



Figure 3: Existing Woolshed

Coach parking will be provided on an area of relatively flat land adjacent to the access track and stock yards before it turns up the hill towards the woolshed. Mobility impaired parking will be provided adjacent to the woolshed building, in an area already formed, while the main car park will be provided in a paddock to the north of the buildings, just beyond a dense *Macrocarpa* shelter belt hedge. This car park will have the ability to accommodate approximately 40 vehicles and will be accessed over an existing farm track. Minimal earthworks will be required as the area is essentially flat. Pedestrian access down to the venue will also be created as illustrated in the site plan. Parking areas will be gravelled with landscaping of the boundaries where considered necessary.

Given the relatively isolated and screened nature of the site, no limitations are considered necessary on the number of events that can be held at the venue. However, the applicants envisage that they will mainly be during summer and on Saturday nights and suggest a restriction to 8 events per calendar month for certainty purposes. Hours of 10am to 12 midnight, with all guests off site by 1am the next day at the latest, are proposed as the maximum duration for a function.

Any music that is played in these outdoor areas is restricted to either pre-recorded music played on a stereo located directly alongside the wedding assembly area, with the music directed at the guests via a single speaker. This music is associated with the entrance of the bride and played intermittently throughout the ceremony. It is also envisioned that there could be live acoustic music played in this area, such as harps, string quartets and the like.

While the renovated woolshed building will incorporate a kitchen and a bar facility, the applicants will not offer alcohol or food for sale. Those that hire the premises will make their own arrangements for the provision of alcohol and food (caterers for example) and will be able to utilise these facilities. As a consequence of this, it is unclear at this stage how many staff will be needed to service each type of function.

However, staff numbers will have little bearing on the effects generated by the proposal.

Some events might include music, with guests arranging bands or other musicians, DJs, juke boxes or similar. With the exception of acoustic music (such as harps, string quartets, chamber music) that might take place in the gardens during ceremonies in daylight hours, all music sources will be restricted to within the building. The applicants do not intend to provide a sound system. All music must be provided by guests. No outside speaker system will be used and guests will not be permitted to direct music outside the building. It will be a condition of all bookings that music is turned off at 12 midnight at the latest. All guests will be asked to leave the site by 12.30am.

The venue will be serviced by a AX20 InnoFlow sewage system and pressure compensated dispersal field, to be designed and installed by All Septic and Drainage Limited (see attached plan). The system will be located and designed to comply with all relevant requirements of the Otago Regional Council. The existing dwelling is currently supplied water from the town supply and it is proposed to connect the venue into this supply also.

1.3 Status of Activity

The property is zoned **Rural** in the Dunedin City District Plan. The site is located within "Peninsula Coast Outstanding Natural Landscape". Tomahawk Road is a **Local Road** in the District Plan's Roading Hierarchy.

We consider this proposal to fall into the same category as the Grandview Gardens venue at Currie Road, Outram which the Court defined as a **Rural Tourist activity**. The definition of 'Rural Tourist Activity' is:

...the use of land and buildings for the purpose of attracting visitors, provided that the activity is complementary to a permitted activity of the Rural Zone or a natural feature of the rural area

The Court in *PW and J Lindsay* (ENC-2012-CHC-112) confirmed that the definition of 'Rural Tourist Activity' cannot be confined to 'tourists' but the more encompassing 'visitors' term used in the definition must be used as it's the congregation of people, not whether they are on holiday, which gives rise to the effects on the environment. The Court also found that the function centre was complementary to the gardens, which are a permitted activity within the zone.

In this case the function centre is complementary to the natural features of this particular rural area, being the outstanding natural landscape and the Tomahawk Lagoon and its environs. While the Court in *Lindsay* did not need to decide whether the gardens in the Grandview case were a natural feature, because they meet the permitted activity arm of the definition, it did go on to say that the phrase should probably be read with section 6(b) of the Act in mind, although without the reference to "outstanding".

This site itself is located within 'Peninsula Coast Outstanding Natural Landscape' and adjoins the Tomahawk lagoon, which is identified as Regionally Significant wetland in the Otago Regional Water Plan (See schedule 9, entry 154). The District Plan also identifies the lagoon and its fringes as a significant conservation value (C112 and C092, which identifies the QEII covenanted area within the property). There are also

two significant trees located within the property, T1120 (Lancewood) and T1121 (Ngaio).

The woolsheds setting within this landscape and adjacent to the lagoon, makes this an attractive location as a venue because of the ability to experience these natural features. Hence the venue is considered complementary to the natural features of the rural area and meets the definition of 'rural tourist activity' accordingly. Rural tourist activity is a **controlled activity** in the District Plan.

For completeness, we note that the replacement of the existing lean-to attached to the woolshed that is to be demolished will not need consent under the ONL rules because the increase in size of the building does not exceed 100% of the floor area of the existing building.

Nor do we anticipate the need for an earthworks consent under the rules of the ONL overlay. For the most part, areas to be utilised by the venue have already been established as part of the historic farm operation. The upper car park proposed is on flat land so minimal earthworks will be required.

Under the proposed District Plan, the property is zoned **Rural Peninsula Coast** and is also located within the 'Peninsula Coast Outstanding Natural Landscape' overlay. The Tomahawk Lagoon and its margins have similar notations over them to the operative District Plan. The proposed activity is defined as a "Conference, meeting and functions" activity, being part of the Commercial Activity group, under this plan. Despite the rural zone containing many such activities, the proposed District Plan identifies this activity as a non-complying activity.

However, the rules of the proposed District Plan are not operative so the activity is considered a **controlled activity**.

2. Assessment of Environmental Effects

2.1 Introduction

Section 104A of the Act sets out how controlled activities are to be determined. After considering an application for a resource consent for a controlled activity, Council:

- (a) **must grant the resource consent**, unless it has insufficient information to determine whether or not the activity is a controlled activity; and*
- (b) may impose conditions on the consent under section 108 only for those matters—*
 - (i) over which control is reserved in national environmental standards or other regulations; or*
 - (ii) over which it has reserved its control in its plan or proposed plan.*

In this case, there are no national environmental standards or other regulations that apply to this activity. Hence Councils control is limited to the matters over which it has reserved control over in the District Plan. These are as follows:

- (a) The scale of the activity.
- (b) Vehicle access and parking.
- (c) Signs.
- (d) The size and location of structures.
- (e) The performance standards of the Environmental Issues Section.

The relevant performance standards of the Environmental Issues section relate to noise, glare and lighting, and electrical interference.

These matters are each addressed below but by way of introduction, we highlight the fact that the primary thrust of the Resource Management Act is to ensure the sustainable management of natural and physical resources. We consider that this proposal will not conflict with this premise. The applicants want to be able to share with others the beauty of the location as well as maintain the property for farming purposes. Establishing a complementary use for their land, based on the sites natural features, will allow the property to provide a greater return to applicants that will ensure a sustainable and viable economic future for the property.

It will also enable the applicant to increase their contribution to the environmental enhancement and restoration work that is being proposed for the Tomahawk Lagoon, which is being driven by the Otago Regional Council. The applicants plan to contribute to this through further fencing and planting work on their property as funds allow. Clearly further income generated by this proposal will assist in reducing the timeframe within which the issues facing the lagoon can be addressed.

Establishing a function venue at the site will also directly sustain other small businesses in Dunedin such as caterers, photographers, hairdressers, make-up artists, marriage celebrants and motellers. Overall, it will have a significant social, cultural and economic benefit to the City.

2.2 *Scale of the Activity*

A maximum of 150 people can be accommodated within the reception area of the converted woolshed building. However, this is likely to occur on only a few occasions as it more common for weddings groups to be no larger than 80-120 people. Staff on-site will depend on the individual caterer used and the size of the function so no restriction on staff numbers is proposed. Such a restriction would create a range of management issues as each function may have a different staff requirement.

However, the staff number is largely irrelevant as it the maximum number of guest that determines the scale of a function and therefore the effects on the environment. Occupancy issues under the Building Act is an altogether different matter than determining the appropriate level of guests at a function, which turns on the effects on the environment, not building regulation matters.

The key point to note is that a function of this size can easily be accommodated with this building and wider site, given the size of the building, the space available for parking and the distance to neighbouring properties from the actual venue. The site provides a relatively secluded and isolated venue despite its proximity to the city. There will be little difference in effects discernible outside the boundaries of the property (such as noise and vehicle movements, considered separately below) between functions of varying sizes. As will be discussed below, noise is very unlikely to be experienced off site from this activity while most people arranging weddings/functions in more remote locations such as this arrange coaches to transport people to and from the venue.

The relatively isolated and secluded nature of the property (despite it being close to the city), suggests that a limitation on the number of events that can occur on the site is not necessary. Of course, this is obviously self-limiting as most weddings, for example, take place on a Saturday. Other functions can occur on a Friday night but

it is unlikely that the venue will be booked out for two consecutive days given the logistics of managing that.

Having said that, the applicants predict that there will be no more than a maximum of 8 events in any one calendar month, when daytime conferences are included. This maximum is unlikely to be met across the calendar year especially since weddings, and outdoor events in particular, tend to favour warmer seasons. To provide a degree of certainty, the applicants will accept a condition restricting activities to no more than 8 events in a calendar month if the Council considers it necessary. Some of those events may of course take place in the daytime where any effects on amenity are more likely to be absorbed. Noise limits are higher during day time hours for example.

The applicants will impose strict finishing hours on all events, with all music being turned off by 12 midnight and all guests to have vacated the site by no later than 1pm. The venue will not be available on public holidays.

It must be remembered that this property is also home to the applicants. They will not want any activity to be rowdy or uncontrolled for the sake of their own home, their family, and their property. This is not a case with absentee venue owners. The indoor and outdoor function areas are located near to the applicants dwelling and as such, the family will be very aware of the level of activity taking place. They will not would allow any situation to develop that would impact on the property in a negative way.

2.3 Vehicle Access and Parking.

As noted above, access is from an un-named legal road line that runs in a north east direction off Tomahawk Road. Because the access road is not formed as a through road it is very quiet, with limited traffic. It currently only serves as the main access to the subject site and the DoC reserve area, although four other properties do have frontage to it.

This road line has a legal width of 16m and a formed width of approximately 7m. The intersection with Tomahawk Road is sealed for the first 10m at which point it becomes a well-formed gravel surface. Once the driveway leaves the legal road line and enters the subject property, the formed carriageway reduces down to 3 to 3.5m in width.

The legal road part of the accessway is more than adequate for two-way traffic, although the driveway within the property will need some upgrading in terms of additional metal to accommodate function traffic, in particular coaches, although sheep trucks do use this road. However, this does not need to be of a standard that provides for two-way traffic as all people associated with the event arrive at similar times or, at least, will all be travelling in the same direction over a period of time. As this is not a legal road line, no conditions requiring the upgrade of this part of the access are considered appropriate. It is for the applicant to ensure the road surface is appropriate for the use.

We consider the current access suitable, with some upgrading within the property itself, to accommodate the traffic expected to be generated by the venue. Host responsibility generally sees event organisers arrange coaches to transport people to and from functions to avoid any potential issue with drink driving (and this is likely to be a stipulation for people hiring the venue). We anticipate that between 3 and 4 coaches would serve the largest event at this venue. It should be noted in

this context that the site is regularly visited by stock vehicles without any difficulty. However, there will always be circumstances where guests prefer to travel in their cars, but we would not expect private vehicle usage to be significant. Out of an abundance of caution, the applicant has planned on a maximum of 30-40 vehicles attend any one function.

In terms of amenity impacts, the majority of the traffic generated by this proposal will arrive and leave during two reasonably short windows. For wedding functions, people generally arrive around mid-afternoon and then leave at the end of the function. The traffic windows for daytime functions will depend on the nature of the function. This will not create any inconvenience for other people who use the road (which is essentially no one else) or generate any significant off-site effects such as noise or dust. Dust will not be an issue given the formation of the road, the very low speed of vehicle's using this road, along with the planted fringe on both sides of the road. Vegetation is generally a very effective dust 'catch'. The leaves of plants intercept any dust generated from the road and trap it until it is washed to the ground by rain. Furthermore, there is approximately 10 metres from the formed carriageway to the boundary of any sites that contain dwellings on the eastern side of the road. The only dwelling on the west side of the road is again 10 metres away and is protected by vegetation.

With respect to noise generated by traffic using the road, we note that the purpose of a road is to carry traffic and it is part of the enabling infrastructure that allows people to provide for their well-being as required by the Act. The Act recognises this by restricting Councils ability to control noise from vehicles on public roads.

Regardless, noise from vehicles will be very minimal given the low operation speed of the road and the lack of seal which will ensure there is no "tyre whir", which is the principal cause of traffic noise. Furthermore, coaches and cars do not generate 'body slam' often associated with stock trucks so no disruptive noise characteristics will occur. In our view, the noise environment on this road will be less than that experienced by residents from the adjoining sealed Tomahawk Road, which will have a faster and busier traffic environment, thereby generating more noise for residents.

Once traffic is beyond the legal road reserve, it will be too distant to have any effect on neighbouring property owners.

Parking will be provided on the flat areas close to the venue. While the management approach for the venue has not yet been fully developed, it is likely that the applicants will require people to travel to functions via coaches. No more than 3 to 4 coaches will be needed to service a function. Parking to accommodate those coaches that will stay on site, or at least until all other visitors have arrived at the venue, will be provided on an area of relatively flat land adjacent to the stock yards and access track before it turns up the hill towards the woolshed, as illustrated on the site plan. This area has previously been formed in conjunction with the stock yards so no earthworks are required. This area is essentially enclosed by existing vegetation but this will be enhanced with further screen plantings as necessary.

However, it is acknowledged that some people will attend functions in private vehicles so parking to accommodate them will be provided. We anticipate that as a maximum, this could be 30 to 40 private vehicles parking on the site at any one-time. We do stress that this is unlikely to occur very often, if at all, given the drink driving regulations and the likely stipulation that those hiring the venue will need to use coaches to transport people to and from the site. This parking area will be

provided within a relatively flat paddock to the north of the buildings and will be metalled. This area is screened by an existing and relatively dense *Macrocarpa* shelter belt hedge. Views into the site will be virtually impossible from most angles and if the car park site can be seen, it will only be from a relatively long distance.

The site is essentially flat so only minimal earthworks will be needed. This will merely involve scrapping off the topsoil (to be retained on site) and applying a layer of gravel. Access to this parking area will be over an existing farm track which will need some upgrading. Pedestrian access down to the venue will also be created as illustrated on the site plan. We do not anticipate these minor earthworks infringing the earthworks rules but this will be addressed as necessary once the final design is completed. This can either be addressed through a condition of this consent or a note advising that an earthworks consent may be noted at a late date, prior to construction.

A drop off and pick zone will also be created adjacent to the wedding venue itself to cater for those who do not wish to leave their vehicles on-site. Mobility impaired parking will also be provided in this area. Again, this area has previously been formed in association with the operation of the woolshed and hence no further earthworks are required.

Overall, we are confident that any transportation effects of this activity will be less than minor.

2.4 Signs

No signs advertising the venue will be erected although a sign bearing the name of the property ('Lochend') will be erected with the properties mailbox on Tomahawk Road. As this is on Councils road reserve, the applicants will need to seek consent from the appropriate Council department.

Rule 19.5.2 permits signs associated with a permitted activity in the Rural Zone, provided that the signs:

- (i) Are located on the same site as the activity to which the sign relates.
- (ii) Do not exceed a total area of 1 m².
- (iii) Are not illuminated by any flashing lights, or neon or fluorescent lights.

The sign is associated with a permitted activity as it is merely the name of the farm property. It will also comply with the size and illumination standards for signs in the rural zone but it is unclear whether it is considered an off-site sign. Given it is to be located at the start of the properties driveway, albeit a legal road, it could be argued that it relates to the site which it is on. In any event, signs are part of the matters which Council has retained control so do not have a different activity category in this application.

Regardless of the interpretation here, the effects of the sign will be less than minor.

2.5 Size and location buildings

As we have already noted above, no new buildings will be erected to accommodate the activity. As a consequence, there will be no effects over and above what currently exists in the environment now. The existing woolshed will be converted into the function centre and its character is to be retained by keeping the existing brick walls and corrugated iron roof. While the 'new' corrugated iron lean-to will be

of a larger dimension to the previous lean-to, this will not be apparent to anyone off-site.

Given its location nestled amongst mature trees, it is difficult to pick out the woolshed from across the lagoon. However, the applicants have commissioned a well-respected architectural firm, McAuliffe Stevens, to ensure the renovation work is undertaken in an appropriate and sensitive manner. A design statement is attached that sets McAuliffe Stevens vision for the building.

The proposed activity and new use of this building will have little impact on rural amenity. The District Plan lists a number of the many different aspects of rural amenity and these include:

- The predominance of natural features over man-made features
- High ratio of open space relative to the built environment
- Significant areas of vegetation (pasture, crops, forestry, indigenous)
- Large numbers of farmed animals
- Noise, smells and effects of agricultural, horticultural and forestry activities
- Low population densities relative to urban areas
- Generally narrow unsealed roads
- Absence of urban infrastructure.

Looking at these values [taken from Objective 6.2.2 of the Plan] we can see that none of these will be affected by the proposal.

2.6 Noise Standard

The noise limits for this site are shown on the Noise Map Index of the District Planning Maps. They are 50dBA day-time and 40dBA night-time. The day-time hours are 7:00am to 9:00pm with all other times being night-time hours. These limits apply at all points within 50m of a residence. That is, noise within the subject site can be louder than the limits, as long as it is no louder than those limits when measured 50m from any other dwelling.

The permitted baseline is particularly relevant with respect to noise. Noise associated with rural activities (agricultural, horticultural and forestry etc) is permitted and indeed should be expected in the Rural zone, while Tomahawk Road itself will create an ambient noise environment for residents along that road. Some of these activities and the associated machinery can be particularly loud. While noise is likely to arise from the proposed activities on this site, the issue is whether the effects of that noise are greater than those that could arise from a permitted rural activity and whether the levels are within the maximum limits for the area.

With respect to potential sources, the arrival and departure of vehicles will bring the sounds of engines starting, doors shutting and wheel crunch over the metalled access and parking area. Vehicles will arrive and depart in 'tides', that is, they will all arrive at much the same time, and all leave at a similar time. This means the duration of such noise will be limited. Furthermore, the applicants will likely require those hiring the premises to use bus transport for large groups. This has many benefits, the most obvious being the avoidance of drinking and driving. It also means fewer vehicle movements, less noise associated with vehicles arriving and departing, less use of the road, and gets people off the site quickly and efficiently at the end of the event. This noise will only be generated at the venue itself, well away from residents. Vehicle noise on the actual road has been addressed in 2.3 above.

A second source of noise is gatherings of people which tend to bring with them noise from voices, laughter and general joviality, and noise associated with catering and dining. The woolshed building is of triple brick construction so noise is unlikely to escape from it. Gatherings outside are most likely to be during the daylight hours in relation to ceremonies or outdoor functions held in the wedding assembly area to the south of the woolshed. This space is surrounded by mature trees.

With respect to the receiving environment, the dwellings to the west and south west of the site are located between 500 and 800 metres from the site. The dwellings to the south are closer at 400 to 500 metres but there is no direct line of sight because of the intervening landform. At these distances, particularly with the intervening topography and different elevations, we anticipate that the noise standards will be easily met.

Finally, music will also be a source of noise. As mentioned earlier, all evening music will be restricted to within the building. The triple brick construction of the building and the distance to neighbours will ensure that this does not infringe the noise standard. Music associated with outdoor ceremonies will generally be acoustic and low key and again distance to neighbours will mitigate any effects in this regard.

In summary, we consider the noise generated on the site will fall well within the noise limits measured 50m from a neighbouring residence.

2.7 *Glare and Lighting*

There is likely to be some outdoor lighting mounted onto the woolshed building (some lighting already exists), primarily for safety purposes to light the area immediately around the building. Some form of safety lighting may also be required at the car parks and the associated pedestrian accessways. While this lighting will be visible from other properties in the area, it will be of a very low level and will largely be screened by the mature trees around the venue.

This will clearly comply with the light spill standards set out at Rule 21.5.4 which states that no activity shall result in greater than:

- (a) 16 lux of light onto any other site in a Residential Zone, measured inside that site.
- (b) 8 lux of light onto any other site used for residential purposes during night-time hours, measured at the windows of any such residentially occupied building.

We note that this rule does not apply to headlights of motor vehicles. While headlights of vehicles leaving the parking area and driving along the accessway will be visible from some areas, given the distances to residential properties involved, these effects will be less than minor.

A lighting plan is attached that illustrates what the applicants are likely to install. The effects of this proposal have been assessed by the Active Electrical Ltd in accordance with Australian Standard 4282-1997, being good practice. Their assessment confirms that adverse effects will be less than minor.

With respect to glare from the building itself, we note that exterior of the building will be untouched.

2.8 *Summary of effects on the environment*

The applicants are an enterprising couple who know there is a market for activities of this nature. As we noted above, we believe the proposal will have positive social

and economic effects and will promote the sustainable management ethos. Given the relatively isolated and secluded nature of the site, we are confident that any adverse effects from the proposal will be less than minor. The District Plan standards for noise and light spill will be met while traffic effects will be minimal. Rural amenity will not be affected by the proposal.

3. District Plan Policy Framework

The key sections of the District Plan are Sustainability, Rural zones, Transportation and Environmental Issues. Each of these sections is considered below.

3.1 Sustainability

The sustainability provisions of the plan seek to ensure that infrastructure is sufficient to cater for the activity without compromising the demands of future generations.

Vehicle parking is to be provided on the site at a level that is well above that anticipated to meet the demand generated by the activity and thereby avoiding adverse effects on the roading network. The access, its location, and the on-site manoeuvring are all of sufficient standard to avoid conflict or road safety issues. The site will be self-serviced in terms of waste disposal and is already serviced by town water supply.

The objectives and policies of this section also encourage the protection of the natural and physical resources and maintenance or enhancement of amenity values. The proposed use of the site will not impact on the outstanding landscape or the significant conservation values of the site. In fact, the proposal is located and designed to take advantage of these values. The proposal has been designed in a manner that will avoid adverse effects, especially in relation to amenity values, visual effects and noise.

Policy 4.3.8 seeks to avoid the mixing of incompatible activities. Given that no neighbours are affected by the proposal, we consider that the activity to be compatible and appropriate in this location.

In our opinion, the proposal is consistent with the provisions of the sustainability section.

3.2 Rural zones

The relevant objectives and policies of the Rural Zones section chiefly seek to protect the productive potential of the zone, public infrastructure, and the rural character and amenity values.

In our opinion, the proposal will not affect the productivity of the zone. The property has an area of more than 41ha and while the bulk of it is used for farming purposes, it is not an economic unit. However, the proposal will not have a significant impact on the productive potential of the subject site or the existing conservation values of the site. The venue will utilise an existing building and only a small area of the existing grazing land for parking. The proposal will not affect the ability of neighbouring properties to carry out farming practices on their land. The proposal is consistent with related objectives 6.2.1 and 6.2.6, and with policies 6.3.1 and 6.3.2.

With regard to public infrastructure [objective 6.2.4 and policy 6.3.8], the proposal will be self-supporting in terms of wastewater disposal and is already serviced by town water supply. We have assessed the effects on the roading network to be no more than minor.

Those objectives and policies that relate to protection of the rural character and amenity values seek to ensure that adverse effects of activities are sufficiently avoided or minimised so that the character and amenity is maintained or enhanced [objective 6.2.2 and policies 6.3.5, 6.3.6 and 6.3.12]. The attraction of the site for hire is its reflection of the rural character and positive amenity offered by the site. The character of the area will remain clearly rural in nature. The majority of the site will continue to operate as a working farm. With respect to amenity values, traffic effects will be no more than minor and will not exceed the maximum noise limits for the area.

Objective 6.2.5 and Policy 6.3.12 seek to avoid conflict between activities. We have outlined above the reasons why there should be little conflict here.

Of particular interest is Policy 6.3.11 which seeks to provide for activities that are appropriate in the Rural zone if their effects can be adequately managed. The associated explanation goes on to refer to tourism and recreational activities being appropriate in the Rural zone if they are dependent on the rural environment and natural resource such as vegetation and character. The explanation also comments that such activities make an important contribution to rural communities. We consider the proposed activities to fall within the ambit of this policy with the attraction to the site being the rural landscape character and conservation values. We have outlined how approving this consent will directly contribute to other local businesses and organisations.

In summary, we consider the proposal to support all relevant objectives and policies of the Rural Zones.

3.3 *Transportation*

The objectives and policies of the Transportation section seek to ensure that land use activities are undertaken in a manner that avoids, remedies or mitigates adverse effects on the transportation network so that the network can operate safely and efficiently.

We have assessed the effects of the activity on the transportation network to be less than minor. We believe that the provision for site access, parking, on-site manoeuvring and queuing space are appropriate for the proposed use. In our opinion, the proposal is consistent with the objectives and policies of the Transportation section.

3.4 *Environmental Issues*

The relevant objectives and policies of the Environmental Issues section relate to protecting public health and amenity from nuisance noise, lighting and glare.

Any exterior lighting will comply with the rules of the Environment Issues section in terms of the level of lux experienced from off the site. With regard to noise, any noise experienced from off the site will comply with the noise limits for the area and such effects will be less than minor.

We consider that the proposal is not contrary to the objectives and policies of the Environmental Issues section of the Plan.

3.5 Conclusion – Objectives and Policies

Having considered the relevant objectives and policies of the District Plan, it is concluded that the proposal is generally consistent with the policy framework.

4. The Proposed District Plan

The proposed District Plan was notified on the 26th September 2015 and submissions closed on the 24th of November 2015. Hearings were recently completed but no decisions have been released. There are numerous submissions on the provisions of the proposed District Plan. Hence very little weight can be given to the provisions of that plan. However, some regard must be given to the policy framework of the proposed plan.

The proposed District Plan zones the site "Rural Peninsula Coast" and the proposed activity is defined as a 'commercial activity' in this plan. Objective 16.2.1 reserves Rural zones *"for productive rural activities and the protection and enhancement of the natural environment, along with certain activities that support the wellbeing of rural communities where these activities are most appropriately located in a rural rather than an urban environment..."*. Policy 16.2.1.8 is to *"Avoid supported living facilities, **commercial activities**, industrial activities, and major facilities, unless otherwise provided for, in the rural zones."*

Despite such activities being commonly located in rural areas (for obvious reasons), this policy framework effectively requires such activities to be avoided in the rural zone. Hence, the proposal does not achieve the policy outcomes sought by the proposed District Plan. However, the proposed District Plan is not operative and as a consequence it is not appropriate to give great weight to this policy framework. In our view, the approach of the proposed District Plan is contrary to the enabling and effects-based ethic of the RMA and does not promote sustainable management accordingly.

5. Affected Persons and Notification

With regard to sections 95A and 95B of the Act, it is considered that the subject application should be processed on a non-notified basis, without written approvals, because:

- The activity does not require mandatory public notification (Step 1 s95A).
- The application is for a controlled activity (Step 2 of s95A).
- No special circumstances exist in relation to the application (Step 4 of s95A).
- No one identified in Step 1 of s95B is affected.
- The application is for a controlled activity (Step 2 of s95B)
- No special circumstances exist that require any other person to be notified (Step 4 of s95B)

6. Conclusion

We are confident that any adverse effects arising from this proposal will be less than minor and that the proposal will, overall, have a positive social and economic impact on the community. The proposal will see an existing rural character building renovated and made available to general public to enjoy the outstanding natural features of the site while celebrating the special occasions in their life. No persons will be adversely affected by the proposal and as a controlled activity, Council can grant consent without notification of any form.



Scale: 1:10000

261 Tomahawk Road Dunedin 9013

27600-17302-B

Rural Industry: Stock Finishing

372,747.00 m²

Legal description:
PT SEC 21 BLK VII SO 1 ANDERSONS BAY SD, PT SEC 22 BLK VII SO 1 ANDERSONS BAY SD, PT SEC 3 BLK III SO 1332 TOMAHAWK SD, PT SEC 5 BLK III SO 4 TOMAHAWK SD, PT SEC 5 BLK VII SO 1332 OTAGO PENINSULA SD, PT SEC 7 BLK III SO 4 TOMAHAWK SD, SEC 19 BLK VII SO 1 ANDERSONS BAY SD, SEC 20 BLK VII SO 1 ANDERSONS BAY SD, SEC 23 BLK VII SO 1 ANDERSONS BAY SD

1. Existing Wool Shed
2. Private Dwelling
3. Existing Parking Area
- Vehicle Access



Site Plan
Scale: 1:1000

Lochend Tomahawk Rd Dunedin at 261 Tomahawk Rd Dunedin for Mark and Jill Caldwell

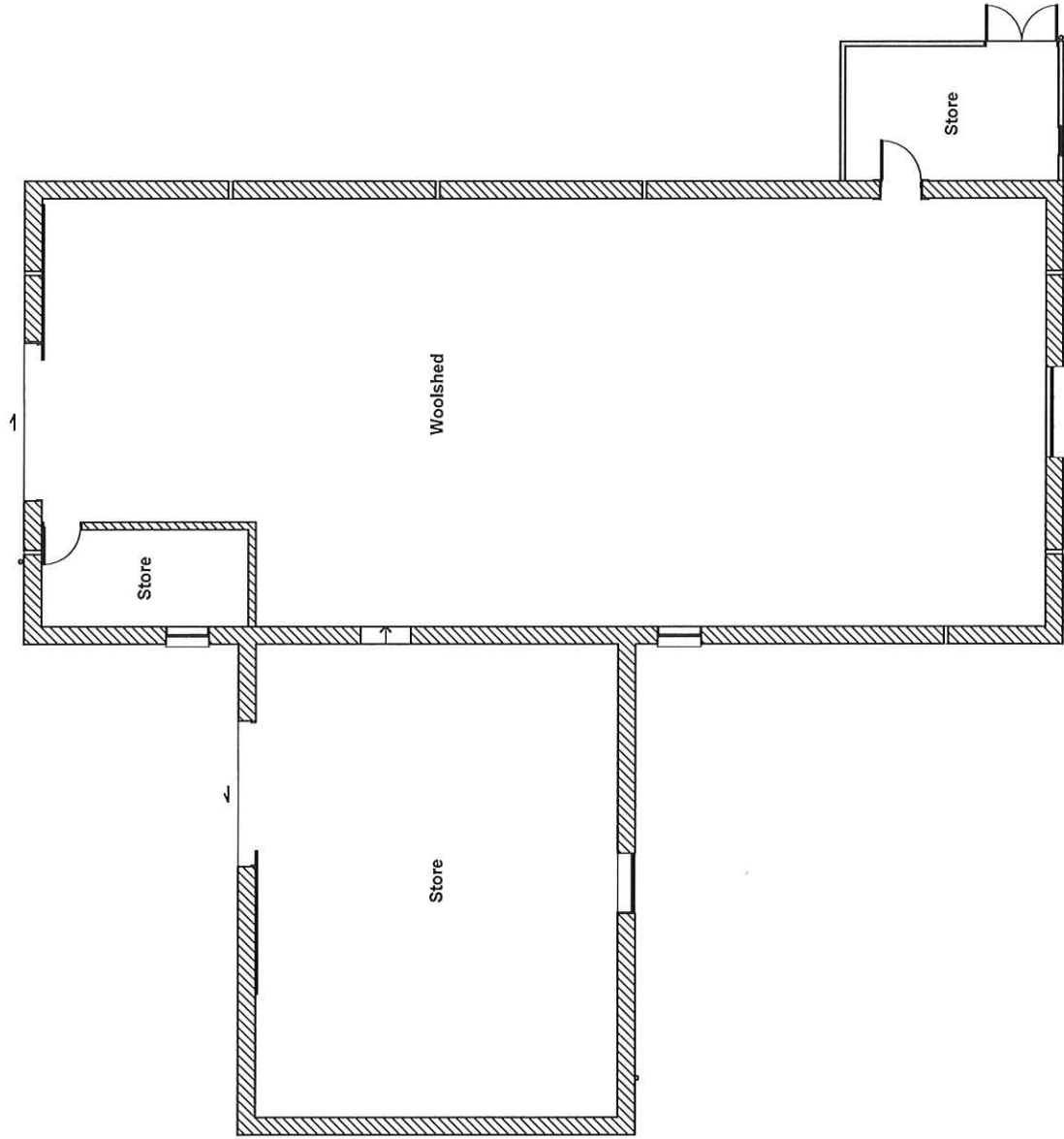
ullffestevens.co.nz | P +64 3 474 1404

CD 02
Revision 2



Site Plan Legend

1.	Proposed Reception Venue
2.	Private Dwelling
3.	Coach Parking (existing)
4.	Accessible Parking
5.	Pick up and Drop Off Zone
6.	Guest Parking (approx. 40 spaces)
7.	Courtyard Area
8.	Proposed Ceremony Site
9.	Existing Septic Tank
10.	Road side parking for Coach
--	New Pedestrian Pathway
---	Vehicle Access

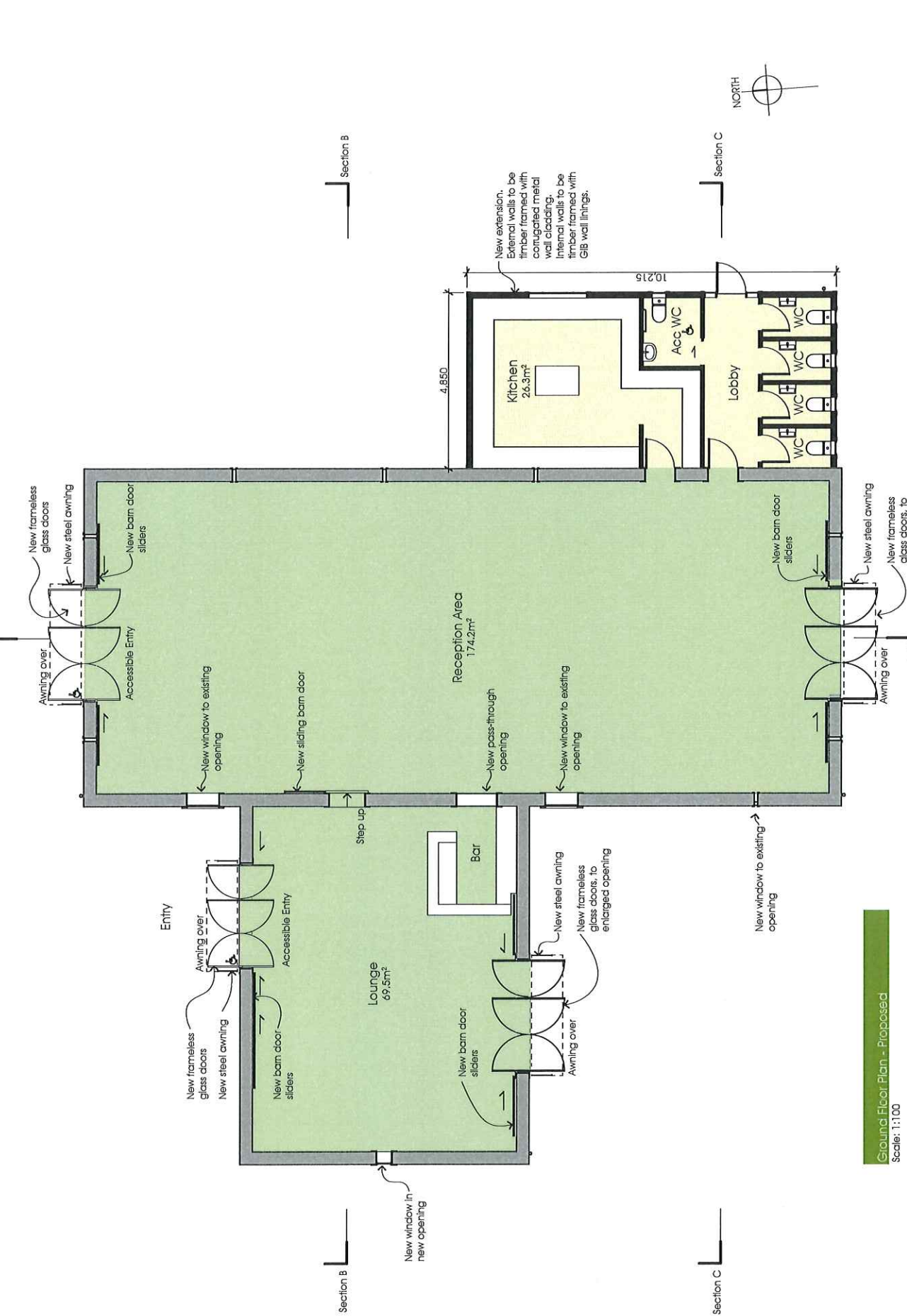


Ground Floor Plan - Existing
Scale: 1:100



McAuliffe Stevens
Registered Architects

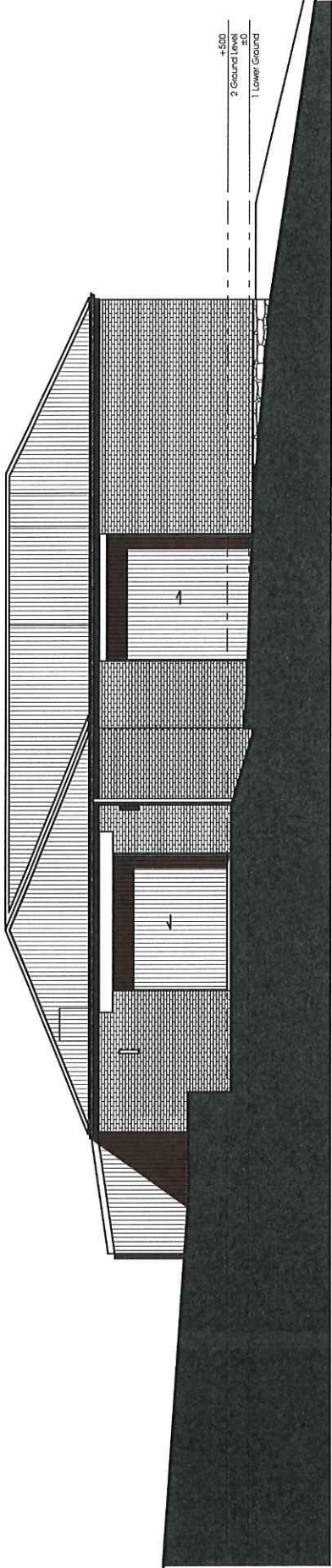
Lochend Tomahawk Rd Dunedin at 26.1 Tomahawk Rd Dunedin for Mark and Jill Catwell



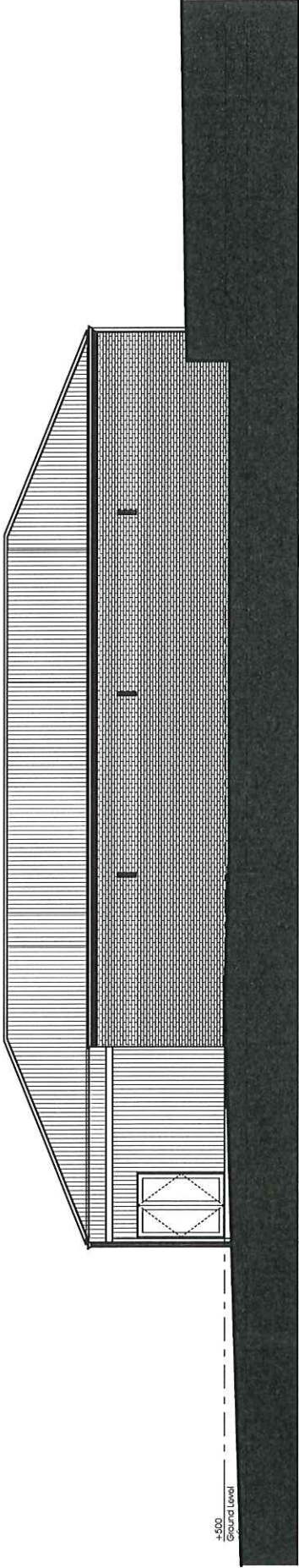


McAuliffe Stevens
Registered Architects

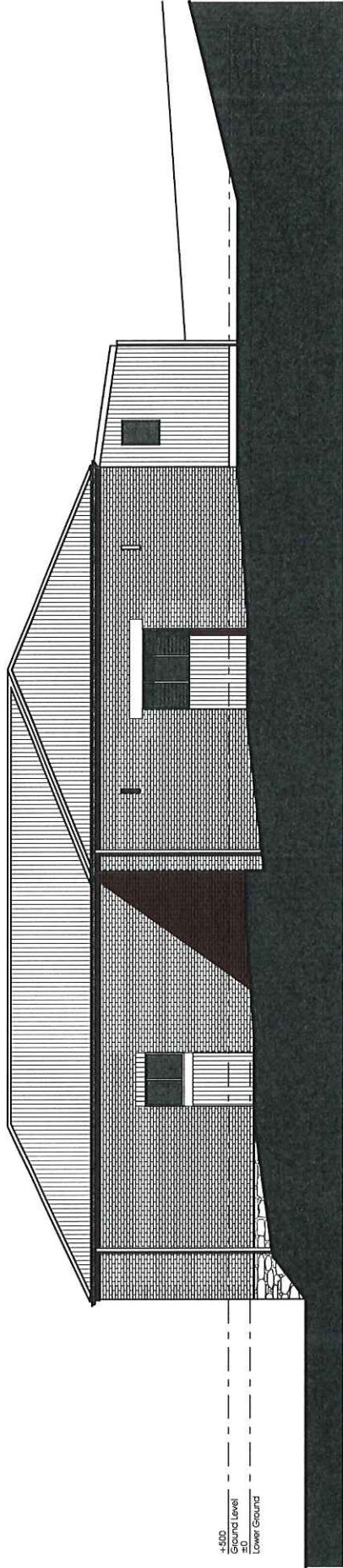
Concept Design | 20/06/2018 | Sheet 7 of 22 | Level 4 Public Trust Building, 442 Moray Place, Dunedin | mcaulliffeevens.co.nz | P +64 3 474 1404



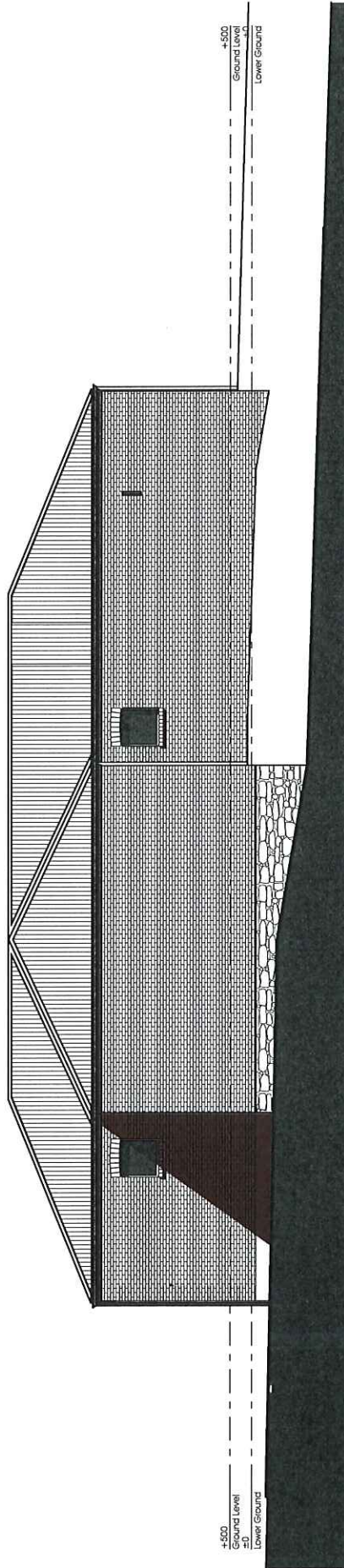
North Elevation - Existing
Scale: 1:100



East Elevation - Existing
Scale: 1:100

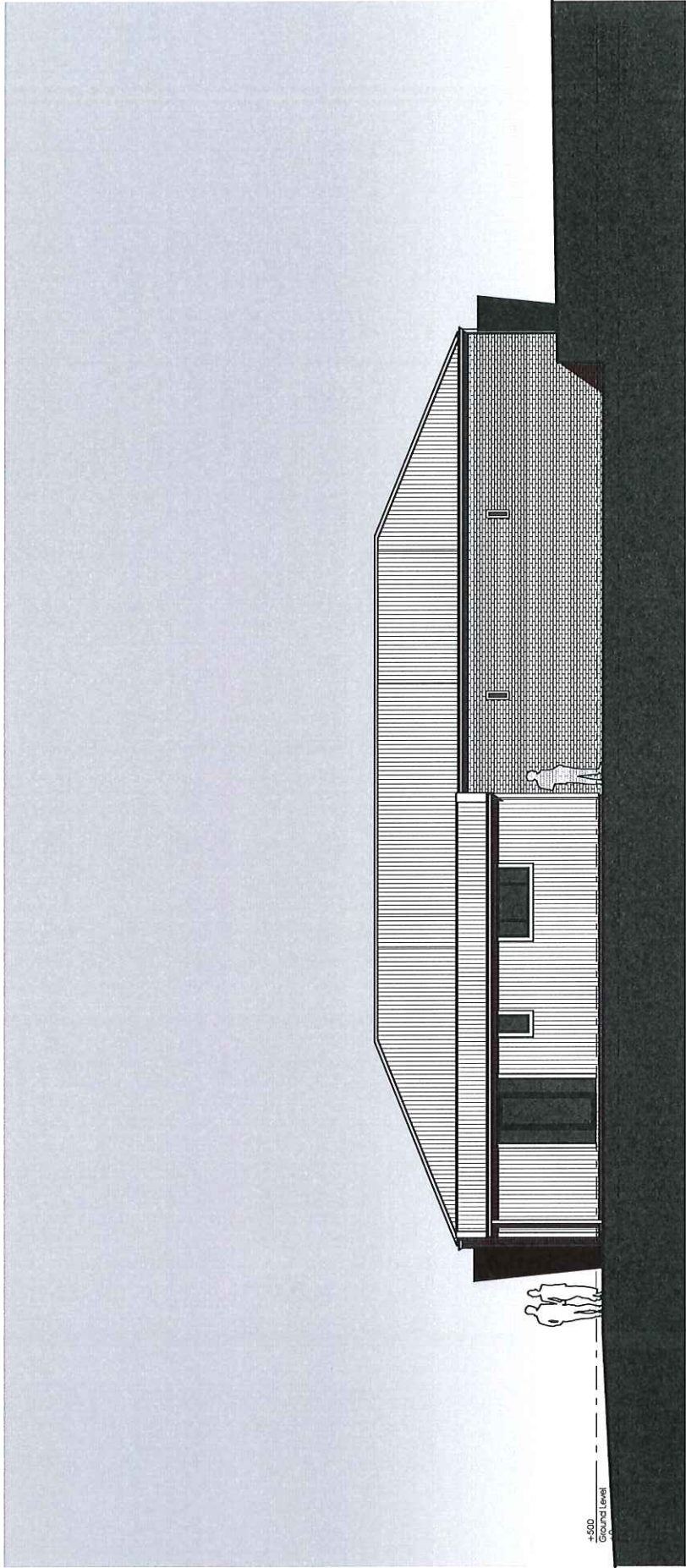


South Elevation - Existing
Scale: 1:100

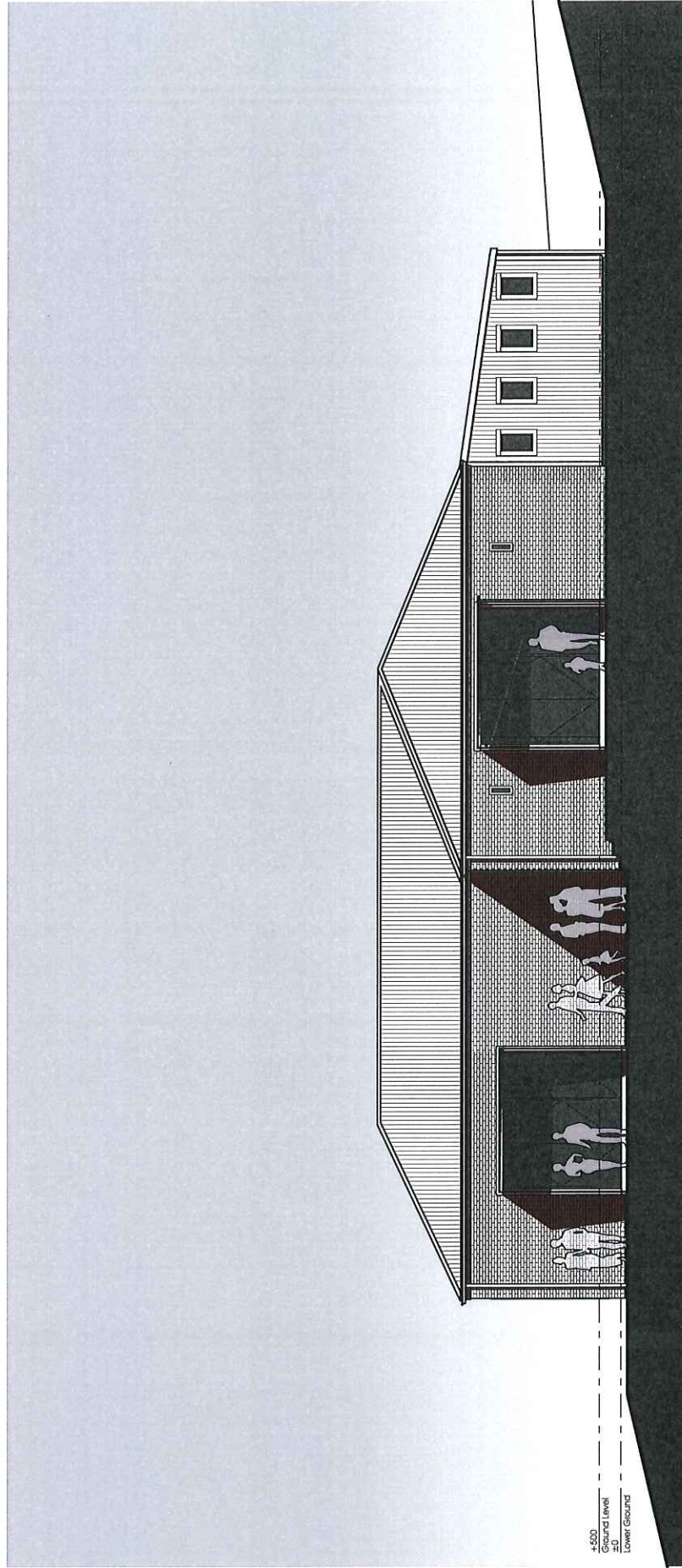


West Elevation - Existing
Scale: 1:100

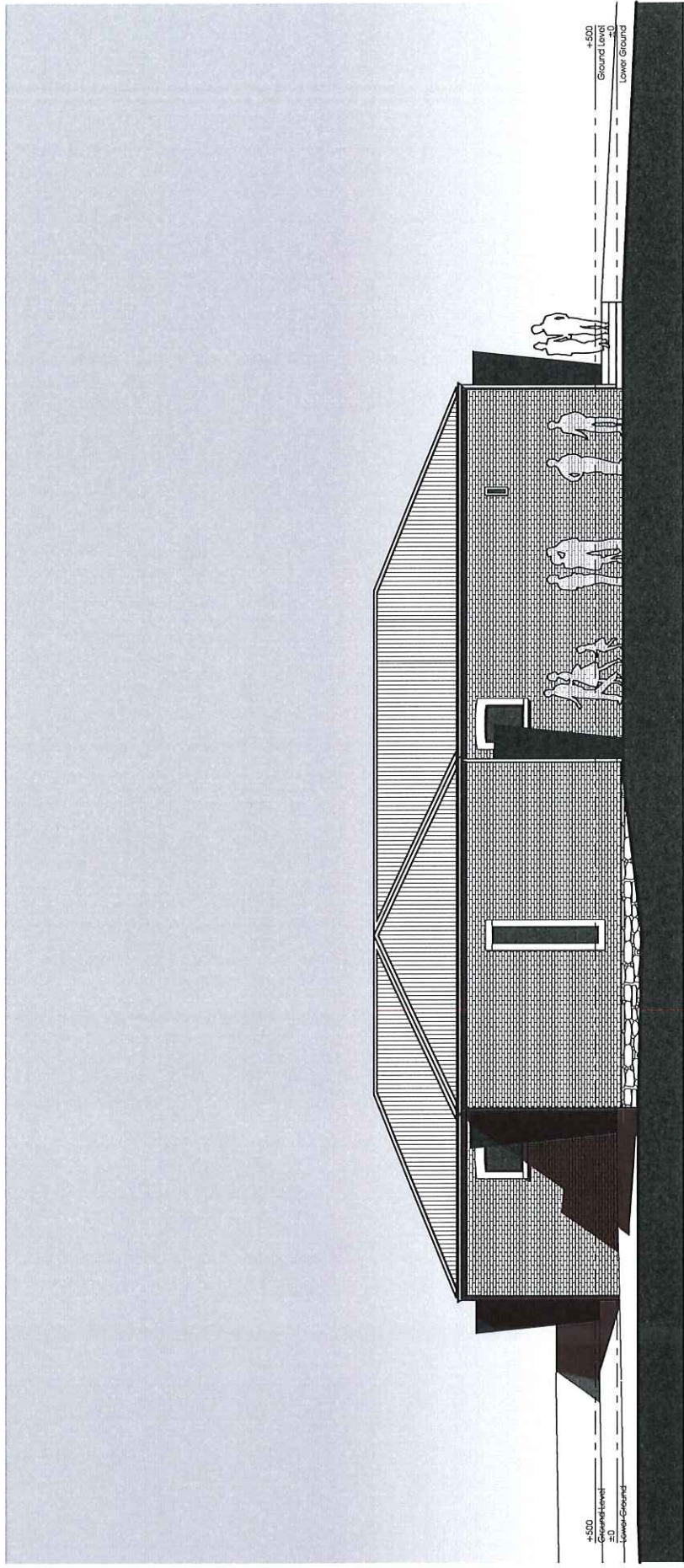




East Elevation - Proposed
Scale: 1:100



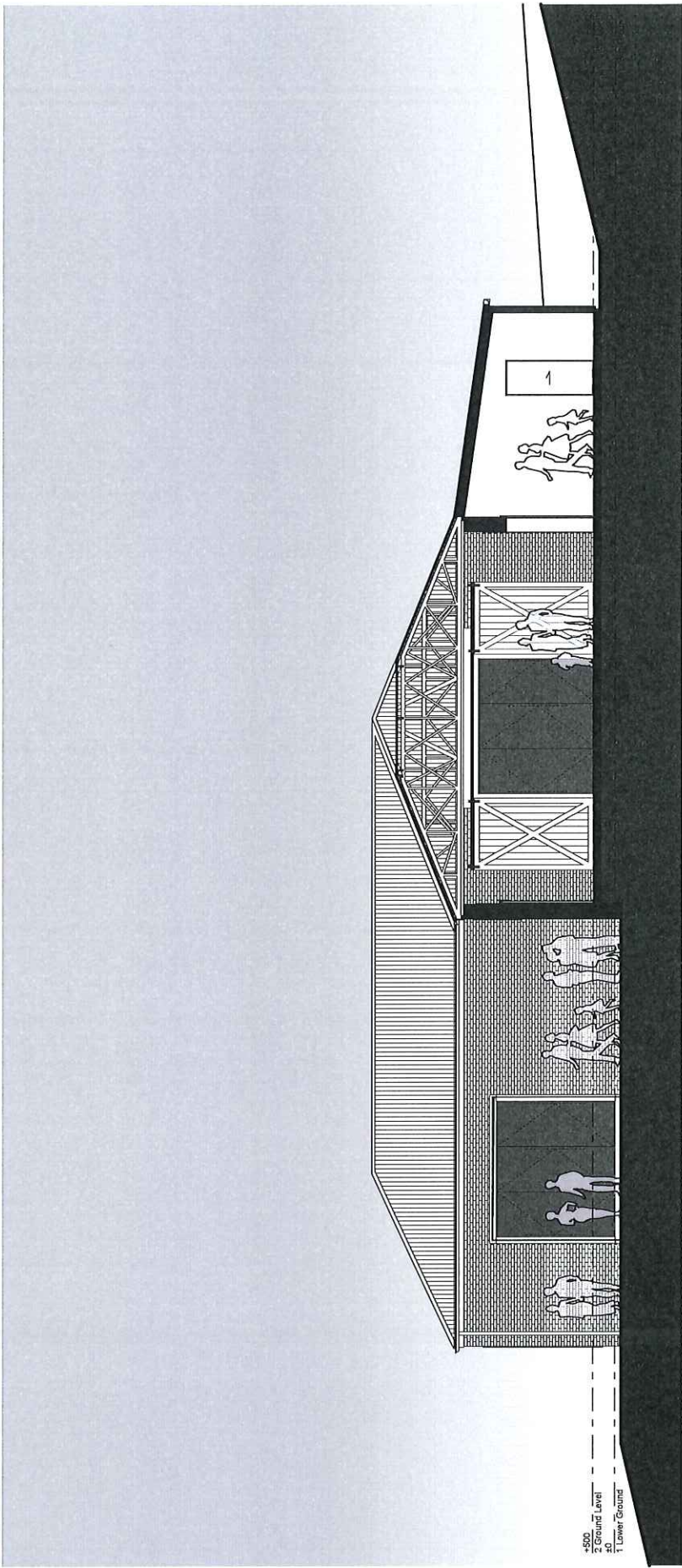
South Elevation - Proposed
Scale: 1:100



West Elevation - Proposed
Scale: 1:100

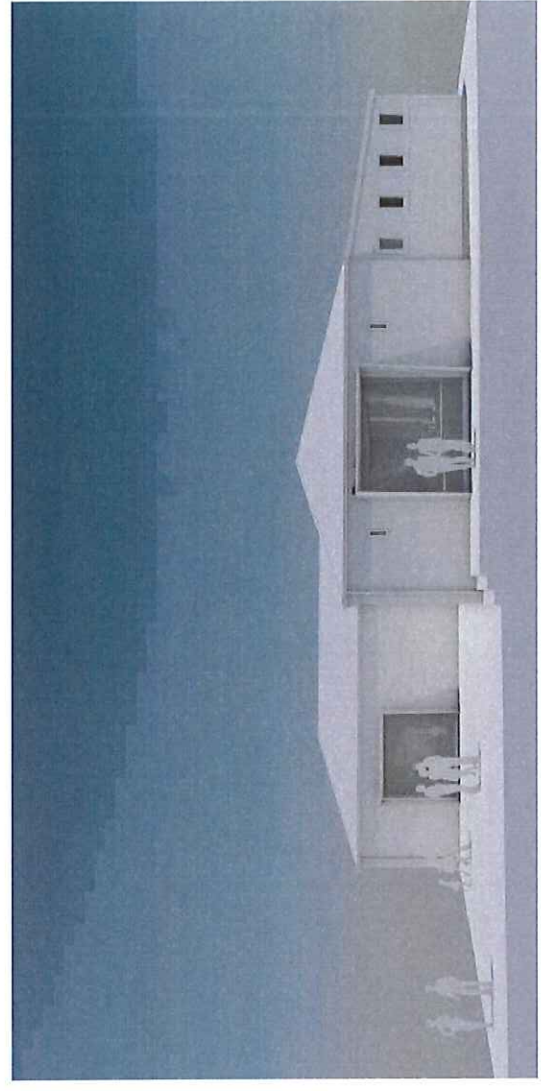




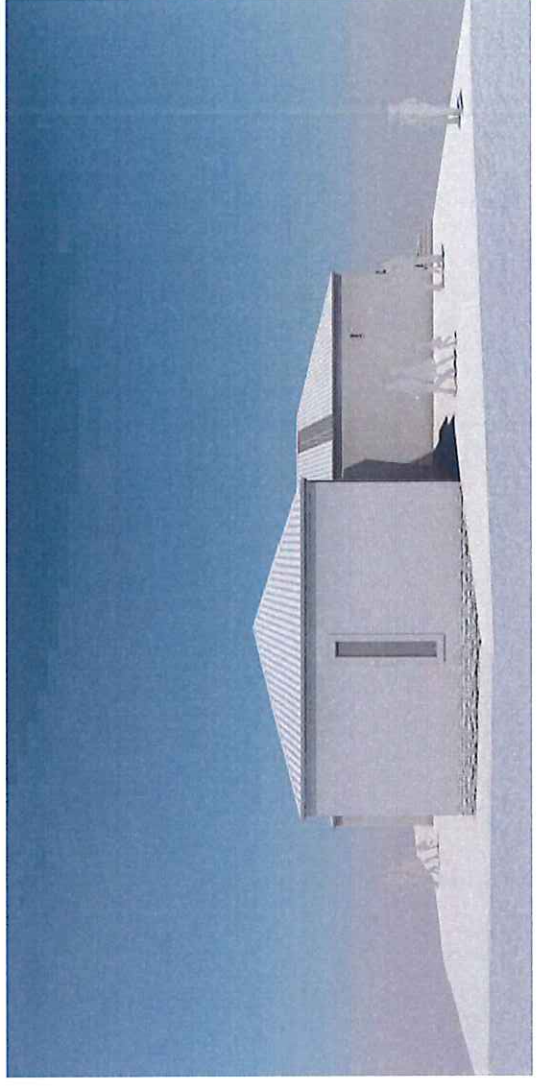


Section CC
Scale: 1:100



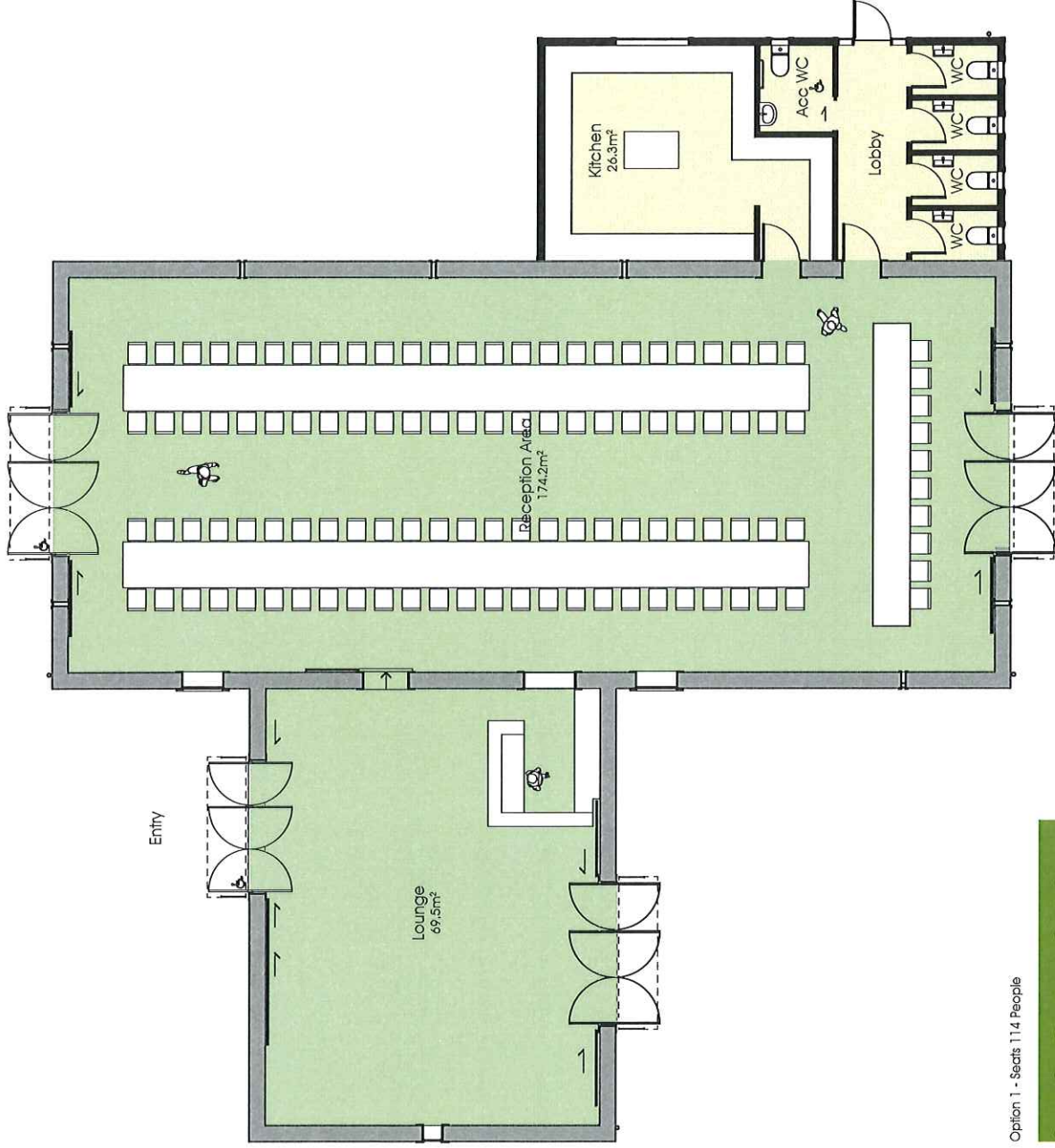


View Looking to South Elevation



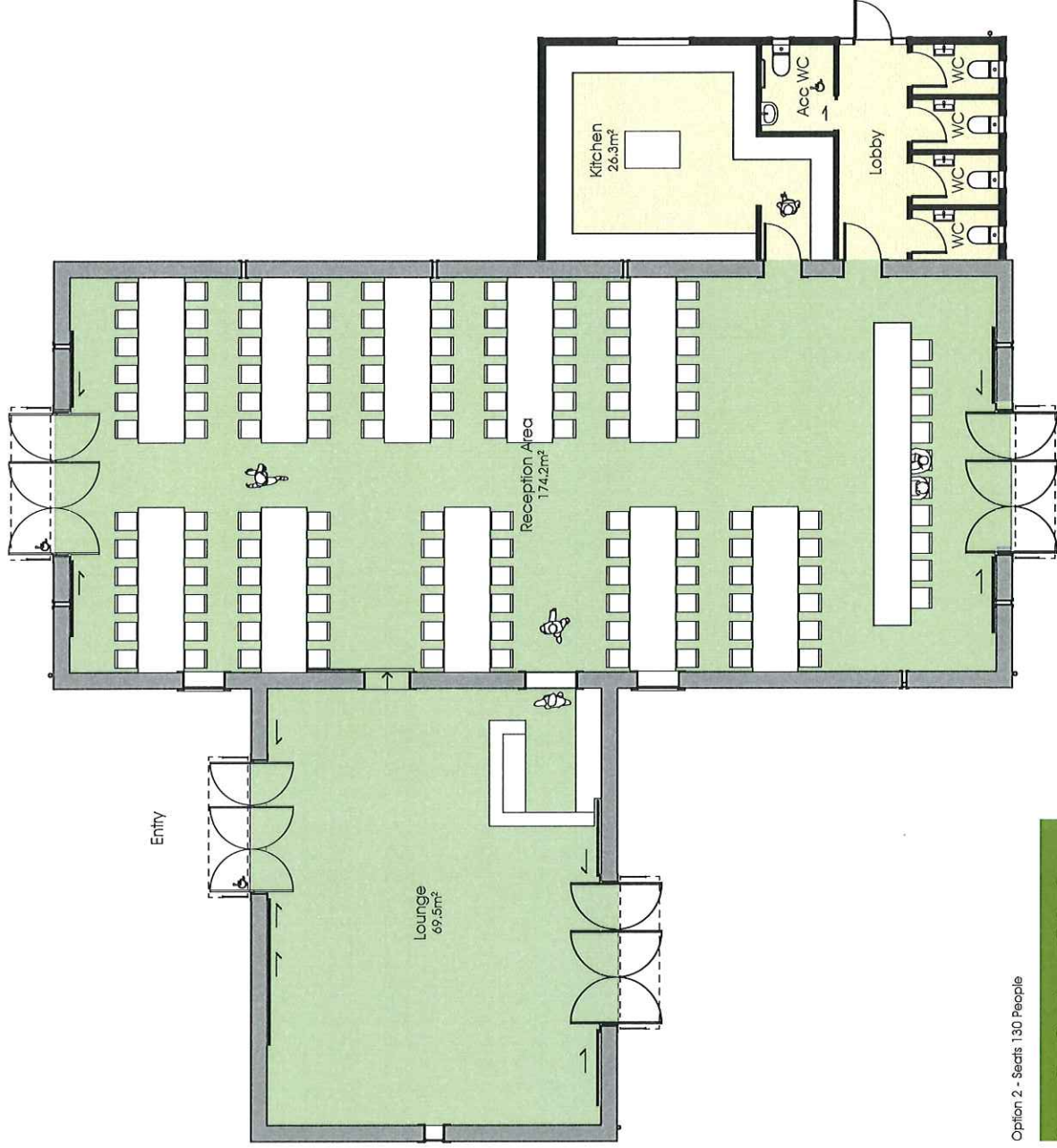
View Looking to West Elevation





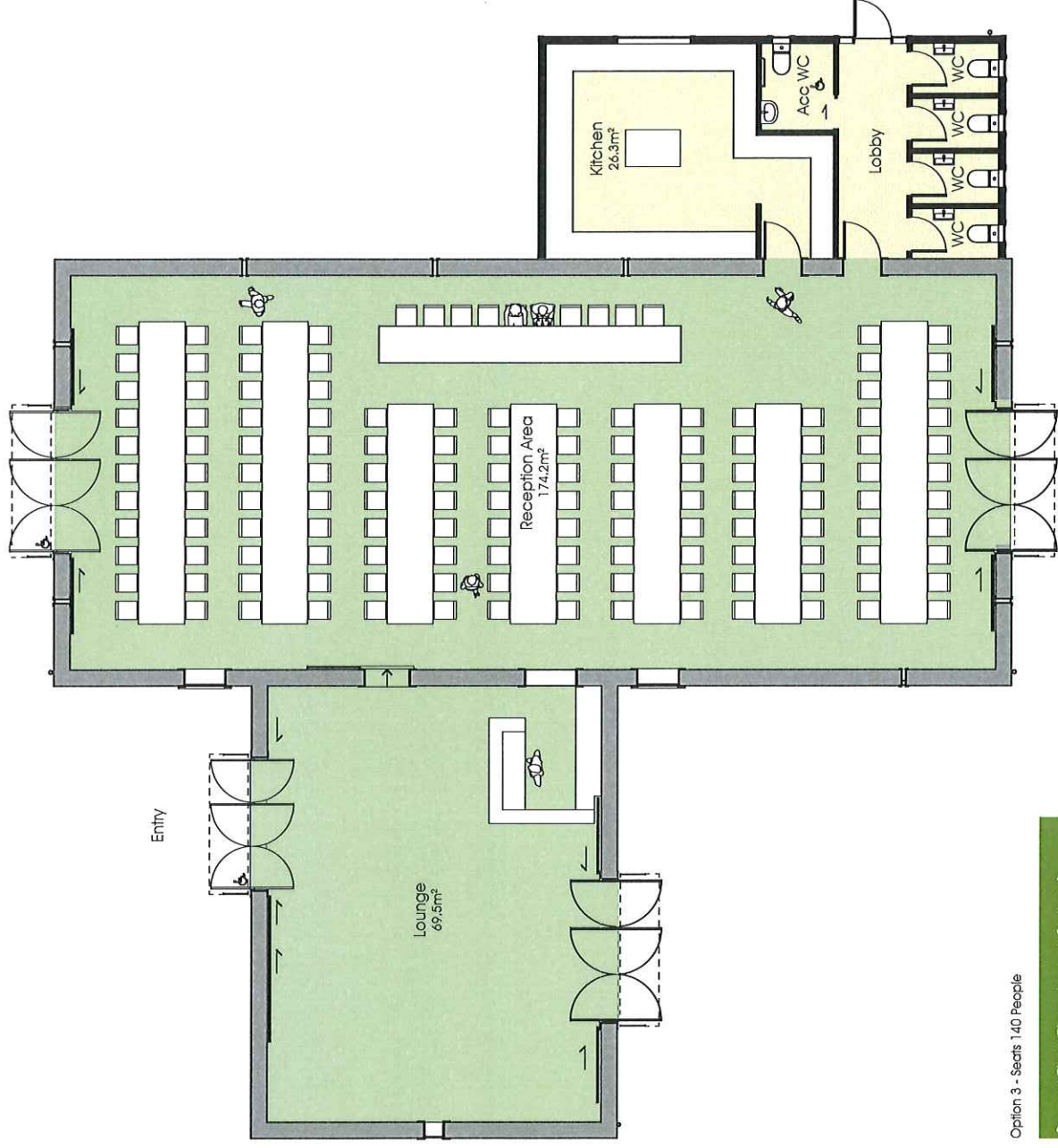
Option 1 - Seats 114 People

Ground Floor Plan - Layout Option 1
Scale: 1:100



Option 2 - Seats 130 People

Ground Floor Plan - Layout Option 2
Scale: 1:100



Option 3 - Seats 140 People

Ground Floor Plan - Layout Option 3
Scale: 1:100

Melissa Shipman

From: Allan Cubitt <allan@cubittconsulting.co.nz>
Sent: Wednesday, 8 August 2018 12:01 p.m.
To: Melissa Shipman; Grant Fisher
Subject: FW: Lochend
Attachments: IMG_0890.PNG; IMG_0891.PNG

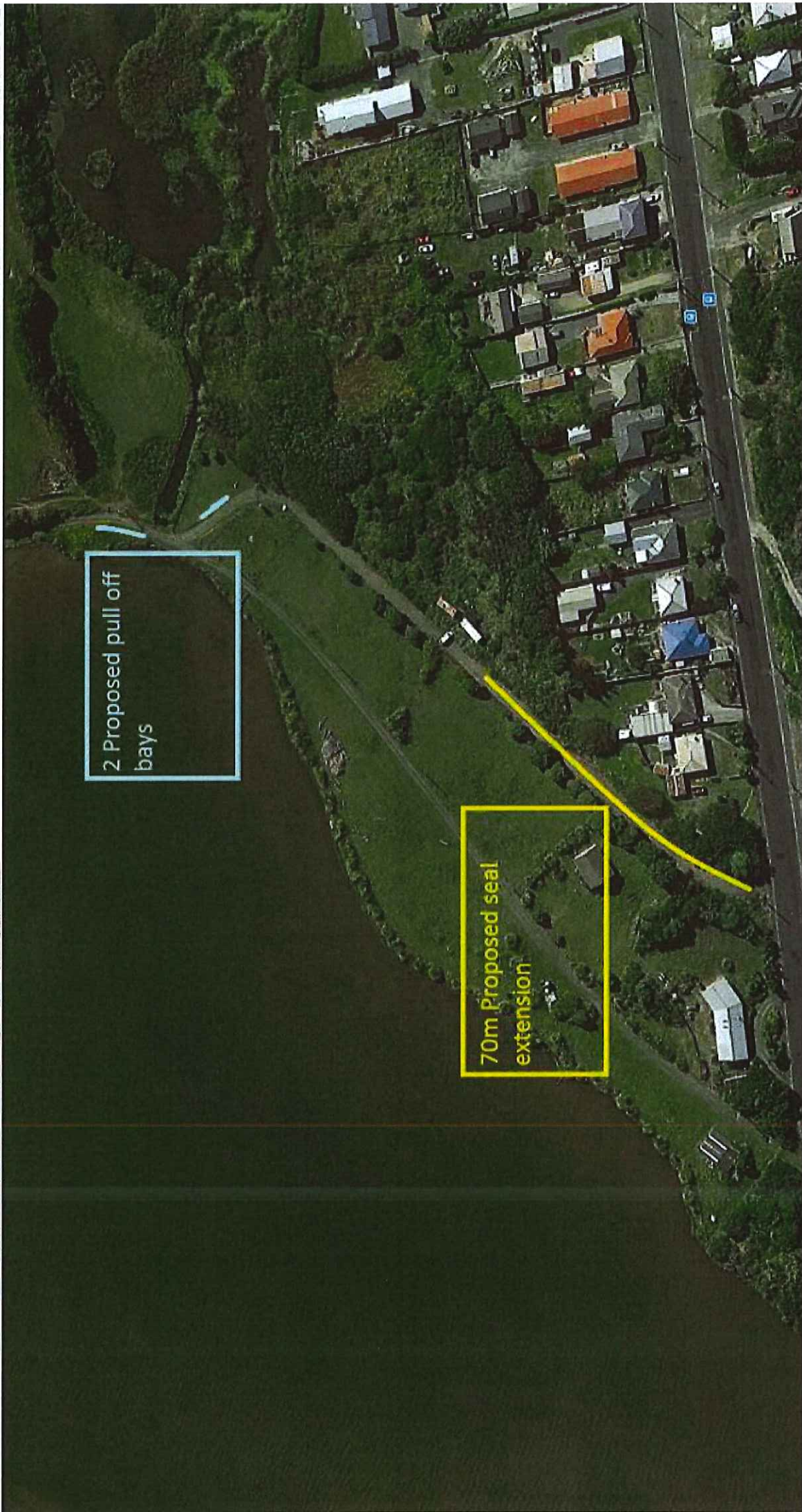
Hi Folks
Please see attached from Fulton Hogan
Regards,
Allan

From: Joshua caldwell <mjcbows@gmail.com>
Sent: Wednesday, August 8, 2018 11:45 AM
To: Allan Cubitt <Allan@cubittconsulting.co.nz>
Subject: Lochend

Hi Allan Kevin said the passing bays are 3 metres wide by about 20 metres long

3rd
proposed
passing bay





2 Proposed pull off
bays

70m Proposed seal
extension

Tour Guide





Department of Conservation
Te Papa Atawhai

Ref: DOC-5532713

18th July 2018

Mark and Julie Caldwell
Lochend Limited
261 Tomahawk Road
Dunedin



Via email

Dear Mark and Julie

**REQUEST FOR APPROVAL: S95 RMA RESOURCE CONSENT:
APPLICATION TO ESTABLISH A FUNCTION VENUE AT 261
TOMAHAWK ROAD, RECEIVED 4TH JULY 2018.**

I have considered the request for the above mentioned proposal in terms of s95E of the RMA, and advise that I grant my approval as an affected person.

My approval is on the basis that the proposal is as described, is for the purposes described, and will have the effects on the interests of the Department of Conservation (Department) as described in the application received 4th July 2018.

This approval is limited to the likely adverse effects of the proposal on the Department's interests and should not be construed as approval to effects on the environment generally.

This approval is specific to the above application and is for the purposes of S95 RMA only. It is not indicative of any associated concession or other statutory approval which may be required from the Department in regard to this proposal.

I note that the property is accessed via a concession (across the Tomahawk Lagoon Wildlife Management Reserve) granted by the Department and that this concession will be used by those attending events at the venue. The concession contains obligations on the holder to protect the environment, and the Department will use this mechanism to ensure there are no adverse effects from this activity on the Reserve.

This approval will be rendered null and void if the proposal to which it refers is changed between the date of this approval and its consideration by the consent authority without referral back to me for my further assessment.

Thank you for your consideration of the interests of the Department.

Department of Conservation Te Papa Atawhai

Ōtepoti / Dunedin Office

Level 1, John Wickliffe House, 265 Princess Street | PO Box 5244, Dunedin 9058

www.doc.govt.nz

If you have any questions regarding this approval, please contact Craig Wilson 027 408 3351 or cgwilson@doc.govt.nz

Yours sincerely



Elizabeth Anne Wallace
Operations Manager, Coastal Otago District
Pursuant to delegated authority

~~cc: Otago Regional Council, Resource Consents administration, Private Bag 1954, Dunedin 9054~~

Resource consents team, city planning, DEC, PO Box 5045, Dunedin 9058

Melissa Shipman

From: Allan Cubitt <allan@cubittconsulting.co.nz>
Sent: Monday, 27 August 2018 09:20 a.m.
To: Melissa Shipman
Subject: FW: LUC-20018-219 - 261 Tomahawk Road - Lighting detail
Attachments: image005.jpg; Untitled attachment 00015.html; image006.png; Untitled attachment 00018.html; image007.jpg; Untitled attachment 00021.html; image008.jpg; Untitled attachment 00024.html; image009.jpg; Untitled attachment 00027.html; image010.png; Untitled attachment 00030.html; image011.jpg; Untitled attachment 00033.html; image012.jpg; Untitled attachment 00036.html; image013.jpg; Untitled attachment 00039.html; image014.jpg; Untitled attachment 00042.html; AU & NZ Standards - SLSC.pdf; Untitled attachment 00045.html; Untitled attachment 00048.pdf; Untitled attachment 00051.html; Untitled attachment 00054.pdf; Untitled attachment 00057.html; Untitled attachment 00060.pdf; Untitled attachment 00063.html; Pre-Curfew Vertical Illuminance & Luminaire Intensity.pdf; Untitled attachment 00066.html; Theshold Increment.pdf; Untitled attachment 00069.html

Hi Melissa,
Further information on the lighting aspect for 261 Tomahawk Road.
Regards, Allan

From: Mark Caldwell <mjcbows@gmail.com>
Sent: Sunday, August 26, 2018 8:30 PM
To: Allan Cubitt <Allan@cubittconsulting.co.nz>
Subject: Fwd: LUC-20018-219 - 261 Tomahawk Road - Lighting detail

Sent from my iPhone

Begin forwarded message:

From: Craig Standring <cstandring@goactive.nz>
Date: 24 August 2018 15:31:12 NZST
To: Mark Caldwell <mjcbows@gmail.com>
Subject: RE: LUC-20018-219 - 261 Tomahawk Road - Lighting detail

Hi Mark

The lighting design has been carried, with the idea of providing safely lit spaces with as little up light spill as possible, I think we have achieved this with just the right amount of fittings, correctly spaced, balanced with the lumen output of each fitting. The two tests I have carried out both have the smallest lux reading of 0.2 lux with maximum threshold set at 10 lux this " confirms that adverse effects will be less than minor"

I have included the AU & NZ Standards SLCS PDF, which confirms that AS4282 is a New Zealand, & Australian standard, in conjunction with NZ/AUS IES council

I have carried out several lighting tests on your southern boundary being:

Pre & Post Curfew Vertical illuminance and luminaire intensity.
Threshold Increment.

I have attached PDF's of the test results that measure against ASNZ 4282-1997 code standard, and some back ground information on the testing

I have combined everything into the drawing, Mark I would recommend that you forward this email onto Mellissa Shipman which gives her access to all data.

PS Check out the just completed driveway lighting at the old Monticillo Retirement home on Eglinton Road, they are using the wooden sleeper with light fitting concept, slightly brighter than what you would go for, but it shows off the concept.

Cheers

Craig Standring Grad Cert Sci Tech (Lighting), Tech IES

Active Electrical Suppliers Ltd
Area Sales Lighting and Design
Otago Southland & Central Otago

105 Cumberland St Dunedin 9016

Mobile +64 021 377 161
Phone +64 3 777 3323
Email cstandring@goactive.nz
Website www.goactive.nz

Exterior Obtrusive Light: Using AGi32 to Calculate and Show Compliance with AS 4282-1997

Australian Standard 4282-1997 is officially titled "Control of the Obtrusive Effects of Outdoor Lighting." In this segment, we will examine how to use AGi32 to evaluate exterior lighting projects for spill light and luminaire glare according to the requirements of AS 4282.

AS 4282-1997 aims to mitigate three general problems caused by outdoor nighttime lighting:

- Spill light: light that intrudes on the property of others, particularly that which enters through windows of neighboring buildings
- Discomfort glare or disability glare caused by excessive luminaire brightness at normal viewing angles
- Sky glow

The design parameters that are controlled are vertical illuminance (E_v) at the property boundary (direct component only), Luminous Intensity (I) emitted by luminaires in the control direction, and Threshold Increment (TI) if near a road. Permissible values depend on the time of night: pre-curfew or curfewed hours. Reflected light is not included in the calculations.

Let's look at how to use AGi32 to determine whether our site lighting will meet the AS 4282 criteria.

Let's assume that our site is in a commercial area. AS 4282 states that the lighting must not exceed these values:

- Vertical illuminance
 - Pre-Curfew: 25 lux
 - Curfewed hours: 4 lux
- Luminous Intensity
 - Pre-curfew (assuming large area, Level 1 control): 7500 cd
 - Curfewed hours: 2500 cd
- Threshold Increment: 20% based on adaptation luminance of 10 cd/m²

Open existing AGI file AS4282.agi.

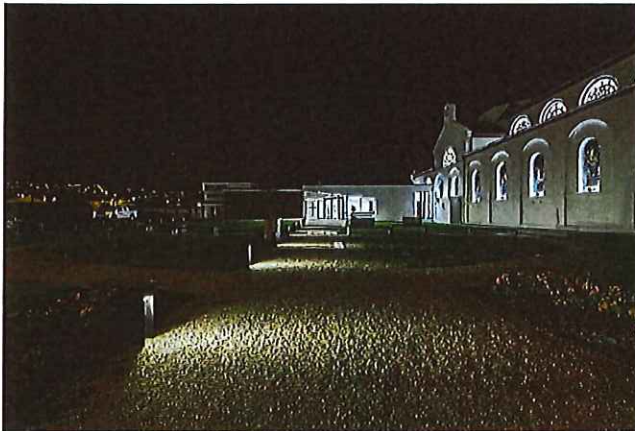
The illuminance calculations for the parking lot have been performed, saved, and then turned off in Project Manager, to keep the project "clean" for the obtrusive light analysis.

The neighboring building and the street will be used in the Vertical Illuminance and Threshold Increment calculations, respectively.

Because the Pre-curfew and Curfewed Hours requirements are different, a separate analysis and compliance test will be required for each. We will begin with the Pre-curfew analysis.

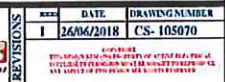
Pre-Curfew: Vertical Illuminance and Luminaire Intensity

The easiest way to show compliance with the vertical illuminance requirement is to create a series of vertical-illuminance grids that run along all or part of the property line, and their height will be where a line between the nearest luminaire and the highest relevant point of the adjacent properties (i.e., the height of the highest window)



St Patricks Basilica

ACTIVE LIGHTING DESIGN 101 Cumberland St Dunedin NEW ZEALAND DD: +64 3 777 2033 M: +64 031 277 161 eastash@active.net.nz	Mark & Jutz Caldwell venue area lighting.AGI CLIENTS NAME Caldwell	active ELECTRICAL SUPPLIES LTD  www.goactive.net.nz	<table><tr><th>REV</th><th>DATE</th><th>DRAWING NUMBER</th></tr><tr><td>1</td><td>24/06/2018</td><td>CS-105070</td></tr></table> A WARNING: THIS DRAWING IS THE PROPERTY OF ACTIVE LIGHTING DESIGN LTD. IT IS TO BE USED FOR THE PROJECT AND SITE SPECIFICALLY IDENTIFIED. ANY OTHER USE IS STRICTLY PROHIBITED.	REV	DATE	DRAWING NUMBER	1	24/06/2018	CS-105070
	REV	DATE	DRAWING NUMBER						
1	24/06/2018	CS-105070							



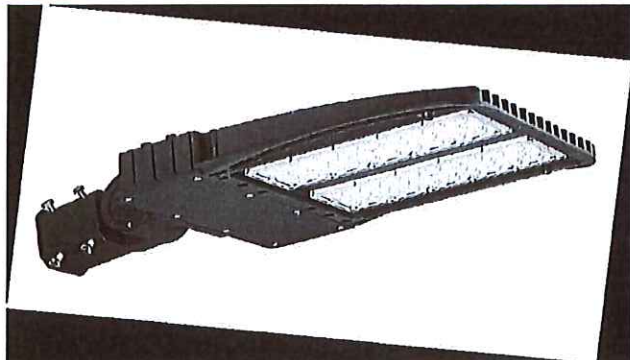
Luminaire Schedule

Symbol	Qty	Label	Total Lamp Lumens	LLF	Description
	33	A	564	1.000	Active 6w bollard 300mm high 564 lumens 3000K
	3	FL	N.A.	1.000	Pierlite Domain 97w LED Pole Mount Flood, Asymmetric, 4000K, 11744 Lumens, Black
	3	FL1	N.A.	1.000	Pierlite Domain 97w LED Wall Mounted Flood, Asymmetric, 4000K, 11744 Lumens, Black

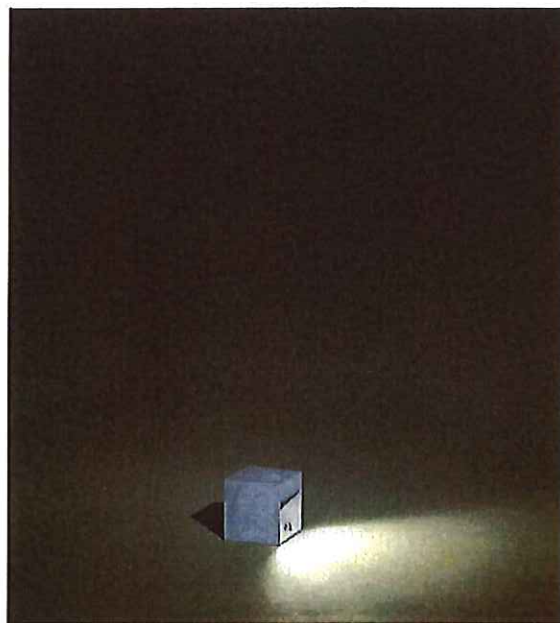
NZBC F6 Compliance Schedule- Illuminance

Calculation Summary

Label	CalcType	Units	Avg	Max
Bottom Carpark_Planar	Illuminance	Lux	7.66	260.4
Carpark_Planar	Illuminance	Lux	27.80	108.6
Ceremony site_Planar	Illuminance	Lux	54.94	132.4
Curfew Vert Illum and Intensity	Obtrusive Light	N.A.	165.66	190
Curfew Vert Illum and Intensity	Obtrusive Light	Lux	0.09	0.2
Front of venue path_1_Planar	Illuminance	Lux	41.82	575.5
Path to bus park_Planar	Illuminance	Lux	12.32	170.6
Path to carpark_Planar	Illuminance	Lux	20.04	623.4
Pre Curfew Vertical Illuminance	Obtrusive Light	Lux	0.08	0.2
Threshold Increment EN	Obtrusive Light	%	0.75	3
Threshold Increment ES	Obtrusive Light	%	0.08	1



Pierlite Domain 100w LED Flood



Active 6w bollard

ACTIVE LIGHTING DESIGN
105 Cambridge Rd
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NEW ZEALAND
DDN: +64 3 777 3313
M: +64 3 777 3311
caldwells@active.net.nz

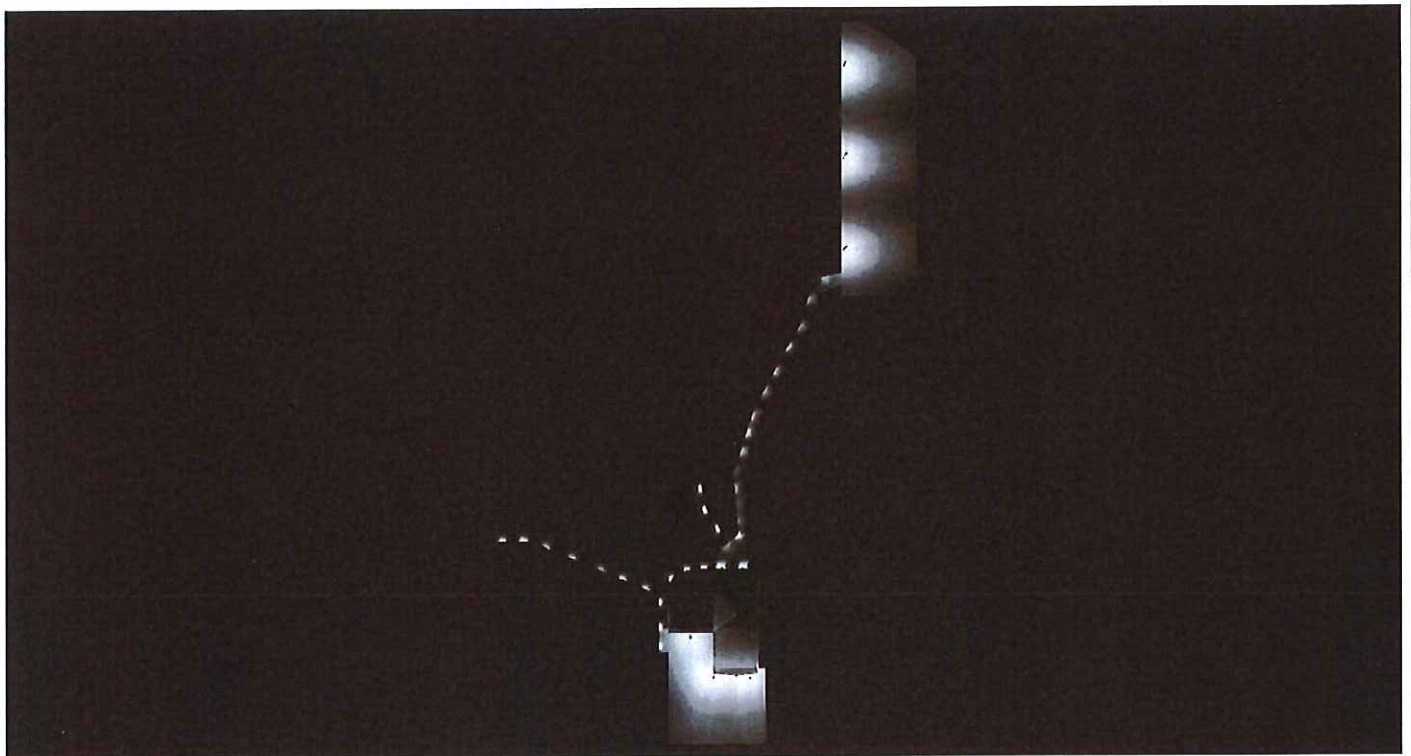
Mark & Julez Caldwell venue area lighting.AGI
CLIENTS NAME Caldwell

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All fitting selected to create as little light spill as possible

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Dunedin
NEW ZEALAND
1400 144 3 777 1315
351 144 031 777 141
active@active.net.nz

Mark & Julz Caldwell venue area lighting, AGI
CLIENTS NAME Caldwell

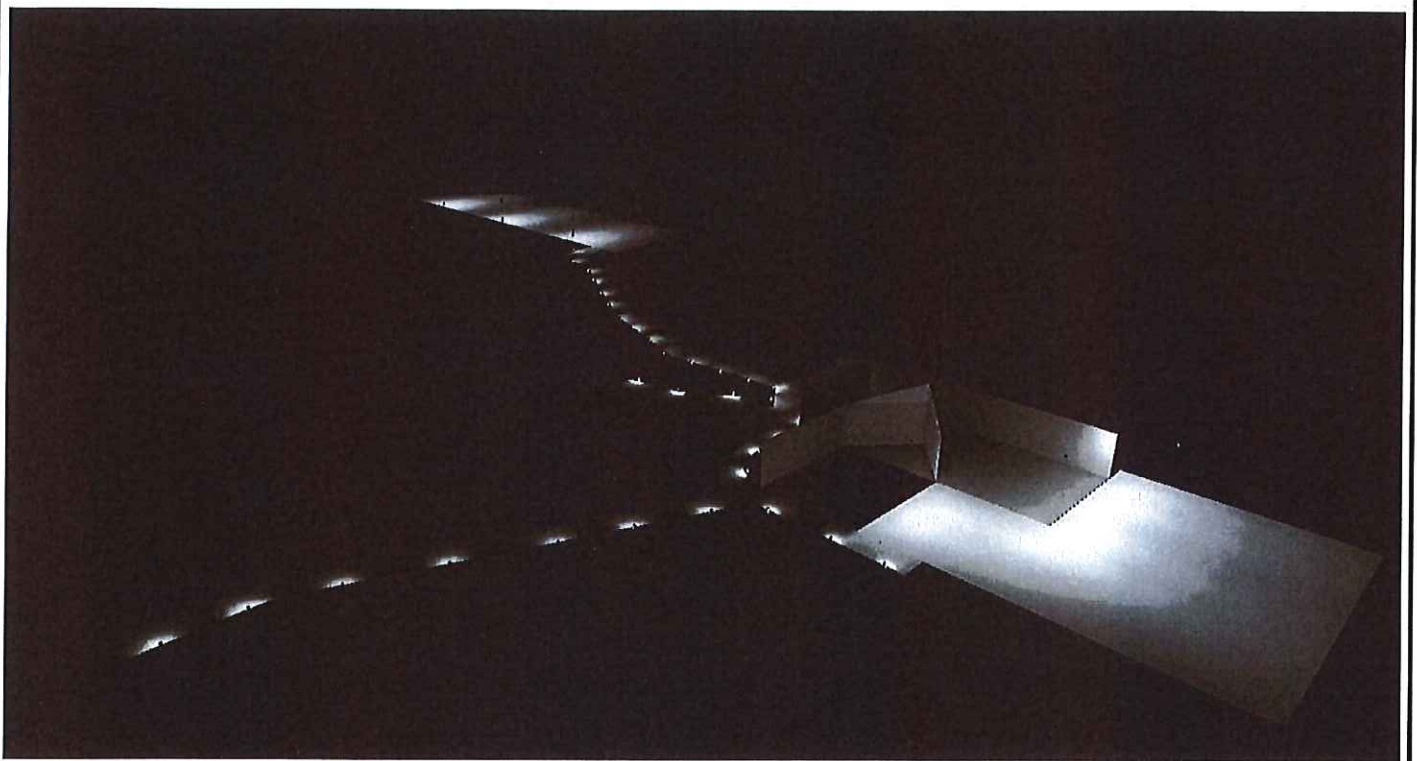
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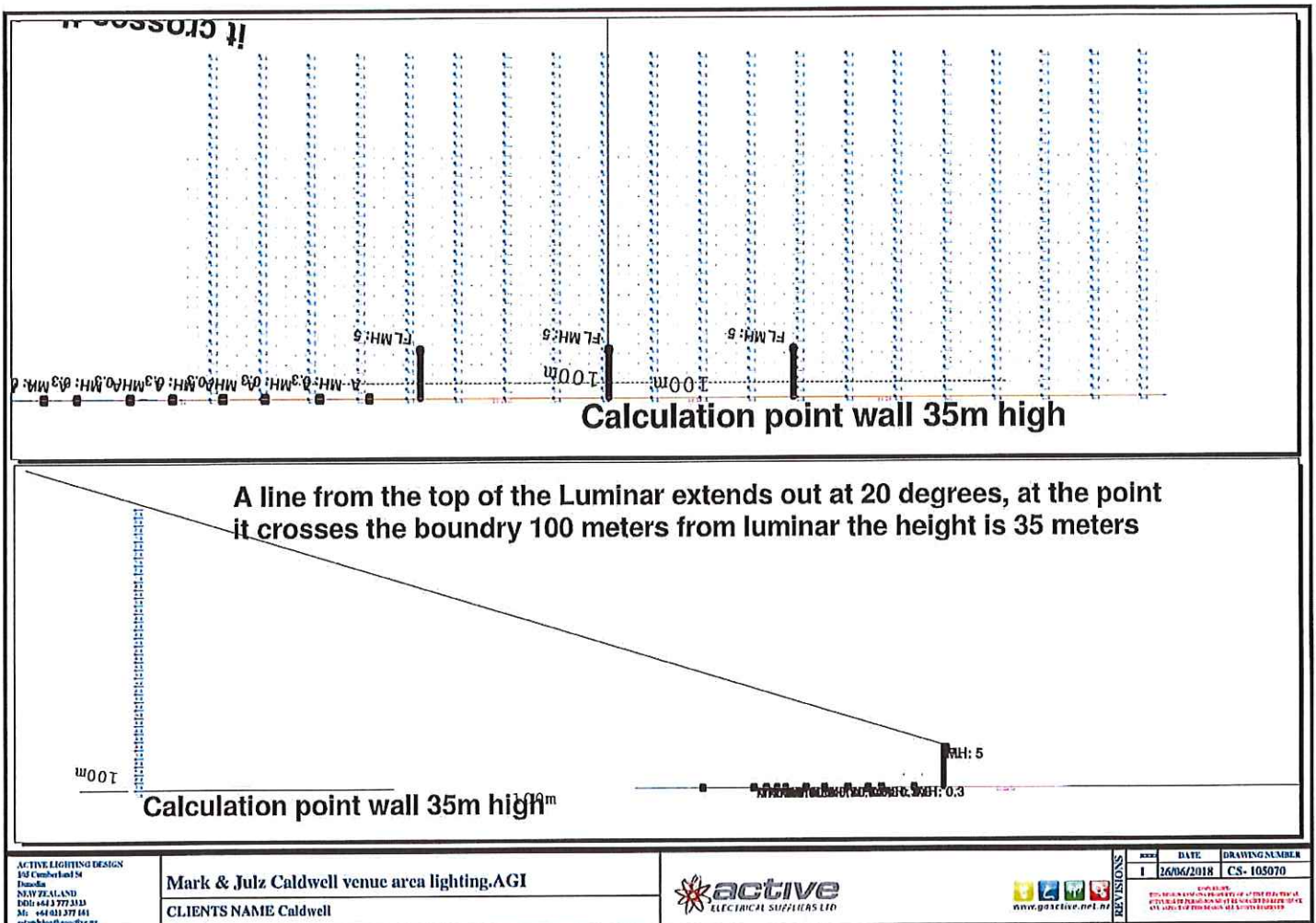


ACTIVE LIGHTING DESIGN
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 NEW ZEALAND
 DDN: 6643 777 3333
 M: 664 631 777 181
 extanv@active.co.nz

Mark & Julz Caldwell venue area lighting.AGI
 CLIENTS NAME Caldwell



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Obtrusive Light - Compliance Report

AS 4282-1997, Post-Curfew, Residential - Dark Surrounds
Filename: Mark & Julz Caldwell venue area lighting
26/06/2018 9:41:57 AM

Illuminance

Maximum Allowable Value: 1 Lux

Calculations Tested (2):

Calculation Label	Test Results	Max. Illum.
Pre Curfew Vertical Illuminance_Ill_Seg1	PASS	0.2
Curfew Vert Illum and Intensity_Ill_Seg1	PASS	0.2

Luminous Intensity (Cd) At Vertical Planes

Maximum Allowable Value: 500 Cd

Calculations Tested (1):

Calculation Label	Test Results
Curfew Vert Illum and Intensity_Cd_Seg1	PASS

Threshold Increment (TI)

Maximum Allowable Value: 20 %

Calculations Tested (2):

Calculation Label	Adaptation Luminance	Test Results
Threshold Increment EN	10	PASS
Threshold Increment ES	10	PASS

Obtrusive Light - Compliance Report

AS 4282-1997, Pre-Curfew, Residential - Dark Surrounds
Filename: Mark & Julz Caldwell venue area lighting
26/06/2018 9:43:31 AM

Illuminance

Maximum Allowable Value: 10 Lux

Calculations Tested (2):

Calculation Label	Test Results	Max. Illum.
Pre Curfew Vertical Illuminance_Ill_Seg1	PASS	0.2
Curfew Vert Illum and Intensity_Ill_Seg1	PASS	0.2

Luminous Intensity (Cd) Per Luminaire

Maximum Allowable Value: 7500 Cd

Control Angle: 83 Degrees

Luminaire Locations Tested (39)

Test Results: PASS

Threshold Increment (TI)

Maximum Allowable Value: 20 %

Calculations Tested (2):

Calculation Label	Adaptation Luminance	Test Results
Threshold Increment EN	10	PASS
Threshold Increment ES	10	PASS

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est@active.net.nz

Mark & Julz Caldwell venue area lighting.AGI

CLIENTS NAME Caldwell

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Exterior Obtrusive Light: Using AGI32 to Calculate and Show Compliance with AS 4282-1997

Australian Standard 4282-1997 is officially titled "Control of the Obtrusive Effects of Outdoor Lighting." In this segment, we will examine how to use AGI32 to evaluate exterior lighting projects for spill light and luminance glare according to the requirements of AS 4282.

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The design parameters that are controlled are vertical illuminance (Fv) at the property boundary (direct component only), Luminous Intensity (I) emitted by luminaires in the control direction, and Threshold Increment (TI) if near a road. Permissible values depend on the time of night: pre-curfew or curfewed hours. Reflected light is not included in the calculations.

Let's look at how to use AGI32 to determine whether our site lighting will meet the AS 4282 criteria.

Let's assume that our site is in a commercial area. AS 4282 states that the lighting must not exceed these values:

- Vertical Illuminance
 - Pre-Curfew: 25 lux
 - Curfewed hours: 4 lux
- Luminous Intensity
 - Pre-curfew (assuming large area, Level 1 control): 7500 cd
 - Curfewed hours: 2500 cd
- Threshold Increment: 20% based on adaptation luminance of 10 cd/m²

Open existing AGI file AS4282.agi.

The illuminance calculations for the parking lot have been performed, saved, and then turned off in Project Manager, to keep the project "clean" for the obtrusive light analysis.

The neighboring building and the street will be used in the Vertical Illuminance and Threshold Increment calculations, respectively.

Because the Pre-curfew and Curfewed Hours requirements are different, a separate analysis and compliance test will be required for each. We will begin with the Pre-curfew analysis.

Pre-Curfew: Vertical Illuminance and Luminance Intensity

The easiest way to show compliance with the vertical illuminance requirement is to create a series of vertical-illuminance grids that run along all or part of the property line, and their height will be where a line between the nearest luminaire and the highest relevant point of the adjacent properties (i.e., the height of the highest window)

Threshold Increment

Threshold Increment (TI) is an indication of luminance glare. Is the luminaire excessively bright for its environment? From AS 4282-1997:

- TI is the measure of disability glare expressed as the percentage increase in contrast required between an object and its background for it to be seen equally well with a source of glare present.
- Higher values of TI correspond to greater disability glare.
- The contributions from all luminaires that lie within 1.5 to 60 degrees from the observer's line of sight are summed.
- Limits apply at all times where users of transport systems are subject to a reduction in the ability to see essential information
- Values given are for relevant positions and viewing directions in the path of travel. [Spacing between points is not specified; we will use 1 meter.]

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Mark & Julie Caldwell venue area lighting.AGI
CLIENTS NAME Caldwell

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Obtrusive Light - Compliance Report

AS 4282-1997, Post-Curfew, Residential - Dark Surrounds

Filename: Mark & Julz Caldwell venue area lighting

26/06/2018 9:41:57 AM

Illuminance

Maximum Allowable Value: 1 Lux

Calculations Tested (2):

Calculation Label	Test Results	Max. Illum.
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Luminous Intensity (Cd) At Vertical Planes

Maximum Allowable Value: 500 Cd

Calculations Tested (1):

Calculation Label	Test Results
Curfew Vert Illum and Intensity_Cd_Seg1	PASS

Threshold Increment (TI)

Maximum Allowable Value: 20 %

Calculations Tested (2):

Calculation Label	Adaptation Luminance	Test Results
Threshold Increment EN	10	PASS
Threshold Increment ES	10	PASS



AU & NZ Standards

Standards provide vital guidance to local governments and main road authorities about how to design and implement safe, effective, robust and reliable public lighting. With the rapid pace of technical development in lighting and smart controls, ANZ standards are currently the focus of much development work and must increasingly be considered in conjunction with key [international standards and guidance documents](#).

An important part of the SLSC Programme is to work consultatively with Standards Australia (SA) and Standards New Zealand (SNZ) to:

- Address the imbalances on some standards committees, identify vacancies or a lack of representation on relevant committees by local government, new-entrant suppliers and those with expertise in LEDs and smart controls and their application to adaptive lighting, identify suitable candidates to fill vacancies, nominate candidates and provide appropriate briefing and support to nominees; and
- Ensure that standards reform proposals support the timely deployment of LEDs, smart controls and smart city technology.

The following Standards and Technical Specifications comprise the fundamental guidance documents for street, road and area lighting in Australia:

[AS/NZS 1158 Series: Lighting for roads and public spaces](#) which includes the following components:

AS/NZS 1158.0:2005	Lighting for roads and public spaces - Introduction
--	---

**For more
information visit:**

[Standards
Australia](#)

[Standards New
Zealand](#)

<u>AS/NZS 1158.1.1:2005</u>	Lighting for roads and public spaces - Vehicular traffic (Category V) lighting - Performance and design requirements
<u>AS/NZS 1158.1.2:2010</u>	Lighting for roads and public spaces - Vehicular traffic (Category V) lighting - Guide to design, installation, operation and maintenance
<u>AS/NZS 1158.2:2005</u>	Lighting for roads and public spaces - Computer procedures for the calculation of light technical parameters for Category V and Category P lighting
<u>AS/NZS 1158.3.1:2005</u>	Lighting for roads and public spaces - Pedestrian area (Category P) lighting - Performance and design requirements
<u>AS/NZS 1158.4:2009</u>	Lighting for roads and public spaces - Lighting of pedestrian crossings
<u>AS/NZS 1158.5:2007</u>	Lighting for roads and public spaces - Tunnels and underpasses
<u>SA/SNZ TS 1158.6 2015</u>	Lighting for roads and public spaces - Luminaires - Performance
<u>AS/NZS 60598.2.3 2015</u>	Luminaires Particular requirements - Luminaires for road and street lighting
<u>AS 4282</u>	AS 4282 Control of the obtrusive effects of outdoor lighting
<u>AS 1798</u>	Lighting poles and bracket arms – Recommended dimensions
<u>AS/NZS 3000</u>	Electrical Installations – Building, Structures and Premises

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Threshold Increment

Threshold Increment (TI) is an indication of luminaire glare. Is the luminaire excessively bright for its environment? From AS 4282-1997:

- TI is the measure of disability glare expressed as the percentage increase in contrast required between an object and its background for it to be seen equally well with a source of glare present.
- Higher values of TI correspond to greater disability glare.
- The contributions from all luminaires that lie within 1.5 to 60 degrees from the observer's line of sight are summed.
- Limits apply at all times where users of transport systems are subject to a reduction in the ability to see essential information.
- Values given are for relevant positions and viewing directions in the path of travel. [Spacing between points is not specified; we will use 1 meter.]

In AGi32, TI has a separate command.

Go back to *Plan View*.

In the Calculations Toolkit, click on the down-arrow next to the Obtrusive Light button and select *Threshold Increment*.

We will need to specify the points for the eastbound and westbound lanes separately.

First: eastbound.

Obtrusive Light - Compliance Report

AS 4282-1997, Pre-Curfew, Residential - Dark Surrounds

Filename: Mark & Julz Caldwell venue area lighting

26/06/2018 9:43:31 AM

Illuminance

Maximum Allowable Value: 10 Lux

Calculations Tested (2):

<u>Calculation Label</u>	<u>Test Results</u>	<u>Max. Illum.</u>
Pre Curfew Vertical Illuminance_Ill_Seg1	PASS	0.2
Curfew Vert Illum and Intensity_Ill_Seg1	PASS	0.2

Luminous Intensity (Cd) Per Luminaire

Maximum Allowable Value: 7500 Cd

Control Angle: 83 Degrees

Luminaire Locations Tested (39)

Test Results: **PASS**

Threshold Increment (TI)

Maximum Allowable Value: 20 %

Calculations Tested (2):

<u>Calculation Label</u>	<u>Adaptation Luminance</u>	<u>Test Results</u>
Threshold Increment EN	10	PASS
Threshold Increment ES	10	PASS

Melissa Shipman

From: Warren Hanley <warren.hanley@orc.govt.nz>
Sent: Friday, 24 August 2018 05:16 p.m.
To: Melissa Shipman
Cc: Charles Horrell; Anita Dawe
Subject: Tomahawk lagoon - ORC comment on affected party status to application to DCC

Follow Up Flag: Follow up
Flag Status: Flagged

Hi Melissa,

First up, thanks, it's really appreciated you've identified ORC's interest due to the significance of the Tomahawk wetland and come to us for discussion. Protection of wetlands are recognised as matter of national importance under s6 of the RMA, and in Otago's water plan.

From what I understand of the application, it will involve a commercial operation on the property, with visitors coming in by car or coach. Water supply will be reticulated with sewage to be disposed on-site. The application/further information doesn't appear to address stormwater. No actual activity related to the applicant's venture appears to be located immediately adjacent or within the wetland.

The water plan rules cover a wide range of activities such as takes, damming, diversion, in relation to wetlands, but only if carried out on or in a wetland. So given the proposal isn't planning to have any activities directly occur within the wetland, I can't see any issue there.

The issues where we may have some interest/concerns are would be stormwater (particularly from car park) and sewage management - therefore potential for discharges. Given the potential sewage discharge volume from a full capacity venue (150 people) will most likely exceed the 2000 litre/day permitted activity rule volume in the water plan, the applicant will need to discuss consenting requirements with ORC's consent team.

Likewise for stormwater, there are rules controlling the discharge of stormwater to water (or land where it may enter water). The applicant may like to discuss its management of stormwater from the site with the consents team to ensure compliance with the water plan rules.

So in short, I don't believe ORC is an affected party to the application before DCC. The issues we may be concerned about in relation to the wetland are able to be controlled by ORC as a regulatory authority under the rules of the water plan.

I hope this is of help, but if you have any further questions, please feel welcome to contact me at the office. Likewise Charles, if you need to correct/add to anything I've covered, please do.

Regards

Warren.



Warren Hanley
Senior Resource Planner
Liaison

Otago Regional Council
70 Stafford St, Private Bag 1954,
Dunedin 9054
Phone (03) 470 7443 or 0800 474 082

Melissa Shipman

From: Allan Cubitt <allan@cubittconsulting.co.nz>
Sent: Monday, 27 August 2018 10:15 a.m.
To: Melissa Shipman
Subject: FW: LUC-20018-219 - 261 Tomahawk Road - Lighting detail
Attachments: AU & NZ Standards - SLSC.pdf; Untitled attachment 00048.pdf; Untitled attachment 00054.pdf; Untitled attachment 00060.pdf; Pre-Curfew Vertical Illuminance & Luminaire Intensity.pdf; Theshold Increment.pdf

From: Mark Caldwell <mjcbows@gmail.com>
Sent: Sunday, August 26, 2018 8:30 PM
To: Allan Cubitt <Allan@cubittconsulting.co.nz>
Subject: Fwd: LUC-20018-219 - 261 Tomahawk Road - Lighting detail

Sent from my iPhone

Begin forwarded message:

From: Craig Standring <cstandring@goactive.nz>
Date: 24 August 2018 15:31:12 NZST
To: Mark Caldwell <mjcbows@gmail.com>
Subject: RE: LUC-20018-219 - 261 Tomahawk Road - Lighting detail

Hi Mark

The lighting design has been carried, with the idea of providing safely lit spaces with as little up light spill as possible, I think we have achieved this with just the right amount of fittings, correctly spaced, balanced with the lumen output of each fitting. The two tests I have carried out both have the smallest lux reading of 0.2 lux with maximum threshold set at 10 lux this " confirms that adverse effects will be less than minor"

I have included the AU & NZ Standards SLCS PDF, which confirms that AS4282 is a New Zealand, & Australian standard, in conjunction with NZ/AUS IES council

I have carried out several lighting tests on your southern boundary being:

Pre & Post Curfew Vertical illuminance and luminaire intensity.
Threshold Increment.

I have attached PDF's of the test results that measure against ASNZ 4282-1997 code standard, and some back ground information on the testing

I have combined everything into the drawing, Mark I would recommend that you forward this email onto Mellissa Shipman which gives her access to all data.

PS Check out the just completed driveway lighting at the old Monticillo Retirement home on Eglinton Road, they are using the wooden sleeper with light fitting concept, slightly brighter than what you would go for, but it shows off the concept.

Cheers

Craig Standring Grad Cert Sci Tech (Lighting), Tech IES

Active Electrical Suppliers Ltd
Area Sales Lighting and Design
Otago Southland & Central Otago

105 Cumberland St Dunedin 9016

Mobile +64 021 377 161
Phone +64 3 777 3323
Email cstandring@goactive.nz
Website www.goactive.nz



AU & NZ Standards

Standards provide vital guidance to local governments and main road authorities about how to design and implement safe, effective, robust and reliable public lighting. With the rapid pace of technical development in lighting and smart controls, ANZ standards are currently the focus of much development work and must increasingly be considered in conjunction with key [international standards and guidance documents](#).

An important part of the SLSC Programme is to work consultatively with Standards Australia (SA) and Standards New Zealand (SNZ) to:

- Address the imbalances on some standards committees, identify vacancies or a lack of representation on relevant committees by local government, new-entrant suppliers and those with expertise in LEDs and smart controls and their application to adaptive lighting , identify suitable candidates to fill vacancies, nominate candidates and provide appropriate briefing and support to nominees; and
- Ensure that standards reform proposals support the timely deployment of LEDs, smart controls and smart city technology.

The following Standards and Technical Specifications comprise the fundamental guidance documents for street, road and area lighting in Australia:

AS/NZS 1158 Series: Lighting for roads and public spaces which includes the following components:

AS/NZS
1158.0:2005

Lighting for roads and public spaces - Introduction

**For more
information visit:**

[Standards
Australia](#)

[Standards New
Zealand](#)

<u>AS/NZS 1158.1.1:2005</u>	Lighting for roads and public spaces - Vehicular traffic (Category V) lighting - Performance and design requirements
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Exterior Obtrusive Light: Using AGI32 to Calculate and Show Compliance with AS 4282-1997

Australian Standard 4282-1997 is officially titled “Control of the Obtrusive Effects of Outdoor Lighting.” In this segment, we will examine how to use AGI32 to evaluate exterior lighting projects for spill light and luminaire glare according to the requirements of AS 4282.

AS 4282-1997 aims to mitigate three general problems caused by outdoor nighttime lighting:

- Spill light: light that intrudes on the property of others, particularly that which enters through windows of neighboring buildings
- Discomfort glare or disability glare caused by excessive luminaire brightness at normal viewing angles
- Sky glow

The design parameters that are controlled are vertical illuminance (E_v) at the property boundary (direct component only), Luminous Intensity (I) emitted by luminaires in the control direction, and Threshold Increment (TI) if near a road. Permissible values depend on the time of night: pre-curfew or curfewed hours. Reflected light is not included in the calculations.

Let's look at how to use AGI32 to determine whether our site lighting will meet the AS 4282 criteria.

Let's assume that our site is in a commercial area. AS 4282 states that the lighting must not exceed these values:

- Vertical illuminance
 - Pre-Curfew: 25 lux
 - Curfewed hours: 4 lux
- Luminous Intensity
 - Pre-curfew (assuming large area, Level 1 control): 7500 cd
 - Curfewed hours: 2500 cd
- Threshold Increment: 20% based on adaptation luminance of 10 cd/m^2

Open existing AGI file AS4282.agi.

The illuminance calculations for the parking lot have been performed, saved, and then turned off in Project Manager, to keep the project “clean” for the obtrusive light analysis.

The neighboring building and the street will be used in the Vertical Illuminance and Threshold Increment calculations, respectively.

Because the Pre-curfew and Curfewed Hours requirements are different, a separate analysis and compliance test will be required for each. We will begin with the Pre-curfew analysis.

Pre-Curfew: Vertical Illuminance and Luminaire Intensity

The easiest way to show compliance with the vertical illuminance requirement is to create a series of vertical-illuminance grids that run along all or part of the property line, and their height will be where a line between the nearest luminaire and the highest relevant point of the adjacent properties (i.e., the height of the highest window)

Threshold Increment

Threshold Increment (TI) is an indication of luminaire glare. Is the luminaire excessively bright for its environment? From AS 4282-1997:

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We will need to specify the points for the eastbound and westbound lanes separately.

First: eastbound.

Obtrusive Light - Compliance Report

AS 4282-1997, Pre-Curfew, Residential - Dark Surrounds

Filename: Mark & Julz Caldwell venue area lighting

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Maximum Allowable Value: 10 Lux

Calculations Tested (2):

Calculation Label	Test Results	Max. Illum.
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Luminous Intensity (Cd) Per Luminaire

Maximum Allowable Value: 7500 Cd

Control Angle: 83 Degrees

Luminaire Locations Tested (39)

Test Results: **PASS**

Threshold Increment (TI)

Maximum Allowable Value: 20 %

Calculations Tested (2):

Calculation Label	Adaptation Luminance	Test Results
Threshold Increment EN	10	PASS
Threshold Increment ES	10	PASS