Planning Report to Support a Development Application
Former Star Theatre
Invermay

transport | community | mining | industrial | food & beverage | carbon & energy



Prepared for:	**Ben Davis**
Client representative:	**Ben Davis**
Date:	**3 June 2016** **Rev02**

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Appendices

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Reviewed by: ..... Date: 3 June 2016
Andrew Turner

Authorised by: ..... Date: 3 June 2016
Andrew Turner

Revision History					
Rev No.	**Description**	**Prepared by**	**Reviewed by**	**Authorised by**	**Date**
00	Planning Report to Support a Development Application	Ian Abernethy	Andrew Turner	Andrew Turner	25/05/16
01	Planning Report to Support a Development Application – hours and car park requirements	Ian Abernethy	Andrew Turner	Andrew Turner	27/05/16
02	Planning Report to Support a Development Application – hours and clarify use	Ian Abernethy	Andrew Turner	Andrew Turner	03/06/16

1. Introduction

This is a Planning Report to support a development application to change the use of a retail outlet to a theatre. The building was granted building approval in 1937. The street address is 217b Invermay Road.

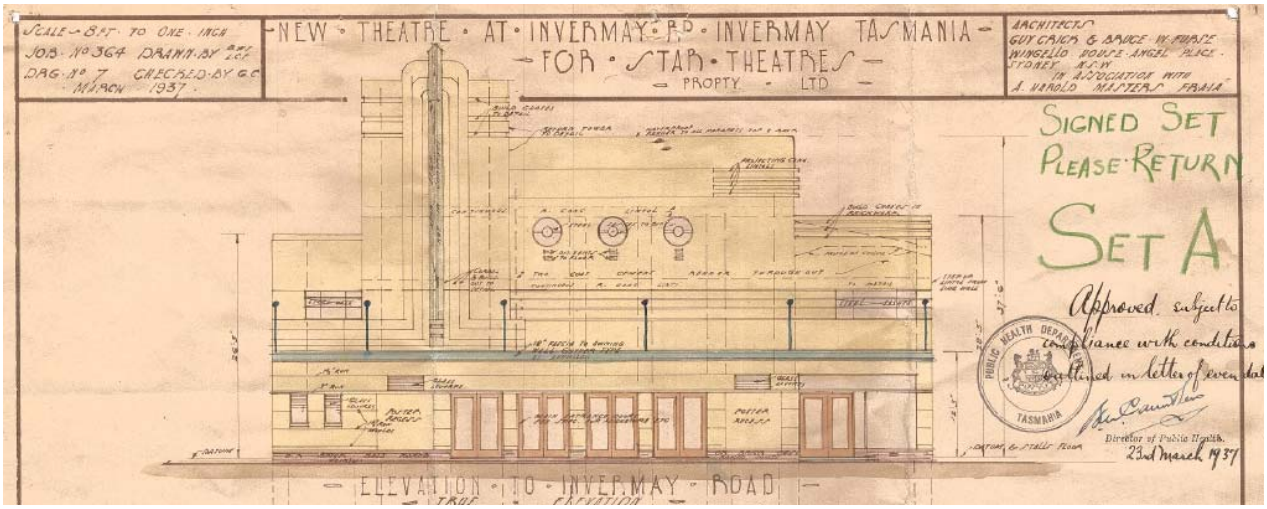

Figure 1 - 1937 Approved Elevation

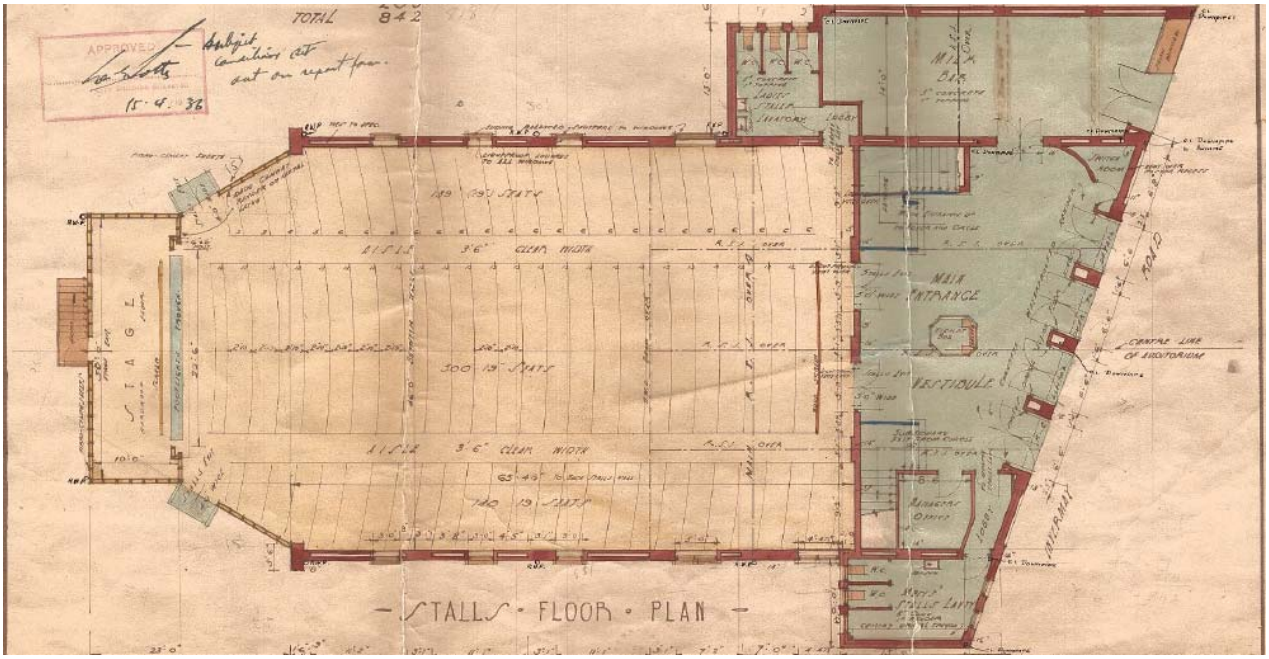

Figure 2 - – 1937 Approved Ground Floor Plan

2. Proposal and Locale

The proposal relates to changing the use of a building from a Charity Shop to a Theatre – in essence returning the building to its original purpose. A series of ancillary uses will support the main use.

The facility will open at 7.00am until 12 (midnight) 7 days a week. The breakdown of uses and hours will be – Cinema/theatre – Monday to Friday evenings (5.30pm) until 10.30/11.00pm (the theatre may operate for matinee sessions as required or if booked by a group) and Saturday 10.30 am until 10.30/11.00pm. It is proposed to operate a cafe from the site serving Breakfast (Sat/Sun from 7am); Light lunches 7 days a week and dinner (for small numbers) when the Theatre is operating.

A small micro brewery is proposed for the site – capitalising on the boutique nature of the use. The microbrewery's focus is on brewing beer for the venue and to add to the appeal of the Star Theatre as a visitor attraction. It is anticipated that approximately 70% of the volume of the microbrewery will be sold in the venue. As such the use becomes subservient to the main use as a theatre/cafe.

At times when the theatre/cinema is not operating the venue can be hired for functions/events/launches/ corporate presentations/product launches/ etc.

The venue will employ 8 full-time people and 10 part-time/casual positions. Not all of these people will be on site at the one time – with rostering and depending on events employee numbers will change. The average on site at any one time will be 3 full-time and 2/3 part-time.

There will be two – three deliveries per day (via small rigid trucks and open utes). Deliveries will take place via the existing access and via the existing rear service area for the building.

Copies of the proposed plans are attached at **Appendix A.**

3. Site and Title Details

Property Address	217B INVERMAY RD INVERMAY TAS 7248
Property ID	6564800
Title Reference	52349/1

A copy of the title is attached at **Appendix B.**

4. Planning Matters

4.1 Planning Scheme

The relevant Planning Instrument is the Launceston Interim Planning Scheme 2015 (the Planning Scheme).

4.2 Definitions

Within the Planning Scheme there are series of defined uses within which each proposal must fit.

The current use is defined as:

General retail and hire	use of land for selling goods or services, or hiring goods. Examples include an adult sex product shop, amusement parlour, beauty salon, betting agency, commercial art gallery, department store, hairdresser, market, primary produce sales, shop, shop front dry cleaner, supermarket and video shop

The proposed dominant use is defined as:

Community meeting and entertainment	use of land for social, religious and cultural activities, entertainment and meetings. Examples include an art and craft centre, church, cinema, civic centre, function centre, library, museum, public art gallery, public hall and theatre.

Ancillary to the main use are the following uses:

Food services	use of land for preparing or selling food or drink for consumption on or off the premises. Examples include a cafe, restaurant and take-away food premises.

Hotel industry	use of land to sell liquor for consumption on or off the premises. If the land is so used, the use may include accommodation, food for consumption on the premises, entertainment, dancing, amusement machines and gambling. Examples include a hotel, bar, bottle shop, nightclub and tavern.

The Food Services and Hotel Industry definitions cover off on uses such as a bar/on-site and takeaway food. This is a boutique theatre which will offer these other uses as an adjunct to the main use.

4.3 Zoning and Overlay Controls

The site is zoned Local Business under the Planning Scheme (pale blue on map below). There are two overlays impacting this site – Inveresk/Invermay Inundation Area (hatched on map below) and Heritage Place (purple dot on map below).

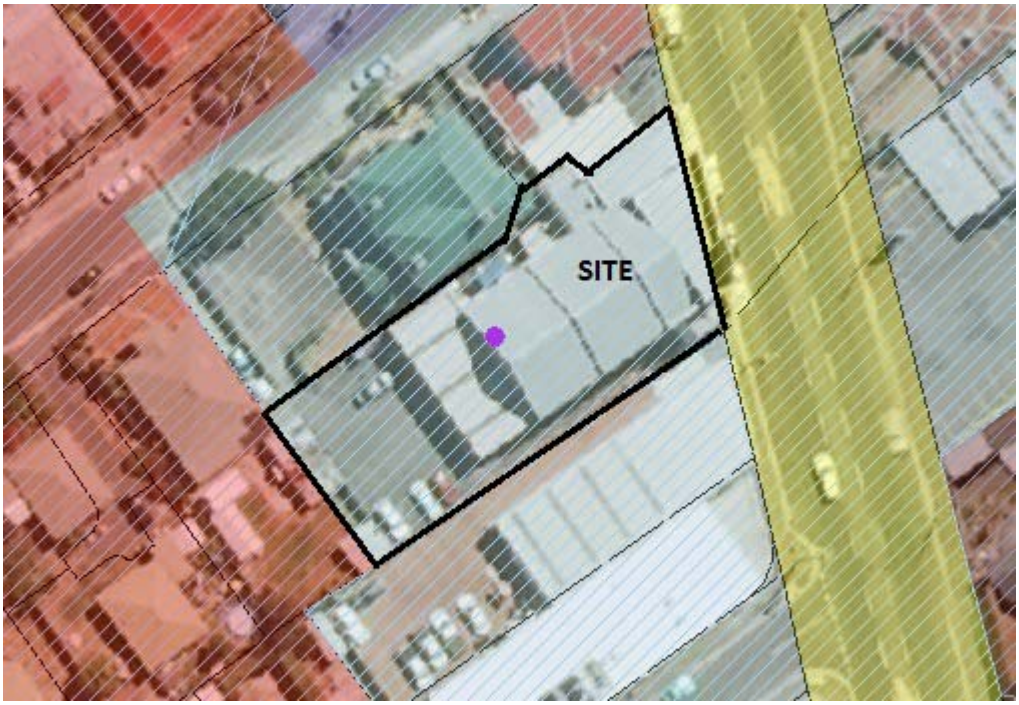

Figure 3 – Zoning and Overlay Controls

4.4 Zone Purpose

The purpose of the Zone is:

20.1.1.1 To provide for business, professional and retail services which meet the convenience needs of a local area.
20.1.1.2 To ensure that the primary purpose of the zone is maintained and use and development does not distort the activity centre hierarchy.
20.1.1.3 To maintain or improve the function, appearance and distinctive qualities of neighbourhood centres.

20.1.1.4 To create:

(a) activity at pedestrian levels, with active road frontages offering interest and engagement to shoppers; and

(b) appropriate provision for car parking, pedestrian access and traffic circulation.

20.1.1.5 To encourage a diversity of residential developments, including shop-top housing and tourist accommodation, which support the functions of neighbourhood centres.

Clearly the proposal is aligned to that purpose. Finding a new use for a Heritage Building is always a good planning outcome. The use will generate much pedestrian interest, making use of the flat topography of the site (for ease of walking) and the well developed public transport network.

4.5 Use Table

Within the Use Table relevant to the Local Business Zone Community Meeting and Entertainment, Food Services and Hotel Industry are Permitted uses.

4.6 Use Standards

Within the Planning Scheme are a series of Use Standards which need consideration. The matters are tabulated below:

Clause Reliant for Compliance	Comment
Hours of Operation - **A1** Commercial vehicles must only operate between 6.00am and 10.00pm Monday to Friday and 7:00am to 5:00pm Saturday and Sunday.	Delivery hours will be from 9.00am until 11.00am with few exceptions.
Hours of Operation - **P2** Uses must not unreasonably impact on the amenity of nearby sensitive uses, having regard to: **(a)** the nature and intensity of the proposed use; **(b)** the characteristics and frequency of any emissions generated; **(c)** the extent and timing of traffic generation; **(d)** the hours of delivery and despatch of goods and materials; and **(e)** the existing levels of amenity.	The site is adjacent to a residential zone and therefore the restricted hours apply. Whilst the stated hours are until 12 (midnight) this includes clean up after functions/events. Generally the public side of the use will cease at 10.30pm – thirty minutes after the stated closing times within the Acceptable Solution. Being influenced by the traffic on Invermay Road will reduce the impact felt by adjoining properties which are already exposed to higher levels of noise than those deeper into the suburb. Delivery hours will comply with A1. The extra 30 minutes in reality will make little difference to the amenity of the area as a whole.

Mechanical Plant and Equipment - A1 Air conditioning, air extraction, heating or refrigeration systems or compressors must be designed, located, baffled or insulated to prevent noise, odours, fumes or vibration from being received by adjoining or immediately opposite sensitive uses.	Any mechanical equipment will be installed so as to prevent noise, odours, fumes or vibration from being received by adjoining or immediately opposite sensitive uses.
Light Spill and Illumination - A1 The use must: **(a)** not include permanent, fixed floodlighting where the zone adjoins the boundary of the General Residential, Inner Residential, Low Density Residential, Urban Mixed Use and Village zones; and **(b)** contain direct light from external light sources within the boundaries of the site.	It is not proposed to have any permanent or fixed floodlighting associated with this development where the site abuts the General Residential zone. Any lighting will be positioned to avoid light spill on to adjoin properties. It is proposed to restore the original neon strip lights on the facade of the building. These were inserted along the darker lines on the upper facade in photo below: 
Noise Levels - A1 Noise generated by a use on the site must: **(a)** not exceed a time average A-weighted sound pressure level ($L_A$eq) of 5 dB(A) above background during operating hours when measured at the boundary of an existing sensitive use adjoining or immediately opposite the site; or **(b)** be in accordance with any permit conditions required by the Environment Protection Authority or an environment protection notice issued by the Director of the Environment Protection Authority.	This is not a noise generating use in that all activity happens within an enclosed building. For the enjoyment of those attending a production/movie noise from outside is the key nuisance factor. Any sound deadening to increase the enjoyment of patrons will be of direct benefit to those who may have experienced hearing noise from inside the building. Compliance will therefore be claimed against A1
Retail impact - A1 If for no permit required or permitted use class.	All the proposed uses fall into the Permitted Use class category.

4.7 Development Standards

Within the Planning Scheme are a series of Development Standards which need to be considered.

Most of the development standards apply to new buildings; residences and/or subdivision. The Development Standards relevant to this application is:

Location of Car Parking	
Objective: To ensure that car parking: (a) does not detract from the streetscape; and (b) provides for vehicle and pedestrian safety.	
Compliance Criteria	**Comment**
A1 Car parking must be located: (a) within the building structure; or (b) behind the building.	Compliance can be claimed against A1 as the car parking is located to the rear of the building.

4.8 Codes

Within the Planning Scheme are a series of Codes which need to be assessed. Only those deemed relevant to the proposal/site will be discussed below.

4.8.1 Parking and Traffic

A traffic and parking assessment was carried out to assess the impact of this development – a copy of this report is attached at **Appendix C**

In summary:

An assessment of the traffic impacts associated with the development has been undertaken in accordance with the Department of State Growth's Framework for Undertaking Traffic Impact Assessments. The analysis and discussions presented in the report can be summarised as follows:

- *The additional traffic volumes generated by the development are expected to have a minimal impact on the safety and operation of the surrounding road network*
- *The available off-street and on-street parking is adequate for use by vehicles generated by the proposed development*
- *The proposed car park complies with the requirements of Australian Standard for Off Street Car Parking (AS/NZS2890.1:2004 and ASNZS 2890.6:2009).*

It is noted that there will be 7 spaces (existing) provided on site plus room for a loading bay. The parking requirement specified within the Planning Scheme is for 110 spaces. A discretion is sought for 113 spaces – the justification is within the Traffic and Parking report, but in summary:

- This is a heritage building which needs a new use to allow it to be restored.
- The use is returning the building to its original use.
- There is ample access to public transport in Invermay Road
- There is ample on-street parking without impacting on the amenity of residential users.
- The parking demand is a theoretical figure based on operating at capacity. In reality the theatre is not going to operate at capacity for the majority of the year.

4.8.2 Invermay/Inveresk Flood Inundation Area

The site is located within the Invermay Road Commercial flood management precinct. The proposal complies with all the relevant use and development standards in the Code. The site is at an elevation of 5.5-6.0m AHD and as such is out of the main flood risk areas.

4.8.3 Heritage

As a heritage listed building the Local Historic Cultural Heritage Code applies to this proposal.

The purpose of this Code is to:

(a) protect and enhance the historic cultural heritage significance of local heritage places and heritage precincts;

(b) encourage and facilitate the continued use of these places;

(c) encourage the maintenance and retention of buildings and places of assessed historic cultural heritage significance; and

(d) ensure that development is undertaken in a manner that is sympathetic to, and does not detract from, the historic cultural heritage significance of the places and their settings.

The proposed works are either internal or relate to the removal of a modern (1980's estimate) rear extension and its rebuilding in a similar style. The internal works are removing walls and other features (not original fittings) to allow the building to function again as a theatre.

To the front elevation the door openings which have previously been boarded over or closed permanently will be opened up and the doors restored to their original condition and operation. Two non-original windows will be filled in and rendered over. One new window and door formation will be installed to the front elevation, making use of the existing opening allowing access to the proposed cafe area.

Figure 4 - Existing elevation

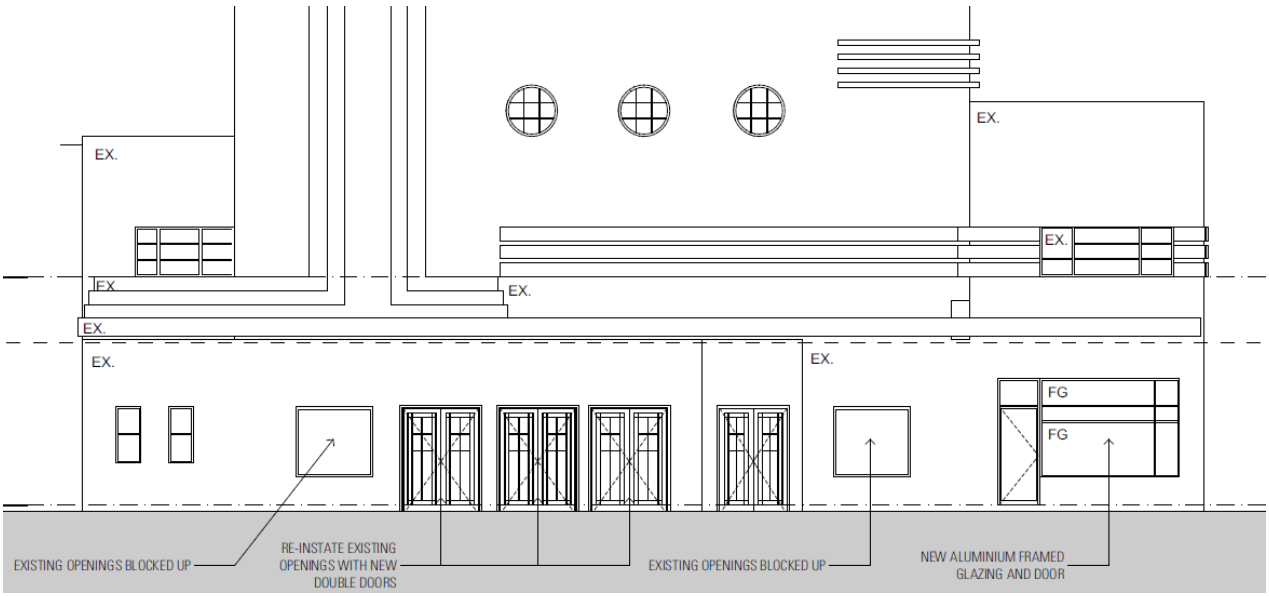

Figure 5 - Proposed Elevation

Addressing the Development Standards:

E13.6.1 Demolition – any demolition revolves around removing modern additions to the original fabric of the building and will not thus impact on the historic cultural heritage significance of local heritage places and their setting. Complies.

Figure 6 - The modern, low ceiling on the ground floor will be removed and this will expose the art deco ceiling above the dress circle (upper level).

E13.6.2 Maintenance and Repair – materials selected to repair/replace sections of this building have been selected because they are more reflective of the original structure of the building (i.e. blockwork rather than colourbond). Complies.

Figure 7 - Rear section to be removed and rebuilt in blockwork

Clauses E13.6.3 – E13.6.8 and E13.6.10 do not apply in this instance are we are dealing with an existing building where the height, setback, plot ratio, lot size and fences are already set. No outbuildings are proposed.

E13.6.9 Wall Materials – the wall materials for the replacement walls have been selected to be compatible with the existing structure. Complies.

E13.6.11 Driveways and Parking – there are no alterations proposed to the existing driveway. The car parking is located behind the primary buildings on site. Complies.

E13.6.12 Trees – there are no trees on site to consider. Not relevant.

E13.6.13 Signs – It is proposed to re-instate the "Star" Sign which once adorned the building to give back its true Art Deco feel. In line with this the neon strip lighting will also be reinstated on the front elevation. Two photos showing the Star sign from past days are included below:

Figure 8 - Sign 1

Figure 9 - Sign 2

The signs are detailed on the submitted plans.

5. Servicing Plan

A plan showing how the development will be serviced form a sewer point of view will be lodged under separate cover.

6. State Policies

The proposal is not in conflict with any approved State Policies.

7. Conclusion

This is a good use for a heritage building, returning it to its original purpose. There are no alterations which will impact on the heritage features of the building. The use complies with the intent of the zone. There are few planning reasons why this proposal should not be supported.

Star Theatre
217 Invermay Road, Invermay
Traffic Impact Assessment

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Prepared for: **Ben Davis**

Date: **27 May 2016**
Rev01

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Appendices

Appendix A: Site Plans
Appendix B: Car Parking Survey Results

Prepared by: ..... Date: 27 May 2016
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Reviewed by: ..... Date: 27 May 2016
Ross Mannering

Authorised by: ..... Date: 27 May 2016
Ross Mannering

Revision History					
Rev No.	**Description**	**Prepared by**	**Reviewed by**	**Authorised by**	**Date**
00	Traffic Impact Assessment	R. Giana	R. Mannering	R. Mannering	23/05/16
01	Traffic Impact Assessment - hours and car park requirements	R. Giana	R. Mannering	R. Mannering	27/05/16

1. Introduction

It is understood that a Development Application is to be lodged with Launceston City Council for a proposed movie theatre to be located at 217b Invermay Road in Invermay. The proposed development includes the refurbishment of the existing building, which is currently a St Vincent De Paul charity shop.

pitt&sherry were engaged by the client to undertake a Traffic Impact Assessment (TIA) for the proposed development.

This report has been prepared in accordance with the Department of State Growth's *Framework for Undertaking Traffic Impact Assessments* and details the findings of the traffic assessment undertaken for the proposed development.

2. Proposed

As discussed, the development site located at 217b Invermay Road currently operates as a St Vincent De Paul Charity Shop. It is proposed to return the building to its original use which is a cinema/ theatre. At times when the cinema is not operating the venue will be available to be hired for functions and events.

The venue will employ 8 full-time staff and 10 part-time/ casual staff. Staff numbers will vary based on the day and time and the rostering of events however it is expected that on average 3 full time and 2-3 part time staff will be on site.

The development will include the following:

- 360 seat theatre (the Old Star Theatre capacity)
- 80 seat theatre
- Cafe dining/retail
- Microbrewery.

The opening hours of each of the uses are as follows:

• General facility opening hours	7:00am – 12:00am, 7 days a week
• Cinema/ theatre	Wednesday and Friday evenings until 10:30pm Saturday from 10:30am until late
• Cafe	Breakfast – Saturday and Sunday from 8:00am Lunch – 7 days a week Dinner – when cinema operates
• Microbrewery	Operates as per general opening hours.

It is expected that during movie showing times (expected operational peak) that the cafe, retail and microbrewery will operate as an ancillary use to the theatre.

A small off-street car park is located to the rear of the site and currently services staff and deliveries. The car park has capacity for 7 cars. Due to the size of the off-street car park the majority of car parking generated by the site will be located on-street.

Plans of the site are attached in Appendix A.

3. Existing Conditions

3.1 Site Location

The site is located on Invermay Road, at the northern end of the Invermay shopping strip. It is located approximately 1km north of Aurora Stadium and the UTAS Inveresk Campus, the Launceston City Centre is a further 500m south of the site. The site has a land use classification as 20.0 – Local Business under the *Launceston Interim Planning Scheme 2015*.

Surrounding properties predominantly include low density residential properties. Retail premises are located to the south of the site, particularly along Invermay Road. Figure 1 shows the location of the site in the local context.

Figure 1: Locality Plan (Basemap source: www.thelist.tas.gov.au)

3.2 Road Network

Invermay Road

Invermay Road (shown in Figure 2 and Figure 3) operates as a local collector road and runs in a north-south direction. The main function of the road is to connect the Launceston City Centre to the northern suburb of Mowbray through Invermay. Invermay Road is a two-way road configured with a two lane carriageway and central median in the vicinity of the site. A mixture of free unrestricted and time-restricted kerbside parking is permitted on both sides of the road during peak parking periods.

Figure 2: Invermay Road (facing south)

Figure 3: Invermay Road (facing north)

Lytton Street

Lytton Street (shown in Figure 4 and Figure 5) is located directly to the north of the site. It operates as a local street and runs in an east-west direction. Lytton Street is a two-way road and a combination of free unrestricted and time-restricted kerbside parking is permitted on both sides of the road during peak parking periods.

Figure 4: Lytton Street (facing east)

Figure 5: Lytton Street (facing west)

Other Surrounding Streets

Several other streets similar to Lytton Street are located close to the site. They each have a combination of free unrestricted and time-restricted kerbside parking is permitted on both sides of the road during peak parking periods.

3.3 Site Access

Access to the off-street car park is provided from Lytton Street, the pedestrian access is from the front of the building on Invermay Road.

3.4 Traffic Volumes and Existing Intersection Operation

3.4.1 Existing Traffic Volumes

Launceston City Council supplied weekly, two-way traffic data for Invermay Road (outside number 94) and Henty Street (a suburban street located a short distance to the north of the site). The counts were undertaken in 2014 and 2013 respectively. A growth rate of 2% per year was applied to these volumes to estimate the current traffic volumes.

By adding the growth rate it is determined that Invermay Road would be expected to carry approximately 13,500 vehicles on a typical weekday whilst Henty Street would carry approximately 700 vehicles on a typical weekday.

3.4.2 Peak Traffic Times

The data shows that the peak traffic volumes are on a weekday between 10:00am and 5:00pm, with the volumes being fairly consistent between these times before reducing gradually after 5:00pm. The traffic volumes on Saturday are much lower.

Based on the information in Section 2, it would be expected that the traffic generation from the development would be highest whilst the cinema is operating.

It has therefore been determined from the data and the movie showing times that the maximum traffic impact would be expected to occur on a weekday evening. The hour between 5:00pm and 6:00pm has been chosen for analysis as patrons may begin to arrive at this time.

3.4.3 Peak Traffic Volumes

Based on the above, traffic volumes were observed in the vicinity of the site during a weekday peak hour (5:00pm – 6:00pm). It was observed that the traffic volumes in the area, including at the Invermay Road/ Lytton Street intersection, were low during this times and would be expected to operate with an acceptable service level.

3.5 Car Parking

Car parking demand surveys were undertaken on surrounding streets on a Wednesday evening, Friday evening and Saturday morning, midday and evening which are the times the theatre will be showing films. The surveys were undertaken on streets within a "reasonable walking distance[1]" of the site which is specified as 237m.

The majority of the car parking spaces in the vicinity are unrestricted during the expected peak operational times and therefore it has been determined that all recorded spaces in the vicinity can be used for the development.

Based on the above, the available spaces in the vicinity of the site during the peak times are summarised in Table 1.

[1] Reasonable walking distances based on research undertaken by the *Institute of Transport Studies.*

Table 1: Car Parking Supply and Demand

Supply	Demand				
	Wednesday 6:00pm	Friday 6:00pm	Saturday 10:00am	Saturday 1:00pm	Saturday 6:00pm
291	62	76	176	91	59

The results in Table 1 show that a minimum of 115 spaces are available during times which the theatre would operate.

Full results of the car parking demands surveys are included in Appendix B.

3.6 Public Transport

There is a regular bus service operating along Invermay Road linking the CBD to the northern suburbs of Mowbray, Newnham and beyond.

3.7 Pedestrian and Cycling Infrastructure

Invermay Road is a relative easy route for both pedestrians and cyclists being flat. There are good footpaths in the area and marked lanes on Invermay Road for cyclists.

4. Transport Assessment

4.1 Vehicle Access

The vehicle access to the site will remain at Lytton Street with pedestrians accessing from the front entrance on Invermay Road.

4.2 Car Parking and Loading

4.2.1 Off-Street Parking and Loading

Car Parking Provision

It is proposed to retain the existing car park and loading area as part of the development. This car park will have 7 spaces for staff and 1 loading space. This number will be adequate based on the estimate of 6 staff being on-site at any time.

Loading Provision

It is expected that the development would generate 2-3 deliveries per day which will be undertaken in the morning. These deliveries will be completed by a vehicle up to a B99 vehicle with the dimensions shown in Figure 6.

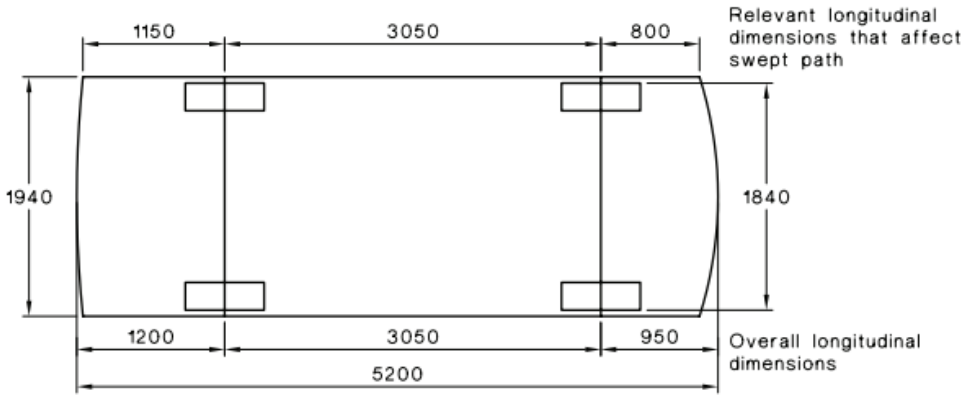

FIGURE B1 B99 (99.8TH PERCENTILE) VEHICLE

Figure 6: B99 Vehicles (Source: AS2890.1)

An additional 300mm width is required for the delivery space as it is located on blind aisle.

Car Park Layout Review

The car parking layout has been reviewed against the *Australian Standard for Off Street Parking (AS/NZS2890.1:2004 and AS 2890.6:2009)*. The car park dimensions are as follows:

- 90 degree staff car parking spaces are 2.4m by 5.4m
- Delivery space in excess of 3m wide and 5.4m in length
- Aisle width is in excess of 7m.

The dimensions above exceed the requirements of the Australian Standard. The car park dimensions comply with requirements for Class 1 and the delivery space allows for the additional 300mm as required at the end of the blind aisle. Based on this the proposed car park and delivery space are expected to operate satisfactorily.

4.2.2 On-Street Parking

As discussed, all visitors to the site will park on-street. The *Launceston Interim Planning Scheme 2015* specifies parking requirements for theatres under "community meeting and entertainment" as follows:

- 1 car parking space for every 4 seats
- 1 bicycle parking space for every 40 seats.

Although the parking for visitors to the site will be on-street the Council rate gives an estimate of the number of parked vehicles that could be generated by the theatre.

Based on this, the theatre could be expected to generate up to 110 parked cars when it is filled during a peak time. This is below the available car parking supply of a minimum of 115 spaces within a reasonable walking distance. The facility will rarely operate at full capacity.

In addition 6 bicycle parking spaces should be located on-site or on-street close to the site.

4.3 Traffic Impact Assessment

Traffic generation rates for the proposed cinema/ theatre have been sought from the *ite Trip Generation Manual* as there are no Australian traffic generation rates for movie theatres. The manual estimates that 0.46 trips per seat are generated during a peak time. This results in an estimated traffic generation of 101 vehicles in a peak hour.

The traffic movements generated by the development are low. When compared with the existing traffic volumes on the road network, the additional movements generated by the development would not be expected to compromise the function or safety of the surrounding road network.

5. Summary

An assessment of the traffic impacts associated with the development has been undertaken in accordance with the Department of State Growth's *Framework for Undertaking Traffic Impact Assessments*. The analysis and discussions presented in the report can be summarised as follows:

- The additional traffic volumes generated by the development are expected to have a minimal impact on the safety and operation of the surrounding road network
- The available off-street and on-street parking is adequate for use by vehicles generated by the proposed development
- The proposed car park complies with the requirements of *Australian Standard for Off Street Car Parking (AS/NZS2890.1:2004* and *ASNZS 2890.6:2009).*

9 August 2016

Mr Ben Davis
C/o Star Theatre
Invermay Road
INVERMAY TAS 7250

Dear Ben

LN15293 – Further Information – LCC DA0250/2016

I refer to the above development application for converting this building back to a theatre.

Launceston City Council has asked for more information in regard to a number of matters listed below:

Issue/Clause	Description	Response
20.3.2 (A1)	Mechanical Plant and Equipment	*It is not considered that sufficient information has been provided in order to demonstrate compliance with the acceptable solution insofar as it does not provide the specific details of where and how the mechanical equipment will be located in order to prevent the specified emissions.* Response: Mechanical plant has been relocated internally to ensure sufficient noise attenuation is possible.
20.3.4 (A1)	Noise Levels	*It is not considered that sufficient information has been provided in order to demonstrate compliance with the acceptable solution insofar as it does not provide specific noise related data relating to acceptable solution 20.3.1 (A1) (a).* Response: An environmental noise assessment has been completed by Vipac Engineers and accompanies the development application.
E6.5.1 (A2)	Accessibility Parking Spaces	*A2* *The number of accessible car parking spaces for use by persons with a disability for uses that require 6 or more parking spaces must be in accordance with Part D3 of the National Construction Code 2014, as amended from time to time.* Response – Whilst three disabled car parking spaces can be provided on site (to the rear of the building) this would not be a practical or

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		workable solution considering the space on site. The proposal is to provide 1 disabled car park on site to the rear of the building.
E6.5.2	Bicycle Parking Numbers	*P1* *Bicycle parking spaces must be provided to meet the reasonable needs of the use, having regard to:* ***(a)*** *the likely number and characteristics of users of the site and their opportunities and likely need to travel by bicycle;* ***(b)*** *the location of the site and the likely distance a cyclist needs to travel to reach the site; and* ***(c)*** *the availability and accessibility of existing and planned parking facilities for bicycles in the vicinity.* Response - Compliance will rely on performance criteria. Logically, the only regular users of bicycle as a mode of transport will be employees – to that end bicycles will be stored/parked inside the building near the loading area. This is safe for the cycles and keeps them out of the public realm. It is highly unlikely patrons will cycle to a theatre showing. It is unrealistic to try and predict the distance anybody will cycle to this facility – if at all.
E6.5.3	Taxi Spaces	*P1* *Taxi parking spaces must be provided to meet the reasonable needs of the use, having regard to:* *(a)* *the nature of the proposed use and development;* *(b)* *the availability and accessibility of taxi spaces on the road or in the vicinity; and* *(c)* *any site constraints such as existing buildings, slope, drainage, vegetation and landscaping.* Response - As the only parking area is to the rear of the building it would be illogical to provide any taxi spaces in this area. It would not work and would cause confusion for users and taxi drivers. To overcome this it is proposed that taxis will pick up and drop off in front of the building.

E6.5.4	Motorcycle Spaces	*P1* *Motorcycle parking spaces must be provided to meet the reasonable needs of the use, having regard to:* *(a) the nature of the proposed use and development;* *(b) the availability and accessibility of motorcycle parking spaces on the road or in the vicinity; and* *(c) any site constraints such as existing buildings, slope, drainage, vegetation and landscaping.* Response – Compliance will rely on performance criteria. There are two potential users of motorcycles – employees and patrons. Employees will be encouraged to park to the rear of the building. Motorcycles can generally fit into many tight spaces (where they do so on a regular basis). It is better to keep this area open for parking generally than to dedicate space to situations which may never arise. In regard to patrons using motorcycles – they can park on the street the same as other patrons. Due to the location of the existing car park patrons are to be discouraged from parking in this area due to the distance to the main entrance.
E6.6.5	Bicycle facilities	*P1* *Shower and change room facilities must be provided at adequate level to cater for the reasonable needs of cyclists, having regard to:* ***(a)*** *the location of the proposed use;* ***(b)*** *the existing network of cycle paths and bicycle lanes and other means of access to the site for cyclists;* ***(c)*** *the nature of the proposed use;* ***(d)*** *the number of employees;* ***(e)*** *the users of the site and the likelihood of travel by bicycle;* ***(f)*** *whether there are facilities on the site for other reasons that could be used by cyclists; and* ***(g)*** *the opportunity for sharing bicycle facilities on nearby sites.*

		Response – Compliance will rely on Performance Criteria. A shower will be shown in the disabled toilet facility. Employees will be encouraged to use this facility if needed. Due to expect low cycling use by patrons shower and change facilities will not be generally available to the public.
E16.7.2	Flood Impact	P3 Buildings not in the Residential use class must be sited and designed in accordance with a hydrological report and an emergency management plan prepared by a suitably qualified engineer. The report and plan must: **(a)** detail: **(i)** the risks to life; **(ii)** the likely impact on the use or development; and **(iii)** how the use or development will manage the risk to tolerable levels; during either an overtopping of the levee or a levee breach at the closest point in the levee during a 5% AEP, 2% AEP or a 1% AEP flood event; and

		(b) consider the following: *(i) the likely velocity and depth of flood waters;* *(ii) the need to locate electrical equipment and other fittings above the 1% AEP flood level;* *(iii) the likely effect of the use or development on flood characteristics;* *(iv) the development and incorporation of evacuation plans into emergency management procedures for the precinct; and* *(v) the ability of the use or development to withstand flood inundation and debris damage and the necessity for the incorporation of any flood proofing measures in the development.* Response – in providing this response the skills and expertise of **pitt&sherry** have been used to formulate a suitably qualified response. Had it not been for the small extension to this existing building exceeding the 10% increase in existing floor area the development could have satisfied the Acceptable Solution. It needs to be noted that existing floor area of the building is between 5.5m and 6.0m – well above the 3.4m AHD stated in the Planning Scheme. As such adding a small area of footprint to an existing building will not significantly increase the risk to life. The greatest risk in terms of flooding is not the inundation of this building, but the cutting of Invermay Road from flood water – limiting escape from the site. The impact on using the building during flood risk events would mean that screenings and functions would be cancelled. Cancelling events as a result of imminent flood events will be part of the emergency management plan for the operation of the building. As the building is a considerable distance from the nearest levee and the floor height is significantly higher than the stated floor level

		of 3.4m AHD breach or overtopping should have little impact on this site unless the 1:200 year event cycle is exceeded. In which case there will be no way of operating the theatre and the operation will cease. In terms of velocity of flood water – an overtopping will mean a very slow filling of the suburb with low water velocity. A major breach will mean higher water speeds – but spread across the whole of Invermay by the time the water reaches this site (if it ever does) the velocity will have decreased. This is an existing heritage listed building to move electrical equipment above the 1% AEP flood level is not feasible. The expensive cinema projection and lighting equipment will be well above any flood level. In terms of emergency management plan the main source of information will be the SES/Police website and public announcements of imminent events (not only flooding). The first priority is customer end employee safety. To that end if there is a high risk of flooding any scheduled event or session will be cancelled and the facility will be prepared for flooding. Any patrons on site will be escorted to a defined safer place – in the case of flood this will more than likely be towards Mowbray – higher ground. More valuable equipment will be moved (if possible) off floors and on to higher parts of the building. If there is time sand bags will be sourced and used to barricade doors using plastic as a sealing agent. The building will only be re-entered once the all clear has been given by SES/Police. Operations and public access will only re-commence once the building has been inspected and declared safe.

Information regarding the Micro Brewery will be provided by others.

Yours sincerely

Ian Abernethy
Principal Planner

STAR THEATRE

PROJECT DETAILS

DESIGNERS NAME	JAWSARCHITECTS
ACCREDITATION NUMBER	CC5471I
OWNER / CLIENT	Ben Davis
PROJECT ADDRESS TAS	217B Invermay Road, Invermay
LAND TITLE REF. NO. (CERTIFICATE FOLIO AND VOLUME)	52349/ 1
TOTAL FLOOR AREA	SITE- 1228m2 EXISTING- 639m2 PROPOSED- 731m2
DESIGN WIND SPEED	N/A
SOIL CLASSIFICATION	N/A
BUSHFIRE-FIRE PRONE AREA BAL RATING (BUSHFIRE ATTACK LEVEL)	NA
ALPINE AREA	NA
CORROSION ENVIRONMENT	NA
OTHER KNOWN SITE HAZARDS (FLOODING, LANDSLIP, DISPERSIVE SOILS, SALINE SOILS, SAND DUNES, MINE SUBSIDENCE, LANDFILL ETC.)	FLOODING
CLIMATE ZONE	7

DRAWING No.	DESCRIPTION
1559_DA00	COVER PAGE
1559_DA01	LOCATION PLAN
1559_DA02	SITE PLAN
1559_DA03	EXISTING / DEMOLITION GROUND FLOOR
1559_DA04	PROPOSED GROUND FLOOR
1559_DA05	EXISTING / DEMOLITION FIRST FLOOR PLAN
1559_DA06	PROPOSED FIRST FLOOR
1559_DA07	NORTH ELEVATION
1559_DA08	EAST ELEVATION
1559_DA09	SOUTH ELEVATION
1559_DA10	WEST ELEVATION
1559_DA11	SECTION A
1559_DA12	SECTIONS B
1559_DA13	3D VIEWS

1559_DA00

FILE: C:\Users\fgra.JAWS\Desktop\Star Thetare DA Revision 11.08.16.pln

REVISIONS:
REV# DATE:
(Description)

PLANNING EXHIBITED DOCUMENTS
Ref. No: DA 0250/2016
Date Received: 17/08/2016
Planning Administration Assistant

DEVELOPMENT APPLICATION

PROJECT
STAR THEATRE
217B INVERMAY ROAD, INVERMAY, TASMANIA, 7248

JACOB ALLOM WADE PTY LTD
ABN 92 009 559 479
THE ORDNANCE STORE
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jaws@jawsarchitects.com
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SCALE	1:1, 1:0.83 @ A3		
DATE	FEB 2016	PLOT DATE	11/08/2016
DRAWN	FG/LW	ACCREDITED DESIGNER	SV
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DRAWING
COVER PAGE

DRAWING NO 1559_DA00 REV
OF 14 DRAWINGS

ARCHITECTSJAWS

LOCATION PLAN

1559_DA01

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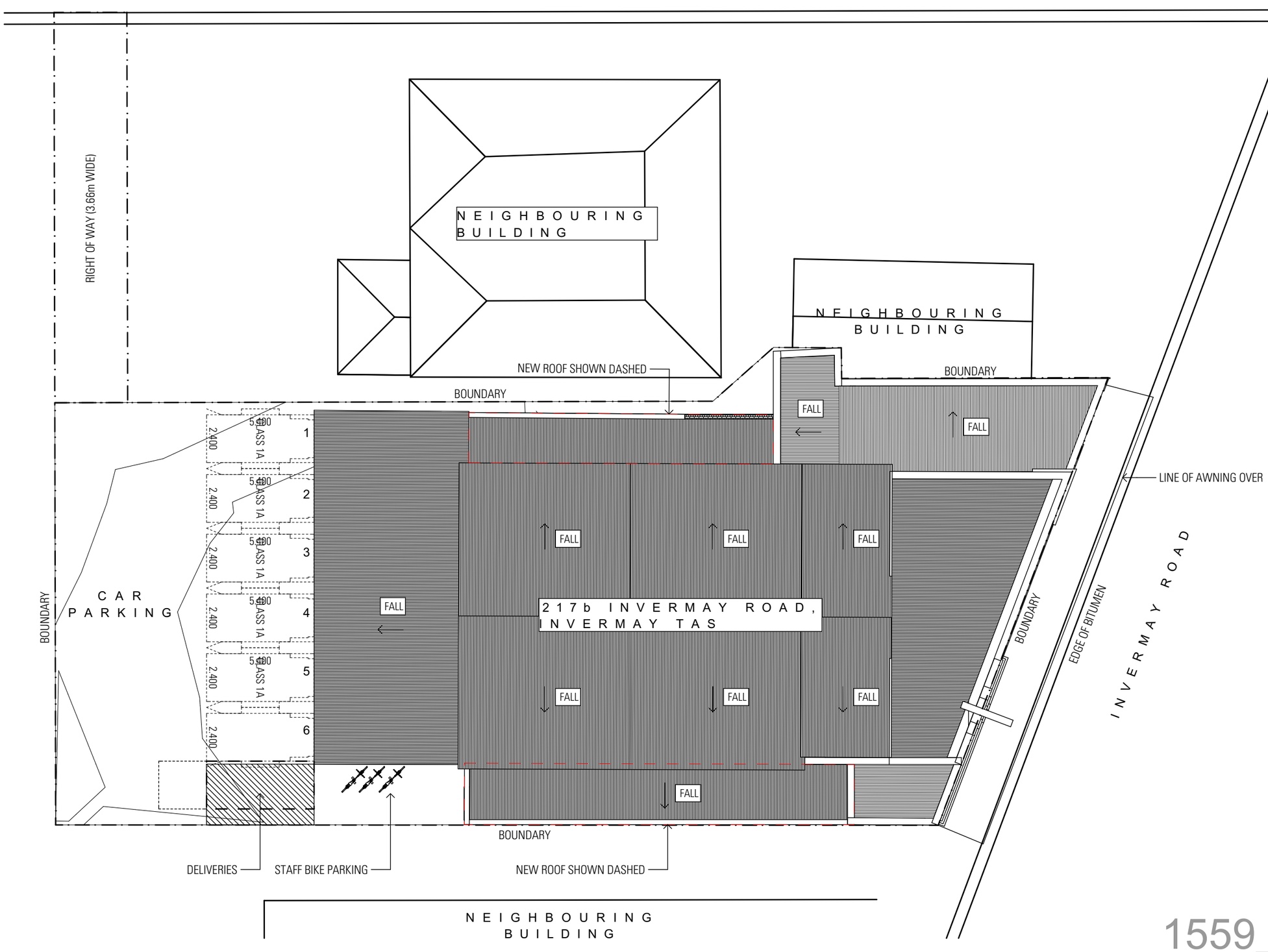
DRAWING
LOCATION PLAN

DRAWING NO 1559_DA01 REV
OF 14 DRAWINGS

ARCHITECTS JAWS



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1559_DA02

JAWS ARCHITECTS

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DEVELOPMENT APPLICATION

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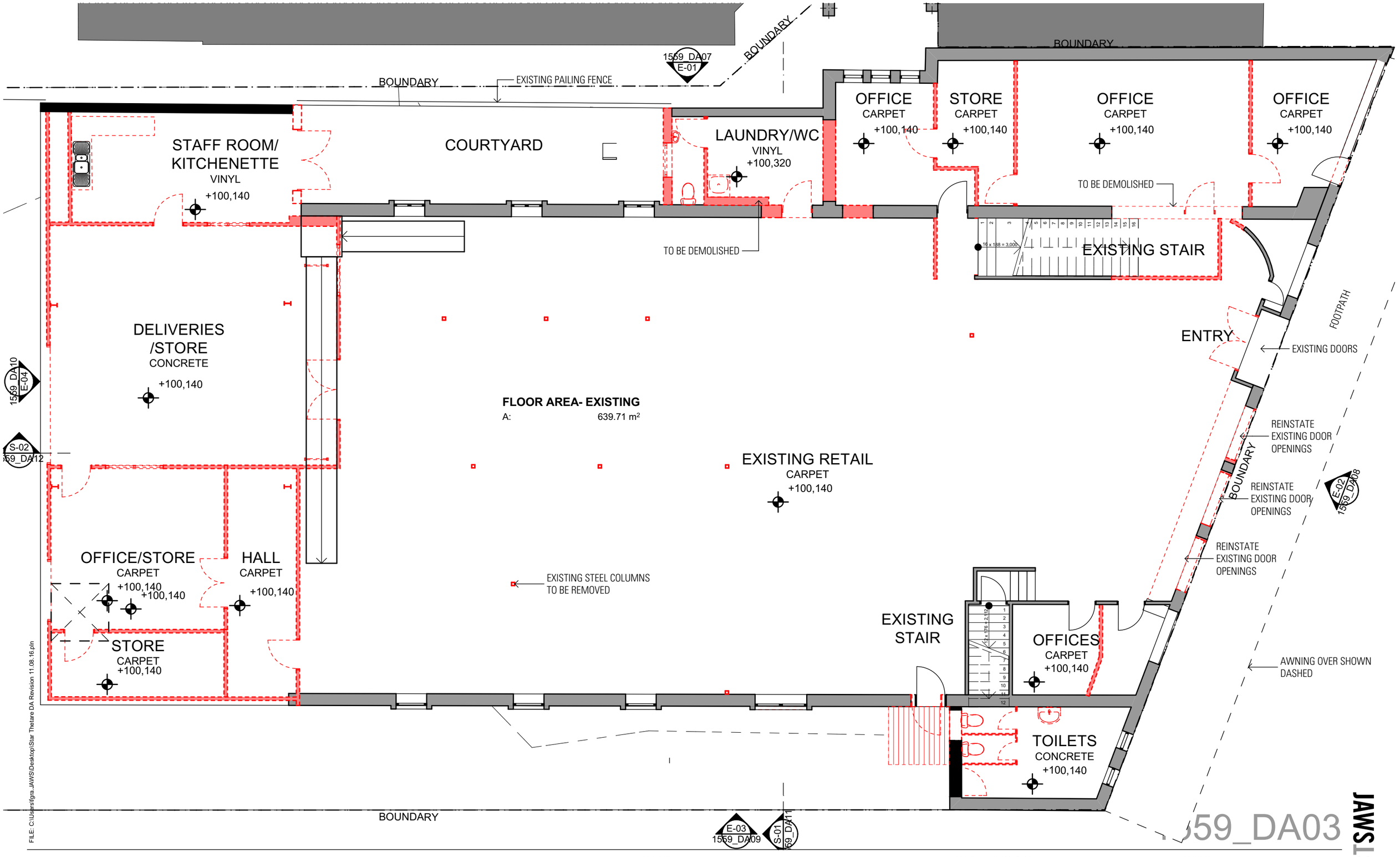
DRAWING
SITE PLAN

DRAWING NO 1559_DA02 REV
OF 14 DRAWINGS



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1559_DA03

JAWS ARCHITECTS

DEVELOPMENT APPLICATION

REVISIONS:
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PLANNING EXHIBITED DOCUMENTS
Ref. No: DA 0250/2016
date advertised 17/08/2016
Planning Administration

Document Set ID: 3360798
Version: 2, Version Date: 16/09/2016

PROJECT
STAR THEATRE
217B INVERMAY ROAD, INVERMAY, TASMANIA, 7248

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DRAWING
EXISTING / DEMOLITION GROUND FLOOR

DRAWING NO 1559_DA03 REV
OF 14 DRAWINGS

BOUNDARY

10,637

1559_DA07 E-01

BOUNDARY

NEW MASONRY BOUNDARY WALL TO REPLACE PAILING FENCE

EXIT

EXISTING KITCHEN LOCATION POTENTIALLY TO REMAIN AS PART OF STAGE 1 WORKS

+100,140

CAFE/ DINING/ RETAIL

TIMBER

+100,140

KITCHEN/ BAR/ CAFE

+100,140

TILE

CAFE DINING/RETAIL

TIMBER

+100,140

CURTAIN

UP

140 SEAT THEATRE/ FUNCTION AREA

1:14 ACCESS RAMP TO STAGE

1559_DA10 E-04

80 SEAT THEATRE APPROX

(STEPPED FLOOR) CARPET

S-02 1559_DA12

STAGE/ SCREEN

EDGE OF STAGE

10m WIDE SCREEN

FLOOR AREA- PROPOSED

A: 731.74 m²

SITE AREA

A: 1,128.06 m²

LOUNGE

16 x 188 = 3,000

STAIR 2

CARPET

BAR/ CAFE/ TICKETING

TILE

LOUNGE

CARPET

+100,140

EXISTING DOORS

REINSTATE EXISTING DOOR OPENINGS

BOUNDARY

REINSTATE EXISTING DOOR OPENINGS

E-02 1559_DA08

NEW ACOUSTIC WALL BETWEEN THEATRE/FUNCTION AREA AND FOYER

REINSTATE EXISTING DOOR OPENINGS

STORE

CARPET

+101,340

+100,140

GRATED DRAIN

MECH PLANT

MICROBREWERY

CURTAIN

CARPET

+100,140

ACOUSTIC INFILL TO EXISTING OPENINGS

ACCESS WC/SHWR

TILE

12 x 176 = 2,112

STAIR 1

CARPET

OFFICE

TILE

+100,140

EXIT

3,064

GRATED DRAIN

MICROBREWERY

FEMALE WC

TILE

+100,140

TILE

CLNR

MALE WC

TILE

+100,140

NEW MASONRY BOUNDARY WALL TO REPLACE PAILING FENCE

BOUNDARY

19240

E-03 1559_DA09

S-01 1559_DA11

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1559_DA04

ARCHITECTSJAWS

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PROJECT

STAR THEATRE

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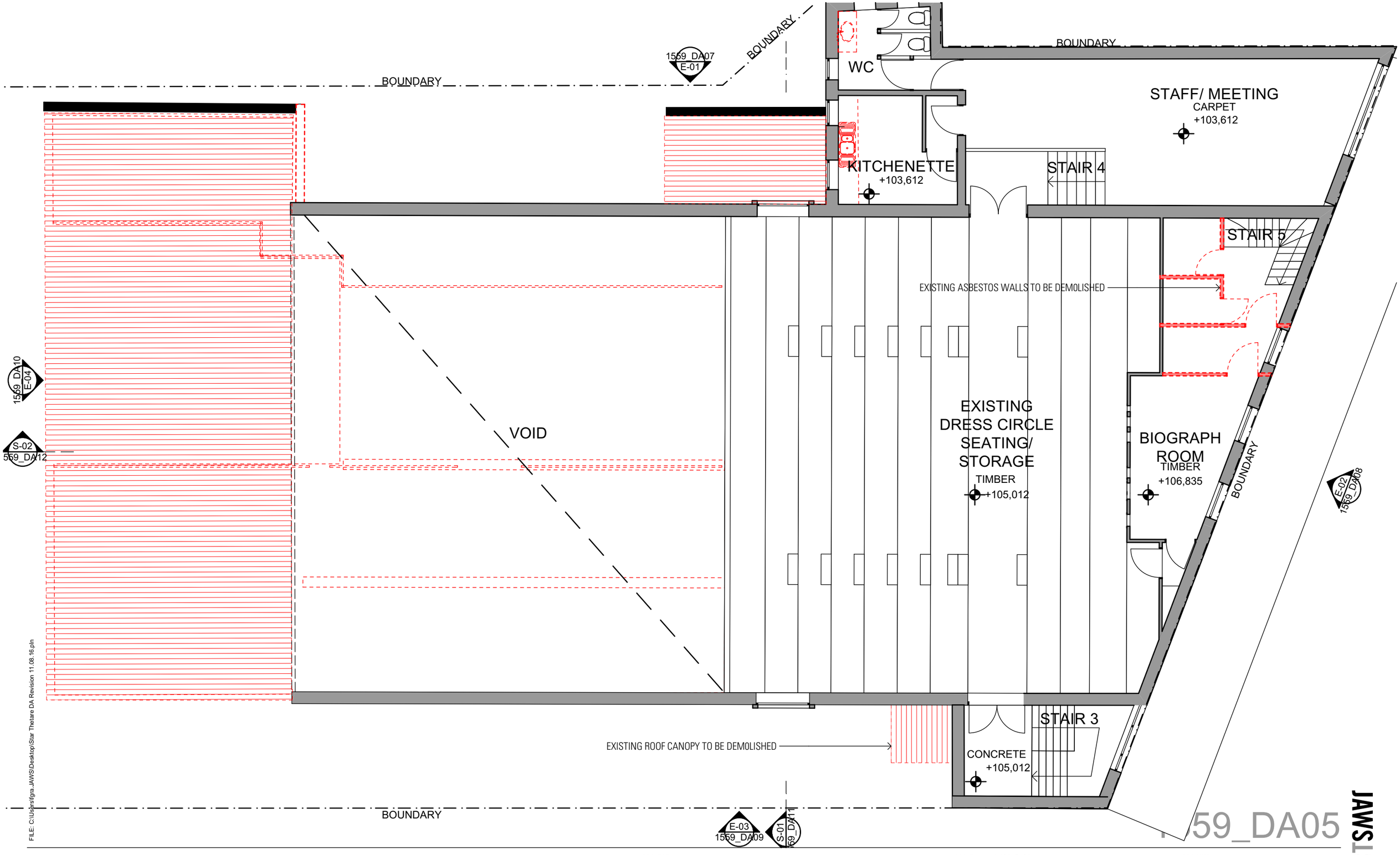
DRAWING

PROPOSED GROUND FLOOR

DRAWING NO 1559_DA04 REV

OF 14 DRAWINGS



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1559_DA05

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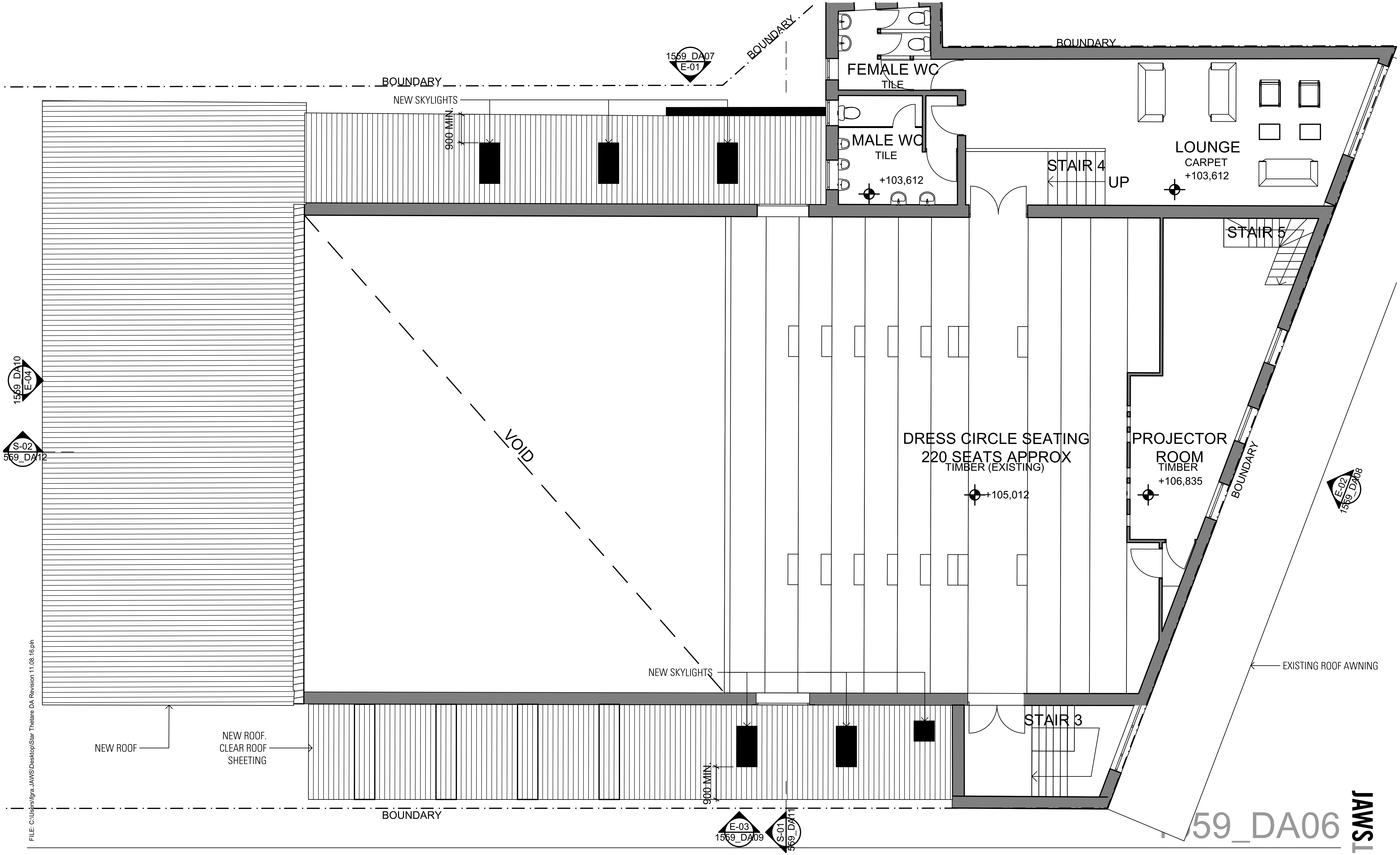
DRAWING
EXISTING / DEMOLITION FIRST FLOOR PLAN

DRAWING NO 1559_DA05 REV
OF 14 DRAWINGS



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1559_DA06

REVISIONS:
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DEVELOPMENT APPLICATION

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DRAWING
PROPOSED FIRST FLOOR
DRAWING NO 1559_DA06 REV
OF 14 DRAWINGS

ARCHITECTS JAWS

DESIGN STATEMENT
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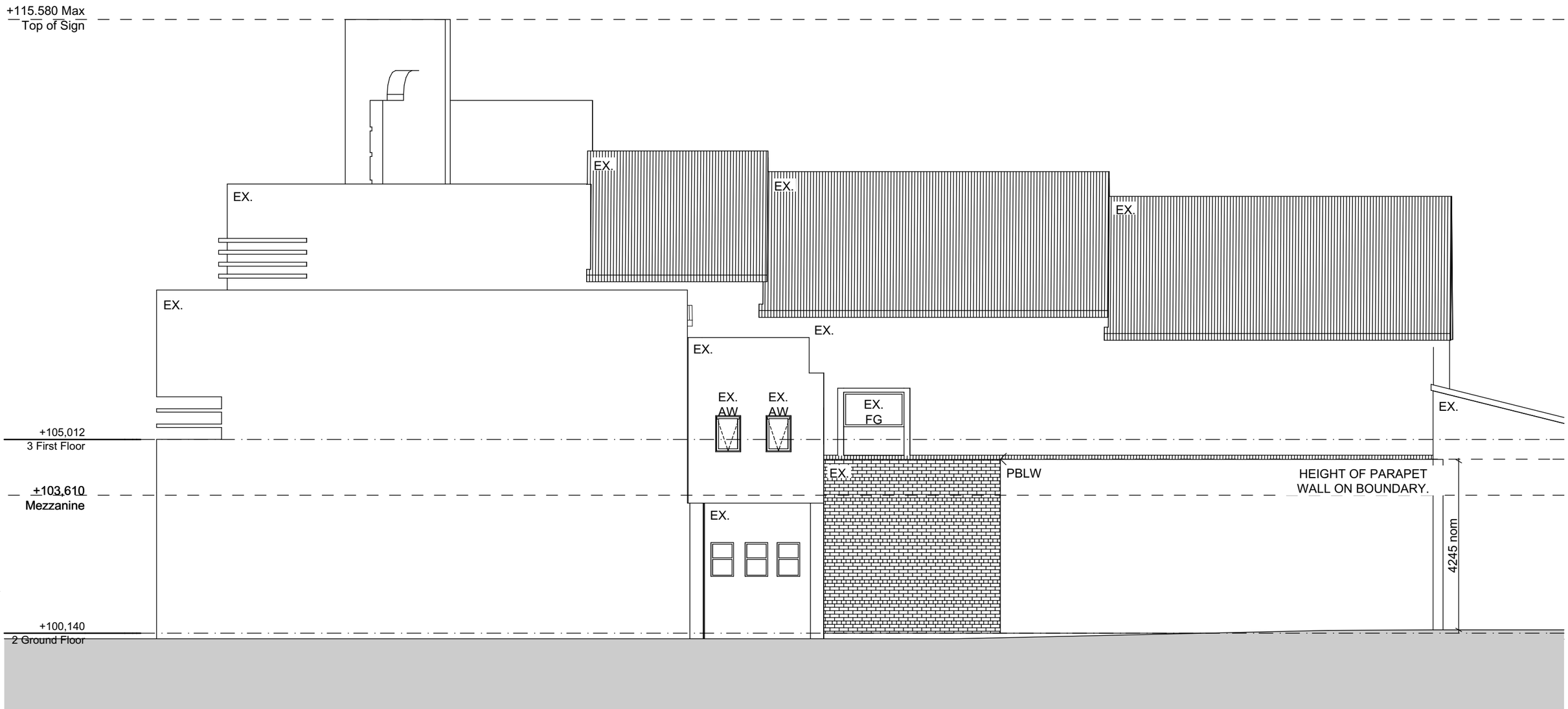
WHERE AN ORIGINAL WALL HAD BEEN REMOVED OR OPENED THE OPENING SHALL BE EXPRESSED IN CONTRASTING MATERIAL TO THE EXISTINGWITH NIB WALLS AND LINTELS RETAINED TO DENOTE THE EXISTING WALL LOCATION, ORIENTATION OR DEPTH.
INTERNAL FINISHES AND FIXTURES WILL BE SIMPLE AND MODERN IN COMPOSITION AND FINISH, DIFFERENTIATING EXISTING FABRIC BUT ENHANCING THE SPIRIT OF STREAMLINE MODERNE.

MATERIALS LEGEND

TAG	DESCRIPTION
AW	AWNING WINDOW
CB	COLORBOND CUSTOM ORB ROOF CLADDING
EX	EXISTING
FG	FIXED GLAZING
PBLW	PAINTED BLOCKWORK

ALL WINDOWS NEW AND EXISITNG TO BE A DARK COLOUR, CHARCOAL OR SIMILIAR.
EXTERIOR PAINT COLOUR TO BE LIGHT, WHITE OR SIMILIAR.



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1559_DA07

ARCHITECTS JAWS

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DRAWING
NORTH ELEVATION

DRAWING NO 1559_DA07 REV
OF 14 DRAWINGS

DESIGN STATEMENT
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MATERIALS LEGEND

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CB	COLORBOND CUSTOM ORB ROOF CLADDING
EX	EXISTING
FG	FIXED GLAZING
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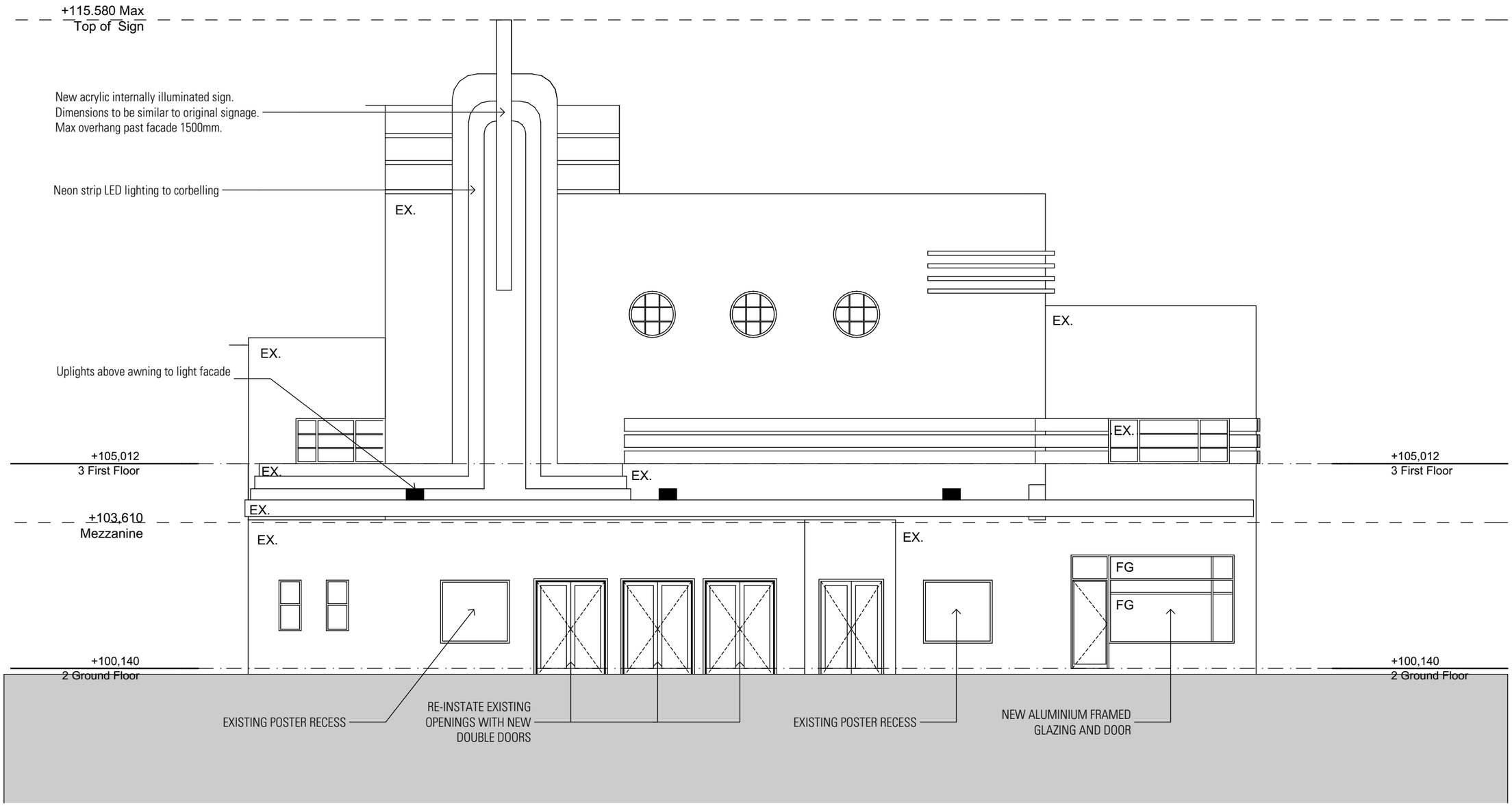

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DRAWING
EAST ELEVATION

DRAWING NO 1559_DA08 REV
OF 14 DRAWINGS

ARCHITECTS JAWS

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MATERIALS LEGEND

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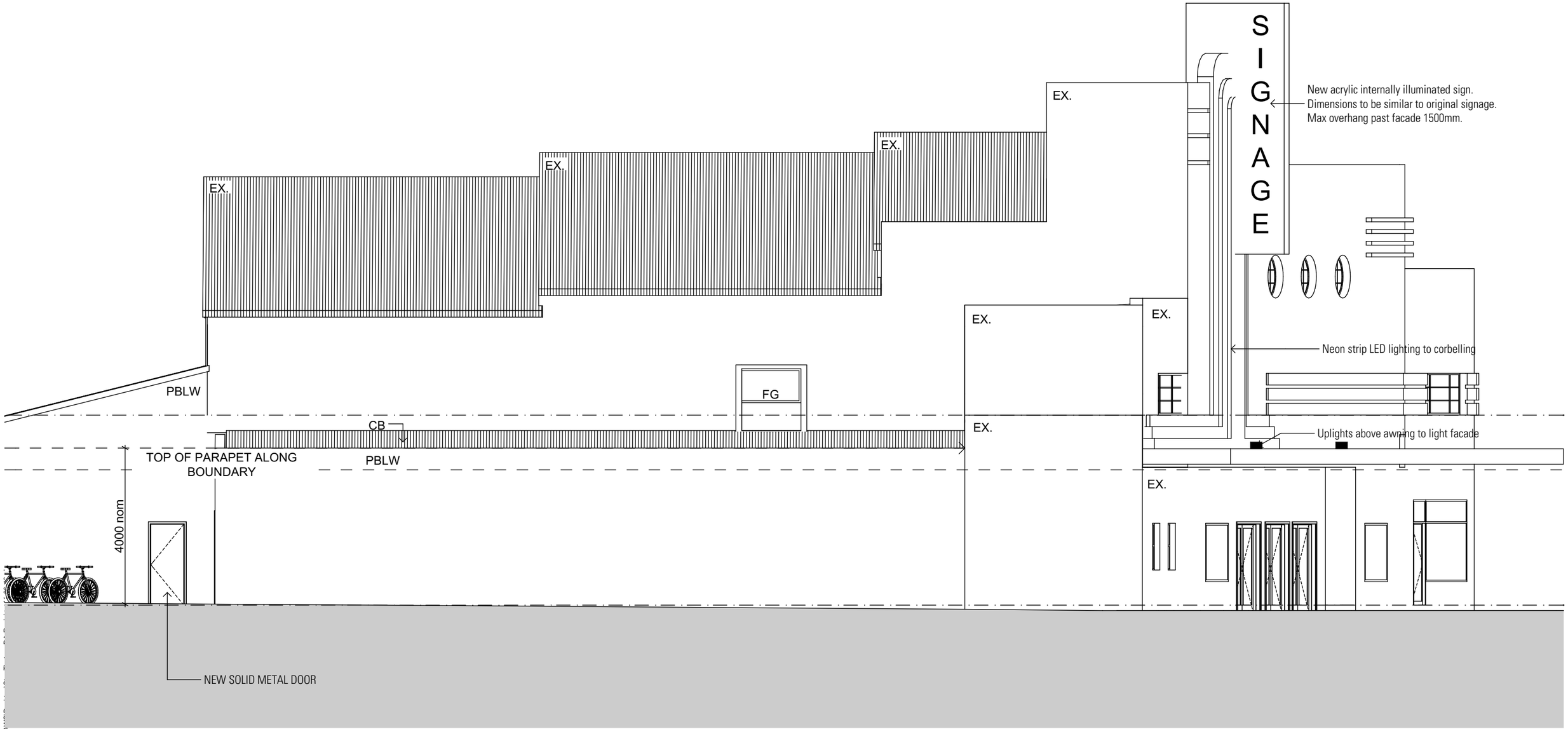

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DRAWING
SOUTH ELEVATION

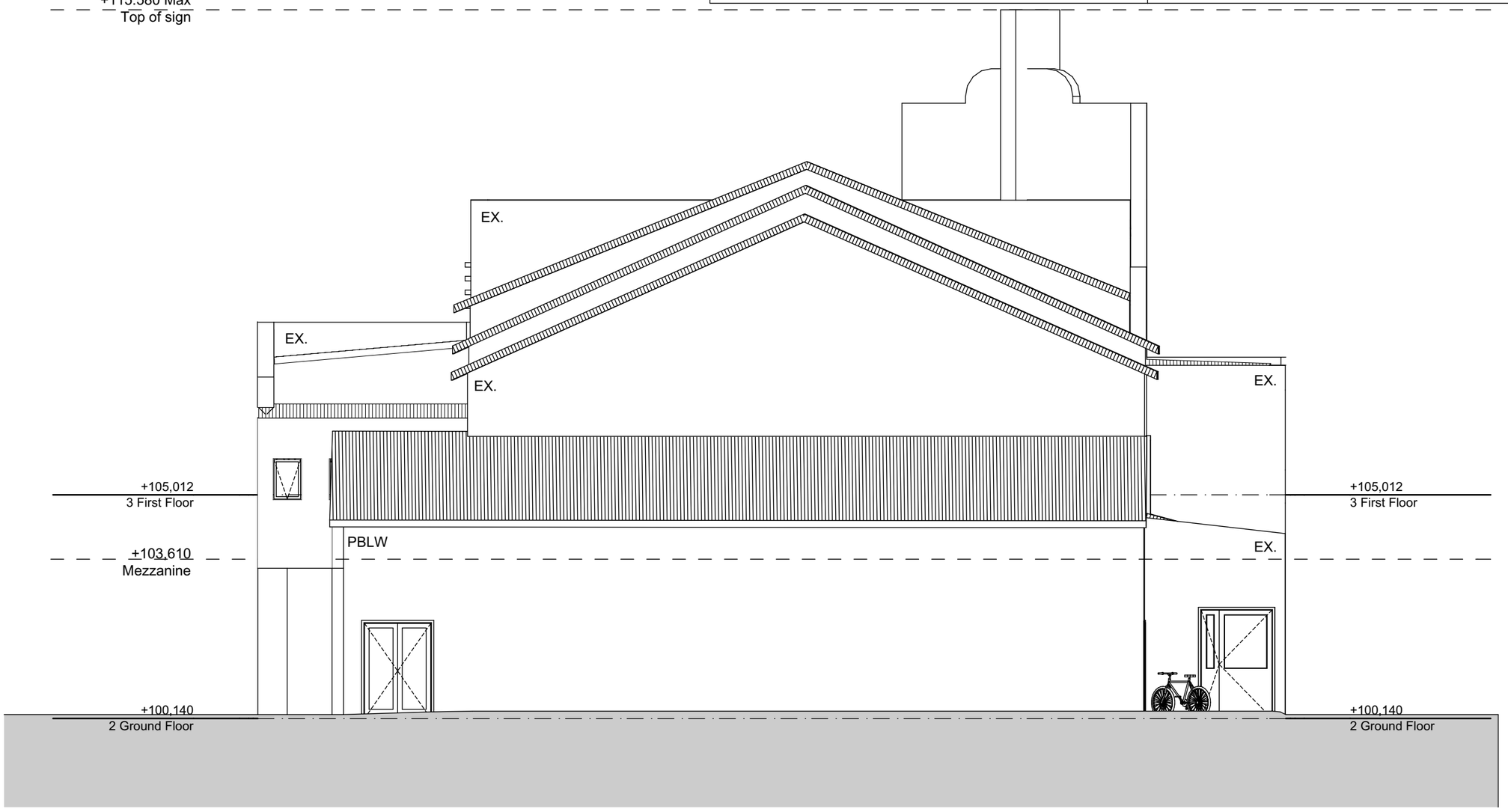
DRAWING NO 1559_DA09 REV
OF 14 DRAWINGS

DESIGN STATEMENT
EXISTING BUILDING FABRIC, EQUIPMENT AND FIXTURES ARE TO BE RETAINED WHERE POSSIBLE, PEPLACED WHERE NECESSARY AND FORM PART OF THE INTERPRETIVE EXPERIENCE.
WHERE AN ORIGINAL WALL HAD BEEN REMOVED OR OPENED THE OPENING SHALL BE EXPRESSED IN CONTRASTING MATERIAL TO THE EXISTINGWITH NIB WALLS AND LINTELS RETAINED TO DENOTE THE EXISTING WALL LOCATION, ORIENTATION OR DEPTH.
INTERNAL FINISHES AND FIXTURES WILL BE SIMPLE AND MODERN IN COMPOSITION AND FINISH, DIFFERENTIATING EXISTING FABRIC BUT ENHANCING THE SPIRIT OF STREAMLINE MODERNE.

MATERIALS LEGEND

TAG	DESCRIPTION
AW	AWNING WINDOW
CB	COLORBOND CUSTOM ORB ROOF CLADDING
EX	EXISTING
FG	FIXED GLAZING
PBLW	PAINTED BLOCKWORK

ALL WINDOWS NEW AND EXISITNG TO BE A DARK COLOUR, CHARCOAL OR SIMILIAR.
EXTERIOR PAINT COLOUR TO BE LIGHT, WHITE OR SIMILIAR.



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1559_DA10

REVISIONS:
REV# DATE:
(Description)

PLANNING EXHIBITED DOCUMENTS
Plan No. DA-0250/2016
Date advertised 17/08/2016
Planning Administrator

DEVELOPMENT APPLICATION

PROJECT
STAR THEATRE
217B INVERMAY ROAD, INVERMAY, TASMANIA, 7248

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DRAWING
WEST ELEVATION

DRAWING NO 1559_DA10 REV
OF 14 DRAWINGS

JAWS ARCHITECTS

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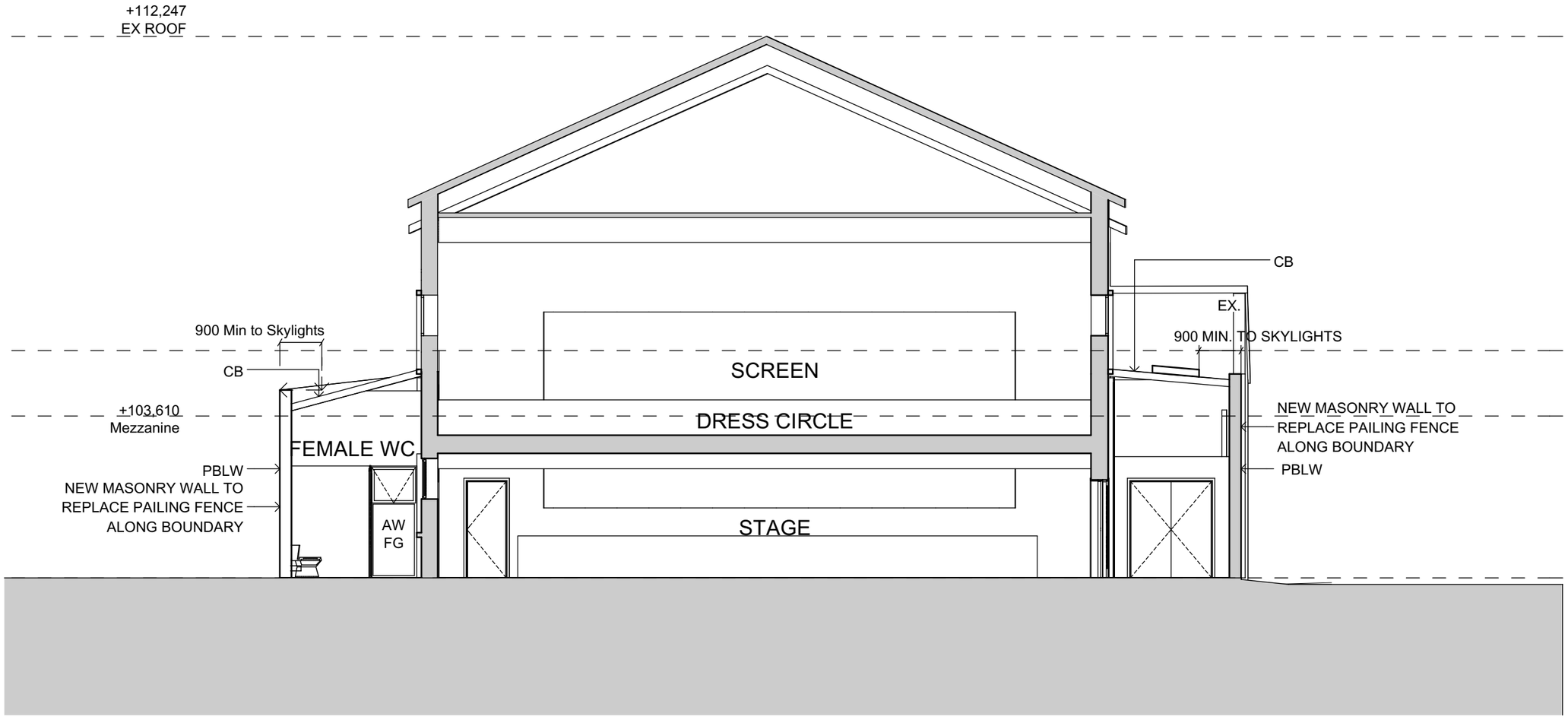

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1559_DA11

REVISIONS:
REV# DATE:
(Description)

PLANNING EXHIBITED DOCUMENTS
Ref. No: DA 0250/2016
Date exhibited: 17/08/2016
Planning Administration

DEVELOPMENT APPLICATION

PROJECT
STAR THEATRE
217B INVERMAY ROAD, INVERMAY, TASMANIA, 7248

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DRAWING
SECTION A

DRAWING NO 1559_DA11 REV
OF 14 DRAWINGS

ARCHITECTSJAWS

DESIGN STATEMENT
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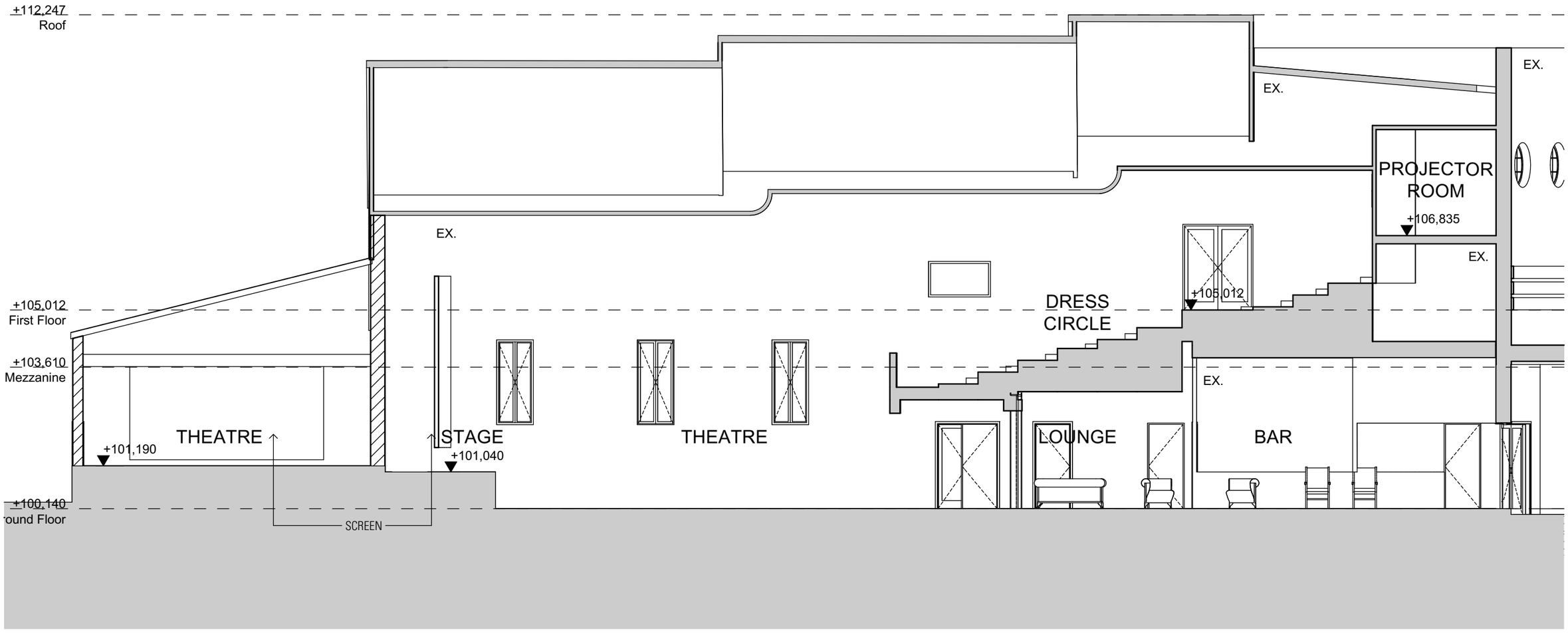

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(Description)

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DEVELOPMENT APPLICATION

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STAR THEATRE
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DRAWING
SECTIONS B

DRAWING NO 1559_DA12 REV
OF 14 DRAWINGS

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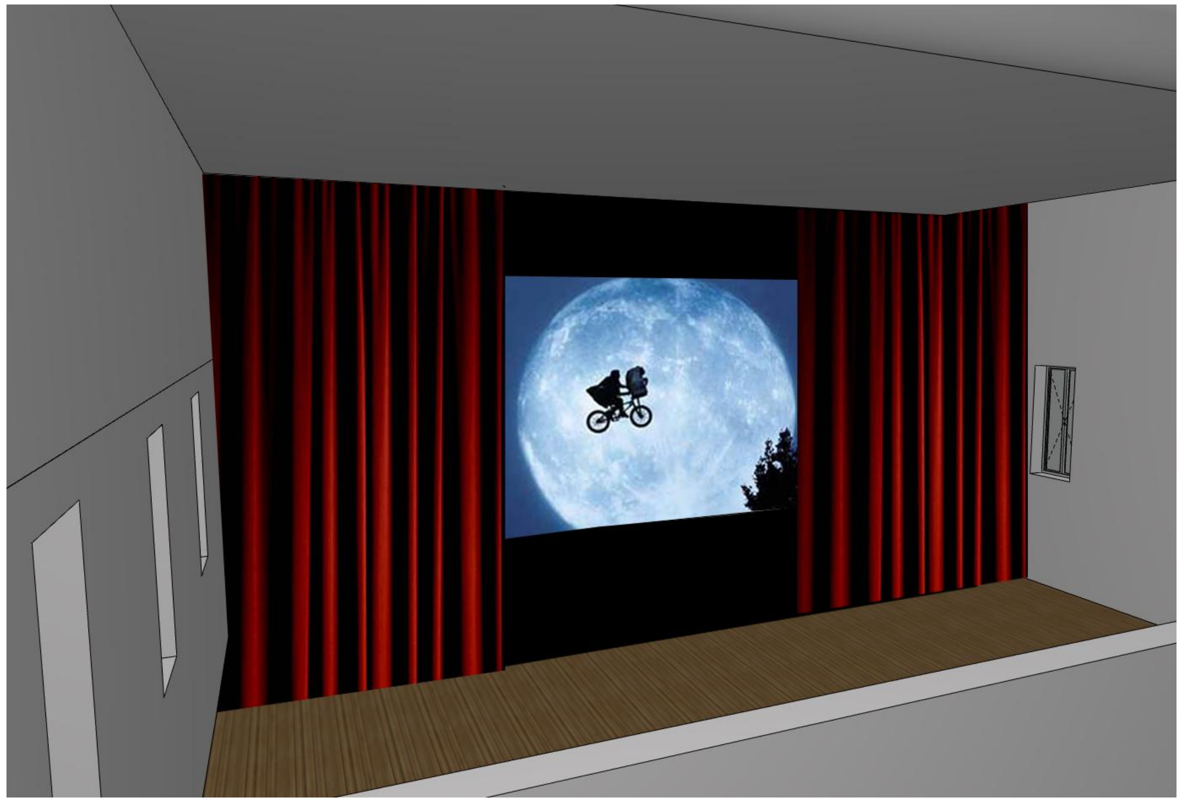

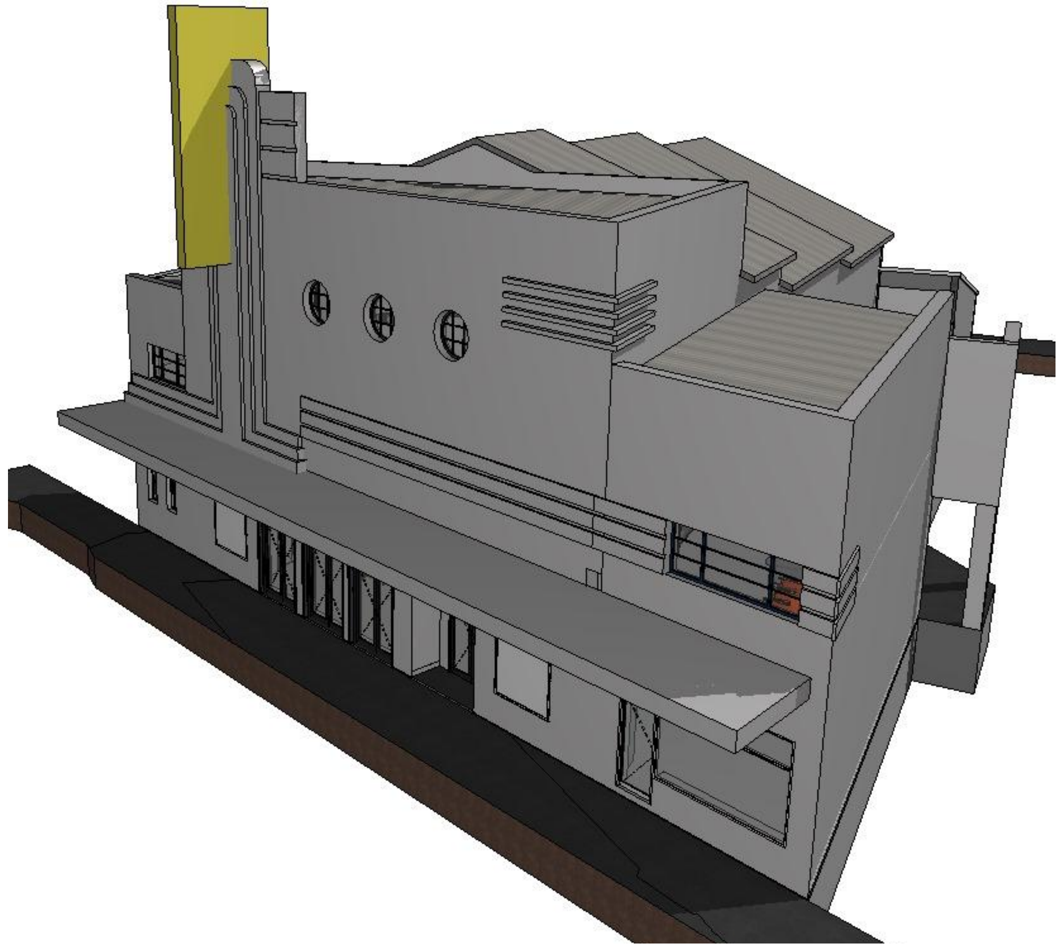

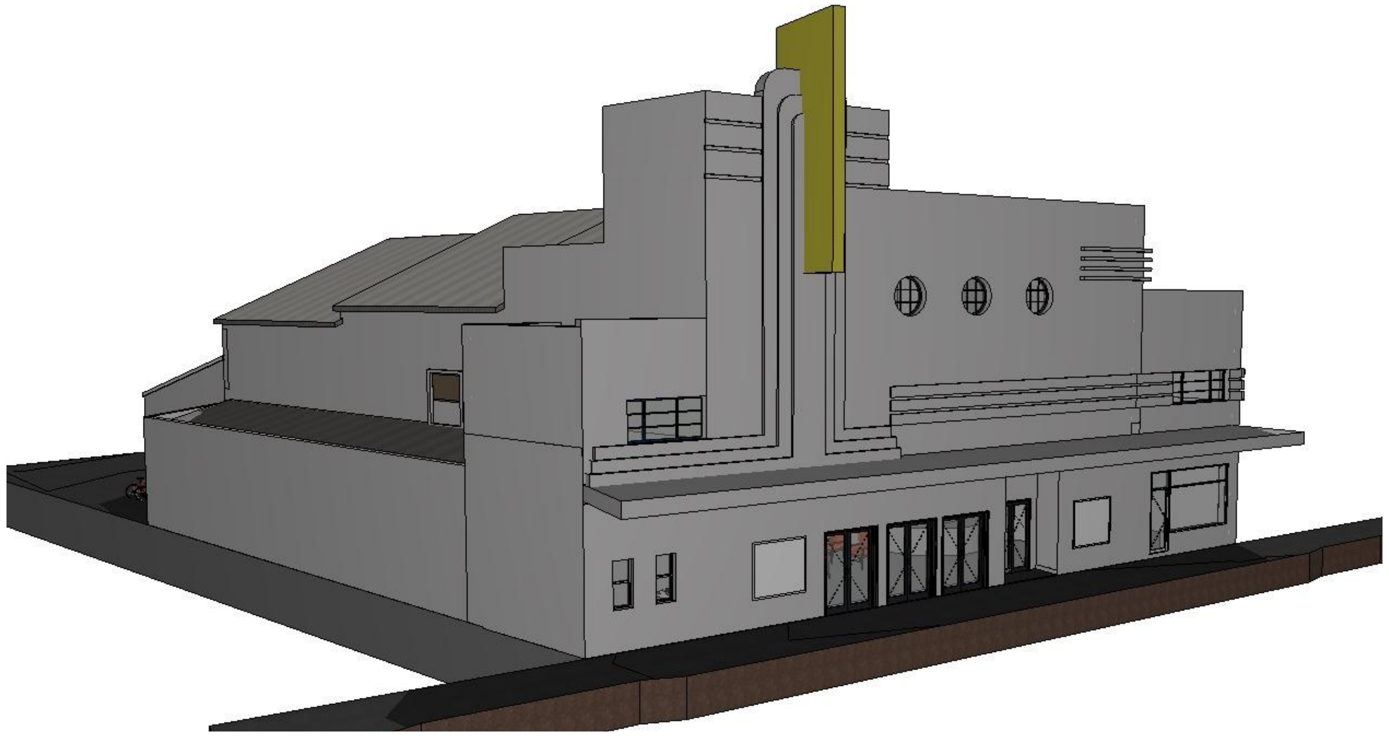

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1559_DA13

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REVISIONS:

REV# DATE: (Description)

PLANNING EXHIBITED DOCUMENTS
Ref. No: DA 0250/2016
Date advertised: 17/08/2016
Planning Administration

DEVELOPMENT APPLICATION

PROJECT

STAR THEATRE

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DRAWING

3D VIEWS

DRAWING NO 1559_DA13 REV

OF 14 DRAWINGS

Star Theatre
Development Application
environmental noise assessment

Report No. 421452-01

Vipac Engineers & Scientists Ltd
PO Box 506
Kings Meadows TAS 7249
July 2016

DOCUMENT CONTROL

STAR THEATRE
DEVELOPMENT APPLICATION
ENVIRONMENTAL NOISE ASSESSMENT

Report No.
421452-01

Library Code
ACS

Prepared for
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Authorised by	Peter Bunker Manager, Tasmania	Date: 1 August 2016
Approved by		Date:

Revision History

Revision No.	Date Issued	Reason/Comments
0		

Distribution

Copy No._____	Revision No.	Location
1	0	Project/Client File
2	0	Client
3	0	Vipac Library

Keywords environmental noise, dBC, dBA. transmission loss

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References

[1] SoundPLAN Acoustic modelling software - Braunstein & Berndt GmbH.

Executive Summary

Vipac was commissioned by the Star Theatre to conduct an environmental noise assessment for a proposed cinema redevelopment at 217b Invermay Road. The assessment is a requirement under the Launceston City Council Interim Planning Scheme 2015.

From environmental noise monitoring on-site a project specific assessment criteria was developed as follows in accordance with LCC planning scheme requirements:-

- $L_{Aeq,10min}$ 42 dBA

Predicted results from the environmental noise modelling of operations indicate that noise emissions levels have the potential to exceed the assessment criteria at critical receiver locations.

To reduce noise emission levels noise reduction recommendations are provided in section 5.1 for the following sources:-

- External mechanical plant.
- Main theatre roof/ceiling complex.
- Rear theatre roof ceiling complex.

1 Introduction

Vipac was commissioned by the Star Theatre to conduct an environmental noise assessment for a proposed cinema redevelopment at 217b Invermay Road. The assessment is a requirement under the Launceston City Council (LCC) Interim Planning Scheme 2015, the relevant section from the planning scheme is provided below:-

---

Part D Zones » 20.0 Local Business Zone » 20.3 Use Standards » 20.3.4 Noise levels

This standard applies to the use classes specified in Table 20.3.

Objective:	
To ensure that emissions to air, land and water are not detrimental to the amenity of sensitive uses.	
Acceptable Solutions	**Performance Criteria**
A1 Noise generated by a use on the site must: (a) not exceed a time average A-weighted sound pressure level (LAeq) of 5 dB(A) above background during operating hours when measured at the boundary of an existing sensitive use adjoining or immediately opposite the site; or (b) be in accordance with any permit conditions required by the Environment Protection Authority or an environment protection notice issued by the Director of the Environment Protection Authority.	P1 Noise levels generated by a use on the site must not unreasonably impact on the amenity of nearby sensitive uses, having regard to: (a) the nature and intensity of the use; (b) the characteristics of the noise emitted; (c) background noise levels; (d) any mitigation measures proposed; (e) the topography of the site; and (f) the character of the surrounding area.

Vipac proposed the following approach to address the above:-

- Measurement of representative ambient noise levels at a secure location
- Internal reverberant noise levels predicted based on internal dimensions and surface finishes and reasonable assumptions about noise levels generated by amplified cinematic noise in the proposed cinema theatre spaces. The spectral shape of the noise field would be based on Vipac library data.
- Transmission loss through the building envelope predicted based on facade and wall construction details. From this facade sound power levels would be calculated for input into environmental noise modelling software.
- Noise emission levels at noise sensitive community locations predicted.
- Assessment of predicted noise emission levels against LCC planning scheme requirements and recommendations for mitigation is required

2 Site description

The Star Theatre is located at 217b Invermay Rd. The site is bounded by commercial properties to the north and south and residential premises to the north-west and west.

The theatre redevelopment would comprise of two cinemas, a main 140 seat theatre and an 80 theatre to the rear of the property. To the sides of the main theatre a cafe and microbrewery are proposed (these spaces are not considered here as they are not expected to generate excessive noise emissions). Noise emissions in the form of building breakout during cinematic showings along with external mechanical plant equipment are considered to the most likely sources of potential noise nuisance from operations at the redeveloped cinema.

The following in relation to hours of operations was provided by the Star Theatre:-

> The facility will open at 7.00am until 12 (midnight) 7 days a week. The breakdown of uses and hours will be – Cinema/theatre – Monday to Friday evenings (5.30pm) until 10.30/11.00pm and Saturday 10.30 am until 10.30/11.00pm. It is proposed to operate a cafe from the site serving Breakfast (Sat/Sun from 7am); Light lunches 7 days a week and dinner (for small numbers) when the Theatre is operating.
>
> Whilst the stated hours are until 12 (midnight) this includes clean up after functions/events. Generally the public side of the use will cease at 10.30pm

Figure 1 provides an aerial view of the site and its surrounds with the location where ambient noise monitoring was conducted marked. Figure 2 provides site plan and floor plan views of the proposed redeveloped facility.

Figure 1 – Aerial view of the Star Theatre and surrounding area with the noise monitoring position marked.

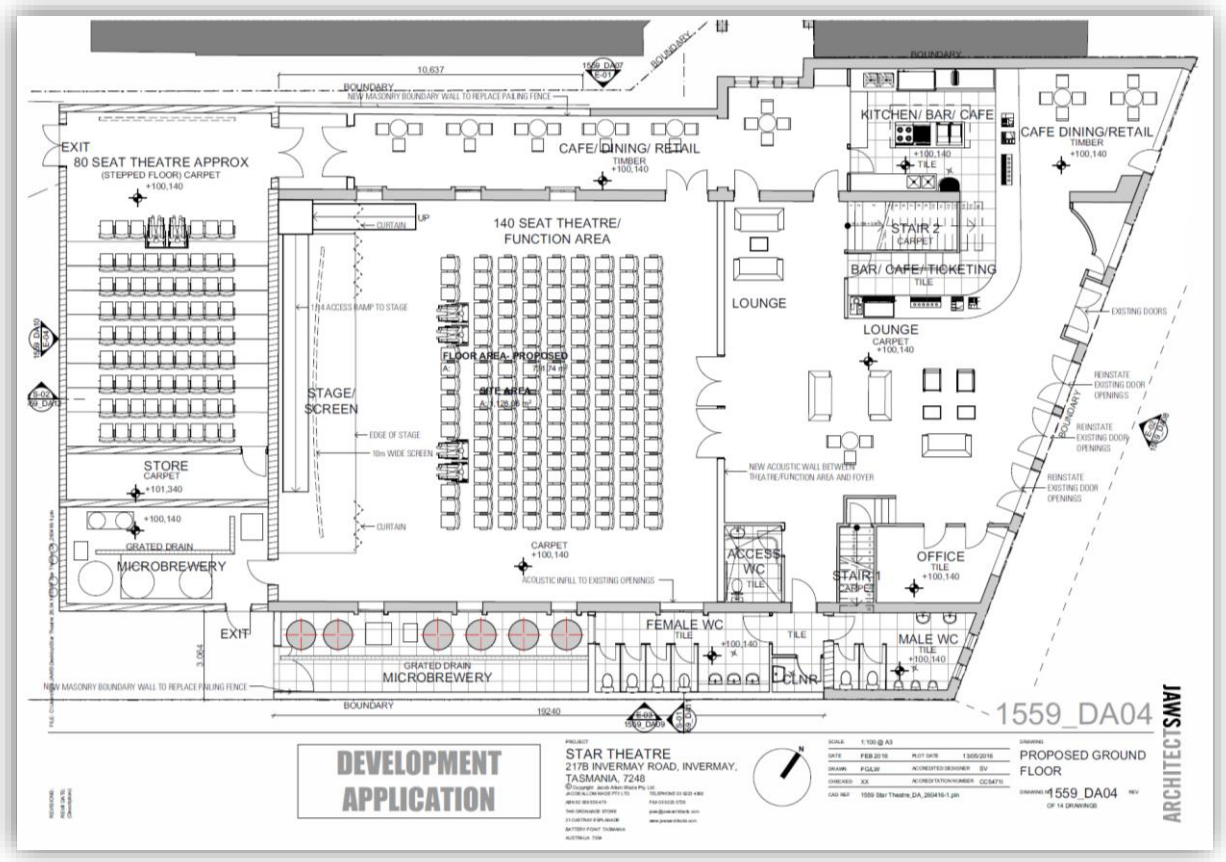


Figure 2 – Proposed floor plan for the Star Theatre redevelopment.

3 Ambient noise monitoring

A logging sound level meter (Larson Davis 824) was located on-site (see figure 1, SLM) for a approx. 5 days measuring L_{eq} and L_{max}, L_{min}, L_1, L_{10}, L_{50}, L_{90} and L_{99} A-weighted sound pressure levels on a 10-minute basis.

Figure 3 provides a photograph of the sound level meter.

Figure 3 – Sound level meter, view to the south.

3.1 Monitoring results and discussion

Figure 4 presents a graph of the main 10-minute statistical data logged at the SLM position as follows:-

- L_{Aeq}: Ambient noise level
- L_{A10}: Represents transient noise levels
- L_{A90}: Considered the background noise level.

For sake of clarity the other 5 data sets measured are not shown in this graph. Vertical dashed lines denote 2230 hrs, the proposed cessation time of cinema showings.

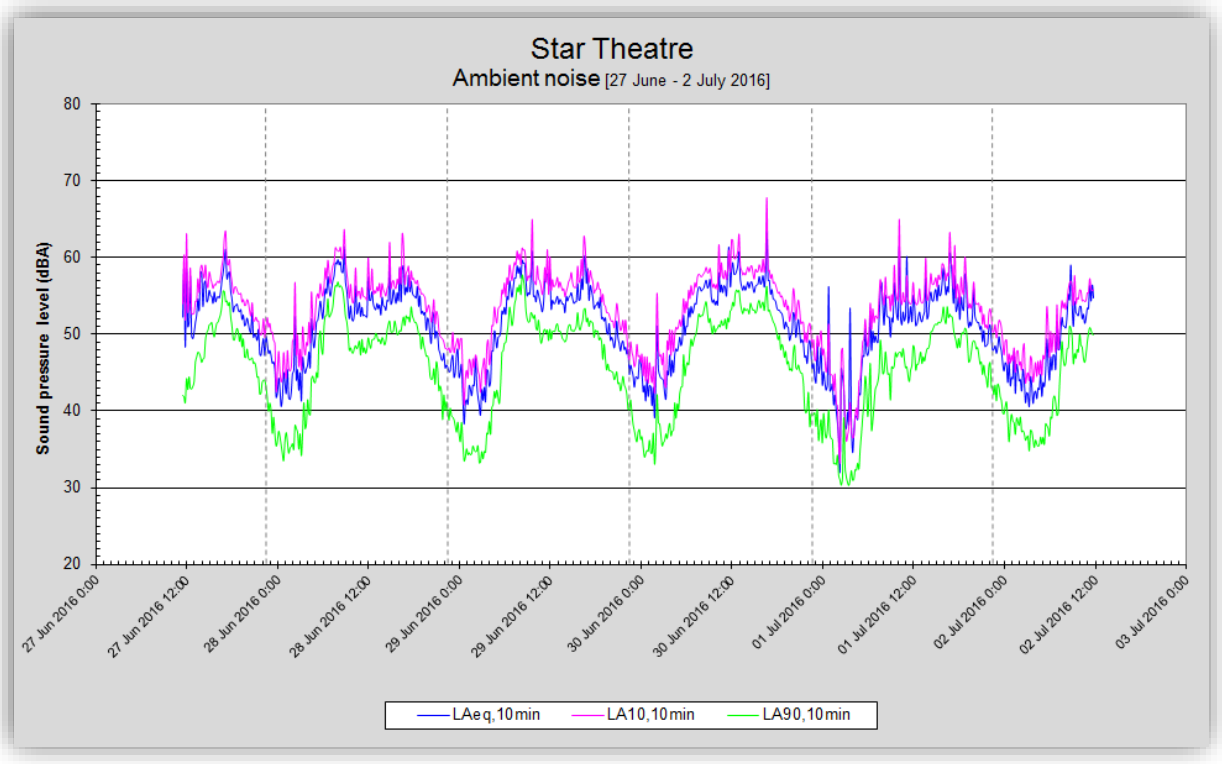


Figure 4 – Monitored Ln-statistics.

From the above:-

- By 2230 hrs background (L_{A90}) levels dropped from a typical day time level of 50 dBA to approx. 40 dBA with L_{Aeq} and L_{A10} levels 5 to 7 dBA above this. After 2230 hrs L_{A90} levels dropped below 40 dBA rising above again after 0500 hrs.

NB: A 2 - 3 dBA reflection correction is applicable at the measurement location given the proximity of nearby structures. Given this, the above and the Acceptable Solution A1(a) applicable under the LCC planning scheme the assessment criteria for this project is 42 dBA L_{Aeq} with Vipac nominating a 10-min time criteria.

4 Environmental noise model

SoundPLAN[1] software was used for carrying out detailed noise emission spectra and contour modelling. Parameters influencing sound propagation and attenuation include:

- Source type (point, line, plane).
- Relative source and receiver height.
- Topography and barriers.
- Industrial buildings as sources and/or barriers.
- Ground absorption.
- Distance attenuation.
- Reflecting surfaces.
- Source directivity.

As all propagation and attenuation parameters are frequency dependent, all input source data has been based on octave band sound power spectra. The General Prediction Method algorithm was used.

Geo-referenced topographic, transport, building and hydrologic data was obtained from Department of Primary Industry, Parks, Water and Environment. This provided contours at 10-metre intervals; residential locations; road layouts; and river and stream courses for the area.

Building details and equipment location details were provided by the Star Theatre and a site visit.

All source and geodata is referenced to the Map Grid of Australia (MGA).

4.1 Model input data

Input sound power (SWL) spectra were determined from Vipac library data to give a spectral shape to noise expected within each cinema and calculated building transmission loss spectra using the software package Insul. The overall reverberant noise level within each cinema was set to 85 dBC based on a standard provided by the Society of Motion Picture & Television Engineers (SMPTE) in America.

NB: The assumption of 85 dBC is conservative for an L_{Aeq} prediction as this is the upper end of the fluctuating noise levels expected within the cinemas.

Table 1 provides overall SWL levels for the external mechanical plant modelled and both the main and rear theatre building radiated noise emissions. Table 2 provides the SWL spectra.

Overall sound power Levels (dBA)			
Area	SWL	Source type	Comment
External mechanical plant	86	Point	Manufacturers data for typical outdoor heat exchanger unit
Main theatre	87	Area	Building radiated noise emissions, structural elements based on site observation
Rear theatre	63	Area	Building radiated noise emissions. Structure based on drawings provided and assumptions in relation to the roof/ceiling design, i.e assumed cavity filled with R4 fibreglass insulation over standard plasterboard.

Table 1 – Sound power levels.

1/1-octave band sound power spectra (dBA)										
Source	Frequency (Hz)									Total
	31.5	63	125	250	500	1k	2k	4k	8k	
External mechanical plant	-	-	71	76	78	82	81	76	-	**86**
Main theatre	53	72	74	76	78	82	81	76	33	**87**
Rear theatre	37	59	59	52	50	37	42	32	26	**63**

Table 2 – Sound power level spectra.

Figure 5 provides a model plan view with the location of sources and 5 receiver locations where single point sound pressure levels were predicted. Figure 6 provides a model wire frame view form the south.

NB: Locations 1 to 5 are at 1.5 m above ground height while location 1A is at 5.5 m above ground height to represent a second floor location in the adjoining property to the north-west.

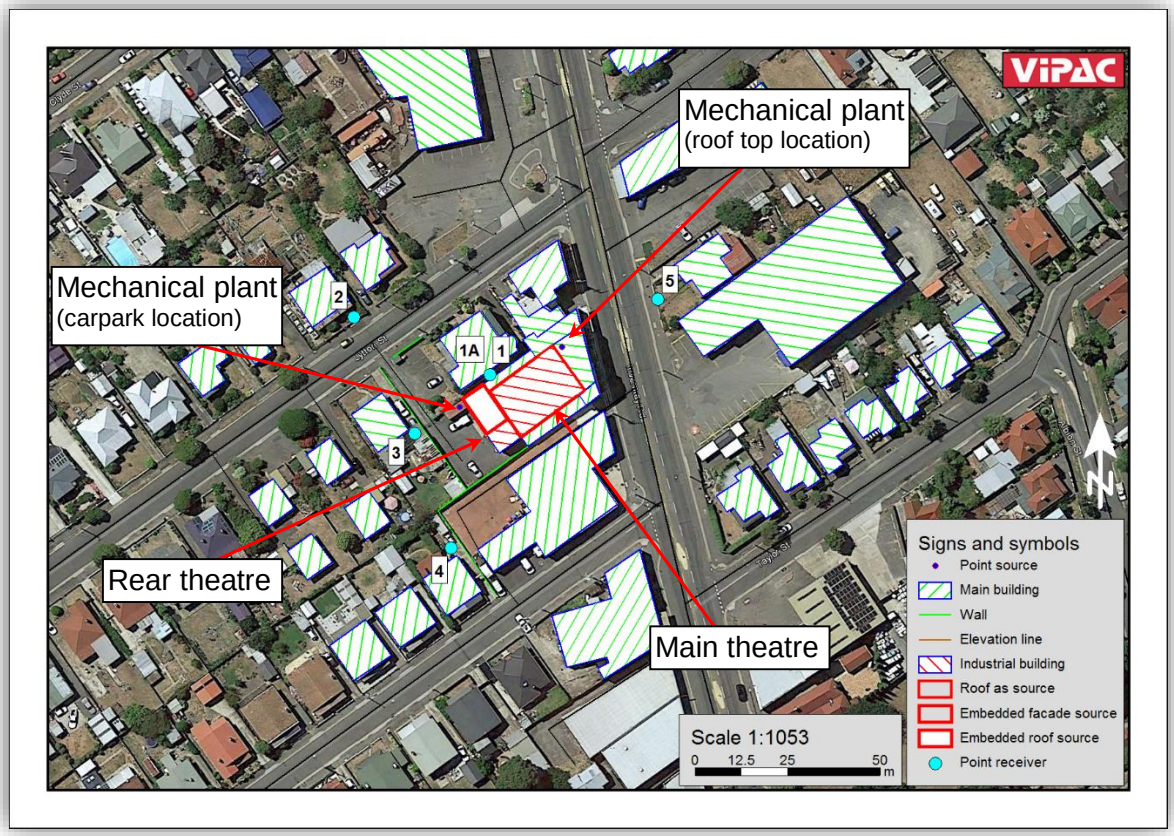


Figure 5 – Model plan view with source and receiver locations marked.

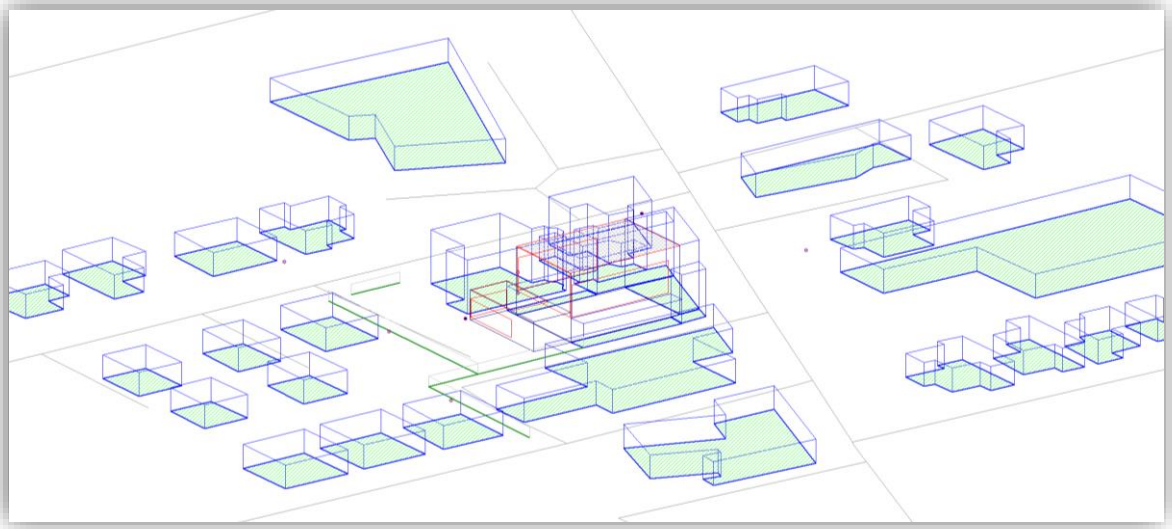


Figure 6 – Model wire-frame view, view from the south.

4.2 Modelling results and discussion

4.2.1 Predicted noise contour maps

Using the environmental noise model, a series of noise contour maps were generated to assist in the visualisation of noise propagation for the following operational scenarios: -

- Cinema showings, mechanical plant on roof – 1.5 m above ground height.
- Cinema showings, mechanical plant on roof – 5.5 m above ground height (contours overlayed on buildings).
- Cinema showings, mechanical plant in carpark – 1.5 m above ground height.
- Cinema showings, mechanical plant in carpark – 5.5 m above ground height (contours overlayed on buildings).

Figure 7 – Predicted noise emission contours, cinema showings, mechanical plant on roof – 1.5 m above ground height.

Figure 8 – Predicted noise emission contours, cinema showings, mechanical plant on roof – 5.5 m above ground height.

Figure 9 – Predicted noise emission contours, cinema showings, mechanical plant in carpark – 1.5 m above ground height.

Figure 10 – Predicted noise emission contours, cinema showings, mechanical plant in carpark – 5.5 m above ground height.

4.2.2 Predicted noise levels

Tables 3 and 4 provide predicted sound pressure levels at 6 receiver locations for the three sources outlined in section 4.1 and overall for both modelling scenarios (as outlined in section 4.2.1).

Predicted noise emission levels (dBA) **Cinema showing, mechanical plant on roof**						
Source	Receiver (gnd level)					Receiver (5.5 m above gnd)
	1	2	3	4	5	1A
mechanical plant	38	27	34	27	35	50
Main theatre	32	28	24	26	25	42
Rear theatre	30	23	15	19	-	31
Overall	**40**	**31**	**34**	**30**	**36**	**51**

Table 3 - Predicted noise levels, Cinema showing with mechanical plant on roof.

Predicted noise emission levels (dBA) **Cinema showing, mechanical plant in carpark**						
Source	Receiver (gnd level)					Receiver (5.5 m above gnd)
	1	2	3	4	5	1A
mechanical plant	47	49	47	43	5	42
Main theatre	32	28	24	26	25	42
Rear theatre	30	23	15	19	-	31
Overall	**47**	**49**	**47**	**43**	**25**	**45**

Table 4 - Predicted noise levels, Cinema showing with mechanical plant in carpark.

From the above:-

- The assessment criteria for the project is exceeded at location 1A with the mechanical plant located on the roof and at locations 1, 2, 3, 4 and 1A with the mechanical plant in the carpark.
- Noise emissions from the mechanical plant and both theatres require a noise reduction to meet the project criteria level of 42 dBA (noise emissions from the two theatres are dominated by breakout noise through the roof/ceiling structures and noise reduction recommendations will focus on these facade elements).

NB: Analysis of the predicted received spectral content indicates the potential of relatively high levels of low frequency energy to be emitted from the roof/ceiling structures of the two theatres and this will be considered in the recommendations given in section 5.1.

5 Conclusions and recommendations

- From environmental noise monitoring on-site at the Star Theatre, 217b Invermay Rd, a project specific assessment criteria were developed as follows in accordance with LCC planning scheme requirements:-
    - $L_{Aeq,10min}$ 42 dBA (not applicable between 2230 and 0500 hrs).
- Predicted results from the environmental noise modelling of operations indicate the noise emissions levels the potential to exceed the assessment criteria at critical receiver locations.

5.1 Recommendations

The following recommendations are given to reduce noise emissions levels below the assessment criteria level:-

- Mechanical plant equipment housed outside of the building structure should have a maximum total SWL level 72 dBA and be free of intrusive noise characteristics as defined by the *Tasmanian Noise Measurement Procedures Manual*. This could be achieved through a combination of selecting 'quiet' equipment and enclosing.

  NB: With the mechanical plant potentially operating past 2230 hrs the above recommendation allows for approx. 37 dBA at critical receiver locations accounting for the lower background noise levels that occur after this time.

  NB: Care should also be taken in the selection of kitchen fume exhaust systems with regard to discharge locations and the SWL level produce by the extraction fan so as not to cause a noise nuisance.

- The transmission loss of the roof/ceiling structure in the main theatre should be upgraded as follows:-
  - All openings in the ceiling should be closed off with plasterboard with a 13 mm plasterboard with a density of 10.5 kg/m^2 (i.e. CSR Fyrchek plasterboard or equivalent)

  - R4 or greater fiberglass insulation to be installed above the ceiling in the cavity space.

- The transmission loss of the roof/ceiling structure in the rear theatre should be upgraded as follows:-
  - Ceiling plasterboard 13 mm plasterboard with a density of 10.5 kg/m^2 (i.e. CSR Fyrchek plasterboard or equivalent).

In addition to the information requested in the table above, it is also requested that further details be provided in relation to the proposed micro brewing operation. Specific details should include (but are not limited to):

• The maximum volume of product brewed per brew and the expected total yearly volume of product to be produced;

- Maximum volume to be brewed on the system is 1000l per brew.
- Fermentation taking 10-14days.
- The maximum output of this system per year would be ~40,000ltr per year or more convertibly ~30,000ltr per year.

• A breakdown of the brewing process including the method of storing ingredients and how the end product will be distributed (in either bottles or kegs);

- Malt will be ordered in advance and will arrive on site in 25kg bags and be stored short term onsite, Hops will be ordered in larger 20kg boxes and be stored in the cool room/fridge.
- A typical brew will use ~250kgs of malt

Brewing overview.

- The day before a brew day the malt will be weighed out and milled into grist
- The brew day will start with the grist and water being combined in the Mashtun for starch conversion (1-2hrs). On completion the wort will be separated from the grain solids in the Lautertun and boiled for ~1hr in the Kettle. Hops will be added ~1-10kg (varies greatly between recipes) before being cooled and pumped into a fermenter and pitched with yeast.
- The beer will be monitored and analysed daily during fermentation and once the beer has reached its target gravity and had sufficient time for diacetyl reduction (~10 – 14 days overall) be filtered, carbonated and kegged.
- Looking forward a small canning or bottling line would be purchased for off premise sales as visitation to the Theatre increases.

• Details of how ingredients will be delivered to the site and distributed from the site in terms of delivery hours and methods;

- Bulk ingredients will be delivered to site in 25kg bags on palettes from the malt supplier by a courier e.g. Toll during normal business hours. Once a week
- Other ingredients e.g. hops, yeast nutrient will be ordered from various suppliers and delivered by courier. As these as not large or bulky and be able to be stored on site they will be ordered less often.

• Hours of operation when the physical activities of brewing will occur (i.e. does not include beer stored in fermenting vessels and maturation tanks);

- A brew day would take approx. 8 hours including set up and clean up and is planned to commence at the earliest 7am and be concluded at the latest by 8pm.
- Normal day-to-day operations of kegging, cleaning, milling, analysing etc. or for single brew days would be conducted in normal business hours.

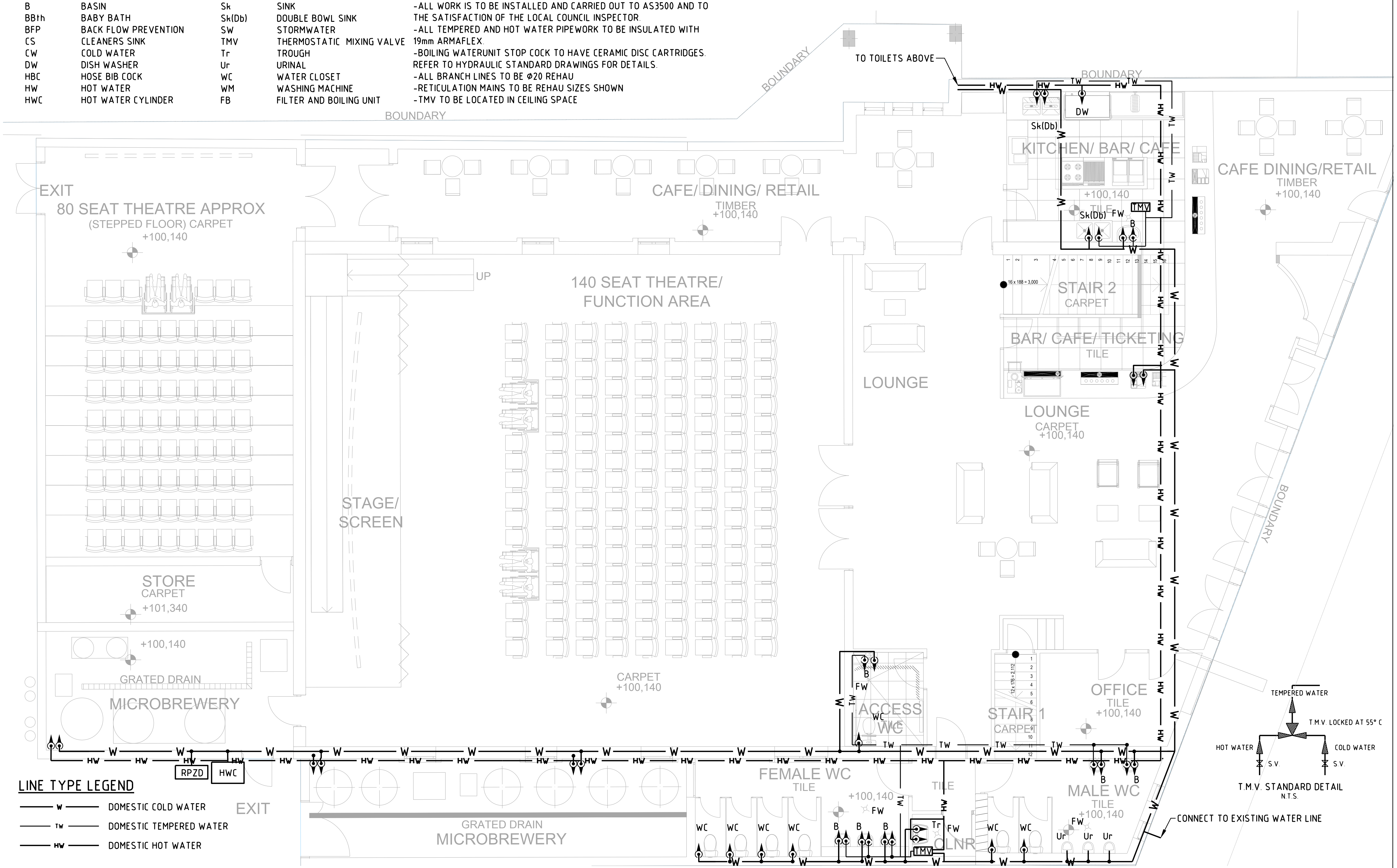
• Indication of potential sources of environmental emissions and nuisances such as odour, noise and waste and proposed methods to manage the emissions in order to mitigate or prevent detrimental impacts occurring to adjoining or nearby sensitive uses such as loss of amenity.

- Noise - The noise of a brewery this size will be negligible and is internal to the theatre, with the building being treated for any spill noise due to nature of theatre.
- Smells – On a brew day there may be a slight malty aroma present during mashing process as with other craft breweries
- Waste – the main waste that needs to be disposed of is the spent grain and yeast; fortunately this is of value as animal feed. It is planed that arrangement will be made with farms for the collection and disposal on the brew day. Spent grain will not be kept on site. Alternatively there is value in the spent grain being used in compost by local nurseries.

FIXTURE LEGEND

B	BASIN	Sk	SINK
BBth	BABY BATH	Sk(Db)	DOUBLE BOWL SINK
BFP	BACK FLOW PREVENTION	SW	STORMWATER
CS	CLEANERS SINK	TMV	THERMOSTATIC MIXING VALVE
CW	COLD WATER	Tr	TROUGH
DW	DISH WASHER	Ur	URINAL
HBC	HOSE BIB COCK	WC	WATER CLOSET
HW	HOT WATER	WM	WASHING MACHINE
HWC	HOT WATER CYLINDER	FB	FILTER AND BOILING UNIT

- ALL WORK IS TO BE INSTALLED AND CARRIED OUT TO AS3500 AND TO THE SATISFACTION OF THE LOCAL COUNCIL INSPECTOR.
- ALL TEMPERED AND HOT WATER PIPEWORK TO BE INSULATED WITH 19mm ARMAFLEX.
- BOILING WATERUNIT STOP COCK TO HAVE CERAMIC DISC CARTRIDGES. REFER TO HYDRAULIC STANDARD DRAWINGS FOR DETAILS.
- ALL BRANCH LINES TO BE Φ20 REHAU
- RETICULATION MAINS TO BE REHAU SIZES SHOWN
- TMV TO BE LOCATED IN CEILING SPACE



LINE TYPE LEGEND

- W — DOMESTIC COLD WATER
- TW — DOMESTIC TEMPERED WATER
- HW — DOMESTIC HOT WATER

No	Revision	Drawn	Date
A	ISSUED FOR PLANNING	TLT	15.06.17

PLANNING

ENGINEERING EDGE Pty Ltd
ACN 109 155 884
219 Invermay Rd, Invermay 7248
t 6326 9805 - f 6326 9607
mail@engineeringedge.com.au

DO NOT SCALE

Scale: AS SHOWN
Drawn: T.TASKER
Accreditation No. -
Stuctural Cert. No.
Designed: R. JESSON
Accreditation No. CC5848I
Approved
Date -

Client: STAR THEATRE PTY LTD
Project
Title: 217B INVERMAY ROAD, INVERMAY
WATER PLAN
Original Size: A3
Drawing No: 14816 - H01
Revision: A

LEGEND OF DIAMETERS

TROUGH = 50MM Ø	WC = 100MM Ø
SINK = 50MM Ø	SEWER = 100MM Ø UPVC
BATH = 40MM Ø	STORMWATER = 100MM Ø UPVC
BASIN = 40MM Ø	VENT PIPE = 50MM Ø
SHOWER = 50MM Ø	DISHWASHER = 50MM Ø

BOUNDARY

BOUNDARY

BOUNDARY

EXIT

80 SEAT THEATRE APPROX

+100,140

CAFE/ DINING/ RETAIL

+100,140

TO TOILETS ABOVE

KITCHEN/ BAR/ CAFE

DW

Sk(Db)

+100,140

TILE

FW

B

Sk(Db)

CAFE DINING/RETAIL

+100,140

UP

140 SEAT THEATRE/
FUNCTION AREA

STAIR 2

16 x 188 = 3,000

BAR/ CAFE/ TICKETING

LOUNGE

B

LOUNGE

+100,140

STAGE/
SCREEN

STORE

+101,340

+100,140

GRATED DRAIN

MICROBREWERY

TRAPPED GRATED DRAIN

+100,140

B

FW

ACCESS
WC

WC

STAIR 1

12 x 176 = 2112

OFFICE

+100,140

FEMALE S/WC

+100,140

MALE WC

+100,140

VEHICLE
ACCESS

1000 LITRE
TRIPLE INTERCEPTOR

EXIT

Ø100 uPVC MIN 1.67%

Ø100 uPVC MIN 1.67%

GRATED DRAIN

MICROBREWERY

TRAPPED GRATED DRAIN

BOUNDARY

WC WC WC WC B B B Tr FW WC WC FW Ur Ur Ur

CLNR

CONNECT TO EXISTING SEWER

MICRO BREWERY NOTES:

- YEAST TO BE CAPTURED AS LIQUID WASTE & TRANSPORTED OFF SITE.
- SPENT GRAIN TO CAPTURED & TRANSPORTED OFFSITE.
- NO WASH DOWN OF THESE PRODUCTS TO SEWER WASTE SYSTEM.

No	Revision	Drawn	Date
A	ISSUED FOR PLANNING	TLT	15.06.17

PLANNING EXHIBITED DOCUMENTS
Ref. No: DA-0250/2016
Date exhibited: 17/08/2016
Planning Administration

PLANNING

ENGINEERING EDGE Pty Ltd
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mail@engineeringedge.com.au

DO NOT SCALE

Scale	AS SHOWN	Stuctural Cert. No.	
Drawn	T.TASKER	Designed	R. JESSON
Accreditation No.	-	Accreditation No.	CC5848I
Approved			
Date	-		

Client: STAR THEATRE PTY LTD

Project

Title: 217B INVERMAY ROAD, INVERMAY
SEWER PLAN

Original Size: A3

Drawing No: 14816 - H02

Revision: A

Pellows Saws & Mowers
223 Invermay Rd,
Invermay, TAS, 7250

pellows@bigpond.com
6326 5722

To whom it may concern,

Pellows Saw and Mowers of 223 Invermay Road, Launceston have discussed the use of their car park outside of business hours with the owners of The Star Theatre.

Pellows are prepared to let cinema patrons use their car park at times that fall outside the operating hours of Pellow's business. These hours currently are;

Monday to Friday 0830 to 1730
Saturday 0830 to 1200

Signed

Neville Coulson
Owner Pellows