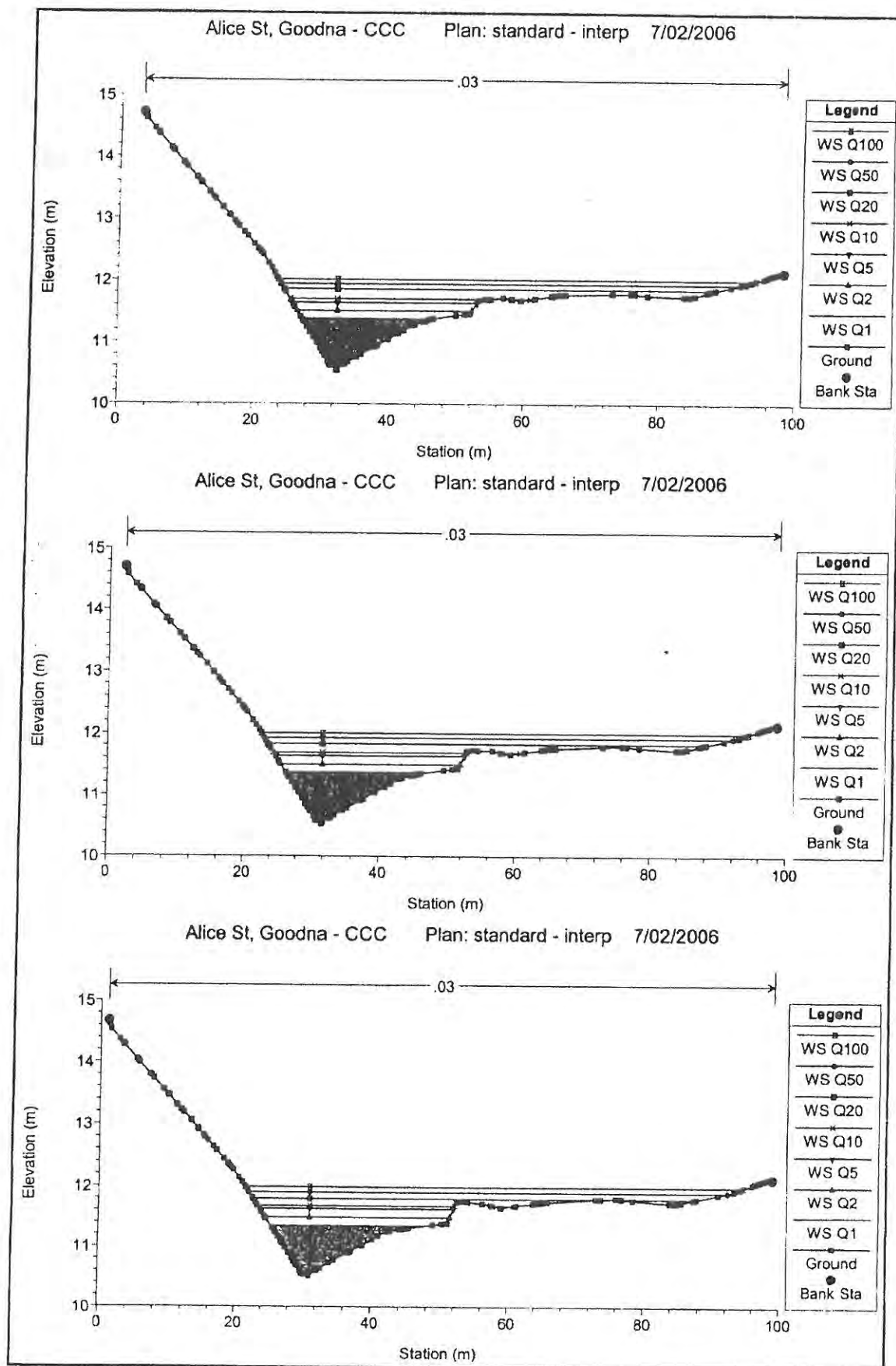
HEC-RAS Plan Interp River Alice St Reach 1 (Continued)

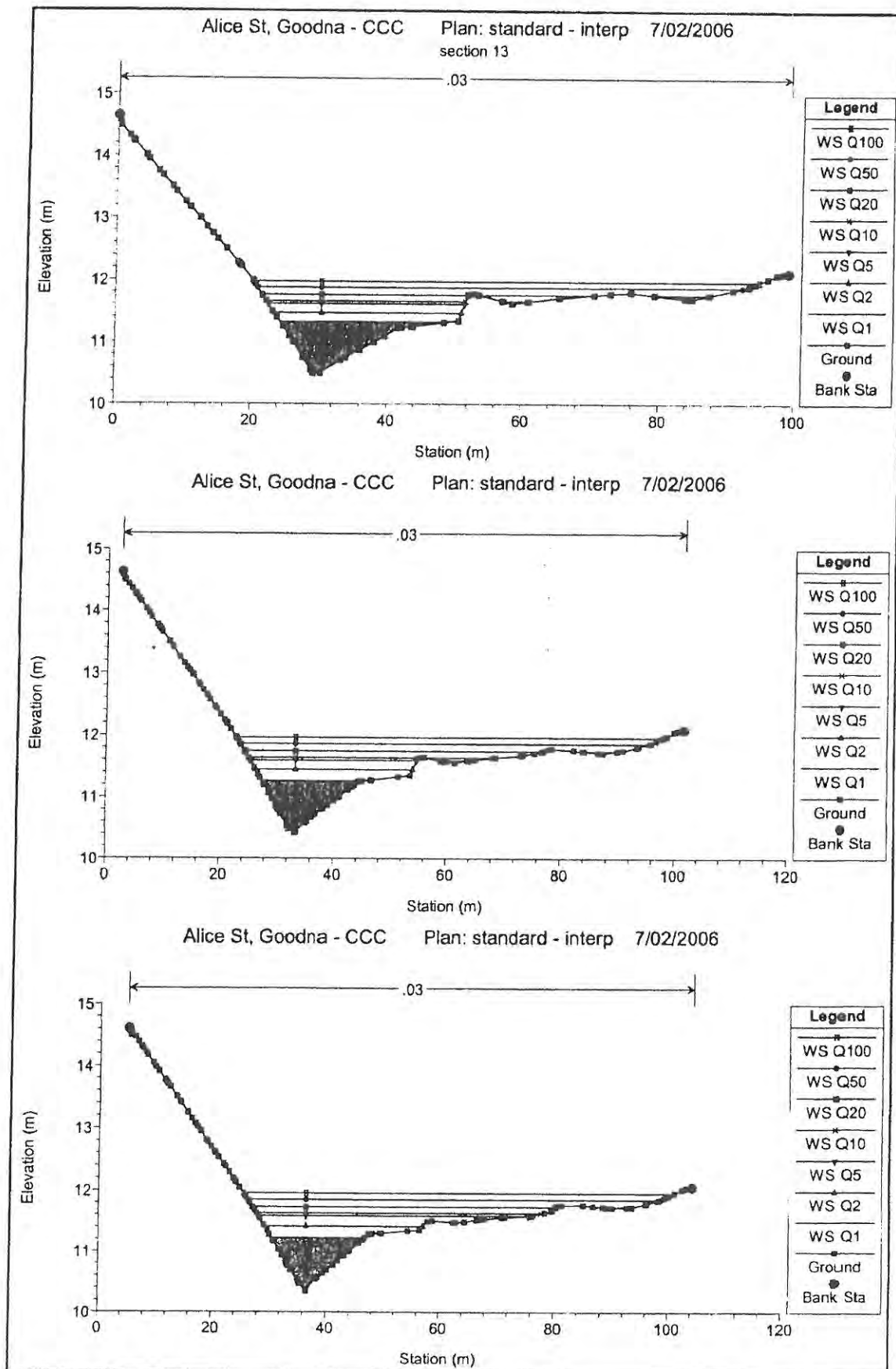
Reach	Profile	Dist	W.S. Elev	C&G S.	E.C. Elev	F.C. Slope	Vel	Flow Area	Top Width	Profile #
(ft)	(ft)	(ft)	(ft)	(ft)	(ft)	(ft)	(ft)	(ft)	(ft)	(ft)
11.30	8.47	9.10	9.10	9.31	0.012438	1.99	5.69	14.49	1.01	
16.00	8.47	9.22	9.22	9.46	0.011719	2.17	7.38	15.82	1.01	
24.00	8.47	9.38	9.38	9.67	0.010804	2.40	10.01	17.25	1.00	
28.50	8.47	9.45	9.45	9.77	0.010655	2.51	11.34	18.02	1.01	
35.90	8.47	9.58	9.58	9.93	0.010198	2.83	13.88	19.83	1.01	
45.90	8.47	9.71	9.71	10.11	0.010296	2.79	16.46	21.78	1.02	
54.10	8.47	9.88	9.88	10.23	0.010112	2.82	20.87	29.77	1.00	
11.30	8.06	8.74	8.74	8.94	0.012602	1.97	5.73	14.87	1.01	
16.00	8.06	8.85	8.85	9.09	0.011847	2.16	7.42	16.09	1.01	
24.00	8.06	9.27	9.27	9.40	0.003484	1.58	15.14	20.86	0.59	
28.50	8.06	9.35	9.35	9.50	0.004137	1.89	16.90	24.02	0.64	
35.90	8.06	9.44	9.44	9.62	0.004707	1.88	19.11	25.45	0.69	
45.90	8.06	9.55	9.55	9.78	0.005040	2.09	21.98	28.27	0.73	
54.10	8.06	9.61	9.61	9.88	0.005792	2.31	23.41	26.65	0.79	
11.30	7.53	8.31	8.31	8.51	0.012498	2.01	5.82	14.08	1.02	
16.00	7.53	8.87	8.87	8.92	0.001441	1.04	15.38	20.41	0.38	
24.00	7.53	9.29	9.29	9.33	0.000878	0.98	25.01	25.82	0.31	
28.50	7.53	9.37	9.37	9.42	0.000984	1.05	27.11	26.56	0.33	
35.90	7.53	9.45	9.45	9.53	0.001227	1.22	29.51	27.40	0.37	
45.90	7.53	9.58	9.58	9.67	0.001514	1.41	32.57	28.40	0.42	
54.10	7.53	9.62	9.62	9.75	0.001823	1.58	34.22	28.85	0.46	
11.30	6.92	8.28	8.28	8.33	0.001077	0.94	12.05	14.83	0.33	
16.00	6.92	8.87	8.87	8.89	0.000439	0.73	22.00	20.19	0.22	
24.00	6.92	9.28	9.28	9.31	0.000521	0.73	32.89	33.91	0.24	
28.50	6.92	9.38	9.38	9.39	0.000711	0.80	35.67	41.28	0.27	
35.90	6.92	9.45	9.45	9.49	0.000967	0.91	39.84	47.96	0.32	
45.90	6.92	9.56	9.56	9.61	0.001250	1.01	45.65	57.31	0.38	
54.10	6.92	9.62	9.62	9.69	0.001374	1.10	49.25	58.08	0.38	
11.30	6.13	8.27	7.08	8.30	0.000393	0.77	14.65	10.45	0.21	
16.00	6.13	8.85	7.26	8.88	0.000350	0.73	21.89	15.84	0.20	
24.00	6.13	9.28	7.53	9.28	0.000948	0.70	34.52	80.38	0.29	
28.50	6.13	9.34	7.68	9.36	0.001009	0.72	39.43	68.41	0.30	
35.90	6.13	9.42	7.85	9.45	0.001057	0.79	45.56	71.89	0.32	
45.90	6.13	9.53	8.09	9.57	0.001065	0.85	53.83	75.88	0.32	
54.10	6.13	9.60	8.28	9.64	0.001143	0.92	58.55	77.10	0.34	
Culvert										
11.30	6.13	7.08	7.08	7.41	0.011297	2.55	4.43	6.84	1.01	
16.00	6.13	7.26	7.26	7.66	0.010682	2.80	5.72	7.22	1.00	
24.00	6.13	7.52	7.52	8.01	0.010271	3.10	7.74	8.06	1.01	
28.50	6.13	7.66	7.66	8.19	0.010022	3.22	8.84	8.48	1.01	
35.90	6.13	7.85	7.85	8.44	0.009751	3.40	10.56	9.11	1.01	
45.90	6.13	8.09	8.09	8.74	0.009437	3.59	12.78	9.86	1.01	
54.10	6.13	8.25	8.25	8.97	0.009333	3.74	14.47	10.39	1.01	

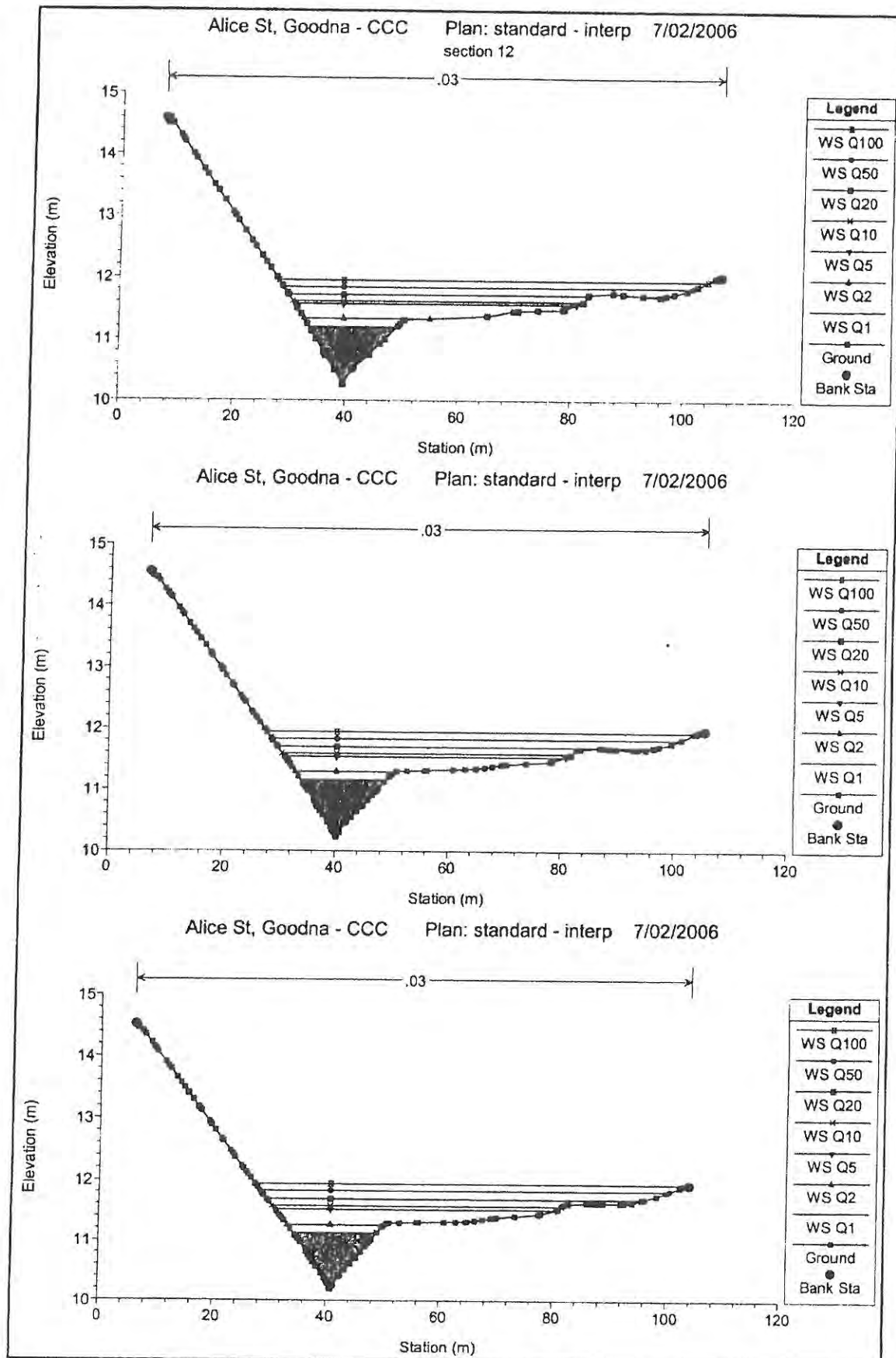


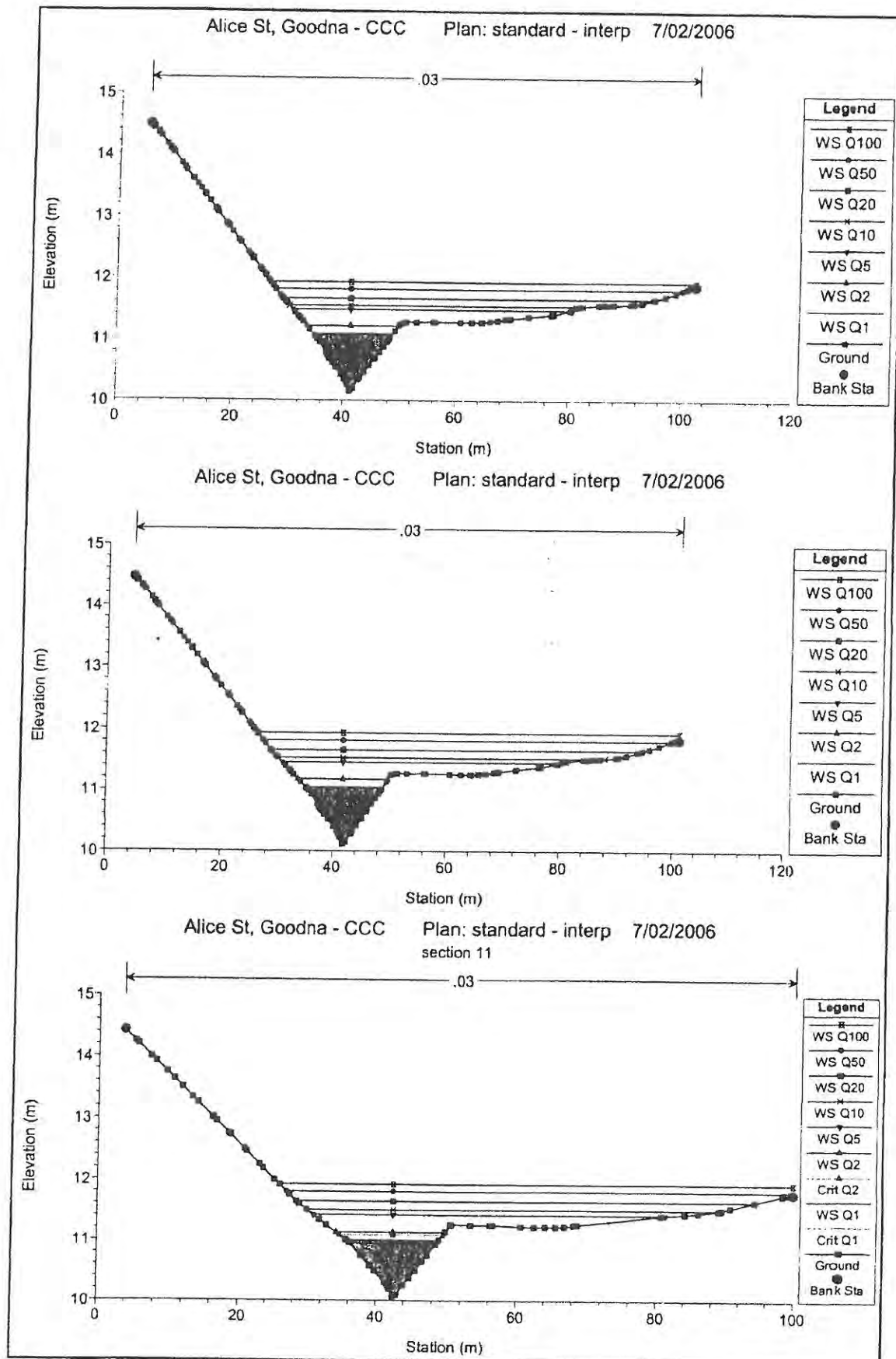


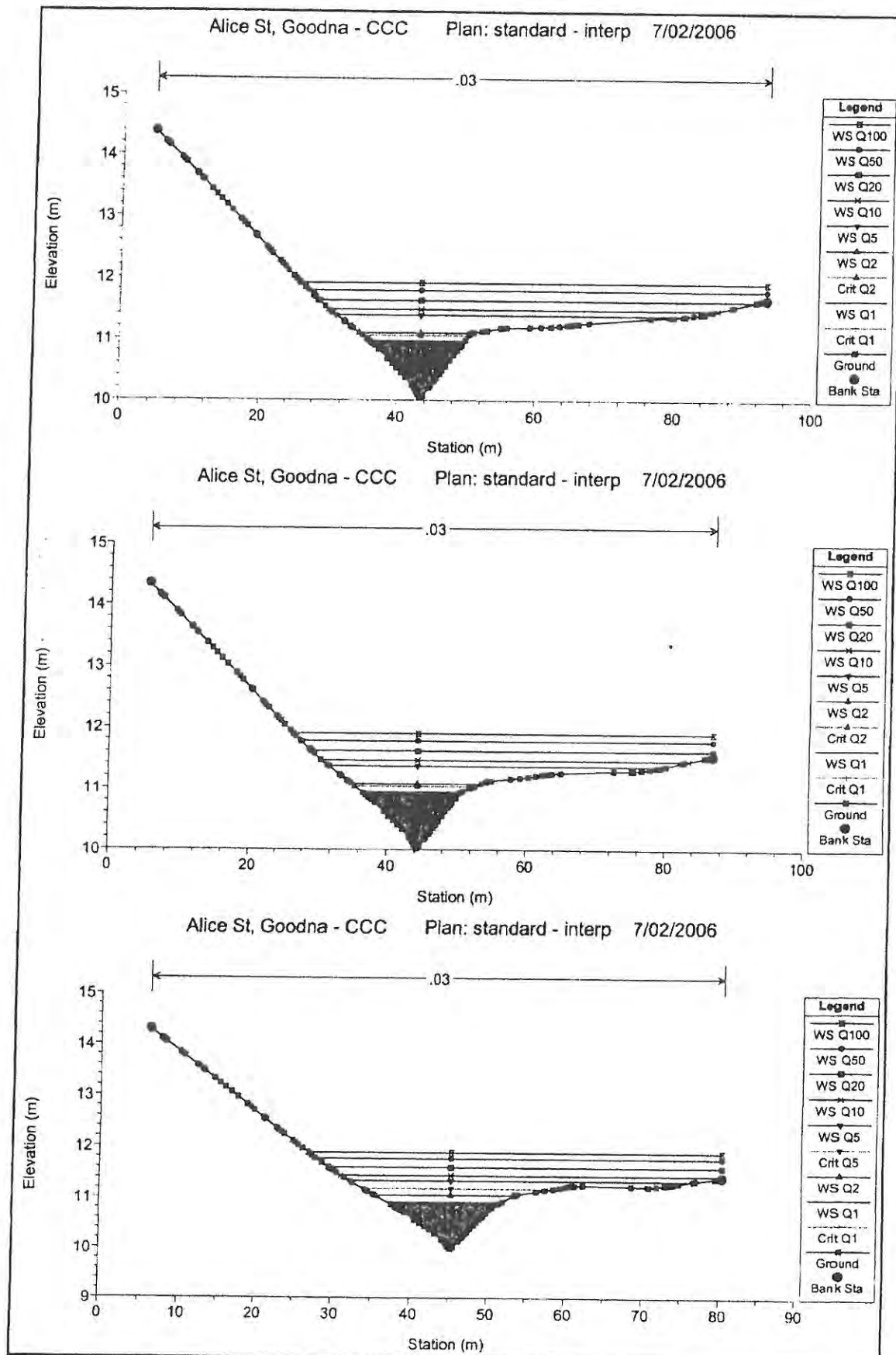


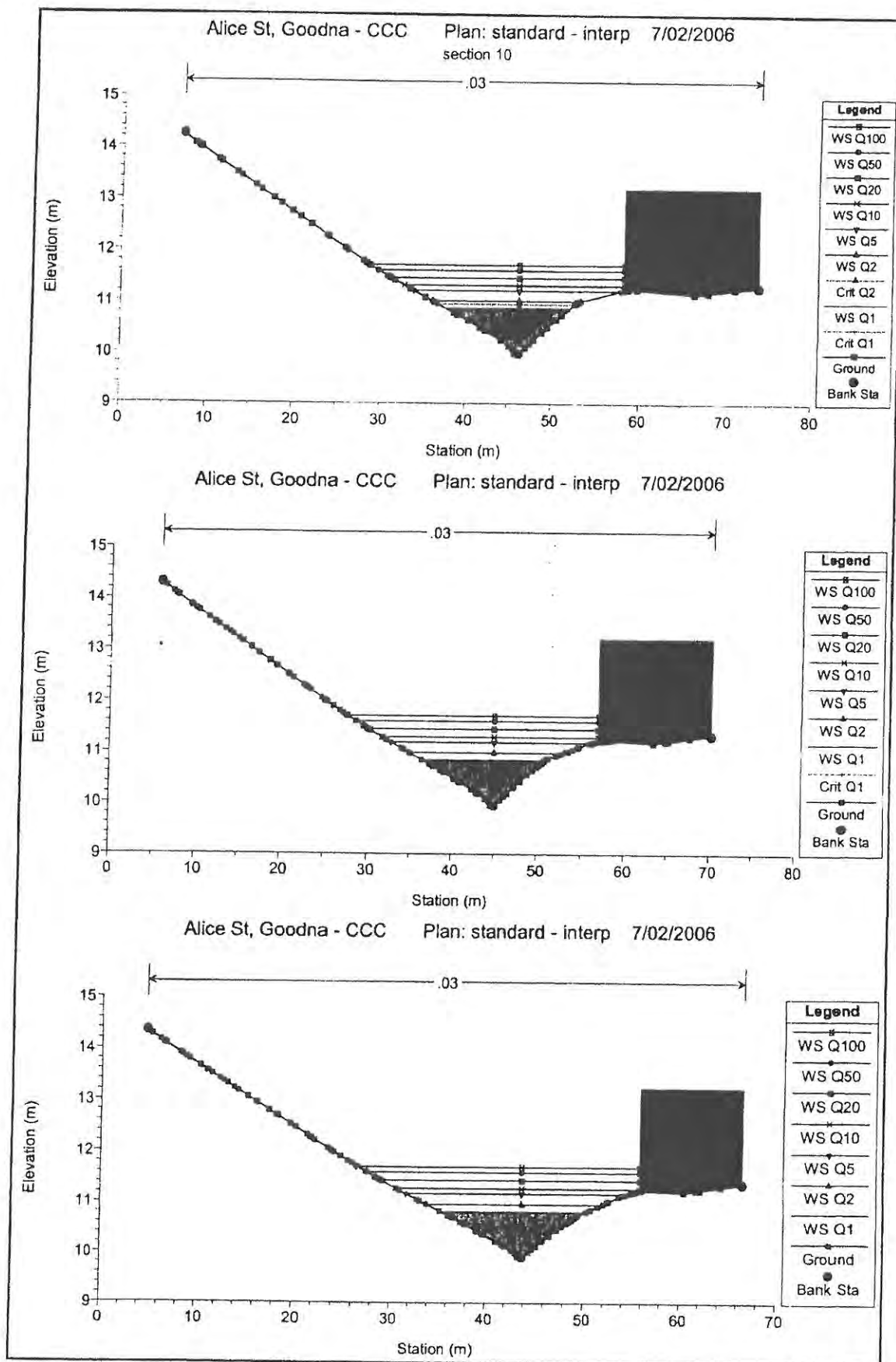


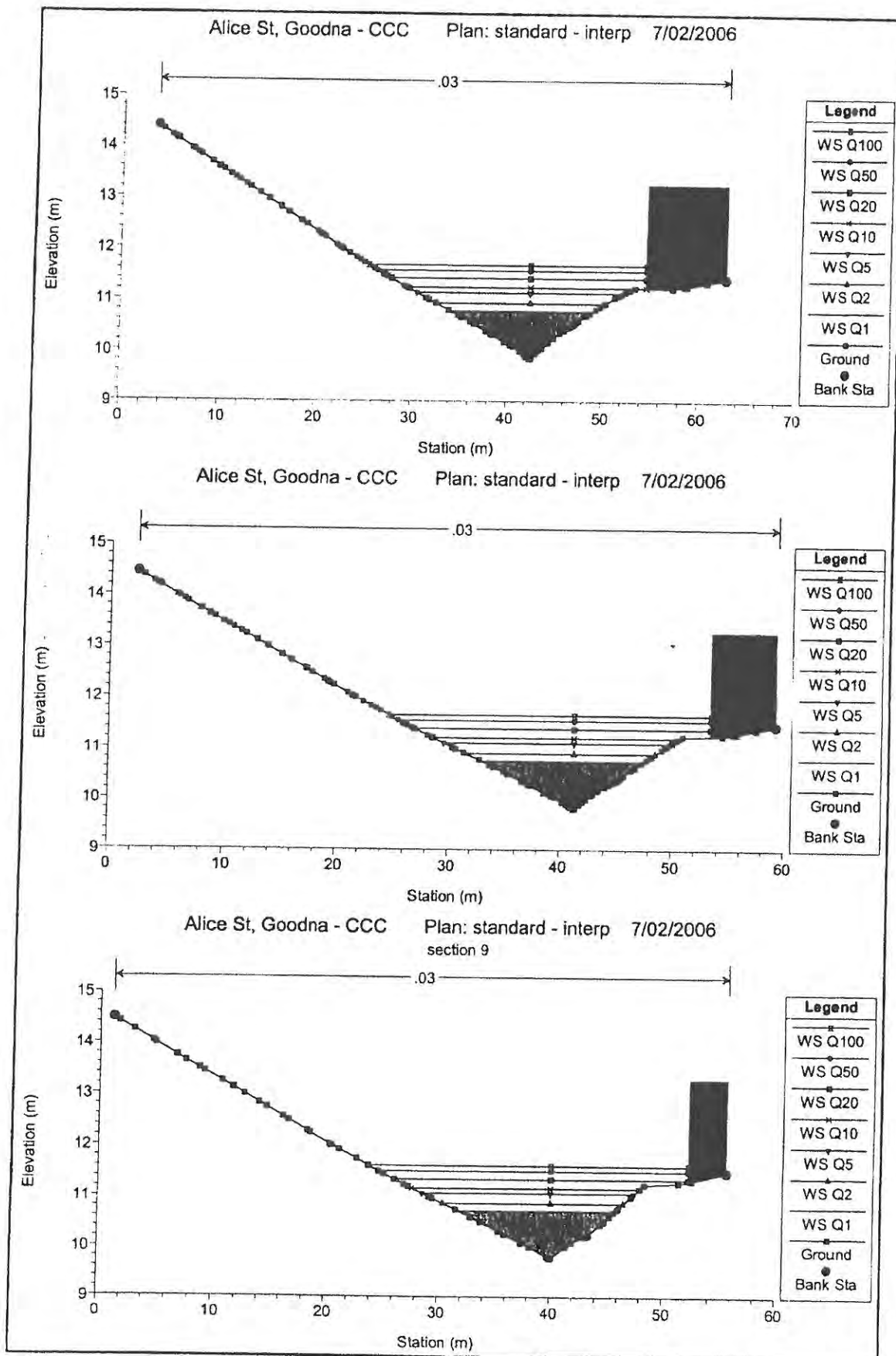












Plan: Interp Alice St 1 RS: 419 Culv Group: Culvert #1 Profile: Q1

Q Culv Group (m3/s)	11.30	Culv Full Len (m)	
# Barrels	2	Culv Vel US (m/s)	2.16
Q Barrel (m3/s)	5.65	Culv Vel DS (m/s)	2.66
E.G. US (m)	12.48	Culv Inlet Elev (m)	11.17
W.S. US (m)	12.45	Culv Inlet Elev (m)	11.17
E.G. DS (m)	12.03	Culv Frict Ls (m)	0.06
W.S. DS (m)	11.94	Culv Exit Elev (m)	0.27
Delta EG (m)	0.44	Culv Exit Elev (m)	0.12
Delta WS (m)	0.51	Q Weir (m3/s)	
E.G. C (m)	12.38	Weir Start Ls (m)	
E.G. IC (m)	12.48	Weir Stop Rgt (m)	
Culv Control	Outlet	Weir Summ	
Culv WS Inlet (m)	12.12	Weir Max Depth (m)	
Culv WS Outlet (m)	11.94	Weir Avg Depth (m)	
Culv Min Depth (m)		Weir Flow Area (m2)	
Culv Crt Depth (m)	0.75	Min El Weir Flow (m)	13.00

Plan: Interp Alice St 1 RS: 419 Culv Group: Culvert #1 Profile: Q2

Q Culv Group (m3/s)	16.00	Culv Full Len (m)	
# Barrels	2	Culv Vel US (m/s)	2.47
Q Barrel (m3/s)	8.00	Culv Vel DS (m/s)	3.06
E.G. US (m)	12.81	Culv Inlet Elev (m)	11.17
W.S. US (m)	12.79	Culv Inlet Elev (m)	11.17
E.G. DS (m)	12.19	Culv Frict Ls (m)	0.06
W.S. DS (m)	12.05	Culv Exit Elev (m)	0.41
Delta EG (m)	0.63	Culv Exit Elev (m)	0.16
Delta WS (m)	0.74	Q Weir (m3/s)	
E.G. C (m)	12.71	Weir Start Ls (m)	
E.G. IC (m)	12.81	Weir Stop Rgt (m)	
Culv Control	Outlet	Weir Summ	
Culv WS Inlet (m)	12.35	Weir Max Depth (m)	
Culv WS Outlet (m)	12.12	Weir Avg Depth (m)	
Culv Min Depth (m)		Weir Flow Area (m2)	
Culv Crt Depth (m)	0.95	Min El Weir Flow (m)	13.00

Plan: Interp Alice St 1 RS: 419 Culv Group: Culvert #1 Profile: Q5

Q Culv Group (m3/s)	20.87	Culv Full Len (m)	
# Barrels	2	Culv Vel US (m/s)	2.73
Q Barrel (m3/s)	10.43	Culv Vel DS (m/s)	3.34
E.G. US (m)	13.21	Culv Inlet Elev (m)	11.17
W.S. US (m)	13.20	Culv Inlet Elev (m)	11.17
E.G. DS (m)	12.40	Culv Frict Ls (m)	0.07
W.S. DS (m)	12.18	Culv Exit Elev (m)	0.47
Delta EG (m)	0.81	Culv Exit Elev (m)	0.27
Delta WS (m)	1.02	Q Weir (m3/s)	3.13
E.G. C (m)	13.21	Weir Start Ls (m)	43.80
E.G. IC (m)	13.20	Weir Stop Rgt (m)	88.54
Culv Control	Inlet	Weir Summ	0.00
Culv WS Inlet (m)	12.56	Weir Max Depth (m)	0.23
Culv WS Outlet (m)	12.31	Weir Avg Depth (m)	0.13
Culv Min Depth (m)		Weir Flow Area (m2)	5.79
Culv Crt Depth (m)	1.14	Min El Weir Flow (m)	13.00

Plan: interp Alice St 1 RS: 419 Culv Group: Culvert #1 Profile: Q10

Q Culv Group (m3/s)	22.09	Culv Full Len (m)	6.02
# Borehole	2	Culv Vel US (m/s)	2.87
Q Barrel (m3/s)	11.04	Culv Vel DS (m/s)	3.40
E.G. IS (m)	13.31	Culv Inlet El (m)	11.17
W.S. DS (m)	13.30	Culv Inlet D (m)	11.17
E.G. DS (m)	12.51	Culv Front El (m)	0.16
W.S. DS (m)	12.24	Culv Exit El (m)	0.43
D. El (m)	0.80	Culv Exit D (m)	0.21
D. El (m)	1.06	Culv Exit D (m)	6.41
E.G. DS (m)	13.31	W.S. St. El (m)	40.54
E.G. DS (m)	13.29	W.S. St. El (m)	93.08
Q Culv Comp	Inlet	W.S. St. El (m)	0.00
Culv WS Inlet (m)	12.57	W.S. St. El (m)	0.31
Culv WS Outlet (m)	12.35	W.S. St. El (m)	0.19
Culv Inlet D (m)		W.S. St. El (m)	9.74
Culv Exit D (m)	1.18	W.S. St. El (m)	13.00

Plan: interp Alice St 1 RS: 419 Culv Group: Culvert #1 Profile: Q20

Q Culv Group (m3/s)	23.37	Culv Full Len (m)	12.12
# Borehole	2	Culv Vel US (m/s)	3.04
Q Barrel (m3/s)	11.69	Culv Vel DS (m/s)	3.47
E.G. IS (m)	13.42	Culv Inlet El (m)	11.17
W.S. DS (m)	13.41	Culv Inlet D (m)	11.17
E.G. DS (m)	12.70	Culv Front El (m)	0.18
W.S. DS (m)	12.36	Culv Exit El (m)	0.31
D. El (m)	0.73	Culv Exit D (m)	0.23
D. El (m)	1.05	Culv Exit D (m)	12.53
E.G. DS (m)	13.42	W.S. St. El (m)	36.78
E.G. DS (m)	13.40	W.S. St. El (m)	98.65
Q Culv Comp	Inlet	W.S. St. El (m)	0.00
Culv WS Inlet (m)	12.57	W.S. St. El (m)	0.42
Culv WS Outlet (m)	12.40	W.S. St. El (m)	0.26
Culv Inlet D (m)		W.S. St. El (m)	15.99
Culv Exit D (m)	1.23	W.S. St. El (m)	13.00

Plan: interp Alice St 1 RS: 419 Culv Group: Culvert #1 Profile: Q50

Q Culv Group (m3/s)	23.33	Culv Full Len (m)	20.00
# Borehole	2	Culv Vel US (m/s)	3.03
Q Barrel (m3/s)	11.66	Culv Vel DS (m/s)	3.03
E.G. IS (m)	13.56	Culv Inlet El (m)	11.17
W.S. DS (m)	13.54	Culv Inlet D (m)	11.17
E.G. DS (m)	12.95	Culv Front El (m)	0.12
W.S. DS (m)	12.74	Culv Exit El (m)	0.26
D. El (m)	0.61	Culv Exit D (m)	0.23
D. El (m)	0.80	Q Weir (m3/s)	22.57
E.G. IS (m)	13.53	Weir St. El (m)	33.46
E.G. DS (m)	13.56	Weir St. El (m)	105.30
Culv Comp	Outlet	Weir Submrg	0.00
Culv WS Inlet (m)	12.57	Weir Max Depth (m)	0.55
Culv WS Outlet (m)	12.57	Weir Avg Depth (m)	0.35
Culv Inlet Depth (m)		Weir Flow Area (m2)	24.83
Culv Exit Depth (m)	1.22	Min El Weir Flow (m)	13.00

Plan: interp Alice St 1 RS: 419 Culv Group: Culvert #1 Profile: Q100

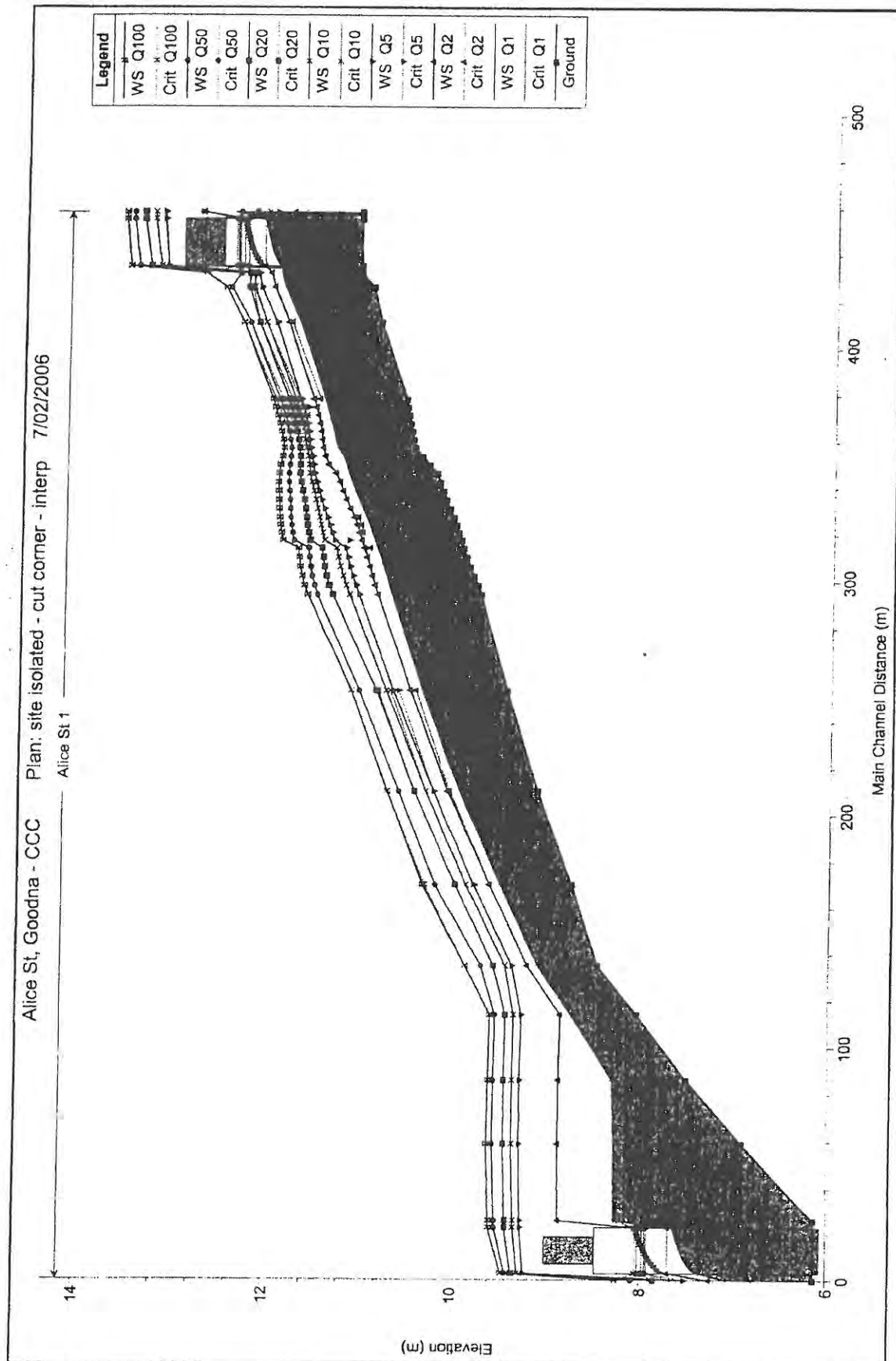
Q Culv Group (m3/s)	23.48	Culv Full Len (m)	20.00
# Pipes	2	Culv Vel (ft/s)	3.05
Q Box (cfs)	11.74	Culv Vel (m/s)	3.05
E Box (m)	13.63	Culv In Elev (m)	11.17
W.S. US (m)	13.61	Culv In Elev (ft)	11.17
E Box (m)	13.01	Culv Head (m)	0.12
W.S. US (m)	12.80	Culv Head (ft)	0.26
D Box (m)	0.61	Culv Exit Elev (m)	0.24
D Box (ft)	0.81	Culv Exit Elev (ft)	30.62
E Box (m)	13.60	W.S. Box (m)	31.33
E Box (ft)	13.63	W.S. Box (ft)	109.57
Culv Exit Elev (m)	Outlet	Culv Exit Elev (ft)	0.00
Culv Exit Elev (ft)	12.57	Culv Exit Elev (m)	0.63
Culv Exit Elev (m)	12.57	Culv Exit Elev (ft)	0.40
Culv Exit Elev (ft)		Culv Exit Elev (m)	31.19
Culv Exit Elev (m)	1.23	Culv Exit Elev (ft)	13.00

APPENDIX C-2
DETAILED HEC-RAS OUTPUT
POST DEVELOPMENT

TABLETOP
ARCHITECTS
PLANNERS
ENGINEERS

ABN 60 067 321 117

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HEC-RAS Plan: cut cor-int River Alice St Reach: 1

			Station	Min Ch. El.	W.S. Elev.	Cut W.S.	E.G. Elev.	E.G. Slope	Vel Const.	Flow Area	Top Width	Flow E.C.N.
			11.30	11.09	12.45	11.88	12.48	0.000481	0.74	15.21	14.05	0.23
			16.00	11.09	12.79	11.80	12.81	0.001107	0.82	26.00	61.99	0.30
			24.00	11.09	13.20	11.99	13.21	0.000275	0.45	53.12	71.22	0.17
			28.50	11.09	13.30	12.08	13.31	0.000280	0.47	60.34	73.61	0.18
			35.90	11.09	13.41	12.21	13.42	0.000283	0.53	68.80	77.40	0.17
			45.90	11.09	13.51	12.39	13.53	0.000333	0.80	78.58	80.34	0.19
			54.10	11.09	13.58	12.80	13.61	0.000363	0.86	83.18	82.69	0.20
			Culvert									
			11.30	11.09	11.94		12.03	0.002838	1.33	8.48	12.57	0.52
			16.00	11.09	12.05		12.19	0.003568	1.82	9.88	12.91	0.59
			24.00	11.09	12.18		12.40	0.004903	2.07	11.59	13.25	0.71
			28.50	11.09	12.24		12.51	0.005893	2.31	12.36	13.40	0.77
			35.90	11.09	12.29	12.22	12.88	0.007801	2.77	12.96	13.55	0.90
			45.90	11.09	12.39	12.38	12.91	0.009479	3.20	14.33	13.87	1.01
			54.10	11.09	12.76	12.76	13.09	0.011701	2.54	21.27	34.93	1.04
			11.30	10.98	11.90		12.01	0.004583	1.47	7.71	14.58	0.84
			16.00	10.98	12.01		12.10	0.005388	1.71	9.38	15.97	0.71
			24.00	10.98	12.16		12.37	0.006424	2.02	11.88	17.86	0.79
			28.50	10.98	12.23		12.47	0.008400	2.18	13.21	18.80	0.82
			35.90	10.98	12.29	12.25	12.61	0.008515	2.49	14.42	19.80	0.93
			45.90	10.98	12.49	12.49	12.78	0.010403	2.40	19.11	31.93	0.99
			54.10	10.98	12.54	12.54	12.88	0.010909	2.59	20.91	32.31	1.03
			11.30	10.88	11.73	11.70	11.90	0.010440	1.84	8.16	15.45	0.93
			16.00	10.88	11.86	11.82	12.05	0.009606	1.94	8.24	17.85	0.91
			24.00	10.88	11.99	11.97	12.24	0.010885	2.24	10.73	20.38	0.98
			28.50	10.88	12.10	12.10	12.33	0.011406	2.18	13.21	27.84	1.00
			35.90	10.88	12.17	12.17	12.45	0.011784	2.32	15.44	29.74	1.03
			45.90	10.88	12.27	12.27	12.58	0.011179	2.50	18.38	30.42	1.03
			54.10	10.88	12.34	12.34	12.69	0.010808	2.82	20.63	30.93	1.03
			11.30	10.59	11.45		11.59	0.008182	1.65	8.85	18.78	0.82
			16.00	10.59	11.58	11.51	11.73	0.008979	1.73	9.27	22.80	0.86
			24.00	10.59	11.71		11.89	0.009289	1.89	12.72	28.99	0.90
			28.50	10.59	11.76	11.72	11.97	0.009211	2.01	14.20	28.36	0.91
			35.90	10.59	11.84	11.80	12.09	0.009145	2.18	18.48	28.77	0.92
			45.90	10.59	11.94	11.90	12.23	0.009274	2.40	19.15	29.26	0.95
			54.10	10.59	12.01	11.98	12.34	0.009159	2.53	21.34	29.55	0.95
			11.30	10.58	11.43		11.56	0.007934	1.61	7.00	17.36	0.81
			16.00	10.58	11.55		11.70	0.008827	1.68	9.52	24.10	0.85
			24.00	10.58	11.68	11.63	11.86	0.008974	1.87	12.85	28.10	0.88
			28.50	10.58	11.73	11.69	11.94	0.009007	1.96	14.32	28.30	0.90
			35.90	10.58	11.81	11.77	12.05	0.008931	2.16	18.61	28.33	0.91
			45.90	10.58	11.91	11.87	12.19	0.009099	2.38	19.29	29.42	0.94
			54.10	10.58	11.98	11.94	12.30	0.008950	2.51	21.53	29.82	0.94
			11.30	10.56	11.40		11.53	0.007650	1.57	7.19	18.04	0.80
			16.00	10.56	11.53		11.68	0.008166	1.62	9.88	24.79	0.82
			24.00	10.56	11.66		11.83	0.007820	1.82	13.21	26.04	0.82
			28.50	10.56	11.71	11.65	11.90	0.008572	1.96	14.58	28.08	0.88
			35.90	10.56	11.79	11.74	12.02	0.008549	2.13	16.86	29.10	0.89
			45.90	10.56	11.88	11.83	12.16	0.008784	2.35	19.54	29.60	0.92
			54.10	10.56	11.96	11.91	12.27	0.008821	2.48	21.83	30.02	0.93
			11.30	10.54	11.38		11.50	0.007384	1.53	7.40	18.03	0.78
			16.00	10.54	11.51		11.63	0.007320	1.55	10.29	25.45	0.78
			24.00	10.54	11.64		11.80	0.006707	1.74	13.81	27.04	0.78
			28.50	10.54	11.69		11.87	0.007335	1.90	15.02	27.57	0.82
			35.90	10.54	11.76	11.70	11.98	0.007977	2.08	17.25	29.31	0.87
			45.90	10.54	11.85	11.80	12.12	0.008300	2.30	19.91	29.81	0.90
			54.10	10.54	11.93	11.87	12.23	0.008150	2.43	22.25	30.25	0.90
			11.30	10.53	11.36		11.47	0.007361	1.48	7.85	20.54	0.77
			16.00	10.53	11.49		11.60	0.006359	1.47	10.85	26.14	0.73
			24.00	10.53	11.63		11.77	0.005805	1.65	14.54	27.60	0.73
			28.50	10.53	11.67		11.84	0.006456	1.81	15.71	28.05	0.77
			35.90	10.53	11.75		11.95	0.007205	2.01	17.83	29.55	0.83
			45.90	10.53	11.83	11.78	12.09	0.007638	2.24	20.47	30.06	0.87
			54.10	10.53	11.91	11.84	12.20	0.007523	2.37	22.86	30.52	0.87
			11.30	10.51	11.34		11.44	0.007254	1.42	7.96	22.39	0.76
			16.00	10.51	11.48		11.58	0.005379	1.39	11.53	26.65	0.68
			24.00	10.51	11.62		11.74	0.004957	1.56	15.39	28.25	0.67
			28.50	10.51	11.68		11.81	0.005588	1.72	16.54	28.65	0.72
			35.90	10.51	11.73		11.92	0.006181	1.93	18.82	29.35	0.77
			45.90	10.51	11.82		12.06	0.006855	2.16	21.22	30.35	0.83
			54.10	10.51	11.90		12.16	0.006794	2.29	23.66	30.82	0.83
			11.30	10.50	11.32		11.41	0.007014	1.36	8.32	24.39	0.74

HEC-RAS Plan: cut cor-int River Alice St Reach: 1 (Continued)

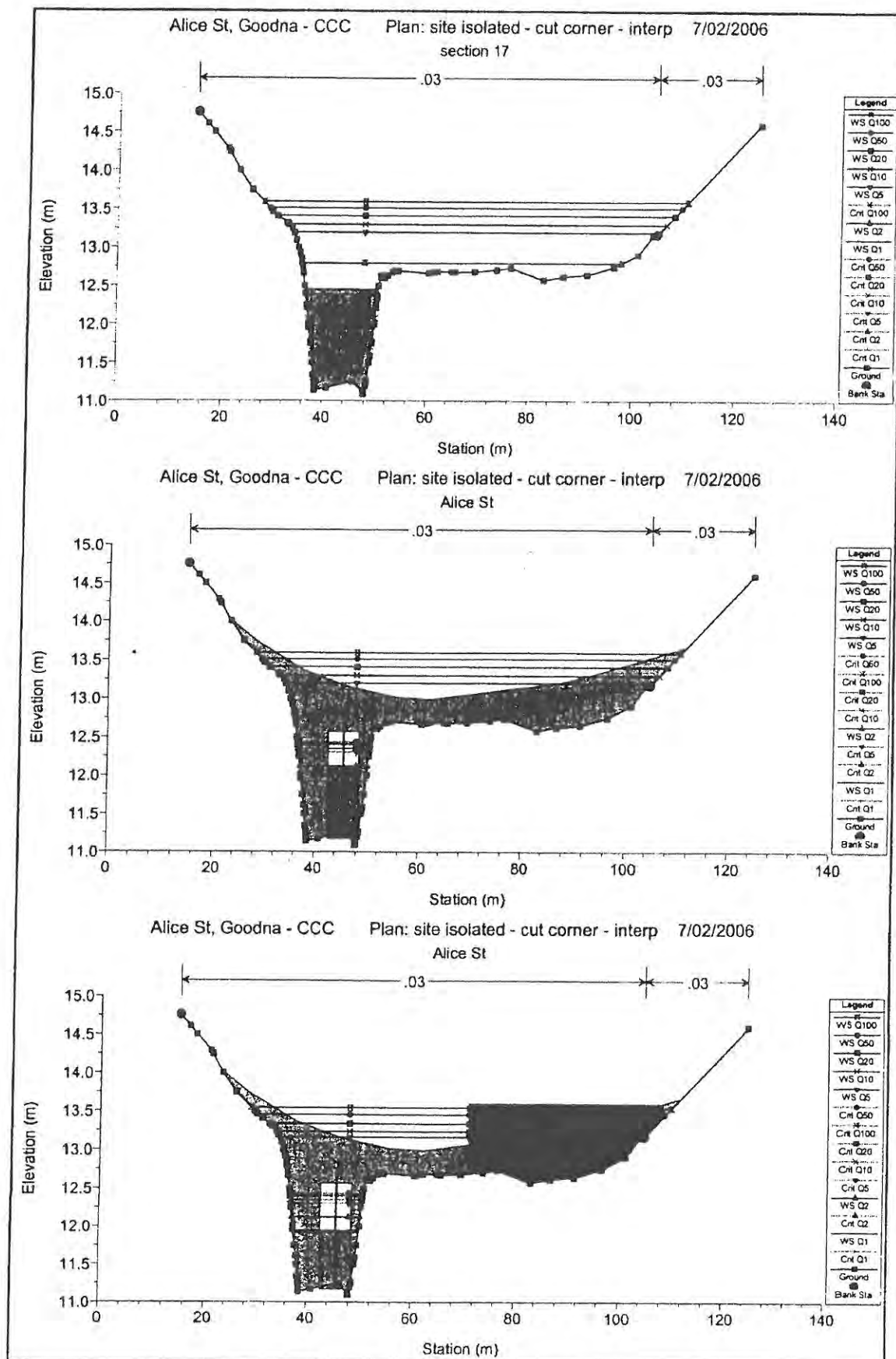
Reach	Profile No.	Profile	Q (Total)	Min. Ch. Elevation	W. S. Elev.	Ch. W. S.	E. S. Elev.	E. G. Slope	Vel. Cnt.	Flow Area	Top Width	Friction Ch.
			(cfs)	(ft)	(ft)	(ft)	(ft)		(cfs)	(sq ft)	(ft)	
1	297.00	Q1	18.00	10.50	11.47		11.53	0.004494	1.30	12.30	27.56	0.82
1	297.00	Q5	24.00	10.50	11.61		11.72	0.004213	1.47	16.31	28.93	0.83
1	297.00	Q10	28.50	10.50	11.65		11.79	0.004836	1.63	17.44	29.30	0.88
1	297.00	Q15	35.90	10.50	11.72		11.89	0.005420	1.84	19.54	29.97	0.73
1	297.00	Q20	45.90	10.50	11.81		12.02	0.006044	2.07	22.13	30.68	0.78
1	297.00	Q100	54.10	10.50	11.89		12.13	0.006030	2.20	24.62	31.14	0.79
1	297.00	Q1										
1	297.00	Q1	11.30	10.42	11.26		11.38	0.006820	1.55	7.27	17.05	0.78
1	297.00	Q5	18.00	10.42	11.44		11.54	0.005125	1.35	11.84	27.84	0.88
1	297.00	Q10	24.00	10.42	11.59		11.70	0.005293	1.49	16.08	33.18	0.88
1	297.00	Q15	28.50	10.42	11.63		11.78	0.006364	1.64	17.42	35.68	0.75
1	297.00	Q20	35.90	10.42	11.71		11.87	0.008277	1.74	20.59	38.10	0.76
1	297.00	Q25	45.90	10.42	11.81		11.99	0.006022	1.89	24.35	38.73	0.78
1	297.00	Q100	54.10	10.42	11.90		12.09	0.005392	1.93	27.98	39.33	0.73
1	297.00	Q1										
1	297.00	Q1	11.30	10.34	11.22		11.35	0.006888	1.80	7.07	16.20	0.77
1	297.00	Q5	18.00	10.34	11.41		11.51	0.006290	1.44	11.14	27.67	0.72
1	297.00	Q10	24.00	10.34	11.58		11.68	0.006717	1.42	18.94	45.18	0.74
1	297.00	Q15	28.50	10.34	11.62		11.74	0.006804	1.51	18.93	45.49	0.74
1	297.00	Q20	35.90	10.34	11.71		11.84	0.005415	1.55	23.23	46.14	0.70
1	297.00	Q25	45.90	10.34	11.82		11.98	0.004712	1.62	28.27	46.89	0.67
1	297.00	Q100	54.10	10.34	11.92		12.06	0.003995	1.64	33.02	47.63	0.63
1	297.00	Q1										
1	297.00	Q1	11.30	10.26	11.19		11.33	0.006958	1.62	6.98	15.60	0.77
1	297.00	Q5	18.00	10.26	11.33		11.48	0.008475	1.71	9.37	22.45	0.84
1	297.00	Q10	24.00	10.26	11.57		11.65	0.005895	1.29	18.57	50.29	0.68
1	297.00	Q15	28.50	10.26	11.81		11.71	0.005572	1.36	20.99	51.90	0.68
1	297.00	Q20	35.90	10.26	11.71		11.81	0.004319	1.36	26.33	53.43	0.62
1	297.00	Q25	45.90	10.26	11.83		11.93	0.003611	1.41	32.61	55.10	0.58
1	297.00	Q100	54.10	10.26	11.93		12.04	0.002967	1.41	38.43	55.89	0.54
1	297.00	Q1										
1	297.00	Q1	11.30	10.22	11.16		11.30	0.007203	1.88	8.82	15.10	0.79
1	297.00	Q5	18.00	10.22	11.29		11.45	0.006995	1.77	9.02	17.61	0.79
1	297.00	Q10	24.00	10.22	11.54		11.63	0.005839	1.31	18.39	49.98	0.69
1	297.00	Q15	28.50	10.22	11.59		11.68	0.005495	1.38	21.00	51.45	0.68
1	297.00	Q20	35.90	10.22	11.70		11.79	0.005394	1.33	26.92	66.80	0.67
1	297.00	Q25	45.90	10.22	11.83		11.91	0.003702	1.27	36.12	72.64	0.58
1	297.00	Q100	54.10	10.22	11.94		12.02	0.002734	1.22	44.52	78.30	0.51
1	297.00	Q1										
1	297.00	Q1	11.30	10.18	11.12		11.27	0.007544	1.70	8.64	14.53	0.81
1	297.00	Q5	18.00	10.18	11.25		11.42	0.007422	1.83	8.74	17.05	0.82
1	297.00	Q10	24.00	10.18	11.51		11.60	0.006065	1.32	18.15	49.75	0.70
1	297.00	Q15	28.50	10.18	11.57		11.68	0.005413	1.35	21.05	51.14	0.67
1	297.00	Q20	35.90	10.18	11.68		11.77	0.004903	1.30	27.63	66.37	0.64
1	297.00	Q25	45.90	10.18	11.82		11.90	0.003270	1.23	37.45	72.44	0.54
1	297.00	Q100	54.10	10.18	11.94		12.01	0.002464	1.17	46.05	76.78	0.48
1	297.00	Q1										
1	297.00	Q1	11.30	10.15	11.08		11.24	0.007933	1.75	8.47	14.20	0.83
1	297.00	Q5	18.00	10.15	11.21		11.40	0.007782	1.88	8.49	16.42	0.84
1	297.00	Q10	24.00	10.15	11.48		11.57	0.006318	1.34	17.89	49.49	0.71
1	297.00	Q15	28.50	10.15	11.54		11.64	0.005477	1.35	21.15	52.20	0.68
1	297.00	Q20	35.90	10.15	11.68		11.74	0.004419	1.26	28.46	66.08	0.61
1	297.00	Q25	45.90	10.15	11.81		11.88	0.002894	1.18	38.84	72.40	0.52
1	297.00	Q100	54.10	10.15	11.93		12.00	0.002171	1.14	47.61	75.32	0.46
1	297.00	Q1										
1	297.00	Q1	11.30	10.11	11.04		11.21	0.008481	1.81	6.26	13.75	0.85
1	297.00	Q5	18.00	10.11	11.17		11.37	0.008427	1.95	8.21	16.01	0.87
1	297.00	Q10	24.00	10.11	11.45		11.54	0.006661	1.37	17.57	49.18	0.73
1	297.00	Q15	28.50	10.11	11.52		11.61	0.006001	1.33	21.48	58.02	0.70
1	297.00	Q20	35.90	10.11	11.65		11.72	0.003855	1.22	29.39	65.90	0.58
1	297.00	Q25	45.90	10.11	11.81		11.87	0.002570	1.14	40.29	72.58	0.49
1	297.00	Q100	54.10	10.11	11.93		11.99	0.001920	1.10	49.17	74.91	0.43
1	297.00	Q1										
1	297.00	Q1	11.30	10.07	11.00	10.95	11.18	0.009197	1.88	6.02	13.24	0.89
1	297.00	Q5	18.00	10.07	11.13	11.08	11.34	0.009304	2.03	7.89	15.58	0.91
1	297.00	Q10	24.00	10.07	11.41		11.51	0.007444	1.40	17.17	50.46	0.77
1	297.00	Q15	28.50	10.07	11.50		11.59	0.005761	1.30	21.93	59.38	0.68
1	297.00	Q20	35.90	10.07	11.64		11.71	0.003454	1.17	30.61	65.90	0.55
1	297.00	Q25	45.90	10.07	11.80		11.88	0.002289	1.10	41.61	72.96	0.46
1	297.00	Q100	54.10	10.07	11.92		11.98	0.001707	1.07	50.72	74.65	0.41
1	297.00	Q1										
1	297.00	Q1	11.30	10.04	10.97	10.92	11.15	0.009388	1.87	6.04	13.54	0.90
1	297.00	Q5	18.00	10.04	11.10	11.06	11.30	0.009255	2.01	7.96	15.07	0.91
1	297.00	Q10	24.00	10.04	11.39		11.49	0.007311	1.39	17.28	50.50	0.76
1	297.00	Q15	28.50	10.04	11.48		11.57	0.005158	1.29	22.14	55.07	0.65
1	297.00	Q20	35.90	10.04	11.63		11.70	0.003168	1.16	30.87	63.07	0.53
1	297.00	Q25	45.90	10.04	11.79		11.85	0.002044	1.10	41.61	66.72	0.44
1	297.00	Q100	54.10	10.04	11.91		11.97	0.001615	1.08	48.67	67.28	0.40
1	297.00	Q1										
1	297.00	Q1	11.30	10.02	10.94	10.89	11.11	0.009530	1.87	6.06	13.63	0.90
1	297.00	Q5	18.00	10.02	11.07	11.03	11.27	0.009891	1.94	8.26	18.57	0.92
1	297.00	Q10	24.00	10.02	11.35		11.46	0.006868	1.39	17.23	47.64	0.74
1	297.00	Q15	28.50	10.02	11.48		11.55	0.004830	1.29	22.05	52.74	0.64

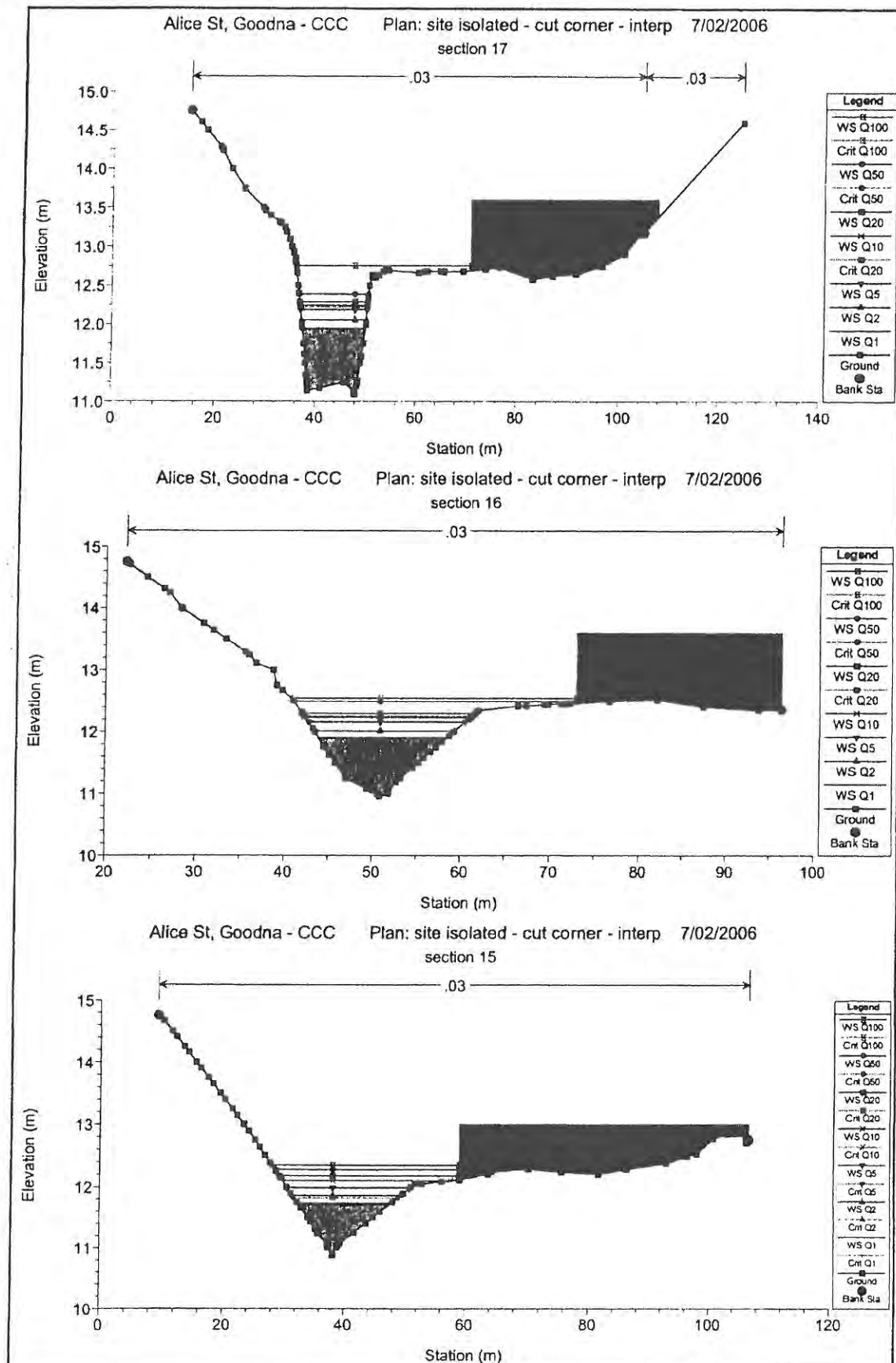
HEC-RAS Plan cut cor-int River Alice St Reach: 1 (Continued)

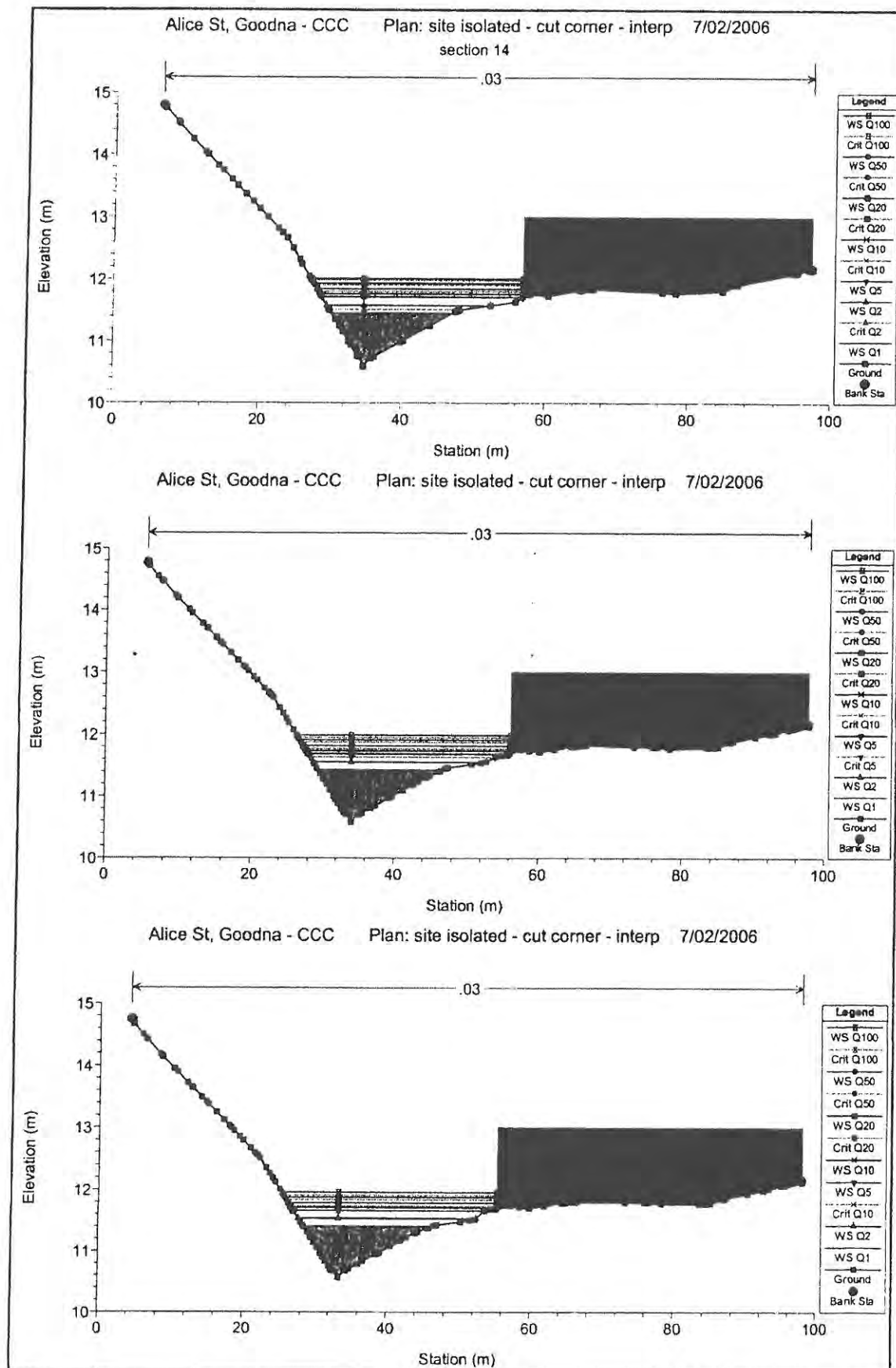
Profile	Water Surface	Channel Bottom	Q Total	Min Ch B	Vel. Bw	Ch Vel	EC Bw	EC Vel	Vel Ch	Flow Area	Top Width	Friction Co
	35.90	10.02	11.62		11.88	0.002870	1.17	30.71	57.72	0.51		
	45.90	10.02	11.78		11.85	0.001981	1.14	40.37	58.28	0.44		
	54.10	10.02	11.90		11.97	0.001818	1.14	47.59	60.42	0.41		
	11.30	9.99	10.91	10.87	11.08	0.009833	1.83	8.17	14.81	0.91		
	16.00	9.99	11.05		11.23	0.008924	1.89	8.45	18.00	0.88		
	24.00	9.99	11.34	11.18	11.44	0.008052	1.42	15.86	44.34	0.74		
	28.50	9.99	11.44		11.53	0.004879	1.32	21.88	49.21	0.63		
	35.90	9.99	11.80		11.87	0.002729	1.21	29.86	50.82	0.51		
	45.90	9.99	11.78		11.84	0.002012	1.20	38.19	52.45	0.45		
	54.10	9.99	11.88		11.98	0.001722	1.21	44.55	53.50	0.42		
	11.30	9.96	10.88	10.84	11.05	0.009505	1.83	8.17	14.44	0.89		
	16.00	9.96	11.02	10.95	11.20	0.008738	1.92	8.35	17.26	0.88		
	24.00	9.96	11.22		11.41	0.008054	1.93	12.46	23.97	0.85		
	28.50	9.96	11.31		11.50	0.006798	1.91	14.91	25.47	0.80		
	35.90	9.96	11.48		11.65	0.005422	1.91	18.82	27.06	0.73		
	45.90	9.96	11.81		11.81	0.005015	2.01	22.84	28.52	0.72		
	54.10	9.96	11.71		11.94	0.004846	2.09	25.86	29.55	0.71		
	11.30	9.92	10.84	10.79	11.01	0.009160	1.81	8.24	14.44	0.88		
	16.00	9.92	10.99		11.18	0.008628	1.87	8.55	18.08	0.87		
	24.00	9.92	11.19		11.37	0.007177	1.87	12.83	23.63	0.81		
	28.50	9.92	11.29		11.47	0.006098	1.85	15.38	25.35	0.78		
	35.90	9.92	11.45		11.62	0.004878	1.85	19.39	26.94	0.70		
	45.90	9.92	11.80		11.79	0.004498	1.95	23.56	28.40	0.68		
	54.10	9.92	11.70		11.91	0.004395	2.04	26.58	29.38	0.68		
	11.30	9.88	10.81		10.97	0.008855	1.77	8.38	14.88	0.86		
	16.00	9.88	10.95		11.12	0.007879	1.82	8.79	18.06	0.83		
	24.00	9.88	11.17		11.34	0.006442	1.83	13.08	22.88	0.77		
	28.50	9.88	11.27		11.44	0.005685	1.82	15.67	25.23	0.74		
	35.90	9.88	11.44		11.60	0.004428	1.80	19.93	26.88	0.67		
	45.90	9.88	11.59		11.77	0.004136	1.90	24.12	28.30	0.66		
	54.10	9.88	11.69		11.89	0.004071	1.99	27.13	29.22	0.68		
	11.30	9.84	10.78		10.93	0.008082	1.72	8.56	14.91	0.83		
	16.00	9.84	10.93		11.09	0.007021	1.77	9.02	17.70	0.79		
	24.00	9.84	11.14		11.31	0.005991	1.83	13.08	21.85	0.75		
	28.50	9.84	11.24		11.41	0.005885	1.84	15.46	25.03	0.75		
	35.90	9.84	11.42		11.58	0.004341	1.79	20.00	26.71	0.66		
	45.90	9.84	11.57		11.75	0.004058	1.90	24.19	28.12	0.65		
	54.10	9.84	11.67		11.87	0.004007	1.99	27.17	29.01	0.68		
	11.30	9.80	10.75		10.89	0.007287	1.68	8.71	14.57	0.79		
	16.00	9.80	10.90		11.08	0.006498	1.76	9.09	17.01	0.77		
	24.00	9.80	11.10		11.28	0.005779	1.86	12.90	20.33	0.75		
	28.50	9.80	11.21		11.39	0.005408	1.89	15.06	22.02	0.73		
	35.90	9.80	11.39		11.56	0.004603	1.83	19.58	26.49	0.68		
	45.90	9.80	11.54		11.73	0.004200	1.92	23.87	27.82	0.66		
	54.10	9.80	11.65		11.85	0.004138	2.02	26.82	28.77	0.67		
	11.30	9.76	10.72		10.86	0.006740	1.67	8.75	13.98	0.77		
	16.00	9.76	10.87		11.03	0.006282	1.78	8.99	16.11	0.76		
	24.00	9.76	11.07		11.25	0.005857	1.92	12.49	18.93	0.75		
	28.50	9.76	11.17		11.36	0.005574	1.97	14.48	20.32	0.75		
	35.90	9.76	11.35		11.54	0.005387	1.93	18.59	26.19	0.73		
	45.90	9.76	11.51		11.71	0.004719	2.00	22.93	27.83	0.70		
	54.10	9.76	11.61		11.83	0.004592	2.09	25.86	28.47	0.70		
	11.30	9.47	10.38		10.56	0.008088	1.88	8.07	12.24	0.84		
	16.00	9.47	10.51	10.45	10.73	0.008453	2.07	7.72	13.71	0.88		
	24.00	9.47	10.89	10.83	10.96	0.008479	2.30	10.44	15.89	0.91		
	28.50	9.47	10.77	10.72	11.07	0.008852	2.44	11.87	16.77	0.93		
	35.90	9.47	10.87	10.85	11.23	0.008548	2.87	13.48	17.93	0.98		
	45.90	9.47	11.05	11.05	11.42	0.010183	2.89	17.05	23.55	1.01		
	54.10	9.47	11.13	11.13	11.55	0.010182	2.84	19.02	24.12	1.02		
	11.30	9.13	9.96	9.94	10.16	0.010475	1.98	5.71	12.81	0.95		
	16.00	9.13	10.09	10.07	10.32	0.010420	2.16	7.42	14.54	0.96		
	24.00	9.13	10.24	10.24	10.54	0.010966	2.43	9.87	16.80	1.01		
	28.50	9.13	10.32	10.32	10.65	0.010722	2.52	11.29	17.87	1.01		
	35.90	9.13	10.45	10.45	10.80	0.010280	2.84	13.59	19.46	1.01		
	45.90	9.13	10.82	10.82	10.98	0.010473	2.86	17.26	24.83	1.02		
	54.10	9.13	10.74	10.74	11.09	0.010174	2.84	20.50	29.23	1.01		
	11.30	8.76	9.52	9.51	9.72	0.011420	2.01	5.62	13.15	0.98		
	16.00	8.76	9.83	9.83	9.88	0.011618	2.22	7.21	14.72	1.01		
	24.00	8.76	9.80	9.80	10.10	0.010962	2.41	9.94	17.11	1.01		
	28.50	8.76	9.88	9.88	10.20	0.010704	2.50	11.39	18.23	1.01		
	35.90	8.76	10.00	10.00	10.36	0.010521	2.64	13.60	19.96	1.02		
	45.90	8.76	10.22	10.22	10.51	0.010808	2.41	19.03	32.54	1.01		
	54.10	8.76	10.35	10.33	10.80	0.010636	2.21	24.53	47.44	0.98		

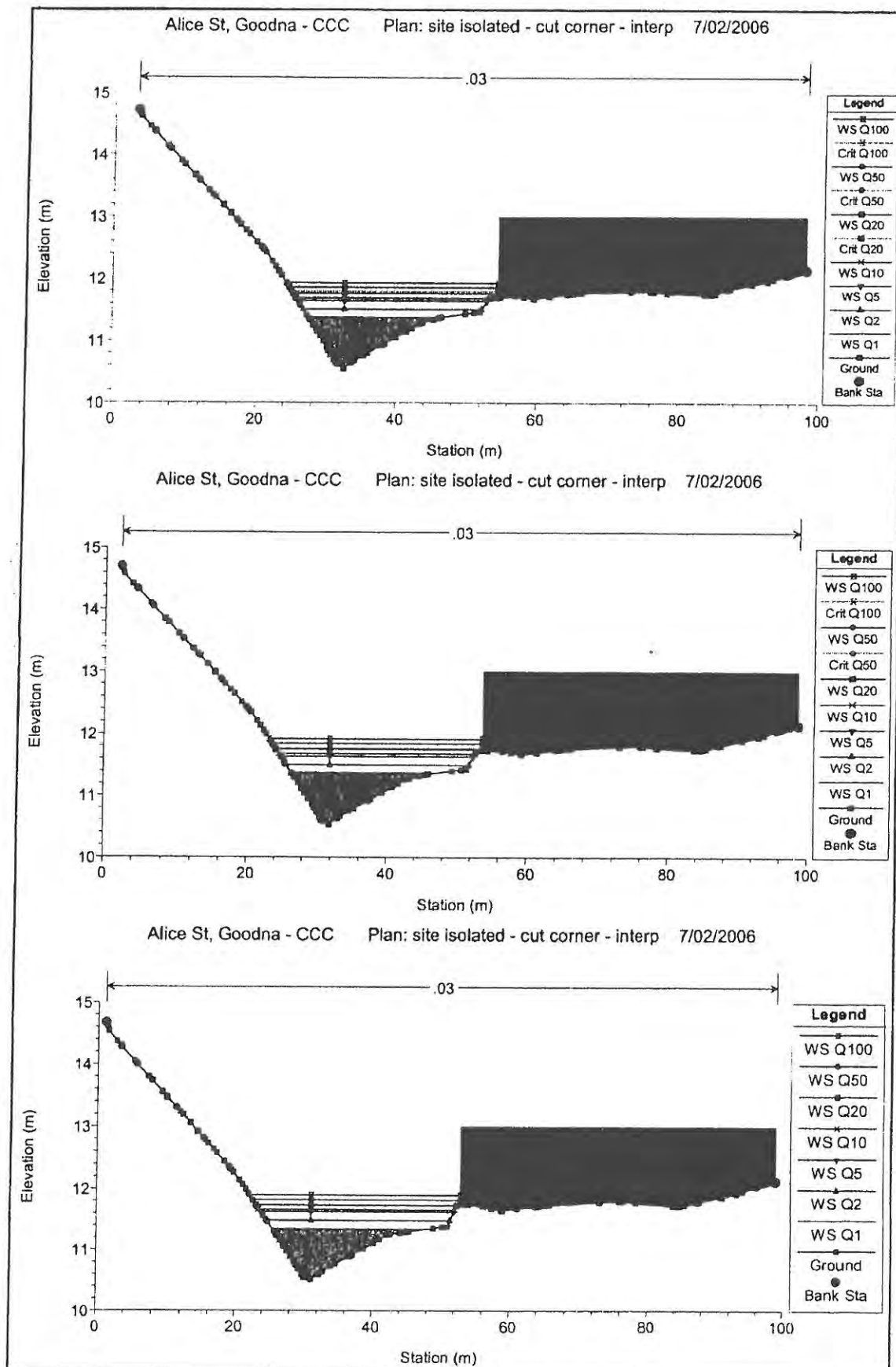
HEC-RAS Plan: cut cor-int River: Alice St Reach: 1 (Continued)

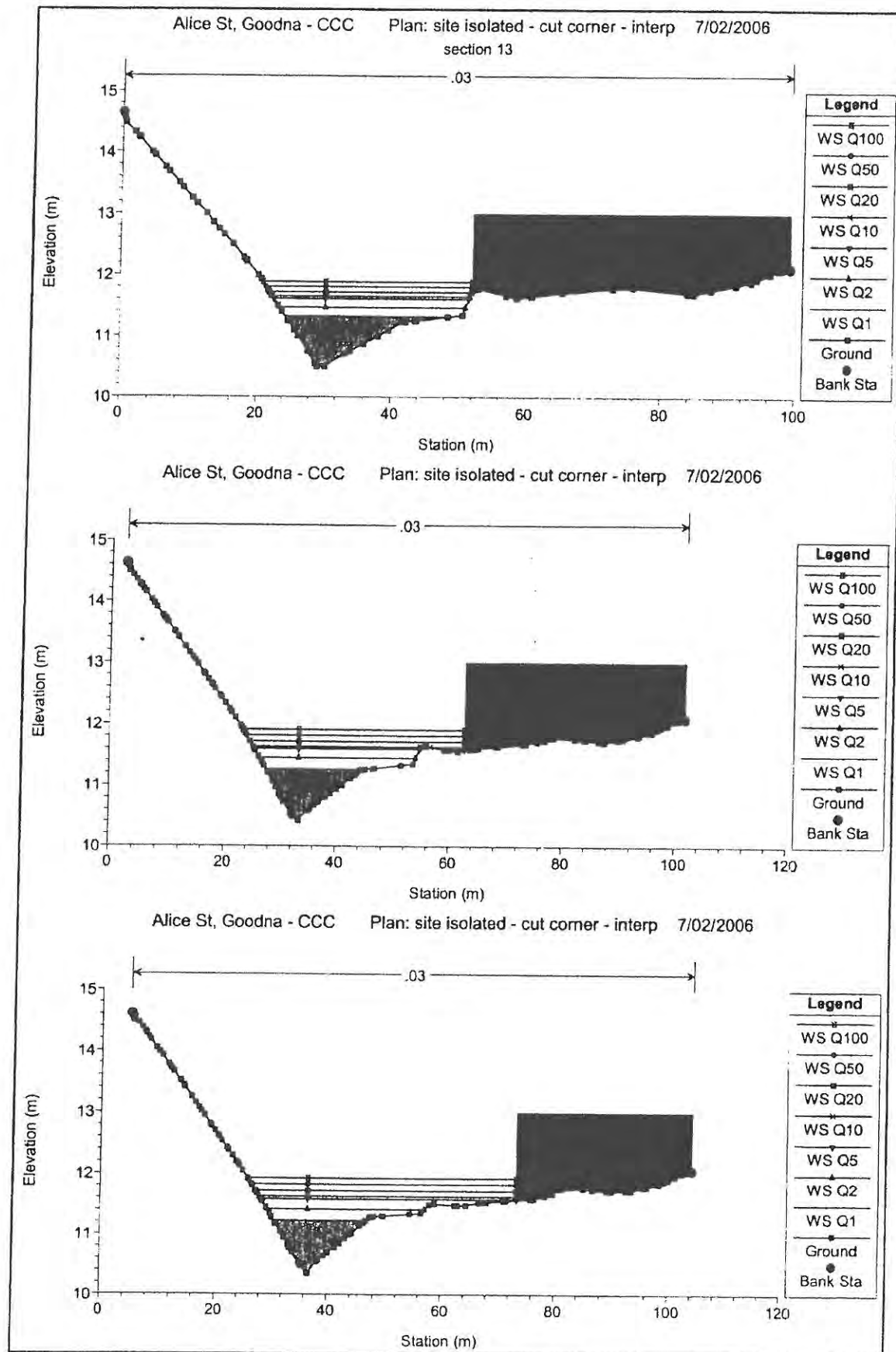
Reaches	Channel	Profile	Q Total (cfs)	Max Ch Br (ft)	W.S. Elev (ft)	R Ch W.S. (ft)	R.O. Elev (ft)	E.G. Slope (ft/ft)	Vel Dist (ft/s)	Cham Area (sq ft)	Top Width (ft)	Profile # Ch
			11.30	8.47	9.10	9.10	9.31	0.012438	1.99	5.89	14.48	1.01
			16.00	8.47	9.22	9.22	9.48	0.011719	2.17	7.36	15.82	1.01
			24.00	8.47	9.38	9.38	9.67	0.010804	2.40	10.01	17.25	1.00
			28.50	8.47	9.45	9.45	9.77	0.010655	2.51	11.34	18.02	1.01
			35.90	8.47	9.58	9.58	9.93	0.010198	2.83	13.66	19.83	1.01
			45.90	8.47	9.71	9.71	10.11	0.010298	2.79	18.48	21.78	1.02
			54.10	8.47	9.88	9.88	10.23	0.010112	2.62	20.87	29.77	1.00
			11.30	8.06	8.74	8.74	8.94	0.012802	1.97	5.73	14.87	1.01
			16.00	8.06	8.85	8.85	9.09	0.011847	2.16	7.42	18.09	1.01
			24.00	8.06	9.27		9.40	0.003484	1.58	15.14	20.88	0.59
			28.50	8.06	9.35		9.50	0.004137	1.89	18.90	24.02	0.84
			35.90	8.06	9.44		9.82	0.004707	1.88	19.11	25.45	0.89
			45.90	8.06	9.55		9.78	0.005040	2.09	21.98	28.27	0.73
			54.10	8.06	9.81		9.88	0.005792	2.31	23.41	28.85	0.79
			11.30	7.53	8.31	8.31	8.51	0.012496	2.01	5.62	14.08	1.02
			16.00	7.53	8.87		8.92	0.001441	1.04	15.38	20.41	0.38
			24.00	7.53	9.29		9.33	0.000878	0.98	25.01	25.82	0.31
			28.50	7.53	9.37		9.42	0.000984	1.05	27.11	26.58	0.33
			35.90	7.53	9.45		9.53	0.001227	1.22	29.51	27.40	0.37
			45.90	7.53	9.56		9.67	0.001514	1.41	32.57	28.40	0.42
			54.10	7.53	9.82		9.75	0.001823	1.58	34.22	28.85	0.48
			11.30	8.92	8.28		8.33	0.001077	0.94	12.05	14.83	0.33
			16.00	8.92	8.87		8.88	0.000439	0.73	22.00	20.19	0.22
			24.00	8.92	9.28		9.31	0.000521	0.73	32.69	32.91	0.24
			28.50	8.92	9.38		9.39	0.000711	0.80	35.87	41.28	0.27
			35.90	8.92	9.45		9.49	0.000987	0.91	39.64	47.96	0.32
			45.90	8.92	9.56		9.61	0.001250	1.01	45.85	57.31	0.36
			54.10	8.92	9.82		9.69	0.001374	1.10	49.25	58.08	0.38
			11.30	8.13	8.27	7.08	8.30	0.000393	0.77	14.65	10.45	0.21
			16.00	8.13	8.85	7.26	8.88	0.000350	0.73	21.89	15.84	0.20
			24.00	8.13	9.26	7.53	9.28	0.000948	0.70	34.52	80.38	0.29
			28.50	8.13	9.34	7.68	9.38	0.001009	0.72	39.43	88.41	0.30
			35.90	8.13	9.42	7.85	9.45	0.001057	0.79	45.58	71.89	0.32
			45.90	8.13	9.53	8.09	9.57	0.001065	0.85	53.83	75.88	0.32
			54.10	8.13	9.80	8.28	9.84	0.001143	0.92	58.55	77.10	0.34
			Culvert									
			11.30	8.13	7.08	7.08	7.41	0.011297	2.55	4.43	8.84	1.01
			16.00	8.13	7.26	7.26	7.68	0.010882	2.80	5.72	7.22	1.00
			24.00	8.13	7.52	7.52	8.01	0.010271	3.10	7.74	8.06	1.01
			28.50	8.13	7.68	7.68	8.19	0.010022	3.22	8.84	8.48	1.01
			35.90	8.13	7.85	7.85	8.44	0.009751	3.40	10.58	9.11	1.01
			45.90	8.13	8.09	8.09	8.74	0.009437	3.59	12.78	9.88	1.01
			54.10	8.13	8.25	8.25	8.97	0.009333	3.74	14.47	10.39	1.01

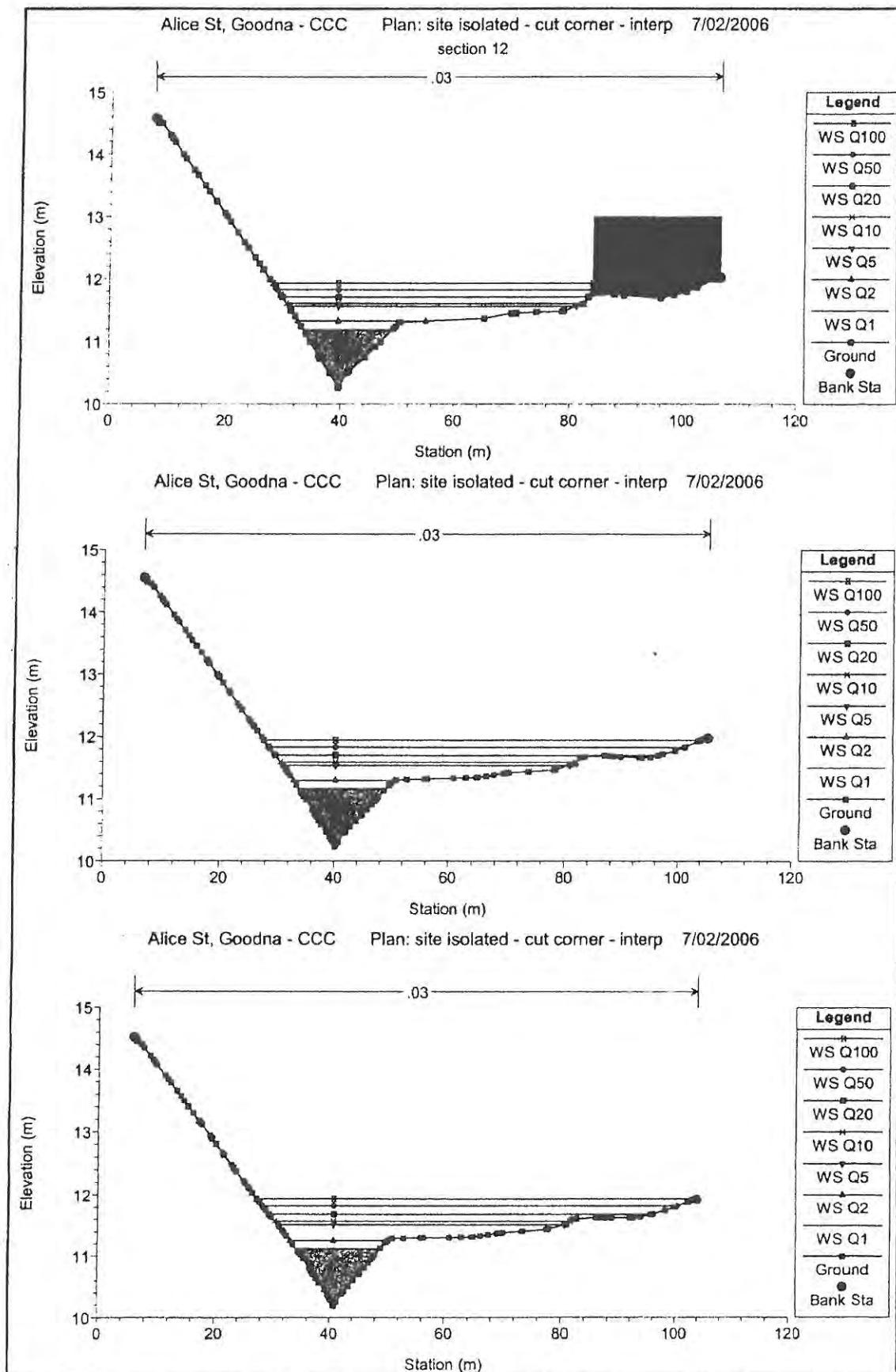


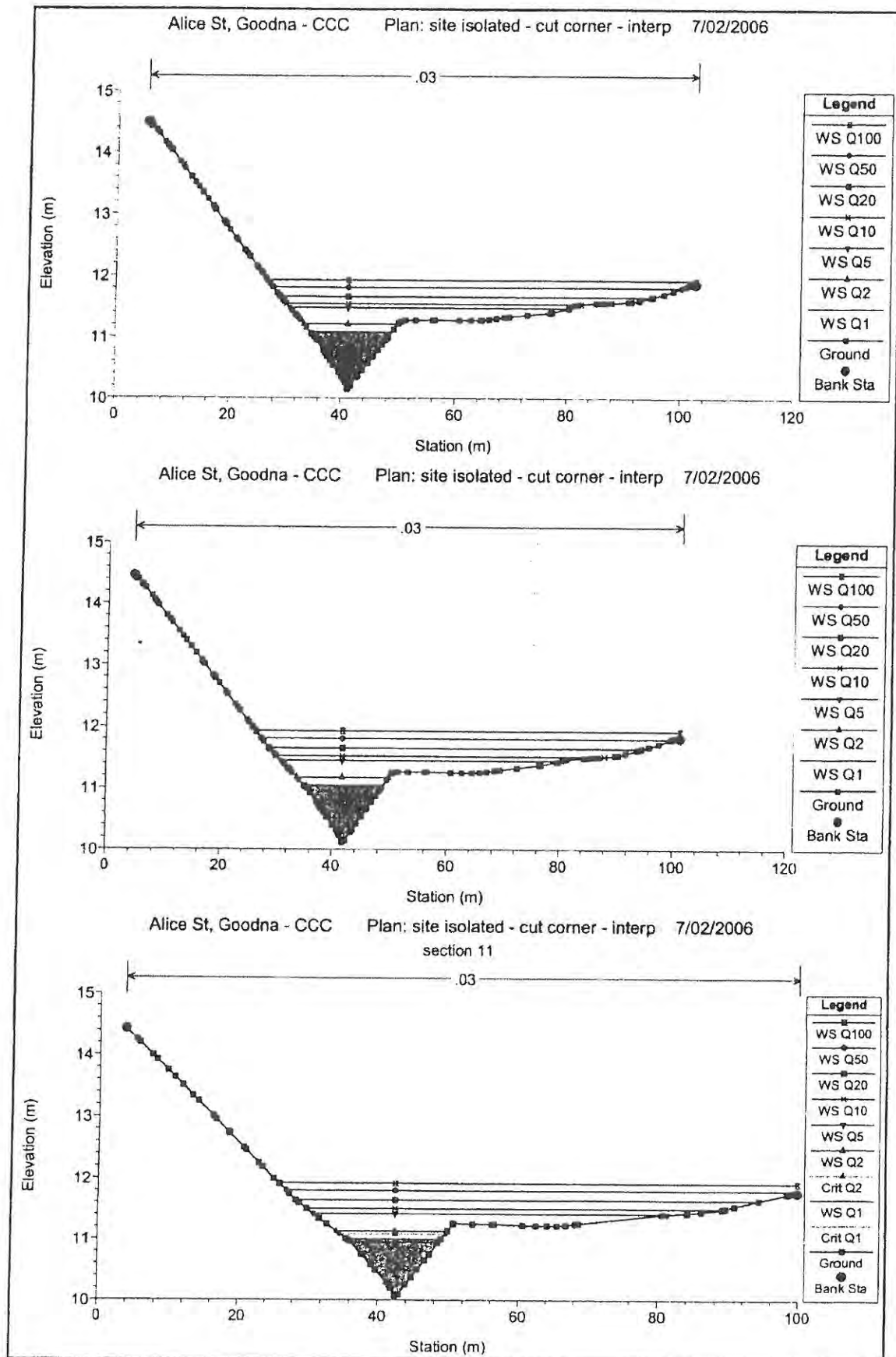


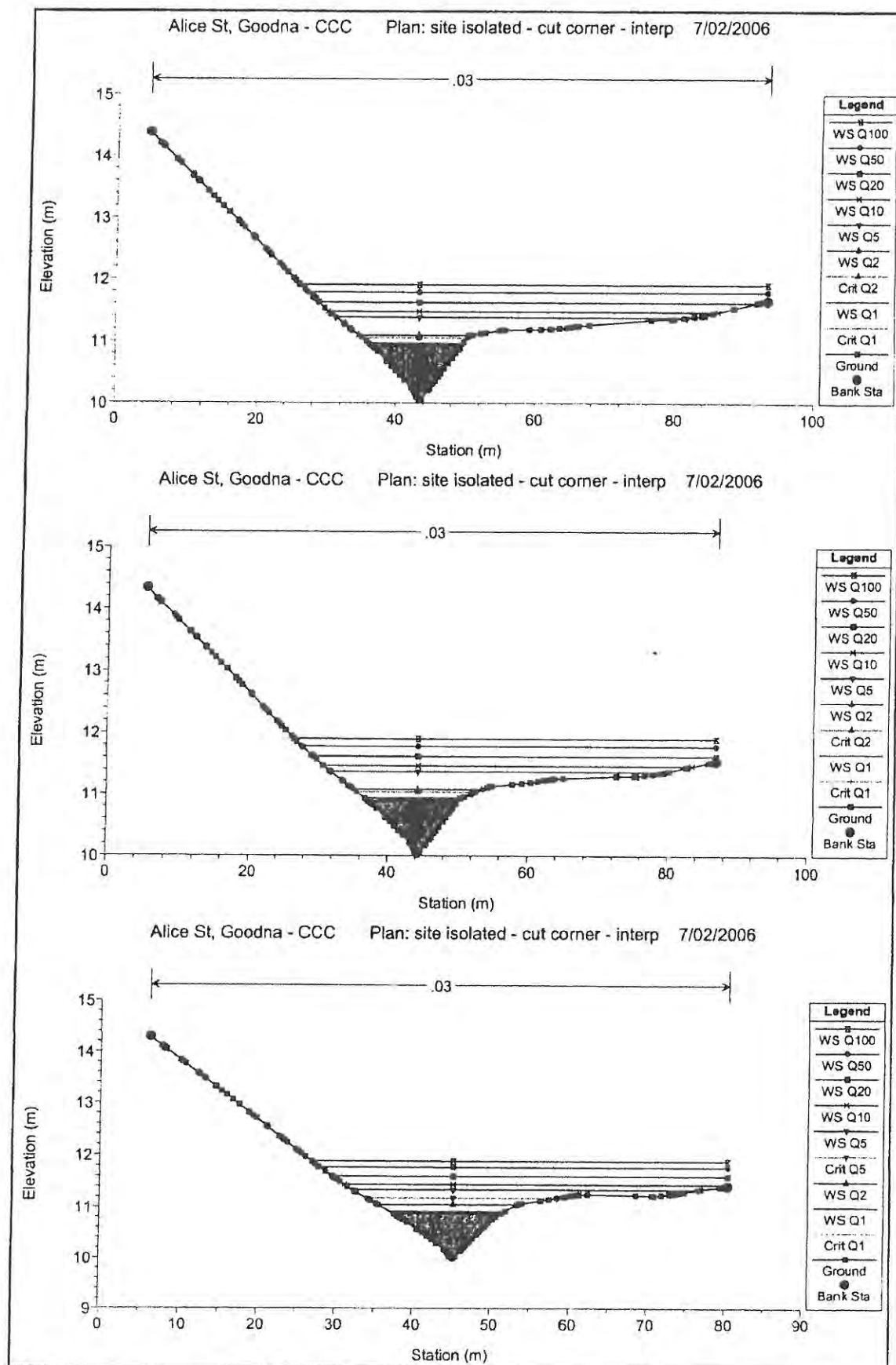


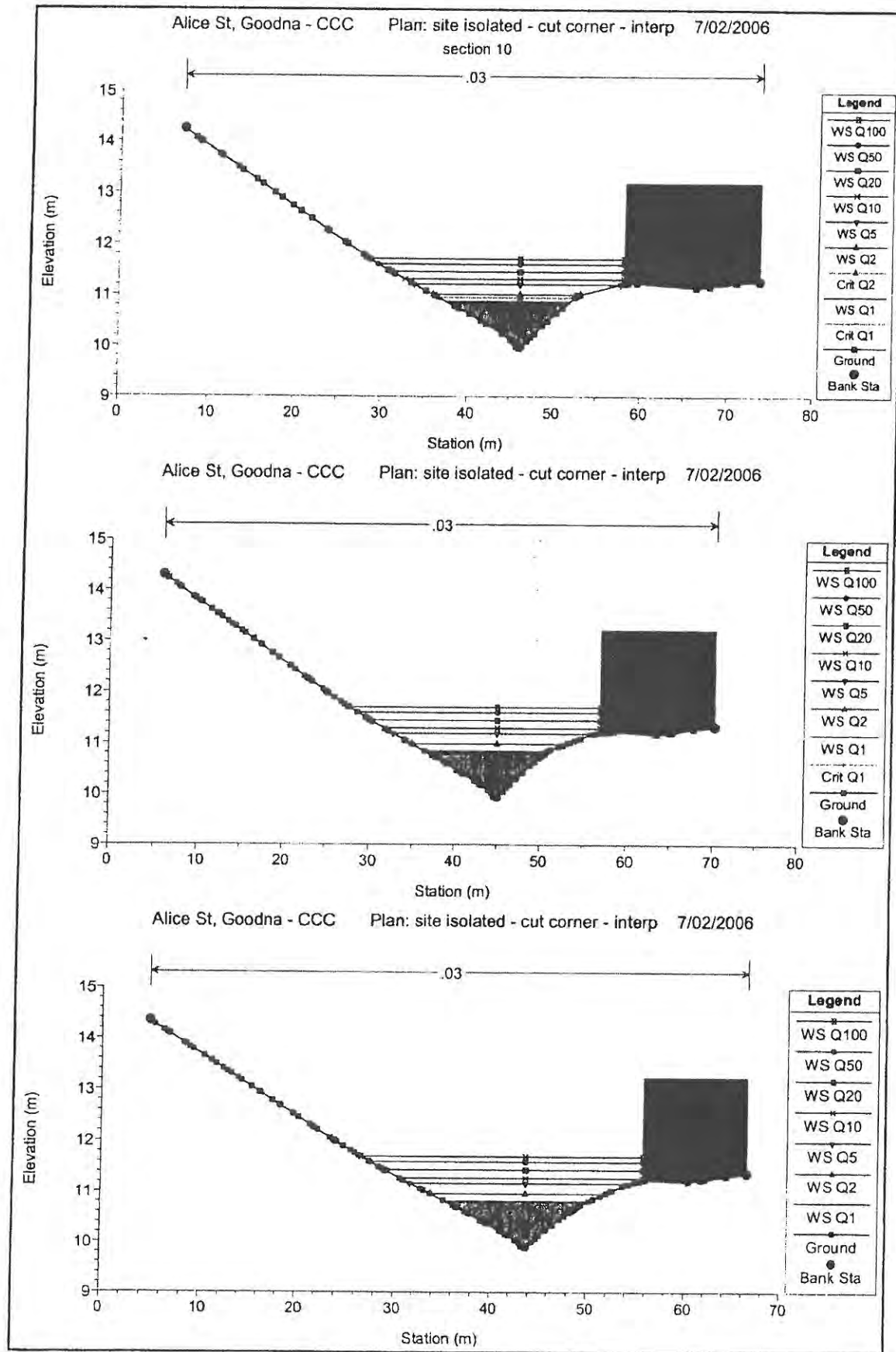


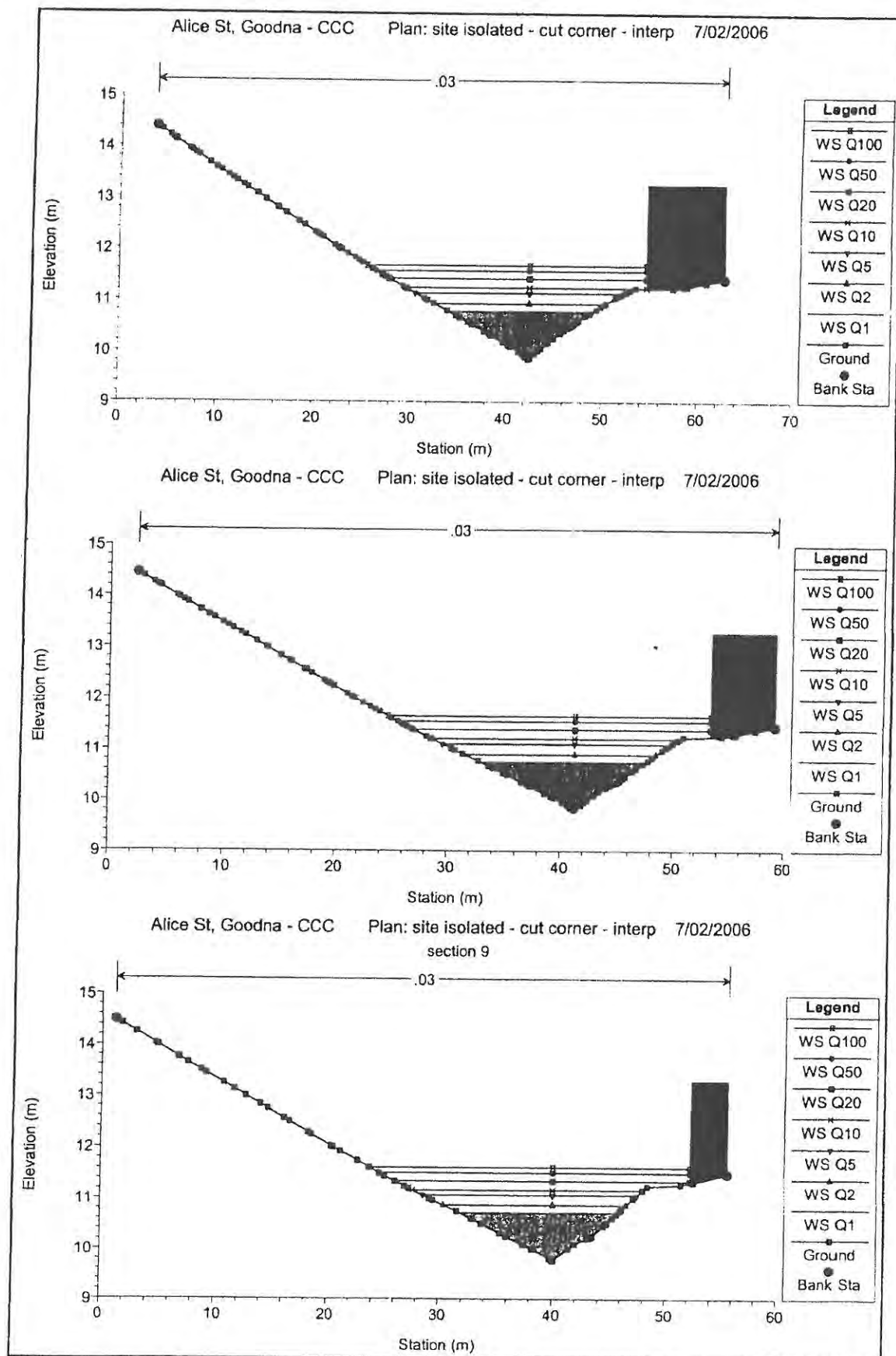












Plan: cut cor-int Alice St 1 RS: 419 Culv Group: Culvert #1 Profile: Q1

Q Culv Group (m³/s)	11.30	Culv Full Len (m)	
# Barrels	2	Culv Vel US (m/s)	2.16
D Barrel (m)	5.65	Culv Vel US (m/s)	2.66
E.G. US (m)	12.48	Culv Inlet Elev (m)	11.17
W.S. US (m)	12.45	Culv Inlet Dm (m)	11.17
E.G. DS (m)	12.03	Culv Floor Elev (m)	0.06
W.S. DS (m)	11.94	Culv Exit Elev (m)	0.27
D Exit (m)	0.44	Culv Exit Dm (m)	0.12
D Barrel (m)	0.51	Culv Len (m)	
E.G. US (m)	12.38	Weir Sta Lft (m)	
E.G. DS (m)	12.48	Weir Sta Rgt (m)	
Culv Inlet	Outlet	Weir Submrg	
Culv Inlet Depth (m)	12.12	Weir Max Depth (m)	
Culv Inlet Depth (m)	11.94	Weir Avg Depth (m)	
Culv Inlet Depth (m)		Weir Flow Area (m²)	
Culv Exit Depth (m)	0.75	Min El Weir Flow (m)	13.00

Plan: cut cor-int Alice St 1 RS: 419 Culv Group: Culvert #1 Profile: Q2

Q Culv Group (m³/s)	16.00	Culv Full Len (m)	
# Barrels	2	Culv Vel US (m/s)	2.47
D Barrel (m)	8.00	Culv Vel US (m/s)	3.06
E.G. US (m)	12.81	Culv Inlet Elev (m)	11.17
W.S. US (m)	12.79	Culv Inlet Dm (m)	11.17
E.G. DS (m)	12.19	Culv Floor Elev (m)	0.06
W.S. DS (m)	12.05	Culv Exit Elev (m)	0.41
D Exit (m)	0.63	Culv Exit Dm (m)	0.16
D Barrel (m)	0.74	Culv Len (m)	
E.G. US (m)	12.71	Weir Sta Lft (m)	
E.G. DS (m)	12.81	Weir Sta Rgt (m)	
Culv Inlet	Outlet	Weir Submrg	
Culv Inlet Depth (m)	12.35	Weir Max Depth (m)	
Culv Inlet Depth (m)	12.12	Weir Avg Depth (m)	
Culv Inlet Depth (m)		Weir Flow Area (m²)	
Culv Exit Depth (m)	0.95	Min El Weir Flow (m)	13.00

Plan: cut cor-int Alice St 1 RS: 419 Culv Group: Culvert #1 Profile: Q5

Q Culv Group (m³/s)	20.87	Culv Full Len (m)	
# Barrels	2	Culv Vel US (m/s)	2.73
D Barrel (m)	10.43	Culv Vel US (m/s)	3.34
E.G. US (m)	13.21	Culv Inlet Elev (m)	11.17
W.S. US (m)	13.20	Culv Inlet Dm (m)	11.17
E.G. DS (m)	12.40	Culv Floor Elev (m)	0.07
W.S. DS (m)	12.18	Culv Exit Elev (m)	0.47
D Exit (m)	0.81	Culv Exit Dm (m)	0.27
D Barrel (m)	1.02	Culv Len (m)	3.13
E.G. US (m)	13.21	Weir Sta Lft (m)	43.80
E.G. DS (m)	13.20	Weir Sta Rgt (m)	88.54
Culv Inlet	Inlet	Weir Submrg	0.00
Culv WS Inlet (m)	12.56	Weir Max Depth (m)	0.23
Culv WS Outlet (m)	12.31	Weir Avg Depth (m)	0.13
Culv Inlet Depth (m)		Weir Flow Area (m²)	5.79
Culv Exit Depth (m)	1.14	Min El Weir Flow (m)	13.00

Plan: cut cor-int Alice St 1 RS: 419 Culv Group: Culvert #1 Profile: Q10

Q Culv Group (m³/s)	22.09	Culv Full Len (m)	6.02
# Barrels	2	Culv Vel US (m/s)	2.87
Q Barrel (m³/s)	11.04	Culv Vel DS (m/s)	3.40
E.C. US (m)	13.31	Culv Inv E Up (m)	11.17
W.S. US (m)	13.30	Culv Inv E Dn (m)	11.17
E.C. DS (m)	12.51	Culv Frict Loss (m)	0.16
W.S. DS (m)	12.24	Culv Exit Loss (m)	0.43
Delta E.G. (m)	0.80	Culv Exit Loss (m)	0.21
Delta V/S (m)	1.06	Q Weir (m³/s)	6.41
E.G. IC (m)	13.31	Weir Sta Crt (m)	40.54
E.G. DC (m)	13.29	Weir Sta Rot (m)	93.08
Culvert Control	Inlet	Weir Submerg	0.00
Culv WS Inlet (m)	12.57	Weir Max Depth (m)	0.31
Culv WS Outlet (m)	12.35	Weir Avg Depth (m)	0.19
Culv Nom Depth (m)		Weir Flow Area (m²)	9.74
Culv Crit Depth (m)	1.18	Min El Weir Flow (m)	13.00

Plan: cut cor-int Alice St 1 RS: 419 Culv Group: Culvert #1 Profile: Q20

Q Culv Group (m³/s)	23.37	Culv Full Len (m)	12.12
# Barrels	2	Culv Vel US (m/s)	3.04
Q Barrel (m³/s)	11.69	Culv Vel DS (m/s)	3.47
E.C. US (m)	13.42	Culv Inv E Up (m)	11.17
W.S. US (m)	13.41	Culv Inv E Dn (m)	11.17
E.C. DS (m)	12.68	Culv Frict Loss (m)	0.18
W.S. DS (m)	12.29	Culv Exit Loss (m)	0.33
Delta E.G. (m)	0.75	Culv Exit Loss (m)	0.23
Delta V/S (m)	1.12	Q Weir (m³/s)	12.53
E.G. IC (m)	13.42	Weir Sta Crt (m)	36.78
E.G. DC (m)	13.40	Weir Sta Rot (m)	98.65
Culvert Control	Inlet	Weir Submerg	0.00
Culv WS Inlet (m)	12.57	Weir Max Depth (m)	0.42
Culv WS Outlet (m)	12.40	Weir Avg Depth (m)	0.26
Culv Nom Depth (m)		Weir Flow Area (m²)	15.99
Culv Crit Depth (m)	1.23	Min El Weir Flow (m)	13.00

Plan: cut cor-int Alice St 1 RS: 419 Culv Group: Culvert #1 Profile: Q50

Q Culv Group (m³/s)	24.52	Culv Full Len (m)	
# Barrels	2	Culv Vel US (m/s)	3.19
Q Barrel (m³/s)	12.26	Culv Vel DS (m/s)	3.98
E.C. US (m)	13.53	Culv Inv E Up (m)	11.17
W.S. US (m)	13.51	Culv Inv E Dn (m)	11.17
E.C. DS (m)	12.91	Culv Frict Loss (m)	0.17
W.S. DS (m)	12.39	Culv Exit Loss (m)	0.19
Delta E.G. (m)	0.62	Culv Exit Loss (m)	0.26
Delta V/S (m)	1.12	Q Weir (m³/s)	21.60
E.G. IC (m)	13.53	Weir Sta Crt (m)	33.75
E.G. DC (m)	13.44	Weir Sta Rot (m)	104.73
Culvert Control	Inlet	Weir Submerg	0.00
Culv WS Inlet (m)	12.57	Weir Max Depth (m)	0.54
Culv WS Outlet (m)	12.29	Weir Avg Depth (m)	0.34
Culv Nom Depth (m)		Weir Flow Area (m²)	24.02
Culv Crit Depth (m)	1.27	Min El Weir Flow (m)	13.00

Plan: cut cor-int Alice St 1 RS: 419 Culv Group: Culvert #1 Profile: Q100

Q Culv Group (m3/s)	23.90	Culv Full Len (m)	20.00
# Boxes	2	Culv Vert US (m)	3.10
Q Bank (m3/s)	11.95	Culv Vert DS (m)	3.10
EC US (m)	13.61	Culv Inlet US (m)	11.17
VS US (m)	13.59	Culv Inlet DS (m)	11.17
EC DS (m)	13.09	Culv Exit US (m)	0.12
VS DS (m)	12.76	Culv Exit DS (m)	0.16
Dist US (m)	0.53	Culv Exit V (m)	0.25
Dist DS (m)	0.83	Q Weir (m3/s)	30.20
EC (m)	13.61	Area (m2)	31.44
VS (m)	13.61	Wet Area (m2)	109.37
Culv Inlet (m)	Outlet	Wet Area (m2)	0.00
Culv Exit (m)	12.57	Wet Area (m2)	0.63
Culv Inlet (m)	12.57	Wet Area (m2)	0.40
Culv Exit (m)		Wet Area (m2)	30.87
SL (m)	1.24	Wet Area (m2)	13.00

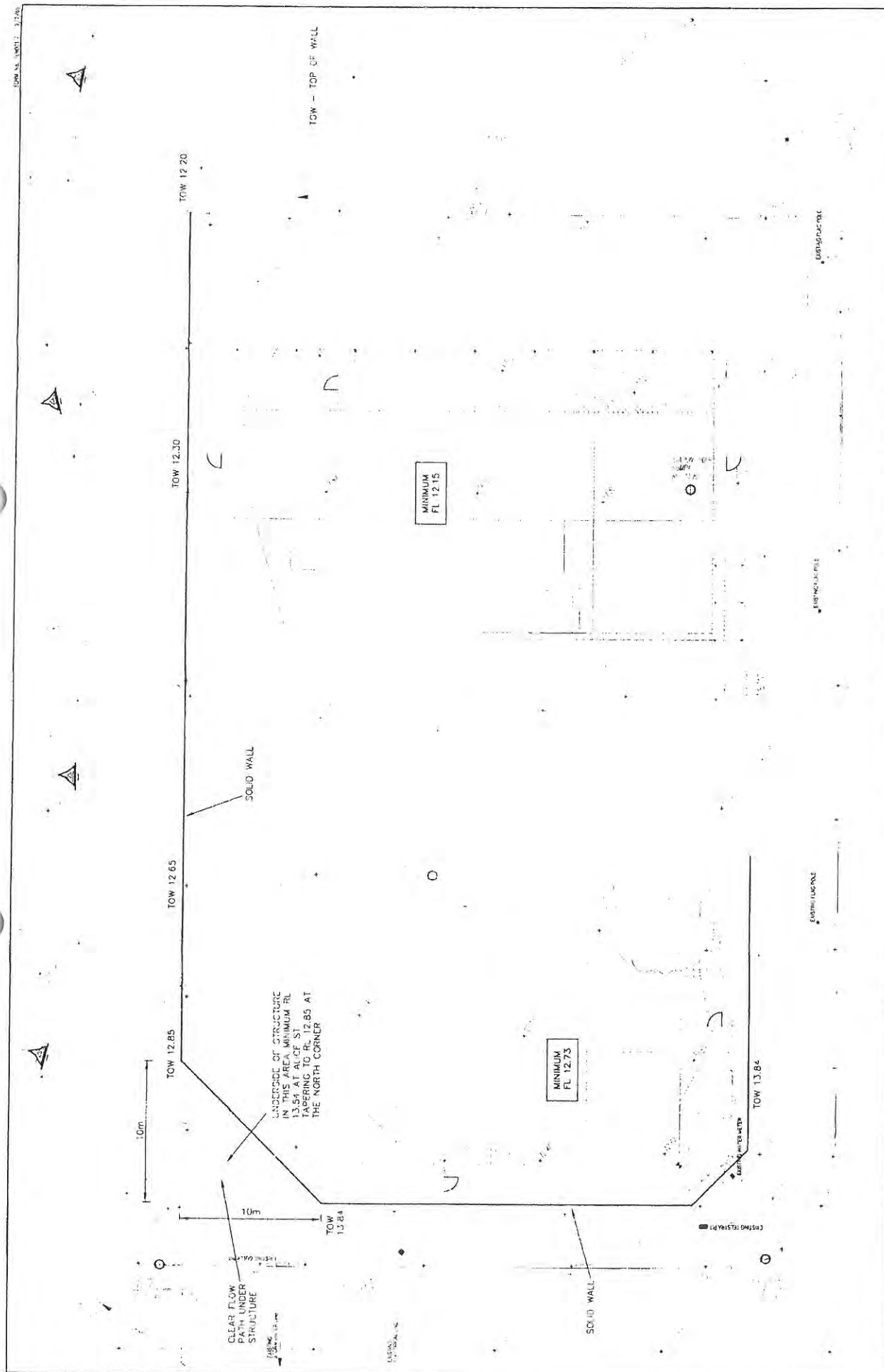
APPENDIX D

**REQUIRED BUILDING AND
WALL DETAILS**

**TABLETOP
ARCHITECTS
PLANNERS
ENGINEERS**

ABN 60 067 321 117

C:\Project\Tape\devel\5946 r01.doc

[illegible]

Annexure TCF-4

J.B. Goodwin, Midson
& Partners
(Business name of
Hillmir Pty. Ltd.)
ABN 75 009 728 634

64 Sylvan Road,
Toowong
P.O. Box 92 Toowong
Brisbane, 4066
Ph: (07) 3870 2161
Fax: (07) 3870 3944
Email: gmpbris@
goodwinmidson.com.au

A Member Firm of
Consulting Surveyors
Queensland

Originating Office
Brisbane
Our Reference
12563:dw
a4197.doc
Directors

Consultant

Associates

Branch Offices


2/12 Technology Drive
Kawana Waters, 4575
Ph: (07) 5493 1707
Fax: (07) 5493 4860
2 Park Street Boonah
Ph/Fax: (07) 5463 1596

J.B. Goodwin, Midson & Partners

Consulting Surveyors, Town Planners and
Development Consultants.

28 February 2006

The Chief Executive Officer
Ipswich City Council
PO Box 191
Ipswich QLD 4305

 RECEIVED - 1 MAR 2006	
Doc. No.	
Applic. No.	1727/05
Action Off.	

Attention: [REDACTED] (Town Planning Assessment Officer)

Dear Sir / Madam:

Re: Material Change of Use (Child Care Centre)
45 Alice Street, Goodna Qld 4300

I am responding to points 1 (Access) and 6 (Waste) of the Information Request, dated 10 May 2005.

As such, I have enclosed four (4) copies of the revised drawing A01 (amendment C) prepared by Tabletop showing two (2) bin enclosures for each of the two (2) proposed buildings (A & B) in response to those issues as identified by Council regarding the storage of wheelie bins for waste collection.

According to previous experience in the design of this and other child care centres, expert advice provided by Tabletop has determined that four (4) wheelie bins collected by Ipswich Waste twice weekly (a total of 8 wheelie bins per week) will be more than sufficient to cater for the storage and disposal of waste generated by the operation of the two adjacent child care centres.

As it is proposed that these bins will be collected from the street, in our opinion it is considered unnecessary that provision of parking and access for a refuse collection vehicle be required (as per point 1 – Access of the Information Request).

Therefore, based on previous information provided to Council, it is considered that all issues raised by the Information Request have now been addressed and responded to and that a final assessment of the application may proceed. If you have any queries regarding any of the above, please don't hesitate to contact me on [REDACTED]

Yours faithfully
J B Goodwin Midson & Partners

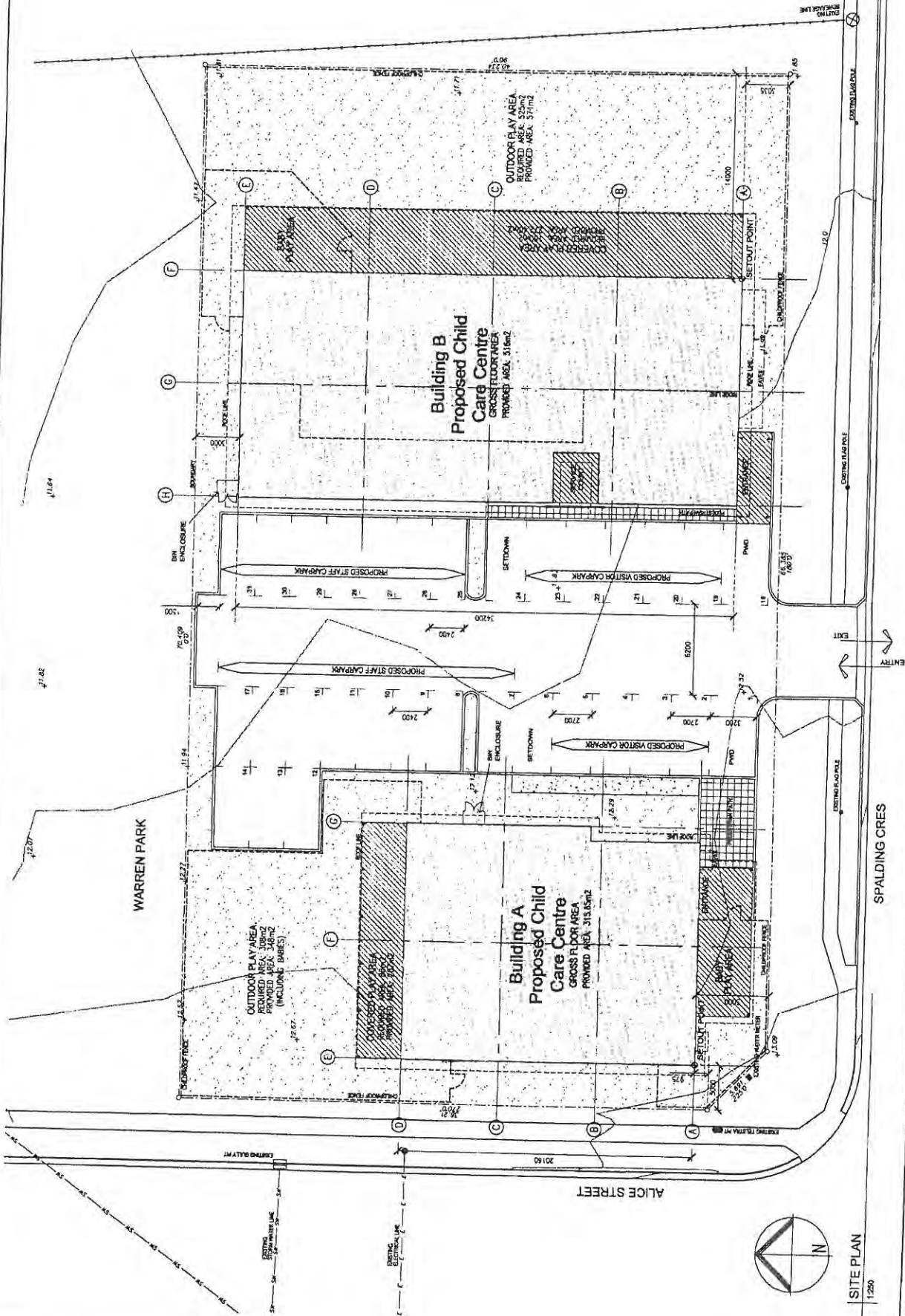
[REDACTED]
Town Planner

Encl.

GM+P



FORM No. DW001.2 3/7/95



SITE PLAN
1:250

CLIENT DETAILS

JOB NAME
**PROPOSED 75 + 44
PLACE CHILDCARE CENTRE
ALICE ST - GOODNA**

REVISION SCHEDULE

REV	DATE	COMMENTS	APPROVED	DATE
A	15/11/04	DEVELOPMENT APPLICATION	ZRC	
B	29/02/05	CAMPARK AMENDED	CD	
C	29/02/06	BN ENCLOSURES ADDED	TMB	
			DESIGNED	C.P.

- General notes:
1. General notes on all documents, drawings and specifications shall be read in conjunction with the contract documents.
2. Do not scale.
3. Dimensions, levels, etc. to be verified by the contractor prior to the commencement of work.
4. Any discrepancies to be reported to the client prior to the commencement of work.

kdw

Unit 1 Monaghan Corporate Park
225 Monaghan Road, New South Wales 1585
P.O. Box 814
New South Wales 1585
Australia
Tel: 02 9344 1400
Fax: 02 9344 1401
www.kdw.com.au

TABLETOP
ARCHITECTURAL ENGINEERS

DRAWING TITLE
SITE PLAN

SCALE
0 1 2 3 4 5
SCALE (m) 1:250 A1 A3
JOB No. 5518
DWG No. A01/C
REV. 1
DRAWING STATUS
INITIAL ISSUE
PLOT NUMBER: 2 DATE: 28/02/06

Annexure TCF-5

1727/2005

4 May, 2006

MEMORANDUM

TO: DEVELOPMENT TEAM CO-ORDINATOR - EAST

FROM: ASSISTANT DEVELOPMENT ENGINEER -

RE: **DEVELOPMENT APPLICATION**
INTEGRATED PLANNING ACT 1997 - SECTION 3.2.1(1)
ENGINEERING ASSESSMENT REPORT

Appn No: 1727/05

Applicant:

Property Location: 45 Alice Street, Goodna Qld 4300

Proposal	Development	Approval Type
Child Care Centre	Carrying out building work Carrying out plumbing or drainage work Carrying out operational work Making a material change of use of premises Reconfiguring a lot	N/A. N/A. N/A. Development Permit. N/A.

Date Received: 23 March 2005

The following comments are made in respect of the above proposed development.

1. APPLICABLE CODES

This application has been assessed against the following codes:-

- (a) Ipswich Planning Scheme (Parts 1-6, including Strategic Plan and Zoning Scheme);
- (b) Ipswich Eastern Corridor Structure Plan;
- (c) Commercial and Industrial Development Code;
- (d) Parking Code;
- (e) Landscaping and Fencing Code;
- (f) Planning Scheme Policy for Water Supply and Sewerage Infrastructure Contributions;
- (g) Planning Scheme Policy for Ipswich Roadworks Infrastructure Contributions;
- (h) Planning Scheme Policy for Ipswich Drainage Contributions;
- (i) Planning Scheme Policy for Warranty and Maintenance;
- (j) Planning Scheme Policy for Flood Liable or Drainage Problem Land;
- (k) Ipswich City Council Engineering Works Manual;

- (l) Queensland Urban Drainage Manual;
- (m) Australian Rainfall and Runoff (The Institution of Engineers, Australia);
- (n) Queensland Streets;
- (o) Austroads Guide to Traffic Engineering Practice - Intersections at Grade;
- (p) Ipswich City Council Standards Drawings;
- (q) Manual of Uniform Traffic Control Devices (Department of Main Roads);
- (r) Australian Standard 2890.1 - Off-Street Car Parking;
- (s) Australian Standard 2890.2 - Commercial Vehicle Facilities;
- (t) Policy Guidelines for Earthworks (including allotment filling);
Sewerage and Water Supply Act;

The proposal generally complies with or has been conditioned to comply with the above codes.

2. EXISTING CONDITIONS AND COMMENTS

(a) Background

There is no significant history to this site from an engineering point of view.

(b) Outstanding Matters Relating to Previous Approvals

There are no previous approvals over the subject site.

(c) Allotments

The subject land is described as Lot3 RP77071 with an area of 2,823m and a general slope from South to North. The subject property is mostly vacant land, except for a few sheds and trees. The entire property was inundated by the Q100 flood line. The Developer proposes to construct two (2) adjacent Child Care Centres with shared access and car parking facilities.

(d) Roads/Traffic/Parking

(i) External

The subject property has frontage to the following two roads:

- Alice Street is approximately 11.2m wide asphaltic concrete sealed pavement with concrete kerb and channel on both sides
- Spalding Crescent is approximately 6.0m wide bituminous carriageway with concrete kerb and channel on both sides

A concrete/bitumen footpath 1.2 m wide exists along Alice Street and Spalding Crescent for the full frontage of the subject site side of the road.

(ii) Internal

The Developer proposes to construct thirty-one (31) carparks and vehicle manoeuvring area for the proposed development.

(iii) Access

The Developer proposes to provide a 6.0m wide driveway access point, which is in accordance with AS2890.

(iv) Future Road System

Based on the Ipswich City Road Transportation Study, it is unlikely that any part of the land will be required for any future road system.

(v) Pathways

Not applicable

(e) Stormwater

The site was inundated in the 1974 flood, is not below the ARI of 20 years flood level, is not subject to an ARI of 20 years overland flow, and is subject to Q100 flooding of the local creek as well as backwater from the Brisbane River.

(f) Sewerage

The Property is in a sewerage area. An existing 150mm diameter sewer main exists within the Council's property at the southern end of the subject site.

(g) Water Supply

The Property is in a water supply area. An existing 300mm water main runs along the northern side of Alice Street and there is also an existing 100mm diameter water main which runs along the western side of Spalding Crescent.

(h) Energex and Street Lighting

Overhead power is available in the area.

(i) Mining

Council records indicate that the subject site is located within an area that has not been undermined.

(j) Others

(i) Easements

Not applicable.

(ii) Oil/Gas Pipelines

Not applicable.

(iii) Service Corridors

Not applicable.

(k) **General**

Not Applicable.

3. CONTRIBUTIONS

(a)

Headworks Contributions

Application Type:

Material Use of Change

1. Existing Equivalent Persons (the greater of)

Deemed Credit

Town Planning Zone:	Residential Medium Density
Category:	Urban Areas
Water Rate:	3.300 per lot
Sewerage Rate:	3.300 per lot
Road Rate:	3.100 per lot
Public Parks Infrastructure Rate:	3.080 per lot
Local Community Facilities Rate:	3.080 per lot
Number of lots:	1.000
Water EPs:	3.300
Sewerage EPs:	3.300
Road EPs:	3.100
Public Parks Infrastructure EPs:	3.080
Local Community Facilities EPs:	3.080

Land Use

1. Land Use:	Vacant
Water Rate:	0.000 EPs per lot
Sewerage Rate:	0.000 EPs per lot
Road Rate:	0.000 EPs per lot
Public Parks Infrastructure Rate:	0.000 EPs per lot
Local Community Facilities Rate:	0.000 EPs per lot
Number of Lots:	1.000
EPs for Water:	0.000
EPs for Sewerage:	0.000
EPs for Roads:	0.000
EPs for Public Parks Infrastructure:	0.000
EPs for Local Community Facilities:	0.000
Total Water EPs:	0.000
Total Sewerage EPs:	0.000
Total Road EP:	0.000

Total Public Parks Infrastructure EP:	0.000
Total Local Community Facilities EP:	0.000

Previous Contributions

Previous Contributions For Water & Sewerage:	No
Previous Contributions For Roads:	No

Deemed Credit Exempt For Water:	No
Deemed Credit Exempt For Sewerage:	No
Deemed Credit Exempt For Roads:	No

Existing Credit EPs for Water:	3.300
Existing Credit EPs for Sewerage:	3.300
Existing Credit EPs for Roads:	3.100
Existing Credit EPs for Public Parks Infra.:	3.080
Existing Credit EPs for Local Community Fac:	3.080

2. Proposed Equivalent Persons

Proposed Land Use

1. Land Use:	Community Use - Child Care Centre
Water Rate:	0.150 EPs per person
Sewerage Rate:	0.150 EPs per person
Road Rate:	0.580 EPs per person
Total Public Parks Infrastructure:	0.000 EPs per person
Total Local Community Facilities:	0.000 EPs per person
Number of Staff and Children:	137.000
Proposed EPs for Water:	20.550
Proposed EPs for Sewerage:	20.550
Proposed EPs for Roads:	79.460
Proposed EPs for Public Parks Infra.:	0.000
Proposed EPs for Local Community Fac.:	0.000

Total Water EPs:	20.550
Total Sewerage EPs:	20.550
Total Road EP:	79.460
Total Public Parks Infrastructure EP:	0.000
Total Local Community Facilities EP:	0.000

3. Headworks Charges

Difference in Equivalent Persons:	(Proposed Equivalent Persons + Existing Land Use EP) - Existing Credit EP
Water EPs:	17.250
Sewerage EPs:	17.250
Road EPs =	76.360
Public Parks Infrastructure EPs =	-3.080
Public Parks Infrastructure contributions are not applicable in this instance.	

Local Community Facilities EPs = -3.080
Local Community Facilities contributions are not applicable in this instance.

Water

Water Zone: Goodna (inc Redbank Industrial) Water Zone
Unit Charge: 1.088
Contribution per EP: \$587.03
Water Headworks Charge: \$11,017.00 (WT-TL1)

Sewerage

Sewerage Catchment: Goodna Catchment (excluding Springfield)
Unit Charge: 1.088
Contribution per EP: \$629.36
Sewerage Headworks Charge: \$11,811.00 (SW-RC2)

Roads

Headworks Road: No

Road Contribution Sector: Goodna
Unit Charge: 1.026
Contribution per EP: \$1,437.77
Road Headworks Charge: \$112,642.00 (RD-WAQ)

4. OTHER DEVELOPMENT APPROVALS REQUIRED

From an engineering perspective, further Development Permits, as required by the *Integrated Planning Act 1997*, shall be obtained in respect of any Operational Works in relation to this approval before any such works are commenced.

RECOMMENDATION

- A. Based on engineering grounds only, it is recommended that the application for Impact Assessment - Development Permit - Material Change Of Use of land at 45 Alice Street, Goodna Qld 4300 as proposed by [REDACTED] and detailed on plan number A01 revision C, dated 28 March 2006, be approved, subject to the following terms and conditions being completed by the Developer, to the satisfaction of the Senior Development Engineer:
1. Terms
 - (a) RPEQ - A Registered Professional Engineer of Queensland, suitably qualified and experienced in the particular area of expertise required. Furthermore, the RPEQ required for the analysis and reporting for mining shall be experienced in the analysis of underground and surface mining within the Ipswich area.
 - (b) QUDM - The Queensland Urban Drainage Manual, produced by the Queensland Department of Primary Industries.

- (c) Queensland Streets - The Design Guidelines for Subdivisional Street Works, prepared for the Institute of Municipal Engineers of Australia (QLD).
- (d) AMCORD - The Australian Model Code of Residential Development produced by the Commonwealth Department of Housing and Regional Development.
- (f) MUTCD - The Manual of Uniform Traffic Control Devices, published by DMR.
- (g) Ipswich Water - Commercial Business Unit of Ipswich City Council providing water and sewerage services.

2. Roadworks

- (a) All traffic signs and delineation shall be installed in accordance with MUTCD.
- (b) The Developer shall extend the 1.2 m wide concrete footpath on the western side of Spalding Crescent to match into the existing 1.2m wide concrete footpath on the northern side of Alice Street.

The construction of footpaths shall be in accordance with Council's Standard Drawing SR.19. The concrete footpaths shall be on the same side as the street lights, and the maximum longitudinal grade shall not exceed 1:8.

- (c) Kerb ramps are to be constructed in accordance with Council's Standard Drawing SR.18 at all intersections and at additional locations where required to connect the concrete pathways and cycleways. Generally at "T" intersections, 4 kerb ramps are required.
- (d) The Developer shall reinstate the existing driveway access located on the Alice Street frontage with new concrete kerb and channelling, which will match the existing kerb and channelling in Alice Street.

3. Access/Parking

- (a) Provision shall be made for pedestrian access directly from each child care centre building to footpath in Spalding Crescent such that no child will need to get to the street level by passing through the carparking areas that may become flooded.
- (b) Design and construction of all access and parking shall be in accordance with the provisions of the Ipswich City Council Parking Code and the Australian Standards (2890 series).
- (c) Parking and manoeuvring areas shall accommodate the largest anticipated vehicle to use the site.
- (d) Adequate facilities for servicing the development shall be provided on site to ensure loading and/or unloading activities do not occur on-street.
- (e) Provision shall be made for all vehicles to enter and exit the site in forward gear.

- (f) All parking, access and manoeuvring areas shall be constructed of concrete, bitumen or pavers and shall be linemarked in accordance with the relevant Australian Standard.
- (g) A concrete driveway shall be constructed from the existing layback for proposed Lot to the property boundary in accordance with Council's Standard Drawings SR.13 and SR.14.
- (h) Carparking spaces shall be provided on site for the proposed development. All parking areas shall be used exclusively for parking and shall be accessible to both staff and customers during any approved hours of operation. The car park shall be appropriately signposted at all entries to the satisfaction of the Senior Development Engineer (eg. Staff and Customer Parking). The car park shall also be maintained to the satisfaction of the Senior Development Engineer.

Unless otherwise indicated on the approved plan of development or approved by the Development Manager, parking shall not be exclusively used for staff parking or customer parking at the expense of the other.

4. Water

- (a) All works on live water mains are to be carried out by Council in accordance with Council's policy, and at the Developer's expense.
- (b) Where concrete footpaths are to be constructed, the Developer shall provide 100 mm diameter conduits under the footpath and in line with the conduits under the road, for future ease of installing the individual water services. The letter "W" shall be embossed in the concrete to mark the location of the conduit.
- (c) The Developer shall lodge a private works request on the prescribed Council form, for Council to supply a cost estimate to:
 - (i) provide a suitable metered water connection for each proposed allotment;
 - (ii) amend the existing connection if necessary; and
 - (iii) seal off any existing water connections if necessary.

The appropriate fees are to be paid prior to Council signing any plan of survey.

5. Stormwater

- (a) The Developer shall provide all necessary stormwater drainage (both internal and external to the development) and such drainage works (except for roofwater systems) shall be designed and constructed in accordance with QUDM such that the overall drainage system caters for a storm event with an ARI of 100 years.

Overland flow paths shall be suitably designed to cater for the water from a storm event with an ARI of 100 years. In the case where the piped system is carrying part of the flow, the overland flow paths shall be designed to cater for that volume which is represented by the difference between the predicted volume from the storm event with an ARI of 100 years and the capacity of the pipe system, noting the requirements of QUDM.

- (c) No ponding or redirection of stormwater shall occur onto adjoining land unless specifically approved by Council in consultation with the owner of the adjoining land.
 - (d) Due consideration shall be given in the design and construction of the development in relation to the effect of the developed catchment flows on the downstream discharge receival areas. Suitable stormwater control devices are to be provided to ensure that there is no increase in flow in watercourses. Such control devices are to be designed so as to integrate the landscaping, recreational, infrastructural and drainage roles of watercourses.
 - (e) All stormwater runoff from the development shall be discharged in a manner and to a point to be approved by the Senior Development Engineer. In this instance, stormwater discharge from all impervious areas shall be directed to the drainage channel to the west of the property in lot 420 SL5041.
 - (f) Stormwater drainage plans and calculations are to be submitted and approved by the Senior Development Engineer, in conjunction with the submission of an Operational Works application.
 - (g) The Developer shall provide a stormwater detention basin (or system) on the subject land, which shall be designed and constructed in accordance with QUDM. The detention basin (or system) shall be constructed to ensure that flows, at any point downstream in the catchment, are not increased by the development for any combination of frequency and duration from the storm event with an ARI of 2 years up to and including the storm event with an ARI of 100 years.
 - (h) The proposed Development shall be designed and constructed in accordance with the flooding report prepared by Tabletop Architects Planners Engineers titled 45 Alice Street, Goodna – Stormwater and Flood Report dated February 2006. As illustrated in this report it examines the stormwater and local flooding impacted on the subject site by a storm event with an ARI of 100 years.
 - (i) The construction of all buildings or other structures are to be constructed with the base floor level 300mm above the storm level associated with an ARI of 100 years.
 - (j) The Developer shall install an appropriate sealed surface within the proposed clear flow path located in the south west corner of the subject property. This area is illustrated on Plan No: R01, in the stormwater and flood report prepared by Tabletop Architects Planners Engineers. This area will be used to transfer the stormwater flow into the existing drainage channel, therefore the sealed surface shall be designed to withstand the force of a high velocity flow of water without being removed.
 - (k) Pollutant control devices shall be installed in the stormwater system. Locations and types of the devices shall be approved by the Senior Development Engineer.
6. Erosion & Silt Management
- (a) The Developer shall be responsible for the installation and maintenance of silt management facilities from the time of commencement of construction until the completion of all works on site. All silt management facilities are to be in accordance with the document "Soil

Erosion and Sediment Control" published by the Institution of Engineers Australia, or equivalent.

- (b) If the Senior Development Engineer determines that silt damage has occurred on the site, or the downstream drainage system has become silted, the Developer shall be responsible for restoration. Such restoration shall be completed in the time determined by the Senior Development Engineer. Should the Developer fail to complete the works determined by the Senior Development Engineer within the specified time, Council shall complete the work and recover all costs from the Developer associated with that work.

7. Operational Works – Municipal Works
(ie Works being handed over to Council)

- (a) Plans relating to all civil engineering works shall be prepared and submitted for review by Council under the cover of Form 1 - Part A (Common details for all applications) and Form 1 - Part E (Planning Scheme Works). The plans shall show full construction details, layout dimensions, and finished surface levels and shall be submitted together with the appropriate fees for Council approval, prior to the commencement of construction on site.
- (b) The Developer shall comply with the requirements of the documents entitled "Planning Scheme Policy 3 - General Works" and "Standard Drawings".
- (c) All engineering drawings submitted to Council shall be in accordance with Council's Planning Scheme Policy 3 - General Works and Standard Drawings, and shall include as a minimum the following:
 - (i) Engineering drawings shall be marked as confirmation that they have been checked and approved by a RPEQ;
 - (ii) The drawings shall be submitted as three A3 size sets and one full size set; and
 - (iii) A "Certificate of Design" shall be submitted by a RPEQ, certifying that the design is in accordance with all relevant engineering standards, Council's requirements and standards, relevant development conditions of approval, and sound engineering practice.
- (d) Municipal works shall require a detailed design certified by a RPEQ, the design approved by Council Engineers with appropriate fees payable, a works pre-start meeting on-site and various detailed construction and audit inspections by Council Officers. A twelve month maintenance period is applicable for the works as well as the payment of a maintenance security deposit.
- (e) All works shall be supervised by a RPEQ competent in civil works and shall be undertaken by a nominated principal contractor experienced in the construction of municipal works. Council reserves the right to request evidence of the principal contractor's competency. Should it be deemed by the Senior Development Engineer that the contractor does not have the necessary competency or has constructed substandard works for Council in the past, Council reserves the right to reject the nominated contractor.
- (f) Municipal works shall be accepted "On Maintenance" prior to commencement of use. A maintenance bond equal to 5% of the construction cost (minimum of \$1,000.00) shall be

retained by Council for a minimum period of twelve months, or until such time as the works are accepted "Off Maintenance" by Council.

- (g) "As Constructed" plans for municipal works shall be submitted to Council and approved prior to the formal acceptance of the works "On Maintenance".
 - (h) On completion of the works a certificate shall be submitted to Council by a RPEQ certifying that the works have been constructed in accordance with Council's construction standards and in compliance with the approved plans and specification. It is expected that the RPEQ will undertake the necessary inspections to make this certification.
 - (i) Council reserves the right to require further amendments and/or additions at a later date, should design errors or omissions become apparent in regard to the works relevant to the Operational Works approval.
 - (j) Prior to the commencement of any municipal works associated with developments other than the subdivision of land, Council shall require the provision of a bond equivalent to not less than 10% (minimum of \$1,000.00) of the value of the works as security for the performance of the various construction obligations (including the provision of engineering certification and "As Constructed" information). The bond shall be reduced to an amount of not less than 5% of the value of the works upon formal acceptance of the works "On Maintenance" and shall be retained by Council during the maintenance period as security for the performance of the maintenance obligations. The bond shall be returned upon formal acceptance of the works "Off Maintenance".
8. Operational Works – Internal Works
(ie Works not being handed over to Council)
- (a) Plans relating to all civil engineering works shall be prepared and submitted for review by Council under the cover of Form 1 - Part A (Common details for all applications) and Form 1 - Part E (Planning Scheme Works). The plans shall show full construction details, layout dimensions, and finished surface levels and shall be submitted together with the appropriate fees for Council approval, prior to the commencement of construction on site.
 - (b) Engineering drawings shall be marked as confirmation that they have been checked and approved by a RPEQ.
 - (c) The drawings shall be submitted as three A3 size sets and one full size set. Where municipal works are also being undertaken, it is usually appropriate to make a combined submission.
 - (d) A "Certificate of Design" shall be submitted by a RPEQ, certifying that the design is in accordance with all relevant engineering standards, Council's requirements and standards, relevant development conditions of approval, and sound engineering practice.
 - (e) Council reserves the right to require further amendments and/or additions at a later date, should design errors or omissions become apparent.
 - (f) A certificate shall be submitted to Council by a RPEQ certifying that the completed works have been constructed in accordance with Council's requirements and standards and in

compliance with the approved plans and specification. It is expected that the RPEQ will undertake the necessary inspections to make this certification.

9. Contributions

- (a) In accordance with the current Council Policies in relation to headworks contributions, the Developer shall pay, prior to the commencement of use, the following monies to Council:
- (i) Water headworks = \$11,017.00 (WT-TL1)
 - (ii) Sewerage headworks = \$11,811.00 (SW-RC2)
 - (ii) Road contribution = \$112,642.00 (RD-WAQ)

Calculations of headworks and contributions are based on the infrastructure contribution rates applicable at the date the development application was lodged with Council. The contributions above shall be applicable for a period of twelve months from the date of the development approval, and thereafter shall be based on the infrastructure contribution rates applicable at the date when payment is made.

10. General

- (a) All disturbed verge areas and allotments shall be graded, grassed and left in a mowable condition. The grass cover shall be obtained as early as possible during the development and an acceptable grass cover shall be achieved before the development can be accepted "Off Maintenance".
- (b) With reference to any works, on land under other private ownership, written permission for the works shall be obtained and forwarded to Council. Similarly, written clearances shall be obtained after the works are completed, unless otherwise accepted by the Senior Development Engineer.
- (c) All works required for this development shall take due regard of any and all existing services and, if considered necessary by the relevant authority or the Senior Development Engineer, such works shall be altered at the cost of the Developer.
- (d) Any allotment filling for a greater depth than 800 mm to provide for building platforms shall be conducted in accordance with Australian Standard 3798. Test results as required by Australian Standard 3798, and a certificate of quality and uniformity of fill shall be provided by a RPEQ. The level of responsibility shall be Level 1.
- (e) A certificate from a RPEQ shall be issued to Council certifying that any retaining wall greater than 800 mm in height is structurally sound and capable of withstanding any likely surcharge loads. Retaining walls greater than 1.0 m in height are to be provided with railings or other barriers to provide pedestrian safety.
- (f) Retaining walls shall be designed so that there are no imposed loads placed upon Council's underground services. This may include extending the footing to a level 300 mm below the invert of the pipe.

- (g) All imported and exported materials shall be transported only on routes approved by the Senior Development Engineer.
- (h) For batters resulting from cutting and filling of the site and producing slopes greater than 1:6, Council requires a RPEQ to certify that they are stable and properly drained.
- (i) Approval of the Senior Development Engineer is required for any fill intended to be placed over Council's underground services.
- (j) Signs are to be erected in the carpark to advise users that this carpark is subject to some flooding of the local creek due to storms with an ARI of less than 100 years. Also the Brisbane River has backwater flooding for those storms with an ARI in excess of 20 years.
- (k) A Flood Escape Plan and procedure is to be developed and periodically practiced/rehearsed in case of flooding of the site. This plan is to include permanently displayed signs and directions for staff and visitors/parents to follow.

11. Compliance with conditions

Unless otherwise stated, all Condition numbers shall be completed prior to commencement of use.

B. Further Advice

1. The subject site was fully inundated in the 1974 flood. Council, and its servants and agents, accept no liability or responsibility for any loss or damage to person or property of whatever nature or however caused as the direct or indirect consequence of the granting of the approval herein contained. Such approval has been granted at the request of the Developer and in reliance of information submitted by the Developer in support thereof.

2. Portable Long Service Leave

From 1 January 2000, the Building and Construction Industry (Portable Long Service Leave) Levy must be paid prior to the issue of a development permit where one is required for the 'Building and Construction Industry'. This applies to Building Works, Operational Works and Plumbing and Drainage Works applications, as defined under the *Integrated Planning Act 1997*, where the works are \$80 000 or more and matching the definition of 'Building and Construction Industry' under the *Building and Construction Industry (Portable Long Service Leave) Act 1991*.

Council will not be able to issue a Decision Notice without receipt of details that the Levy has been paid. Should you require clarification in regard to the amendments to the *Building and Construction Industry (Portable Long Service Leave) Act 1991*, you should contact QLeave on 1800 803 481 (free call) or (07) 3212 6855.

3. That the applicant be advised that from an engineering perspective, further Development Permits, as required by the *Integrated Planning Act 1997*, shall be obtained in respect of any Operational Works in relation to this approval before any such works are commenced.

ASSISTANT DEVELOPMENT ENGINEER

ENDORSED BY:

SENIOR DEVELOPMENT ENGINEER

Annexure TCF-6

Hi [REDACTED]

as promised, here are the amended plans showing the North arrow pointing in the right direction, North!

cheers


[REDACTED]
Town Planner


GM+P

J.B. GOODWIN MIDSON & PARTNERS
Consulting Surveyors, Town Planners and
Development Consultants

64 Sylvan Road, Toowong, QLD 4066

PO Box 92, Toowong, QLD 4066

 **Tel** (07) 3870 2161

 **Fax** (07) 3870 3944

-----Original Message-----

From: [REDACTED]

Sent: Thursday, 1 June 2006 3:27 PM

To: [REDACTED]

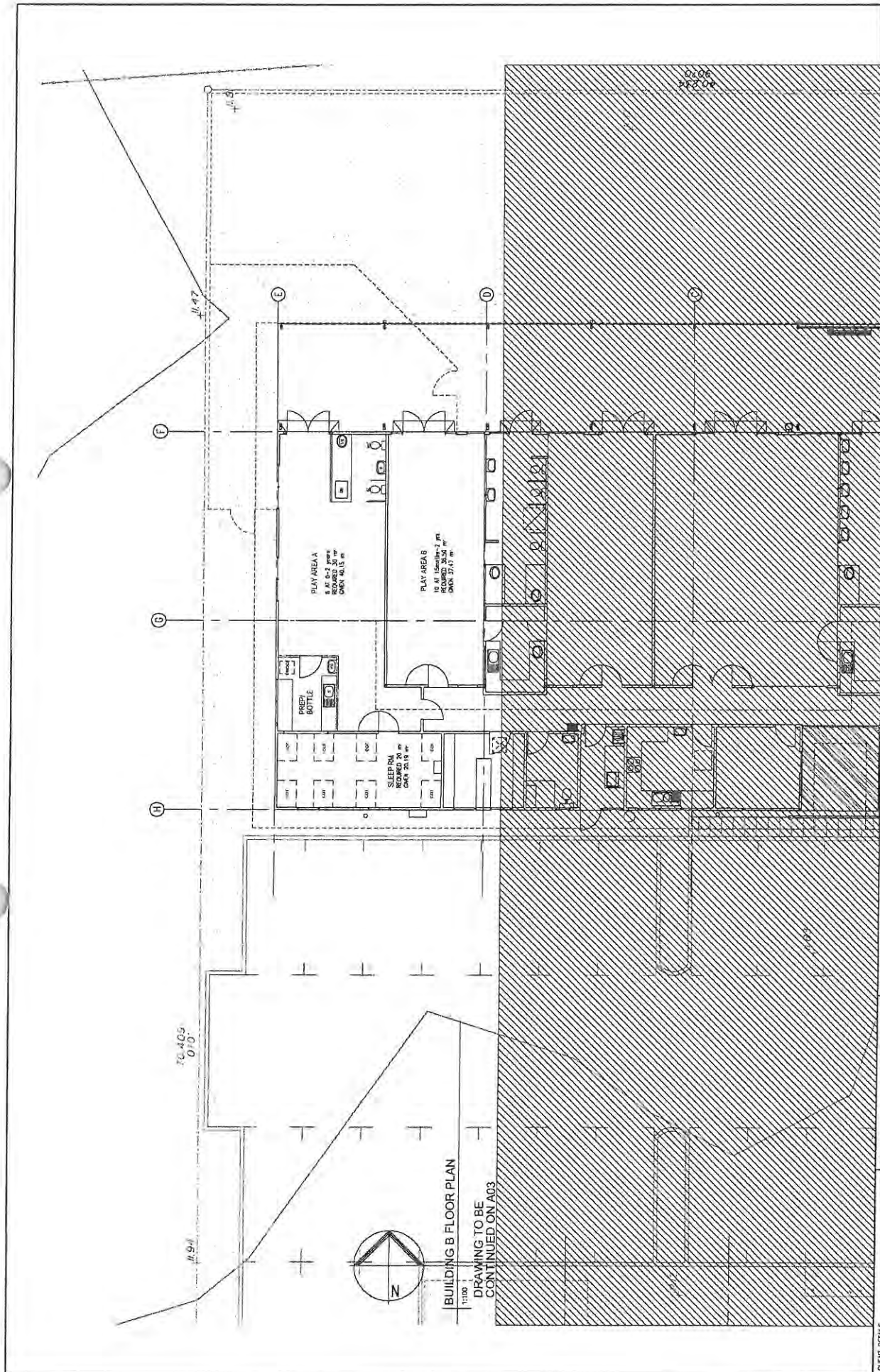
Subject: #5518 Goodna

[REDACTED]
Attached are A01-5 for the Goodna project.

KDW Design
Interior Architecture

Unit 2 205 Montague Road WEST END QLD 4101

P: 07 3846 2414 F: 07 3846 1525 E: design@kdw.com.au

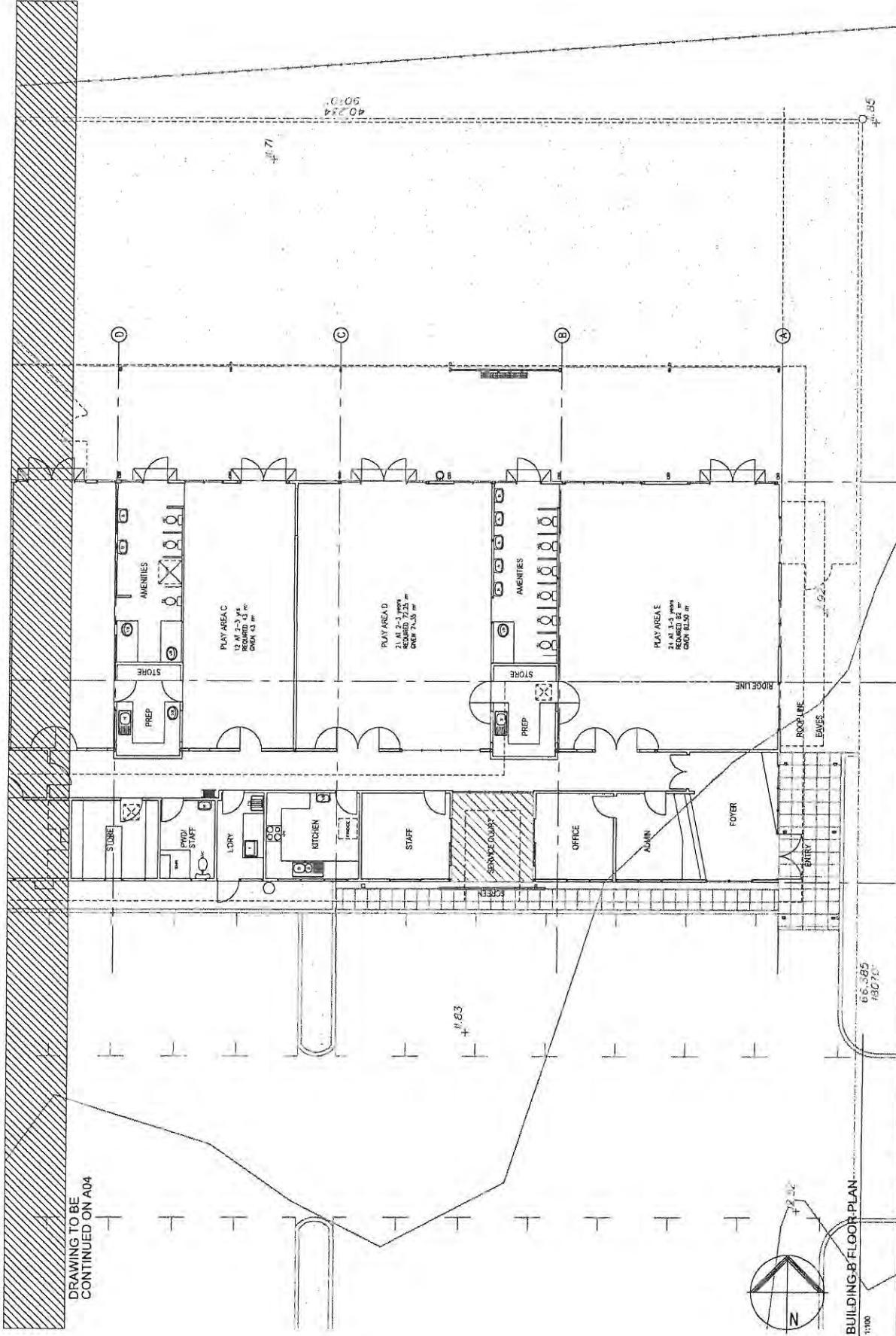


CLIENT DETAILS	JOB NAME PROPOSED 75 + 44 PLACE CHILDCARE CENTRE ALICE ST - GOODNA	DESIGN SCHEDULE	DESIGNED C.P. ZRC	DRAWN ZRC	CHECKED LJM/CPD	APPROVED ZRC	DATE	REVISIONS	TABLETOP ARCHITECTURAL SERVICES P.O. BOX 100 MURFEEVILLE SA 5103	DRAWING TITLE BUILDING B FLOOR PLAN	SCALE 0 0.5 1.0 1.5 2.0 2.5 SCALE (m) 1:100 AT A3	JOB No. 5518	DWG No. A04 B
DRAWING STATUS PRELIMINARY										PLOT NUMBER: 2 DATE: 01/06/06			

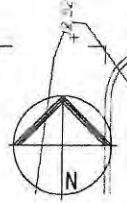
kdw

75 years experience (45)
P.O. BOX 580
MURFEEVILLE SA 5103
www.kdwgroup.com.au

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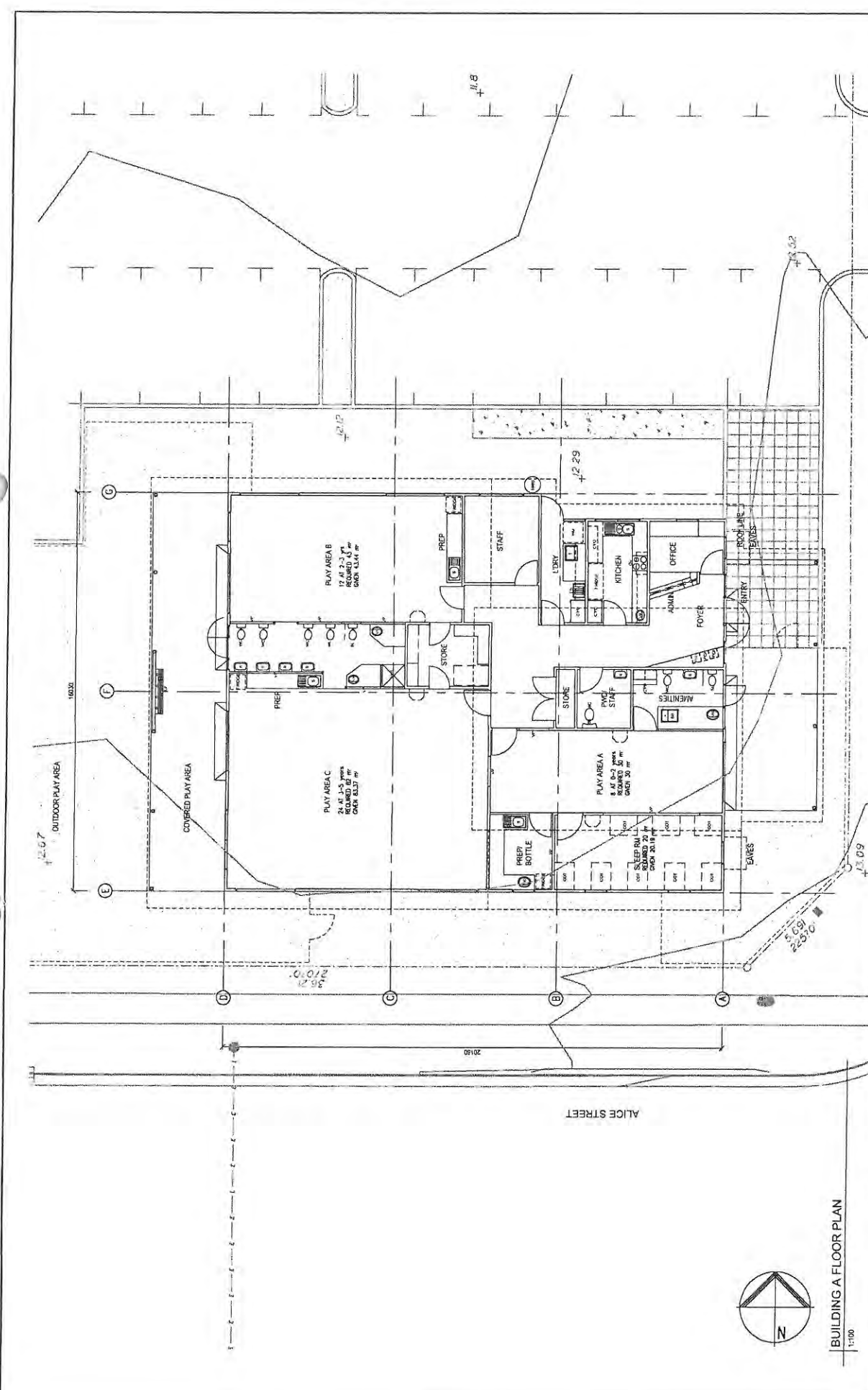


DRAWING TO BE
CONTINUED ON A04

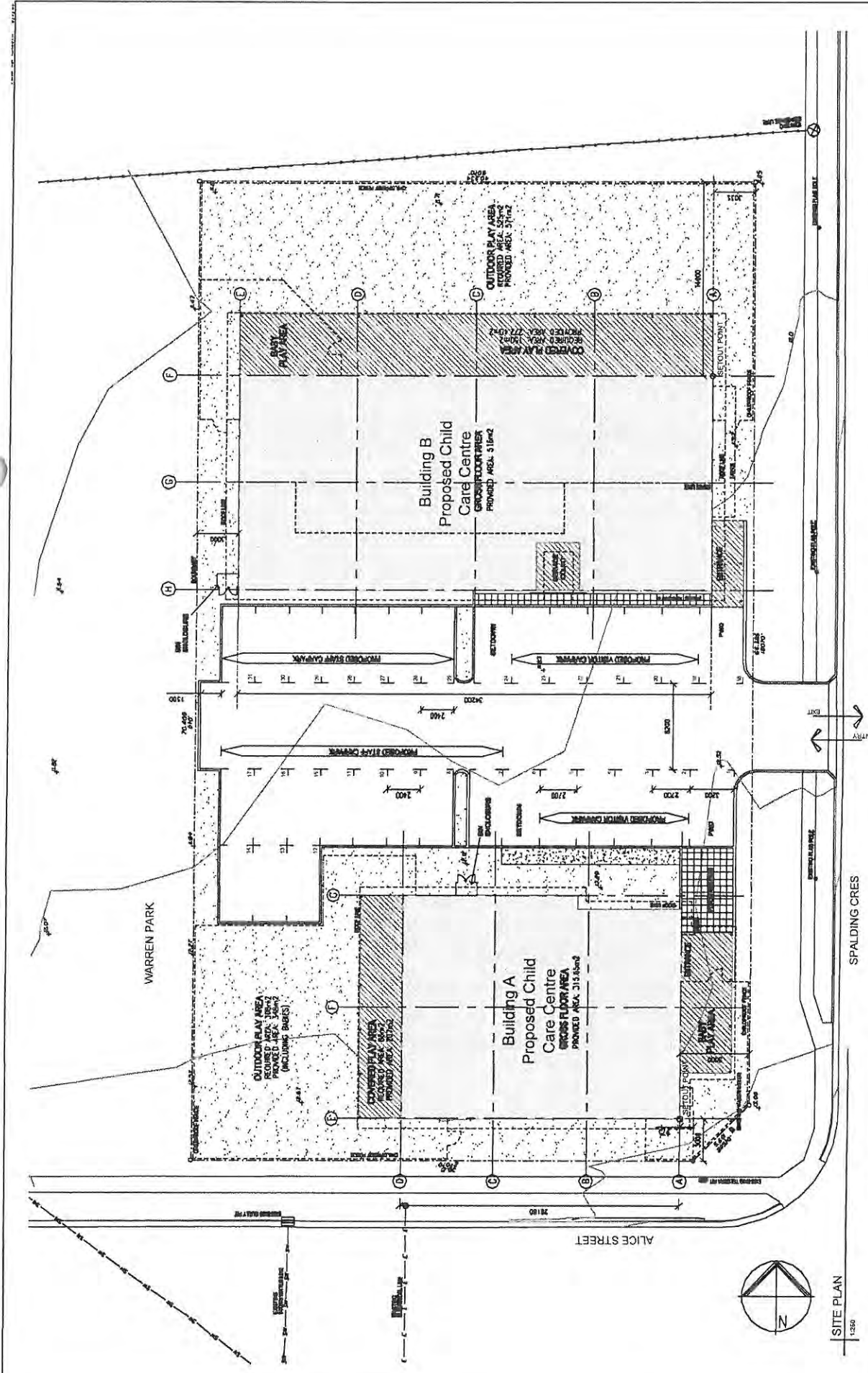


BUILDING-B FLOOR PLAN

CLIENT DETAILS	JOB NAME		PROPOSED 75 + 44 PLACE CHILDCARE CENTRE ALICE ST - GOODNA		REVISION SCHEDULE		DATE		REVISION		DATE		
	PROPOSED 75 + 44 PLACE CHILDCARE CENTRE ALICE ST - GOODNA		CORRECTION OF NORTH POINT		B 01/06/06		CORRECTION OF NORTH POINT		ZRC		DATE		
DRAWING STATUS	INITIAL ISSUE		A03		B		DATE		01/06/06		01/06/06		
	A03		B		01/06/06		01/06/06		01/06/06		01/06/06		
DRAWING TITLE		BUILDING B FLOOR PLAN		TABLETOP		kdw		75 West Ave, Goodna QLD 4308 p 03 380 980 e kdw@kdw.com.au		75 West Ave, Goodna QLD 4308 p 03 380 980 e kdw@kdw.com.au		75 West Ave, Goodna QLD 4308 p 03 380 980 e kdw@kdw.com.au	
SCALE		0 0.5 1.0 1.5 2.0 2.5 SCALE (m) 1:100 AT A3		JOB No. 5518		DWG No. A03		REV. B		DATE 01/06/06		DATE 01/06/06	



CLIENT DETAILS [REDACTED]	JOB NAME PROPOSED 75 + 44 PLACE CHILDCARE CENTRE ALICE ST - GOODNA	REVISIONS <table border="1"> <thead> <tr> <th>REV</th> <th>DATE</th> <th>COMMENTS</th> </tr> </thead> <tbody> <tr> <td>A</td> <td>15/11/04</td> <td>DEVELOPMENT APPLICATION</td> </tr> <tr> <td>B</td> <td>01/05/06</td> <td>CORRECTION OF NORTH POINT</td> </tr> </tbody> </table>	REV	DATE	COMMENTS	A	15/11/04	DEVELOPMENT APPLICATION	B	01/05/06	CORRECTION OF NORTH POINT	DESIGN <table border="1"> <thead> <tr> <th>DESIGNED</th> <th>C.P.</th> </tr> </thead> <tbody> <tr> <td>ZRC</td> <td></td> </tr> </tbody> </table>	DESIGNED	C.P.	ZRC		GENERAL NOTES 1. Check all dimensions, fittings, and all work executed from room to room, and on or on creation with building.	kdw 	TABLETOP ARCHITECTURAL SERVICES 111 LINDSAY ST APT 117 SYDNEY NSW 2017	DRAWING TITLE BUILDING A FLOOR PLAN	SCALE 0 0.5 1.0 1.5 2.0 2.5 SCALE (m) 1:100 AT A3 JOB NO. 5518 DWG NO. A02 B INITIAL ISSUE PLOT NUMBER 2 DATE: 01/05/06
REV	DATE	COMMENTS																			
A	15/11/04	DEVELOPMENT APPLICATION																			
B	01/05/06	CORRECTION OF NORTH POINT																			
DESIGNED	C.P.																				
ZRC																					



CLIENT DETAILS	JOB NAME PROPOSED 75 + 44 PLACE CHILDCARE CENTRE ALICE ST - GOODNA		REVISIONS		DATE		DATE	
	REVISIONS		DATE		DATE		DATE	
D 01/05/08 CORRECTION OF NORTH POINT		D 01/05/08		D 01/05/08		D 01/05/08		
C 04/02/08 BNA ENCLOSURES ADDED		C 04/02/08		C 04/02/08		C 04/02/08		
B 07/02/08 CAMPUS AMENDED		B 07/02/08		B 07/02/08		B 07/02/08		
A 05/11/04 DEVELOPMENT APPLICATION		A 05/11/04		A 05/11/04		A 05/11/04		
REV. DATE COMMENTS		REV. DATE COMMENTS		REV. DATE COMMENTS		REV. DATE COMMENTS		
DRAWING TITLE SITE PLAN		DRAWING SCALE 0 1 2 3 4 5 SCALE (M) 1:250 AT A3		DRAWING NO. 5518		DRAWING DATE 01/05/08		
DRAWING STATUS INITIAL ISSUE		DRAWING NO. A01		DRAWING DATE 01/05/08		DRAWING DATE 01/05/08		

kdw

TABLETOP

100% DESIGN & CONSTRUCTION
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Annexure TCF-7

1727/05

14 July 2006

MEMORANDUM

TO: DEVELOPMENT TEAM CO-ORDINATOR - CITYWIDE
FROM: DEVELOPMENT PLANNER -
RE: DEVELOPMENT APPLICATION - IMPACT ASSESSMENT
INTEGRATED PLANNING ACT 1997 - SECTION 3.2.1(1)

Appn No: 1727/05

Applicant:

Real Property Description: Lot 3 RP 77071

Property Location: 45 Alice Street, Goodna

Division: 2

Proposal	Development	Approval Type Requested
Community Use – Two (2) Child Care Centres (Total 119 Children)	Making a Material Change of Use of Premises	Development Permit.

Date Received: 23 March 2005

Start Date for Decision Stage: 10 July 2006 (the date that further detailed elevation plans
were submitted for assessment)

Stat. Date for Determination: 7 August 2006

Site Area: 2,823 m²

Zone: Residential Medium Density (RM2)

This is a detailed street map of a neighborhood in Portland, Oregon. The map shows the intersection of Church Street, Spalding Street, and Alice Street. The map includes lot numbers, street names, and a shaded area representing a specific property.

Streets:

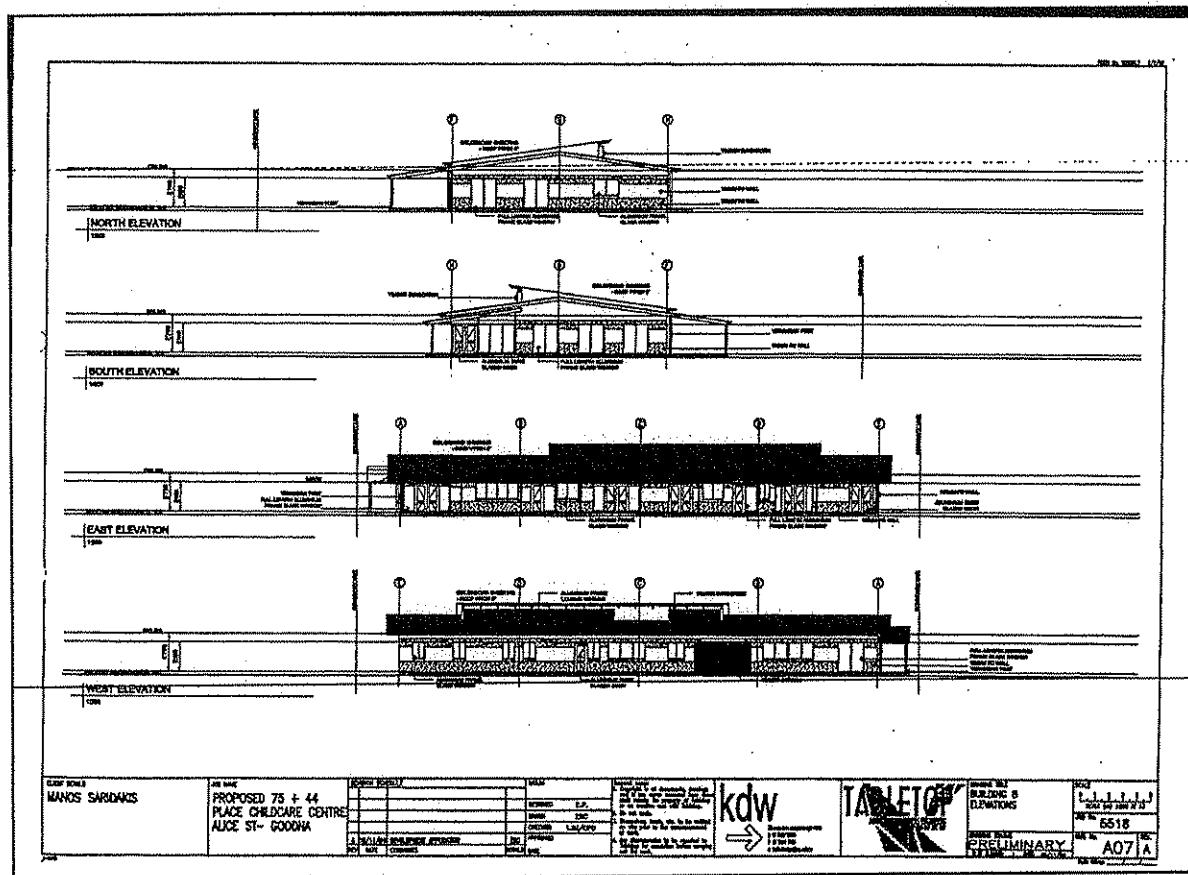
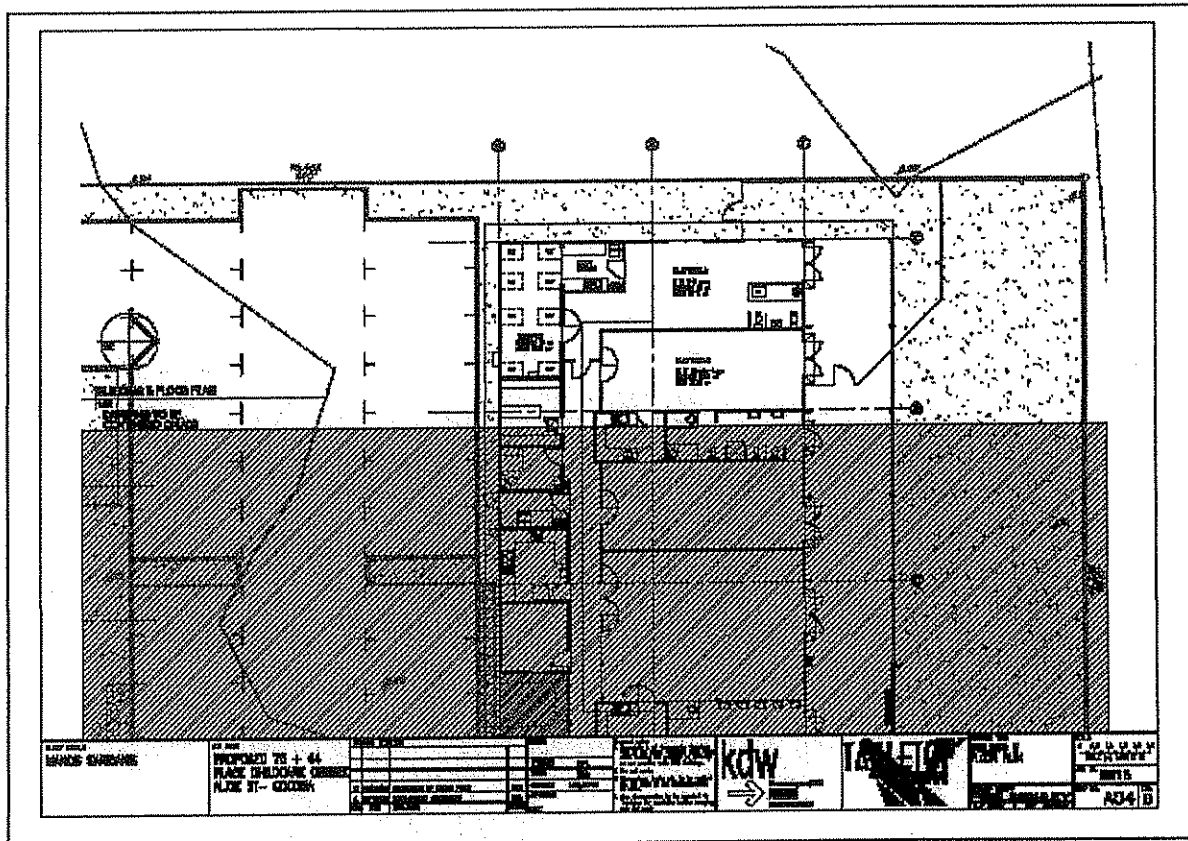
- Church Street:** Runs vertically along the left side of the map.
- Spalding Street:** Runs vertically through the center of the map, intersecting Alice Street.
- Alice Street:** Runs horizontally across the bottom of the map, intersecting Spalding Street.

Lot Numbers:

- Along Church Street (left):** 20, 24, 26A, 26.
- Along Spalding Street (left):** 45, 48, 46.
- Along Spalding Street (right):** 5, 1, 41, 39, 37, 35, 33, 31, 29, 27.
- Along Alice Street (bottom):** 56, 44, 42, 40, 38, 36, 32, 30A.

Shaded Area: A small, irregularly shaped area is shaded in the upper right quadrant of the map, near the intersection of Church Street and Spalding Street. This area is bounded by Church Street to the west, Spalding Street to the east, and a diagonal line to the south.

[illegible]





This application is for the development of a Community Use [two (2) Child Care Centres] on land located at 45 Alice Street, Goodna. The subject site is a corner allotment totalling 2,823 m² in area and included in the Residential Medium Density (RM2) zone pursuant to the Planning Scheme. The northern boundary of the site adjoins land within *Ipswich City Council Program 23* (i.e. 9,170 m² vacant land reserved for drainage purposes), whilst the western boundary of the site adjoins land within *Ipswich City Council Program 30* (i.e. 1.012 hectares of parkland). The eastern and southern boundaries of the subject site front Spalding Crescent (66.3 m) and Alice Street (36.2 m) respectively. The subject site is predominantly vacant with the exception of a few sheds and trees.

A carpark for thirty-one (31) car spaces is to be located centrally between proposed Building 'A' and Building 'B'. Access is proposed from Spalding Crescent only. Proposed hours of operation are from 6:00 a.m. to 6:30 p.m. Monday to Friday.

The provision of 31 parking spaces for the proposed 119 children and 18 staff is two (2) parking spaces less than that required by the Parking Code. However, given the site's proximity and connectivity to the Major Centre zone and public transport modes (i.e. bus, train and pedestrian network), it is considered that adequate parking facilities are provided in this instance. It is further recommended that the approval be limited to 119 children and 18 employees only.

A condition is included for hours of operation to be from 6:30 a.m. to 6:30 p.m. Monday to Friday. Such hours are consistent with previously approved child care centres and maintain residential amenity (e.g. noise). Conditions are included in relation to waste storage and collection, lighting and noise (including construction of a 2.0m high acoustic barrier along the south-western and south-eastern corners of the property in accordance with the submitted 'Environmental Noise Level Study').

It is noted that the subject site was previously used for sawmill operations. It is further noted that sawmill operations may result in chemical contamination of land. The subject site is not listed on any contaminated land register pursuant to the Environmental Protection Act. However, given the possibility that chemical contamination of the subject land may be present (and not included on an official record), a condition is included for the Developer to contract a qualified environmental consultant to undertake soil sampling on site to test for chemical contamination. Rehabilitation of the land will be required should any contamination be identified.

The site is affected by flooding (Q100 levels) over the whole of the site. Upon review of the submitted 'Stormwater and Flood Report', Q100 flood immunity can be achieved by constructing a solid wall along the road frontage from the eastern corner, across the southwest corner of the property and along the western boundary to the northwest corner. For safety and aesthetic reasons, it is recommended that the proposed elevated play area (overhanging the Q100 level stormwater flowpath area) be deleted from the proposal. It is recommended that all walling/ fencing along the south-west corner of the site maintain alignment with the specified Q100 flood immunity level as detailed on 'Wall and Floor Details for Q100 Immunity' Plan No. 5946 R01, prepared by Tabletop Architects.

A condition is recommended to require that building levels are a minimum 300mm above the Q100 levels and that elevations and treatment details for the southwest corner of the site (fronting Alice Street) be submitted to the satisfaction of the Development Manager prior to commencement of any works. An operational works approval will be required in relation to stormwater management on site.

It is recommended that the Developer extend the 1.2m wide concrete footpath on the western side of Spalding Crescent to match into the existing 1.2m wide concrete footpath on the northern side of Alice Street. Infrastructure contributions have been requested from the Developer in relation to water, sewer and roadworks.

Overall, the proposal generally supports the intent of the Residential Medium Density zone and subject to the conditions in the recommendation, is consistent with the Parking Code and Community Use Code. There are no concurrence or advice agencies applicable to this proposal and referral co-ordination was not required in this instance.

Public notification of the proposal has been carried out in accordance with the *Integrated Planning Act 1997* and forty-four (44) properly made submissions were received. The predominant issues raised in the submissions include:

- Increased levels of traffic and on-street parking along Spalding Crescent and Alice Street;
- Safety concerns for drivers (due to increased traffic levels) and children crossing roads;
- Air quality and possible site contamination impacts on the Child Care Centre;
- Noise impacts on the amenity of surrounding residences;
- Perception that there is no need for an additional child care centre and that there are plenty of vacancies within those existing in the area; and
- Flooding concerns.

In summary, it is considered that the proposal to permit the development of a Community Use – Two (2) Child Care Centres (Total 119 Children) is suitable for the subject site and should be approved, subject to the conditions detailed below.

RECOMMENDATION

- A. That the Developer be advised that Development Application No. 1727/05 is determined as outlined in the table below and is subject to the conditions specified below.

Proposal	Development	Decision	Approval Type
Community Use – Two (2) Child Care Centres (Total 119 Children)	Making a Material Change of Use of Premises	Approved	Development Permit.
	Carrying out Operational Work	Approved	Preliminary Approval.
	Carrying out Building Work	Approved	Preliminary Approval.

Further Development Permits Required

Further Development Permits, as required by the *Integrated Planning Act 1997*, shall be obtained in respect of any Operational Works, Building Works and Plumbing Works in relation to this approval before any such works are commenced.

Conditions of Assessment Manager (Ipswich City Council)

1. **Basis of Approval**

Subject to these conditions, the facts and circumstances set out in the application and all relevant Council Local Laws and/or Planning Scheme Policies shall be adhered to.

2. **Site Development**

The proposed development of the subject site shall be undertaken generally in accordance with the following plans:

- (a) Site Plan Job Number 5518 Drawing Number A01 D, drawn by Tabletop Architects and dated 1 June 2006, subject to the following amendment to the satisfaction of the Development Manager:-

- (i) The Developer shall submit an amended Site Plan demonstrating that the proposed elevated section for the outdoor play area for proposed Building A has been deleted. All walling/ fencing along the south-western corner boundary shall align with the south-western corner truncation detailed in the submitted 'Wall and Floor Details for Q100 Immunity' Plan No. 5946 R01, prepared by Tabletop Architects. These details shall be submitted prior to application for Operational Works Approval.
- (b) Building A Floor Plan Job Number 5518 Drawing Number A02 B, drawn by Tabletop Architects and dated 1 June 2006;
- (c) Building B Floor Plan Job Number 5518 Drawing Number A03 B, drawn by Tabletop Architects and dated 1 June 2006;
- (d) Building B Floor Plan Job Number 5518 Drawing Number A04 B, drawn by Tabletop Architects and dated 1 June 2006;
- (e) Landscape Plan Job Number 5518 Drawing Number A05 B, drawn by Tabletop Architects and dated 1 June 2006, subject to the following amendment to the satisfaction of the Development Manager:-
 - (i) The Developer shall incorporate into the Landscape Master Plan the necessary amendments required to comply with Condition 3(a)(i), at the time of its submission to Council (please refer to Condition 11 for further detail on landscaping conditions).
- (f) Building A Elevations Job Number 5518 Drawing Number A06 A, drawn by Tabletop Architects and dated 5 November 2004; and
- (g) Building B Elevations Job Number 5518 Drawing Number A07 A, drawn by Tabletop Architects and dated 5 November 2004.

3. Particular Use

This approval is for the particular use of a Community Use (Child Care Centre) for a maximum of 119 children and 18 employees and does not imply approval for other similar or more intensive uses. To this end, the use of any of the proposed structures associated with the Child Care Centre inclusive of car parking and any associated outdoor areas on site, are not permitted for any other purpose, unless, in the opinion of the Development Manager, such use is ancillary and incidental to the predominant use of the site for a Child Care Centre.

4. Limits to Approval

Preliminary Approval for the carrying out of Building Works and Operational Works is approved in respect of those aspects of the application to which the Planning Scheme applies.

5. Hours of Construction

Unless otherwise approved in writing by the Development Manager, hours of construction shall be:

Monday to Saturday 6.30 a.m. to 6.30 p.m.

Work or business shall not be conducted from or on the premises outside the above hours or on Sundays or public holidays.

6. Hours of Operation

Unless otherwise approved in writing by the Development Manager, hours of operation shall be:

Monday to Friday 6.30 a.m. to 6.30 p.m.

Work or business shall not be conducted from the premises outside the above hours or on Sundays or Public Holidays.

7. Carparking - Use and Maintenance

- (a) A minimum of thirty-one (31) car parking spaces shall be provided on site for the proposed development.
- (b) Unless otherwise indicated on the approved plan of development or approved by the Development Manager, parking areas shall not be:
 - (i) exclusively used for staff parking at the expense of general public/customer parking; or
 - (ii) exclusively used for general public/customer parking at the expense of staff parking.
- (c) All parking areas shall be:
 - (i) kept exclusively for parking;
 - (ii) used exclusively for parking;
 - (iii) accessible to both staff and the general public/customer during any approved hours of operation;
 - (iv) appropriately signposted at the entry/entries to the carpark, to the satisfaction of the Development Manager (eg. "Staff and Customer Parking"), in accordance with AS1742; and
 - (v) maintained to the satisfaction of the Development Manager.

8. Advertising Signage

No signage is approved as part of this application. A separate application (under cover of Form E) for Advertising Devices will be required detailing the proposed signage on the subject site.

9. Locality References

- (a) Any place name or estate name used by the developer (excluding a reference to a building, structure or the like and excluding minor, subsidiary signage within a development) shall make reference to the relevant, approved place name under the *Place Names Act 1994*.

- (b) Any reference to the regional location of the site or the development shall not refer to the place or estate as being located in Brisbane or a Brisbane suburb or in the metropolitan area or in the western suburbs (excluding the western suburbs of Ipswich as determined by Council in writing from time to time).

10. Landscaping Plan

- (a) A Landscape Master Plan, which conforms to the approved development plan, Section 27 of Ipswich City Council's Planning Scheme Policy 2, Council's Street Tree Strategy and the relevant Planning Scheme Development Code/s, shall be submitted to Council for approval prior to the commencement of the use. Such plan shall include, amongst other necessary items, the following features:

- (i) extent of landscaped areas;
- (ii) location and name of existing trees;
- (iii) soil type;
- (iv) location of drainage, sewerage and other underground services and overhead powerlines;
- (v) details of landscaping structures;
- (vi) contours and spot levels;
- (vii) proposed surface treatments;
- (viii) means of drainage and irrigation;
- (ix) fence size and type of material ;
- (x) schedule of plant species size (see Note 1 below), densities (see Note 2 below) and attributes;
- (xi) exclude the use of environmental weeds. Consideration shall be given to utilising Council's Vegetation Communities Rehabilitation Guide No. 4 *Open Forests and Woodlands*, where applicable.

Note 1: Planting sizes are at least as follows

Street and features trees	45L
Other trees	300mm
Larger shrubs	200mm
Groundcovers	150mm

Note 2: Planting at approximately the following density rates:

	<i>As street trees</i>	<i>For buffer planting</i>	<i>All Other instances</i>
<i>Trees</i>	1 per allotment frontage	at 2m centres	at 5m centres
<i>Large shrubs</i>	NA	at 1m centres	at 2m centres
<i>Groundcovers</i>	NA	at 0.5-1m centres	at 0.5-1m centres

- (b) The Developer shall complete landscaping and fencing works in accordance with the approved landscape plans to the satisfaction of the Development Manager prior to the commencement of the use of the land unless Council determines otherwise. Such landscaping and fencing shall be maintained in perpetuity to Council's satisfaction by the existing or future owners and occupiers of the property.
- (c) Such landscaping, where possible, should minimise areas of potential concealment.

11. Health and Environmental Protection Requirements

Conditions 12 – 18 unless otherwise stated, shall be completed to the satisfaction of the Environmental Health Protection Manager.

12. Waste Storage & Collection

- (a) An adequate refuse collection service shall be provided to the premises.
- (b) Unless otherwise specifically agreed to in writing by the Health and Environmental Protection Manager, Ipswich City Council, all refuse collection shall occur on site:
 - (i) The area on which the bin is to be accessed by refuse collection vehicles shall be screened, level, concreted and constructed in conjunction with the driveway surface with no intervening step, ledge, kerb or other obstruction.
 - (ii) The waste storage and collection areas shall allow forward motion entry to the waste containers and forward motion entry and exit to and from the site. The following dimensions are given as a minimum of front-, rear- and side- loading truck dimensions for a guide to design for the adequate emptying of the bin and manoeuvring of the truck:

	Front/Load	Rear/Load	Side/Load
Length overall	10.9 m	8.2 m	8.7 m
Length when loading	12.6 m	9.5 m	3.0 m
Travelling overhead clearance required	4.0 m	3.0 m	3.5 m
Loading overhead clearance required	6.5m x 10m*	3.0 m	3.0 m
Access width required	3.8 m	3.8 m	4.0 m
Turning radius	14 m	8.0 m	11.1 m
Gross vehicle mass (GVM)	28 tonne	13.6 t	13.6 t

*from the back of the bin

- (c) Prior to the commencement of the use, submit to the Health and Environmental Protection Manager certification from a Civil Engineer (RPEQ) which demonstrates that the necessary access, as required above, has been incorporated into the development.
- (d) A bin washdown facility shall be provided. The facility shall be designed such that all wash down waters are appropriately treated and discharged to sewer subject to a Trade Waste approval. No wash down waters are permitted to flow to a roadway, gutter, stormwater drain or natural waterway.

13. Incineration

No incineration of waste, including cleared vegetation, is permitted. All cleared vegetation must be chipped/mulched and spread on site or removed from site within two (2) days of being felled/cleared.

14. Lighting

- (a) The provision of advertising, security and flood lighting shall be so designed, constructed, located and maintained in accordance with Australian Standard 4282 – 1997 (Control of the obtrusive effects of outdoor lighting) as not to cause nuisance to

the occupants of nearby properties or passing traffic.

- (b) Certification from a qualified and experienced lighting consultant, demonstrating compliance with the above condition, shall be submitted to the Manager for Health and Environmental Protection, prior to the commencement of the use.

15. Noise

- (a) All mechanical plant and equipment, including but not limited to air conditioning plant, for the southern child care centre (Building A) shall be located adjacent to the northern or western façades of the building.
- (b) All mechanical plant and equipment, including but not limited to air conditioning plant, for the northern child care centre (Building B) shall be located adjacent to the southern or western façades of the building.
- (c) Prior to the commencement of the use, the Developer shall erect a 2.0 metre high acoustic barrier along the south western and south eastern corners of the property as shown in Figure 3 of the acoustic report entitled "Environmental Noise Level Study for Proposed Child Care Centre, 45 Alice Street, Goodna" prepared by David Moore & Associates Pty Ltd (Report No: R05044/D1245/Rev.0/28.02.05). The acoustic barrier shall be:
- continuous and gap free;
 - constructed of a material with a surface density not less than 12 kg/m^2 ; and
 - consist of an aesthetically pleasing weather-resistant material such as earth, timber, fibre cement or brick.
- (d) Service vehicle movements to and from the site, including delivery and waste collection vehicles, shall be limited to 7.00 a.m. to 6.00 p.m. Monday to Friday.
- (e) There shall be no openings in the southern façade of the southern building (Building 'A'). All windows on the southern side/façade of the building shall be unable to be opened and the glazing shall have minimum Rw requirements of Rw 30.
- (f) Prior to the commencement of the use, the Developer shall submit to the Health and Environmental Protection Manager certification from an independent and appropriately qualified acoustic consultant which demonstrates that the necessary design and construction requirements have been incorporated into the development and achieve the noise criteria.

16. Stormwater Quality

- (a) At the time of submitting the Operational Works application, the applicant shall also submit a Detailed Design Stormwater Quality Management Plan (SQMP) to the satisfaction of both the Senior Development Engineer and the Health and Environmental Protection Manager. The plan must be prepared by a suitably qualified and experienced professional and must demonstrate, through appropriate pollutant export modelling (eg AQUALM or MUSIC), that the pollutant levels in the stormwater discharged from the site comply with the pollutant levels identified in Table 1 below. The plan must also provide a detailed drawing showing the location of the stormwater quality treatment train /catchment boundaries and design drawings of the stormwater quality treatment measures eg. GPTs, bioswales etc.

TABLE 1

Oils and grease ⁽³⁾	no visible films or odour
Suspended solids	15mg/L for combined wet and dry periods ⁽¹⁾ 90% ile < 100mg/L for wet weather periods ⁽²⁾
Litter/gross pollutants ⁽⁴⁾	No anthropogenic (man-made) material greater than 5mm in any dimension

1. Derived from the Draft Queensland Water Quality Guidelines (EPA, 1998)
2. Derived from local and interstate information. A wet weather period is defined as "any period where stormwater runoff leaves the site".
3. Taken from Australian Water Quality Guidelines for Fresh and Marine Waters (ANZECC, 1992).
4. An interpretation of what is acceptable to the community in terms of visual impact. Litter definition derived from information provided by the CRC for Catchment.

- Levels are upper limits for median values or ranges in which medians should lie, unless otherwise stated.
- If a parameter relevant to a particular activity is not given in the above table please refer to the latest Australian Water Quality Guidelines for Fresh and Marine Waters (ANZECC).

- (b) Prior to the commencement of the use, the Developer shall submit to the Health and Environmental Protection Manager certification from a Civil Engineer (RPEQ) which demonstrates that the physical stormwater quality improvement measures, as required above, have been incorporated into the development.

17. Access for People with a Disability

- (a) The Developer shall provide adequate access for people in wheelchairs by means of an unimpeded continuous path of travel from any adjacent roadway, other public lands and from any car parking bay allocated for use by people with a disability, to all parts of the development which are normally open to the public.
- (b) The Developer shall provide sanitary facilities for people with a disability. Access to them shall be provided in accordance with the provisions of Australian Standard 1428.1 - 1993 (or any standard in substitution thereof).

18. Contamination of Land

Prior to the submission of an application for Operational Works approval, the Developer shall contract a suitably qualified Environmental Consultant to undertake soil sampling on the subject land to test for chemical contamination. The results of this testing shall be submitted to Council's Development Manager in conjunction with the Operational Works application. Should any contamination of the subject land be identified, rehabilitation of the site shall be undertaken to the satisfaction of the Development Manager and Health and Environmental Protection Manager.

19. Infrastructure Contributions

In accordance with the current Council Policies in relation to infrastructure contributions, the Developer shall pay, prior to the commencement of use, the following monies to Council:

Contribution	Sector	Rate	Proposal	Calculation
Water Supply	Goodna (including Redbank Industrial) Water Zone	\$587.03/EP Unit Charge = 1.088 Total = \$638.68/EP	Number of Staff and Children: 137.000 @ 0.150 EP Existing Credit of 3.3 EP Proposal = 17.25 EP	\$638.68 x 17.25 = \$11,017.00 Total = \$11,017.00
Sewerage Catchment	Goodna (excluding Springfield) Catchment	\$629.36/EP Unit Charge = 1.088 Total = \$684.74/EP	Number of Staff and Children: 137.000 @ 0.150 EP Existing Credit of 3.3 EP Proposal = 17.25 EP	\$684.74 x 17.25 = \$11,812.00 Total = \$11,812.00
Road Contributions	Goodna	\$1,437.77/EP Unit Charge = 1.026 Total = \$1,475.15/EP	Number of Staff and Children: 137.000 @ 0.580 EP Existing Credit of 6.8 EP Proposal = 72.66 EP	\$1,475.15 x 72.66 = \$107,184.00 Total = \$107,184.00
Total for Development				\$130,013.00

The contributions above shall be applicable for a period of twelve months from the date of the development approval, and thereafter shall be based on the infrastructure contribution rates applicable at the date when payment is made.

20. Engineering Requirements

The following engineering requirements, detailed in Conditions 21 – 26, shall be completed to the satisfaction of the Senior Development Engineer.

Terms

- (a) RPEQ - A Registered Professional Engineer of Queensland, suitably qualified and experienced in the particular area of expertise required.
- (b) QUDM - The Queensland Urban Drainage Manual, produced by the Queensland Department of Primary Industries.
- (c) Queensland Streets - The Design Guidelines for Subdivisional Street Works, prepared for the Institute of Municipal Engineers of Australia (QLD).
- (d) AMCORD - The Australian Model Code of Residential Development produced by the Commonwealth Department of Housing and Regional Development.

- (f) MUTCD - The Manual of Uniform Traffic Control Devices, published by DMR.
- (g) Ipswich Water - Commercial Business Unit of Ipswich City Council providing water and sewerage services.

21. Roadworks

- (a) All traffic signs and delineation shall be installed in accordance with MUTCD.
- (b) The Developer shall extend the 1.2 m wide concrete footpath on the western side of Spalding Crescent to match into the existing 1.2 m wide concrete footpath on the northern side of Alice Street.

The construction of footpaths shall be in accordance with Council's Standard Drawing SR.19. The concrete footpaths shall be on the same side as the street lights, and the maximum longitudinal grade shall not exceed 1:8.

- (c) The Developer shall provide additional kerb ramps at Spalding Crescent and Alice Street intersection (including the southern side of Alice Street) in order to comply with minimum 4 kerb ramps at the Tee intersection. Kerb ramps are to be constructed in accordance with Council's Standard Drawing SR.18.
- (d) The Developer shall remove the existing driveway access located on the Alice Street frontage by reinstating new concrete kerb and channelling, which will match the existing kerb and channelling in Alice Street.
- (e) The Developer shall provide to the satisfaction of the Senior Development Engineer linemarking, RRPM's and street signage (eg. No Standing) etc along Alice Street frontage and within the existing pavement in order to provide a left turn deceleration lane at Spalding Crescent intersection for the east bound traffic. The Developer shall also provide street signage along Spalding Street frontage to restrict on-street parking, and where necessary remove existing linemarking in Alice Street.

22. Access/Parking

- (a) Provision shall be made for pedestrian access directly from each child care centre building to the footpath in Spalding Crescent such that no child will need to get to the street level by passing through the carparking areas.
- (b) Design and construction of all access and parking shall be in accordance with the provisions of the Ipswich City Council Parking Code and the Australian Standards (2890 series).
- (c) Parking and manoeuvring areas shall accommodate the largest anticipated vehicle to use the site.
- (d) Adequate facilities for servicing the development shall be provided on site to ensure loading and/or unloading activities do not occur on-street.
- (e) Provision shall be made for all vehicles to enter and exit the site in forward gear.

- (f) All parking, access and manoeuvring areas shall be constructed of concrete, bitumen or pavers and shall be linemarked in accordance with the relevant Australian Standard.
- (g) A concrete driveway shall be constructed from the existing layback to the property boundary in accordance with Council's Standard Drawings SR.13 and SR.14.

23. Water

- (a) All works on live water mains are to be carried out by Council in accordance with Council's policy, and at the Developer's expense.
- (b) Where concrete footpaths are to be constructed, the Developer shall provide 100 mm diameter conduits under the footpath and in line with the conduits under the road, for future ease of installing the individual water services. The letter "W" shall be embossed in the concrete to mark the location of the conduit.
- (c) The Developer shall amend and/or seal off any existing water connections if necessary.

24. Stormwater

- (a) The Developer shall provide all necessary stormwater drainage (both internal and external to the development) and such drainage works (except for roofwater systems) shall be designed and constructed in accordance with QUDM such that the overall drainage system caters for a storm event with an ARI of 100 years.

Overland flow paths shall be suitably designed to cater for the water from a storm event with an ARI of 100 years. In the case where the piped system is carrying part of the flow, the overland flow paths shall be designed to cater for that volume which is represented by the difference between the predicted volume from the storm event with an ARI of 100 years and the capacity of the pipe system, noting the requirements of QUDM.

- (c) No ponding or redirection of stormwater shall occur onto adjoining land unless specifically approved by Council in consultation with the owner of the adjoining land.
- (d) Due consideration shall be given in the design and construction of the development in relation to the effect of the developed catchment flows on the downstream discharge receival areas. Suitable stormwater control devices are to be provided to ensure that there is no increase in flow in watercourses. Such control devices are to be designed so as to integrate the landscaping, recreational, infrastructural and drainage roles of watercourses.
- (e) All stormwater runoff from the development shall be discharged in a manner and to a point to be approved by the Senior Development Engineer. In this instance, stormwater discharge from all impervious areas shall be directed to the drainage channel to the west of the property in Lot 420 SL 5041.
- (f) Stormwater drainage plans and calculations are to be submitted and approved by the Senior Development Engineer, in conjunction with the submission of an Operational Works application.

- (g) The Developer shall provide a stormwater detention basin (or system) on the subject land, which shall be designed and constructed in accordance with QUDM. The detention basin (or system) shall be constructed to ensure that flows, at any point downstream in the catchment, are not increased by the development for any combination of frequency and duration from the storm event with an ARI of 2 years up to and including the storm event with an ARI of 100 years.
- (h) The proposed Development shall be designed and constructed in accordance with the flooding report prepared by Tabletop Architects Planners Engineers titled 45 Alice Street, Goodna – Stormwater and Flood Report dated February 2006. As illustrated in this report it examines the stormwater and local flooding impacted on the subject site by a storm event with an ARI of 100 years.
- (i) The construction of all buildings or other structures are to be constructed with the base floor level 300 mm above the storm level associated with an ARI of 100 years.
- (j) The Developer shall install an appropriate sealed surface within the proposed clear flow path located in the south west corner of the subject property. This area is illustrated on Plan No: R01, in the stormwater and flood report prepared by Tabletop Architects Planners Engineers. This area will be used to transfer the stormwater flow into the existing drainage channel, therefore the sealed surface shall be designed to withstand the force of a high velocity flow of water without being removed.
- (k) Pollutant control devices shall be installed where applicable for the proposed stormwater management system. The proposed locations and types of devices shall be approved by the Development Manager.

25. Erosion & Silt Management

- (a) The Developer shall be responsible for the installation and maintenance of silt management facilities from the time of commencement of construction until the completion of all works on site. All silt management facilities are to be in accordance with the document "Soil Erosion and Sediment Control" published by the Institution of Engineers Australia, or equivalent.
- (b) If the Senior Development Engineer determines that silt damage has occurred on the site, or the downstream drainage system has become silted, the Developer shall be responsible for restoration. Such restoration shall be completed in the time determined by the Senior Development Engineer. Should the Developer fail to complete the works determined by the Senior Development Engineer within the specified time, Council shall complete the work and recover all costs from the Developer associated with that work.

26. Operational Works – Internal Works (Stormwater and Car Parking)
(i.e. Works not being handed over to Council)

- (a) Plans relating to all civil engineering works shall be prepared and submitted for review by Council under the cover of Form 1 - Part A (Common details for all applications) and Form 1 - Part E (Planning Scheme Works). The plans shall show full construction details, layout dimensions, and finished surface levels and shall be submitted together with the appropriate fees for Council approval, prior to the commencement of construction on site.

- (b) Engineering drawings shall be marked as confirmation that they have been checked and approved by a RPEQ.
- (c) The drawings shall be submitted as three A3 size sets and one full size set. Where municipal works are also being undertaken, it is usually appropriate to make a combined submission.
- (d) A "Certificate of Design" shall be submitted by a RPEQ, certifying that the design is in accordance with all relevant engineering standards, Council's requirements and standards, relevant development conditions of approval, and sound engineering practice.
- (e) Council reserves the right to require further amendments and/or additions at a later date, should design errors or omissions become apparent.
- (f) A certificate shall be submitted to Council by a RPEQ certifying that the completed works have been constructed in accordance with Council's requirements and standards and in compliance with the approved plans and specification. It is expected that the RPEQ will undertake the necessary inspections to make this certification.

27. General

- (a) All disturbed verge areas and allotments shall be graded, grassed and left in a mowable condition. The grass cover shall be obtained as early as possible during the development and an acceptable grass cover shall be achieved before the development can be accepted "Off Maintenance".
- (b) With reference to any works, on land under other private ownership, written permission for the works shall be obtained and forwarded to Council. Similarly, written clearances shall be obtained after the works are completed, unless otherwise accepted by the Senior Development Engineer.
- (c) All works required for this development shall take due regard of any and all existing services and, if considered necessary by the relevant authority or the Senior Development Engineer, such works shall be altered at the cost of the Developer.
- (d) Any allotment filling for a greater depth than 800 mm to provide for building platforms shall be conducted in accordance with Australian Standard 3798. Test results as required by Australian Standard 3798, and a certificate of quality and uniformity of fill shall be provided by a RPEQ. The level of responsibility shall be Level 1.
- (e) A certificate from a RPEQ shall be issued to Council certifying that any retaining wall greater than 800 mm in height is structurally sound and capable of withstanding any likely surcharge loads. Retaining walls greater than 1.0 m in height are to be provided with railings or other barriers to provide pedestrian safety.
- (f) Retaining walls shall be designed so that there are no imposed loads placed upon Council's underground services. This may include extending the footing to a level 300 mm below the invert of the pipe.

- (g) All imported and exported materials shall be transported only on routes approved by the Senior Development Engineer.
- (h) For batters resulting from cutting and filling of the site and producing slopes greater than 1:6, Council requires a RPEQ to certify that they are stable and properly drained.
- (i) Approval of the Senior Development Engineer is required for any fill intended to be placed over Council's underground services.
- (j) Signs are to be erected in the carpark to advise users that this carpark is subject to some flooding of the local creek due to storms with an ARI of less than 100 years. Also the Brisbane River has backwater flooding for those storms with an ARI in excess of 20 years.
- (k) A Flood Escape Plan and procedure is to be developed and periodically practiced/rehearsed in case of flooding of the site. This plan is to include permanently displayed signs and directions for staff and visitors/parents to follow.

28. Compliance with Conditions

- (a) Unless otherwise stated, all conditions shall be completed prior to commencement of use.
- (b) All conditions shall be completed to the satisfaction of the Development Manager.

29. Minor Alterations

Notwithstanding the requirements detailed in this approval, any other minor alterations and/or modifications acceptable to the Development Manager will suffice.

30. When Approval Takes Effect

This approval has effect in accordance with the provisions of Section 3.5.19 of the *Integrated Planning Act 1997* as follows:

- (a) If the applicant does not appeal the decision to the court - when the submitter's appeal period ends; or
- (b) If an appeal is made to the court - subject to the decision of the court, when the appeal is finally decided.

31. When Approval Lapses

- (a) This approval lapses:
 - (i) At the end of the relevant period, unless the change of use happens before the end of the relevant period. The relevant period for this approval is 4 years starting the day the approval takes effect; and
 - (ii) Where the change of use of any premises established pursuant to the development approval has ceased for a period of at least 12 months.

- (b) An extended relevant period may be agreed upon, pursuant to Section 3.5.22 of the *Integrated Planning Act 1997*, provided a written notice to Council is made before the end of the relevant period. Such written notice is to be on Council's approved form, accompanied by the owner's consent and the prescribed fee in Council's Register of General Charges.

B. The Developer be further advised of the following:-

1. Food Hygiene Licence and Registration

Where a premises used for the sale or preparation, packing, storing, handling, serving or, supplying of food or drink takes up tenancy at the site, Food Hygiene Licence and Registration must be obtained under the provisions of the Food Hygiene Regulation 1989. For further advice on this matter, please contact Council's Health and Environmental Protection Department on (07) 3810 6822.

2. Flooding

The subject site was fully inundated in the 1974 flood. Council, and its servants and agents, accept no liability or responsibility for any loss or damage to person or property of whatever nature or however caused as the direct or indirect consequence of the granting of the approval herein contained. Such approval has been granted at the request of the Developer and in reliance of information submitted by the Developer in support thereof.

3. Portable Long Service Leave

From 1 January 2001, the Building and Construction Industry (Portable Long Service Leave) Levy must be paid prior to the issue of a development permit where one is required for the 'Building and Construction Industry'. This applies to Building Works, Operational Works and Plumbing and Drainage Works applications, as defined under the *Integrated Planning Act 1997*, where the works are \$80 000 or more and matching the definition of 'Building and Construction Industry' under the *Building and Construction Industry (Portable Long Service Leave) Act 1991*.

Council will not be able to issue a Decision Notice without receipt of details that the Levy has been paid. Should you require clarification in regard to the amendments to the *Building and Construction Industry (Portable Long Service Leave) Act 1991*, you should contact QLeave on 1800 803 481 (free call) or (07) 3212 6855.

4. Fire Ants

In accordance with the *Plant Protection Act 1989* and the Plant Protection Regulation 1990, a quarantine notice has been issued for the State of Queensland to prevent the spread of the Red Imported Fire Ant (ant species *Solenopsis invicta*) and to eradicate it from the State.

It is the legal obligation of the land owner or any consultant or contractor employed by the land owner to report the presence or suspicion of Fire Ants to the Queensland Department of Primary Industries on 132523 within 24 hours of becoming aware of the presence or suspicion, and to advise in writing within seven days to:

Director General

Department of Primary Industries
GPO Box 46, Brisbane QLD 4001

It should be noted that the movement of Fire Ants is prohibited, unless under the conditions of an Inspectors Approval. More information can be obtained from the Queensland Department of Primary Industries website www.dpi.qld.gov.au. The land over which you have made a development application is within a suburb known to have Fire Ants and as such is within a "Restricted Area". The presence of Fire Ants on the site may affect the nature, form and extent of works permitted on the site. In view of this it will be necessary for you to contact the Department of Primary Industries to investigate the site and for you to implement any necessary matters required by that Department prior to the commencement of any works.

- C. That the Decision Notice advise the Developer that there were forty-four (44) properly made submissions received with respect to this application. Details of the submitters are as follows:

1. [REDACTED]
GOODNA QLD 4300

2. [REDACTED]
GOODNA QLD 4300

3. [REDACTED]
GOODNA QLD 4300

4. [REDACTED]
GOODNA QLD 4300

5. [REDACTED]
GOODNA QLD 4300

6. [REDACTED]
GOODNA QLD 4300

7. [REDACTED]
GOODNA QLD 4300

8. [REDACTED]
GOODNA QLD 4300

9. [REDACTED]
GOODNA QLD 4300

10. [REDACTED]
GOODNA QLD 4300

11. [REDACTED]
GOODNA QLD 4300

12. [REDACTED]
GOODNA QLD 4300

13. [REDACTED]
GOODNA QLD 4300

14. [REDACTED]
GOODNA QLD 4300

15. [REDACTED]
GOODNA QLD 4300

16. [REDACTED]
GOODNA QLD 4300

17. [REDACTED]
GOODNA QLD 4300

18. [REDACTED]
GOODNA QLD 4300

19. [REDACTED]
GOODNA QLD 4300

20. [REDACTED]
GOODNA QLD 4300

21. [REDACTED]
GOODNA QLD 4300

22. [REDACTED]
GOODNA QLD 4300

23. 
GOODNA QLD 4300

24. 
GOODNA QLD 4300

25. 
GOODNA QLD 4300

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GOODNA QLD 4300

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GOODNA QLD 4300

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GOODNA QLD 4300

33. 
GOODNA QLD 4300

34. 
GOODNA QLD 4300

35. 
GOODNA QLD 4300

36. [REDACTED]
GOODNA QLD 4300
37. [REDACTED]
GOODNA QLD 4300
38. [REDACTED]
GOODNA QLD 4300
39. [REDACTED]
GOODNA QLD 4300
40. [REDACTED]
GOODNA QLD 4300
41. [REDACTED]
GOODNA QLD 4300
42. [REDACTED]
GOODNA QLD 4300
43. [REDACTED]
GOODNA QLD 4300
43. [REDACTED]
Goodna Community Child Care Centre
22 Stuart Street
GOODNA QLD 4300
44. [REDACTED]
GOODNA QLD 4300

[REDACTED]
DEVELOPMENT PLANNER

I have this day adopted the recommendation specified in this report.

Such action was taken pursuant to the delegation entitled "Determination of a Development Application, including Negotiated Decisions" granted to me by the Chief Executive Officer dated 16 August 2001 and 22 August 2001.



**ACTING DEVELOPMENT TEAM
CO-ORDINATOR - CITYWIDE**

Date:



Assessment Checklist

Impact Assessable Development

A. Application Details

Appln No.: 1727/05

Division: 2

B. Preamble Assessment

1. Are the real property description and location details provided on the Application Form correct? ☒ Yes ☐ No
2. Has the 'consent of owner' been correctly obtained? ☒ Yes ☐ No
3. Has the correct fee been paid? ☒ Yes ☐ No

C. Supporting Information

1. (a) Was any supporting material lodged with the application? ☒ Yes ☐ No

Comment: IDAS Forms A and D, Site Plan, Elevation Plans, Floor Plans, Planning Assessment Report, Cover Letter, Stormwater and Flood Report.

- (b) Are there any planning issues associated with this material? ☒ Yes ☐ No

Preliminary assessment of the proposal identified concerns in relation to access (e.g. refuse collection), flooding (e.g. impact of Q100 flooding), stormwater (e.g. management and quality), noise levels, air quality and waste storage and collection.

C. Supporting Information

2. (a) Is there a need for an Information Request?

☒ Yes ☐ No

By letter dated 10 May 2005, a request for further information was issued to the Developer in relation to the above noted issues. The Developer responded with an amended site plan detailing the location, enclosure and storage of waste facilities; a stormwater and flood report and a letter of response from an acoustic consultant in relation to noise levels. All of the above information was submitted to Council by 1 March 2006 to the satisfaction of the assessing officer.

{Note: Further assessment by the ICC Health and Environmental Department determined that the proposal did not trigger (due to traffic levels) the necessity for an Air Quality Report to be submitted by the Applicant.}

- (b) Are there any outstanding issues associated with the Information Response?

☒ Yes ☐ No ☐ N/A

Given the concerns raised by submitters and the possibility that the subject site may have previously used chemicals during sawmill operations on site, the Developer shall contract a suitably qualified Environmental Consultant to instigate soil sampling on the subject land to test for chemical contamination. Should any contamination of the subject land be identified, rehabilitation of the site shall be undertaken to the satisfaction of the Development Manager and Health and Environmental Protection Manager prior to application for Operational Works or Building Works Approval.

D. Referral / Advice Agencies

1. Are there any referral or advice agencies applicable to this development?

☐ Yes ☒ No

The subject application was initially referred to the Environmental Protection Agency (EPA) for concurrence assessment. However, because the subject site is not included on any contaminated land register and no recorded history or background indicates that contamination is present on the subject site, the EPA notified Council that referral to themselves is not triggered in this instance. Consequently, an amended Acknowledgement Notice dated 8 April 2005 was issued to the Applicant without the requirement for referral to the EPA as concurrence agency.

2. Are there any issues associated with advice received from a Referral / Advice Agency?

☒ Yes ☐ No ☐ N/A

Please refer to notes in Section D (1) above.

E. State Planning Policies (SPP's)

1. Are there any SPP's applicable to this development? ☐ Yes ☒ No
2. Does the development comply with any relevant SPP's? ☐ Yes ☐ No ☒ N/A

F. Zone Code

1. What is the relevant zone code(s) for this development?

Urban Areas - Division 6 - Residential Medium Density Zone

2. (a) Does the development require impact assessment under the relevant assessment table for the zone? ☒ Yes ☐ No

- (b) Is the development consistent with the outcomes sought for the zone? ☒ Yes ☐ No

Section 4.6.5 (2) of the Ipswich Planning Scheme classifies 'community use' as consistent with the outcomes of the Residential Medium Density Zone if of a type and scale appropriate for the prevailing nature of the area and the particular circumstances of the site and its surrounds.

In response to the above, the proposed development is considered to be of an adequate type and scale to:-

- 1) be provided with sufficient infrastructure and services as required;
- 2) fulfil a local community need; and
- 3) minimise adverse impact on the amenity of nearby residents.

Furthermore, the proposed development is considered to be consistent with Section 4.6.3 (5) of the Planning Scheme (i.e. *Non Residential Uses - Specific Outcomes* under the Residential Medium Density Zone) given that the non-residential use:-

- (a) fulfils a community need;
- (b) is accessible to the population it serves;
- (c) is located in close proximity with other non-residential uses;
- (d) does not have a significant detrimental impact on the amenity of nearby residents;
- (e) maintains a scale and appearance in keeping with the residential amenity and character of the locality with adequate buffering or screening to nearby residential uses.

It is worth mention that in relation to (d) above, the nearest residence will be located 26 metres from the proposed development. This is because the site directly adjoins drainage and park land along the northern and western boundaries, and Alice Street and Spalding Crescent along the southern and eastern boundaries respectively.

F. Zone Code

3. (a) Are there any overall or specific outcomes for the locality which apply to the development?

☒ Yes ☐ No

Please refer to Section F(2b) notes above.

- (b) Does the development comply with any relevant overall or specific outcomes for the locality?

☒ Yes ☐ No ☐ N/A

4. Does the development comply with the overall outcomes for the zone?

☒ Yes ☐ No ☐ N/A

5. Does the development comply with the "Effects of Development – General" (including the specific outcomes and any applicable probable solutions or acceptable solutions) for the zone?

☒ Yes ☐ No ☐ N/A

6. (a) Are there any Sub Area or Precinct provisions within the zone which apply to this development?

☒ Yes ☐ No

The subject site is included in Sub Area RM2 - Residential Medium Density: 2 storeys. The specific outcomes and probable solutions for this sub area predominantly apply to residential dwellings, however, the provision of a low rise urban profile (i.e. two storeys), is supported by the proposed elevations for the development (highest point of roof form is five metres from ground level).

- (b) Does the development comply with these provisions?

☒ Yes ☐ No ☐ N/A

G. Codes for a Stated Purpose or of a Stated Type (refer Part 12 of the Planning Scheme)

1. Are there any codes under Part 12 of the Planning Scheme applicable to the development?

☒ Yes ☐ No

Comment: Community Use Code; and
Parking Code

2. Does the development comply with these codes?

☒ Yes ☐ No ☐ N/A

H. Overlays (refer Part 11 of the Planning Scheme)

1. (a) Is the site affected by a Character Places Overlay? ☐ Yes ☒ No

(b) Is the assessment category changed (refer Table 11.3.2)? ☐ Yes ☐ No ☒ N/A

(c) Does the development comply with the Character Places Overlay Code and the Character Code? ☐ Yes ☐ No ☒ N/A

2. (a) Is the site affected by a Development Constraints Overlay? ☒ Yes ☐ No

The site is affected by flooding (Q100 level) over the whole of the site. This was a major issue for the proposed development, and a 'Stormwater and Flood Report' was necessitated for further submission by the Applicant. The submitted report concluded that Q100 immunity from local flood events in the adjoining waterway can be achieved by:-

- setting minimum building levels of RL 12.15 for Building 'B' and RL 12.73 for Building 'A';
- constructing a solid wall along the road frontage from the south-eastern corner, across the south-west corner of the property and along the western boundary to the north-west corner of the property; and
- suspension of development above ground level (min. RL 13.54) in the south-west corner of the site to allow for free passage of flood flows below.

Upon review of the submitted stormwater and flood report, Council are satisfied that Q100 flood immunity can be achieved on site. Notwithstanding, conditions are included in the Recommendation to ensure stormwater and flood management are undertaken for the development in accordance with the *Queensland Urban Drainage Manual*. Stormwater quality conditions are also included in the Recommendation to ensure that stormwater quality measures are incorporated into the development.

(b) Is the assessment category changed (refer Table 11.4.3 and 11.4.4)? ☐ Yes ☒ No ☐ N/A

(c) Does the development comply with the relevant provisions of the Development Constraints Overlay Code? ☒ Yes ☐ No ☐ N/A

I. Other Relevant Matters

1. (a) Are there any Planning Scheme Policy provisions which specifically apply to this development? ☐ Yes ☒ No

(b) Does the development comply with these provisions? ☐ Yes ☐ No ☒ N/A

I. Other Relevant Matters

2. (a) Are there any Implementation Guidelines which specifically apply to this development? ☐ Yes ☒ No
- (b) Does the development comply with these Guidelines? ☐ Yes ☐ No ☒ N/A
3. Are there any other relevant matters which pertain to this development? ☐ Yes ☒ No ☐ N/A
4. Infrastructure Contributions – Calculation Sheet attached to this checklist? ☒ Yes ☐ No ☐ N/A

J. Public Notification

1. Was the public notification carried out in accordance with the *Integrated Planning Act* requirements? ☒ Yes ☐ No

Written notice has been received from the applicant confirming public notification of the proposal correctly identified the application as a proposal for a Child Care Centre and included publishing a notice in the Queensland Times on 6 March 2006. Such notice confirmed that the actual notification period of 15 business days complies with Section 3.4.5 of the *Integrated Planning Act 1997* which states that the notification period for the application is 15 business days. The public notification of the proposal has been carried out in accordance with the *Integrated Planning Act 1997*.

2. Were any submissions received? ☒ Yes ☐ No

Forty-four (44) 'properly made' submissions and four (4) 'not properly made' submissions have been received. Please refer to Appendix A for a detailed summary of submitter issues and an assessment of these issues.

K. Summary

1. Recommended for:

- ☒ Approval - Subject to Conditions
- ☐ Refusal
- ☐ Part Refusal / Part Approval -
Subject to conditions

2. Comment: The proposal is generally in compliance with the requirements of the *Ipswich Planning Scheme 2004*.

DEVELOPMENT PLANNER

Date:

**ACTING DEVELOPMENT TEAM
CO-ORDINATOR - CITYWIDE**

Date:

Infrastructure Contributions Calculation Sheet for DA 1727/2005/MCU

Headworks Contributions

Application Type:

Material Use of Change

1. Existing Equivalent Persons (the greater of)

Deemed Credit

Town Planning Zone:	Residential Medium Density
Category:	Urban Areas
Water Rate:	3.300 per lot
Sewerage Rate:	3.300 per lot
Road Rate:	3.100 per lot
Public Parks Infrastructure Rate:	3.080 per lot
Local Community Facilities Rate:	3.080 per lot
Number of lots:	1.000
Water EPs:	3.300
Sewerage EPs:	3.300
Road EPs:	3.100
Public Parks Infrastructure EPs:	3.080
Local Community Facilities EPs:	3.080

Land Use

1. Land Use:	Special Industry
Water Rate:	0.750 EPs per 100m ²
Sewerage Rate:	0.750 EPs per 100m ²
Road Rate:	1.700 EPs per 100m ²
Public Parks Infrastructure Rate:	0.000 EPs per 100m ²
Local Community Facilities Rate:	0.000 EPs per 100m ²
Gross Floor Area (m ²):	400.000
EPs for Water:	3.000
EPs for Sewerage:	3.000
EPs for Roads:	6.800
EPs for Public Parks Infrastructure:	0.000
EPs for Local Community Facilities:	0.000

Total Water EPs:	3.000
Total Sewerage EPs:	3.000
Total Road EP:	6.800
Total Public Parks Infrastructure EP:	0.000
Total Local Community Facilities EP:	0.000

Previous Contributions

Previous Contributions For Water & Sewerage: No

Previous Contributions For Roads: No

Deemed Credit Exempt For Water: No

Deemed Credit Exempt For Sewerage: No

Deemed Credit Exempt For Roads: No

Existing Credit EPs for Water: 3.300

Existing Credit EPs for Sewerage:	3.300
Existing Credit EPs for Roads:	6.800
Existing Credit EPs for Public Parks Infra.:	3.080
Existing Credit EPs for Local Community Fac:	3.080

2. Proposed Equivalent Persons

Proposed Land Use

1. Land Use:	Community Use - Child Care Centre
Water Rate:	0.150 EPs per person
Sewerage Rate:	0.150 EPs per person
Road Rate:	0.580 EPs per person
Total Public Parks Infrastructure:	0.000 EPs per person
Total Local Community Facilities:	0.000 EPs per person
Number of Staff and Children:	137.000
Proposed EPs for Water:	20.550
Proposed EPs for Sewerage:	20.550
Proposed EPs for Roads:	79.460
Proposed EPs for Public Parks Infra.:	0.000
Proposed EPs for Local Community Fac.:	0.000
Total Water EPs:	20.550
Total Sewerage EPs:	20.550
Total Road EP:	79.460
Total Public Parks Infrastructure EP:	0.000
Total Local Community Facilities EP:	0.000

3. Headworks Charges

Difference in Equivalent Persons:	Proposed Equivalent Persons - Existing Credit EP
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Note: The existing structure is being demolished.

Water EPs:	17.250
Sewerage EPs:	17.250
Road EPs =	72.660
Public Parks Infrastructure EPs =	-3.080

Public Parks Infrastructure contributions are not applicable in this instance.

Local Community Facilities EPs =	-3.080
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Local Community Facilities contributions are not applicable in this instance.

Water

Water Zone:	Goodna (inc Redbank Industrial) Water Zone
Unit Charge:	1.088
Contribution per EP:	\$587.03
Water Headworks Charge:	\$11,017.00 (WT-TL1)

Sewerage

Sewerage Catchment:	Goodna Catchment (excluding Springfield)
Unit Charge:	1.088
Contribution per EP:	\$629.36
Sewerage Headworks Charge:	\$11,811.00 (SW-RC2)

Roads

Headworks Road:

No

Road Contribution Sector:

Goodna

Unit Charge:

1.026

Contribution per EP:

\$1,437.77

Road Headworks Charge:

\$107,184.00 (RD-WAQ)

Annexure TCF-8



Assessment Checklist

Impact Assessable Development

A. Application Details

Appln No.: 1727/05

Division: 2

B. Preamble Assessment

1. Are the real property description and location details provided on the Application Form correct? ☒ Yes ☐ No
2. Has the 'consent of owner' been correctly obtained? ☒ Yes ☐ No
3. Has the correct fee been paid? ☒ Yes ☐ No

C. Supporting Information

1. (a) Was any supporting material lodged with the application? ☒ Yes ☐ No

Comment: IDAS Forms A and D, Site Plan, Elevation Plans, Floor Plans, Planning Assessment Report, Cover Letter, Stormwater and Flood Report.

- (b) Are there any planning issues associated with this material? ☒ Yes ☐ No

Preliminary assessment of the proposal identified concerns in relation to access (e.g. refuse collection), flooding (e.g. impact of Q100 flooding), stormwater (e.g. management and quality), noise levels, air quality and waste storage and collection.

C. Supporting Information

2. (a) Is there a need for an Information Request?

☒ Yes ☐ No

By letter dated 10 May 2005, a request for further information was issued to the Developer in relation to the above noted issues. The Developer responded with an amended site plan detailing the location, enclosure and storage of waste facilities; a stormwater and flood report and a letter of response from an acoustic consultant in relation to noise levels. All of the above information was submitted to Council by 1 March 2006 to the satisfaction of the assessing officer.

{Note: Further assessment by the ICC Health and Environmental Department determined that the proposal did not trigger (due to traffic levels) the necessity for an Air Quality Report to be submitted by the Applicant.}

- (b) Are there any outstanding issues associated with the Information Response?

☒ Yes ☐ No ☐ N/A

Given the concerns raised by submitters and the possibility that the subject site may have previously used chemicals during sawmill operations on site, the Developer shall contract a suitably qualified Environmental Consultant to instigate soil sampling on the subject land to test for chemical contamination. Should any contamination of the subject land be identified, rehabilitation of the site shall be undertaken to the satisfaction of the Development Manager and Health and Environmental Protection Manager prior to application for Operational Works or Building Works Approval.

D. Referral / Advice Agencies

1. Are there any referral or advice agencies applicable to this development?

☐ Yes ☒ No

The subject application was initially referred to the Environmental Protection Agency (EPA) for concurrence assessment. However, because the subject site is not included on any contaminated land register and no recorded history or background indicates that contamination is present on the subject site, the EPA notified Council that referral to themselves is not triggered in this instance. Consequently, an amended Acknowledgement Notice dated 8 April 2005 was issued to the Applicant without the requirement for referral to the EPA as concurrence agency.

2. Are there any issues associated with advice received from a Referral / Advice Agency?

☒ Yes ☐ No ☐ N/A

Please refer to notes in Section D (1) above.

E. State Planning Policies (SPP's)

1. Are there any SPP's applicable to this development? ☐ Yes ☒ No
2. Does the development comply with any relevant SPP's? ☐ Yes ☐ No ☒ N/A

F. Zone Code

1. What is the relevant zone code(s) for this development?

Urban Areas - Division 6 - Residential Medium Density Zone

2. (a) Does the development require impact assessment under the relevant assessment table for the zone? ☒ Yes ☐ No

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F. Zone Code

3. (a) Are there any overall or specific outcomes for the locality which apply to the development?

☒ Yes ☐ No

Please refer to Section F(2b) notes above.

- (b) Does the development comply with any relevant overall or specific outcomes for the locality?

☒ Yes ☐ No ☐ N/A

4. Does the development comply with the overall outcomes for the zone?

☒ Yes ☐ No ☐ N/A

5. Does the development comply with the "Effects of Development – General" (including the specific outcomes and any applicable probable solutions or acceptable solutions) for the zone?

☒ Yes ☐ No ☐ N/A

6. (a) Are there any Sub Area or Precinct provisions within the zone which apply to this development?

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- (b) Does the development comply with these provisions?

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1. Are there any codes under Part 12 of the Planning Scheme applicable to the development?

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Comment: Community Use Code; and
Parking Code

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(b) Is the assessment category changed (refer Table 11.4.3 and 11.4.4)? ☐ Yes ☒ No ☐ N/A

(c) Does the development comply with the relevant provisions of the Development Constraints Overlay Code? ☒ Yes ☐ No ☐ N/A

I. Other Relevant Matters

1. (a) Are there any Planning Scheme Policy provisions which specifically apply to this development? ☐ Yes ☒ No

(b) Does the development comply with these provisions? ☐ Yes ☐ No ☒ N/A

I. Other Relevant Matters

2. (a) Are there any Implementation Guidelines which specifically apply to this development?

☐ Yes ☒ No

- (b) Does the development comply with these Guidelines?

☐ Yes ☐ No ☒ N/A

3. Are there any other relevant matters which pertain to this development?

☐ Yes ☒ No ☐ N/A

4. Infrastructure Contributions – Calculation Sheet attached to this checklist?

☒ Yes ☐ No ☐ N/A

J. Public Notification

1. Was the public notification carried out in accordance with the *Integrated Planning Act* requirements?

☒ Yes ☐ No

Written notice has been received from the applicant confirming public notification of the proposal correctly identified the application as a proposal for a Child Care Centre and included publishing a notice in the Queensland Times on 6 March 2006. Such notice confirmed that the actual notification period of 15 business days complies with Section 3.4.5 of the *Integrated Planning Act 1997* which states that the notification period for the application is 15 business days. The public notification of the proposal has been carried out in accordance with the *Integrated Planning Act 1997*.

2. Were any submissions received?

☒ Yes ☐ No

Forty-four (44) 'properly made' submissions and four (4) 'not properly made' submissions have been received. Please refer to Appendix A for a detailed summary of submitter issues and an assessment of these issues.

K. Summary

1. Recommended for:

- ☒ Approval - Subject to Conditions
☐ Refusal
☐ Part Refusal / Part Approval -
Subject to conditions

2. Comment: The proposal is generally in compliance with the requirements of the *Ipswich Planning Scheme 2004*.

DEVELOPMENT PLANNER

Date:

**ACTING DEVELOPMENT TEAM
CO-ORDINATOR - CITYWIDE**

Date:

Annexure TCF-9

APPENDIX A – ISSUES MADE BY SUBMITTERS AND COUNCIL'S COMMENTS

Submitter Issues	Council Comment
<p>Traffic and Safety Related</p> <p><i>The sun makes it very difficult to see in the early morning and late afternoon. The sun in drivers eyes has been a major cause of many road accidents.</i></p> <p><i>This part of Alice Street has become known as the drag strip. If this development goes ahead it's not if a child gets knocked down it's when.</i></p> <p><i>Residents of our courts often have to wait some time to turn into Alice St., with this proposed Child Care Centre it is going to make matters worse.</i></p> <p><i>Dangerous road. The childcare centres lie at the bottom of the gully in Alice Street. Cars tend to speed down the hill on both sides of the road. It is not a safety zone area.</i></p> <p><i>Spalding Crescent is a narrow lane. There are 70 residents using Spalding Crescent. With the proposed childcare centres providing 150 places it will make Spalding Crescent too congested during peak periods.</i></p> <p><i>An upgrade would be required if increased traffic occurs....traffic lights would be needed to manage the effects of increased traffic and suitable child crossings must be put in place.</i></p>	<p>Council records show that over the last five (5) years, six (6) accidents (no fatalities) have been recorded along Alice Street, between the intersections of Bertha Street and Church Street.</p> <p>The submitted 'Traffic Impact Assessment Report' prepared by Lambert and Rehbein Pty Ltd for the proposed development concluded the following:-</p> <p><u>Separation of access from intersection</u> - based on assumptions that represent a "worst case" scenario for the development, the results clearly indicated that the impacts of the proposed child care centre would be insignificant;</p> <p><u>Traffic Generation and Distribution</u> - the report concluded that the maximum additional traffic associated with the proposed development at the Spalding Crescent/ Alice Street/ Jo Street intersection, is 60 vehicles per peak hour. It is considered that the addition of a maximum of one (1) vehicle every two minutes to turning movement at the subject intersection during the peak hours would have an insignificant impact on the external road network in the surrounding vicinity. The intersection analysis further indicated that any additional traffic resultant from the development would theoretically result in minimal increases in delays and queues. It was further analysed that the future operation of the intersection will be operating with acceptable levels of service in the year 2015 development scenario.</p> <p>Council consider that the above results of the Traffic Impact Report are satisfactory and that the proposed development will have minimal impact on the operation of the external road network and adjacent intersection.</p>
<p>Parking Related</p> <p><i>The dangers of cars and 4 wheel drives parked outside the new school (i.e.childcare centre) blocking ones view of oncoming traffic...also the amount of parking in</i></p>	<p>The proposed Child Care Centre caters for 119 children and proposes 18 f/t staff only. Hence, considering that the provision of parking spaces strictly cater for the above number of proposed children and staff, the approval will be limited (via a condition) accordingly.</p>

Spalding Crescent causing an obstruction to the residents cars going in and out...

Insufficient parking spaces for 150 childcare places.

In response to the adjacent submitters comment, it is noted that there is insufficient parking spaces for 150 children. A condition is included in the Recommendation to limit the Approval to 119 children and 18 staff only.

The Applicant proposes 31 parking spaces. Table 12.9.1 of the Planning Scheme specifies that for a Community Use (Child Care Centre), one (1) parking space per eight (8) children and one (1) parking space per full-time employee is required. The requirement for the proposed development, on the basis of 119 children and 18 staff members consequently amount to 33 required parking spaces. It is noted that the proposed 31 parking spaces are two (2) parking spaces less than the requirement of the Parking Code.

However, the Applicant has requested that dispensation of two (2) parking spaces be allowed in consideration of the following:-

- due to proximity and connectivity to nearby public transport (i.e. bus/ footpath/ train), it is reasonable to assume that some visitors and staff would utilise this mode of transport;
- it also is considered reasonable to assume that car pooling would occur for pick-up and drop-off to the Child Care Centre(s);
- Rotating shifts between staff would not necessitate one (1) parking space per employee;
- duration and stay for each vehicle would be adequately met by the provided spaces;
- whilst unlikely, two (2) vehicles parked on the street would not necessarily have a significant impact on the safe and efficient operation of the road network.

The above justification by the Applicant was considered in conjunction with the following:-

In accordance with Section 12.9.1(4) of the Planning Scheme, Council may permit a parking rate reduction for developments located within close proximity to transport nodes and of which are clustered with Major Centres.

As such, given the Applicant's comments, together with the fact that the proposed

	development is connected to, (via a constructed footpath) and within walking distance of, a major centre and major transport facilities, the provision of 31 parking spaces is considered reasonable.
<p>Need Related</p> <p><i>There are already 6 childcare centres in Goodna in near proximity:-</i></p> <ul style="list-style-type: none"> - Goodna Community Childcare Centre (22 Stuart Street); - Goodna Early Learning Centre (Cnr Kingsford Street and Queen Street); - Goodna Station Early Learning (18 Woogaroo Street); - Hutchinson's Early Learning Centre (14 Kingsford Street); - Mother Goose Childcare Centre (34 Smiths Road); and - Goodna Family Daycare (72 Alice Street). <p><i>We seem to have enough childcare centres in this area for our needs (the childcare centres servicing this area seem to have plenty of vacancies).</i></p> <p><i>We object on the grounds that we are concerned that it could seriously affect the viability of our 44 place 'not for profit' community childcare centre...we believe there are already enough childcare centres in this area...we are aware that many childcare centres in the area have vacancies...</i></p> <p><i>Is not required due to adequate servicing of the Childcare needs in the locality. The locality has also not seen a significant increase in population in the last few years that would justify the need for an additional centre.</i></p>	<p>Further examination of the six (6) child care centres (listed adjacent) revealed that:-</p> <ol style="list-style-type: none"> 1) Hutchinsons Early Learning Centre IS Goodna Early Learning Centre; and 2) Goodna Family Daycare is <i>not</i> a child care centre (i.e. its operations revolve around parents taking care of children 'at home'). <p>Hence, there are four (4) identified child care centres currently operating in Goodna.</p> <p>Additional research also disclosed that there is a viable opportunity for an additional child care centre in the Goodna vicinity. For example, on 24 May 2006, all four (4) existing child care centres in the Goodna locality were contacted and asked how many vacancies they currently had. The results are listed following:-</p> <ul style="list-style-type: none"> - Goodna Community Childcare Centre One (1) vacancy (2 days/wk for toddler only) from 44 places; - Goodna Early Learning Centre One (1) vacancy (3 days/wk for toddler only) from 75 places; - Goodna Station Early Learning Centre Two (2) vacancies (one (1) for 4 days/wk for toddler only) from 75 places; and - Mother Goose Childcare Centre Several vacancies from 50 places. <p>Incidentally, there were no vacancies through the Goodna Family Daycare.</p> <p>The above results indicate currently, there are very limited vacancies (not to mention choice of options) for child care places in the Goodna vicinity.</p>
<p>Amenity Related</p> <p><i>Will adversely impact the surrounding properties, the local environment and the overall amenity of the area.</i></p> <p><i>Is likely to generate considerable noise above what was experienced there previously, both from raucous children and</i></p>	<p>A condition for landscaping of the proposed Child Care Centre is included in the Recommendation. This will significantly minimise any adverse visual impact that the built structures and hard surface areas may have on the streetscape. A condition is also included for fencing to be aesthetically pleasing. The elevations for the proposed buildings are considered to positively</p>

<p><i>increased traffic movement.</i></p> <p><i>As this is a residential area, the location of the childcare centre will cause undue impact on residents along Alice Street and Spalding Crescent (traffic, parking, noise).</i></p> <p><i>The additional traffic in the area is likely to generate significantly increased air pollution in the area due to the stop/start movements to drop off and pick up children.</i></p> <p><i>No consideration has been given by the applicant as to whether any contamination is present on the site due to previous activity.</i></p> <p><i>The possible contamination of soil from the old saw mill site.</i></p>	<p>contribute to the built form character along Alice Street and Spalding Crescent.</p> <p>Conditions are included in the Recommendation which regulate noise level impacts to an acceptable level. This includes:-</p> <ul style="list-style-type: none"> - acoustic barriers (1.8m high) along the south-western and south-eastern corners of the property; - restriction of service vehicle movements between 7am and 6pm; - no openings in the southern façade of Building 'A'; - location of air-conditioning plants away from nearby residences. <p>Assessment by the Health and Environmental Protection Department determined that the traffic levels (existing and proposed) along Alice Street and Spalding Crescent were not high enough to trigger concern (or conditions) in relation to air quality for the proposed development.</p> <p>The subject site is not included on a contaminated land register and hence did not trigger referral to the Environmental Protection Department.</p> <p>However, given the concerns raised by submitters and the possibility that the subject site may have previously used chemicals during sawmill operations on site, a condition is recommended that the Developer contract a suitably qualified Environmental Consultant to undertake soil sampling on the subject land to test for chemical contamination. Should any contamination of the subject land be identified, rehabilitation of the site shall be undertaken to the satisfaction of the Development Manager and Health and Environmental Protection Manager prior to application for Operational Works Approval.</p>
<p>Planning Scheme (Zone Intent) and Flood Related</p> <p><i>Incorrect zoning</i></p> <p><i>It is not consistent with the current planning scheme</i></p> <p><i>The increased pressure on existing services</i></p>	<p>Section 4.6.5 (2) of the Ipswich Planning Scheme classifies 'community use' as consistent with the outcomes of the Residential Medium Density Zone if of a type and scale appropriate for the prevailing nature of the area and the particular circumstances of the site and its surrounds.</p> <p>In response to the above, the proposed</p>

(such as sewer, water and power) required to service this facility will impact on their ability to provide those services to current residents..

The site in question is not in a practical location. The land is within metres of an open run off drain that would go through the proposed building plan. The drain is subjected to minor flooding with heavy rain. If the vegetation were removed then more excess run off water would increase the level of flooding around the proposed childcare centre.

It is strongly recommended that due to the issues of flood risk....and the likely exacerbation of flooding on upstream and downstream properties, that the application be rejected.

development is considered to be of an adequate type and scale to:-

- 1) be provided with sufficient infrastructure and services as required;
- 2) fulfil a local community need; and
- 3) minimise adverse impact on the amenity of nearby residents.

Furthermore, the proposed development is considered to be consistent with Section 4.6.3 (5) of the Planning Scheme (i.e. *Non Residential Uses - Specific Outcomes* under the Residential Medium Density Zone) given that the non-residential use:-

- (a) fulfils a community need;
- (b) is accessible to the population it serves;
- (c) is located in close proximity with other non-residential uses;
- (d) does not have a significant detrimental impact on the amenity of nearby residents;
- (e) maintains a scale and appearance in keeping with the residential amenity and character of the locality with adequate buffering or screening to nearby residential uses.

It is worth mention that in relation to (d) above, the nearest residence will be located 26 metres from the proposed development. This is because the site directly adjoins drainage and park land along the northern and western boundaries, and Alice Street and Spalding Crescent along the southern and eastern boundaries respectively.

Furthermore, the existing continuous concrete footpath which extends for the full frontage of the Alice Street and Spalding Crescent boundary and through the drainage reserve north of the site, is conveniently located to permit functional connectivity for pedestrian access to and from the site.

It is considered that stormwater management for the site can be adequately addressed in the event of flooding. Relevant conditions are included in the Recommendation to ensure that pre-development flows are maintained and that adjoining properties are not adversely impacted upon. An Operational Works approval in relation to stormwater management on site is required prior to commencement of

	construction.
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Annexure TCF-10

14 August 2006

INTEGRATED PLANNING ACT 1997
DEVELOPMENT APPLICATION DECISION NOTICE

Application Details

Application No:	1727/05
Real Property Description:	Lot 3 RP77071
Property Location:	45 Alice Street, Goodna
Names and Addresses of all Referral Agencies:	N/A
Decision Date:	14 August 2006
Decision:	Approved subject to the conditions detailed below.
Decision Authority:	Team Co-ordinator - Citywide

Approval Details:

Proposal	Development	Decision	Approval Type
Community Use - Two (2) Child Care Centres (Total 119 Children)	Making a material change of use of premises	Approved	Development Permit.
	Carrying out operational work	Approved	Preliminary Approval.
	Carrying out building work	Approved	Preliminary Approval.

Further Development Permits Required

Further Development Permits, as required by the *Integrated Planning Act 1997*, shall be obtained in respect of any Operational Works, Building Works and Plumbing Works in relation to this approval before any such works are commenced.

Conditions***Assessment Manager (Ipswich City Council)***

Conditions applicable to this approval under Integrated Planning Act:

Conditions of Assessment Manager (Ipswich City Council)1. Basis of Approval

Subject to these conditions, the facts and circumstances set out in the application and all relevant Council Local Laws and/or Planning Scheme Policies shall be adhered to.

2. Site Development

The proposed development of the subject site shall be undertaken generally in accordance with the following plans:

- (a) Site Plan Job Number 5518 Drawing Number A01 D, drawn by Tabletop Architects and dated 1 June 2006, subject to the following amendment to the satisfaction of the Development Manager:-
 - (i) The Developer shall submit an amended Site Plan demonstrating that the proposed elevated section for the outdoor play area for proposed Building A has been deleted. All walling/ fencing along the south-western corner boundary shall align with the south-western corner truncation detailed in the submitted 'Wall and Floor Details for Q100 Immunity' Plan No. 5946 R01, prepared by Tabletop Architects. These details shall be submitted prior to application for Operational Works Approval.
 - (b) Building A Floor Plan Job Number 5518 Drawing Number A02 B, drawn by Tabletop Architects and dated 1 June 2006;
 - (c) Building B Floor Plan Job Number 5518 Drawing Number A03 B, drawn by Tabletop Architects and dated 1 June 2006;

- (d) Building B Floor Plan Job Number 5518 Drawing Number A04 B, drawn by Tabletop Architects and dated 1 June 2006;
- (e) Landscape Plan Job Number 5518 Drawing Number A05 B, drawn by Tabletop Architects and dated 1 June 2006, subject to the following amendment to the satisfaction of the Development Manager:-
 - (i) The Developer shall incorporate into the Landscape Master Plan the necessary amendments required to comply with Condition 3(a)(i), at the time of its submission to Council (please refer to Condition 11 for further detail on landscaping conditions).
- (f) Building A Elevations Job Number 5518 Drawing Number A06 A, drawn by Tabletop Architects and dated 5 November 2004; and
- (g) Building B Elevations Job Number 5518 Drawing Number A07 A, drawn by Tabletop Architects and dated 5 November 2004.

3. Particular Use

This approval is for the particular use of a Community Use (Child Care Centre) for a maximum of 119 children and 18 employees and does not imply approval for other similar or more intensive uses. To this end, the use of any of the proposed structures associated with the Child Care Centre inclusive of car parking and any associated outdoor areas on site, are not permitted for any other purpose, unless, in the opinion of the Development Manager, such use is ancillary and incidental to the predominant use of the site for a Child Care Centre.

4. Limits to Approval

Preliminary Approval for the carrying out of Building Works and Operational Works is approved in respect of those aspects of the application to which the Planning Scheme applies.

5. Hours of Construction

Unless otherwise approved in writing by the Development Manager, hours of construction shall be:

Monday to Saturday 6.30 a.m. to 6.30 p.m.

Work or business shall not be conducted from or on the premises outside the above hours or on Sundays or public holidays.

6. Hours of Operation

Unless otherwise approved in writing by the Development Manager, hours of operation shall be:

Monday to Friday 6.30 a.m. to 6.30 p.m.

Work or business shall not be conducted from the premises outside the above hours or on Sundays or Public Holidays.

7. Carparking - Use and Maintenance

- (a) A minimum of thirty-one (31) car parking spaces shall be provided on site for the proposed development.
- (b) Unless otherwise indicated on the approved plan of development or approved by the Development Manager, parking areas shall not be:
 - (i) exclusively used for staff parking at the expense of general public/customer parking; or
 - (ii) exclusively used for general public/customer parking at the expense of staff parking.
- (c) All parking areas shall be:
 - (i) kept exclusively for parking;
 - (ii) used exclusively for parking;
 - (iii) accessible to both staff and the general public/customer during any approved hours of operation;
 - (iv) appropriately signposted at the entry/entries to the carpark, to the satisfaction of the Development Manager (eg. "Staff and Customer Parking"), in accordance with AS1742; and
 - (v) maintained to the satisfaction of the Development Manager.

8. Advertising Signage

No signage is approved as part of this application. A separate application (under cover of Form E) for Advertising Devices will be required detailing the proposed signage on the subject site.

9. Locality References

- (a) Any place name or estate name used by the developer (excluding a reference to a building, structure or the like and excluding minor, subsidiary signage within a development) shall make reference to the relevant, approved place name under the *Place Names Act 1994*.
- (b) Any reference to the regional location of the site or the development shall not refer to the place or estate as being located in Brisbane or a Brisbane suburb or in the metropolitan area or in the western suburbs (excluding the western suburbs of Ipswich as determined by Council in writing from time to time).

10. Landscaping Plan

- (a) A Landscape Master Plan, which conforms to the approved development plan, Section 27 of Ipswich City Council's Planning Scheme Policy 2, Council's Street Tree Strategy and the relevant Planning Scheme Development Code/s, shall be submitted to Council for approval prior to the commencement of the use. Such plan shall include, amongst other necessary items, the following features:

- (i) extent of landscaped areas;
- (ii) location and name of existing trees;
- (iii) soil type;
- (iv) location of drainage, sewerage and other underground services and overhead powerlines;
- (v) details of landscaping structures;
- (vi) contours and spot levels;
- (vii) proposed surface treatments;
- (viii) means of drainage and irrigation;
- (ix) fence size and type of material;
- (x) schedule of plant species size (see Note 1 below), densities (see Note 2 below) and attributes;
- (xi) exclude the use of environmental weeds. Consideration shall be given to utilising Council's Vegetation Communities Rehabilitation Guide No. 4 *Open Forests and Woodlands*, where applicable.

Note 1: Planting sizes are at least as follows

Street and features trees	45L
Other trees	300mm
Larger shrubs	200mm
Groundcovers	150mm

Note 2: Planting at approximately the following density rates:

	<i>As street trees</i>	<i>For buffer planting</i>	<i>All Other instances</i>
<i>Trees</i>	1 per allotment frontage	at 2m centres	at 5m centres
<i>Large shrubs</i>	NA	at 1m centres	at 2m centres
<i>Groundcovers</i>	NA	at 0.5-1m centres	at 0.5-1m centres

- (b) The Developer shall complete landscaping and fencing works in accordance with the approved landscape plans to the satisfaction of the Development Manager prior to the commencement of the use of the land unless Council determines otherwise. Such landscaping and fencing shall be maintained in perpetuity to Council's satisfaction by the existing or future owners and occupiers of the property.
- (c) Such landscaping, where possible, should minimise areas of potential concealment.

11. Health and Environmental Protection Requirements

Conditions 12 – 18 unless otherwise stated, shall be completed to the satisfaction of the Environmental Health Protection Manager.

12. Waste Storage & Collection

- (a) An adequate refuse collection service shall be provided to the premises.
- (b) Unless otherwise specifically agreed to in writing by the Health and Environmental Protection Manager, Ipswich City Council, all refuse collection shall occur on site:
 - (i) The area on which the bin is to be accessed by refuse collection vehicles shall be screened, level, concreted and constructed in conjunction with the driveway surface with no intervening step, ledge, kerb or other obstruction.
 - (ii) The waste storage and collection areas shall allow forward motion entry to the waste containers and forward motion entry and exit to and from the site. The following dimensions are given as a minimum of front-, rear- and side- loading truck dimensions for a guide to design for the adequate emptying of the bin and manoeuvring of the truck:

	Front/Load	Rear/Load	Side/Load
Length overall	10.9 m	8.2 m	8.7 m
Length when loading	12.6 m	9.5 m	3.0 m
Travelling overhead clearance required	4.0 m	3.0 m	3.5 m
Loading overhead clearance required	6.5m x 10m*	3.0 m	3.0 m
Access width required	3.8 m	3.8 m	4.0 m
Turning radius	14 m	8.0 m	11.1 m
Gross vehicle mass (GVM)	28 tonne	13.6 t	13.6 t

*from the back of the bin

- (c) Prior to the commencement of the use, submit to the Health and Environmental Protection Manager certification from a Civil Engineer (RPEQ) which demonstrates that the necessary access, as required above, has been incorporated into the development.
 - (d) A bin washdown facility shall be provided. The facility shall be designed such that all wash down waters are appropriately treated and discharged to sewer subject to a Trade Waste approval. No wash down waters are permitted to flow to a roadway, gutter, stormwater drain or natural waterway.
- ### 13. Incineration

No incineration of waste, including cleared vegetation, is permitted. All cleared vegetation must be chipped/mulched and spread on site or removed from site within two (2) days of being felled/cleared.

14. Lighting

- (a) The provision of advertising, security and flood lighting shall be so designed, constructed, located and maintained in accordance with Australian Standard 4282 – 1997 (Control of the obtrusive effects of outdoor lighting) as not to cause nuisance to the occupants of nearby properties or passing traffic.
- (b) Certification from a qualified and experienced lighting consultant, demonstrating compliance with the above condition, shall be submitted to the Manager for Health and Environmental Protection, prior to the commencement of the use.

15. Noise

- (a) All mechanical plant and equipment, including but not limited to air conditioning plant, for the southern child care centre (Building A) shall be located adjacent to the northern or western façades of the building.
 - (b) All mechanical plant and equipment, including but not limited to air conditioning plant, for the northern child care centre (Building B) shall be located adjacent to the southern or western façades of the building.
 - (c) Prior to the commencement of the use, the Developer shall erect a 2.0 metre high acoustic barrier along the south western and south eastern corners of the property as shown in Figure 3 of the acoustic report entitled “Environmental Noise Level Study for Proposed Child Care Centre, 45 Alice Street, Goodna” prepared by David Moore & Associates Pty Ltd (Report No: R05044/D1245/Rev.0/28.02.05). The acoustic barrier shall be:
 - continuous and gap free;
 - constructed of a material with a surface density not less than 12 kg/m²; and
 - consist of an aesthetically pleasing weather-resistant material such as earth, timber, fibre cement or brick.
 - (d) Service vehicle movements to and from the site, including delivery and waste collection vehicles, shall be limited to 7.00 a.m. to 6.00 p.m. Monday to Friday.
 - (e) There shall be no openings in the southern façade of the southern building (Building ‘A’). All windows on the southern side/façade of the building shall be unable to be opened and the glazing shall have minimum Rw requirements of Rw 30.
 - (f) Prior to the commencement of the use, the Developer shall submit to the Health and Environmental Protection Manager certification from an independent and appropriately qualified acoustic consultant which demonstrates that the necessary design and construction requirements have been incorporated into the development and achieve the noise criteria.
16. Stormwater Quality
- (a) At the time of submitting the Operational Works application, the applicant shall also submit a Detailed Design Stormwater Quality Management Plan (SQMP) to the satisfaction of both the Senior Development Engineer and the Health and Environmental Protection Manager.

The plan must be prepared by a suitably qualified and experienced professional and must demonstrate, through appropriate pollutant export modelling (eg AQUALM or MUSIC), that the pollutant levels in the stormwater discharged from the site comply with the pollutant levels identified in Table 1 below. The plan must also provide a detailed drawing showing the location of the stormwater quality treatment train /catchment boundaries and design drawings of the stormwater quality treatment measures eg. GPTs, bioswales etc.

TABLE 1

Oils and grease ⁽³⁾	no visible films or odour
Suspended solids	15mg/L for combined wet and dry periods ⁽¹⁾ 90% ile < 100mg/L for wet weather periods ⁽²⁾
Litter/gross pollutants ⁽⁴⁾	No anthropogenic (man-made) material greater than 5mm in any dimension

1. Derived from the Draft Queensland Water Quality Guidelines (EPA, 1998)
2. Derived from local and interstate information. A wet weather period is defined as "any period where stormwater runoff leaves the site".
3. Taken from Australian Water Quality Guidelines for Fresh and Marine Waters (ANZECC, 1992).
4. An interpretation of what is acceptable to the community in terms of visual impact. Litter definition derived from information provided by the CRC for Catchment.

- Levels are upper limits for median values or ranges in which medians should lie, unless otherwise stated.
 - If a parameter relevant to a particular activity is not given in the above table please refer to the latest Australian Water Quality Guidelines for Fresh and Marine Waters (ANZECC).
- (b) Prior to the commencement of the use, the Developer shall submit to the Health and Environmental Protection Manager certification from a Civil Engineer (RPEQ) which demonstrates that the physical stormwater quality improvement measures, as required above, have been incorporated into the development.

17. Access for People with a Disability

- (a) The Developer shall provide adequate access for people in wheelchairs by means of an unimpeded continuous path of travel from any adjacent roadway, other public lands and from any car parking bay allocated for use by people with a disability, to all parts of the development which are normally open to the public.
- (b) The Developer shall provide sanitary facilities for people with a disability. Access to them shall be provided in accordance with the provisions of Australian Standard 1428.1 - 1993 (or any standard in substitution thereof).

18. Contamination of Land

Prior to the submission of an application for Operational Works approval, the Developer shall contract a suitably qualified Environmental Consultant to undertake soil sampling on the subject land to test for chemical contamination. The results of this testing shall be submitted to Council's Development Manager in conjunction with the Operational Works application. Should any contamination of the subject land be identified, rehabilitation of the site shall be undertaken to the satisfaction of the Development Manager and Health and Environmental Protection Manager.

19. Infrastructure Contributions

In accordance with the current Council Policies in relation to infrastructure contributions, the Developer shall pay, prior to the commencement of use, the following monies to Council:

Contribution	Sector	Rate	Proposal	Calculation
Water Supply	Goodna (including Redbank Industrial) Water Zone	\$587.03/EP Unit Charge = 1.088 Total = \$638.68/EP	Number of Staff and Children: 137.000 @ 0.150 EP Existing Credit of 3.3 EP Proposal = 17.25 EP	\$638.68 x 17.25 = \$11,017.00 Total = \$11,017.00
Sewerage Catchment	Goodna (excluding Springfield) Catchment	\$629.36/EP Unit Charge = 1.088 Total = \$684.74/EP	Number of Staff and Children: 137.000 @ 0.150 EP Existing Credit of 3.3 EP Proposal = 17.25 EP	\$684.74 x 17.25 = \$11,812.00 Total = \$11,812.00
Road Contributions	Goodna	\$1,437.77/EP Unit Charge = 1.026 Total = \$1,475.15/EP	Number of Staff and Children: 137.000 @ 0.580 EP Existing Credit of 6.8 EP Proposal = 72.66 EP	\$1,475.15 x 72.66 = \$107,184.00 Total = \$107,184.00
Total for Development				\$130,013.00

The contributions above shall be applicable for a period of twelve months from the date of the development approval, and thereafter shall be based on the infrastructure contribution rates applicable at the date when payment is made.

20. Engineering Requirements

The following engineering requirements, detailed in Conditions 21 – 26, shall be completed to the satisfaction of the Senior Development Engineer.

Terms

- (a) RPEQ - A Registered Professional Engineer of Queensland, suitably qualified and experienced in the particular area of expertise required.
- (b) QUDM - The Queensland Urban Drainage Manual, produced by the Queensland Department of Primary Industries.

- (c) Queensland Streets - The Design Guidelines for Subdivisional Street Works, prepared for the Institute of Municipal Engineers of Australia (QLD).
- (d) AMCORD - The Australian Model Code of Residential Development produced by the Commonwealth Department of Housing and Regional Development.
- (f) MUTCD - The Manual of Uniform Traffic Control Devices, published by DMR.
- (g) Ipswich Water - Commercial Business Unit of Ipswich City Council providing water and sewerage services.

21. Roadworks

- (a) All traffic signs and delineation shall be installed in accordance with MUTCD.
- (b) The Developer shall extend the 1.2 m wide concrete footpath on the western side of Spalding Crescent to match into the existing 1.2 m wide concrete footpath on the northern side of Alice Street.

The construction of footpaths shall be in accordance with Council's Standard Drawing SR.19. The concrete footpaths shall be on the same side as the street lights, and the maximum longitudinal grade shall not exceed 1:8.

- (c) The Developer shall provide additional kerb ramps at Spalding Crescent and Alice Street intersection (including the southern side of Alice Street) in order to comply with minimum 4 kerb ramps at the Tee intersection. Kerb ramps are to be constructed in accordance with Council's Standard Drawing SR.18.
- (d) The Developer shall remove the existing driveway access located on the Alice Street frontage by reinstating new concrete kerb and channelling, which will match the existing kerb and channelling in Alice Street.
- (e) The Developer shall provide to the satisfaction of the Senior Development Engineer linemarking, RRPM's and street signage (eg. No Standing) etc along Alice Street frontage and within the existing pavement in order to provide a left turn deceleration lane at Spalding Crescent intersection for the east bound traffic. The Developer shall also provide street signage along Spalding Street frontage to restrict on-street parking, and where necessary remove existing linemarking in Alice Street.

22. Access/Parking

- (a) Provision shall be made for pedestrian access directly from each child care centre building to the footpath in Spalding Crescent such that no child will need to get to the street level by passing through the carparking areas.
- (b) Design and construction of all access and parking shall be in accordance with the provisions of the Ipswich City Council Parking Code and the Australian Standards (2890 series).
- (c) Parking and manoeuvring areas shall accommodate the largest anticipated vehicle to use the site.

- (d) Adequate facilities for servicing the development shall be provided on site to ensure loading and/or unloading activities do not occur on-street.
- (e) Provision shall be made for all vehicles to enter and exit the site in forward gear.
- (f) All parking, access and manoeuvring areas shall be constructed of concrete, bitumen or pavers and shall be linemarked in accordance with the relevant Australian Standard.
- (g) A concrete driveway shall be constructed from the existing layback to the property boundary in accordance with Council's Standard Drawings SR.13 and SR.14.

23. Water

- (a) All works on live water mains are to be carried out by Council in accordance with Council's policy, and at the Developer's expense.
- (b) Where concrete footpaths are to be constructed, the Developer shall provide 100 mm diameter conduits under the footpath and in line with the conduits under the road, for future ease of installing the individual water services. The letter "W" shall be embossed in the concrete to mark the location of the conduit.
- (c) The Developer shall amend and/or seal off any existing water connections if necessary.

24. Stormwater

- (a) The Developer shall provide all necessary stormwater drainage (both internal and external to the development) and such drainage works (except for roofwater systems) shall be designed and constructed in accordance with QUDM such that the overall drainage system caters for a storm event with an ARI of 100 years.
- (b) Overland flow paths shall be suitably designed to cater for the water from a storm event with an ARI of 100 years. In the case where the piped system is carrying part of the flow, the overland flow paths shall be designed to cater for that volume which is represented by the difference between the predicted volume from the storm event with an ARI of 100 years and the capacity of the pipe system, noting the requirements of QUDM.
- (c) No ponding or redirection of stormwater shall occur onto adjoining land unless specifically approved by Council in consultation with the owner of the adjoining land.
- (d) Due consideration shall be given in the design and construction of the development in relation to the effect of the developed catchment flows on the downstream discharge receival areas. Suitable stormwater control devices are to be provided to ensure that there is no increase in flow in watercourses. Such control devices are to be designed so as to integrate the landscaping, recreational, infrastructural and drainage roles of watercourses.
- (e) All stormwater runoff from the development shall be discharged in a manner and to a point to be approved by the Senior Development Engineer. In this instance, stormwater discharge from all impervious areas shall be directed to the drainage channel to the west of the property in [REDACTED]

- (f) Stormwater drainage plans and calculations are to be submitted and approved by the Senior Development Engineer, in conjunction with the submission of an Operational Works application.
- (g) The Developer shall provide a stormwater detention basin (or system) on the subject land, which shall be designed and constructed in accordance with QUDM. The detention basin (or system) shall be constructed to ensure that flows, at any point downstream in the catchment, are not increased by the development for any combination of frequency and duration from the storm event with an ARI of 2 years up to and including the storm event with an ARI of 100 years.
- (h) The proposed Development shall be designed and constructed in accordance with the flooding report prepared by Tabletop Architects Planners Engineers titled 45 Alice Street, Goodna – Stormwater and Flood Report dated February 2006. As illustrated in this report it examines the stormwater and local flooding impacted on the subject site by a storm event with an ARI of 100 years.
- (i) The construction of all buildings or other structures are to be constructed with the base floor level 300 mm above the storm level associated with an ARI of 100 years.
- (j) The Developer shall install an appropriate sealed surface within the proposed clear flow path located in the south west corner of the subject property. This area is illustrated on Plan No: R01, in the stormwater and flood report prepared by Tabletop Architects Planners Engineers. This area will be used to transfer the stormwater flow into the existing drainage channel, therefore the sealed surface shall be designed to withstand the force of a high velocity flow of water without being removed.
- (k) Pollutant control devices shall be installed where applicable for the proposed stormwater management system. The proposed locations and types of devices shall be approved by the Development Manager.

25. Erosion & Silt Management

- (a) The Developer shall be responsible for the installation and maintenance of silt management facilities from the time of commencement of construction until the completion of all works on site. All silt management facilities are to be in accordance with the document "Soil Erosion and Sediment Control" published by the Institution of Engineers Australia, or equivalent.
- (b) If the Senior Development Engineer determines that silt damage has occurred on the site, or the downstream drainage system has become silted, the Developer shall be responsible for restoration. Such restoration shall be completed in the time determined by the Senior Development Engineer. Should the Developer fail to complete the works determined by the Senior Development Engineer within the specified time, Council shall complete the work and recover all costs from the Developer associated with that work.

26. Operational Works – Internal Works (Stormwater and Car Parking)
(i.e. Works not being handed over to Council)

- (a) Plans relating to all civil engineering works shall be prepared and submitted for review by Council under the cover of Form 1 - Part A (Common details for all applications) and Form 1 - Part E (Planning Scheme Works). The plans shall show full construction details, layout dimensions, and finished surface levels and shall be submitted together with the appropriate fees for Council approval, prior to the commencement of construction on site.
- (b) Engineering drawings shall be marked as confirmation that they have been checked and approved by a RPEQ.
- (c) The drawings shall be submitted as three A3 size sets and one full size set. Where municipal works are also being undertaken, it is usually appropriate to make a combined submission.
- (d) A "Certificate of Design" shall be submitted by a RPEQ, certifying that the design is in accordance with all relevant engineering standards, Council's requirements and standards, relevant development conditions of approval, and sound engineering practice.
- (e) Council reserves the right to require further amendments and/or additions at a later date, should design errors or omissions become apparent.
- (f) A certificate shall be submitted to Council by a RPEQ certifying that the completed works have been constructed in accordance with Council's requirements and standards and in compliance with the approved plans and specification. It is expected that the RPEQ will undertake the necessary inspections to make this certification.

27. General

- (a) All disturbed verge areas and allotments shall be graded, grassed and left in a mowable condition. The grass cover shall be obtained as early as possible during the development and an acceptable grass cover shall be achieved before the development can be accepted "Off Maintenance".
- (b) With reference to any works, on land under other private ownership, written permission for the works shall be obtained and forwarded to Council. Similarly, written clearances shall be obtained after the works are completed, unless otherwise accepted by the Senior Development Engineer.
- (c) All works required for this development shall take due regard of any and all existing services and, if considered necessary by the relevant authority or the Senior Development Engineer, such works shall be altered at the cost of the Developer.
- (d) Any allotment filling for a greater depth than 800 mm to provide for building platforms shall be conducted in accordance with Australian Standard 3798. Test results as required by Australian Standard 3798, and a certificate of quality and uniformity of fill shall be provided by a RPEQ. The level of responsibility shall be Level 1.
- (e) A certificate from a RPEQ shall be issued to Council certifying that any retaining wall greater than 800 mm in height is structurally sound and capable of withstanding any likely surcharge loads. Retaining walls greater than 1.0 m in height are to be provided with railings or other barriers to provide pedestrian safety.

- (f) Retaining walls shall be designed so that there are no imposed loads placed upon Council's underground services. This may include extending the footing to a level 300 mm below the invert of the pipe.
- (g) All imported and exported materials shall be transported only on routes approved by the Senior Development Engineer.
- (h) For batters resulting from cutting and filling of the site and producing slopes greater than 1:6, Council requires a RPEQ to certify that they are stable and properly drained.
- (i) Approval of the Senior Development Engineer is required for any fill intended to be placed over Council's underground services.
- (j) Signs are to be erected in the carpark to advise users that this carpark is subject to some flooding of the local creek due to storms with an ARI of less than 100 years. Also the Brisbane River has backwater flooding for those storms with an ARI in excess of 20 years.
- (k) A Flood Escape Plan and procedure is to be developed and periodically practiced/rehearsed in case of flooding of the site. This plan is to include permanently displayed signs and directions for staff and visitors/parents to follow.

28. Compliance with Conditions

- (a) Unless otherwise stated, all conditions shall be completed prior to commencement of use.
- (b) All conditions shall be completed to the satisfaction of the Development Manager.

29. Minor Alterations

Notwithstanding the requirements detailed in this approval, any other minor alterations and/or modifications acceptable to the Development Manager will suffice.

30. When Approval Takes Effect

This approval has effect in accordance with the provisions of Section 3.5.19 of the *Integrated Planning Act 1997* as follows:

- (a) If the applicant does not appeal the decision to the court - when the submitter's appeal period ends; or
- (b) If an appeal is made to the court - subject to the decision of the court, when the appeal is finally decided.

31. When Approval Lapses

- (a) This approval lapses:
 - (i) At the end of the relevant period, unless the change of use happens before the end of the relevant period. The relevant period for this approval is 4 years starting the day the approval takes effect; and

- (ii) Where the change of use of any premises established pursuant to the development approval has ceased for a period of at least 12 months.
- (b) An extended relevant period may be agreed upon, pursuant to Section 3.5.22 of the *Integrated Planning Act 1997*, provided a written notice to Council is made before the end of the relevant period. Such written notice is to be on Council's approved form, accompanied by the owner's consent and the prescribed fee in Council's Register of General Charges.

Advice

***The following advices are offered for your information only
and should not be viewed as mandatory conditions of this approval.***

Assessment Manager (Ipswich City Council)

1. Food Hygiene Licence and Registration

Where a premises used for the sale or preparation, packing, storing, handling, serving or, supplying of food or drink takes up tenancy at the site, Food Hygiene Licence and Registration must be obtained under the provisions of the Food Hygiene Regulation 1989. For further advice on this matter, please contact Council's Health and Environmental Protection Department on (07) 3810 6822.

2. Flooding

The subject site was fully inundated in the 1974 flood. Council, and its servants and agents, accept no liability or responsibility for any loss or damage to person or property of whatever nature or however caused as the direct or indirect consequence of the granting of the approval herein contained. Such approval has been granted at the request of the Developer and in reliance of information submitted by the Developer in support thereof.

3. Portable Long Service Leave

From 1 January 2001, the Building and Construction Industry (Portable Long Service Leave) Levy must be paid prior to the issue of a development permit where one is required for the 'Building and Construction Industry'. This applies to Building Works, Operational Works and Plumbing and Drainage Works applications, as defined under the *Integrated Planning Act 1997*, where the works are \$80 000 or more and matching the definition of 'Building and Construction Industry' under the *Building and Construction Industry (Portable Long Service Leave) Act 1991*.

Council will not be able to issue a Decision Notice without receipt of details that the Levy has been paid. Should you require clarification in regard to the amendments to the *Building and Construction Industry (Portable Long Service Leave) Act 1991*, you should contact QLeave on 1800 803 481 (free call) or (07) 3212 6855.

4. Fire Ants

In accordance with the *Plant Protection Act 1989* and the Plant Protection Regulation 1990, a quarantine notice has been issued for the State of Queensland to prevent the spread of the Red Imported Fire Ant (ant species *Solenopsis invicta*) and to eradicate it from the State.

It is the legal obligation of the land owner or any consultant or contractor employed by the land owner to report the presence or suspicion of Fire Ants to the Queensland Department of Primary Industries on 132523 within 24 hours of becoming aware of the presence or suspicion, and to advise in writing within seven days to:

Director General
Department of Primary Industries
GPO Box 46, Brisbane QLD 4001

It should be noted that the movement of Fire Ants is prohibited, unless under the conditions of an Inspectors Approval. More information can be obtained from the Queensland Department of Primary Industries website www.dpi.qld.gov.au.

The land over which you have made a development application is within a suburb known to have Fire Ants and as such is within a "Restricted Area". The presence of Fire Ants on the site may affect the nature, form and extent of works permitted on the site. In view of this it will be necessary for you to contact the Department of Primary Industries to investigate the site and for you to implement any necessary matters required by that Department prior to the commencement of any works.

There were forty-four (44) properly made submissions received with respect to this application. Details of the submitters are as follows:

1. [REDACTED]
GOODNA QLD 4300

2. [REDACTED]
GOODNA QLD 4300





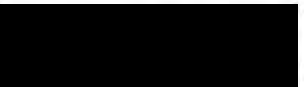







3. [REDACTED]
GOODNA QLD 4300

4. [REDACTED]
GOODNA QLD 4300

5. [REDACTED]
GOODNA QLD 4300

6. [REDACTED]
GOODNA QLD 4300

7. [REDACTED]
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20. [REDACTED]
GOODNA QLD 4300

21. [REDACTED]
GOODNA QLD 4300

22. [REDACTED]
GOODNA QLD 4300

23. [REDACTED]
GOODNA QLD 4300

24. [REDACTED]
GOODNA QLD 4300

25. [REDACTED]
GOODNA QLD 4300

26. [REDACTED]
GOODNA QLD 4300

27. [REDACTED]
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28. [REDACTED]
GOODNA QLD 4300

29. [REDACTED]
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30. [REDACTED]
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31. [REDACTED]
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GOODNA QLD 4300

43. 
GOODNA QLD 4300

44. [REDACTED]
Goodna Community Child Care Centre
22 Stuart Street
GOODNA QLD 4300

45. [REDACTED]
GOODNA QLD 4300

Pursuant to the provisions of the *Integrated Planning Act 1997*, I also enclose herewith a copy of Section 4.1.27 concerning the institution of an appeal.

Yours faithfully

[REDACTED]
DEVELOPMENT MANAGER