



Development Services Attachments
ORDINARY MEETING OF COUNCIL
Wednesday 17 April 2019

REPORT NUMBER	REPORT TITLE AND ATTACHMENT DESCRIPTION	PAGE NUMBER(S)
9.1.1	Bindoon Lifestyle Village and Caravan Park Expression of Interest: Lots 88 and 89 Great Northern Highway, Bindoon 1. Wastewater Treatment and Disposal for a Proposed Caravan Park and Lifestyle Village at Bindoon/ River Engineering (March 2019) 2. Draft Expression of Interest for prospective developers of a Lifestyle Village and Caravan Park development at Lots 88 and 89 Great Northern Highway, Bindoon	1 – 12
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9.1.3	Restrictive Covenant: Freehold (Green Title) Subdivision of Lot 100 (RN2035) Chittering Road, Lower Chittering (WAPC 156432) 1. Restrictive Covenant – S129BA Transfer of Land Act document 2. Deposited Plan (415966)	17 – 21



Our Ref C18027

Contact Michael Chessells

Date 19 March 2019

Shire of Chittering
6177 Great Northern Highway
Bindoon
WA6502
Att: Glenn Sargeson

River Engineering Pty Ltd

7/9 Griffin Drive, Dunsborough, WA 6281

ABN 78 146 050 384

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Dear Glenn,

RE: WASTEWATER TREATMENT & DISPOSAL FOR A PROPOSED CARAVAN PARK & LIFESTYLE VILLAGE AT BINDOON

The Shire of Chittering (the Shire) is proposing the development of a caravan park and lifestyle village (the proposed development) on Lot 979 Great Northern Highway Bindoon Western Australia (the site). It is proposed that the caravan park comprises 30 sites and the lifestyle village will consist of 119 dwellings of either 2 or 3 bedrooms. Although the design of the development is preliminary, a draft site layout plan is presented as Figure 1. Figure 2 shows the draft site layout overlain on an aerial photograph with relevant cadastral boundaries.

The site is approximately 16 hectares in area and was previously used for a golf course. The south west portion of the site currently contains a Shire community centre and the north-west portion is periodically used for horse based community activities. Otherwise, the site is vacant.

In 2005 the Shire commissioned Coffey Geosciences Pty Ltd (Coffey) to undertake a geotechnical investigation to characterise the site soils and geology, and describe civil engineering requirements for site development. In general, the site soils are classified as Class H – highly reactive clays, that overly Gneiss, Dolerite and colluvium. The Coffey report is presented in Appendix 1.

Due to the site having the above noted soil characteristics, the Shire has contracted River Engineering Pty Ltd (River) to undertake a site and soil evaluation in accordance with the relevant requirements of AS/NZS 1547:2012 On-site domestic wastewater management (the Standard).

This correspondence details the results of River's investigations in accordance with the Standard, and provides opinion as to required infrastructure to comply with any future applications for site sewage treatment and disposal to the Department of Water and Environmental Regulation (DWER) and the Department of Health (DoH).

Site and Soil Evaluation Procedure

The Standard requires the following tasks to be undertaken by suitably qualified and experienced persons.

1. A desktop study.
2. A site and soil check.
3. A site and soil assessment.

4. Evaluation of results and preparation of a site and soil evaluation report (SSE).

The status of the proposed development is “SSE surveys of land prior to zoning or rezoning the land use” (pp 36). It follows that this report examines and describes potential sewage treatment options rather than the specific detail required by the Standard when intending to construct and use a preferred treatment and disposal system.

Desktop Observations

An aerial photograph of the site is shown below.



In all general respects the site is suitable for urban development, being in the Bindoon township with proximity to community services. The site does not appear to be significantly constrained by topographic or environmental issues, and the geology and soil characteristics are the main engineering and environmental constraints.

The climate statistics for the site locality are presented in Appendix 2. The locality is characterised by a dry summer and a wet winter, and yearly evaporation exceeds yearly rainfall.

The site is located close to the Brockman River in a sewage sensitive location as defined by the Draft Government Sewerage Policy 2016.

Site and Soil Check

The Coffey report provides sufficient information to characterise the site soils and no further investigation was warranted, other than a site inspection to confirm aerial photographic interpretations. Percolation testing was not undertaken in the Coffey investigation however this would be required once the location of an irrigation area(s) was determined.

The site soils are relatively uniform and comprise reactive clays. The site soils are classified as soil Category 6 under the Standard with an indicative permeability of <0.06m/d (pp 39 Table 5.1).

The site would be classified as “unfavourable land” under the Standard (pp 95), which has the following definition.

Terrain soil combinations, which present severe limitations for land application of effluent, shall be shown on the plan. On-site system development in these areas shall be avoided, unless covered by specific design.

Site and Soil Assessment and Evaluation

The site is significantly constrained in relation to treated water disposal due to the following.

1. The site soils comprise reactive clays with very limited potential for water infiltration, especially when saturated.
2. The sites climate is such that most rainfall occurs over winter months where the site soils will become unsuitable for treated water disposal, and therefore treated water storage is required.
3. Treated water irrigation areas would need to be specifically designed and operated, and be significantly larger than in most other cases due to the low infiltration capacity of the site soils. Irrigation rates will require active management based on soil moisture levels and prevailing meteorological conditions.
4. The specialised treated water disposal requirements, and sensitive downstream receiving environment, dictate that a high level of waste water treatment is required to protect public health, safety and the environment.

Figure C1 – Site and Soil Evaluation Process for Subdivisions of the Standard (pp 91) provides a flow chart for determining the suitability of a site for disposal of treated water. Item C of the flow chart requires interpretation of desktop and preliminary investigations. In relation to the site the following is noted.

C Interpretation

Preliminary terrain-soil descriptions all indicate favourable potential for proposed land use? Answer = No.

H Select

All mapping units are unfavourable.

I Analyse limitations

If limitations can be overcome at an acceptable cost, specify land management to enable proposed use. If not, abandon the subdivision proposal.

Treated Water Disposal Options

The Standard specifies a number of options for sub-surface disposal of treated water including trenches, beds and mounds, and includes general design and construction information for these methods.

For Category 6 soils the Design Loading Rate (DLR) is generally not provided, rather there is reference to table notes as below:

To enable use of such soils for on-site wastewater land application systems, special design requirements and distribution techniques or soil modification procedures will be necessary. (pp 145 Table L1) (pp 172 Table N1)

The issue of using these options is further complicated by the fact that treated water disposal cannot occur when the site soils are saturated, which is likely over extended periods during winter months.

It is concluded that the use of traditional septic tank systems with passive treated water distribution trenches, beds or mounds is not sustainable for the proposed development at the site, and is unlikely to gain regulatory approval.

River does not support a decentralised system whereby individual or small groups of dwellings use passive treatment and disposal methods for treatment and disposal of waste water. The nature of the site soils, the sites climatic conditions and the density of the proposed development does not make this option viable.

River considers that the only viable option for sewage treatment and disposal for the proposed development is to construct a centralised facility that produces a high-quality effluent for land disposal by actively controlled irrigation, with an appropriately sized wet weather storage facility.

Base Data for Evaluation of Preferred Treatment and Disposal Option

The Shire has estimated the peak daily load of effluent to be 45kL per day, but notes a staged development timeline of 10 years. In real terms, the effluent load from any stage of the proposed development would need to be calculated from the relevant DoH guideline once the specific details were known. For the sake of an overall site water balance, it is assumed that 45kL is the peak effluent flow.

The Standard's recommended Design Irrigation Rate (DIR) for Category 6 soils using spray irrigation is 2mm/day (pp 160 Table M1). DIR at the site will vary as rainfall and evaporation rates change throughout the year, and there will be periods where the DIR is 0mm/day in winter and significantly higher during summer.

Evaporation and evapotranspiration should be the primary method of treated water disposal at the site, but 2mm/d, based on soil properties is assumed for this preliminary assessment. An irrigation area of 2.25ha allows for 100% disposal to land daily when conditions allow.

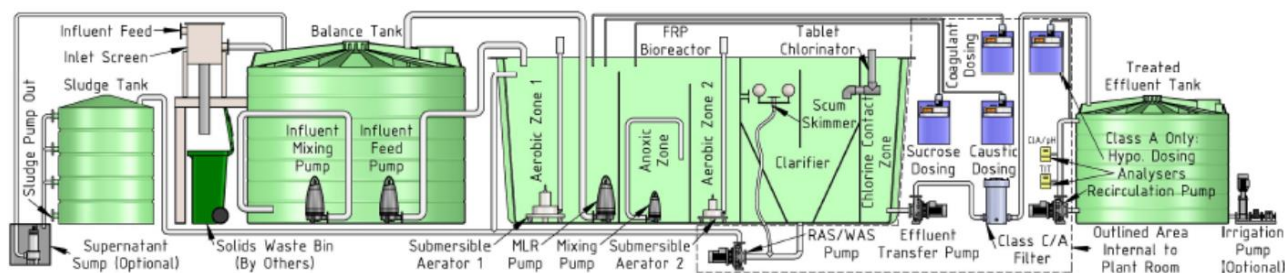
The standard for treated effluent wet weather storage is usually based on the duration of consecutive days where the irrigation field is not operable due to wet conditions. Agreement would need to be reached with DWER and DoH, but it is assumed that 14 days will be sufficient given the consecutive rain days data provided in Appendix 2.

Treated water is to be of suitable quality that it can be disposed of sustainably at the site. Again, the level of sewage treatment required would need to be agreed with DWER and DoH, but it is assumed that a "proven" packaged treatment plant that produced Class A treated water would be appropriate.

Sewage Treatment Plant

For this situation, an activated sludge bed bioreactor sewage treatment plant is proposed. The standard treatment process includes influent screening, balance tank mixing, anoxic & aerobic treatment for nitrification and denitrification, clarification, effluent sterilization and bag filtration (100 micron). To produce Class A treated water an auto-backwashing filter (25 micron), secondary chlorination via tank recirculation and residual trim hypochlorite dosing, and analysers for online monitoring of treated effluent turbidity, free chlorine and pH would be required.

A general arrangement for this type of treatment plant is shown below.



A photograph of a typical treatment plant is shown below. Given the proximity of odour and noise sensitive places to the site the treatment plant should be housed within a building (shed) which is vented through odour control filters.



A treatment plant of this type would typically produce an effluent with the following quality characteristics.

Risk Level	Medium (Class A)
BOD	<20 mg/L
TSS	<30 mg/L
pH	6.5~8.5
T-N	<10 mg/L (or 70 mg/L reduction)
T-P	1~2 (according to coagulant dose rate)
Turbidity	<5 NTU
E.Coli	<10 CFU/100 mL
Free Chlorine	0.2~2 mg/L

If DWER and DoH required a higher level of effluent treatment then a membrane bioreactor plant could be considered, however if public access to the irrigation area is restricted then the above plant type should suffice.

Irrigation Field

As noted above, with a DIR of 2mm/d, a total irrigation area of 2.25ha is required to dispose of 45kL on any given day. Evaporation and evapotranspiration is the preferred method of treated water disposal so the irrigation field is expected to comprise a 2.25ha relatively level area that would be turfed and irrigated via conventional sprinkler arrangements (similar to a sports oval).

Due to the nature of the site soils, the irrigation field would require an array of soil moisture sensors that interfaced with the irrigation control equipment to ensure that irrigation of the area does not produce overland flow. Surface runoff from upstream catchment areas would also need to be diverted around the irrigation field.

Regular maintenance of the irrigation field would be required in order to remove the nutrients assimilated by the turf grass species. The irrigation field would also need to be fenced to restrict public access during times when irrigation is occurring and for a period following irrigation.

Irrigation of treated water would need to be managed in accordance with a Recycled Water Quality Management Plan (RWQMP) prepared for and approved by the DoH.

There is certainly the opportunity to integrate the irrigation field into the proposed development to create an attractive public open space, although restrictions on public access would be required at times.

Wet Weather Storage

A storage for treated water would be required for situations where the irrigation field is not useable due to wet ground conditions. This storage is expected to be in the form of an open pond adjacent to the treatment plant. The clay soils on the site are suitable for lining of the pond and it could be constructed using balanced cut and fill, with compaction of a clay liner.

If it is assumed that DWER and DoH would accept 14 days as being acceptable for wet weather storage of treated water then the volume of the pond would need to be a minimum of 630 cubic metres.

Cost Estimates

River has assembled preliminary cost estimates for the elements described above as follows:

Capital Costs (ex GST)*

Treatment plant including equipment, installation and commissioning	\$450,000
Preparation of treatment plant base and construction of shed	\$80,000
2.25ha irrigation field with all distribution and control equipment	\$300,000
Wet weather storage based on a balanced cut to fill	\$40,000
Fencing of the irrigation field and wet weather storage	\$40,000
Preparation of RWQMP and liaison with regulators	\$25,000
Western Power connections (subject to discussions with Western Power)	\$25,000
Total	\$960,000

* note that no allowance has been made for gravity mains, sewage pump stations or rising mains to deliver sewage to the treatment plant as these costs are generally associated with site development.

Operational Costs (ex GST)*

Monitoring and maintenance (annual cost)	\$50,000
Monitoring actions in accordance with the RWQMP (annual cost)	\$25,000
Electricity (annual cost estimate)	\$40,000
Total	\$115,000

* note that no allowance has been made for maintenance of the irrigation field or regular attendance at the plant site for routine inspections as these tasks would likely be undertaken by Shire staff as part of normal duties.

Observations

The above estimates are for a treatment plant that is capable of processing the entire flow from the proposed development. In real terms the development would be staged over a potential 10 year period, however the proposed treatment plant has a minimum daily flow requirement of 12.5kL so this would need to be achieved in the first stage.

Upon review, the Shire may amend the proposed development layout to either increase or decrease the site yield. The above estimates cater for a flow between 12.5kL per day and 50kL per day, 630 cubic metres of wet weather storage and a controlled irrigation field of 500 square metres per kilolitre per day of treated water. Variations are acceptable but there are certain thresholds that would require a different treatment plant arrangement with subsequent impact on costs.

The treatment plant and wet weather storage facility would need to be sited at a location that was separated from sensitive uses (dwellings) by as much distance as possible, whilst being at a low point of the site to minimise the requirement for sewage pump stations. The most logical location for the treatment plant is the south west portion of the site.

An option exists whereby the Shire could construct the proposed caravan park as the first stage of development and reduce the size and cost of the treatment plant, wet weather storage and irrigation field in the first instance. As the site develops, infrastructure may become redundant however.

An option exists where treated water could be beneficially used for other Shire assets in close proximity to the site. A possible location is the existing sports facilities to the north west of the site (approximately 1.3ha) however this action would be subject to the requirements of an approved RWQMP and any other necessary approvals at the time.

For the reasons described throughout this document, centralised sewage treatment, storage and disposal is required to cater for the proposed density of development and the “unfavourable land” classification of the site soils. It is also noted that the site soils will present civil engineering limitations during design and construction.

Should you have any questions or matters for discussion please contact me.

Yours faithfully,



Michael Chessells
for River Engineering Pty Ltd



ABN 48 445 751 800

6177 Great Northern Highway

PO Box 70, Bindoon WA 6502

T: 08 9576 4600

E: chatter@chittering.wa.gov.auwww.chittering.wa.gov.au

Request for Expression of Interest

PROPOSED CARAVAN PARK AND LIFESTYLE VILLAGE AT LOTS 88 AND 89 WOOLAH RISE, BINDOON.

The Shire of Chittering invites suitably qualified and experienced consultants to submit an Expression of Interest (EOI) for the development of a caravan park and lifestyle (park home) village in the Bindoon town site. It is proposed that the caravan park will consist of 30 sites and the lifestyle village will consist of 119 dwellings of either 2 or 3 bedrooms (predominately 2 bedrooms). A schematic of a possible development is attached along with a location map.

The village will be managed as an “over 50’s” facility with residents owning their home (modular dwelling) but with the entire development remaining on a single parcel of land. Under the management arrangements, residents will pay a lease for the land and the maintenance of common facilities. Apart from casual visitation, the average occupancy will be two residents per unit. Families will not be permitted to reside in the development.

The site is approximately 16 hectares and consists of a heavy soil profile with a moderate downslope. It is located close to the Brockman River in a sewage-sensitive location determined under the Draft Government Sewerage Policy

2016. It is estimated that the daily wastewater loading rate will be approximately 45 KL. The wastewater will require treatment to the standards required of the above Policy and will also require approval from the Department of Health.

It is envisaged that the development and all infrastructure including the wastewater treatment and disposal system will be on the one lot after amalgamation. The development could proceed in stages, depending on the model submitted by proposed developers. Attached is a site and soil evaluation (SSE), including details of a suitable type of wastewater treatment and disposal system and estimated costings, provided by River Engineering.

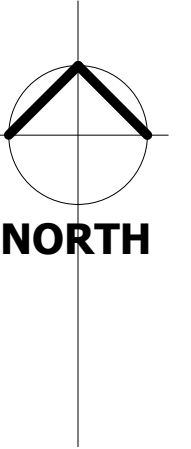
The development will proceed under the requirements of the *Caravans and Camping Grounds Act 1995* and the *Caravans and Camping Grounds Regulations 1997*.

It is proposed that Council would supply the land on a long-term lease basis. Thus, it is anticipated that the development would be a joint venture based upon the Council supplying the land and the developer undertaking the role of developer and operator. Contract management and lease options can be structured to suit under a commercial relationship.

It should be noted that there is considerable land available for future expansion of the caravan park or lifestyle village or a future aged care facility.

Further information can be obtained from:

(to be determined by EMT)







12 February 2019

Mr Neil Hartley
Chief Executive Officer
Shire of Chittering
PO Box 70
BINDOON WA 6502

Cc'ed Peter Stuart, Executive Manager Development Services

Dear Neil

With the very successful running of Make Smoking History Targa West in 2018 and the positive feedback we have received from competitors and spectators, in line with the MOU Approved by the Shire of Chittering on 16 March 2016 we would like to make an application to run Make Smoking History Targa West in the Maryville Downs Estate in 2018 on Saturday 10 August.

In addition for 2019, after our consultation with the Shire of Chittering Councilors and Management Team on 17 October 2018, followed by a Survey of the Muchea Residents in December and then a Community Meeting on 6 February 2019, we wish to apply to run a Special Stage in the Town of Muchea.

Attached are our Road Closure Application Form and Map for the closure of the roads Muchea and Maryville Downs Estate. The Muchea the Road Closure Times are 3.00pm to 5.30pm. We will make allowances for school buses and residents returning from school or work. For Maryville the Road Closure Times are 1:00pm to 4:30pm. The Stage has been slightly changed from 2018.

We are now in the planning stages for the 2019 event. It would be our desire to run tboth stages twice in quick succession as we have done successfully in 2016, 2017 and 2018. By running the stage twice, there will be a period where the cars will be parked up in McKenzie Street, Muchea and on Santa Gertrudis Drive, Maryville where we will promote these as a locations where the public can come and have a look at the cars and meet the drivers.

In Maryville we will run a Parade of local exotic cars around the Stage before the competition started. This has been very popular with the drivers and residents.

It will be a requirement of the rally to fully close all roads that make up the Special Stages. In addition to closing off all roads, we will also have to close off all driveways and gates that lead onto the course. The cars will be running at 30 second intervals. We require one hour before the first car to close the roads and driveways and thirty minutes after the last car to reopen them. A team of local volunteers assisted in doing this in 2018 and we are confident they will again this year.

To notify the landowners we would contact local newspapers for press coverage and would do a letterbox drop in the area prior to the rally. Road Closure signs will be in place for 1 month prior to the event.



We also wish to seek permission to use the area behind the Lower Chittering Volunteer Fire Brigade as a refuel point on the Saturday. We are aware the council has concern over fuel spillage. This has never been a problem in our 14 years of operation. We will have our own fire crew on location equipped to clean up fuel spillage or extinguish a fire.

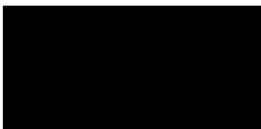
Targa West has the support of the Confederation of Australian Motor Sport (CAMS), the controlling body of motor sport in Australia. CAMS also provide the Public Risk Insurance cover for the event of \$100,000,000.00. We are extremely confident in gaining the approval of the Western Australian Police as they have not raised any concerns regarding the running of the event over the past ten years.

We will provide the Shire with a Risk Management Plan and a Traffic Management Plan produced by Taborda Contracting and a Rally Safety Plan for the event.

The Shire of Chittering will be treated as an event sponsor and your logo will be used in prominent positions in all posters, publications, websites, social media etc. We will continue our high profile Social Media promotions including video clips and are currently reviewing the value of television shows compared to pre-event advertising.

We look forward to working with the Shire of Chittering to produce another terrific event.

* Regards,



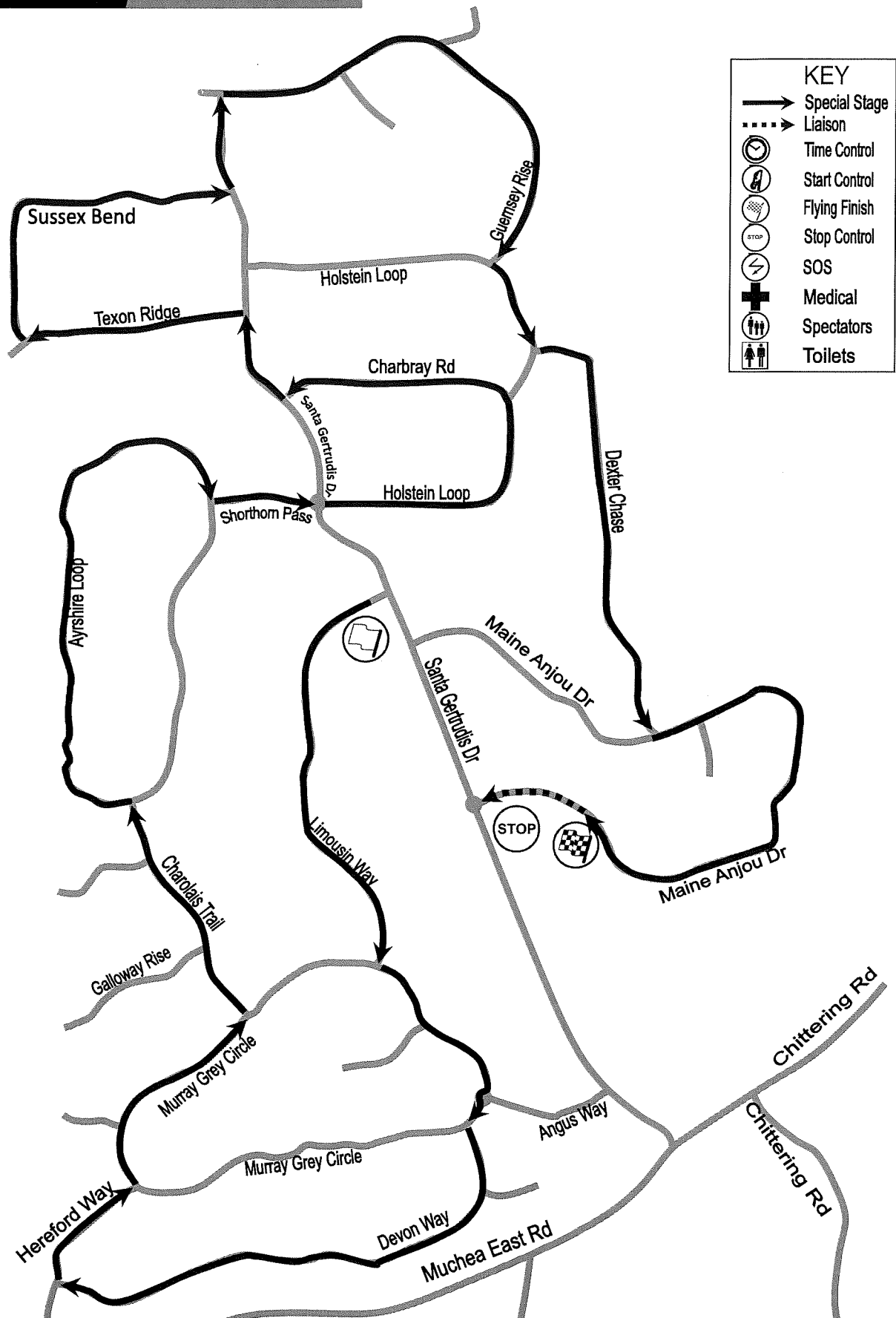
Ross Tapper
Clerk of Course / Event Director
0418 950 022
ross@targawest.com.au



Maryville Downs Special Stage

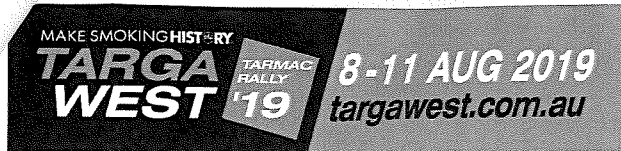
Lower Chittering

Saturday 10th August 2019

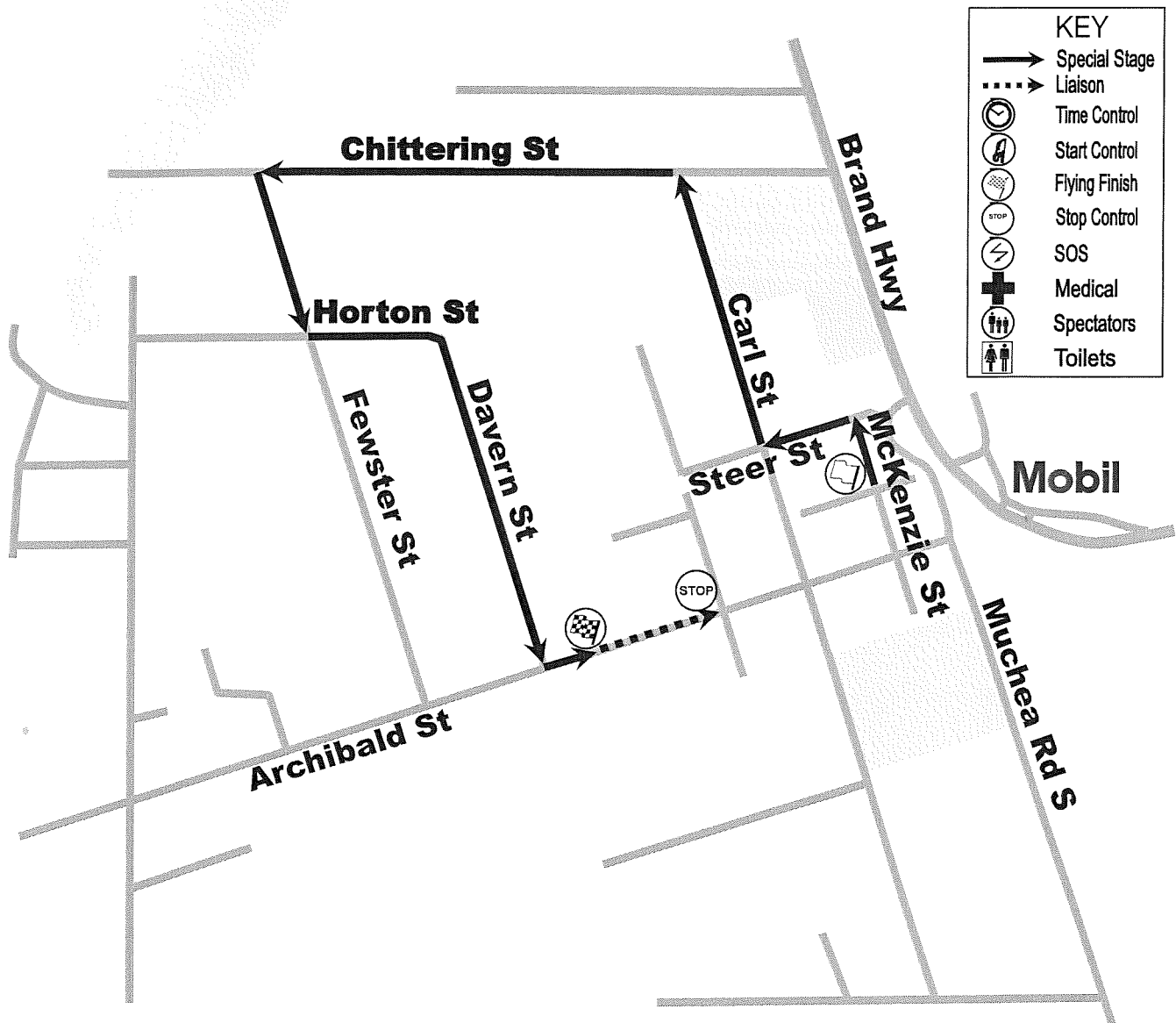


ROAD CLOSURE TIMES

Date	Road Closed	Rally Action	Road Open
10th August	1:00pm	1:50pm to 3:35pm	4:30pm



Muchea Special Stage Thursday 8th August 2019



ROAD CLOSURE TIMES			
Date	Road Closed	Rally Action	Road Open
8th August	3:00pm	3:45pm to 5:15pm	5:30pm

Joanne & Peter Gunn
2035 Chittering Road
LOWER CHITTERING WA 6084

1 March 2019

BY HAND

Mr Jake Whistler
Senior Planner
Shire of Chittering
6177 Great Northern Highway
BINDOON WA 6502

SHIRE OF CHITTERING
RECEIVED

11 MAR 2019

Office: SP
File: 18/03/144 A11720
Ref: 119/104119

Dear Mr Whistler

RE: SUBDIVISION OF 2035 CHITTERING ROAD, LOWER CHITTERING

We are the registered proprietors of the above property.

Further to previous correspondence we now submit for approval by the Shire:

1. Notification Under Section 70A; and
2. Restrictive Covenant – S129BA of the Transfer of Land Act.

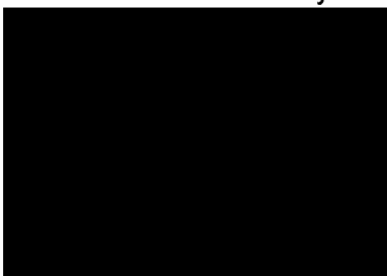
The subdivision presently before the Western Australian Planning Commission requires the approval from the Shire of these documents in order for us to proceed to Landgate.

These documents will then be transposed on to the two new titles for the proposed Lots 700 and 701.

If you could please put these documents forward at the next Shire Council meeting for their consideration it would be much appreciated.

We look forward to hearing from you in the near future.

Yours faithfully



FORM B2

Page 1 of 6 Pages

WESTERN AUSTRALIA
TRANSFER OF LAND ACT 1893 AS AMENDED

Date:

BLANK INSTRUMENT FORM

Restrictive Covenant - S129BA Transfer of Land Act

(Note 1)

THIS DEED is made on the _____ day of March 2019.

BETWEEN:

The Shire of Chittering (ABN 48 445 751 800) of 6177 Great Northern Highway, Bindoon Western Australia ("Shire").
and

Joanne Gunn and Peter Charles Gunn, both of 2035 Chittering road, Lower Chittering Western Australia ("Joanne and Peter").

RECITALS

A. Joanne and Peter are the registered proprietors of an estate in fee simple land being Lot 100 on Deposited Plan 408022 and being the whole of the land comprised in Certificate of Title Volume 2933 Folio 716 ("Lot 100").

B. The Shire is the Local Government Authority for Lot 100.

C. Joanne and Peter intend to subdivide Lot 100 ("the Land") in accordance with Deposited Plan 415966, a copy of which is annexed hereto as Annexure A ("the Deposited Plan").

D. In accordance with Section 129BA of the Transfer of Land Act, Western Australian Planning Commission requires each of the lots created by the Deposited Plan ("the Lots"), being Lot 700 and Lot 701, to be encumbered by the restrictive covenants set out herein so that the restrictive covenants will be noted on the Deposited Plan and when separate Certificates of Title issue for each of the Lots, the burden of each of the restrictive covenants is noted on each Certificate of Title.

NOW THIS DEED witnesses as follows:

1. Each Certificate of Title which issues for the Lots is to be encumbered by the restrictive covenants which will run with each of the Lots.

2. The burden of the restrictive covenants is to run with each of the Lots and will be enforceable against the registered proprietor of the Lots and every subsequent registered proprietor of the Lots.

3. Any terms defined in this Deed shall have the same meaning when used in the Restrictive Covenants.

IN WITNESS WHEREOF the parties have each executed this Deed the day and year first hereinbefore written.

ENCUMBRANCES

Limitations, Interests, Encumbrances and Notifications:

1. Nil.

PARTICULARS OF THE RESTRICTIVE COVENANT

No habitable buildings are to be built within areas identified as BAL-40 or BAL-Flame Zone.
(Local Government)

Executed on behalf of the Shire of Chittering (ABN 48 445 751 800)
under delegated authority of the Shire Council through a resolution
of Council at a formal ordinary council meeting

Signature: _____

Signer name: _____

Signer organisation: _____

Signer description: _____

Gordon Houston

Shire of Chittering

Shire President

Witness signature: _____

Witness name: _____

Witness address: _____

Witness occupation: _____

Signature: _____

Signer name: _____

Signer organisation: _____

Signer description: _____

Neil Hartley

Shire of Chittering

Chief Executive Officer

Witness signature: _____

Witness name: _____

Witness address: _____

Witness occupation: _____

Signature: _____

Signer name: _____

Witness signature: _____

Witness name: _____

Witness address: _____

Witness occupation: _____

Signature: _____

Signer name: _____

Witness signature: _____

Witness name: _____

Witness address: _____

Witness occupation: _____

Joanne Gunn

Peter Charles Gunn

