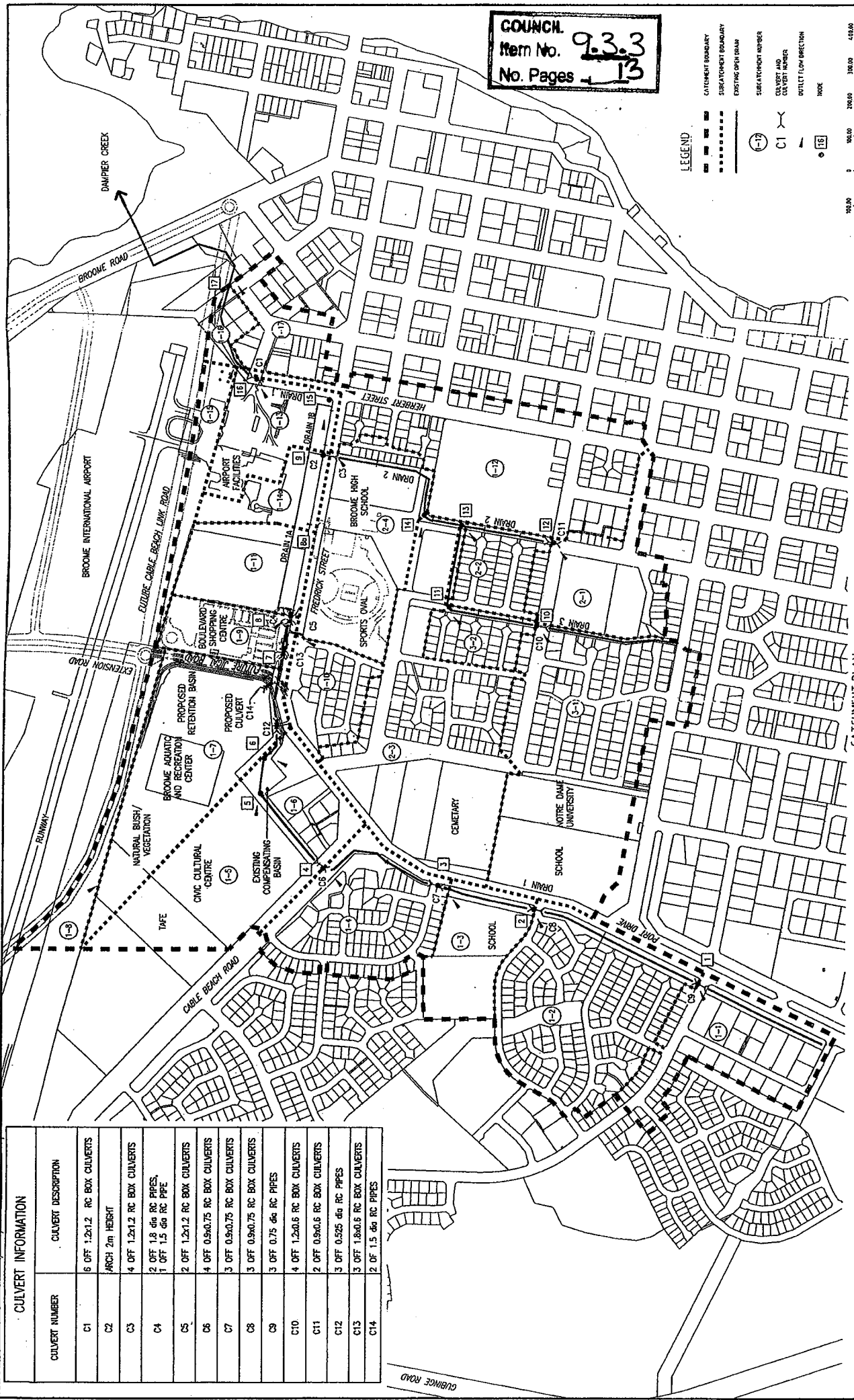


COUNCIL
Item No. **9.3.3**
No. Pages **13**

LEGEND

- CATCHMENT BOUNDARY (dashed line)
- SEGMENTATION BOUNDARY (dotted line)
- EXISTING OPEN DRAIN (solid line)
- SEGMENTATION NUMBER (circle with number)
- INVERT AND CULVERT NUMBER (circle with 'C' and number)
- OUTLET FLOW DIRECTION (arrow)
- ROCK (circle with 'R')

SCALE 1:500
SCALE 1:1000
SCALE 1:2000
SCALE 1:4000
SCALE 1:8000

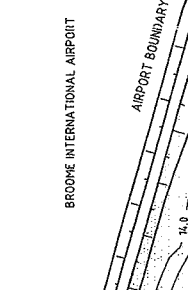
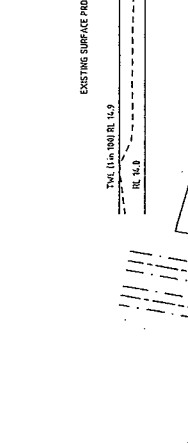
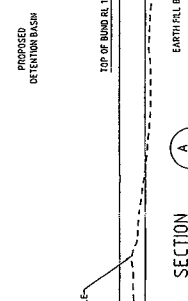
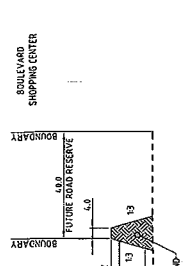
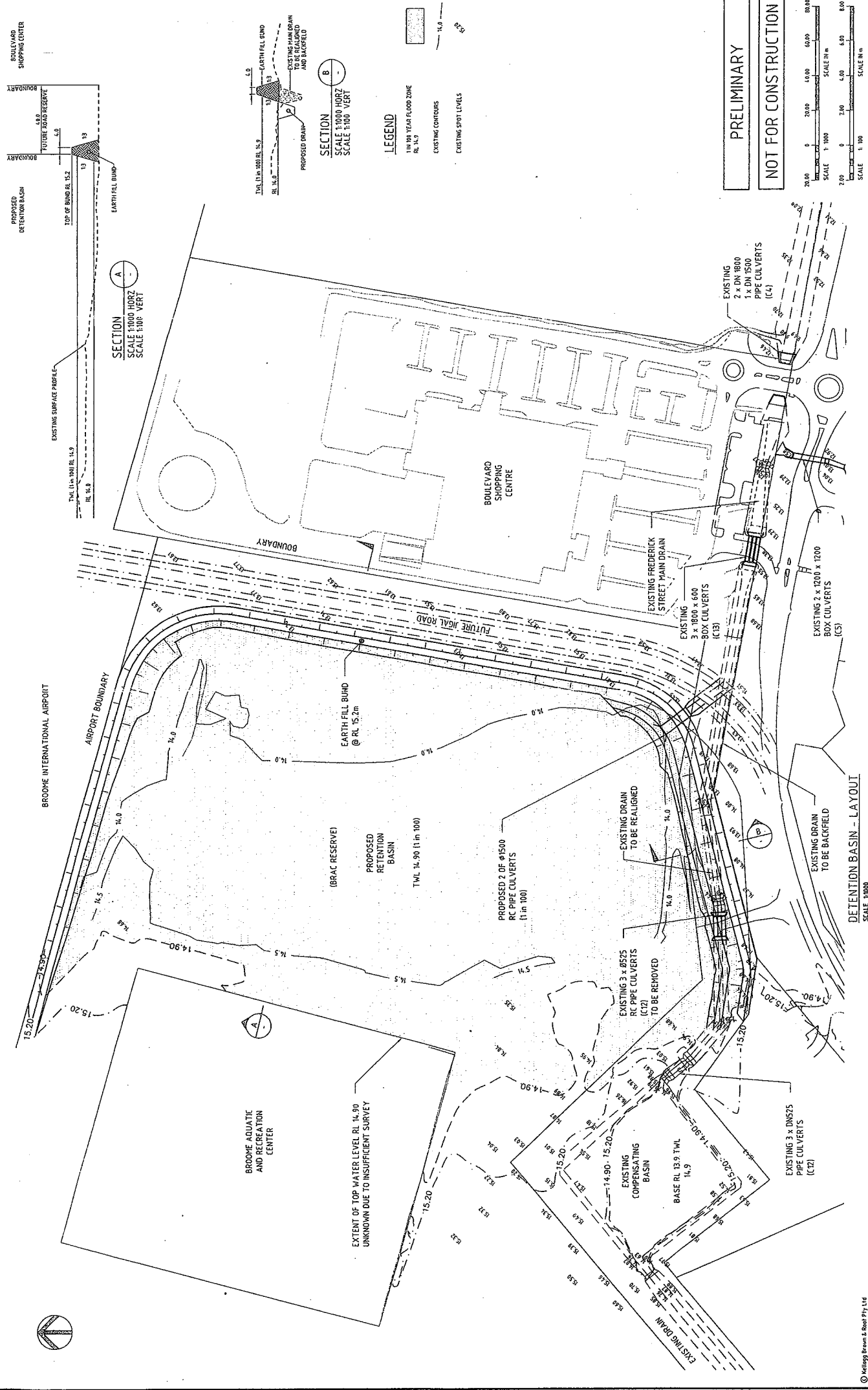


CATCHMENT PLAN
SCALE 1:5000

<p>SHIRE OF BROOME FREDERICK STREET MAIN DRAIN DIVERSION PRELIMINARY DESIGN EXISTING CATCHMENT PLAN</p>		<p>PROJECT No. PEG821 DRAWING No. PEG821-C-DWG-001</p>	
<p>KBR Kellogg Brown & Root Pty Ltd Level 2, Capital Centre, 25-51 George St, Perth, Western Australia 6000</p>		<p>DATE: 20/08/2015 DRAWN BY: G. DEVLIN CHECKED BY: G. DEVLIN SCALE: 1:5000</p>	
NO. 2000	DATE	DESCRIPTION	APPROVAL
A	15/08/2015	ISSUED FOR PERMIT	G. DEVLIN
B	15/08/2015	REVISED AS PER COMMENTS	G. DEVLIN
C			
D			
E			
F			
G			
H			
I			
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U			
V			
W			
X			
Y			
Z			

CULVERT INFORMATION	
CULVERT NUMBER	CULVERT DESCRIPTION
C1	6 OFF 1.2x1.2 RC BOX CULVERTS
C2	ARCH 2m HEIGHT
C3	4 OFF 1.2x1.2 RC BOX CULVERTS
C4	2 OFF 1.8 dia RC PIPES, 1 OFF 1.5 dia RC PIPE
C5	2 OFF 1.2x1.2 RC BOX CULVERTS
C6	4 OFF 0.9x0.75 RC BOX CULVERTS
C7	3 OFF 0.9x0.75 RC BOX CULVERTS
C8	3 OFF 0.9x0.75 RC BOX CULVERTS
C9	3 OFF 0.75 dia RC PIPES
C10	4 OFF 1.2x0.6 RC BOX CULVERTS
C11	2 OFF 0.9x0.6 RC BOX CULVERTS
C12	3 OFF 0.925 dia RC PIPES
C13	3 OFF 1.8x0.6 RC BOX CULVERTS
C14	2 OFF 1.5 dia RC PIPES

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No. 20/08/2015 10:29 AM - 10:30 AM User Name: G. DEVLIN



PRELIMINARY
NOT FOR CONSTRUCTION

SHIRE OF BROOME
FREDERICK STREET MAIN DRAIN DIVERSION
PRELIMINARY DESIGN
PROPOSED DETENTION BASIN LAYOUT

Kellogg Brown & Root Pty Ltd
KBR
Kellogg Brown & Root Pty Ltd, ABN 21 007 669 370
Level 2, Capital Centre, 255 St Georges Terrace
Perth, Western Australia 6000

AS SHOWN PROJECT NO. **1PE6821**
DATE: **14/09/2017**
DRAWING SCALE: **AS SHOWN** DATE: **14/09/2017**
DRAFTER: **G. HINDEN/SJK** CAD FILE: **PE821-C-DWG-002.dwg**

NO.	DESCRIPTION	DATE	APPROVAL

NO.	DESCRIPTION	DATE	APPROVAL

NO.	DESCRIPTION	DATE	APPROVAL

NO.	DESCRIPTION	DATE	APPROVAL

NO.	DESCRIPTION	DATE	APPROVAL

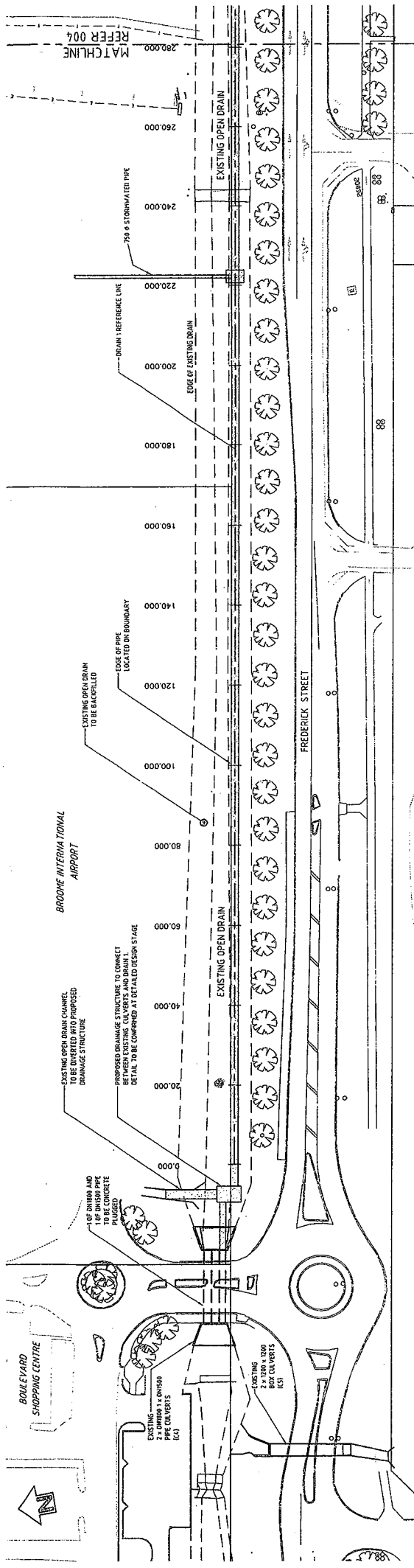
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SCALE 1:1000

NOTES

REFERENCE DRAWINGS

DATE: 28 Nov 2017, 09:54am User: jason.k@kbr.com.au

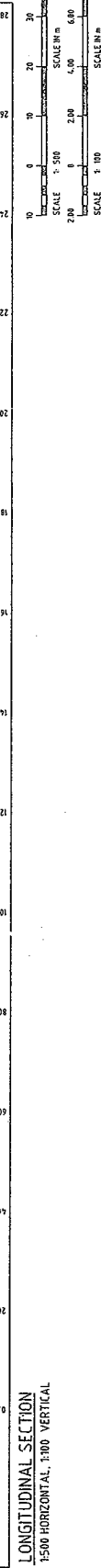
© Kellogg Brown & Root Pty Ltd



PLAN
SCALE 1:500

LONGITUDINAL SECTION
1:500 HORIZONTAL, 1:100 VERTICAL

STATIONING	EXISTING SURFACE LEVEL	DESIGN SURFACE	DESIGN INVERT	EXISTING SURFACE	DEPTH TO INVERT	CHANGE
129.99	12.99	12.519	8.918	10.555	1.556	0.000
127.91	11.796	12.791	8.836	10.208	1.271	4.000
119.76	11.558	11.558	8.508	9.957	1.449	120.000
114.38	11.426	11.426	8.262	9.817	1.393	160.000
112.91	11.295	11.295	8.590	9.685	1.295	100.000
113.76	11.262	11.262	8.672	9.916	1.242	80.000
100.00	10.000	10.000	8.836	9.855	1.019	0.000
99.16	9.916	9.916	8.508	9.357	1.449	120.000
98.26	9.826	9.826	8.262	9.683	1.242	160.000
88.10	8.810	8.810	8.100	9.223	1.763	200.000
80.98	8.098	8.098	8.098	9.973	1.875	220.000
79.56	7.956	7.956	8.016	9.155	1.199	24.000
79.26	7.926	7.926	8.016	9.155	1.199	24.000
70.24	7.024	7.024	8.016	9.155	1.199	24.000
68.52	6.852	6.852	8.016	9.155	1.199	24.000
58.98	5.898	5.898	8.016	9.155	1.199	24.000



PRELIMINARY
NOT FOR CONSTRUCTION

DATE: 20 Nov 2019 9:58am User: LK2977

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REVISIONS

NO.	DESCRIPTION	DATE	APPROVAL

NOTES

-
-

Notes on original drawing

APPROVALS

NO.	DESCRIPTION	DATE	APPROVAL

PROJECT INFORMATION

PROJECT No: A1 PEG621
 DRAWING No: PEG821-C-DWG-003-REV.049
 DRAWING SCALE: 1:500
 URG. SZ: A1 PEG621

CLIENT INFORMATION

Shire of Broome
 Frederick Street Main Drain Diversion
 Preliminary Design
 Plan & Longitudinal Section Sheet 1

DESIGNER INFORMATION

Kellogg Brown & Root Pty Ltd
 Level 7, Perth, Western Australia 6000
 Phone: 9100 660 37
 Fax: 9100 660 38
 Email: kbr@kelloggbr.com.au

DESIGNER SIGNATURE

DATE

SCALE

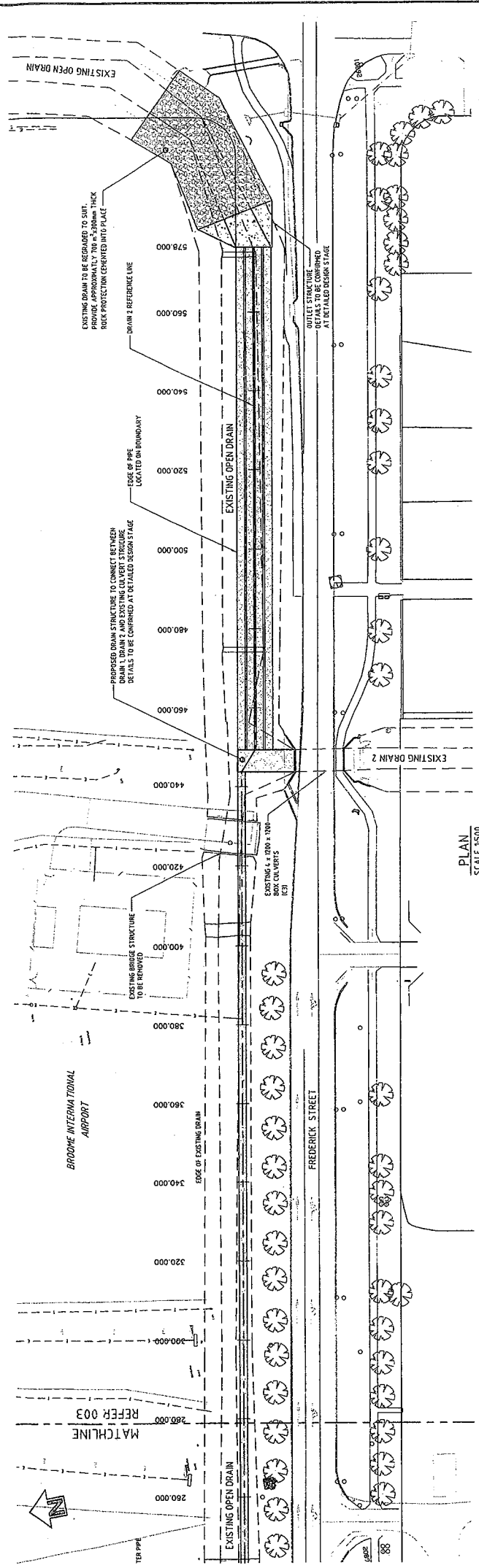
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TITLE

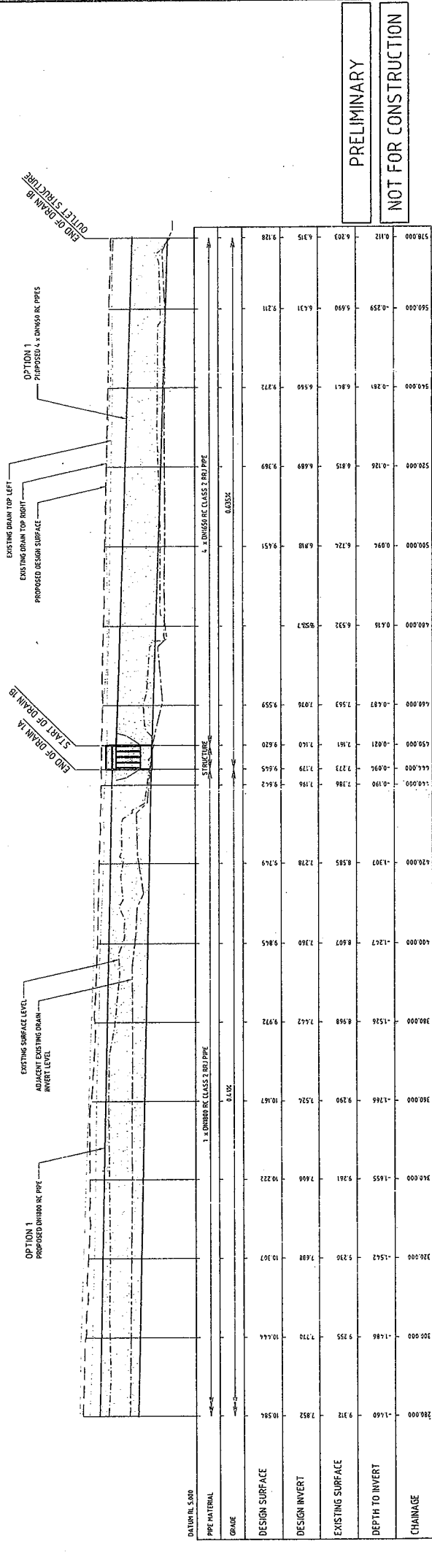
SHIRE OF BROOME
 FREDERICK STREET MAIN DRAIN DIVERSION
 PRELIMINARY DESIGN
 PLAN & LONGITUDINAL SECTION SHEET 1

DRAWING No. PEG821-C-DWG-003

REVISION B

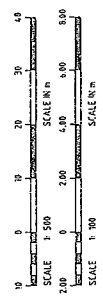


PLAN SCALE 1:500



LONGITUDINAL SECTION
1:500 HORIZONTAL, 1:100 VERTICAL

PRELIMINARY
NOT FOR CONSTRUCTION



SHIRE OF BROOME
FREDERICK STREET MAIN DRAIN DIVERSION
 PRELIMINARY DESIGN
 PLAN & LONGITUDINAL SECTION SHEET 2

KBR
 Kellogg Brown & Root Pty Ltd
 Level 2, Capital Centre, 255 St Georges Terrace
 Perth, Western Australia 6000

PROJECT No. **PEG821**
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 DRAWING SCALE **1:500**
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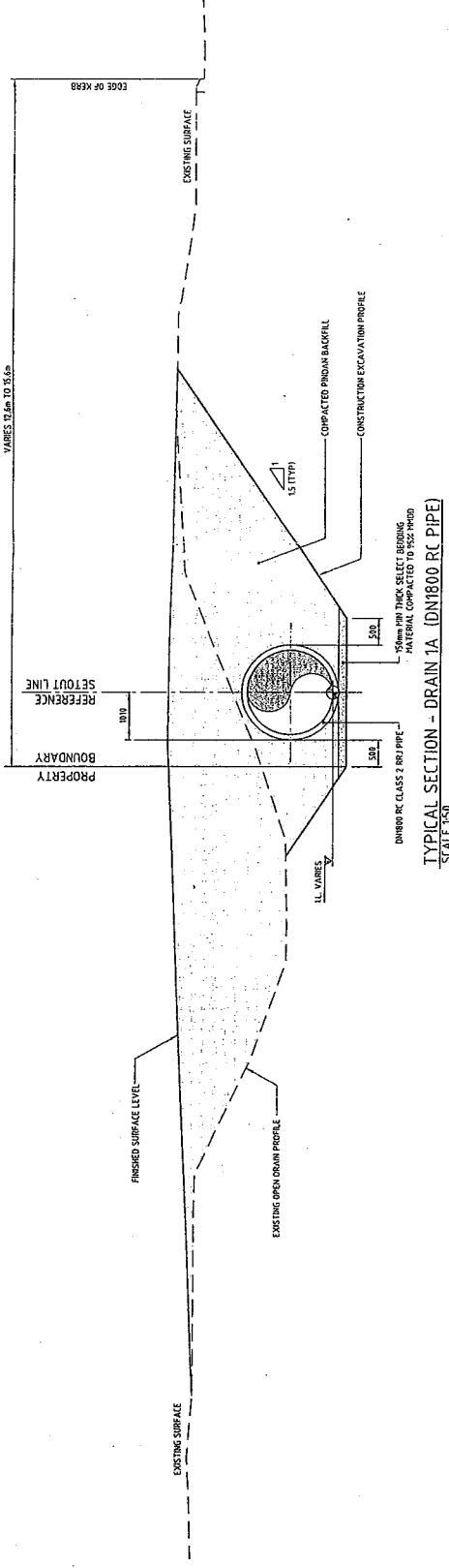
NO.	DATE	DESCRIPTION

NO.	DATE	DESCRIPTION

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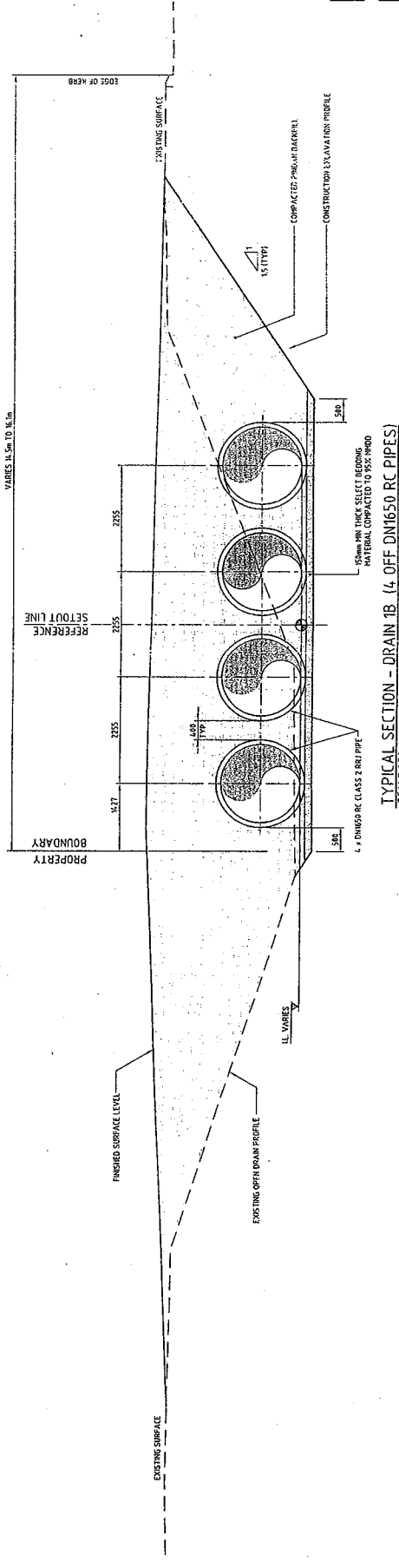
BROOME INTERNATIONAL AIRPORT

FREDERICK STREET ROAD RESERVE



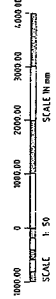
BROOME INTERNATIONAL AIRPORT

FREDERICK STREET ROAD RESERVE



PRELIMINARY

NOT FOR CONSTRUCTION



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 REFERENCE DRAWINGS
 P10 Date: 28 Nov, 2007 - \$99m User Name: 1sk7127

REV	DATE	DESCRIPTION	REVISIONS	APPROVALS

A		INCLUSION IN REPORT		DATE	APPROVALS

DRAWING No.		DESCRIPTION	
PROJECT No.			
DESIGN APPROVAL	P. DAVIES		
CONSTRUCTION APPROVAL	A. BERRY		
DRAWING No.	AS SHOWN		
PROJECT No.	A1		
DRAWING No.	PEG821		
PROJECT No.			

SHIRE OF BROOME
 FREDERICK STREET MAIN DRAIN DIVERSION
 PRELIMINARY DESIGN
 TYPICAL SECTIONS - OPTION 1 (RC PIPE)

Kellogg Brown & Root Pty Ltd
KEBR
 Kellogg Brown & Root Pty Ltd
 Level 2, Capital Centre, 25-31 Georges Terrace
 Perth, Western Australia 6000

PROJECT No.
 DRAWING No.
 SCALE 1:50
 REVISION
 A

PLAGG

MPS: 6032

BROOME INTERNATIONAL AIRPORT

1091223 - 49198

Mr. K.R Donohoe
 Chief Executive Officer
 Shire of Broome
 PO Box 44
 BROOME WA 6725

Dear Mr Donohoe,

Broome International Airport – Frederick Street Drain

I refer to previous correspondence and discussions regarding that section of Frederick Street Drain on land owned by Pearl Coast Properties (PCP) and covered by a Drainage Licence.

At Council's meeting on 26th November 2009 it was resolved that Council "*Initiates an amendment to Town Planning Scheme No.4 to rezone the drainage licence area from development zone to drainage reserve*". This resolution removed this from the Airport Development Plan process.

If the Shire intends to rezone that section of the drain downstream of the Boulevard Shopping Centre (being that area covered by the existing Drainage Licence) from Development Zone to Drainage Reserve then, pursuant to the provisions of the Planning and Development Act 2005, the owner of the land, (PCP) is entitled to obtain compensation from the Shire. It would be appreciated if you could confirm what the Shire intends in this regard.

We also have concerns about the status of that section of the drain downstream of the MacPherson Street culvert which traverses airport operational land. Re-zoning this section of the drain to "Reserve" would not be acceptable to PCP or the operators of the airport, Broome International Airport Pty Ltd (BIA).

A meeting to progress this project has been arranged for 28th January 2010 at 11 am at the Shire offices. Ahead of the meeting I take this opportunity to outline the following items for discussion;

1. Is it still Council's intention to relocate the section of drain from the Boulevard Shopping Centre to Herbert Street wholly in the Frederick Street road reserve in accordance with the objectives of *the Frederick Street Trunk Drain – Infrastructure Design Report*, prepared by consultants Kellogg Brown & Root (KBR). This objective has been discussed on many previous occasions.

2. How does Council see itself funding and/or recouping the costs to relocate the drain into Frederick Street road reserve, given that PCP will make a contribution of 20% of the costs as has been put forward at previous meetings? Would this be by;
 - a) Approaching the State Government to provide funding to recognise previous Government sponsored land developments that have accessed this drain, with no headwork's fees charged in the past.
 - b) From future developments via a headwork's charge/contribution.
 - c) A joint, or individual submission, by BSC and/or PCP to Royalties for Regions, based on the Government's previous up-stream developments and sale of land.
3. What would be the process to ultimately place this section of the drain in the Frederick Street Road Reserve and why would Council look to initiate a scheme amendment to change the zoning from Development Zone to Drainage Reserve ahead of this?

In summary, we have held discussions with various Council staff and Councillors from pre 2000 in an attempt to come up with a resolution regarding the drain, it's ultimate location, undergrounding the Frederick Street portion and fair market rental, etc. We look forward to coming up with a solution that suits all parties.

I look forward to meeting with you on the 28th January 2010. In addition to me, those attending from BIA will be Messrs Lou Sauzier, Rob Menzies and Paul McSweeney.

Yours sincerely



Nick Belyea
General Manager

18 December, 2009

Our Reference: FRE-1/Lt1653
Enquiries: Darryl Butcher

Shire of Broome
ABN 94 526 654 007

27 Weld Street
PO Box 44
Broome, WA, 6725
Phone: (08) 9191 3456
Fax: (08) 9191 3455
shire@broome.wa.gov.au
www.broome.wa.gov.au

29 December 2009

Mr N Belyea
General Manager
Broome International Airport Pty Ltd
Locked Bag 4016
Broome WA 6725

Dear Mr Belyea,

Frederick Street Drain

I refer to your letter dated 18 December 2009.

I acknowledge your comment regarding provisions in the Planning and Development Act 2005 relating to compensation. At this stage Council has a resolution to amend its Scheme and that resolution will be actioned as required. Following the preparation of the necessary documentation the proposed amendment will be processed in accordance with the Town Planning Regulations.

You advise that PCP and Broome International Airport Pty Ltd have concerns about the status of the section of drain downstream of the MacPherson Street culvert. Council's resolution of 26 November 2009, *Initiates an amendment to Town Planning Scheme No 4 to rezone the drainage licence area from development zone to drainage reserve*, refers to the area covered by the Drainage Licence and as such includes an area east of the MacPherson Street culvert. I cannot see any basis for differentiating between one portion of the Drainage Licence area and another.

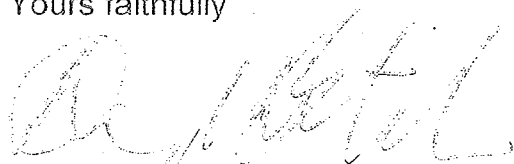
You have asked if it is still Council's intention to relocate the drain from Boulevard Shopping Centre to Herbert Street wholly within the Frederick Street road reserve. At this stage Council has not resolved to relocate any sections of the drain. Shire staff have participated in the investigation for design of an option for the relocation of a section of the drain for cost estimate purposes. The decision to proceed with any such relocation would be assumed to be dependant on appropriate funding being available.

Appropriate funding is considered to be funding under some formulae that does not involve unrecompensed municipal funds. The options you outline in your letter would need to be tested to see if they are feasible.

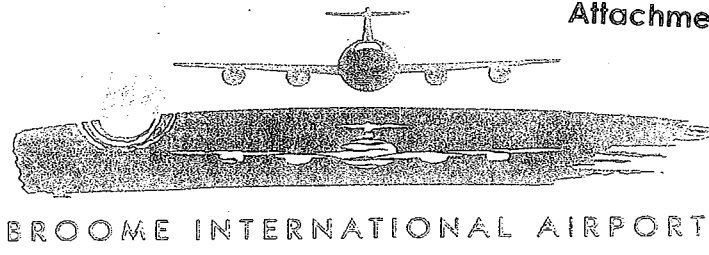
At this stage there appears to be a number of options for the drain, some of which involve the relocation of portion or it into the Frederick Street road reserve. There are many issues to be resolved before the future of the drain can be considered to be settled and the resolution of these issues may take an extended period of time. It is therefore considered prudent to place the Drainage Licence area in a reserve under the Town Planning Scheme to protect the future operation of this major piece of infrastructure.

I look forward to meeting with you and continuing discussions towards an acceptable solution to the future of this drain.

Yours faithfully

A handwritten signature in dark ink, appearing to read 'D. Butcher', written in a cursive style.

DARRYL BUTCHER
DIRECTOR DEVELOPMENT SERVICES



BROOME INTERNATIONAL AIRPORT

Pearl Coast Properties Pty Ltd
ABN: 34 009 197 031

Suite 6, 2a Brodie Hall Drive, Technology Park, Bentley, Western Australia 6110
Telephone : (08) 9470 7200 Facsimile : (08) 9470 5955
Website: www.broomeair.com.au

Handwritten notes:
funds
presented to
me by [unclear]
27/10/10

27 January 2010

Mr Graeme Campbell
The President
Shire of Broome
PO Box 44
BROOME WA 6725

FILE:	FRE-1/LT 1653	PLAGG
ACTION OFFICER:	FRE-1/GEN-DRAIN	
ACTION:	CEO	DDS
(sign & date):		DES
RECORD NO:	1100127-49755	
FURTHER REFE:		
ACTION OFFI:		
ACTION RELE:		

Dear Sir,

FREDERICK STREET DRAIN

In light of our understanding that there are no funds available to the Shire at this time that can be used to relocate the Frederick Street drain, we are writing to you with a suggestion on the matter ahead of the meeting on 28 January 2010.

It has been suggested by Shire Planning staff and others that there are retailers who wish to establish in Broome and that the best location for this would be on airport land adjoining the Boulevard Shopping Centre and fronting Frederick Street.

We have a shared objective for the orderly expansion of Broome's retail and commercial area, particularly between Chinatown and the Boulevard Shopping Centre.

Since completing the current Airport Master Plan we have identified land on the eastern side of the Boulevard Shopping Centre that will not be required for airport aviation use in the future. This land could be subdivided and developed for mixed use commercial.

For a successful land release and good planning, as well as aesthetics, the open storm water drain within and adjacent to this land, being on the north side of Frederick Street, needs to be buried and piped wholly within the Frederick street road reserve as has been discussed with the Shire staff over several years.

It would be usual for a Shire to carry out this type of work (relocating infrastructure) and recover its costs from headwork's' contributions from users of the drain. Unfortunately in this case, approximately 90% of the users have already developed their land so this option is not available to the Shire.

We understand that the Shire has made approaches to both the State and Federal governments for financing this work, however, these approaches have been unsuccessful.

As you know, the drain is on airport land and the Shire has a month to month licence agreement with Pearl Coast Properties (PCP) for the drain to remain there.

Having considered the matter further, in our view, there is a way in which the drain can be relocated underground into the Frederick Street road reserve in a two stage process. This relocation will enable the development of non-airport operational parts of our land with direct frontage to Frederick Street and thereby provide additional income to the Shire.

Stage 1 would be to put the drain underground between the Boulevard Shopping Centre and the unused bridge to the East. This would remove the drain from part of our land not required for airport operations. We propose that we undertake Stage 1, at our cost in 2010/11, by installing the required 1800mm drainage pipe and ancillary engineering works. We expect over time to recover our costs for this from developing this non-airport operational land.

As part of Stage 1 the Shire will need to construct the drainage compensation basin to the west of the Boulevard Shopping Centre in accordance with the Shire's *Frederick Street Trunk Drain – Infrastructure Design Report*.

If we complete Stage 1, we envisage that we would not be charged any further headwork's charges for drainage on the subdivision and development of the affected parts of our land.

Stage 2 of putting the drain underground concerns the section between the unused bridge and Herbert Street, which adjoins airport operational land. This land needs to be retained by us for future airport use and we will, therefore, not have any opportunity to develop this land for commercial use.

We consider that it would be desirable to have this Stage 2 portion of the drain put underground in the Frederick street road reserve so that the aesthetics of this important road can be continued from the Boulevard through to Herbert Street.

We are proposing that we build Stage 1 at our expense to resolve the impasse caused by the lack of available funding for this project.

We understand the Shire Engineering Department and its consultants have completed the *Frederick Street Trunk Drain – Infrastructure Design Report* which includes a concept design and cost estimate. The final design of the drain, including details and drawings suitable for construction purposes, will need to be undertaken by the Shire in consultation with our engineering consultants. This would leave the Shire with the responsibility for the construction of only the upstream compensation basin, which is a minor part of the overall cost of the project.

It appears from current interest that about one third of the subdivisible land will be built on quite quickly with the final two thirds expected to take some years to develop the full extent of the Stage 1 frontage to Frederick Street. The Shire can then examine its financial position with the additional income from the land released by development of Stage 1 and determine whether it can finance the building of Stage 2 of the underground drain in the road reserve.

Should the Shire agree to what we suggest, an agreement would need to be entered into between us and the Shire. Obviously discussions need to take place to resolve detailed items, however we think it would be appropriate for the Shire to undertake Stage 2 at some time in the future. We believe the Shire's revenue from the subdivided land will go a long way towards paying for the costs of Stage 2. As part of the agreement and to provide certainty for the Shire we would agree to give the Shire a new licence over the remaining (open) drain on our land to replace the existing drainage licence agreement.

Our proposal to build Stage 1, at our cost (despite only a small percentage of the drain being required to drain water from our land) will enable an important mixed use commercial area to be available for development in a very timely fashion. By putting

the entire Frederick Street drain underground, from the Boulevard Shopping Centre to Herbert Street, Broome will have this important arterial road landscaped. Broome will also benefit from the availability of commercial use retail linking the Broome Boulevard Shopping Centre to Chinatown, as envisaged by the Shire's town planning scheme. Importantly, the entire works will not involve any costs to the existing rate payers of Broome, with the exception of ourselves.

We look forward to discussing this proposal at our meeting on 28 January, 2010.

Yours sincerely,

A handwritten signature in black ink, appearing to read 'Lou Sauzier', with a stylized flourish at the end.

Lou Sauzier

Broome International Airport Group