

ATTACHMENTS:



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Our Ref: PSA-18-2

18 January 2020

Mr James Dryburgh
General Manager
Brighton Council
1 Tivoli Road
OLD BEACH TAS 7017

Via Email: admin@brighton.tas.gov.au

Dear Mr Dryburgh

REQUEST TO AMEND THE SOUTHERN TASMANIA REGIONAL LAND USE STRATEGY 2010-2035 – URBAN GROWTH BOUNDARY AT 66 SUMMERHILL ROAD

At the City of Hobart Council meeting of 26 October 2020, Council resolved to initiate an amendment to the *Hobart Interim Planning Scheme 2015* (HIPS 2015) to rezone 66 Summerhill Road, West Hobart (CT 178330) from Environmental Management, Environmental Living and General Residential to Low Density Residential. Council also resolved at this meeting to seek an amendment to the *Southern Tasmania Regional Land Use Strategy 2010-2035* (STRLUS) to include the rezoned area of land within the Urban Growth Boundary, as requested by the landowner.

The Minister for Planning has requested that the City of Hobart seek endorsement for this amendment to the STRLUS from all councils within the southern region, in the form of a Council resolution.

Documentation relating to this amendment request is available to view here: <https://hobartcitycouncil.sharefile.com/d-s4743a0d4878459db>.

Please advise Sarah Crawford (62382157 or crawfords@hobartcity.com.au) whether you foresee any issues with the proposed STRLUS amendment, and when it is likely this proposal can be considered at a Council meeting.

Yours sincerely

(Neil Noye)
DIRECTOR CITY PLANNING

REPORT TITLE: AMENDMENT PSA-18-2 - HOBART INTERIM PLANNING SCHEME 2015 - 66 SUMMERHILL ROAD REZONING

REPORT PROVIDED BY: Development Planner
Director City Planning

1. Report Purpose and Community Benefit

- 1.1. The purpose of this report is to consider an application under the former provisions of the *Land Use Planning and Approvals Act 1993* (LUPAA), from ERA Planning on behalf of Newdegate Nominees Pty Ltd, to amend the *Hobart Interim Planning Scheme 2015* (HIPS 2015) by rezoning the property at 66 Summerhill Road to Low Density Residential from Environmental Management, Environmental Living and General Residential. The amendment is described in the applicant's rezoning plan and accompanying submission in **Attachments A and B**.
- 1.2. The Biodiversity Protection Area overlay is also proposed to be extended across the entire area rezoned to Low Density Residential.
- 1.3. As requested by the applicant, this report also recommends the initiation of an amendment to the Southern Tasmania Regional Land Use Strategy 2010-2035 (STRLUS) to amend the Urban Growth Boundary (UGB) to allow for the rezoning to occur.
- 1.4. The proposal benefits the community by ensuring that land is appropriately zoned and that use and development is undertaken in a fair and orderly manner.

2. Report Summary

- 2.1. The proposal is to rezone 66 Summerhill Road (title reference: CT 178330/1) to Low Density Residential. The site is currently zoned General Residential, Environmental Management and Environmental Living.
- 2.2. The proposed rezoning plan is provided as **Attachment A**.
- 2.3. The applicant's supporting documentation relating to the rezoning is provided as **Attachment B**.
- 2.4. The site is located on the fringe of existing residential development at the end of Summerhill Road in West Hobart, and adjoins the City-owned Knocklofty Reserve.
- 2.5. The land is generally east facing and partly vegetated. The dominant vegetation type is *Eucalyptus globulus* dry forest and woodland, although it is significantly weed infested.

- 2.6. The subject site comprises part of the balance lot of a previous subdivision for 9 lots plus balance at 66 Summerhill Road (PLN-16-1296).
- 2.7. Council purchased some of this balance lot following the subdivision to formalise existing informal use of the area by the public and provide a strategic link between the southern and northern parts of Knocklofty Reserve.
- 2.8. Submitted documentation demonstrates that the land subject to the rezoning is capable of being developed to a density commensurate with the Low Density Residential Zone.
- 2.9. In order for the rezoning to occur, the Urban Growth Boundary (UGB) of the Southern Tasmania Regional Land Use Strategy 2010-2035 (STRLUS) will need to be extended.
- 2.10. The applicant has also requested that Council initiate an amendment to the STRLUS. Justification for this change is provided as **Attachment C**.
- 2.11. It is considered that both the proposed rezoning and the amendment to the STRLUS are capable of meeting the requirements of LUPAA for the following reasons:
 - 2.11.1. The land is not considered to be suitable for retention under the Environmental Management Zone given it does not contain high conservation value vegetation;
 - 2.11.2. The Low Density Residential Zone provides for a transition in residential density between the adjacent General Residential Zone and neighbouring Council-owned Knocklofty Reserve;
 - 2.11.3. The development potential following the rezoning is not significantly different in terms of number of permitted dwellings compared to the existing situation;
 - 2.11.4. The rezoning is not considered to increase potential for land use conflicts considering surrounding land uses and the likely location and number of future dwellings.
- 2.12. It is recommended that the Biodiversity Protection Area Overlay should be extended across the entire rezoned area, in order to consider existing vegetation at the development stage and to protect a significantly old, large, hollow-bearing white gum.
- 2.13. The proposed amendment is recommended for initiation, and it is recommended that a letter be sent to the Minister for Planning to request a STRLUS amendment to extend the UGB.

3. Recommendation

That:

1. ***Pursuant to Section 34(1) (a) of the former provisions of the Land Use Planning and Approvals Act 1993, the Council resolve to initiate an amendment to the Hobart Interim Planning Scheme 2015 to rezone the property at 66 Summerhill Road to Low Density Residential from General Residential, Environmental Living and Environmental Management, as indicated in the rezoning plan provided in Attachment A, and to extend the Biodiversity Protection Area Overlay over the entire area rezoned to Low Density Residential.***
2. ***Pursuant to Section 35 of the former provisions of the Land Use Planning and Approvals Act 1993, the Council certify that the amendment to the Hobart Interim Planning Scheme 2015 PSA-18-2 meets the requirements of Section 32 of the former provisions of the Land Use Planning and Approvals Act 1993 and authorise the General Manager and the Deputy General Manager to sign the Instrument of Certification (Attachment E).***
3. ***Pursuant to Section 38 of the former provisions of the Land Use Planning and Approvals Act 1993, the Council place Amendment PSA-18-2 to the Hobart Interim Planning Scheme 2015 on public exhibition for a 28 day period following certification.***
4. ***Council resolve to request the Minister for Planning to amend to the Southern Tasmania Regional Land Use Strategy 2010-2035 (STRLUS) to extend the Urban Growth Boundary to include the area of 66 Summerhill Road to be rezoned Low Density Residential.***

4. Background

- 4.1. The land subject to the rezoning comprises part of the balance lot of a previous subdivision at 66 Summerhill Road (PLN-16-1296). This subdivision was for 9 lots plus balance.
- 4.2. Council purchased some of the balance lot following the subdivision to formalise existing informal use of the area by the public and provide a strategic link between the southern and northern parts of Knocklofty Reserve. The remainder of the balance lot is the subject of this application.
- 4.3. The ownership of the subject site has changed since the amendment request was submitted.
- 4.4. Since submission, a parcel of land acquired through an adverse possession claim has been adhered to the title for 66 Summerhill Road, and forms part of the proposal.
- 4.5. There is no application for subdivision or development as part of this amendment, although an indicative subdivision and servicing plan has been submitted to demonstrate a possible scenario.

Existing situation

- 4.6. The site is located on the fringe of existing residential development at the end of Summerhill Road in West Hobart, and adjoins the City-owned Knocklofty Reserve (see Figure 1).
- 4.7. The land is generally east facing and partly vegetated. The dominant vegetation type is *Eucalyptus globulus* dry forest and woodland, although it is significantly weed infested.
- 4.8. The site is currently partly zoned General Residential, Environmental Living and Environmental Management.
- 4.9. It is noted that the zoning maps of the Council's GIS overlays (see Figure 1) align differently with the underlying property boundaries compared to the State Government's LISTmap property boundaries (see Figure 2).
- 4.10. Advice from the Tasmanian Planning Commission (TPC) GIS unit is that this is due to adjustments made to the LISTmap cadastre to align property boundaries more closely with zone boundaries, although there does not appear to have been any formal amendments to the zoning maps to reflect this. It is recommended that the TPC formally resolve this mapping inconsistency.



Figure 1: Subject site showing existing zoning (Council GIS)



Figure 2: Subject site showing existing zoning (LISTmap)

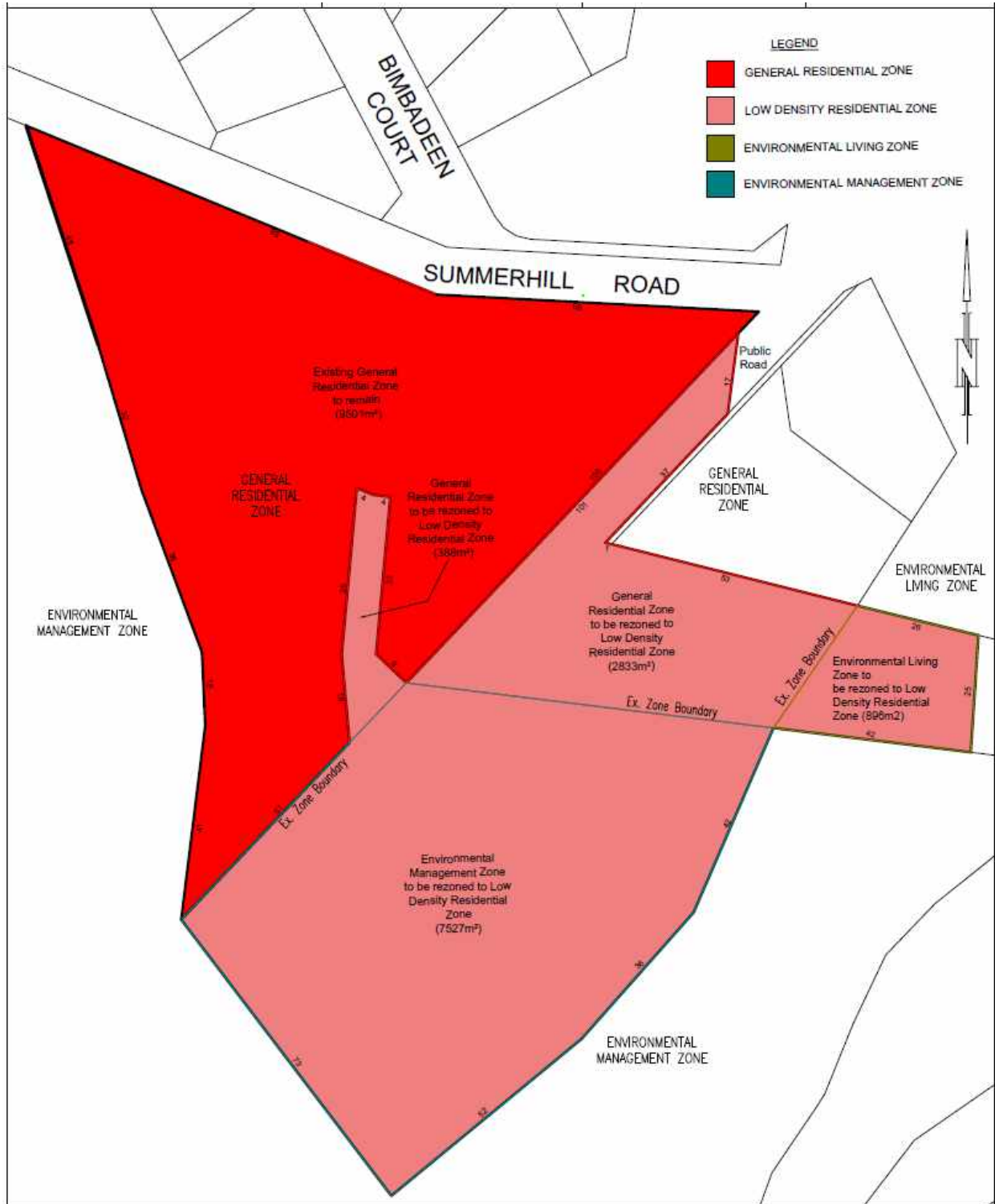


Figure 3: Proposed rezoning of subject site

Planning Scheme Provisions

- 4.11. The Zone Purpose Statements of the Environmental Management Zone are:

To provide for the protection, conservation and management of areas with significant ecological, scientific, cultural or aesthetic value or with a significant likelihood of risk from a natural hazard.

To only allow for complementary use or development where consistent with any strategies for protection and management.

To facilitate passive recreation opportunities which are consistent with the protection of natural values in bushland and foreshore areas.

To recognise and protect highly significant natural values on private land.

To protect natural values in un-developed areas of the coast.

- 4.12. Allowable uses under the Environmental Management Zone are generally limited to those that have a public benefit. Permitted uses are generally only those compatible with a reserve management plan. Use and development standards under this zone are primarily focussed towards protecting vegetation and landscape values.

- 4.13. The Zone Purpose Statements of the Environmental Living Zone are:

To provide for residential use or development in areas where existing natural and landscape values are to be retained. This may include areas not suitable or needed for resource development or agriculture and characterised by native vegetation cover, and where services are limited and residential amenity may be impacted on by nearby or adjacent rural activities.

To ensure development is reflective and responsive to the natural or landscape values of the land.

To provide for the management and protection of natural and landscape values, including skylines and ridgelines.

To protect the privacy and seclusion that residents of this zone enjoy

To provide for limited community, tourism and recreational uses that do not impact on natural values or residential amenity.

To encourage passive recreational opportunities through the inclusion of pedestrian, cycling and horse trail linkages.

- 4.14. Allowable uses under the Environmental Living Zone are generally focussed towards residential or recreation uses, as well as some discretionary community uses. Use and development standards are

primarily focussed towards retaining residential amenity and natural values.

- 4.15. The Zone Purpose Statements of the General Residential Zone are:

To provide for residential use or development that accommodates a range of dwelling types at suburban densities, where full infrastructure services are available or can be provided.

To provide for compatible non-residential uses that primarily serve the local community

To provide for the efficient utilisation of services.

To encourage residential development that respects the neighbourhood character.

To provide a high standards of residential amenity.

To allow commercial uses which provide services for the needs of residents of a neighbourhood and do not displace an existing residential use or adversely affect their amenity particularly through noise, traffic generation and movement, and the impact of demand for on-street parking.

- 4.16. Allowable uses under the General Residential Zone are focussed towards residential uses, with some commercial uses (primarily in existing commercial buildings) that serve the local community. Use and development standards are generally focussed towards achieving residential amenity, allowing for suburban level of density.

- 4.17. The Zone Purpose Statements of the Low Density Residential Zone are:

To provide for residential use or development on larger lots in residential areas where there are infrastructure or environmental constraints that limit development.

To provide for non-residential uses that are compatible with residential amenity.

To encourage residential development that respects the neighbourhood character.

To provide a high standard of residential amenity.

To ensure that development respects the natural and conservation values of the land and is designed to mitigate any visual impacts of development on public views.

- 4.18. Allowable uses under the Low Density Residential Zone are generally focussed towards residential uses, with a limited number of other

community-focussed uses. The only allowable commercial use is Domestic animal breeding, boarding or training, with discretion.

- 4.19. Use and development standards under the Low Density Residential Zone are generally focussed towards achieving residential amenity, at a lower density level than for general urban areas.

Tasmanian Planning Scheme

- 4.20. The Environmental Management, General Residential and Low Density Residential zones under the Tasmanian Planning Scheme (TPS) are substantially similar to the equivalent zones under the HIPS 2015. There is no equivalent 'Environmental Living' zone.
- 4.21. Some differences in the Low Density Residential Zone under the TPS compared to the HIPS 2015 include that a slightly wider range of discretionary non-residential uses are allowable. In addition, the site area per dwelling for multiple dwellings is set at the same area as the minimum lot size for serviced lots (1500m²), and there is no maximum permitted lot size. The absolute minimum lot size is 1200m².
- 4.22. Under the HIPS 2015, the site area per dwelling requirement under the Low Density Residential Zone is greater than the minimum lot size (1500m² and 1000m² respectively), and there is a maximum lot size of 2,500m². There is no discretion to approve lots either below the minimum or above the maximum permitted lot sizes unless for open space purposes.

5. Proposal and Implementation

- 5.1. The proposal is to amend the *Hobart Interim Planning Scheme 2015* (HIPS 2015) zoning maps by rezoning part of the property at 66 Summerhill Road to Low Density Residential from Environmental Management, Environmental Living and General Residential.
- 5.2. The proposal is also to submit a request to the Minister of Planning to amend the STRLUS by extending the UGB to include the rezoned area.

Justification – Applicant's Submission

- 5.3. The applicant considers that the requested rezoning amendment is justified for the following reasons:
 - 5.3.1. The subject site is capable of being serviced by sewer and water infrastructure.
 - 5.3.2. A natural values report indicates that the conservation value of the vegetation community on the site is significantly diminished due to substantial weed infestation. Many of the large trees on the site can be retained even following subdivision.

- 5.3.3. It is considered that following the proposed rezoning, three lots and a balance could be provided. This would provide for a transition of density from the General Residential Zone through to Environmental Management and Environmental Living zoned land, reflecting orderly development and reducing bushfire clearance and vegetation maintenance on non-residentially zoned land.
- 5.3.4. The proposal includes an element of 'back-zoning' from General Residential to Low Density Residential, and therefore the change in overall development potential will not be significantly altered.
- 5.3.5. The proposed rezoning removes split zoning of the site and provides for a more logical and systematic pattern of residential development reflective of site constraints.
- 5.3.6. The proposed rezoning and development potential will not have an unreasonable impact on visual landscape values. The land is at a similar or lower contour level compared to adjoining land that is already developed, and the vegetated ridgeline will remain.
- 5.3.7. The site is highly modified already and the area that is suitable for development is substantially cleared of vegetation.
- 5.3.8. While part of the site is subject to the Landslide Hazard Area Overlay, building envelopes can be accommodated outside of these areas. A submitted landslide risk management report concludes the risk posed on the site is low, instability and erosion from vegetation removal is low and acceptable, and expected development should not have a significant effect on land stability on the site or neighbouring properties.
- 5.3.9. A submitted Bushfire Hazard Management Plan (BHMP) indicates that hazard management areas based on BAL-19 construction could be contained within the lot boundaries for a four lot subdivision with building envelopes close to the northern lot boundary.
- 5.3.10. The proposal is consistent with the STRLUS in that:
- Future lot sizes are such that house sites and associated bushfire hazard management areas can be adequately accommodated within the lot boundaries, minimising the impact on broader vegetation values and managing bushfire risk;
 - Adequate land area will be provided to enable a future subdivision that incorporates house sites outside of landslide hazard risk areas;

- An area of the original site has been provided to Council to formalise walking tracks and links to Knocklofty Reserve;
- The rezoning presents a logical transition in the pattern of development and the existing potential of the site;
- the proposal does not represent residential growth but rather an alternative layout for residential development that is more sustainable and responsive to site characteristics;
- the application of the Low Density Residential Zone is reflective of the constraints of the site;

5.3.11. The proposal is consistent with the Objectives of the Resource Management and Planning System, in particular that it:

- Promotes sustainable development given it minimises impacts on bushland while allowing for appropriate residential development;
- Provides for the fair, orderly and sustainable use and development of land given it enables a transition of density without further impacting on significant vegetation or landscape values;
- Encourages public involvement through a public exhibition process;
- Facilitates economic development in that it contributes to the provision of housing and maximises use of infrastructure and services;
- Promotes the sharing of responsibility between government, community and industry by way of the rezoning process;
- Represents sound strategic planning as it is a logical and orderly expansion of a residential area at an appropriate density, removing split-zoning of sites;
- Does not affect the established system of planning instruments, allowing future development of the land to be considered against the planning scheme;
- Considers effects on the environment and social and economic impacts as environmental values on the land can be managed appropriately;
- Contributes to a pleasant, efficient and safe working, living and recreational environment in that it allows of a transition of land between established residential areas and Knocklofty Reserve;

- Conserves places of aesthetic interest as it retains the existing contour line beyond which the existing development pattern does not currently extend.
 - Does not impact on the coordination of public and other facilities and infrastructure.
- 5.3.12. The proposal does not contravene the *State Policy on Water Quality Management 1997* as the planning scheme provisions will ensure use and development is undertaken in accordance with the policy.
- 5.3.13. There are unlikely to be any potential land use conflicts as the proposal provides for an orderly graduation of lot sizes and sustainable utilisation of land that is otherwise constrained.
- 5.3.14. The size and configuration of potential lots means development opportunities will be limited on the site, and therefore the regional impact of the proposal is negligible.
- 5.4. In relation to the amendment to the STRLUS to extend the UGB, the applicant considers the request is justified for the following reasons:
- 5.4.1. The STRLUS was declared 9 years ago, and has had little review since.
- 5.4.2. Maintaining a forward rolling supply of residential land is critical to orderly land release that does not have adverse effects on affordability of housing supply.
- 5.4.3. The UGB was originally intended to be a 'management' tool to control orderly release of new land, not a 'restrictive' tool requiring all land to be converted and used for urban purposes before more is released.
- 5.4.4. The UGB was developed through a relatively inexact process that took into account the best available data on capacity of infrastructure, values, hazards, existing zoning and proposed zoning amendments. There were some constraints associated with this data, and with the dwelling forecast and dwelling yield analysis conducted.
- 5.4.5. Originally the UGB was not intended to be read at a cadastral level and the map was notated to reflect the indicative nature of the line, which was anticipated to adjust taking into account local investigations into values, hazards and other constraints.
- 5.4.6. In 2013 the UGB was changed from a 'fuzzy' line to a 'black and white line', at the behest of some councils in order to provide for easier application. This has caused an unreasonable degree of regulatory burden on proposed small

scale land releases around the UGB such as the one proposed for this amendment.

- 5.4.7. Population increase in greater Hobart since the STRLUS was prepared has been greater than predicted, and 2019 predictions from the Department of Treasury and Finance confirms greater increases into the future than accounted for under the STRLUS.
- 5.4.8. The rezoning at 66 Summerhill Road would facilitate potentially 3 additional lots suited to single dwellings in a well serviced and located area. This is only 0.01% of the dwelling demand underlying the UGB which is negligible and has no effect on the overall attainment of the residential and settlement policies within the STRLUS.

Justification - Comment

- 5.5. The applicant has submitted some valid reasons in support of the rezoning.
- 5.6. As the land has been assessed to not contain vegetation that is of high conservation value, and the potential hazards are manageable, retention of the site within the Environmental Management Zone is not warranted.
- 5.7. It is not considered that the land reflects the Zone Purpose Statements of the Environmental Management Zone, particularly:

To provide for the protection, conservation and management of areas with significant ecological, scientific, cultural or aesthetic value or with a significant likelihood of risk from a natural hazard.
- 5.8. The area of the original site that did have conservation and recreation value has now been transferred to City of Hobart ownership.
- 5.9. It is considered that the Low Density Residential Zone is a reasonable alternative zone for the remainder of the site, including the portion currently zoned General Residential which includes site constraints, such as landslide hazard areas, that will likely limit potential development density.
- 5.10. The replacement of the small section zoned Environmental Living is appropriate as the vegetation community is compromised and it is unlikely any housing will be developed in this area. The indicative subdivision plan suggests this area will likely remain part of a large balance lot that does not have further subdivision potential. The Low Density Residential Zone with a Biodiversity Protection Area Overlay will still allow consideration of any hazards and values in this section of land if further development were to be proposed.
- 5.11. The Low Density Residential Zone will recognise existing site constraints and limit high density development in the area. Future

development on the site is considered to be capable of meeting the zone purpose statements of the Low Density Residential Zone.

- 5.12. The zone provides for a transition in density between the General Residential Zone and adjoining Environmental Living and Environmental Management zoned areas.
- 5.13. In terms of development potential, the difference in the number of lots or developments theoretically possible is not significant.
- 5.14. Under the current zoning, there is the theoretical capacity for 5-6 permitted dwellings on the site (0 on the Environmental Management zoned land and 5-6 on the General Residential/Environmental Living zoned land).
- 5.15. If the site were to be rezoned as proposed, under the HIPS 2015, the Low Density Residential Zone could theoretically yield up to 11 lots or 7 multiple dwellings (minimum lot size of 1000m², minimum land per multiple dwelling of 1500m²). It is noted however that, in terms of subdivision, available frontage to a road is restricted and therefore the maximum number of lots would not be achievable.
- 5.16. The draft Hobart Local Provisions Schedule (LPS) currently proposes that the areas of this site currently zoned Environmental Living or Environmental Management be zoned Rural Living C. This zone has a minimum permitted lot size of 5 hectares.
- 5.17. Under the LPS, the multiple split zoning of the site would continue. Removal of the site's split zoning as proposed by the amendment will be a positive outcome as it consolidates development potential and simplifies assessments.
- 5.18. Under the draft LPS as currently zoned, the development potential would theoretically allow for approximately 6-7 permitted dwellings (1 on the Rural Living C zoned portion of land, 5-6 on the General Residential zoned portion of land.) If the site were to be rezoned as proposed when the LPS is approved, the development potential would be approximately 7 lots or 7 multiple dwellings.
- 5.19. The number of lots or dwellings that could be practically realised on the site following rezoning is highly likely to be lower than the maximum theoretical number due to access constraints, servicing constraints, natural hazards and gradient.
- 5.20. The applicant has provided an indicative subdivision plan that shows three additional lots plus balance. This is considered to be a more realistic potential, assuming servicing for each potential dwelling can be achieved.
- 5.21. Essentially, the rezoning will result in a larger area of land available for residential purposes, but not a significantly greater number of permitted dwellings or lots, compared to the existing situation.

- 5.22. Avoiding zoning privately owned land as Environmental Management is consistent with the established strategic direction favoured under the Tasmanian Planning Scheme.
- 5.23. It is agreed that the development of additional houses in the northern section of the site will not have a significant adverse impact from a visual point of view, given the existing line of development, the recently approved subdivision, the primarily cleared nature of the building areas, and the small number of possible dwellings.
- 5.24. The proposal was referred to relevant Council officers. Comments are provided below:

Open Space and Recreation

- 5.24.1. There does not appear to be any clearing for bushfire protection required on Council land outside the indicative new blocks.
- 5.24.2. Almost all trees could be retained on the new lots, and there would be some reduction in the area covered by gorse. Ongoing gorse control to provide a buffer for the reserve is highly desirable.
- 5.24.3. Pedestrian access between the existing cul-de-sac and Knocklofty Reserve is desirable in the subsequent subdivision;
- 5.24.4. The rezoning proposal is supported in principle.

Stormwater

- 5.24.5. The indicative subdivision plan shows 4 building areas clustered to the north of the site to allow access, servicing, avoid landslide areas and minimise bushfire clearing.
- 5.24.6. Both the Northern and Southern tributaries of Providence Rivulet have identified capacity issues, as does the public stormwater system in Hillside Crescent. Flow maintenance would be required for future subdivision/development, including for the proposed zone's acceptable density. This would likely be conditioned on any subdivision permit as a Part 5 agreement.
- 5.24.7. The submitted concept servicing plan shows only a very small area of the indicative Lots could drain via gravity. Some lots (particularly 'lot 11' and the balance lot) of the indicative subdivision would struggle to get through LG(BMP) or the planning scheme provisions relating to services for subdivision (HIPS 2015 Clause 12.5.4) if not submitted simultaneously with house plans as the building area (considered as the ground surface) could not drain by gravity. Onsite disposal would not be supported due to the steepness and landslip risk, and

Council does not accept pumped drainage disposal for subdivisions.

- 5.24.8. There are, however, possible alternative servicing layouts (for example mains below the building area roughly following 186m contour but above the landslide zone, subject to geotechnical advice, rather than confined to access strips). The majority of the rezoned area is not able to be developed - the building areas must be clustered along the northern boundary, as indicated in the concept subdivision layout.
- 5.24.9. The fire trail to the west of the site has previously concentrated water, causing issues over the site. As part of the Council contract to purchase land, it was proposed to redirect some of these flows to above Bimbadeen Court. The remaining section would sheet flow to Providence Rivulet. If these works have been carried out, the proposed land will be largely unaffected. If it has not, this is still unlikely to be an issue given the likely building areas.
- 5.24.10. The new outcome for maximum acceptable developed area following the rezoning is difficult to judge, but theoretically stays fairly consistent (1924m² of existing General Residential land could yield 5 multiple dwellings with 75% impervious surfaces. Approx. 11,000m² of Low Density Residential land could yield 7 dwellings).
- 5.24.11. In reality, however, it would be difficult to develop the current General Residential zoned lot to this density given the site constraints. The proposed rezoning will therefore slightly increase the practicable development potential of the land.
- 5.24.12. In summary, the rezoning is supported, noting:
- Only a small area of the proposed rezoned land is able to be serviced by future public stormwater, and Council would not support the development of the unserviced land. Future subdivision/development would require extensive stormwater design.
 - Future subdivision/development would require flow management/detention.
 - Whilst development suited to the proposed zone could occur, the indicative subdivision would face some challenges in its current form.

Development Engineering

- 5.24.13. There are concerns that the recently constructed cul-de-sac head on Summerhill Road is insufficiently sized to allow fire

trucks to turn around. As such, a sign was installed as part of that subdivision which prohibits fire trucks to enter the cul-de-sac. Inability for fire trucks to access the Fire Hydrant would mean the Bushfire Hazard Management Plan (BHMP) does not adequately cover fire protection.

5.24.14. Despite these concerns, however, the Tasmania Fire Service (TFS) have provided some advice that indicates they consider access to the cul-de-sac fire hydrant as viable and adequate for appliance manoeuvring. However, the TFS do have concerns regarding all building areas being within 120m unobstructed hose lay of the hydrant, and do not believe the BHMP adequately addresses this issue and proposes an adequate solution. An updated BHMP will need to be provided at subdivision stage to demonstrate an adequate water access solution can be achieved

5.24.15. Notwithstanding the TFS advice relating to access, a suggestion to improve ease of access to the Fire Hydrant is to connect the shared driveway servicing indicative lots 10 and 11. From review of JMG Concept Servicing Plan C100 it appears this may be possible (with alterations to driveway gradients requiring review) with realignment permitting a fire truck to drive through from one shared driveway to the other.

Environmental Planning

5.24.16. A full report by Council's Environmental Development Planner is provided as **Attachment D**.

5.24.17. Generally, it is concluded that the site can reasonably accommodate development consistent with the proposed zone (Low Density Residential).

5.24.18. It is noted that some design alterations may need to be made to the indicative subdivision plan to meet bushfire hazard management requirements. A Bushfire Hazard Management Plan prepared for a subsequent subdivision will need to resolve the issue of adequate hose-lay distance to each building site to ensure compliance with the Bushfire Prone Areas Code.

5.24.19. It is recommended that as part of the rezoning the Biodiversity Protection Area should be extended to cover all areas of the site that were previously not covered by this overlay. This will help to protect a particular very large white gum which may represent the most significant value on the lot from a conservation perspective for its age, size and habitat potential (including hollows). Protection of this tree and other existing vegetation that is outside of the current extent of the

Biodiversity Protection Area is considered to go a considerable way in offsetting the impact of any future development of the land.

- 5.25. In relation to the request to amend the UGB under the STRLUS, it is considered that this is a reasonable request given the minor nature of the extension, and the suitability of the site to be used for low density residential purposes.
- 5.26. An information sheet (RLUS 1) was issued by the Planning Policy Unit (Department of Justice) to provide guidance on amending regional land use strategies.
- 5.27. Under the RLUS 1, amendments to strategies must include justification on how the change being sought:
- (a) *Furtheres the Schedule 1 objectives of LUPAA;*
 - (b) *Is in accordance with State Policies made under section 11 of the State Policies and Project Act 1993;*
 - (c) *Is consistent with the Tasmanian Planning Policies, once they are made; and*
 - (d) *Meets the overarching strategic directions and related policies in the regional land use strategy.*
- 5.28. Further justification is required for those amendments that relate to the development of greenfield sites, including impacts on natural values, risks from hazards, impacts on road networks, impacts on adjoining land use and consideration of agricultural values.
- 5.29. It is considered that each of the above issues have been adequately covered in this report in relation to the proposed rezoning.
- 5.30. The RLUS 1 strongly recommends that proposed amendments are accompanied by an endorsement from other planning authorities in the relevant region, and that State Service agencies, State authorities and infrastructure providers are consulted. However, given the minor nature of this proposal and the unlikely event of any impact on other planning authorities, this is considered unnecessary at this stage. TasWater will be notified during the exhibition process if the amendment is initiated, as per usual process.
- 5.31. The RLUS 1 specifically requests the following information where a modification to the Urban Growth Boundary is sought:
- (a) *Justification for any additional land being required beyond that already provided for under the existing regional land use strategy. This analysis should include the current population growth projections prepared by the Department of Treasury and Finance;*

- (b) Analysis and justification of the potential dwelling yield for the proposed additional area of land;*
- (c) Analysis of land consumption (i.e. land taken up for development) since the regional land use strategy was declared;*
- (d) Justification for any additional land being located in the proposed area, considering the suitability of the area in terms of access to existing physical infrastructure, public transport, and activity centres that provide social services, retail and employment opportunities;*
- (e) Consideration of appropriate sequencing of land release within the local area and region;*
- (f) Consideration of any targets for infill development required by the regional land use strategy;*
- (g) Potential for land use conflicts with use and development on adjacent land that might arise from the proposed amendment.*

- 5.32. The applicant has submitted a response to these requirements (see **attachment C**). The position of the applicant generally is that the minor nature of the extension and the low potentially dwelling yield means detailed analysis against many of the RLUS 1 requirements are unnecessary.
- 5.33. It is considered that this is a reasonable position, and the Planning Policy Unit under the Department of Justice has confirmed that in this instance the documentation provided is sufficient to advance the request to amend the STRLUS.
- 5.34. The proposal to amend the Urban Growth Boundary under the STRLUS is supported.

6. Strategic Planning and Policy Considerations

- 6.1. The proposed amendment is consistent with the objectives of the Capital City Strategic Plan 2019-29, in particular with the following outcomes:
- 6.1.1. Hobart keeps a strong sense of place and identity, even as the city changes;
 - 6.1.2. Hobart's cityscape reflects the heritage, culture and natural environment that make it special;
 - 6.1.3. In City decision-making, we consider how different aspects of Hobart life connect and contribute to sense of place;
 - 6.1.4. The natural environment is part of the city and biodiversity is preserved, secure and flourishing;

6.1.5. Development enhances Hobart's unique identity, human scale and built heritage;

6.1.6. Community involvement and an understanding of future needs help guide changes to Hobart's built environment.

7. Financial Implications

7.1. Funding Source and Impact on Current Year Operating Result

7.1.1. None.

7.2. Impact on Future Years' Financial Result

7.2.1. None.

7.3. Asset Related Implications

7.3.1. None.

8. Legal, Risk and Legislative Considerations

8.1. The *Land Use Planning and Approvals Act 1993* (LUPAA) requires that planning scheme amendments must seek to further the Objectives of Schedule 1 of the Act and be prepared in accordance with the State Policies.

8.2. The Objectives of LUPAA require use and development to occur in a fair, orderly and sustainable manner and for the planning process to facilitate economic development in accordance with the other Schedule 1 Objectives.

8.3. It is considered that the proposed amendment meets the Objectives of LUPAA, in particular it:

8.3.1. Does not unreasonably compromise natural resources or ecological processes and encourages serviced land with easy access to public infrastructure to be effectively utilised;

8.3.2. Is a fair, orderly and sustainable use of the site as it does not adversely impact on environmental values, and provides for economic development through increased housing provision in close proximity to the city;

8.3.3. Assists sound strategic planning by not prejudicing the achievement of the relevant zone objectives or the STRLUS objectives;

8.3.4. Is consistent with the objective to establish a system of planning instruments to be the principal way of setting objectives, policies and controls for the use, development and protection of land;

- 8.3.5. Provides greater flexibility to address changes in local, environmental, social and economic circumstances;
 - 8.3.6. Allows for more efficient use of existing infrastructure and facilities;
 - 8.3.7. Considers the provision of a pleasant, efficient and safe environment for residents and visitors to Hobart;
 - 8.3.8. Considers the capability of the zone and allowable uses that are likely to have minimal land use conflict with surrounding uses.
- 8.4. The only State Policy relevant to the proposed rezoning is the State Policy on Water Quality Management 1997. As the HIPS 2015 includes provisions that ensure use and development is undertaken in accordance with the policy, it is considered that the rezoning and future development on the site will not contravene this policy.
- 8.5. S32(e) of the former provisions of LUPAA requires that planning scheme amendments must, as far as practicable, avoid the potential for land use conflicts with use and development permissible under the planning scheme applying to the adjacent area. This amendment is considered to be appropriate in the context of adjoining land use. It provides for a transition in residential density, and the area of the site that is capable of containing dwellings is concentrated close to the existing General Residential Zone boundary. The site is not adjacent to any areas controlled by a different planning scheme.
- 8.6. S32(f) of the former provisions of LUPAA requires that planning scheme amendments must have regard to the impact that use and development permissible under the amendment will have on the use and development of the region as an entity in environmental, economic and social terms. The proposed amendment is relatively minor in nature, and will not have any significant impact on use or development at a regional level. The proposal is not considered to impact negatively on environmental values of the site, given the extent and condition of vegetation on the site. Supporting use of appropriate city fringe land for housing supports economic development, housing choice, and accessibility to transport and services for future residents.
- 8.7. S300 of LUPAA requires that an amendment to an interim planning scheme is as far as practicable consistent with the regional land use strategy. It is considered that this amendment is consistent with the Southern Tasmania Regional Land Use Strategy 2010-2035 (STRLUS), in particular that it:
- 8.7.1. Manages significant native vegetation at the earliest possible stage of the land use planning process by considering the conservation value of the site, and extending the Biodiversity Protection Area Overlay to include some currently unprotected

vegetation (particularly a very old and large white gum with hollows) – in accordance with policy BNV 1;

- 8.7.2. Adequately manages the risk from natural hazards from bushfire and land instability, in accordance with policies MRH 1 and MRH 3;
 - 8.7.3. Maximises the efficiency of existing physical infrastructure, in accordance with policy PI 1;
 - 8.7.4. Gives preference to urban expansion in close physical proximity to existing transport corridors and higher order Activity Centres, in accordance with policy LUTI 1;
 - 8.7.5. Provides a sustainable and compact pattern of residential development, only utilising the Low Density Residential Zone where it is necessary to manage land constraints in accordance with policy SRD 1 and SRD 2.
- 8.8. It is noted that consistency with the UGB of the STRLUS is dependent on the Minister's determination of the concurrent application to amend the STRLUS.

9. Environmental Considerations

- 9.1. The proposed amendment has been considered in terms of its impact on the environmental values of the site. The documentation submitted indicates the proposed rezoning will not have an unreasonable environmental impact, and this has been supported by Council's Environmental Development Planner.

10. Social and Customer Considerations

- 10.1. The proposal is not considered to have any negative impact on social inclusion.

11. Marketing and Media

- 11.1. There are no marketing or branding implications of this amendment.

12. Community and Stakeholder Engagement

- 12.1. The Council has requested that reports which recommend the initiation of planning scheme amendments address the need to conduct a public meeting or forum to explain the proposed amendments and also outline the explanatory information to be made available. These are addressed below:
 - 12.1.1. It is not considered that a public forum is necessary to explain the proposed amendment to the public as it is relatively simple and self-explanatory.

- 12.1.2. The following information will be made available on the website: a copy of this report, a copy of the formal amendment document and the applicant's submission.

13. Delegation

- 13.1. Delegation rests with the Council.

As signatory to this report, I certify that, pursuant to Section 55(1) of the Local Government Act 1993, I hold no interest, as referred to in Section 49 of the Local Government Act 1993, in matters contained in this report.








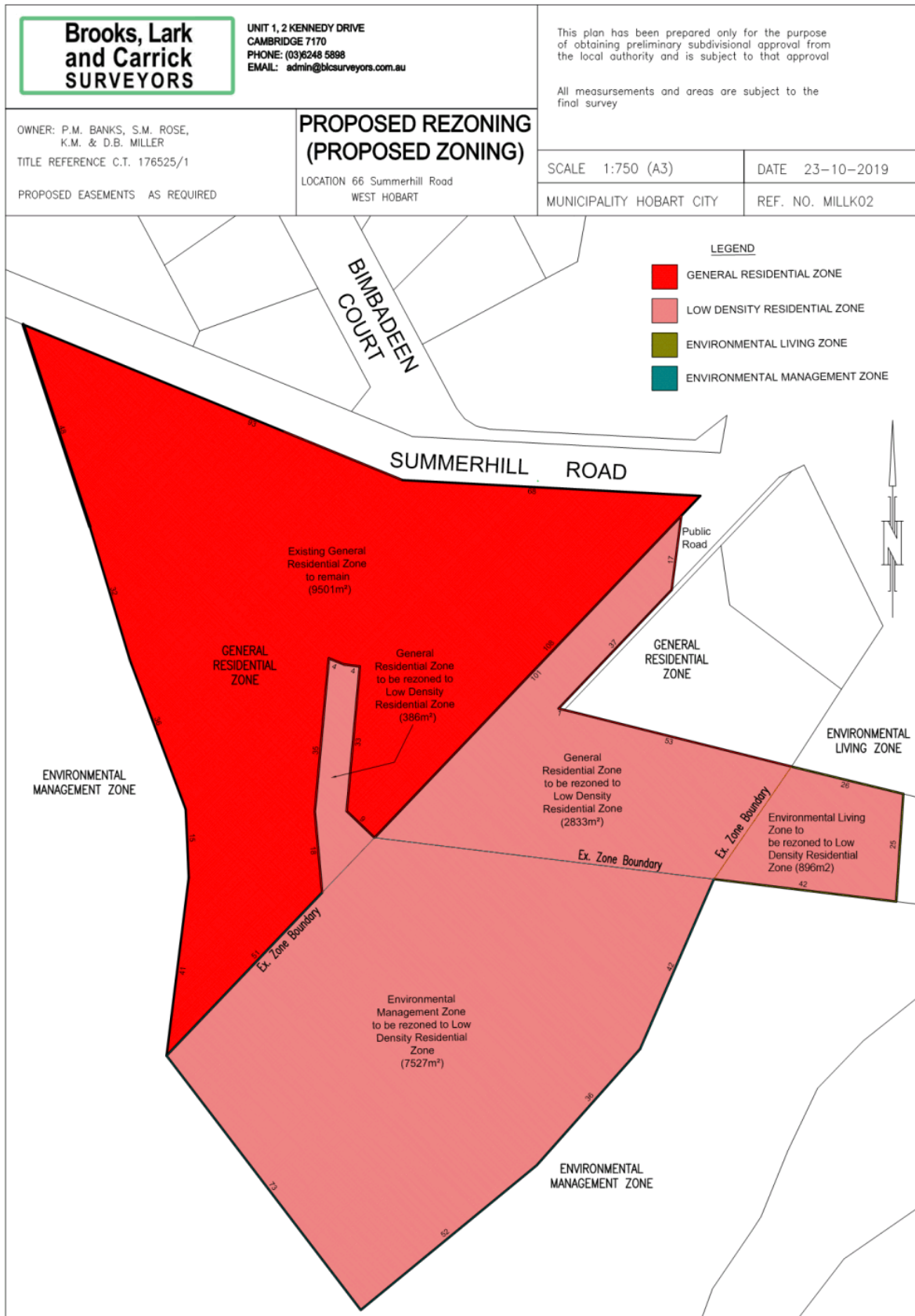
Sarah Crawford
DEVELOPMENT PLANNER



Neil Noye
DIRECTOR CITY PLANNING

Date: 13 October 2020
File Reference: F20/97691; PSA-18-2

Attachment A: Rezoning Plan ↓ 
Attachment B: Rezoning Supporting Documentation ↓ 
Attachment C: STRLUS Amendment Justification ↓ 
Attachment D: Environmental Development Planner Assessment ↓ 
Attachment E: Instrument of Certification ↓ 





66 Summerhill Road, West Hobart

Submission to City of Hobart in support of
a Section 33 request to amend the
Hobart Interim Planning Scheme 2015

3 May 2018

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Appendices

- A. Titles
- B. Owners Consent
- C. Supporting Natural Values letter

NOTE

References in this document to the provisions of the *Land Use Planning and Approvals Act 1993* are references to the former provisions of the Act as defined in Section 2 of Schedule 6 – Savings and transitional provisions of the Act.

1. Introduction

1.1 Purpose of the Report

ERA Planning have been engaged by David Miller on behalf of Phillip Banks, Sharon Rose, David and Kim Miller to request an amendment to the *Hobart Interim Planning Scheme 2015 (Interim Planning Scheme)* pursuant to Section 33 of the *Land Use Planning and Approvals Act 1993 (the Act)*.

The proposed amendment has a number of elements and involves two separate land titles, which are zoned Environmental Management, General Residential and Environmental Living and will be rezoned to Low Density Residential and Environmental Living. This is shown in map form in Figure 1.

This report forms the basis of the application and has been prepared taking into account the provisions of the Interim Planning Scheme, the requirements under Section 32 of the Act and other relevant strategic documents.

Enquiries relating to this report can be directed to:

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Emma Riley & Associates Pty Ltd
183 Macquarie Street
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E: caroline@eraplanning.com.au



Figure 1: Proposed rezoning of the subject site.

An electronic copy of the shapefile is available on request.

1.4 Statutory References

1.4.1 Name of Planning Instrument

The subject of the proposed amendment is the *Hobart Interim Planning Scheme 2015* (hence forth referred to as the Interim Planning Scheme).

1.4.2 Name of Planning Authority

The Planning Authority is the **City of Hobart**.

1.5 Title Information

The proposed amendment relates to the following titles:

| Address | Owner(s) | Title Reference | Land Area |
|------------------------------------|--|----------------------------|----------------------|
| 66 Summerhill Road | Phillip Banks, Sharon Rose, David Miller and Kim Miller | 199596/1 | 10.67 ha |
| Land to east of 66 Summerhill Road | Phillip Banks, Sharon Rose, David Miller and Kim Miller (in accordance with the conveyancing agreement dated 8 th July 2016.) | General Law Deed GL7424 | 5020m ² . |

The Certificates of Title is attached for this property and can be found in **Appendix A**.

Owners consent has been provided in **Appendix B** along with the conveyancing information in relation to the smaller parcel of land.

1.6 Description of Proposed Amendment

The proposed amendment is the second stage of a broader redevelopment on this site. The site is partially zoned General Residential and was the subject of planning approval for subdivision into 9 lots and balance (PLN-16-1296).

The remainder of certificate of Title 199596/1 is zoned Environmental Management. It is currently utilised as open space and part of Knocklofty Reserve, although it is in private ownership.

The amendment involves rezoning to Low Density Residential, a 7095m² parcel of land which is currently zoned Environmental Management to the south of the General Residential zoned land.

In addition, the lot over which the developers are seeking adverse possession (see the conveyancing documentation provided and the previous agreement) is currently zoned partially General Residential, and partially Environmental Living Zone. Part of this land is proposed to be zoned Low Density Residential also, with a section left as Environmental Living which is not being claimed through the adverse possession process by our clients, but rather will be adhered to the adjacent title at 44 Summerhill Road through the same process.

This parcel of land has an easterly orientation and is partially vegetated with *Eucalyptus globulus* dry forest and woodland with a shrubby/weedy understorey.

The section of land which has already been subdivided is primarily cleared and heavily covered in weeds. The area proposed for rezoning is also heavily modified with occasional *Eucalyptus globulus* and *Eucalyptus viminalis* present.

The rezoning to Low Density Residential will assist in the retention of the more important vegetation values that exist on the site, including a number of *Eucalyptus globulus* and *Eucalyptus viminalis* trees that were specified to be retained in the subdivision permit PLN-16-1296. Any future building areas will be located close to the boundary with the General Residential zone. This will ensure that they remain on the flatter sections of the site. It will also ensure that any bushfire management is

clustered within the existing approved impact area and does not extend onto Council land, or onto land with more significant vegetation values.

2. The Site and Surrounds

2.1 The Subject Land

The subject site is irregular in shape and is located to the south of Summerhill Road and Knocklofty Reserve to the west. There is a walking track that bisects the land that is not formally for public access, however is used by local residents with some regularity.



Figure 2. The subject sites are large parcels of predominantly bushland on the urban bushland interface in West Hobart.

The site is large with a generally eastern facing slope with varying vegetation types. For the most part the site contains intact native vegetation dominated by *Eucalyptus globulus* dry forest and woodland and patches of *Eucalyptus viminalis*. There are however substantial weed infestations along the access track and on the eastern side of the access track. Recorded weeds on the site include boneseed, gorse, English broom, cotoneaster, pampas grass, blackberry and forget me nots.

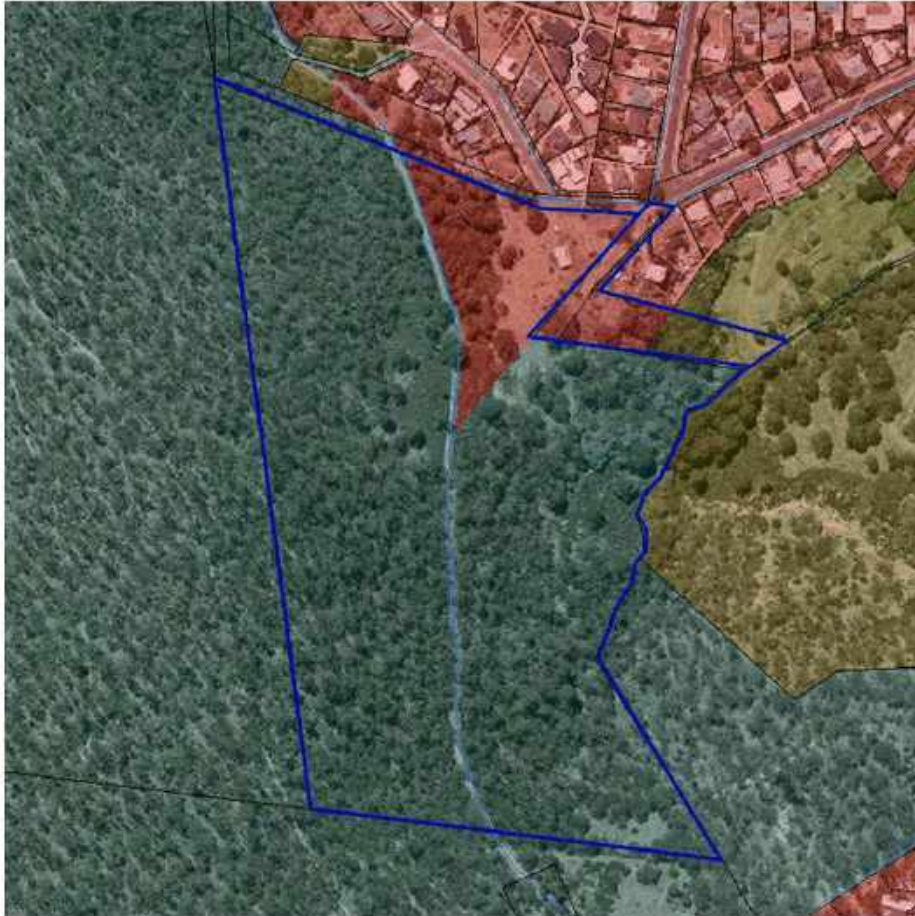


Figure 3. The properties are currently zoned General Residential at the Summerhill Road end, Environmental Management for the remainder of the larger lot, and Environmental Living on half of the smaller lot to the east. [source: www.maps.tas.gov.au].

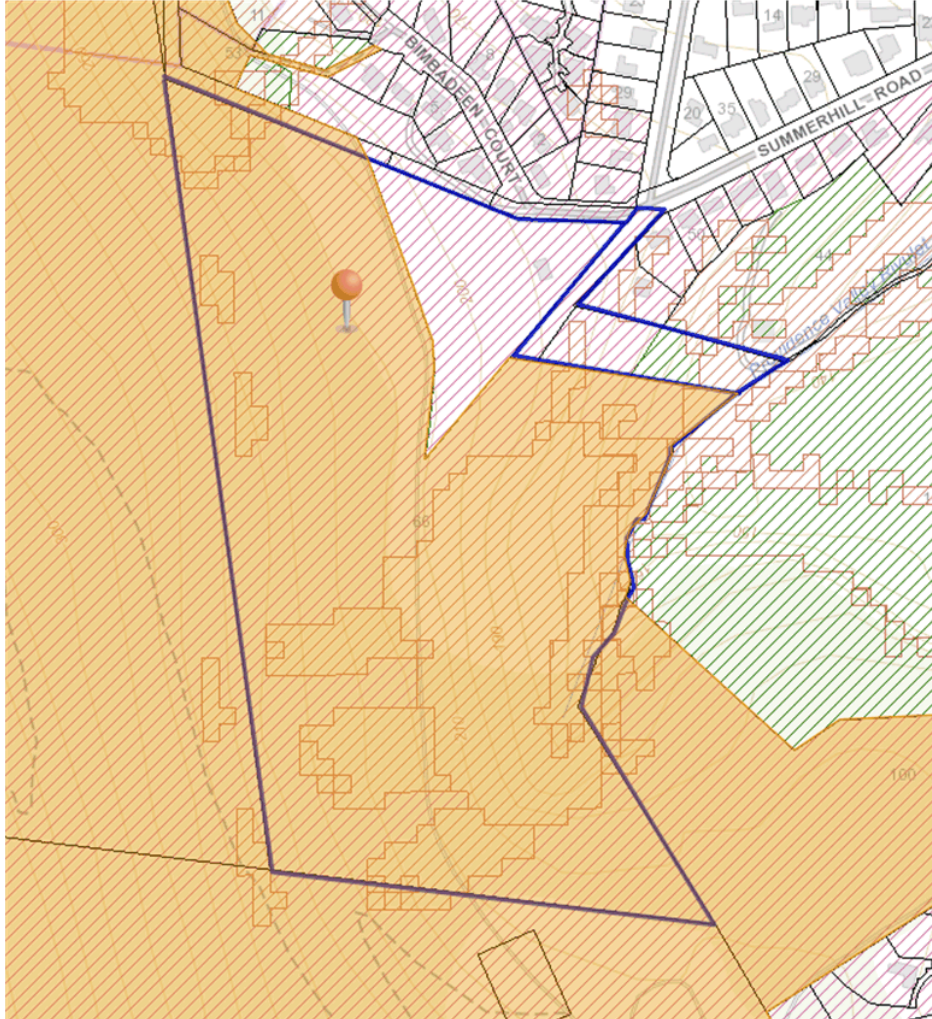


Figure 4: The Biodiversity protection area as it applies to the site. The section it doesn't apply to includes the existing General Residential zone.

The land is currently vacant except for the remains of a derelict building to the northern edge of the lot. This building is proposed to be removed as part of the approved subdivision application within the General Residential Zone.

The remainder of the land is bushland in variable condition and is dominated by *Eucalyptus globulus* dry forest and woodland. The land closest to the residential development areas includes significant weed infestations. This area has historically been used as a chicken farm and more recently for residential purposes and passive recreation which is occurring informally through the lot.

A number of overlays apply to the site including the Biodiversity Code as shown in Figure 4, and the Landslide Code as shown in Figure 5 and 6,

A natural values letter supporting the previously approved subdivision application confirms the vegetation values found in this area and is attached in Appendix C. These values include *Eucalyptus globulus* dry forest and woodland and sections of *Eucalyptus viminalis*. The *E. globulus* forest is however considered to be of poor condition on account of significant weed infestations and modifications through historic ground works. As such, the conservation value has been diminished.

The natural values letter identifies trees to be retained as part of the previously approved subdivision. A subdivision layout has not been finalised for consideration in the event of the approval of the rezoning, however the majority of the trees identified in this letter are within the bushfire hazard management area for the approved subdivision. These trees will still be able to be retained as building areas can be located around them. Of note is the fact that trees 4 and 5 as identified in this letter, are within the General Residential zoned land and not within the Biodiversity Code overlay. Despite this they have still been identified for retention.

In regard to the remaining land within the subject site zoned Environmental Management, the applicants have come to an agreed position with Council. This is that it is to be purchased by Council as public open space to formalise the informal use of this area by the public, and to provide a strategic link between the southern and northern parts of Knocklofty Reserve.

2.2 Description of Surrounding Area

The subject site is located on the western edge of Hobart, at the foothills of Mount Wellington. It is one of the last remaining parcels of privately owned land in this area of Hobart, and the owners have been in negotiation with Council regarding selling the balance lot to the City of Hobart as part of Knocklofty reserve in this area.

To the west and south the area is dominated by vegetation as part of Knocklofty Reserve. To the north the area is zoned General Residential and for the most part has an established pattern of development of single dwellings on average residential sized lots. To the east there are several titles of Environmental Living zoned land, which adjoin the second title which is also partially zoned Environmental Living. This land is steeply sloping forming part of the Providence Rivulet gully. These lots are more substantial in size and may be constrained by vegetation values, or by infrastructure provision.

2.3 Servicing

The subject site is capable of being serviced by sewer and water infrastructure being within the relevant districts, and given the proximity of the site to the General Residential land to the north. Furthermore, considering the recently approved subdivision on this land to the north, it is anticipated that connections to services should be achievable.

This will be considered in further detail at the subdivision stage of any future development.

2.4 Consideration of Natural Values

The subject site overall is heavily vegetated, and as part of the application for a subdivision on the General Residential zoned land, a number of Natural Values Reports were undertaken. This report highlights that the area to be rezoned to Low Density Residential is a mixture of *Eucalyptus Globulus* dry forest and woodland vegetation community, with patches of *Eucalyptus viminalis* and cleared urban land overlain by a woody weeds area. In addition, a large area of the lot is within the Bushfire Hazard Management Zone for the recently approved subdivision to the north.

The conservation value of this vegetation community has been significantly diminished on account of the substantial weed infestations occurring on the site. This results in the remaining vegetation community being of low conservation value.

Notwithstanding this, the supporting letter from enviro-dynamics provides details of the trees to be retained from the previously approved subdivision. These trees are within the area to be rezoned Low Density Residential and given the potential size of the lots, will continue to be able to be retained in the event of a subdivision.

2.5 Consideration of Landslide Hazards

The Landslide Hazard overlay as shown in Figure 5 below, includes the medium level landslide hazard risk area. It is considered that the future size of the lots facilitated by the proposed rezoning will provide opportunities for development outside of these overlay areas. If necessary, at the subdivision stage supporting geotechnical reports can be provided to demonstrate safe building sites for future development.

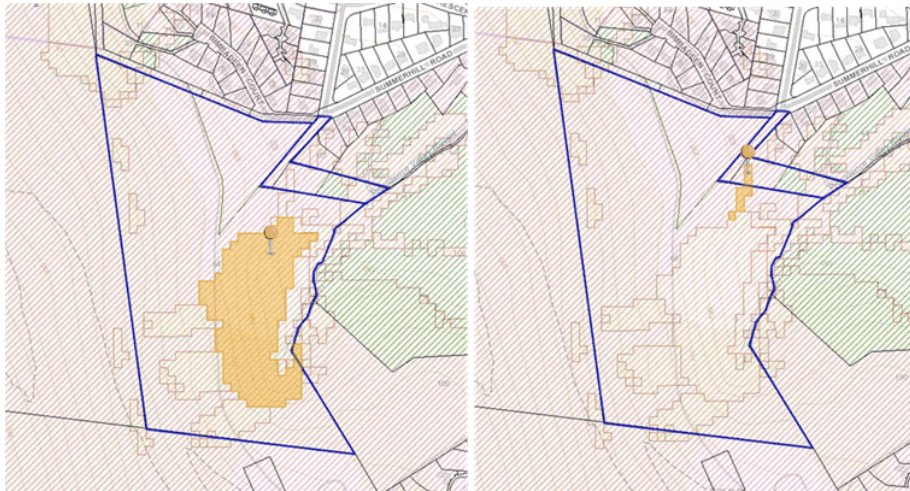


Figure 5: The Medium landslide hazard area applies to the sections shown above.

2.6 Consideration of Bushfire Risk

The land is within a bushfire prone area. As part of the subdivision for the area to the north, a Bushfire Hazard Management plan was undertaken which determined clearance areas necessary for residential development on those lots. Part of these clearance areas extend into the land proposed to be zoned Low Density Residential. Subject to a future subdivision approval, future house sites could be located within the Bushfire hazard management areas, further limiting the risk.

Whilst a bushfire hazard management plan is not necessary for a rezoning, considering the plan provided for the north of the site, and the fact that the Low Density Residential area is limited in scope and therefore cannot provide for substantial tracts of housing, means that it is anticipated a bushfire hazard management plan showing all management areas within the property boundaries of a future subdivision, could be achieved.

2.7 Future Development Potential

As part of the owner's due diligence regarding the proposed rezoning, the future development potential of this site has been considered. It has been concluded that following a rezoning to Low Density Residential and over the two titles, three lots and a balance could be provided. This would provide for a transition of density from the General Residential zoned land through to the Environmental Management and Environmental Living zoned land. This not only reflects orderly development, but also reduces any necessary bushfire clearance and maintains vegetation values.

It is of note that as the proposal includes an element of back-zoning from General Residential, to Low Density Residential, the change in overall development potential will not be increased.

The parcel of land half zoned General Residential and half zoned Environmental Living, is able to be developed with up to 5 dwelling units and still comply with the density provisions under the existing situation. The development potential therefore does change. Rather the proposed rezoning provides for a more logical and systematic pattern of residential development reflective of site constraints and avoids the challenges of split zonings on parent titles.

2.8 Consideration of Landscape Values

The site is on the western edge of the established residential area of West Hobart. To the west it adjoins Knocklofty Reserve which represents one of the more significant vegetated back drops to the City of Hobart and is part of the foothills of mountain.

Much of the land above the 210-220 contour is in the ownership of the City of Hobart and it links into kunyoni/Wellington Park. This is one of the special landscape characteristics of Hobart that is valued by the community. It allows for the edge to the urban environment to be easily read within the broader landscape.

The physical link between urban areas and the bushland setting of the City of Hobart is also valued from a recreational perspective.

The area subject to the proposed rezoning within the subject site sits at the 200-210 contour. To the north of the site, the General Residential area extends to the 200m - 210m contour with housing and cleared sections up until that point. To the south the area around Fielding Drive extends beyond the 210m contour with development up until that point.

The proposed rezoning will extend at a maximum point to the 210m contour however the majority of the area to be rezoned is well below the 200m contour. This is consistent with the pattern of urban development along the foothills of the mountain in the surrounding area. Furthermore, the site is highly modified and the area which is suitable for future development is for the most part cleared of vegetation already.

In summary the proposed rezoning not only reflects of the pattern of development along the urban fringe in the City of Hobart, but also responds to the vegetation values and location of vegetation on the site. This will ensure that the visual impact of the development, when viewed from afar, will be minimised and the landscape value placed on the vegetated backdrop, will be retained.

2.9 Photos



Photo 1: The subject site, including the General Residential zoned land already subdivided, looking east.



Photo 2. Looking north across the area to be rezoned and into the *General Residential* zone. The tree to the right of the picture is tree 5 as marked in the *enviro-dynamics* report.



Photo 3. Looking south across the area to be rezoned. The trees include those in the cluster marked 6-13 in the *enviro-dynamics* report.



Photo 4. Looking down the land acquired through adverse possession which will be rezoned from General Residential to Low Density Residential and Environmental Living to the south.



Photo 5. Looking down the access way on the land zoned General Residential which is being acquired through adverse possession.

3. Assessment of Proposed Amendment

3.1 Requirements of the Act

Section (2)(b) of Schedule 6 of the *Land Use Planning and Approvals Act 1993* (the Act) saves Parts 2A and 3 of the former provisions under the Act.

Pursuant to Section 32(1) of the former provisions, a draft amendment of a planning scheme, and an amendment of a planning scheme, in the opinion of the relevant decision-maker within the meaning of section 20(2A)–

(a)....

(b)....

(c).....

(d)....

(e) must, as far as practicable, avoid the potential for land use conflicts with use and development permissible under the planning scheme applying to the adjacent area; and

(ea) must not conflict with the requirements of section 30O; and

(f) must have regard to the impact that the use and development permissible under the amendment will have on the use and development of the region as an entity in environmental, economic and social terms.

(2) The provisions of section 20(2), (3), (4), (5), (6), (7), (8) and (9) apply to the amendment of a planning scheme in the same manner as they apply to planning schemes.

Section 30O of the Act requires that an amendment to an interim planning scheme is as far as practicable, consistent with the regional land use strategy. Section 30O also sets a number of requirements relating to the insertion of a local provision and its relationship to a common provision.

In addition to these requirements, Section 20(1) is also relevant, as a planning scheme amendment is also the making of a planning scheme:

(1) A relevant decision-maker, in preparing, accepting, declaring or making a relevant scheme, or giving approval in relation to the making or approving of a relevant scheme, must, in the opinion of the relevant decision-maker–

(a) seek to further the objectives set out in Schedule 1 within the area covered by the scheme; and

(b) prepare the scheme in accordance with State Policies made under section 11 of the State Policies and Projects Act 1993; and

(c) ...

(d) have regard to the strategic plan of a council referred to in Division 2 of Part 7 of the Local Government Act 1993 as adopted by the council at the time the planning scheme is prepared; and

(e) have regard to the safety requirements set out in the standards prescribed under the Gas Pipelines Act 2000.

3.2 Southern Tasmanian Regional Land Use Strategy

The *Southern Tasmanian Regional Land Use Strategy* was declared in October 2011 with an amended strategy declared in October 2013 and then again on 14 September 2016. This *Regional Land Use Strategy* provides direction on future use and development within the Southern Region.

3.2.1 Strategic Directions

There are certain Strategic directions within this strategy that are critical for consideration. These include:

- Managing Risks and Hazards;
- Recreation and Open Space;
- Settlement and Residential Development;

3.2.2 Managing Risks and Hazards

The site is located on an east facing slope which is vegetated and adjacent to Knocklofty Reserve. It is covered by a Landslide Hazard Risk Area (medium risk) and Bushfire Prone Area.

Accordingly, the following Regional Policies require consideration:

MRH 1.J Provide for the management and mitigation of bushfire risk at the earliest possible stage of the land use planning process (rezoning or if no rezoning is required; subdivision) by the identification and protection (in perpetuity) of buffer distances or through the design and layout of lots.

The land in question is to the south and east of a recently approved general residential subdivision. Part of the bushfire hazard management area covers the land to be rezoned and as such there is already a level of impact on this land and its biodiversity values. In addition, the land currently zoned General Residential and Environmental Living which is proposed for rezoning to Low Density Residential also, can accommodate a level of development consistent with residential densities for at least part of the site. This proposed rezoning will allow for 1.16ha area of land to be zoned Low Density Residential. The future lot sizes are such that house sites and associated hazard management areas can be adequately accommodated within the low density residential land. This

will ensure that the impact is minimised on the broader vegetation values and that there will be no impact upon Council land to the west and south, but also that any subsequent houses can be clustered with General Residential land to the north, thereby reducing the bushfire risk.

Sections of the land are covered by the medium landslide hazard risk. The following policies require consideration:

MRH 3.1 Prevent further development in declared landslip zones

MRH 3.2 Require the design and layout of development to be responsive to the underlying risk of land instability.

The proposed rezoning provides for adequate land to enable a future subdivision which can incorporate house sites outside of the medium landslide hazard risk area.

Future residential development will be able to locate within the area close to the General Residential zone for the western lots and outside of the Landslide hazard area, or to the east of any landslide hazard risk on the land currently zoned General Residential.

This ensures the land to be rezoned, is capable of residential development that is responsive to the underlying risk of land instability. It also highlights the appropriateness of applying the Low Density Residential zone, as opposed to the General Residential zone, as it facilitates a density more appropriate to addressing risks on the site.

This will be addressed in greater detail in any future subdivisions.

3.2.3 Recreation and Open Space.

The land is currently privately owned. However, the zoning of the Title CT 199596/1 as Environmental Management, the informal use of parts of the land by the community, as well as the ongoing negotiations between Council and the landowners suggests at Council's interest in having it as part of their Open Space network. The following regional policies are relevant:

ROS 1.5 Ensure residential areas, open spaces and other community destinations are well connected with a network of high quality walking and cycling routes.

Providing the remaining Environmental Management land to Council and formalising the walking track will secure the missing spatial link between Knocklofty Reserve and Bimbadeen Court and Weerona Avenue to the north, as well as other trails within the reserve such as Fiona Allan Memorial Walkway. It will also enable Council to undertake formal maintenance works within the reserve improving on the quality of tracks in the area. This is consistent with the strategic objective.

3.2.4 Settlement and Residential Development

The City of Hobart is an established settlement and is the primary urban centre for the region as identified in the Regional Land Use Strategy. Its expansion as a settlement is managed through an urban growth boundary of which this site exists on the edge of. The strategic direction in relation to the Low Density Residential zone is reflected in the current policies:

SRD 1.6 Utilise the low density residential zone only where it is necessary to manage land constraints in settlements or to acknowledge existing areas.

Broader residential policy requirements that should be considered include:

SRD 1 Provide a sustainable and compact network of settlements with Greater Hobart at its core, that is capable of meeting projected demand.

SRD 2 Manage residential growth for Greater Hobart on a whole of settlement basis and in a manner that balances the need for greater sustainability, housing choice and affordability.

When considering the Regional Land Use Strategy and consistency with it or otherwise, it is important to consider 30O(1) which states:

(1) An amendment may only be made under Division 2 or 2A to a local provision of a planning scheme, or to insert a local provision into, or remove a local provision from, such a scheme, if the amendment is, as far as is, in the opinion of the relevant decision-maker within the meaning of section 20(2A), practicable, consistent with the regional land use strategy, if any, for the regional area in which is situation the land to which the scheme applies.

The strategy provides guiding principles for the development pattern of the southern region. This strategy was drafted in a way to promote a broad interpretation of the rules applicable, rather than strict application of policies as assessment test as is required under a planning scheme.

Furthermore, the act specifies "consistency". The legal meaning of this term has been established through a number of Planning Appeal Tribunal decisions as being "in harmony with". Accordingly, in our opinion, the assessment of any rezoning must be in harmony with the regional land use strategy.

The land is currently zoned Environmental Management which is not suitable for residential development. However, the site is on the urban fringe and has the characteristics of an urban area with heavily modified vegetation, and substantial cleared sections. Additionally, the proposed rezoning is at the same contour as the developed area nearby. Both of these factors provide the visible edge to the urban areas as viewed in the landscape.

When considering managing residential growth on a whole of settlement basis in a sustainable manner, this rezoning represents a logical transition in the pattern of development and the existing potential of the site.

On the land in question, currently three separate zonings apply; Environmental Management, General Residential, and Environmental Living Zone. The General Residential zone has the capacity to accommodate 5 dwelling units through a multiple dwelling scenario, although it exists on the same title as the Environmental Living zone land.

With the application of the Low Density Residential zone to this parcel of land 1.16ha in area, due to constraints on site such as landslide hazards and bushfire restrictions, the anticipated number of lots is likely to be 4-5. Accordingly, the dwelling yield is comparable to what could occur now.

As such, it is our position that this does not represent residential growth, but rather represents an alternative layout for the residential development within this area that is more sustainable and more responsive to the restrictions on site.

The proposed rezoning is considered to be consistent with the Regional Land Use Strategy as it is in harmony with the intent of the strategy; that being the land should be zoned Low Density in reflection of the constraints on site, whilst providing a more logical and considered pattern of development without increasing the possible dwelling yield. This is managing the development potential sustainably and on a whole of settlement basis.

3.3 Local and Common Provisions

3.4 Municipal Plan

Section 20(d) of the Act requires the Commission to have regard to the strategic plan of a Council prepared in accordance with Division 2 of Part 7 of the *Local Government Act 1993*.

The following strategic plans from the City of Hobart are relevant for consideration:

- Hobart 2025 Strategic Framework;
- Capital City Strategic Plan 2015;
- City of Hobart Housing and Homelessness Strategy, 2016-2019;

None of these strategies articulate the future pattern of housing development that the City of Hobart wants to see.

Beyond the planning scheme, there is no local strategic document that informs the areas to be considered for future residential development that appropriately respond to infrastructure constraints, environmental constraints, or accessibility.

The proposed rezoning will enable additional lots, within 3km of the city centre to be created which will respond to the bushfire, environmental and geological constraints on the site more appropriately, and utilise land that will provide sensible lot sizes given the constraints on site.

3.5 Objectives of the Resource Management and Planning System.

| Objective | Response |
|---|---|
| <i>Part 1</i> | |
| <i>(a) to promote the sustainable development of natural and physical resources and the maintenance of ecological processes and genetic diversity</i> | The subject land is adjacent to an established residential area to the north and east, and bushland to the south and west. The proposed rezoning represents an orderly staggering of residential development that is at an appropriate density to minimise impacts on the bushland, whilst still allowing for an appropriate residential development. As part of this proposal, the finalisation of the transfer of land to the Council will be resolved facilitating an environmental benefit for the broader community. |
| <i>(b) to provide for the fair, orderly and sustainable use and development of air, land and water</i> | The proposed rezoning represents orderly and sustainable use and development of air, land and water. The proposed rezoning enables a transition of density from general residential, to low density |

| Objective | Response |
|---|---|
| | residential through to the Environmental Management Zone without further impacting on vegetation values or landscape values as part of the backdrop to the City of Hobart. |
| <i>(c) to encourage public involvement in resource management and planning</i> | Public involvement will be achieved through the public exhibition process for the draft amendment and draft permit. |
| <i>(d) to facilitate economic development in accordance with the objectives set out in paragraphs (a), (b) an (c)</i> | The proposed rezoning will facilitate economic development through the change of use for residential. It will contribute to the provision of housing, maximising use of infrastructure and services existing in the area. |
| <i>(e) to promote the sharing of responsibility for resource management and planning between the different spheres of Government, the community and industry in the State</i> | The rezoning process demonstrates the sharing of responsibility for resource management and planning between different spheres of government, the community and industry. |
| <i>Part 2</i> | |
| <i>(a) to require sound strategic planning and co-ordinated action by State and local government</i> | <p>The proposed rezoning is consistent with the Southern Tasmania Regional Land Use Strategy.</p> <p>The area to be rezoned is a logical and orderly expansion of residential use in an area that does have constraints, inhibiting its development to higher densities. In addition, the rezoning reflects a reconsideration of the zone boundaries in general in this area, enabling the removal of the split zoning by rezoning the section Environmental Living to Low Density Residential.</p> |
| <i>(b) to establish a system of planning instruments to be the principal way of setting objectives, policies and controls for the use, development and protection of land</i> | The proposed rezoning does not affect the established system of planning instruments: it will allow for the future development of the land to be considered against the provisions of the planning scheme. |

| Objective | Response |
|---|--|
| <p><i>(c) to ensure that the effects on the environment are considered and provide for explicit consideration of social and economic effects when decisions are made about the use and development of land</i></p> | <p>The proposed rezoning will enable a low density residential use and development, adjacent to existing and approved general residential use and development.</p> <p>It has been demonstrated that the residual environmental values on the land on which there will be residential potential under the proposed rezoning can be appropriately managed through the existing planning scheme provisions.</p> <p>The remainder of the site which has high environmental and recreational value will be retained in the Environmental Management Zone and ultimately transferred to Council ownership.</p> |
| <p><i>(d) to require land use and development planning and policy to be easily integrated with environmental, social, economic, conservation and resource management policies at State, regional and municipal levels</i></p> | <p>The proposed rezoning does not affect the attainment of this objective.</p> |
| <p><i>(e) to provide for the consolidation of approvals for land use or development and related matters, and to co-ordinate planning approvals with related approvals</i></p> | <p>The proposed rezoning does not affect the attainment of this objective.</p> |
| <p><i>(f) to secure a pleasant, efficient and safe working, living and recreational environment for all Tasmanians and visitors to Tasmania</i></p> | <p>The proposed rezoning will provide for low density residential lots. The previous subdivision and agreement with Council enables an expansion of an established and well used recreational area and this rezoning allows for a transition from the General residential land, to the Environmental Management land of the reserve beyond, representing a sustainable development response.</p> |
| <p><i>(g) to conserve those buildings, areas or other places which are of scientific, aesthetic, architectural or historical interest, or otherwise of special cultural value</i></p> | <p>The subject site has not been identified with having heritage values.</p> <p>The site more broadly does have landscape value forming part of the vegetated back drop</p> |

| Objective | Response |
|--|---|
| | of the City and forming part of the foothills of kunyani/Mt Wellington. The proposed rezoning appropriately responds to this by ensuring the low density residential zone does not extend further upslope than the existing pattern of development, and is occurring on an area that is already highly modified. |
| <i>(h) to protect public infrastructure and other assets and enable the orderly provision and co-ordination of public utilities and other facilities for the benefit of the community.</i> | <p>The proposed rezoning will support the orderly provision of residential use and will have no adverse impact on the coordination of public utilities and other facilities.</p> <p>There are adequate safeguards through the permit application process to protect the public infrastructure that is within the subject site and adjacent.</p> |
| <i>(i) to provide a planning framework which fully considers land capability.</i> | The proposed rezoning does not affect the attainment of this objective. |

3.6 State Policies

3.6.1 State Policy on the Protection of Agricultural Land 2009

The *State Policy on the Protection of Agricultural Land 2009* does not apply to the proposed rezoning.

3.6.2 State Policy on Water Quality Management 1997

The existing Interim Planning Scheme includes provisions that ensure that future use and development is undertaken in accordance with the *State Policy on Water Quality Management 1997*. Given the physical characteristics of the site these are considered to provide adequate safeguards.

3.6.3 State Coastal Policy 1996

The subject site is over 1 kilometre from the coast. The State Coastal Policy therefore does not apply the proposed rezoning.

3.6.4 National Environmental Protection Measures

National Environmental Protection Measures (NEPMs) are developed under the *National Environment Protection Council (Tasmania) Act 1995* and outline objectives and protections for aspects of the environment. Section 12A of the *State Policies and Projects Act 1993* provides NEPMs with the status of a State Policy.

Seven NEPMs have been made to date that deal with:

- Ambient air quality;
- Air Toxins;
- Assessment of Site Contamination;
- Diesel Vehicle Emissions;
- Movement of Controlled Waste Between States and Territories;
- National Pollutant Inventory; and
- Used Packaging Materials.

The site is not identified as potentially contaminated and the rezoning does not involve any potential use or development that will give rise to the environmental considerations under the NEPMs.

3.7 Gas Pipelines Act 2000

The subject land is not affected by a Gas Pipeline. This requirement is therefore not applicable.

3.8 Potential Land Use Conflict

The subject land is currently zoned Environmental Management, General Residential and Environmental Living. The proposed rezoning will rezone a section of Environmental Management Zoned land to Low Density Residential providing a transition in residential density, to the bushland of Knocklofty Reserve.

The second element of the proposed rezoning is to zone a parcel of General Residential land and Environmental Living zoned land, to Low Density Residential, in recognition of the constraints on site.

Given the residential development nearby, and the proposed rezoning facilitating lower density residential development, it is unlikely there will be any potential land use conflicts. It provides for an orderly graduation of lot size, and a sustainable and efficient utilisation of land on a site that is otherwise constrained.

3.9 Regional Impact

The proposed rezoning will facilitate additional low density residential land adjacent to existing residential land. The size and configuration of the lots means that the development opportunities are limited. Therefore, the regional impact is negligible in this instance.

3.10 Other requirements of Section 20

The proposed rezoning is also consistent with the other requirements under Section 20(2), (3), (4), (5), (6), (7), (8) and (9) of the Act. In particular, the proposed rezoning does not:

- prevent the continuance or completion of any lawful use or development.

As there are no buildings on site, there is no impact upon the ongoing use of buildings on the property.

4. Conclusion

The application is a request pursuant to Section 33 of the former provisions of the *Land Use Planning and Approvals Act 1993*.

The proposed rezoning is in two parts:

1. to rezone part of the land from Environmental Management to Low Density Residential Zone, and
2. to rezone part of the land from General Residential and Environmental Living, to Low Density Residential.

in the proposed rezoning results a number of overall land use benefits.

Firstly, it provides for an improved and appropriate transition of lot size from the General Residential, through Low Density Residential to the Environmental Management Zone. Secondly it removes the difficulty of assessing applications, particularly for subdivision, over split zones, where the lot size may be met for one zone, but the balance of the land in the second zone may not be met (and indeed may be unable to be met irrelevant of the subdivision). This ensures that the zone intent and provisions of the zone can be carried out as drafted by the scheme provisions.

Overall the proposed rezoning does not affect the total capacity of the land to accommodate a given number of dwellings. The area to be rezoned is primarily cleared and it has been demonstrated that the low density residential zone is appropriate to accommodate bushfire hazard management, protection of natural values and a response to land stability risk in accordance with the existing provisions within the Interim Planning Scheme.

The proposed rezoning is considered to further the relevant legislative requirements under *Land Use Planning and Approvals Act 1993* and is consistent with the *Southern Tasmanian Regional Land Use Strategy*, and the *Hobart Interim Planning Scheme 2015*. It provides for a logical and systematic use of land, adjacent to an existing residential area.

Appendix A
Titles



RESULT OF SEARCH

RECORDER OF TITLES

Issued Pursuant to the Land Titles Act 1980



SEARCH OF TORRENS TITLE

| | |
|---------|---------------|
| VOLUME | FOLIO |
| 178330 | 1 |
| EDITION | DATE OF ISSUE |
| 2 | 29-Jul-2020 |

SEARCH DATE : 12-Oct-2020

SEARCH TIME : 02.41 PM

DESCRIPTION OF LAND

City of HOBART
 Lot 1 on Plan 178330
 Derivation : Part of 317A-2R-0P and Part of 19A-1R-0P Granted
 to Susan Ross and Valentine Griffiths.
 Prior CT 176525/1

SCHEDULE 1

M825359 TRANSFER to NEWDEGATE NOMINEES PTY LTD Registered
 29-Jul-2020 at 12.01 PM

SCHEDULE 2

Reservations and conditions in the Crown Grant if any

C834186 BURDENING EASEMENT: a pipeline and services easement
 in favour of Tasmanian Water and Sewerage Corporation
 Pty Limited over the land marked Pipeline & Services
 Easement 6.00 wide on Plan 178330 Registered
 03-Jul-2018 at 12.03 PM

3/8993 BURDENING EASEMENT: Subject to such Rights of Way
 created by and more fully set forth in Indenture No.
 3/8993 over that part of the said land within
 described formerly comprised in folio of the Register
 Volume 173296 Folio 1

E139574 ADHESION ORDER under Section 110 of the Local
 Government (Building and Miscellaneous Provisions)
 Act 1993 Registered 29-Jan-2019 at noon

UNREGISTERED DEALINGS AND NOTATIONS

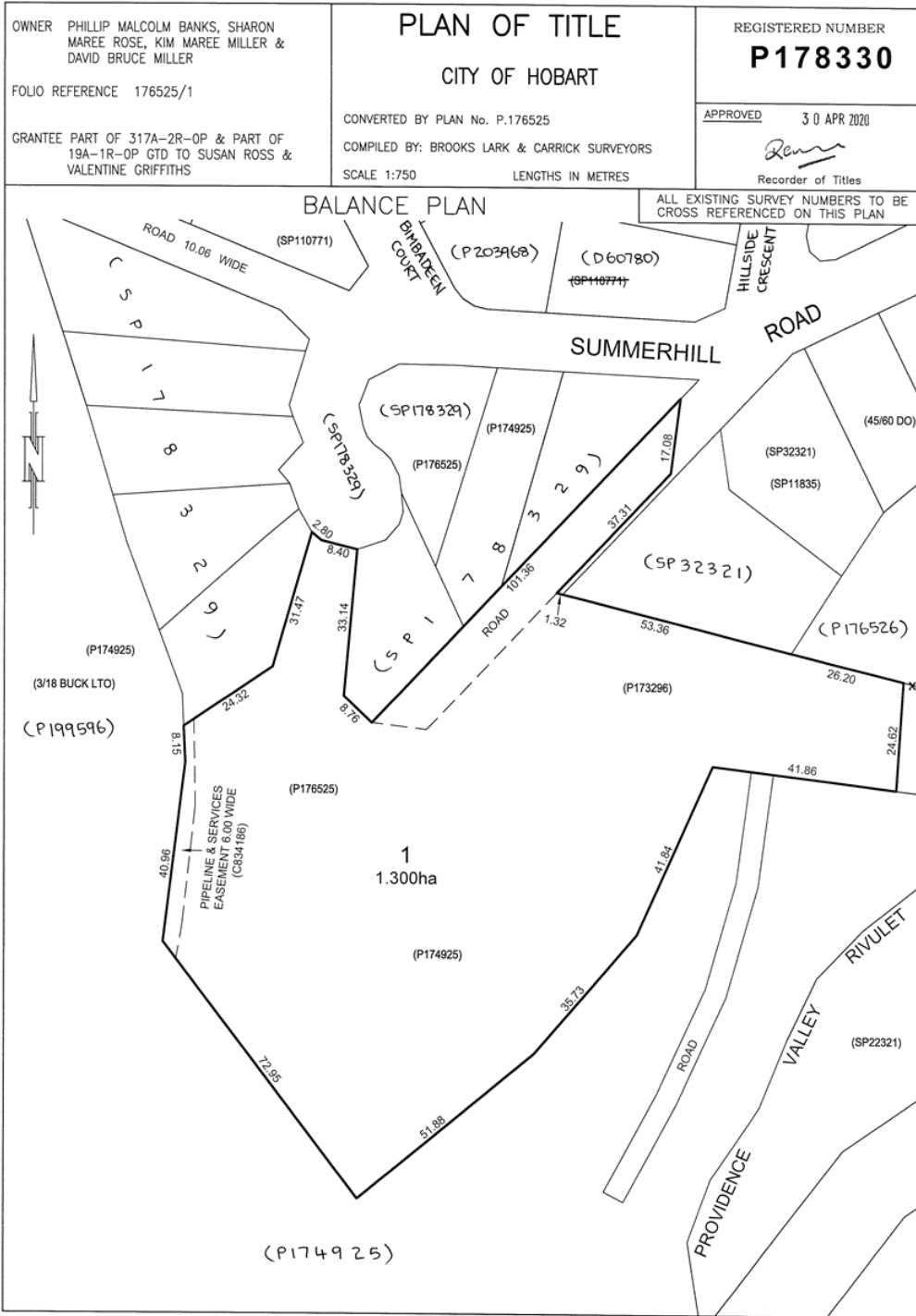
No unregistered dealings or other notations



FOLIO PLAN

RECORDER OF TITLES

Issued Pursuant to the Land Titles Act 1980



Appendix B
Owners Consent

TASMANIAN PLANNING COMMISSION

Form No. 1

Owners' consent

Accompanying draft planning scheme amendment requests under section 33(1), including combined permit applications under section 43A of the *Land Use Planning and Approvals Act 1993*.

Requests for draft amendments or combined permit applications require owners' consent. This form must be completed if the person making the request is not the owner, or the sole owner.

The person making the request must clearly demonstrate that all owners have consented.

Please read the notes below to assist with filling in this form.

1. Request made by:

Name(s): John Kelly - Director
Newdegate Nominees
P/L.

Address: 375 Elizabeth St
North Hobart 7000.

Email address: jkellycontact@gmail.com

Contact number: 0417 300111

2. Site address:

Address:

66 Summerhill Rd
West Hobart 7000.

Property identifier (folio of the register for all lots, PIDs, or affected lot numbers on a strata plan):

3. Consent of registered land owner(s):

Every owner, joint or part owner of the land to which the application relates must sign this form (or a separate letter signed by each owner is to be attached).

Consent to this request for a draft amendment/and combined permit application is given by:

Registered owner : *Newdegate Services P/L*

Property identifier (folio of the register for all lots, PIDs, or affected lot numbers on a strata plan):

Position (if applicable): *Sole Director*

Signature: *Jaely*

Date: *14/9/20*

Registered owner (please print):

Property identifier (folio of the register for all lots, PIDs, or affected lot numbers on a strata plan):

Position (if applicable):

Signature:

Date:

Registered owner (please print):

Property identifier (folio of the register for all lots, PIDs, or affected lot numbers on a strata plan):

Position (if applicable):

Signature:

Date:

Appendix C

Supporting Natural Values letter

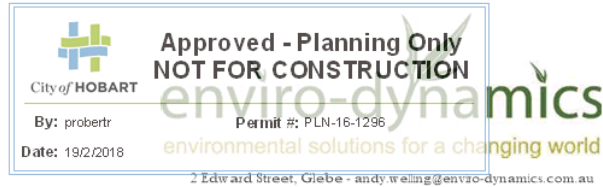
183 Macquarie Street, Hobart
T: 03 6105 0443
E: enquiries@eraplanning.com.au

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Document Status

Author: Caroline Lindus
Reviewer: Emma Riley
Version: Final Draft for Client Review



22nd December 2017

Hobart City Council
 16 Elizabeth Street
 Hobart.

Attention: Planning Officer

RE: Request of additional information re 10 lot subdivision at 66 Summerhill Road, West Hobart (Application No. PLN-16-1296).

Dear Planner,

This letter provides additional information regarding the provisions of the Biodiversity Code in relation to vegetation clearance for bushfire hazard management as your letter dated 21st December 2017.

BC1 *Details (location, extent, species and numbers) of the clearing/modification of native vegetation required to comply with the hazard management area requirements in section 5.1 of the submitted bushfire report, and any clearing of native vegetation for the proposed fire trail and track and drainage works.*

Vegetation modification for bushfire hazard management

Further to the detailed provided in the revised report (August 2017) the following outlines the number of trees, size and species within the HMA and which can be retained (refer to Table 1 and Figure 1).

The Bushfire Hazard Management Plan (JMG, 2017) outlines the vegetation removal to reduce fuel loads within the HMA as per the following:

Trees – canopies to be separated by a minimum of 2.0 m; tree branches to be removed from a height of 2.0m above ground, no branches to overhang dwellings.

Understorey – maintain grass <100mm in height; maintain shrubs < 2.0m in height; shrubs to be maintained in clumps <10m² and separated by at least 10.0m from each other; avoid planting directly under trees and periodically remove dead branches, bark and leaves from under trees.



Based on these parameters the majority of the larger trees within the HMA will be retained. An estimated 12 – 15 white gum (*E. viminalis*) saplings and small trees will need to be removed to achieve the fuel reduction however all trees indicated in Figure 1 and listed in Table 1 can be retained. Whist clumps of shrubs can be retained with the HMA downslope on the balance lot (as per the bushfire plan) as the understorey is predominantly woody weed species the clearance of the shrub layer and maintenance in a low fuel condition is recommended to assist with weed control on the site (approximate area to be modified 3000m²).

The vegetation along the rear of lots 5 – 9 will be modified to remove most understorey and most saplings and small trees will be cleared (approximate area 850m²). The understorey in this area is the same as mentioned above and can be managed in the same manner. A small number of larger blue gums (*E. globulus*) that occur within the HMA are can be retained.

Table 1 – List of trees within HMA

| Tree # | Species Name | Common Name | Height | DBH (cm) | Comment |
|--------|-----------------------------|-------------|--------|--------------|---|
| 1 | <i>Eucalyptus globulus</i> | Blue gum | 20 m | 80 cm | Retain |
| 2 | <i>Eucalyptus globulus</i> | Blue gum | 15-20m | 60, 90, 70cm | Retain – 3 trees clustered close together |
| 3 | <i>Eucalyptus globulus</i> | Blue gum | 20m | 70cm | Retain |
| 4 | <i>Eucalyptus globulus</i> | Blue gum | 20m | 70cm | Retain |
| 5 | <i>Eucalyptus viminalis</i> | white gum | 20m | 150cm | Retain – within residential zoning. Remove lower branches |
| 6 | <i>Eucalyptus globulus</i> | Blue gum | 20m | 90cm | Retain |
| 7 | <i>Eucalyptus viminalis</i> | white gum | 12m | 70cm | Retain |
| 8 | <i>Eucalyptus viminalis</i> | white gum | 15m | 40 and 30 cm | Retain – double stem |
| 9 | <i>Eucalyptus viminalis</i> | white gum | 15m | 40 cm | May need to be removed or treated as cluster with tree # 9, 12 and 12 |
| 10 | <i>Eucalyptus globulus</i> | Blue gum | 18m | 80cm | Retain |
| 11 | <i>Eucalyptus globulus</i> | Blue gum | 18 m | 70 cm | Retain |
| 12 | <i>Eucalyptus viminalis</i> | white gum | 12m | 60 cm | May need to be removed or treated as cluster with tree # 9, 12 and 12 |
| 13 | <i>Eucalyptus viminalis</i> | white gum | 20m | 100cm | Retain |
| 14 | <i>Eucalyptus viminalis</i> | white gum | 12 m | 90cm | Retain |
| 15 | <i>Eucalyptus viminalis</i> | white gum | 10m | 2 x 30cm | Retain– double stem |
| 16 | <i>Eucalyptus viminalis</i> | white gum | 15m | 50cm | Retain |



Figure 1 – location of mature trees within bushfire hazard management area.



Vegetation Impacts from fire trail relocation and drainage works

An assessment of the vegetation on the top side of the existing fire trail (for a width of 5-10m) along the length of 51 Summerhill Road (Figure 1) was undertaken on the 14th December 2017.

The area was found to contain degraded regrowth eucalypt woodland with an understorey dominated by exotic species (Figure 2). The tree layer contains a mixture of white gum (*E. viminalis*), blue gum (*E. globulus*) and white peppermint (*E. pulchella*) saplings with most <10m high. The understorey is dominated by winter euryops daisy (*Euryops abrotanifolius*), boneseed seedlings (*Chrysanthemoides monilifera*) and scotch thistle (*Cirsium vulgare*). There are also a range of native grasses and herbs along the drain and on the bank. This includes wallaby grass (*Rytidosperma caespitosum* and *R. racemosa*), speargrass (*Austrostipa stuposa* and *A. mollis*), tussock grass (*Poa labillardierei*), native cranberry (*Astroloma humifusum*) and raspwort (*Gonocarpus tetragynus*).

No threatened flora species were recorded and the site contain no significant habitat for threatened fauna species.



Figure 2 – vegetation along top side of existing fire trial.

The required vegetation removal for fire trail and drainage works will require the removal of most vegetation across a narrow strip above the existing fire trail. No significant natural values



were recorded and as such the works will have no significant detrimental impacts. The area is heavily infested with weed species (as is the adjoining subdivision land) and as such all works will need to be carried out to ensure weeds do not spread into uninfested areas as a result of the works.

Please do not hesitate to contact me if you require any further information or clarification on the information provided in this letter.

Yours sincerely

Andrew Welling
Enviro-dynamics Pty Ltd
Mobile: 0400151205
Email: andy.welling@enviro-dynamics.com.au



27 March 2019

Mr James McIlhenny
Manager Planning Policy and Heritage

Email: rfi-information@hobartcity.com.au

Dear Sir,

**66 SUMMERHILL ROAD, WEST HOBART
PLANNING SCHEME AMENDMENT PSA-18-2,**

Thank you for your letter dated 12 June 2018 regarding the Planning Scheme amendment for 66 Summerhill Road, West Hobart. Please find attached our responses below:

1. Please find attached (Appendix A) the zoning plan overlain with the potential subdivision layout as existing, and as proposed. This includes reference to the approximate areas of each zone, a legend showing zoning colours, and a Title reference.
2. A Bushfire Hazard Management report was undertaken by Andrew Welling at Enviro Dynamics as associated with PLN-16-1296. This application is not for a subdivision at this stage so there is not the requirement to provide a Bushfire Hazard Management Report in the same manner as a standard subdivision would need. Notwithstanding this, a subsequent Bushfire Hazard Management Report has been undertaken and is provided in Appendix E which addresses the area to be rezoned.
3. The Environmental Management Report in Appendix B provides commentary regarding the vegetation values of the adverse possession lot.
4. The Environmental Management Report within Appendix B provides commentary regarding the risk of bird collisions, weed spread and threatened vegetation communities.
5. Council has requested a landslide hazard risk assessment. It is our position that this is not necessary as all building envelopes are outside of the medium level landslide hazard area, as is the access points to the site.
6. Please provide attached a concept servicing plan to support the rezoning (Appendix C).
7. The concept servicing plan provides details around existing and proposed vehicular access for all proposed rezoned land.
8. In relation to overland flow from Council's reserve, all stormwater should be contained within Council's reserve and not impact upon adjoining properties, irrelevant of the zoning. None the less the approach taken is to cluster the building areas for the proposed dwellings on the Low Density Residential Zoned land closer to the General Residential Zone. This serves to minimise any impacts of development on the broader landscape, but in addition, the contours of the land suggest that any overland flow would need to traverse the General Residential zone in the first instance, before crossing the building envelopes on the rezoned parcels of land. The JMG Stormwater Report for

66 Summerhill Road, dated December 2016 that supported that subdivision application for the General Residential Zone provide a Concept Services Stormwater Catchments Plan, Sheet 2, show the overland flow path being directed to Summerhill Road in reflection of the contours on the site, and the most logical design outcome. This plan is provided as Appendix D.

Should you have any queries regarding this response do not hesitate to contact me at caroline@eraplanning.com.au or on 0417 246 474.

Yours sincerely,



Caroline Lindus, MPlA
Senior Planner

Appendix A: Subdivision and Zoning Plan

Appendix B: Addendum to Environmental Values Report

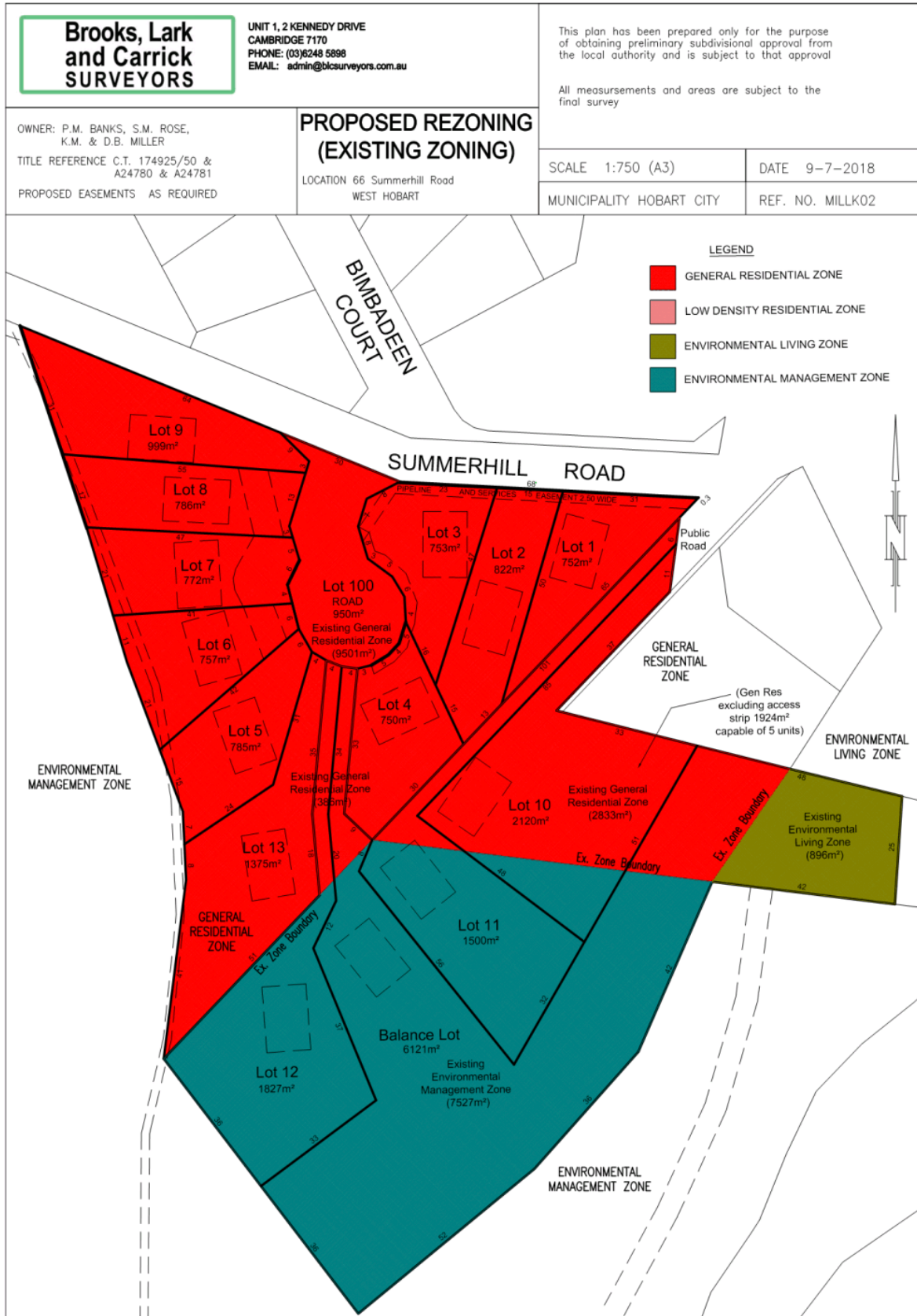
Appendix C: Concept Servicing Plan

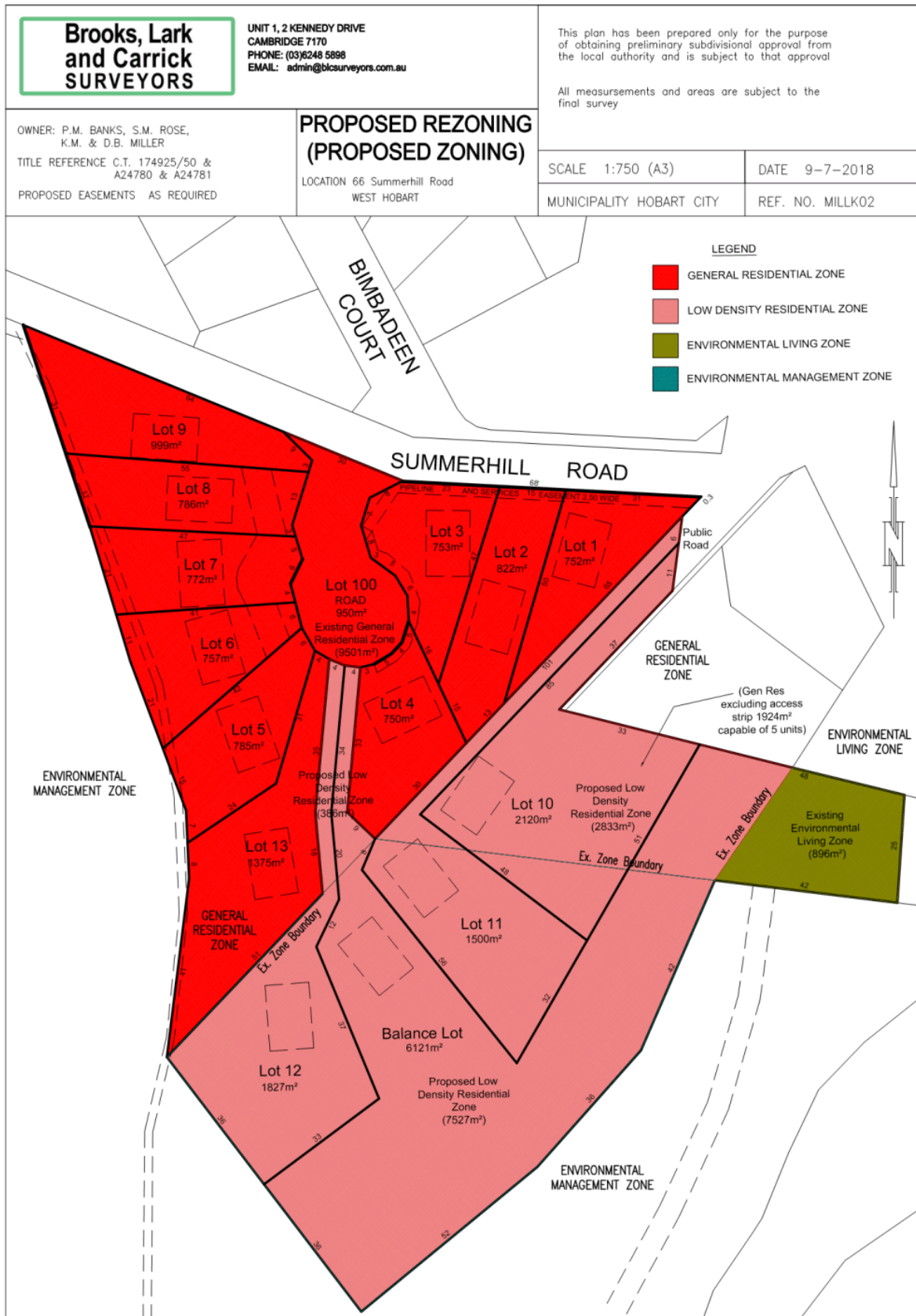
Appendix D: Subdivision Development Stormwater Flow Calculation

Appendix E: Bushfire Hazard Management Plan

p2

Appendix A: Subdivision and zoning plans

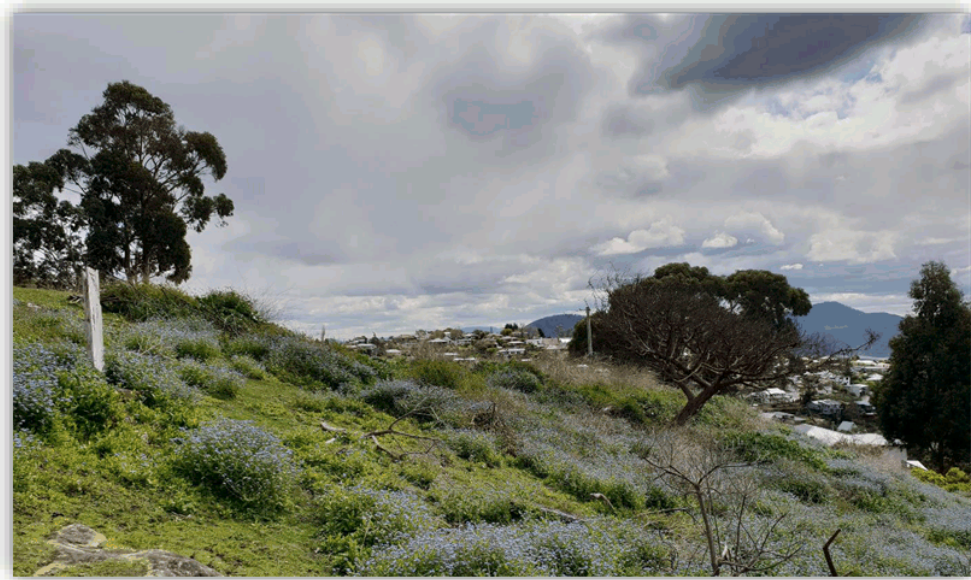




Appendix B: Environmental Management
Report

Addendum to Natural Values Report

For proposed rezoning of land at 66 Summerhill Road, West Hobart



For: P. Banks, S. Rose, D & K Miller

3rd October 2018

enviro-dynamics
environmental solutions for a changing world

Level 1, 2 Edward Street, Glebe – andy.welling@enviro-dynamics.com.au

Addendum to Natural Values Report for proposed rezoning at 66 Summerhill Road, West Hobart -October '18

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3. SUMMARY..... 10

0

andy.welling@enviro-dynamics.com.au

Addendum to Natural Values Report for proposed rezoning at 66 Summerhill Road, West Hobart -October '18

1. Introduction

The following *Addendum to the Natural Values Report* has been carried out to accompany an application to the Hobart City Council for the rezoning of land at 66 Summerhill Road from Environmental Management, General Residential and Environmental Living to Low Density Residential and Environmental Living (refer to Submission Document – ERA Planning, May 2018).

The natural values of the site were initially assessed in 2016 as part of a subdivision application for 9 lots. The initial assessment surveyed all land that was to be impacted by the subdivision including land downslope to the south which forms part of the bushfire hazard management areas for that subdivision.

An additional assessment of the land further downslope to the south east was carried out on the 25th September 2018. The area assessed will be within the proposed low density residential zone and will form the bushfire hazard management area for any new lots formed in the future. An assessment of the bushfire requirements has been carried out as part of the rezoning submission to broadly quantify the potential environmental impacts associated with a future subdivision development of the rezoned area (refer to Bushfire Hazard Risk Assessment, Enviro-dynamics October 2018).

Limitations of the survey

Whilst every effort was made to compile a complete list of vascular plant species occurring at the site, limitations of the survey method (Time Meander Method), seasonal conditions and the timing of the survey means that additional flora species may be present on the site and be revealed during subsequent surveys.

Appendix to Natural Values Report for proposed rezoning at 66 Summerhill Road, West Hobart - October '18



Figure 1 - Location Plan (Source LIST 2016)

2. Natural Values Assessment

Vegetation Communities

The intact vegetation on the site was identified as *Eucalyptus globulus* grassy forest (DGL) in the April 2017 natural values report for the site.

The 2018 survey of the vegetation further down slope (which was not initially assessed) identified a higher percentage of white gums (*E. viminalis*) than the higher slope with blue gums sub-dominant. The broad classification of the community remains as DGL however. The slope is heavily degraded by woody weeds and historic quarrying and earthworks which have altered the hillside (Figures 2 and 3).

Addendum to Natural Values Report for proposed rezoning at 66 Summerhill Road, West Hobart - October '18

There are scattered native cherry (*Exocarpos cupressiformis*), silver wattle (*Acacia dealbata*) and isolated prickly box (*Bursaria spinosa*) trees over a shrub layer that is dominated by exotic woody weeds including boneseed (*Chrysanthemoides monilifera*), gorse (*Ulex europaeus*), cotoneaster (*Cotoneaster frigida*), pampas grass (*Cortaderia selloana*), blackberry (*Rubus fruticosus*) and english broom (*Cytisus scoparius*). The ground layer is dominated by exotic grasses and herbs and large areas of forget me nots (*Myosotis sylvatica*), fumitory (*Fumaria muralis*) and cleavers (*Galium aparine*). Native species including fireweed (*Senecio linearifolius*), bracken (*Pteridium esculentum*), tussock grass (*Poa labillardierei*) amongst the weeds.

Due to the weed infestations the community is considered to be in poor to moderate condition.



Figure 2 – quarried area downslope with eucalypt over storey and weedy understorey.

Addendum to Natural Values Report for proposed rezoning at 66 Summerhill Road, West Hobart - October '18



Figure 3 – Vegetation broadly classified as DGL with understorey dominated by woody weeds.

Addendum to Natural Values Report for proposed rezoning at 66 Summerhill Road, West Hobart - October '18

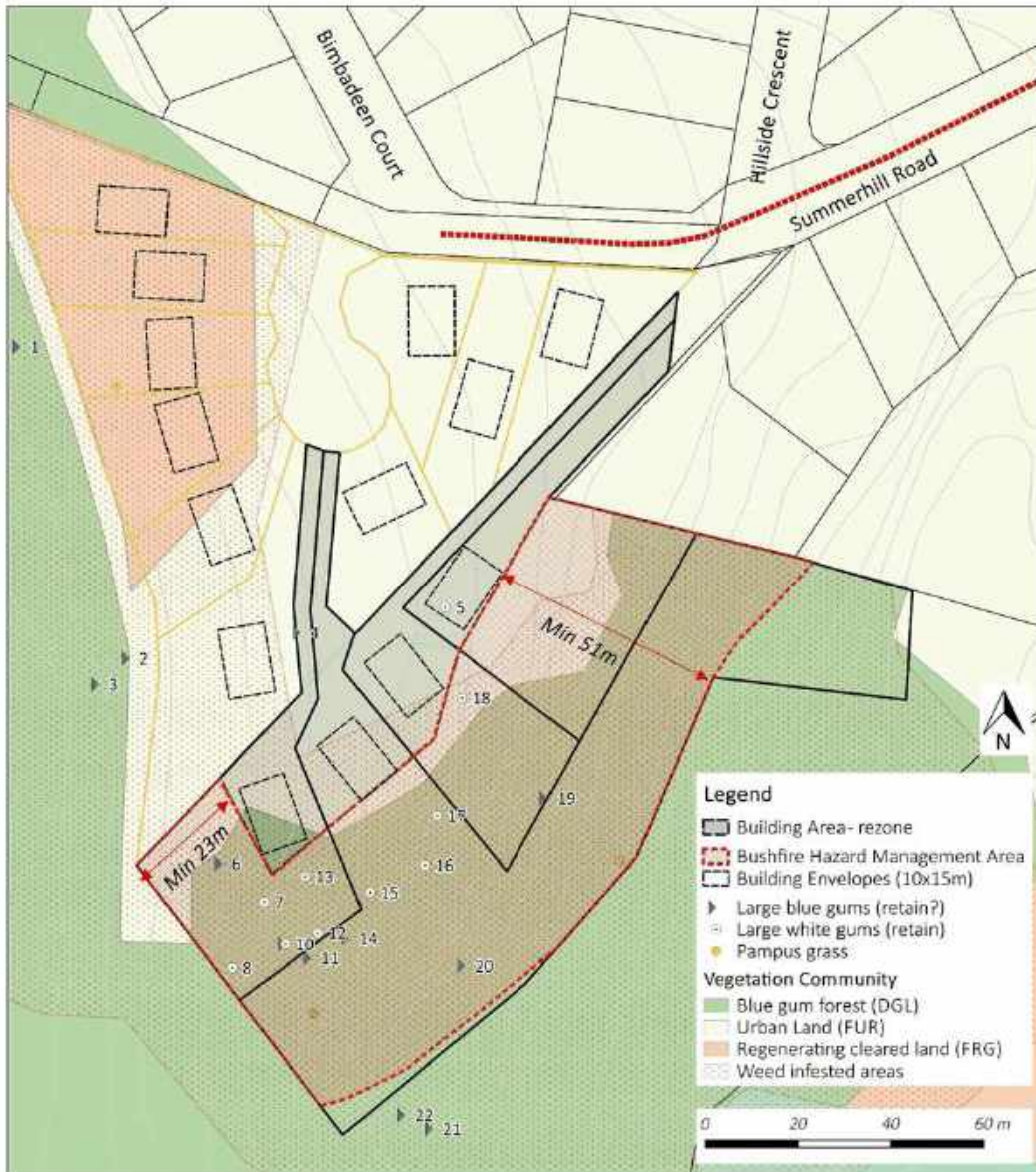


Figure 4 - Vegetation communities, weeds and significant trees and potential impacts of rezoning.

Addendum to Natural Values Report for proposed rezoning at 66 Summerhill Road, West Hobart -October '18

Flora Values

No threatened flora species were recorded during the additional survey. Species known from within 1km of the site were outlined in the initial report with a comment on the likelihood of them occurring on this site. The initial comments remain relevant for the additional area that was surveyed.

The slope contains a number of larger trees that were plotted and measured during the previous survey with additional trees further downslope measured as part of the rezoning survey. Larger trees are shown in Figure 4 and list in Table 1 below.

Table 1 – List of trees within land to be rezoned.

| Tree # | Species Name | Common Name | Height | DBH (cm) | Comment |
|--------|-----------------------------|-------------|--------|--------------|---|
| 1 | <i>Eucalyptus globulus</i> | blue gum | 20 m | 80 cm | Retain |
| 2 | <i>Eucalyptus globulus</i> | blue gum | 15-20m | 60, 90, 70cm | Retain |
| 3 | <i>Eucalyptus globulus</i> | blue gum | 20m | 70cm | Retain |
| 4 | <i>Eucalyptus globulus</i> | blue gum | 20m | 70cm | To be removed |
| 5 | <i>Eucalyptus viminalis</i> | white gum | 20m | 150cm | To be removed |
| 6 | <i>Eucalyptus globulus</i> | blue gum | 20m | 90cm | Retain |
| 7 | <i>Eucalyptus viminalis</i> | white gum | 12m | 70cm | Retain |
| 8 | <i>Eucalyptus viminalis</i> | white gum | 15m | 40 and 30 cm | Retain – double stem |
| 9 | <i>Eucalyptus viminalis</i> | white gum | 15m | 40 cm | May need to be removed or retained in cluster. |
| 10 | <i>Eucalyptus globulus</i> | blue gum | 18m | 80cm | Retain |
| 11 | <i>Eucalyptus globulus</i> | blue gum | 18 m | 70 cm | Retain |
| 12 | <i>Eucalyptus viminalis</i> | white gum | 12m | 60 cm | May need to be removed or treated as cluster with tree # 9, 10 and 11 |
| 13 | <i>Eucalyptus viminalis</i> | white gum | 20m | 100cm | Retain |
| 14 | <i>Eucalyptus viminalis</i> | white gum | 12 m | 90cm | Retain |
| 15 | <i>Eucalyptus viminalis</i> | white gum | 10m | 2 x 30cm | Retain– double stem |
| 16 | <i>Eucalyptus viminalis</i> | white gum | 15m | 50cm | Retain |
| 17 | <i>Eucalyptus viminalis</i> | white gum | ? | ? | Retain – may need to prune canopy |
| 18 | <i>Eucalyptus viminalis</i> | white gum | 15m | 50cm | May need to be removed depending on location of future dwelling |
| 19 | <i>Eucalyptus globulus</i> | blue gum | 20m | 120cm | Retain |
| 20 | <i>Eucalyptus globulus</i> | blue gum | 15m | 60cm | Retain |
| 21 | <i>Eucalyptus globulus</i> | blue gum | 20m | 70cm | Retain - Outside HMA |
| 22 | <i>Eucalyptus globulus</i> | blue gum | 18m | 80cm | Retain - Outside HMA |

Addendum to Natural Values Report for proposed rezoning at 66 Summerhill Road, West Hobart -October '18

Fauna Values

The fauna habitat provided by the vegetation is similar to that outlined in the initial report. The slope contains scattered mature blue gums which provide potential foraging habitat for the swift parrot. There are also mature white gums downslope. No trees within hollows were recorded downslope. A mature white gum with hollows and a mature blue gum are present within the cleared land that is zoned as general residential (Figure 4 – trees 4 and 5).

The vegetation downslope (including the weed infestations) provides some foraging and shelter habitat for the eastern barred bandicoot and other native mammals. This species may shelter in the understorey amongst woody weeds such as gorse and forage over the cleared land in the evenings. The rocky outcrops and rubble piles down the slope may also provide marginal shelter sites for the Tasmanian devil however there was no suitable den sites recorded.

Addendum to Natural Values Report for proposed rezoning at 66 Summerhill Road, West Hobart -October '18

3. Rezoning Impacts

The following section outlines the impacts of the proposed rezoning of a portion the site. A rezoning to low density residential would allow for the subdivision of the land to create new lots. Given the steep slope of most of the land any residential development would be restricted to the hill top. The natural values of the hill top area are limited to an isolated white gums and blue gums over introduced woody weeds, grasses and herbs.

Impacts of the future Bushfire Hazard Management Areas

Due to the bushfire prone nature of the surrounding vegetation any future development of residential lots would require bushfire hazard management areas to be established around dwellings.

Hazard Management Areas (HMA) for any new lots within the rezoned area would extend downslope for a minimum distance of 51m and across and up slope for 23m from the edge of designated building envelopes (refer to bushfire hazard assessment, Enviro-dynamics 2018). The existing approved subdivision to the north will provide a managed area in this direction.

A restrictive building area is proposed on the south eastern side of the hilltop to ensure that the required HAM for A BAL 19 solutions can be contained within the area of the site to be rezoned to Low Density residential. No vegetation on the adjoin HCC title in the bottom of the gully will be impacted by the proposal.

The majority of the HMA downslope and across slope contains degraded DGL vegetation. This vegetation would need to be modified to reduce fuel loads in the event of development on the hilltop. Modification of the vegetation would include the removal of most understorey vegetation and the thinning of the trees to reduce the canopy density and separation trees. As the understorey is dominated by woody weeds the clearance of the understorey will not have significant environmental impact.

Within the HMA larger blue gums and white gums can be retained provided they do not overhang dwellings, separation between canopies is established and maintained (min 2-6m) and have

Addendum to Natural Values Report for proposed rezoning at 66 Summerhill Road, West Hobart - October '18

branches below 2m removed. Smaller eucalypts and silver wattles would need to be removed to reduce fuel loads however. All significant trees within the rezone area were plotted during the site survey (Figure 2). The majority of large the trees could be retained within the HMA for hence most important natural values of the hills side can be retained. The management of the understorey would remove a significant seed source for weed species and contribute to the ongoing management of the intact vegetation within the adjacent Knocklofty Reserve.

An estimated 3000m² of degraded regrowth DGL vegetation will need to be managed to significantly reduce the fuel loads.

Overall the area of native vegetation to be impacted by the formation of the HMA for the subdivision will be approximately 1.2ha. Provided larger blue gums are retained within the HMA to protect the foraging habitat for the endangered swift parrot, the impacts will be limited. The majority of the vegetation to be removed to reduce the fuel load will be woody weed species. Some clusters of understorey shrubs can be retained or planted within the HMA provided clusters are less than 10m², there is separation between clusters (minimum 10m) and they are not located under retained trees.

The removal of the woody weeds within the HMA will reduce shelter habitat for mammals such as the eastern barred bandicoot and wallabies. This is unlikely to have a significant impact these species as there are large areas of similar habitat within the adjoining HCC land and the management of the HMA area is likely to lead to an increased foraging resource for these species.

Addendum to Natural Values Report for proposed rezoning at 66 Summerhill Road, West Hobart - October '18

3. Summary

An assessment of the natural values of land at Summerhill Road, West Hobart were undertaken as part of a proposed rezoning of the balance lot to the south east of the site. The proposed rezoning of the land to Low Density Residential would allow for the subdivision of the land to form new lots. Due to the steepness of the site and access restrictions, any building envelopes for new lots would be restricted to the upper slope of the land.

The survey found that the upper slope contains cleared land with remnant white gum and blue gum trees and scattered introduced species. The steep slope contains degraded DGL vegetation dominated by white gums and blue gums with an understorey of woody weeds including gorse, broom, pampas grass and boneseed.

The rezoning and future subdivision of the balance lot would require the clearing of vegetation with the building area the modification of vegetation downslope to accommodate the bushfire hazard management areas (HMA) for each new lot. Whilst the vegetation in the building areas has limited significance a large white gum and a blue gum tree will need to be removed.

An assessment of the bushfire risk of the surrounding land determined that a HMA would need to extend across the entire balance lot or to a minimum of 51m wide downslope and 23m wide across slope or upslope.

on the naturvla alvaleu of the Balance land he impacts of a proposed subdivision on the natural values of land at 60 Summerhill Road, West Hobart were assessed during a site survey in July 2016. The impact of the required Bushfire Hazard Management Areas on the land than is zoned Environmental Management and is within a Biodiversity Protection Area was assessed.

Some additional natural values occur on the land zoned general residential including mature blue gums and white gums however this impact is not assessed as part of this report as they occur within the general residential zone and a NVR of this area is not required under the scheme.

The vegetation to be impacted (for the establishing of the HMA) is generally in poor condition with significant infestations of the declared weeds boneseed, gorse and pampas grass. The control of

Addendum to Natural Values Report for proposed rezoning at 66 Summerhill Road, West Hobart -October '18

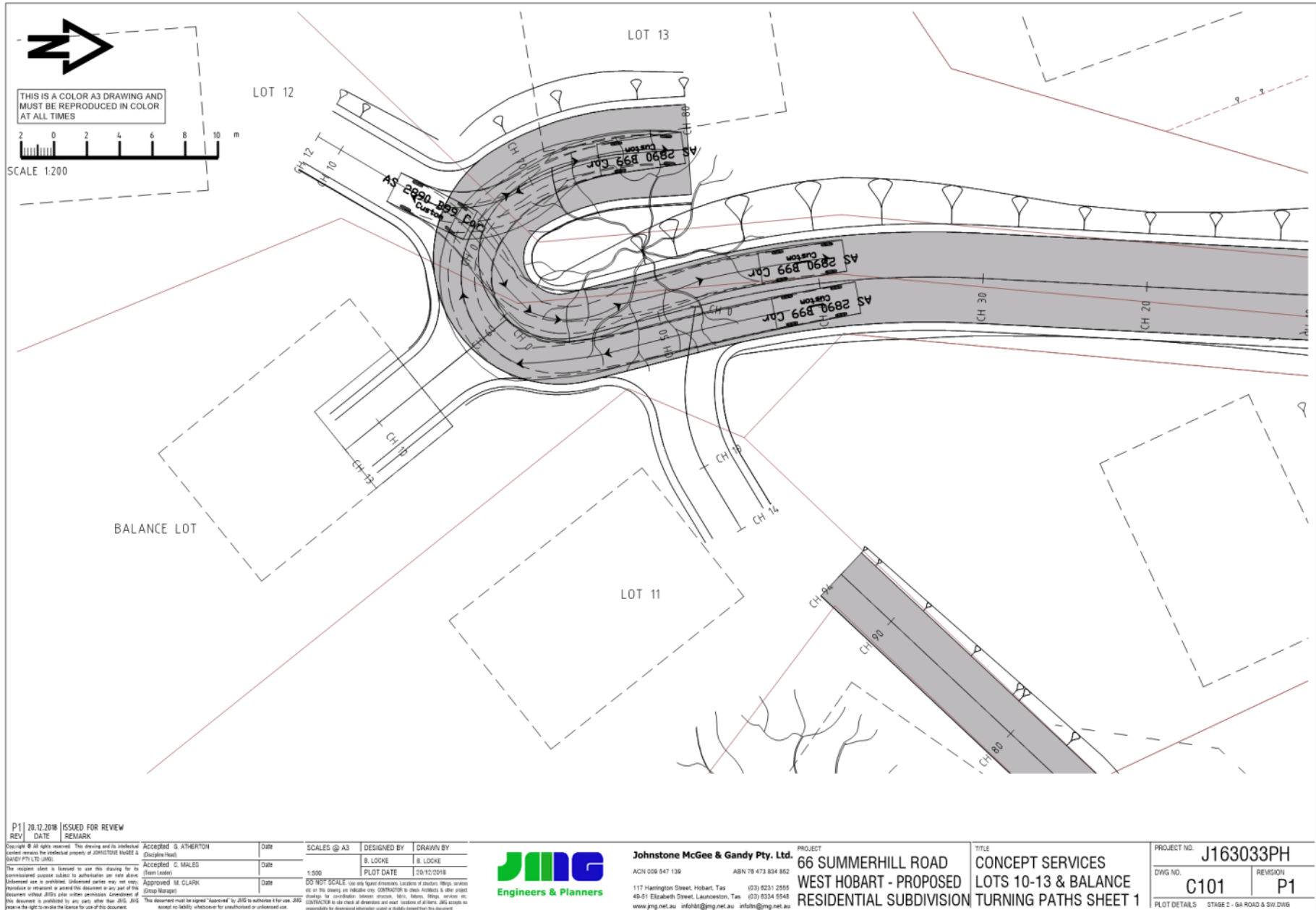
these weeds as part of the development may be required to prevent the spread of weeds of the site.

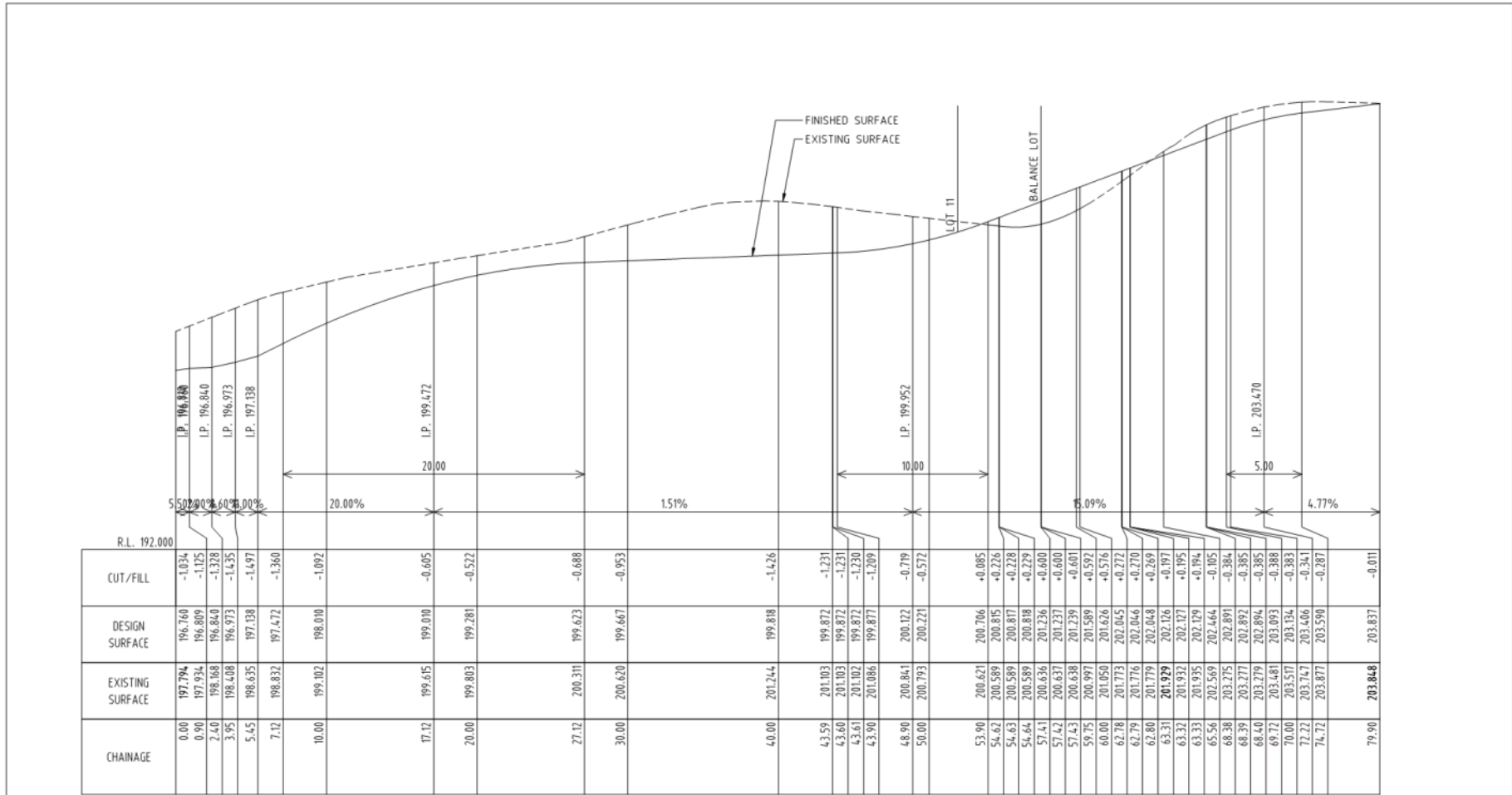
The area of vegetation which was classified as blue gum forest (DGL - listed as a threatened vegetation community under the *Nature Conservation Act 2002*) contained a layer of blue gum saplings and some smaller trees. The understorey contains significant woody weed infestations. Some mature trees (in particular blue gums) can be retained within the HMA provided there is minimum 2m separation between canopies and there is separation between the ground and the canopy. Clusters of native understorey can also be retained as per the provisions of the bushfire hazard report (Section 5.1 - JMG).

No threatened flora species were recorded on the site and the habitat for threatened fauna species was limited to regrowth blue gum - which provide a minor foraging resource for the swift parrot; and some habitat for the eastern barred bandicoot. Due to the present of large area of similar vegetation, in better condition, adjacent to the site the impact on the fauna habitat is very limited.

The removal of the vegetation was able to meet the performance criteria under E10. 0 for a high priority community due to its degraded condition. An estimated 3850m² of DGL will be impacted by the subdivision which represents < 0.2% of the DGL within local area. The vegetation to be modified is also degraded by weeds including gorse and as such the vegetation clearance will be largely restricted to weed control and removal of the shrub layer with any mature blue gums to be retained. The blue gums within the HMA are generally small (<10m – 15m high) and provide a limited foraging resource for the swift parrot. Any larger blue gum trees within the HMA will be retained.

and the presence of the adjoining DGL forest (on proposed balance lot which may be transferred to the HCC) and within the Knocklofty Reserve.





Profile ALN-Balance Lot Access Rd From 0.000 To 79.901
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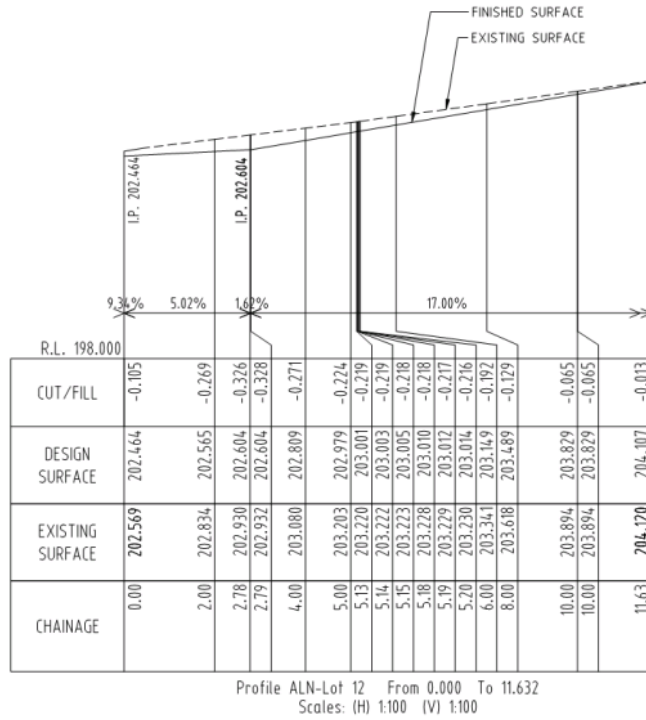


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PROJECT
66 SUMMERHILL ROAD
WEST HOBART - PROPOSED
RESIDENTIAL SUBDIVISION

TITLE
CONCEPT SERVICES
LOTS 10-13 & BALANCE
PROFILE - BALANCE LOT ACCESS RD

PROJECT NO. J163033PH
DWG NO. C102 REVISION P1
PLOT DETAILS STAGE 2 - ROAD PROFILES.DWG



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1:500

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B. LOCKE

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B. LOCKE

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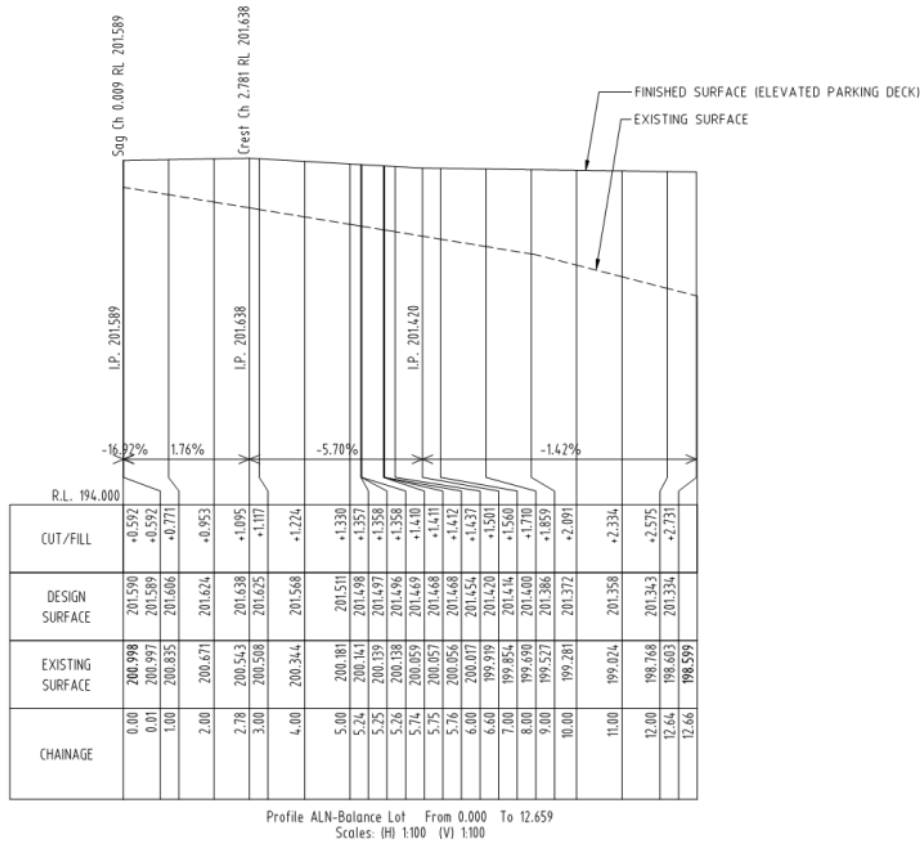


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LOTS 10-13 & BALANCE
PROFILE - LOT 12 ACCESS

PROJECT NO. J163033PH
DWG NO. C103 REVISION P1
PLOT DETAILS STAGE 2 - ROAD PROFILES.DWG



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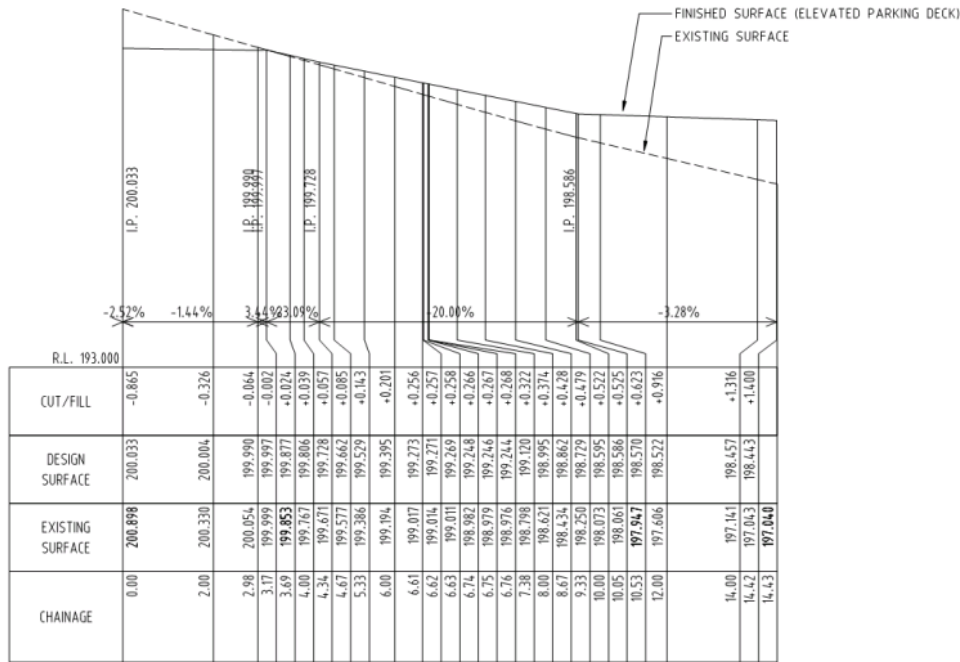


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66 SUMMERHILL ROAD
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TITLE
CONCEPT SERVICES
LOTS 10-13 & BALANCE
PROFILE - BALANCE LOT

PROJECT NO. J163033PH
DWG NO. C104 REVISION P1
PLOT DETAILS STAGE 2 - ROAD PROFILES.DWG



Profile ALN-Lot 11 From 0.000 To 14.434
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(ALTERNATE OPTION 2 - REFER ALN-LOT 10 & 11 SHARED ACCESS FOR OPTION 1)

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66 SUMMERHILL ROAD

WEST HOBART - PROPOSED

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TITLE

CONCEPT SERVICES

LOTS 10-13 & BALANCE

PROFILE - LOT 11 ACCESS

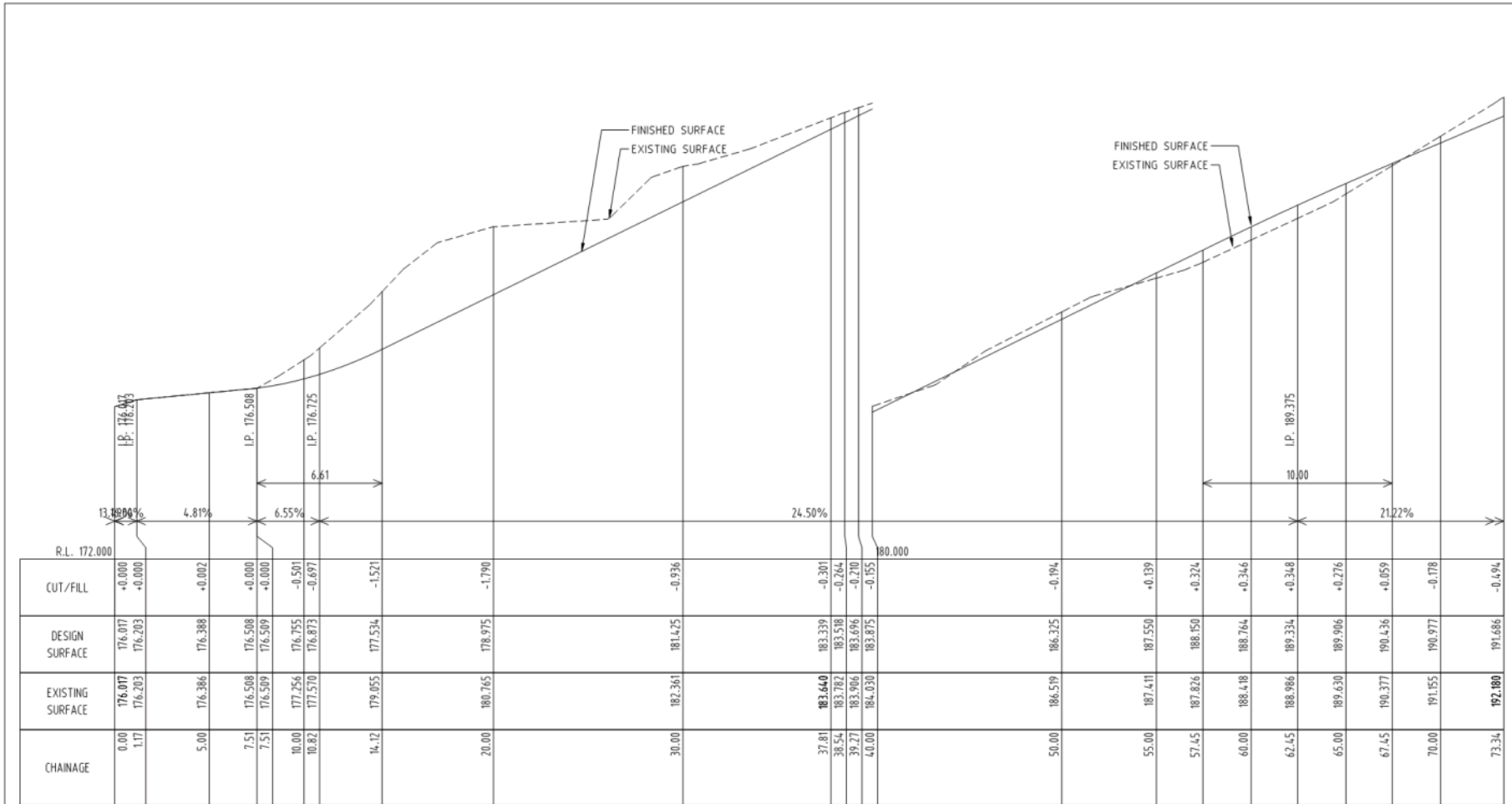
PROJECT NO. J163033PH

DWG NO. C105

REVISION P1

PLOT DETAILS

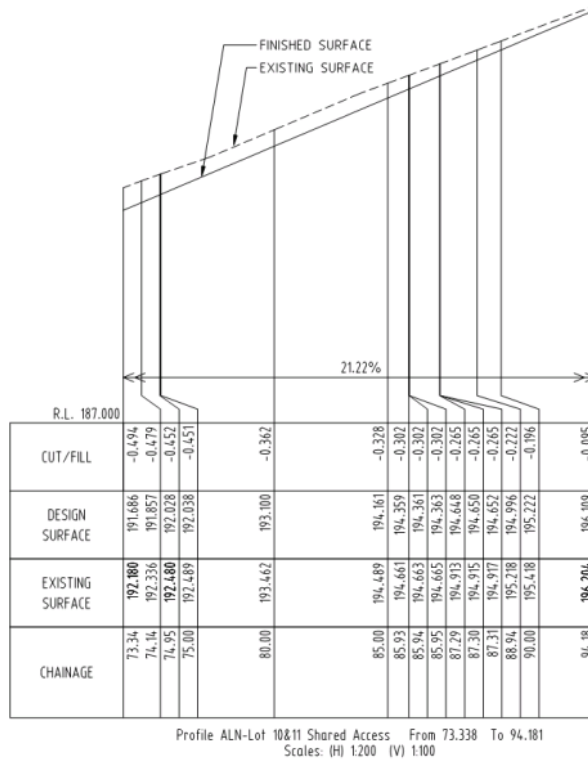
STAGE 2 - ROAD PROFILES.DWG



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| 10.00 | 177.256 | 176.755 | -0.501 |
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| 30.00 | 182.361 | 181.425 | -0.936 |
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| 38.54 | 183.782 | 183.518 | -0.264 |
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| 57.45 | 187.826 | 188.150 | +0.324 |
| 60.00 | 188.418 | 188.764 | +0.346 |
| 62.45 | 188.986 | 189.334 | +0.348 |
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Profile ALN-Lot 10&11 Shared Access From 0.000 To 73.338
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| <p>P1 20.12.2018 ISSUED FOR REVIEW</p> <table border="1"> <tr> <th>REV</th> <th>DATE</th> <th>REMARK</th> </tr> <tr> <td> </td> <td> </td> <td> </td> </tr> </table> | REV | DATE | REMARK | | | | <p>Accepted G. ATHERTON (Discipline Head)</p> <p>Accepted C. MALED (Team Leader)</p> <p>Approved M. CLARK (Group Manager)</p> | <p>DATE</p> <p>DATE</p> <p>DATE</p> | <p>SCALES @ A3</p> <p>1:500</p> | <p>DESIGNED BY</p> <p>B. LOCKE</p> <p>PLLOT DATE</p> <p>20/12/2018</p> | <p>DRAWN BY</p> <p>B. LOCKE</p> | | <p>Johnstone McGee & Gandy Pty. Ltd.</p> <p>ACN 009 547 130 ABN 79 473 834 852</p> <p>117 Harrington Street, Hobart, Tas (03) 8231 2555</p> <p>40-51 Elizabeth Street, Launceston, Tas (03) 8534 5548</p> <p>www.jmg.net.au info@jmg.net.au info@jmg.net.au</p> | <p>PROJECT</p> <p>66 SUMMERHILL ROAD WEST HOBART - PROPOSED RESIDENTIAL SUBDIVISION</p> | <p>TITLE</p> <p>CONCEPT SERVICES LOTS 10-13 & BALANCE PROFILE - LOT 10 & 11 SHARED ACCESS</p> | <p>PROJECT NO.</p> <p>J163033PH</p> | <p>DWG NO.</p> <p>C106</p> | <p>REVISION</p> <p>P1</p> | <p>PLOT DETAILS STAGE 2 - ROAD PROFILES.DWG</p> |
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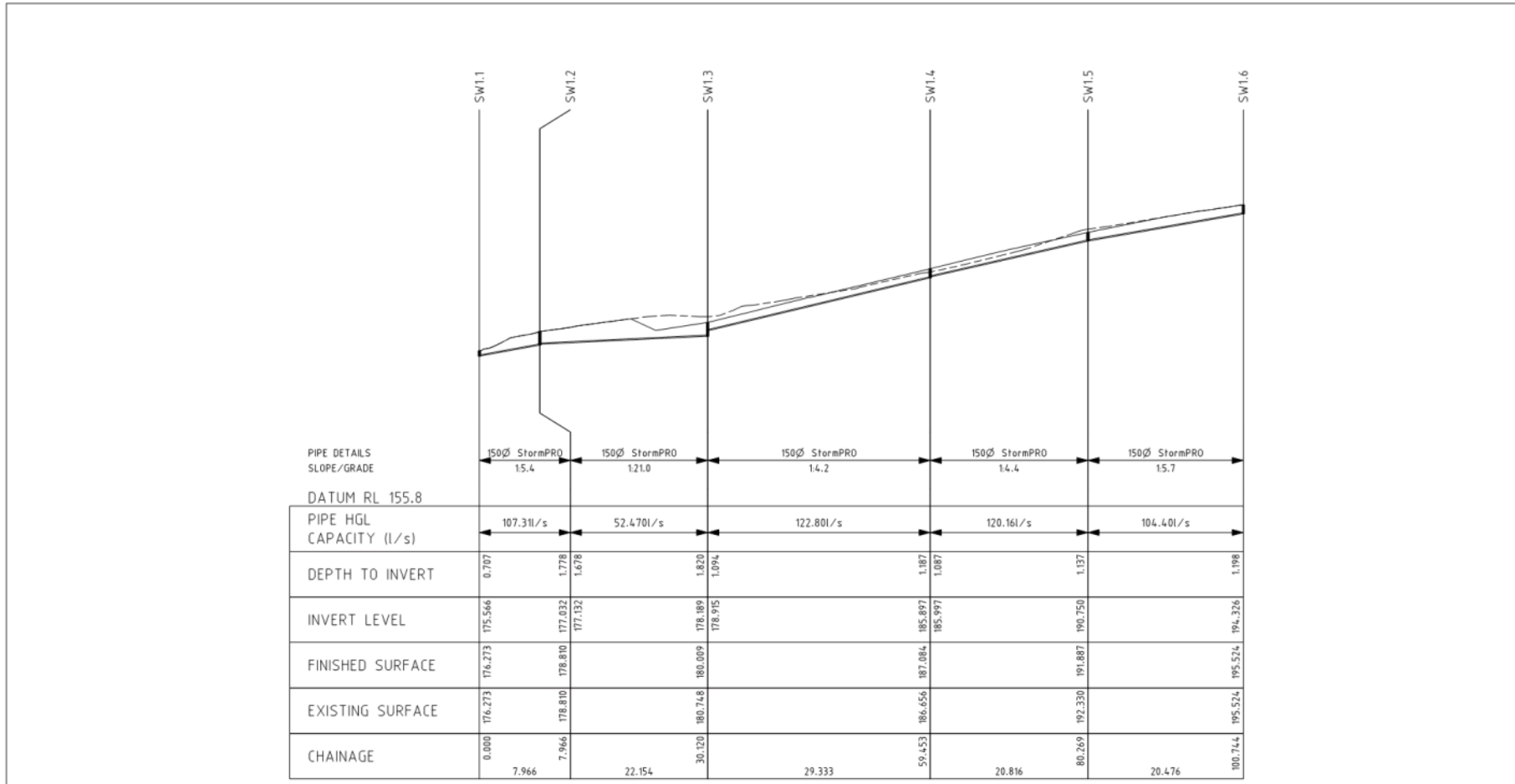


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66 SUMMERHILL ROAD
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TITLE
CONCEPT SERVICES
LOTS 10-13 & BALANCE
PROFILE - LOT 10 & 11 SHARED ACCESS

| | |
|--------------|-----------------------------|
| PROJECT NO. | J163033PH |
| DWG NO. | C107 |
| REVISION | P1 |
| PLOT DETAILS | STAGE 2 - ROAD PROFILES.DWG |



STORMWATER PROFILE
SCALES: HORIZONTAL 1500 VERTICAL 1500

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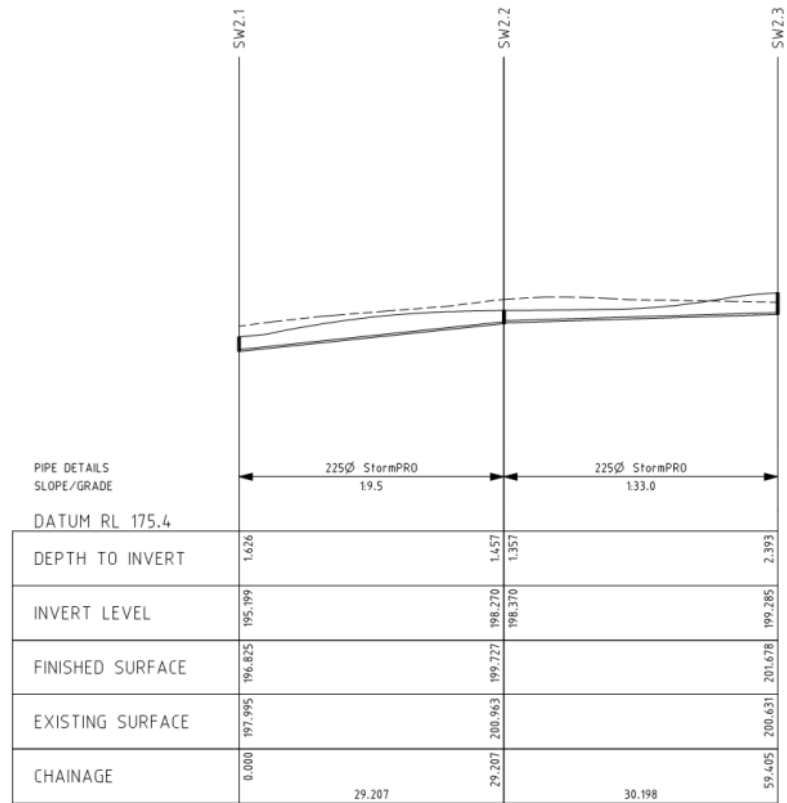


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PROJECT
66 SUMMERHILL ROAD
WEST HOBART - PROPOSED
RESIDENTIAL SUBDIVISION

TITLE
CONCEPT SERVICES
LOTS 10-13 & BALANCE
SW PROFILES SHEET 1

| | |
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| PROJECT NO. | J163033PH |
| DWG NO. | C108 |
| REVISION | P1 |
| PLOT DETAILS | STAGE 2 - STORMWATER PROFILES.DWG |



STORMWATER PROFILE
SCALES: HORIZONTAL 1:500 VERTICAL 1:500

| REV | DATE | REMARK |
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Accepted C. MALES (Team Leader)

Approved M. CLARK (Group Manager)

Date

Date

Date

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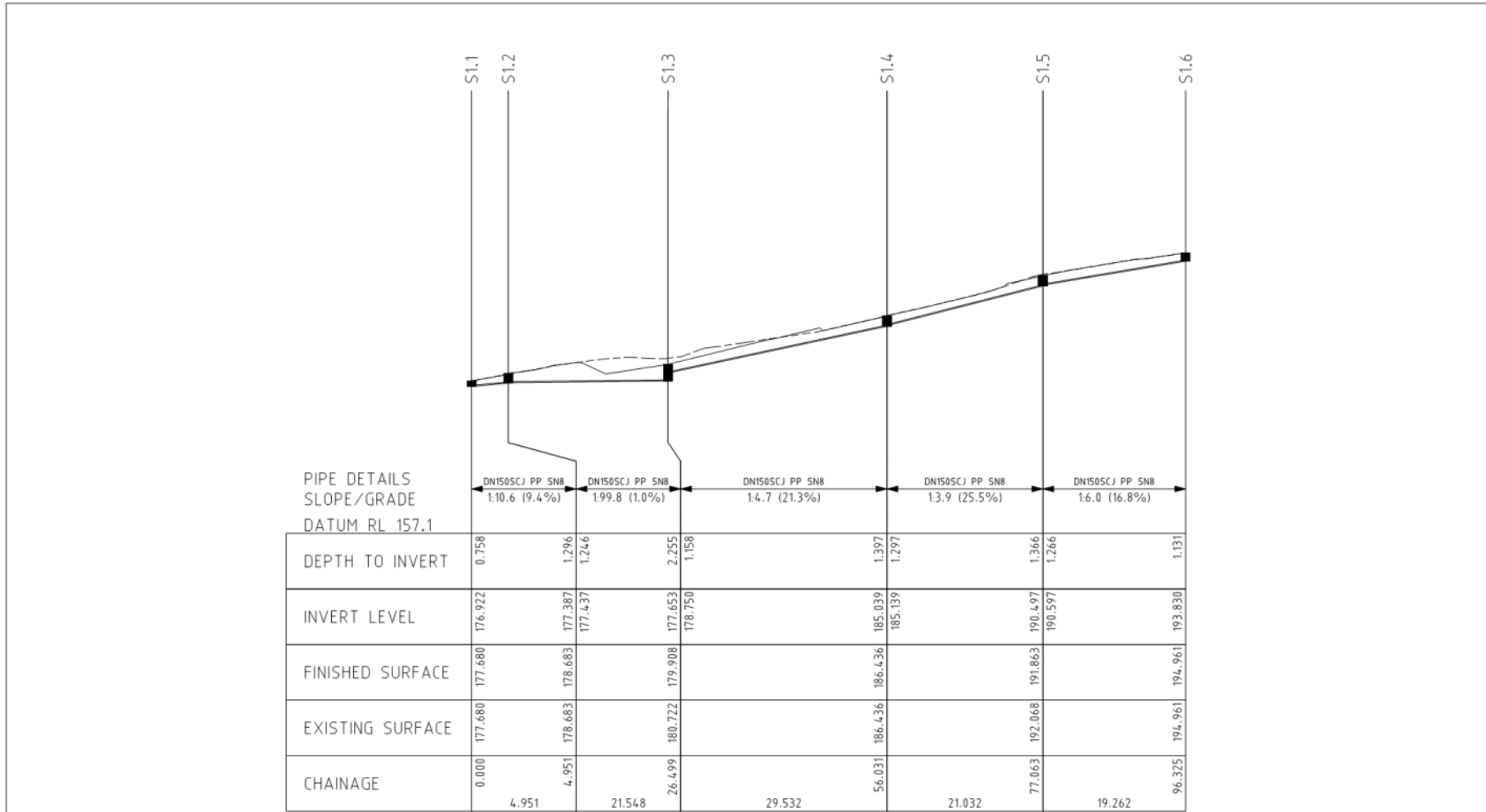


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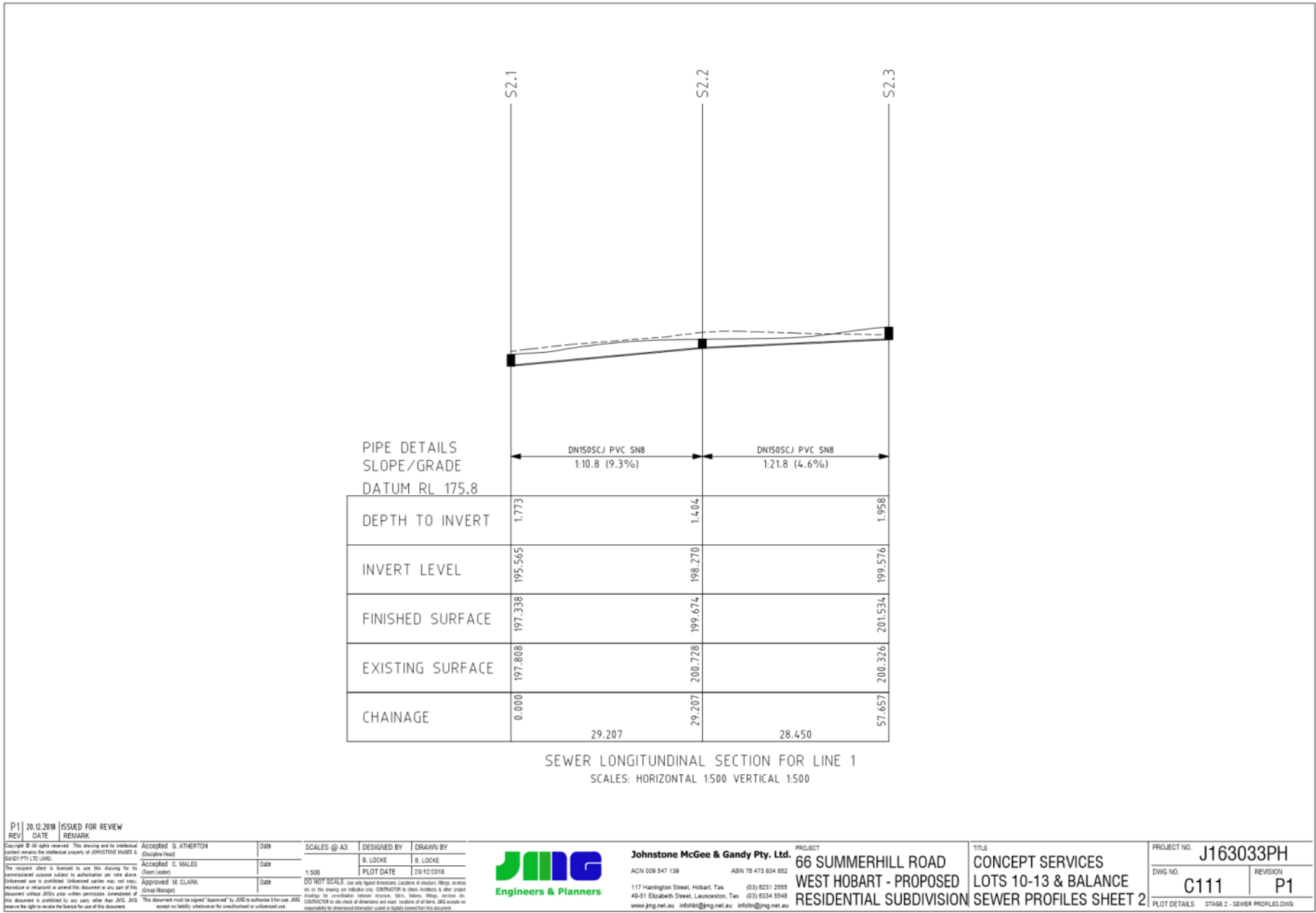


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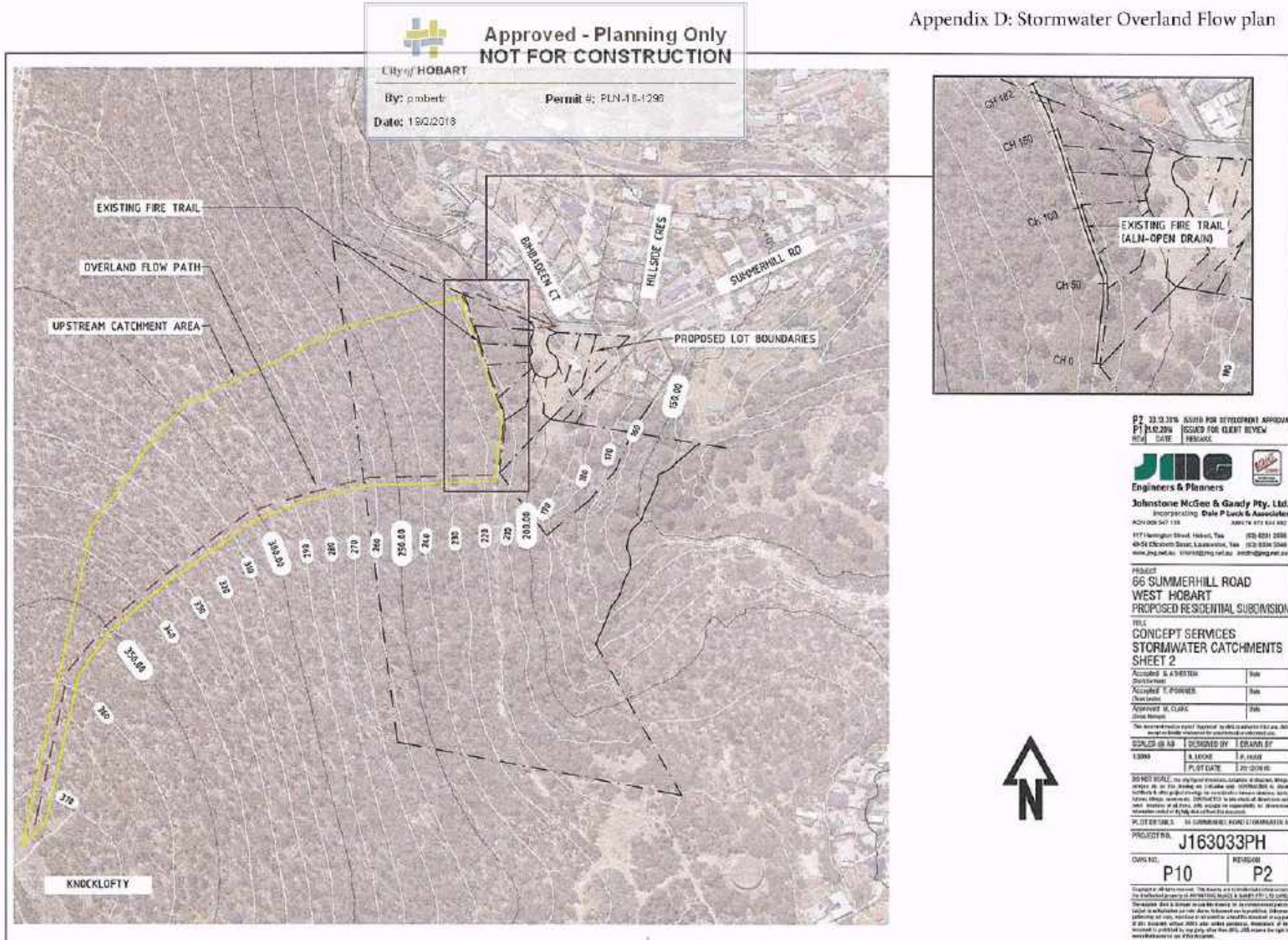
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WEST HOBART - PROPOSED
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TITLE
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LOTS 10-13 & BALANCE
SEWER PROFILES SHEET 2

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| PROJECT NO. | J163033PH |
| DWG NO. | C111 |
| REVISION | P1 |
| PLOT DETAILS STAGE 2 - SEWER PROFILES DWG | |

Appendix D: Stormwater Overland Flow plan



Bushfire Hazard Assessment

For proposed Rezone application at 66 Summerhill Road, West Hobart



Landowner: P. Banks, S. Rose, D & K Miller

Prepared by: Andrew Welling (BFP-135)

Date of Assessment: 13th September 2018

Bushfire Hazard Assessment for rezoning application, 66 Summerhill Road, West Hobart – September 2018

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Disclaimer

The assessor has taken all reasonable steps to ensure that the information provided in this assessment is accurate and reflects the conditions on and around the site and allotment on the date of this assessment. Whilst measures outlined in this report are designed to reduce the bushfire risk to future dwellings located within the subdivision, due to the unpredictable nature of wildfires and impacts of extreme weather conditions the survival of the structures on the site during a fire event cannot be guaranteed.

1. Introduction

The following Bushfire Hazard Assessment has been undertaken as part of a rezoning application for land at 66 Summerhill Road, West Hobart (FR 199596/1).

The document provides an assessment of the risk that bushfire poses to future dwellings which may be developed on the lot, within a designated building area. In addition, the document outlines the extent of bushfire hazard management areas required to achieve a Bushfire Attack Level of $>12.5 \text{ kW/m}^2$ to $\leq 19 \text{ kW/m}^2$ (BAL 19). The assessment has been used to inform the likely impacts on the natural values of the lot (refer to Addendum to Natural Values Report, Enviro-dynamics October 2018).

The designated building area is located along the northern side of the area to be rezoned (Figure 1).

1.2 Site Description

The bushfire hazard assessment relates to the southern portion of land at 66 Summerhill Road, West Hobart (FR 174925/50) and the adjoining lot (FR 173296/2) acquired through adverse possession. The land subject to a rezoning application includes the eastern side of small hilltop and the steep east facing slope. The land is proposed to be rezoned from Environmental Management, General Residential and Environmental Living to Low Density Residential and Environmental Living (refer to Submission Document – ERA Planning, May 2018).

The natural values of the site were initially assessed in 2016 as part of a subdivision application for 9 lots. The initial assessment surveyed all land that was to be impacted by the subdivision including land downslope to the south which formed part of the bushfire hazard management areas for the subdivision.

An additional assessment of the land further downslope to the south east was carried out on the 25th September 2018. The area assessed will be within the proposed low-density residential zone and will form the bushfire hazard management area for any new lots formed in the future.

Bushfire Hazard Assessment for rezoning application, 66 Summerhill Road, West Hobart – October 2018

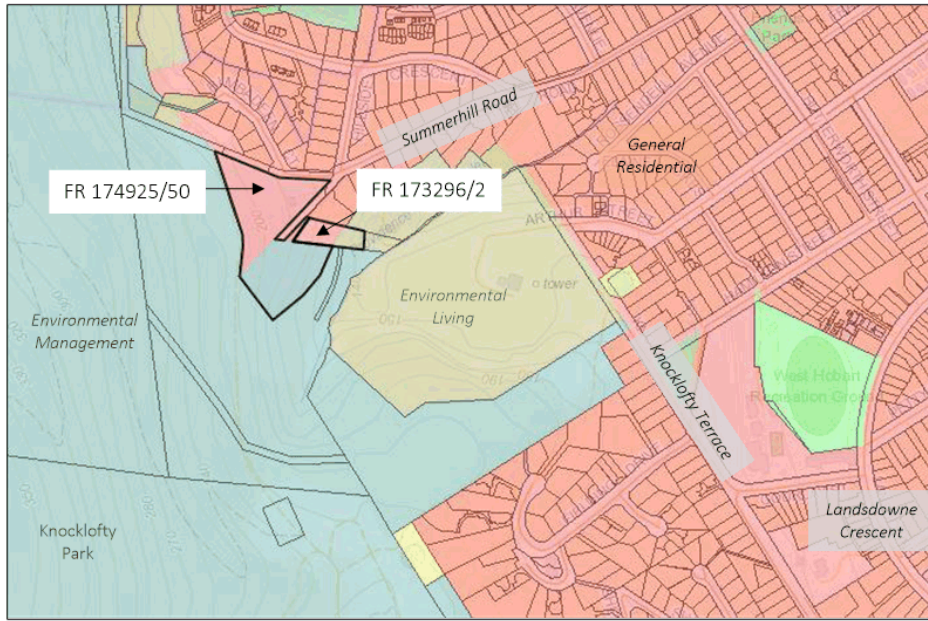


Figure 1: Location of Lots on Summerhill Road and adjacent to Environmental Management Zone

Bushfire Hazard Assessment for rezoning application, 66 Summerhill Road, West Hobart – October 2018

2. Bushfire Site Assessment

The following is a summary of the bushfire risk at the property.

Bushfire Hazard: Slope and forest vegetation

Bushfire Attack Mechanisms: Radiant heat, ember attack, wind, direct flame and smoke

Bushfire Threat Direction: The bushfire threat to the land, subject to the proposed subdivision, is from the north and northwest which is mainly developed and zoned general residential. Due to the managed land to the north, the bushfire risk is reduced.

Fires have burned in the hills to the northwest but would have to travel downslope to reach the proposed subdivision. It is noted that a fire in this forest could be a source of embers from the west and northwest. The fire threats from the west and northwest are moderate due to distance to forest vegetation, refer to Figure 2 and Appendix 1 for Photos.

Fire Danger Index: FDI 50 (this index applies across Tasmania).

Vegetation: Vegetation was assessed within 100 m in all directions from the proposed building area and classified as per Table 2.3 of AS 3959-2009.

The site contains managed land to the north and forest vegetation to the east and west.

There are a number of established residences surrounding the site to the north and east.

Refer to Table 1 for the summary of the BAL Assessment.

Table 1 – Summary of Bushfire Site Assessment

| Direction of slope | Northeast | Southeast | Southwest | Northwest |
|--|---------------------|----------------------|-----------|--------------|
| Balance Lot | | | | |
| Vegetation Classification ^A | MANAGED LAND | FOREST | FOREST | MANAGED LAND |
| Distance to classified vegetation | 0 m | 0 - 20 m | 0 m | 0 m |
| Effective slope under vegetation | Downslope >5-10° | Downslope >15-20° | Upslope | Across slope |
| Current BAL value for each side of the site | BAL LOW | BAL FZ | BAL FZ | BAL LOW |
| Separation distances to achieve BAL-19 | n/a | 51-<67 m | 23-<32 m | n/a |

^A Vegetation within 100 m of the proposed lots identified as *Forest* has a woody weed understorey with some native trees and shrubs.

Managed Land surrounding the development is classified as an exclusion as per definitions in paragraph 2.2.3.2 of AS3959-2009, an 'Exclusion' is provided by Low threat vegetation and non-vegetated areas:

Bushfire Hazard Assessment for rezoning application, 66 Summerhill Road, West Hobart – October 2018

(e) Non-vegetated areas, including roads and buildings; and

(f) Low threat vegetation, including grassland managed in a minimal fuel condition such as maintained lawns, cultivated gardens and windbreaks. NOTE: minimal fuel condition means there is insufficient fuel available to significantly increase the severity of the bushfire attack (recognised as short-cropped grass to a nominal height of 100 mm).

Bushfire Hazard Assessment for rezoning application, 65 Summerhill Road, West Hobart – September 2018

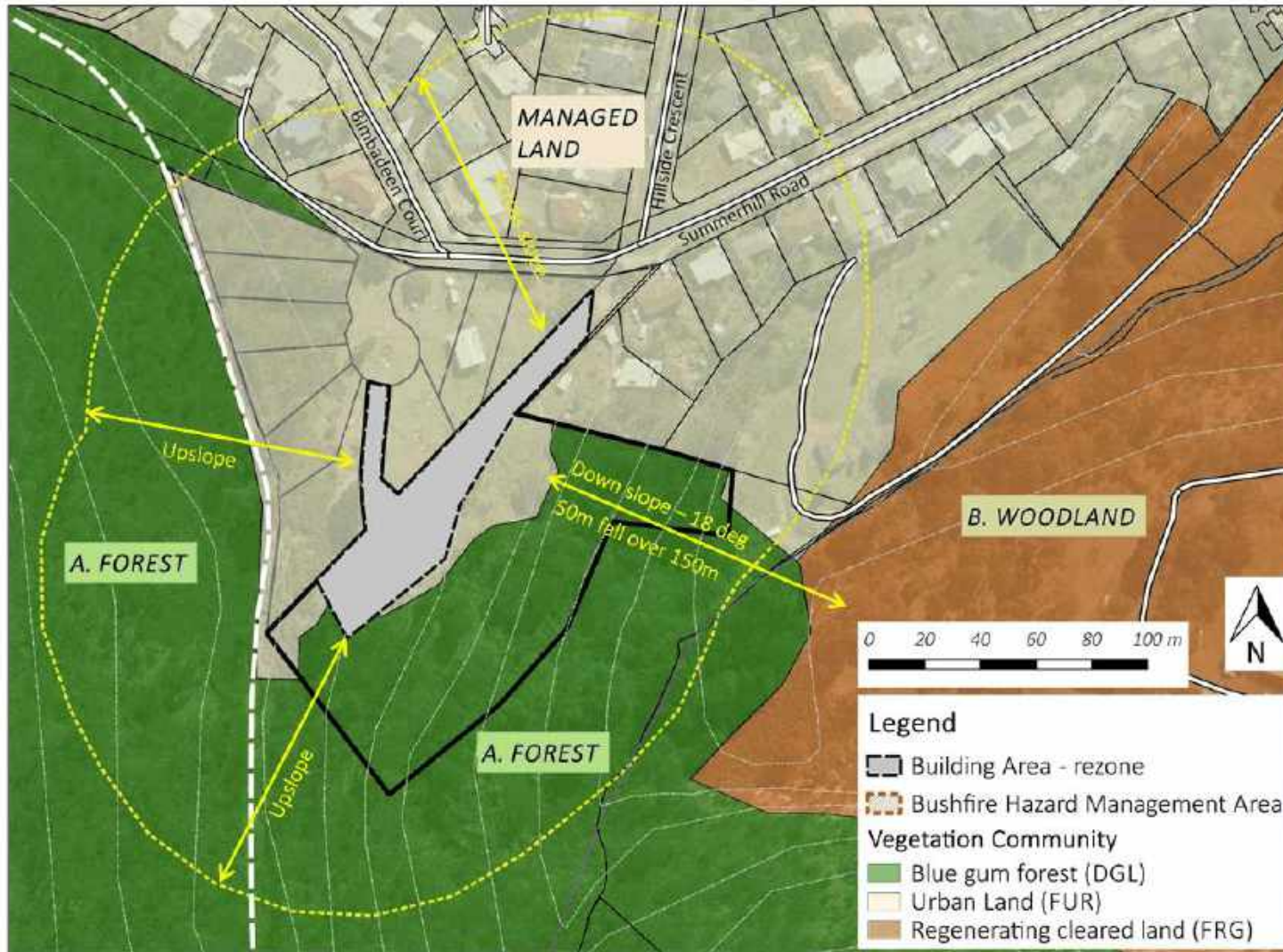


Figure 2 – Bushfire hazard assessment area (100m radius yellow dash line) showing surrounding managed areas and vegetation

3. Bushfire Management Measures

3.1 Hazard Management Areas

Future development within the designated building area will require the establishment of a bushfire hazard management area (HMA). The HMA provides a cleared space between the buildings and the bushfire hazard. Vegetation within the HMA needs to be strategically modified and then maintained in a low fuel state to protect buildings from direct flame contact and intense radiant heat thereby allowing built infrastructure to be defended from lower intensity bushfires. Fine fuel loads must be minimal: to reduce the quantity of windborne sparks and embers reaching buildings, to reduce the radiant heat at the building, and to halt or check direct flame attack.

Further information on the maintenance of the equivalent 'defendable space' are provided in the Tasmania Fire Service document: Guidelines for Development in Bushfire Prone Areas of Tasmania (2005). This document identifies different protection zones including a Bushfire Protection Zone and a Fuel Modified Buffer Zone.

Requirements

To comply with PD5.1 Acceptable solutions under E1.6.1 – A1. Acceptable solutions A1 future subdivision must:

- show building areas for each lot; and
- indicate HMAs which separate building areas from bushfire prone vegetation with separation distances required for BAL 19 as a minimum as per Table 2.4.4 of AS 3959-2009 Construction of Buildings in Bushfire Prone Areas.

Indicative building areas have been designated on the lots subject to the rezone application and an HMA with separation distances sufficient to achieve BAL 19 as set out in Table 1 and are shown in Attachment 1.

Current conditions:

- The land subject to the rezoning application contains cleared land on the hilltop and intact forest vegetation with a weedy understory downslope to the southeast and upslope to the southwest. The land to the northwest and northeast is cleared and will be developed as residential lots in the future. There are existing suburban areas beyond the cleared land in these directions.

Compliance:

- The future development of the land (subdivision and then housing) will require the modification of vegetation to the northeast and northwest as indicated in Attachment 1. Vegetation modification will require reduction of fuel loads by the removal of trees, shrubs and groundcover fuels. The HMA does not need to be cleared of all vegetation. The retention of some trees can act to reduce wind speeds and catch embers in the event of bushfire.
- The following vegetation management requirements apply within the HMA:

Bushfire Hazard Assessment for rezoning application, 66 Summerhill Road, West Hobart – October 2018

- All vegetation including trees to be cleared from within 10m of future buildings;
- Non-flammable features such as paved areas, lawns, driveways and paths should be included around buildings.
- Trees can be retained within the HMA provided there is: horizontal separation between canopies (min 2m); and vertical separation between the ground and the canopy. This can be achieved by removing low branches up to a minimum height of 2m from ground level. No trees to overhang dwellings. Most of the large trees within the HMA can be retained at the site (refer to Natural Values Report, enviro-dynamics Oct 2018).
- Understorey shrubs may be retained provided they are not contiguous with dwellings. Clusters should be a maximum of 10m² in area with a minimum 10m separation between clusters. Clusters should not be located under retained trees. This can be largely achieved through the removal of woody weeds from the HMA.
- The ground layer (grasses) is always to be maintained at a height of <100mm.
- All leaf litter, twigs, branches and bark are to be removed and will require on-going management.

Maintenance of Hazard Management Areas

The HMA around all the building areas (existing and proposed) must always be maintained in a minimal fuel condition to ensure bushfire protection mechanisms are effective. An annual inspection and maintenance of the HMA should be conducted prior to the bushfire season and any flammable material such as leaves, litter and wood piles should be removed.

3.2 Access

Access to the land for future development will be from the end of newly formed cul-de-sac or from Summerhill Road via a right-of-way. All access requirements of PD5.1, Section E.1.6.2 and Table E2 can be satisfied for future site development (i.e. subdivision).

3.3 Water Supply

Water supply for fire-fighting will be available to the site through a reticulated system with water hydrants. As such all requirements PD5.1, Section E1.6.3 and Table E5 can be satisfied for future site development (i.e. subdivision).

Bushfire Hazard Assessment for rezoning application, 66 Summerhill Road, West Hobart – October 2018

4. Conclusions

The assessment of the bushfire risk of the proposed four Lot subdivision at 66 Summerhill Road, West Hobart indicates that it is able to meet the requirements of PD5.1, E1.0 Bushfire-Prone Areas Code for a BAL 19 rating provided compliance with the following measures:

- Building areas are designated for the new lots and minimum Hazard Management Areas are maintained as per Table 1 of this report and the Bushfire Hazard Management Plan (Attachment 1).
- Subdivision access to the lots meets the relevant requirements of PD5.1 E.1.6.2.
- Provision of reticulated water supply meets the requirements of PD5.1 E1.6.3.

Based on this bushfire risk assessment the property is suitable for rezoning.

Limitations of Plan

The bushfire protection measures outlined in this plan are based on a fire danger rating of 'very high'. Defending the property or sheltering within a structure constructed to AS3959-2009 on days when the fire danger rating is greater than FDI 50 (i.e. 'severe' or higher) is not recommended. Due to the unpredictable nature of bushfire behaviour and the impacts of extreme weather no structure built in a bushfire-prone area can be guaranteed to survive a bushfire. The safest option in the event of a bushfire is to leave the area early and seek shelter in a safe location.

This report does not include a certified Bushfire Hazard Management Plan, as the information provided is intended to inform the decision whether the area is suitable for rezoning from Environmental Management to General Residential.

Bushfire Hazard Assessment for rezoning application, 66 Summerhill Road, West Hobart – October 2018

APPENDIX 1 – Photos of vegetation surrounding land to be rezoned



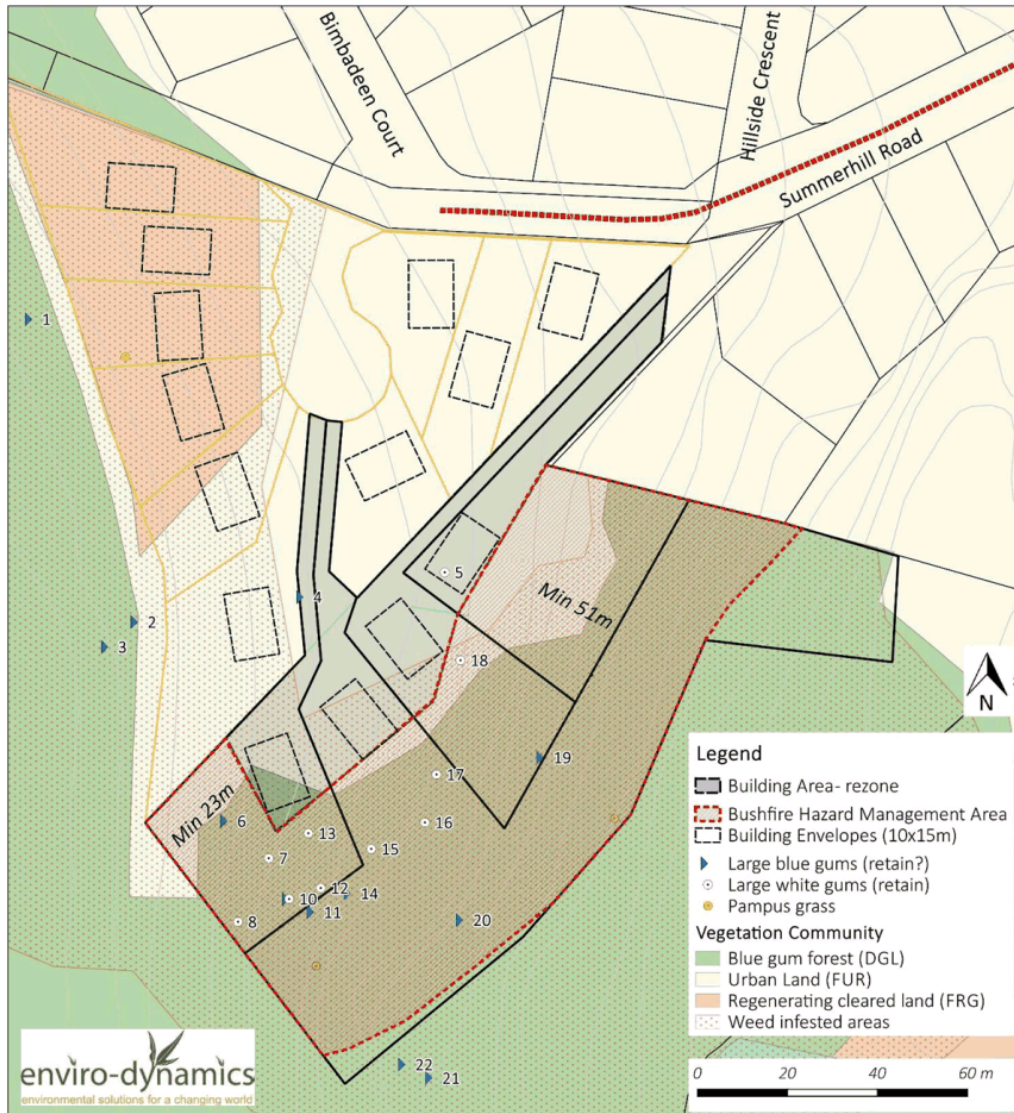
Photo 1: SOUTH EAST - Forest Vegetation downslope (15 -<20°)



Photo 2: SOUTH WEST - Forest Vegetation upslope

Bushfire Hazard Assessment for rezoning application, 66 Summerhill Road, West Hobart – September 2018

ATTACHMENT 1 – Bushfire Hazard Management Area Plan – October 2018



NOTES

Construction Standards

- Future dwellings on new lots to be constructed to comply with BAL 19 as per AS3959-2009 (Sections 3 and 6).

Hazard Management Zone

- HMAs to be established and/or maintained to distances indicated on this plan and as set out in Table 1 of Bushfire Attack Level Assessment for BAL 19 as a minimum.
- Vegetation in HMA to be strategically modified and maintained in low fuel state to protect future dwellings from direct flame contact and intense radiant heat. Annual inspections and maintenance of HMA is to be conducted prior to bushfire season. All grasses or pastures to be kept short (<100 mm) within the HMA. Fine fuel loads at ground level (leaves, litter and wood piles) must be minimal to reduce the windborne sparks and embers; and halt flame attack.
- Some trees can be retained provided horizontal separation between canopies; and low branches are removed to create vertical separation between ground and canopy. Small clumps of established trees and/or shrubs may act to trap embers and reduce wind speeds.
- No trees to overhang houses to prevent branches or leaves from falling on the building.
- Non-combustible elements including driveways, paths and short cropped lawns are recommended within the HMA.

Access Requirements

- Public and fire-fighting access to house sites to comply with Section 3.4 of the Bushfire Hazard Report.

Water Supply

- Reticulated fire-fighting water supply to comply with Section 3.5 of the Bushfire Hazard Report to ensure reliable water supply for fire-fighting at all dwellings.

This plan should be printed at A3 and read in conjunction with the preceding Bushfire Hazard Assessment Report (enviro-dynamics October 2018).

For: P. Banks, S. Rose, D & K Miller –
Summerhill Road, West Hobart

Titles: FR 199596/1 and FR 173296/2

Oct 2018 Assessment #: ED1872



2 Edward Street, Glebe Mobile: 0400151205
Email: andy.welling@enviro-dynamics.com.au

13th November 2019

Sarah Crawford
Hobart City Council
crawfords@hobartcity.com.au

Dear Sarah,

RE: HOBART INTERIM PLANNING SCHEME – PLANNING SCHEME AMENDMENT PSA-18-2 – 66 SUMMERHILL ROAD, WEST HOBART

The following letter addresses a request for additional information (letter dated 19th April 2019) regarding a rezoning application and in particular dot point 2.

2. Please provide a clear statement regarding the long-term viability of the DGL community on the area previously part of the 'adverse possession lot' with regard to clause (b) in the definition of 'special circumstances' in the Biodiversity Code.

Response

The lower half of the 'adverse possession lot' contains vegetation classified as *Eucalyptus globulus* forest and woodland (DGL). DGL is a threatened vegetation community as per the *Nature Conservation Act 2002* and is a high priority biodiversity value under Table E10.1 of the Hobart Interim Planning Scheme 2015. Approximately half of the DGL in the far eastern portion of the lot is within a Biodiversity Protection Area (BPA).

The rezoning of the portion of the DGL that is outside the BPA to low density residential is likely to facilitate future subdivision development. A future subdivision would require modification of a portion of the DGL vegetation to establish bushfire hazard management areas.

Under the Biodiversity Code (E10.0) clearance (or modification) of a high priority vegetation must satisfy the 'special circumstances' clause of the Code. Whilst the area of the site to be rezoned is outside the BPA the special circumstances (b) can be met as per the following.

The DGL vegetation to be rezoned is in poor condition due to significant woody weed infestations and a long-term history of disturbance. Without significant sustained management of the woody weeds in conjunction with revegetation works the remnant will continue to degrade. The management of the DGL area for bushfire hazard reduction will predominantly involve the removal of the woody weeds with mature trees able to be retained. As such the highest value of the vegetation (the mature trees) can be retained and the modification will not lead to a loss of biodiversity value.

Please do not hesitate to contact me if you require further clarification regarding the biodiversity value associated with the rezoning application.

Yours sincerely

A handwritten signature in black ink, appearing to read 'AW', with a stylized flourish extending to the right.

Andrew Welling
Ecological Consultant

GEOTECHNICAL SITE ASSESSMENT

66 Summerhill Road

West Hobart

April 2017



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Geo-Environmental Solutions – 66 Summerhill Road - Geotechnical Assessment

Introduction

Client: ERA Planners
Date of inspection: 10/2/20
Location: 66 Summerhill Road, West Hobart, Tasmania
Land Zoning: General Residential
Building type: Proposed future subdivision
Investigation: 5.5 Tonne Excavator
Inspected by: A. Plummer

Background information

Map: Mineral Resources Tasmania sheet 1:25 000
Rock type: Triassic Sandstone.
Soil depth: ~1.0m
Planning Overlays: None Known
Local meteorology: Annual rainfall approx 550 mm
Local services: Reticulated water and services on site.

Site conditions

Slope and aspect: Approx. 20-30% slope to the South East.
Site drainage: Moderately drained
Vegetation: Grass & weed species & native scrub
Weather conditions: Fine, approx. 5 mm rainfall received in preceding 7 days.
Ground surface: Disturbed

Investigation

Geo-Environmental Solutions Pty. Ltd. (GES) were engaged by ERA Planners (“the Client”) to undertake a Geotechnical Investigation at 66 Summerhill Road (“The Site”) (see Figure 1). This report presents the findings of the Geotechnical Investigation undertaken by GES at the investigation site in West Hobart, Tasmania.

Geo-Environmental Solutions – 66 Summerhill Road - Geotechnical Assessment

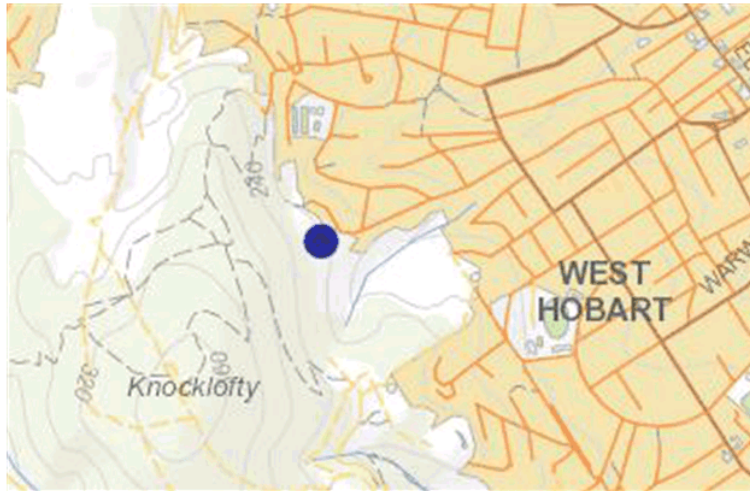


Figure 1 – Location of the site. (Indicated by blue dot)

A number of auger holes were completed to identify the distribution of, and variation in soil materials on the site. Auger holes completed on site were used for testing and classification according to AS1726-1993 (see Profile Summary).

The purpose of the investigation was to:

- Provide information on the geotechnical conditions encountered.
- Provide advice on the depth to underlying rock.
- Comment on stability of any existing slopes
- Assess the impact of vegetation removal upon slope stability
- Address the relevant code within the Hobart City Council Interim Planning Scheme

Profile Summary

The subsurface conditions encountered during field drilling were generally consistent with available geological mapping of Triassic aged sediments (MRT 1:25 000 sheets). See Plate 1 & Table 1 below.

Geo-Environmental Solutions – 66 Summerhill Road - Geotechnical Assessment

Plate 1 – Mapped Geology of the area with the site assessed marked by red square.

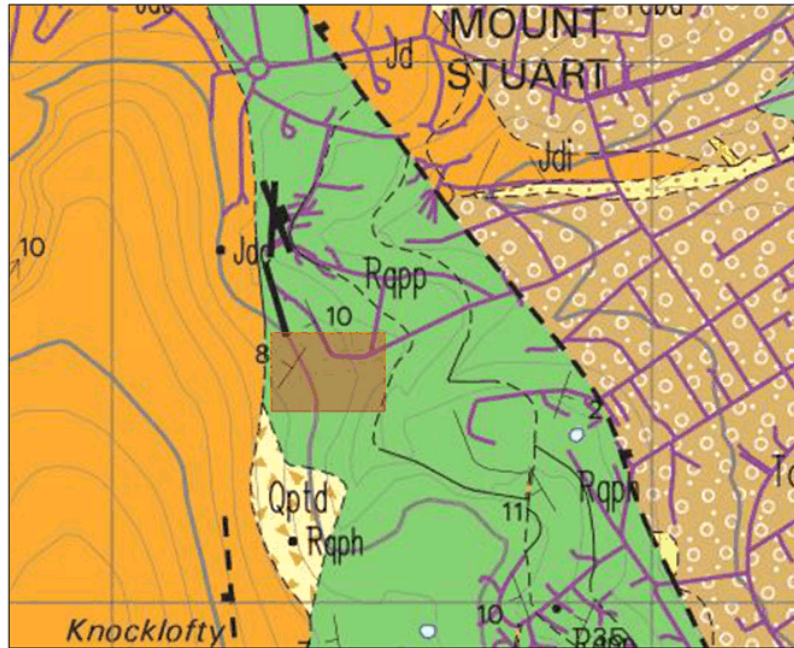


Table 1 – Typical soil conditions on site

| Depth (m) | USCS/Rock | Description |
|-------------|-----------|--|
| 0 – 0.20 | SC | CLAYEY SAND: dark brown, slightly moist, very dense, some fine to coarse gravel |
| 0.20 – 0.90 | CI | Sandy CLAY: orange-brown/grey/brown, slightly moist, very stiff, medium plasticity |
| 0.90 – 1.0 | MW | Moderately Weathered Rock (SANDSTONE): orange/yellow, dry, low to moderate rock strength. Refusal |

Soil Profile Notes

The site is situated on a mid-slope of ‘Knocklofty’ hill with a moderate to steep slope angle of approx. 20-30% with some undulations, the soil profile across the site is generally consistent and moderately shallow over weathered basement material of Triassic Sandstone, weathering degree is relatively uniform with some variables. The site has undergone

Geo-Environmental Solutions – 66 Summerhill Road - Geotechnical Assessment

previous excavation with isolated cut and fill evident, and prior removal of vegetation. From the field assessment there was no instability noted.

Geotechnical Assessment of site stability

Site and published geological information was integrated to complete a detailed geotechnical assessment of the site according to the principles outlined in AS1726-1993 *Geotechnical Site Investigations* and the *Australian Geomechanics Society* (2007).

Site location and context

The proposed development site is located on Triassic aged sandstone, in an upper slope position. The site has a moderately steep slope of up to 15°, and the slope morphology shows no visible signs of past land instability. The site is not in a declared landslip zone, but is close to an area mapped by Mineral Resources Tasmania (Mazengarb 2004) as having possible geological hazards (see figure 1). Therefore, in accordance with local government requirements an investigation of possible land instability hazards has been undertaken in the following sections.

Geological setting

The site is underlain by Triassic aged sandstone (knocklofty formation) which is known to be a stable foundation material and construction product where quarried. The rock at depth has a relatively high load point index, but the surface of the rock has generally undergone moderate weathering. The excavated profiles examined in the current development area appear to be stable in its present state. Therefore, the local geology confirms the general stable nature that sandstone is renowned for. Sites developing on sandstone on easterly facing slopes generally feature shallow residual soils less than 1m in depth with medium reactivity, therefore the parent material generally imparts a low geological hazard to a site. However, where deeper weathered soils or colluvial deposits overly the bedrock, then localised slope stability may be an issue as some of the dolerite soils can be prone to soil creep. The soils examined in site appear to be largely residual in their nature and the profiles are generally less than 1.0m in depth, therefore the risk posed by the underlying geology of the site is rated as low.

Geo-Environmental Solutions – 66 Summerhill Road - Geotechnical Assessment



Figure 1 – extract of landslide hazard area and proposed vegetation removal

Potential for landslip

The site has a moderately steep slope of approximately 10-15°, with vegetative cover of mixed scrub and a few large eucalypt species. The slope angle in the proposed construction area is far less than the modelled instability threshold for sandstone bedrock in the MRT hazard analysis. There was no evidence of landslip or soil creep, notably those trees still present on the site on the slope were growing straight and vertical. Further, the ground surface showed no hummocks, terracing or patterns from past slips or soil creep. The site therefore appears stable in its present state, and there is no evidence of mass movement of soil materials on site. There is however evidence of previous construction/demolition and excavation with cut and fill on parts of the site. This historical activity has not resulted in any significant instability and it appears much of the material has remained in place for a considerable amount of time. The assessment of possible land instability has been undertaken for the most likely failure mechanisms, a shallow debris slide in soil material on site.

Geo-Environmental Solutions – 66 Summerhill Road - Geotechnical Assessment

Debris Flow hazard

The possibility of a debris flow in the highly weathered upper layer of the soils and weathered rock in the local area has been modelled due to the moderate slope. In particular where excavation and filling has occurred there is a small possibility of shallow seated instability if the ground cover conditions altered. Field inspection on the subject site revealed predominantly shallow residual soils overlying weathered sandstone with an inherent low potential for slope movement. Therefore, any shallow surface instability would only have some chance of occurring where deep excavation and poorly placed fill is present. The proposed future residential construction is likely to result in some disturbance to the site in its present state, and as such the risk of slope instability has been modelling for this scenario.

Based upon the scale of development and the site conditions the risk is considered low and acceptable (see quantitative risk model).

Potential for vegetation removal to cause instability & erosion

There is open forest present on site, the removal of which is likely to only have a small effect upon surface soil stability. The shallow sandstone-based soils are well structured and resistant to erosion, therefore the risk of site instability and erosion from vegetation removal is low and acceptable. Care must be taken following the removal of trees in any future construction footprint to ensure any voids and roots are removed, and all foundations in the area must ensure founding into underlying rock. It is also recommended that any root balls removed are backfilled with suitable material to prevent any water accumulation and potential for weakening of soils on the site. The risk of soil erosion should not be ignored either, such that I recommend standard Soil and Water Management Planning (SWMP) is undertaken prior to any earthworks. The SWMP must also address the potential for liberated soil and rocks to move downslope and ensure adequate barriers are in place during excavation.

Geotechnical Risk Assessment

The following quantitative risk assessment is based upon the Australian Geomechanics Society Sub-committee report (March 2007) Landslide Risk Management Concepts and Guidelines. The risk assessment has been undertaken for the most limiting hazard identified for the site – potential for shallow seated instability – debris flow.

Geo-Environmental Solutions – 66 Summerhill Road - Geotechnical Assessment

Landslide Risk Management Model

Adapted from AGS Sub-committee (March 2007) Landslide Risk Management Concepts and Guidelines.

Date 16/04/20

Site 66 Summerhill Road

Project Proposed residential subdivision

Scoping Residential dwelling on Triassic Sandstone with slope angle up to 15°

Hypothetical Shallow (<2m deep) slide develops in soil/fill on site above adjacent properties

1. **Hazard Identification**

| | |
|--|-------------------------------------|
| a. Type of potential instability | Debris slide |
| b. Location | down-slope of proposed dwelling |
| c. Estimated area affected(m²) | 100 (10m across and 10 m downslope) |
| d. Estimated volume (m³) | 100 (soil/sediments 1 m deep) |
| e. Initiating event(s) | Extreme heavy/prolonged rainfall |
| f. Estimated velocity of movement | Slow (5×10^{-5} mm/sec) |
| g. Estimated travel distance | 10m |

2. **Frequency Analysis**

| | |
|--|--|
| a. Estimated frequency of event (P_H) | 0.002 (1 in 500 yr event) |
| b. Justification of frequency | Stability of sediments on site & existing cuttings |

3. **Consequence Analysis**

| | |
|--|---|
| a. Element at risk | Property, services & occupants |
| b. Value at risk (E) | \$300 000 (dwelling) |
| c. Temporal probability (P_{T:S}) | 0.5 (probability of occupation) |
| d. Property vulnerability (V_{P:S}) | 0.10 (proportion of property value lost) |
| e. Probability of effect (P_{S:H}) | 0.10 (probability of debris affecting building) |
| f. Human vulnerability (V_{D:T}) | 0.001 (probability of loss of life) |

4. **Quantitative Risk Calculation**

| | |
|---|--------------------------------------|
| a. Property [R_{prop} = (P_H) x (P_{S:H}) x (V_{P:S}) x (E)] | = \$15 (annual loss of dollar value) |
| b. Loss of life [R_{DI} = (P_H) x (P_{S:H}) x (P_{T:S}) x (V_{D:T})] | = 2.5×10^{-7} |

5. **Semi-quantitative risk estimation for property**

| | |
|-----------------------------------|--|
| a. Likelihood of event | Level E- Rare (exceptional conditions req) |
| b. Consequence to property | Level 4 – Minor (limited damage) |
| c. Combined level of risk | Very Low – risk acceptable |

6. **Sensitivity Analysis**

Most uncertainty surrounds frequency of event (item 2a)

7. **Risk Evaluation (should the risk be accepted, reduced, avoided or rejected?)**

From the assessment in 4a&4b the risk to life and property is acceptable

8. **Risk Treatment**
 - a. **Options**

| | |
|---------------------|---|
| Accept risk | Recommended |
| Avoid risk | |
| Reduce likelihood | Yes – utilise drainage controls on site |
| Reduce consequences | yes – footing design based upon best practice |
| Transfer | |
 - b. **Treatment Plan**

Installation of appropriate drainage
Stormwater and wastewater correctly connected to council services
Any site cuts to be adequately retained and fill minimised
 - c. **Implement Plan**

Yes
 - d. **Monitoring**

Project monitoring required – professional supervision of sensitive earthworks recommended

Geo-Environmental Solutions – 66 Summerhill Road - Geotechnical Assessment

Conclusions

The geotechnical risk associated with residential development on the site is classified as **Very low** according to *Australian Geomechanics Society* Guidelines and **minor** according to *AS1726-2011 Geotechnical Site Investigations*.

- The development is not expected to have any significant effect upon land stability on the subject or neighbouring properties.
- All excavation and placement of fill should be in accordance with Australian Geomechanics Society Guidelines for Hillside Construction (please refer to appendix 2) - In particular batter angles of 45° in natural soils and 70° in weathered sandstone should not be exceeded unless cuts are retained where over 1m height
- Any controlled fill on site should have a Plasticity Index of less than 10 and ensure adequate compaction in controlled layers
- All earthworks on site must comply with AS3798-2007 and sediment and a sediment and erosion control plan should be implemented on site during and after construction
- In particular the felling any clearing of any large trees should ensure adequate controls are in place
- All stormwater should be immediately directed to appropriately designed absorption areas upon the construction of hard surfaces to minimise any possible water accumulation and excess flows onto the slopes below
- It is concluded that the development proposal complies with the landslide hazard code of the Hobart City Interim Planning Scheme 2015

It is my opinion that the risk of land instability will not increase substantially as a result of the proposed development provided that current best practice for construction on sloping sites and soil and water management practices are followed.

I do however recommend that during construction that I and/or the design engineer be notified of any major variation to the foundation conditions as predicted in this report.



Dr John Paul Cumming B.Agr.Sc (hons) PhD CPSS GAICD
Environmental and Engineering Soil Scientist

Geo-Environmental Solutions – 66 Summerhill Road - Geotechnical Assessment

Appendix 1 – Geotechnical risk assessment terminology

Geotechnical Risk Assessment – Example of Qualitative Terminology

Adapted from AGS Sub-committee (March 2007) Landslide Risk Management Concepts and Guidelines.

Qualitative Measures of Likelihood

| Level | Descriptor | Description | Indicative Annual Probability |
|-------|-----------------|---|-------------------------------|
| A | Almost Certain | The event is expected to occur | $> \sim 10^{-1}$ |
| B | Likely | The event will probably occur under adverse conditions | $\sim 10^{-2}$ |
| C | Possible | The event could occur under adverse conditions | $\sim 10^{-3}$ |
| D | Unlikely | The event might occur under very adverse circumstances | $\sim 10^{-4}$ |
| E | Rare | The event is conceivable only under exceptional circumstances | $\sim 10^{-5}$ |
| F | Barely Credible | The event is inconceivable or fanciful | $\sim 10^{-6}$ |

Note: “~” means approximate

Qualitative Measures of Consequences to Property/Element at risk

| Level | Descriptor | Description |
|-------|---------------|---|
| 1 | Catastrophic | Structure completely destroyed or large scale damage requiring major engineering works for stabilization. |
| 2 | Major | Extensive damage to most of structure, or extending beyond site boundaries requiring significant stabilization works. |
| 3 | Medium | Moderate damage to some of structure, or significant part of site requiring large remedial works. |
| 4 | Minor | Limited damage to part of structure or part of site requiring some reinstatement or remedial works. |
| 5 | Insignificant | Little damage or effect. |

Note: The “Description” may be edited to suit a particular case.

Qualitative Risk Analysis Matrix – Level of Risk to Property/Element at Risk

| Likelihood | Consequences to Property | | | | |
|--------------------|--------------------------|----------|-----------|----------|------------------|
| | 1: Catastrophic | 2: Major | 3: Medium | 4: Minor | 5: Insignificant |
| A – Almost Certain | VH | VH | VH | H | M or L |
| B – Likely | VH | VH | H | M | L |
| C – Possible | VH | H | M | M | VL |
| D – Unlikely | H | M | L | L | VL |
| E – Rare | M | L | L | VL | VL |
| F – Not Credible | L | VL | VL | VL | VL |

Risk Level Implications

| Risk Level | Example Implications |
|------------|---|
| VH | Very High Risk Extensive detailed investigation and research, planning and implementation of treatment options essential to reduce risk to acceptable levels; may be too expensive and not practical |
| H | High Risk Detailed investigation, planning and implementation of treatment option required to reduce risk to acceptable levels |
| M | Moderate Risk Tolerable provided treatment plan is implemented to maintain or reduce risks. May be acceptable. May require investigation and planning of treatment options. |
| L | Low Risk Usually acceptable. Treatment requirements and responsibility to be defined to maintain or reduce risks. |
| VL | Very Low Risk Acceptable. Manage by normal site maintenance procedures. |

- Notes:**
- (1) The implications for a particular situation are to be determined by all parties to the risk assessment; these are only given as a general guide.
 - (2) Judicious use of dual descriptors for likelihood, Consequence and Risk to reflect the uncertainty of the estimate may be appropriate in some cases

Appendix 2 – Guidelines for Hillside Construction

PRACTICE NOTE GUIDELINES FOR LANDSLIDE RISK MANAGEMENT 2007

APPENDIX G - SOME GUIDELINES FOR HILLSIDE CONSTRUCTION

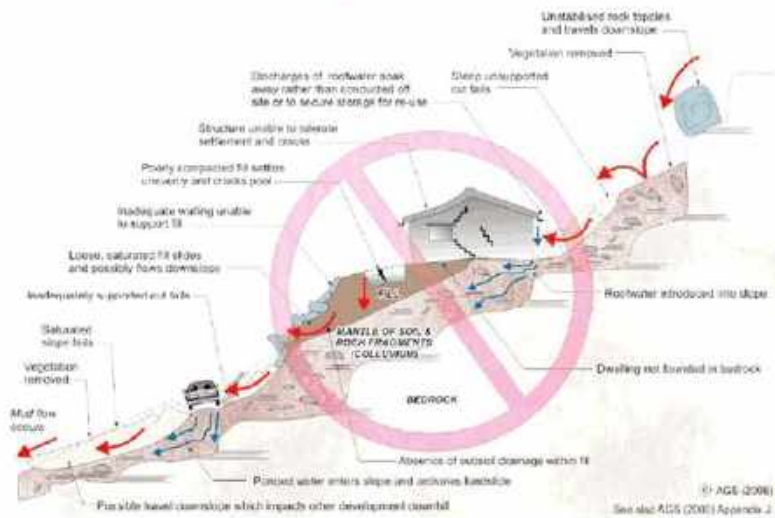
| ADVICE | GOOD ENGINEERING PRACTICE | POOR ENGINEERING PRACTICE |
|---|---|---|
| GEO-TECHNICAL ASSESSMENT | Obtain advice from a qualified, experienced geotechnical practitioner at early stage of planning and before site works. | Prepare detailed plan and start site works before geotechnical advice. |
| PLANNING | | |
| SITE PLANNING | Having obtained geotechnical advice, plan the development with the risk arising from the identified hazards and consequences in mind. | Plan development without regard for the Risk. |
| DESIGN AND CONSTRUCTION | | |
| HOUSE DESIGN | Use flexible structures which accommodate properly designed brickwork, masonry or steel frames, timber or panel cladding. Consider use of split levels. Use decks for recreational areas where appropriate. | Fixed plans which require extensive cutting and filling. Movement intolerant structures. |
| SITE CLEARING | Retain natural vegetation wherever practicable. | Indiscriminately clear the site. |
| ACCESS & DRIVEWAYS | Satisfy requirements below for cuts, fills, retaining walls and drainage. Council specifications for grades may need to be modified. Driveways and parking areas may need to be fully supported on piers. | Excavate and fill for site access before geotechnical advice. |
| EARTHWORKS | Retain natural contours wherever possible. | Indiscriminatory bulk earthworks. |
| CUTS | Maximise depth. Support with engineered retaining walls or batter to appropriate slope. Provide drainage measures and erosion control. | Large scale cuts and benching. Unsupported cuts. Ignore drainage requirements. |
| FILLS | Maximise height. Strip vegetation and topsoil and key into natural slopes prior to filling. Use clean fill materials and compact to engineering standards. Batter to appropriate slope or support with engineered retaining wall. Provide surface drainage and appropriate subsurface drainage. | Loose or poorly compacted fill, which if it fails, may flow a considerable distance including onto property below. Block natural drainage lines. Fill over existing vegetation and topsoil. Include stumps, trees, vegetation, topsoil, boulders, building rubble etc in fill. |
| ROCK OUTCROPS & BOULDERS | Remove or stabilise boulders which may have unacceptable risk. Support rock faces where necessary. | Disturb or undercut detached blocks or boulders. |
| RETAINING WALLS | Engineer design to resist applied soil and water forces. Found on rock where practicable. Provide subsurface drainage within wall backfill and surface drainage on slope above. Construct wall as soon as possible after cut/fill operation. | Construct a structurally inadequate wall such as sandstone flagging, brick or unreinforced blockwork. Lack of subsurface drains and weepholes. |
| FOOTINGS | Found within rock where practicable. Use rows of piers or strip footings oriented up and down slope. Design for lateral creep pressures if necessary. Backfill footing excavations to exclude ingress of surface water. | Found on topsoil, loose fill, detached boulders or undercut cliff. |
| SWIMMING POOLS | Engineer designed. Support on piers to rock where practicable. Provide water under-drainage and gravity drain outlet where practicable. Design for high soil pressures which may develop on upland side whilst there may be little or no lateral support on downhill side. | |
| DRAINAGE | | |
| SURFACE | Provide at top of cut and fill slopes. Discharge to street drainage or natural water courses. Provide general falls to prevent blockage by siltation and incorporate silt traps. Line to minimise infiltration and make flexible where possible. Special structures to dissipate energy at changes of slope and/or direction. | Discharge at top of fills and cuts. Allow water to pond on bench areas. |
| SUBSURFACE | Provide filter around subsurface drain. Provide drain behind retaining walls. Use flexible pipelines with access for maintenance. Prevent inflow of surface water. | Discharge roof runoff into absorption trenches. |
| SEPTIC & SULLAGE | Usually requires pump-out or mains sewer system; absorption trenches may be possible in some areas if risk is acceptable. Storage tanks should be water tight and adequately founded. | Discharge effluent directly onto and into slopes. Use absorption trenches without consideration of landslide risk. |
| EROSION CONTROL & LANDSCAPING | Control erosion as this may lead to instability. Revegetate cleared area. | Failure to observe earthworks and drainage recommendations when landscaping. |
| DRAWINGS AND SITE VISITS DURING CONSTRUCTION | | |
| DRAWINGS | Building Application drawings should be viewed by geotechnical consultant. | |
| SITE VISITS | Site Visits by consultant may be appropriate during construction. | |
| INSPECTION AND MAINTENANCE BY OWNER | | |
| OWNER'S RESPONSIBILITY | Clear drainage systems; repair broken joints in drains and leaks in supply pipes. Where structural distress is evident see advice. If seepage observed, determine causes or seek advice on consequences. | |

PRACTICE NOTE GUIDELINES FOR LANDSLIDE RISK MANAGEMENT 2007

EXAMPLES OF **GOOD** HILLSIDE PRACTICE



EXAMPLES OF **POOR** HILLSIDE PRACTICE





28 September 2020

City Planning Unit
Hobart City Council
GPO Box 503
HOBART TAS 7000

Attn: Sarah Crawford
By email: crawfords@hobartcity.com.au

Dear Sarah,

**PSA-2018-2 – 66 SUMMERHILL ROAD
RESPONSE TO INFORMATION SHEET RLUS1**

I refer to your email of 2 September 2020 and a request for further information to satisfy *Information Sheet RLUS 1 – Reviewing and Amending the Regional Land Use Strategies* in order to progress with the formal consideration of PSA-18-2 to rezone part of 66 Summerhill Road to Low Density Residential.

While I understand that following conversations with the Planning Policy Unit you are now of the opinion that the further information may not be necessary, I provide the following response in any event.

- 1.1 The Southern Tasmania Regional Land Use Strategy (STRLUS) was initially declared on 27 October 2011 after a lengthy 2 year preparation. Since its initial declaration, there has been one housekeeping review in 2013 followed by a series of minor 'ad-hoc' amendments in response to various requests as well as the inclusion of an addendum to assist in the implementation of the Tasmanian Planning Scheme.
- 1.2 The STRLUS provides for an overall settlement network and growth strategy for all settlements within the southern region. At its core is the Greater Hobart area. The growth strategy and growth scenario for Greater Hobart is by way of an Urban Growth Boundary (UGB) shown in Map 10 of the STRLUS.
- 1.3 The UGB was identified in the original version of the STRLUS on the basis of a dwelling yield analysis (Background Report No. 14), a forecast of 26,500 additional dwellings for Greater Hobart and a policy goal of 50:50 ratio of infill development to greenfield development.
- 1.4 Importantly the UGB includes around a 15-year supply of land and was intended to be maintained as a rolling supply of land. Maintaining a forward rolling supply of land is absolutely critical to effective and orderly land release that does not have adverse effects on affordability of the housing supply. Sufficient supply within the UGB must be maintained in order to accommodate the relatively long lead times required to progress land through the rezoning, subdivision and land release process and provide sufficient options within the market to suit a broad range of housing needs. The UGB boundary was intended to be a 'management' tool to control this orderly release of new land; not a 'restrictive' tool requiring all land to be converted and used for urban purposes before more is released.
- 1.5 The actual setting of the UGB was a relatively inexact 'science'. It was a GIS based exercise that took into account the best available data on capacity of infrastructure, existing and recognised values (such as

- biodiversity, heritage and landscape) and potential hazards and mapping on existing residentially zoned land. There were clearly some constraints associated with this data.
- 1.6 At the time of its preparation (first half of 2011), the UGB also took into account known draft amendments already initiated and certified, as well as seriously entertained rezoning proposals, as far as these were practicable and consistent with other policies in the Regional Land Use Strategy.
- 1.7 Because of potential limitations of the data used to support the mapping, it was recognised by the authors at the time that the UGB was not spatially perfect. Hence the notation on Map 10 in the original version of the UGB that the features on the map are indicative and require local investigations such as the identification of values, hazards and other constraints to determine their specific application.
- 1.8 It should also be recognised that the identification of greenfield areas in the UGB was focused on either single very large lots or conglomerations of small lots with significant potential dwelling yields. The potential dwelling yields from this land was a theoretical calculation assuming net densities of 15 dwelling per hectare.
- 1.9 It was envisaged at the time that the STRLUS was prepared that the refinement of the Urban Growth Boundary would occur through the preparation of zoning maps in the new planning schemes. There was a clear intention at that time that the UGB should not be read to the cadastral level and that there would be adjustments once read at a site level, taking into account specific site analysis.
- 1.10 Unfortunately in 2013, at the behest of some Council's in order to provide an 'easier' application, the UGB was changed from a 'fuzzy' line to a 'black and white' line in the absence of any further site specific analysis. This has in my opinion caused an unreasonable degree of regulatory burden on proposed small scale land releases around the UGB, such as the one proposed under this amendment.
- 1.11 The dwelling yield analysis informing the UGB was also a desktop GIS exercise to determine vacant land parcels across the range of residential zones in the Greater Hobart area at that time. To determine developability of vacant land a 5% sample of the different categories was undertaken. All in all the dwelling yield analysis while important and useful was still high level being premised on the basis of broad assumptions.
- 1.12 The 26,500 additional dwelling forecast was on the basis of predicted growth (which is outlined in Background Report No.2: The Regional Profile), predicted demographic changes (such as a reduction in average household size), as well as a known undersupply of housing at that time. The population forecast came from the then Demographic Change Advisory Council under the auspices of the Department of Treasury and Finance. It assumed that across Greater Hobart the population was to increase by 38,698 persons through to 2032, of which 16,715 would be by 2017 (based on the medium scenario). As of the 2016 Census, the population of Greater Hobart has increased to 222,356 persons from 200,525 persons at the 2006 Census or 205,113 persons which was the estimated residential population in 2009. The population increase in Greater Hobart since the STRLUS was prepared has been greater than what was predicted. By 2016 the predicted population increase of 16,715 persons had already been exceeded.
- 1.13 The Department of Treasury and Finance in 2019 released population projections for Tasmania and local government areas. This population projects unfortunately do not provide a clear understanding for the Greater Hobart area which includes all of four LGAs and part of two LGAs. However, as an indication across those 6 LGAs, the population is predicted to grow by an additional 37,179 persons (based on the medium scenario) from the 2016 actual population.
- 1.14 In summary the STRLUS predicted a population increase of 38,698 across Greater Hobart from 2008 to 2032. We have already experienced a known increase to 2016 of 16,715 persons and the new Department of Treasury and Finance predicts a further 37,179 persons, in total being 53,894 additional persons by 2032.

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- 1.15 It is undeniable that the growth experienced over the last 10 years and that predicted to continue through to 2032 under the Department of Treasury and Finance's predictions well exceed the growth analysis underlying the setting of the UGB. This alone should be sufficient justification to require a complete review of the STRLUS.
- 1.16 Turning more specifically to the subject site (66 Summerhill Road), the proposed amendment would facilitate potentially 3 additional lots suited to single dwellings and in an area in close proximity to services and the largest activity centre for the Southern Tasmania region (indeed for some people in walking distance). This is 3 additional dwellings of the 26,500 forecast additional dwellings or 0.01% of the dwelling demand underlying the UGB. In anyone's mind this is negligible and has no affect on the overall attainment of the Residential and Settlement policies within the STRLUS.

In summary, it is my opinion that there is clear and apparent justification for amending the UGB in the STRLUS to accommodate the proposed amendment.

For the record, I do note that the requirements outlined in Information Sheet RLUS No. 1 are very burdensome for individual proponents and completely out of proportion with the scale of the majority of land releases across Greater Hobart. It does not take into account the approach and data that informed the setting of the policies under the STRLUS and in particular the UGB. That the UGB continues to be maintained as a hard and fast 'black and white' line when it was never designed to be such in the continuing delay full review of the STRLUS, is in my opinion particularly problematic for effective and sound strategic planning that keeps pace with changing conditions across the urban environment.

Our discussions with the Planning Policy Unit indicates that a full review of the STRLUS is still approximately 5 years away. If the economic and social consequences of continuing to plan for what is Tasmania's largest urban area and an important 'engine of economic growth' (including the current very significant roll out of transport related infrastructure), on the basis of a Strategy which is so clearly outdated, has serious long term consequences and is hardly 'sound strategic planning'.

Instead collectively Tasmania continues to focus its planning effort on regulatory changes and development assessment rather than strategic planning systems. The latter would not only bring significant cost-benefit to the Tasmanian economy, but overtime be the most effective way to reduce regulation.

I trust that Council can progress the proposed amendment for 66 Summerhill Road under PSA-18-02 through to initiation and certification along with a formal request from Council to amend the UGB. Should you have any queries please do not hesitate to contact me on 0409 787 715 or at emma@eraplanning.com.au.

Yours sincerely,



Emma Riley, RPIA (Fellow), GAICD
Director

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Environmental Development Planner Assessment

The applicant has requested that Council initiate an amendment to the planning scheme to rezone land at 66 Summerhill Road, West Hobart.

The land is currently zoned General Residential, Environmental Living and Environmental Management and it proposed to amend the zoning to Low Density Residential.

The effect of the rezoning would be provide greater flexibility for development of the lot.

Bushfire

All of the land is within a bushfire-prone area. A bushfire hazard management plan for an indicative four-lot subdivision was submitted to demonstrate the land can be developed with adequate bushfire risk mitigation measures.

The submitted BHMP indicates that hazard management areas based on BAL-19 construction could be contained within the lot boundaries for a four-lot subdivision with building envelopes close to the northern lot boundary. Future buildings will be required to have hazard management areas of 51m to the south-east and 23m to the south-west.

The additional area of the lot that would be required as a bushfire hazard management area (HMA) beyond that approved for the existing subdivision, based on the indicative building envelope for future dwellings is shown in Figure 1 below.

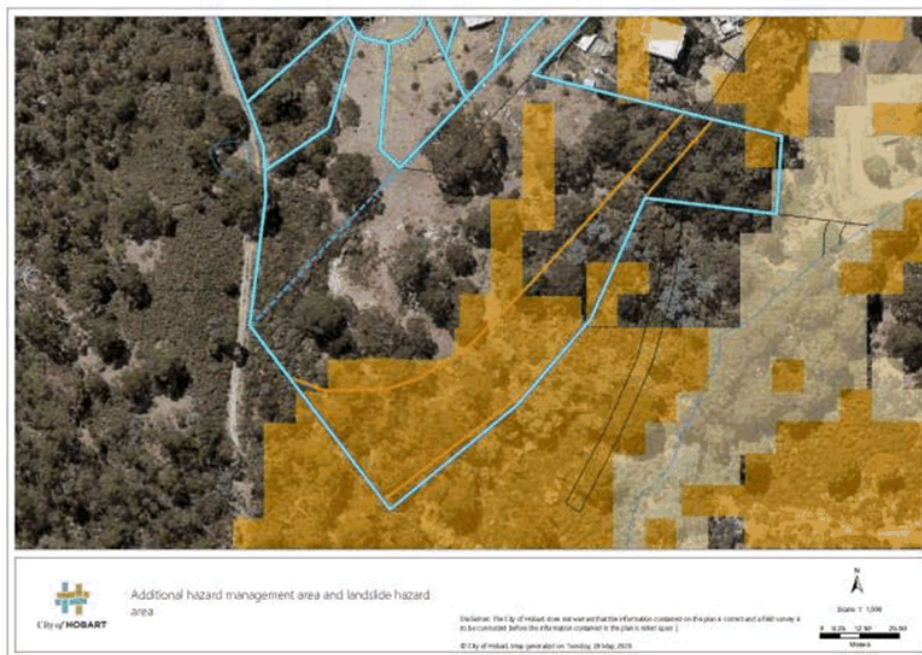


Figure 1: Additional area required for hazard management area (between orange lines)

Vegetation management requirements to establish the indicative HMA are discussed in

greater detail below with regard to biodiversity, however in summary the future development of the land will require the modification of vegetation to the northeast and northwest including reduction of fuel loads by the removal of trees, shrubs and ground-level fuels.

With regard to access, the submitted BHMP states the following:

Access to the land for future development will be from the end of newly formed cul-de-sac or from Summerhill Road via a right-of-way. All access requirements of PD5.1, Section E.1.6.2 and Table E2 can be satisfied for future site development (i.e. subdivision).

An indicative access design was submitted showing an access off the existing cul-de-sac serving four lots. The access design appears not to comply with the design parameters specified in the Bushfire Code, particularly with regard to the proposed inner radius of the bend. However, it appears there is ample room to redesign the access to comply with the design parameters.

With regard to fire-fighting water supply, the submitted BHMP states the following:

Water supply for fire-fighting will be available to the site through a reticulated system with water hydrants. As such all requirements PD5.1, Section E1.6.3 and Table E5 can be satisfied for future site development (i.e. subdivision).

All of the indicative building envelope is within 120m of fire hydrants in Summerhill Road and the new cul-de-sac. However, the hydrant in the cul-de-sac was not an element of the approved BHMP for the existing subdivision, and that BHMP proposed a hydrant at the entrance to the cul-de-sac as the cul-de-sac does not have the required turning area dimensions. The TFS was contacted to determine if the hydrant in the cul-de-sac could be relied upon to satisfy the water supply provisions of the Bushfire-prone Areas Code, and the advice was that '*given the cul-de-sac head is a no standing zone, we are satisfied it is adequate in terms of access to the hydrant in the cul-de-sac head and for appliance manoeuvring*'.

While the indicative building area is entirely within 120m of existing fire hydrants with hose paths over public land and the subject lot only, the TFS raised concern that boundary fencing between future lots could obstruct fire hose-lays to all areas of the indicative building envelope. This will certainly need to be addressed in any BHMP submitted for a future subdivision application however I am confident an acceptable solution can be found by the bushfire practitioner. A solution could be a prohibition on complete boundary fencing, a requirement for an unlocked gate through boundary fencing or alternatively reliance on static water supplies (e.g. tanks) rather than mains supply. Obstructions to hose lays are a standard issue that need consideration during any bushfire hazard management plan assessment.

It is recommended that advice be included to the applicant that this issue will need to be addressed as part of any future subdivision application.

Landslide

Parts of the lot are within Landslide Hazard Areas specified in the Landslide Code of the planning scheme (orange areas in Figure 1 above). This is a medium landslide hazard area due to the modelled risk of rockfall and debris flow (source area).

The indicative building envelope for future dwellings is wholly outside the landslide hazard area, so the main risk is that development works could increase the likelihood of a landslide occurring that impacts down-slope properties (e.g. vegetation removal in source area leads

to debris flow).

A landslide risk management report was submitted that concluded:

- the risk posed by the underlying geology of the site is rated as low;
- the shallow sandstone-based soils are well structured and resistant to erosion, therefore the risk of site instability and erosion from vegetation removal is low and acceptable; and
- the development is not expected to have any significant effect upon land stability on the subject or neighbouring properties.

Some recommendations are included in the report to further reduce the risk to 'as low as reasonably practicable'. These recommendations can be easily implemented.

Biodiversity

The Natural Values Assessment submitted for the subdivision application covers most of the land subject to the proposed rezoning. An addendum to that report covers the additional land subject to the proposed rezoning.

The findings of the NVA and addendum in relation to the land proposed for rezoning include:

- the land supports a native vegetation community ('*Eucalyptus globulus* dry forest/woodland') and areas that don't constitute native vegetation communities (refer to Figure 2 below);
- No threatened flora species were recorded during the survey and the species recorded within 1km of the site are all unlikely to occur on the site due to the highly-degraded nature of the vegetation.
- The site is heavily dominated by woody weeds with gorse dominant on the western perimeter of the vegetation and boneseed dominant on the southern and eastern portions of the area assessed. English broom and pampas grass are also scattered across the site. The complete dominance of these weeds across large portions of the property means that the native species have been suppressed.
- No threatened fauna species were recorded on the site.
- Four listed fauna species have previously been recorded within 1km of the site - *Chaostola* skipper, eastern quoll, swift parrot and eastern-barred bandicoot.

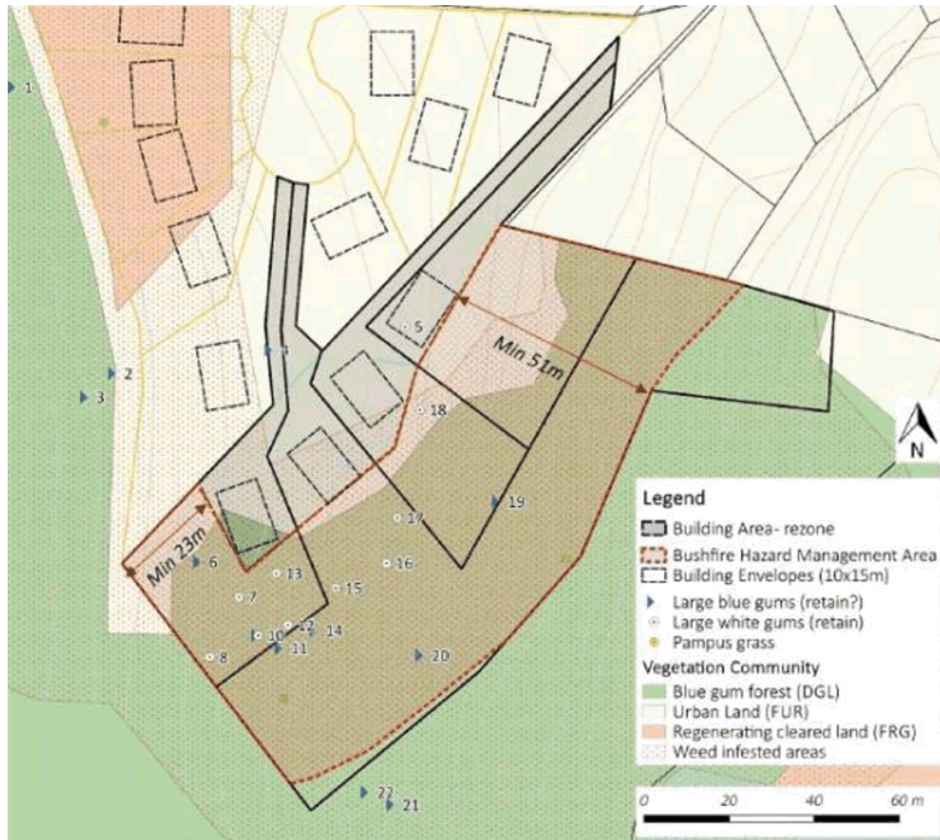


Figure 2: TASVEG mapping units (also showing mature trees, indicative subdivision and associated bushfire hazard management area)

It should be noted that not all mature trees on the site are shown on this map, and there are a number of mature trees in the north-eastern part of the lot on the lower slopes that are not shown.

Eucalyptus globulus dry forest/woodland ('DGL') is listed as a threatened native vegetation community under the *Nature Conservation Act 2002*. The DGL community on the land is described as follows:

This community occurs across the majority of the site and into the reserved land to the west... Blue gum is the dominant tree species although both white peppermint (E. pulchella) and white gum (E. viminalis) are present and in small areas may be dominant. The shrub layer is almost entirely dominated by boneseed, gorse and English broom... There are isolated occurrences of native cherry (Exocarpos cupressiformis), Prickly box (Bursaria spinosa), Blanketleaf (Bedfordia salicina) and silver banksia (Banksia marginata).

The ground layer in areas where weeds are not entirely dominant contains isolated occurrences of groundcover shrubs, native grasses and sedges such as peachberry heath (Lissanthe strigosa), native cranberry (Astroloma humifusum), spear grass (Austrostipa sp.), tussock grass (Poa rodwayi), sagg (Lomandra longifolia) and white flag iris (Diplarrena

moreaa).

The community is in poor condition due to the infestations of boneseed and gorse and other weeds including english broom (Cytisus scoparius), cotoneaster (Cotoneaster frigida), pampas Grass (Cortaderia selloana), blackberry (Rubus fruticosus) and forget me nots (Myosotis sylvatica).



Figure 3: Typical DGL vegetation on the lot



Figure 4: Typical DGL vegetation on the lot in former quarry site

Eucalyptus globulus dry forest and woodland has an approximate Tasmania-wide extent of 19 800 hectares. Of this, 25% of the community is mapped within the secure National Reserve System increasing to 29% in the wider Tasmanian Reserve Estate, which also includes informal and fixed-term reserves. In the Hobart Municipal Area, approximately 100ha of DGL vegetation has been mapped, or around 1% of the total mapped in Tasmania. Of the mapped community in Hobart, approximately 32% is located within reserves.

With regard to the long-term viability of the DGL community, the NVA includes the following statement:

Due to the high level of woody weeds in the site, only trees are likely to persist in the area to be cleared without significant long-term management. In its current form with a dominant understorey of gorse the persistence of native grasses is unlikely to occur.

The remaining 'FUR' areas are described as follows:

The north eastern section of the site is classified as FUR as it has been cleared of most native vegetation including most trees. The remaining ground layer is predominately exotic grasses and plants including boneseed, gorse and broom... There are scattered regrowth blue gums and silver wattle around the edge of the site and one mature blue gum and white gum (with hollows) in the southern end of the site.

It should be noted that the white gum and blue gums referred to are not currently within a biodiversity protection area, however they are on, or at least partially on, the land proposed for rezoning.



Figure 5: Extent of Biodiversity Protection Area on lot and location of large White Gum with hollows

With regard to the general habitat values of the vegetation, the NVA makes the following comments:

The native vegetation on the site provides foraging habitat for a range of common fauna species such as wallabies and possums and variety of native bird, reptile, and invertebrate species. The habitat is part of a large intact area of vegetation on the eastern side of Knocklofty Reserve.

There are scattered blue gums and the occasional white gum present on the site which provide potential feeding habitat for the swift parrot. A mature white gum with hollows and a mature blue gum are present within the cleared land that is zoned as general residential...

The vegetation also provides some foraging and shelter habitat for the eastern barred bandicoot as the bandicoot may shelter in the bushland vegetation (including amongst woody weeds such as gorse) and forage over the cleared land at night. No potential denning habitat for the Tasmanian devil occurs on the site.

With regard to the four threatened species previously recorded from within 1km of the site, the NVA makes the following comments:

Chaostola skipper - Specie relies on Gahnia spices. Small number of G. radula within survey site however no sign of this species present

Eastern quoll - Site provides habitat for this species and likely to occur on site. Impacts of residence will be the removal of small area of forest only and no significant habitat located in this area.

Swift parrot - This species has a strong association with blue gum and black gum which provide their primary foraging resource. Site contain a number of saplings and scattered mature trees within the land zoned general residential. The loss of saplings will not significantly impact on current foraging habitat but will remove potential future foraging habitat.

Eastern-barred bandicoot - Widespread and common species. Likely to occur on site. Loss of vegetation associated with HMA will not impact on this species.

The NVA addendum summarises the impact of future development (based on the indicative subdivision arrangement) as follows:

Given the steep slope of most of the land any residential development would be restricted to the hill top. The natural values of the hill top area are limited to an isolated white gums and blue gums over introduced woody weeds, grasses and herbs...

Due to the bushfire prone nature of the surrounding vegetation any future development of residential lots would require bushfire hazard management areas to be established around dwellings.

Hazard Management Areas (HMA) for any new lots within the rezoned area would extend downslope for a minimum distance of 51m and across and up slope for 23m from the edge of designated building envelopes...

The majority of the HMA downslope and across slope contains degraded DGL vegetation. This vegetation would need to be modified to reduce fuel loads in the event of development on the hilltop. Modification of the vegetation would include the removal of most understorey vegetation and the thinning of the trees to reduce the canopy density and separation trees. As the understorey is dominated by woody weeds the clearance of the understorey will not have significant environmental impact.

Within the HMA larger blue gums and white gums can be retained provided they do not overhang dwellings, separation between canopies is established and maintained (min 2-6m) and have branches below 2m removed. Smaller eucalypts and silver wattles would need to be removed to reduce fuel loads however. All significant trees within the rezone area were plotted during the site survey... The majority of large the trees could be retained within the HMA for hence most important natural values of the hills side can be retained. The management of the understorey would remove a significant seed source for weed species and contribute to the ongoing management of the intact vegetation within the adjacent Knocklofty Reserve.

An estimated 3000m² of degraded regrowth DGL vegetation will need to be managed to significantly reduce the fuel loads...

Provided larger blue gums are retained within the HMA to protect the foraging habitat for the endangered swift parrot, the impacts will be limited. The majority of the vegetation to be removed to reduce the fuel load will be woody weed species. Some clusters of understorey shrubs can be retained or planted within the HMA provided clusters are less than 10m², there is separation between clusters (minimum 10m) and they are not located under retained trees.

The removal of the woody weeds within the HMA will reduce shelter habitat for mammals such as the eastern barred bandicoot and wallabies. This is unlikely to have a significant impact these species as there are large areas of similar habitat within the adjoining HCC land and the management of the HMA area is likely to lead to an increased foraging resource for these species...

An estimated 3850m² of DGL will be impacted by the subdivision which represents < 0.2% of the DGL within local area. The vegetation to be modified is also degraded by weeds including gorse and as such the vegetation clearance will be largely restricted to weed control and removal of the shrub layer with any mature blue gums to be retained. The blue gums within the HMA are generally small (<10m – 15m high) and provide a limited foraging resource for the swift parrot. Any larger blue gum trees within the HMA will be retained.

It should be noted that approximately two thirds of the indicative HMA for future dwellings on the land is within the approved HMA for the existing subdivision, however the lower slope supports more vegetation than the upper slope.

It should also be noted that approximately 500m² of that additional HMA area is not covered by the Biodiversity Protection Area overlay, so current opportunities to enforce retention of that vegetation are limited (refer to Figure 5 above).

While land use planning decisions should generally try to avoid placing threatened native vegetation communities at risk of further decline, the vegetation on this land a poor candidate for the biodiversity conservation of this community generally. The vegetation community has been substantially modified through historical disturbance and weed infestation and does not reflect an intact DGL community. Based on the submitted natural values assessments, the weed infestation is so severe that in the short term the vegetation would be reduced to a native canopy with an exotic understorey. In the long term, if the weed infestation is not controlled it is reasonably likely that the canopy will be lost as the existing trees die and the exotic understorey precludes recruitment of new trees.

It is likely that the vast majority of large trees on the lot could be retained if the lot was developed for several dwellings. Several may need to be removed, however some of these trees are not within a Biodiversity Protection Area so are afforded little protection currently. While some native saplings and understorey vegetation would need to be removed to establish bushfire hazard management areas, for a large part the HMA can be established through the removal of exotic species.

If it is proposed to rezone the land, Council could recommend that those parts of the lot not currently within the Biodiversity Protection Area overlay be included, providing much greater protection for that vegetation. That vegetation includes very large white gum which may represent the most significant specific value on the lot from a conservation perspective. The tree has a diameter of 1.5m and contains hollows that will provide important habitat for local fauna. Protection of this tree and other vegetation outside the BPA would go a considerable way in offsetting the impact of any future development of the land.

Another conservation advantage of allowing the land to be developed is that any approval could be conditional upon the implementation of a weed management plan to address the current weed infestation. This would not only benefit the condition of the community on the lot, but also reduce the risk of weed spread to the neighbouring Council land which also supports DGL vegetation. Even if not subject to a weed management plan, the weed infestation is likely to be reduced if the land is developed given the requirements for bushfire hazard management and landowner's personal motivations for managing weeds.

The vegetation is not considered to be highly significant habitat for fauna, and the majority of

the blue gums could be retained meaning a food source for the endangered swift parrot would not be lost.

On balance, the proposed rezoning is supported from a biodiversity perspective, subject to the lot (excluding access strip) being included within the biodiversity protection area overlay, because:

- the area of DGL vegetation is relatively small, and an insignificant proportion of the total area of this community in the Municipality and the State;
- the community is significantly degraded and unlikely to persist in the long-term without concerted active management;
- much of the land is within the approved bushfire hazard management area of the existing subdivision;
- any future proposal to clear vegetation on the land would be subject to assessment under the Biodiversity Code;
- development of the land will provide an opportunity to address the weed infestations on the lot;
- it would provide an opportunity to provide protection for the significant white gum on the lot; and
- the mature trees on the lot could largely be retained.

Waterway

While a development proposal on the land is likely to require assessment against the Waterway and Coastal Protection Code, I am confident an application can comply with the Code provisions and that the land can be developed without unacceptable impacts upon Providence Valley Rivulet. The minimum setback of the lot from the creek is approximately 40m.

Recommendation

The proposed rezoning is supported subject to amendment of the Biodiversity Protection Area overlay to include the entirety of the lot excluding the access strips.

Advice to applicant

Please note that the submitted indicative access design may not comply with the relevant standards of the Bushfire-prone Areas Code. The access off the existing *cul-de-sac* appears to serve three or more properties and is longer than 30m so it is understood that the access would have to comply with the specifications for Element D in Table E2 of the Code. Element D requires private accesses to have curves with an inner minimum radius of 10m, however the submitted plans appear to show a curve with a radius of less than 10m. Therefore the access design may need to be amended or compliance with the relevant performance criterion certified.

The Natural Values Assessment that was submitted as part of the previous subdivision for 9 lots plus balance at 66 Summerhill Road (PLN-16-1296) is attached for reference.



Natural Values Report

For proposed 9 lot subdivision at 66 Summerhill Road, West Hobart



For: P. Banks, S. Rose, D & K Miller

December 2016 (ver 2)

Project No. ED1603



Level 1, 32 Murray Street, Hobart – andy.welling@enviro-dynamics.com.au

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By: probertr Permit #: PLN-16-1296

Date: 19/2/2018

Natural Values Report for proposed subdivision at 66 Summerhill Road, West Hobart

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Natural Values Report for proposed subdivision at 66 Summerhill Road, West Hobart



1. Introduction

The following *Environmental Values Report* has been carried out as a requirement of a subdivision application under the Hobart Interim Planning Scheme (HIPS) 2015. The site at 66 Summerhill Road, West Hobart (PID 5560461; Grid ref. 524470E, 5252465N – GDA94) is partially zoned ‘General Residential’ in the northeast corner of the site (approx. 1.7 ha) and ‘Environmental Management’ across the remaining approx. 8.7 ha. The land has a Biodiversity Protection Area (BioPA) across the environmental management zone and Landslide Hazard Areas (LHA) associated with steeper parts of the site. Due to the presence of the BioPA a ‘Natural Values Assessment’ (as per E10.0 Biodiversity Code) is required to assess the impacts of the subdivision.

Property Information

The 10.4 ha site (approx.) is located at the west end of Summerhill Road and extends from the road up the hill slope to the Knocklofty Reserve boundary (Figure 1).

The site contains a derelict building adjacent to Summerhill Road. There is cleared land in the vicinity of the building and across the General Residential zone portion of the site. The site is bisected by an access track which runs from the southern boundary through to the northern boundary and onto Weerona Avenue, Mount Stuart. The site has an east facing slope except in the southeast corner where a gully causes the slope to face north. The majority of the site contains intact native vegetation (Figure 2). However weed infestations are dense along the access track and on the eastern side of the access track.

The site is bordered by Knocklofty Park to the west, south and southeast. Along the middle of the eastern boundary the adjoining land is zoned Environmental Living and consists of an old quarry, Telstra Utilities and Providence Valley Rivulet. Adjacent to the northeast boundary of the site are existing residences at the top of Summerhill Road (Figure 2).

An assessment of the natural values on the site was conducted on the 19th July 2016. The assessment was restricted to the area of the site that is zoned as environmental management and is within the proposed bushfire hazard management area for the proposed subdivision. The balance of the land to the west – south west of the development area was not surveyed. Within


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the survey area the broad vegetation communities were determined, vascular plants and significant fauna habitat assessed and the impact of the proposed subdivision investigated.

Whilst the natural values assessment is not required for the land zoned as general residential, an assessment of the declared weeds present was undertaken during the survey.

Limitations of the survey

Whilst every effort was made to compile a complete list of vascular plant species occurring at the site, limitations of the survey method (Time Meander Method), seasonal conditions and the timing of the survey means that additional flora species may be present on the site and be revealed during subsequent surveys.



Figure 1 - Location Plan (Source LIST 2016)



2. Natural Values Assessment

Vegetation Communities

The site contains one native vegetation community and two disturbance induced communities as per the TASVEG (v3.0) vegetation classification system (Figure 2).

TASVEG Unit – *Eucalyptus globulus* dry forest and woodland

Community Description – Eucalypt forest dominated by blue gum with a shrubby/weedy understorey.

TASVEG Code – DGL

General Description – DGL is a community of *E. globulus* (and occasionally *E. viminalis* and *E. pulchella*) dominated forest and woodland associated with drainage flats and moderate to poorly-drained fertile soils. Most typically characterised by shrubby or sedgy understoreys although grassy and even broad leaved facies occur.

Site Specific Description – This community occurs across the majority of the site and into the reserved land to the west (Figure 2). Blue gum is the dominant tree species although both white peppermint (*E. pulchella*) and white gum (*E. viminalis*) are present and in small areas may be dominant. The shrub layer is almost entirely dominated by boneseed, gorse and English broom (see Figure 3) There are isolated occurrences of native cherry (*Exocarpos cupressiformis*), Prickly box (*Bursaria spinosa*), Blanketleaf (*Bedfordia salicina*) and silver banksia (*Banksia marginata*).

The ground layer in areas where weeds are not entirely dominant contains isolated occurrences of groundcover shrubs, native grasses and sedges such as peachberry heath (*Lissanthe strigosa*), native cranberry (*Astroloma humifusum*), spear grass (*Austrostipa* sp.), tussock grass (*Poa rodwayi*), sagg (*Lomandra longifolia*) and white flag iris (*Diplarrena moraea*).

The community is in poor condition due to the infestations of boneseed and gorse and other weeds including english broom (*Cytisus scoparius*), cotoneaster (*Cotoneaster frigida*), pampas Grass (*Cortaderia selloana*), blackberry (*Rubus fruticosus*) and forget me nots (*Myosotis sylvatica*).


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Figure 2 - Distribution of vegetation communities, threatened flora and weeds across site.

Natural Values Report for

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West Hobart

TASVEG Unit – Cleared urban land

Community Description - Urban areas (FUR) include urban and suburban landscapes. These areas are largely or wholly devoid of vegetation apart from areas such as suburban gardens, street trees and parks.

TASVEG Code – FUR

The north eastern section of the site is classified as FUR as it has been cleared of most native vegetation including most trees. The remaining groundlayer is predominately exotic grasses and plants including boneseed, gorse and broom (Figure 3). There are scattered regrowth blue gums and silver wattle around the edge of the site and one mature blue gum and white gum (with hollows) in the southern end of the site (Figure 2).



Figure 3 – Cleared land with dense gorse and boneseed around the edges.



TASVEG Unit - Regenerating cleared land

Community Description - Regenerating cleared land (FRG) is used to map abandoned farmland or other degraded land (e.g. abandoned mines, quarries etc.) where there has been significant natural recolonisation by native species of rushes and shrubs. Native restoration plantings are also included within FRG.

TASVEG Code – FRG

A portion of the central northern area of the site has been classified as regenerating cleared land. Whilst the vegetation on the site does not fit exactly with the TasVeg description it provides the best fit. The community is dominated by an over storey of a regenerating blue gum saplings with a dense understorey of woody weeds including gorse, broom and boneseed (Figure 4). This area contains no mature trees and has clearly regenerated following historical clearance and long term use as farmland.

Conservation status of the vegetation communities

Eucalyptus globulus dry forest and woodland (DGL) is classified as a threatened native vegetation community under Schedule 3A of the *Nature Conservation Act 2002*.

Under 'Table E10.1 Priority Biodiversity Values' of the Hobart Interim Planning Scheme *Eucalyptus globulus* forest and woodland (DGL) is considered to have 'High Priority Biodiversity Value' due to the listing under the NCA and/or the presence of threatened species habitat.

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Figure 3 – Vegetation classified as FRG due to regenerating blue gum layer with weed understorey

Flora Values

During the survey 41 native plant species were recorded at the site plus 9 common exotic weed species (refer to Appendix 1). Whilst every effort was made to compile a complete list of native plant species in the area surveyed, limitations of the survey technique and factors such as seasonality and absence of identifying features of some plants means that additional species may be found in subsequent surveys.

The search of the Natural Values Atlas (DPIPWE database) revealed that 7 threatened species has been recorded within 500m of the site and a further 4 species within a 1km radius of the site. These species are listed in Table 1 & 2 including a likelihood of them occurring at this site.



Natural Values Report for proposed subdivision at 66 Summerhill Road, West Hobart

Table 1 – Threatened flora recorded within a 500m radius of site

| Species | Status TSPA | Status EPBC | Comments |
|--|-------------|-------------|---|
| <i>Prasophyllum apoxychilum</i> tapered leek-orchid | e-v | EN | Not recorded. Survey outside flowering period however unlikely to occur due to highly disturbed nature of the vegetation. |
| <i>Prasophyllum perangustum</i> Knocklofty leek-orchid | e | CR | Not recorded. Survey outside flowering period however unlikely to occur due to highly disturbed nature of the vegetation. |
| <i>Pterostylis squamata</i> Ruddy greenhood | r-v | | Not recorded. Survey outside flowering period however unlikely to occur due to highly disturbed nature of the vegetation. |
| <i>Rytidosperma indutum</i> Tall wallabygrass | r | | Multiple records nearby to site however records from intact vegetation. Not recorded within survey site and unlikely to occur due to highly disturbed nature of vegetation. |
| <i>Senecio squarrosus</i> Leafy groundsel | | | Not recorded during survey |
| <i>Velleia paradoxa</i> Spur Velleia | v | | Not recorded during survey |
| <i>Vittadinia muelleri</i> Narrowleaf new-holland daisy | r | | Not recorded during survey |

Table 2 – Threatened flora recorded within a 1km radius of site

| Species | Status TSPA | Status EPBC | Comments |
|---|-------------|-------------|---|
| <i>Dianella anaemia</i> Grassland flaxlily | | | No <i>Dianella</i> plants recorded on site. Unlikely to occur in impact are due to degraded nature of site. |
| <i>Goodenia geniculata</i> bent native-primrose | e | | Not recorded during survey. Unlikely to occur in impact are due to degraded nature of site. |
| <i>Lachnagrostis punicea</i> <i>subsp. filifolia</i> narrowleaf blowgrass | r | | No <i>Lachnagrostis</i> species recorded. Unlikely to occur in impact are due to degraded nature of site. |
| <i>Epacris virgata</i> Pretty Heath | | | Distinctive species – Not recorded at site. |
| <i>Prasophyllum apoxychilum</i> tapered leek-orchid | e-v | EN | As per Table 1 |
| <i>Prasophyllum perangustum</i> Knocklofty leek-orchid | e | CR | As per Table 1 |
| <i>Pterostylis squamata</i> Ruddy greenhood | r-v | | As per Table 1 |
| <i>Rytidosperma indutum</i> | r | | As per Table 1 |



Figure 4 - Photos of weed infestations at site.

Fauna Values

To assess the conservation significance of the site for fauna species a visual search and a search for scats, tracks and diggings was undertaken and habitat types were recorded. This data was then assessed against the requirements of threatened species known to occur in the area.

No threatened fauna species listed under Schedule 3, 4 or 5 of the Threatened Species Protection Act 1995 or under the Environmental Protection and Biodiversity Act 1999 were recorded during the survey.



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The search of the Natural Values Atlas (DPIPWE database) revealed that four (2) threatened species have been recorded within a 1km radius of the site. These species are listed in Table 3 including a comment on the likelihood of them occurring at this site.

Table 2 – Threatened Fauna recorded within a 1km radius of site

| Species | Status TSPA | Status EPBC | Comments |
|---|-------------|-------------|--|
| <i>Antipodia Chaostola</i> Chaostola Skipper | e | EN | Specie relies on <i>Gahnia</i> spices. Small number of <i>G. radula</i> within survey site however no sign of this species present |
| <i>Dasyurus viverrinus</i> eastern quoll | | EN | Site provides habitat for this species and likely to occur on site. Impacts of residence will be the removal of small area of forest only and no significant habitat located in this area. |
| <i>Lathamus discolor</i> Swift parrot | e | CR | This species has a strong association with blue gum and black gum which provide their primary foraging resource. Site contain a number of saplings and scattered mature trees within the land zoned general residential. The loss of saplings will nor significantly impact on current foraging habitat but will remove potential future foraging habitat. |
| <i>Perameles gunnii</i> Eastern Barred Bandicoot | | VU | Widespread and common species. Likely to occur on site. Loss of vegetation associated with HMA will not impact on this species. |

General Habitat Values

The native vegetation on the site provides foraging habitat for a range of common fauna species such as wallabies and possums and variety of native bird, reptile and invertebrate species. The habitat is part of a large intact area of vegetation on the eastern side of Knocklofty Reserve.

There are scattered blue gums and the occasional white gum present on the site which provide potential feeding habitat for the swift parrot. A mature white gum with hollows and a mature blue gum are present within the cleared land that is zoned as general residential (Figure 2).

The vegetation also provides some foraging and shelter habitat for the eastern barred bandicoot as the bandicoot may shelter in the bushland vegetation (including amongst woody weeds such as gorse) and forage over the cleared land at night. No potential denning habitat for the Tasmanian devil occurs on the site.

A record of *Chaostola* skipper is known from nearby to the site. This species has an intrinsic link with *Gahnia radula* and other *Gahnia* species. A small number of *G radula* plants were recorded in the survey area however they represent very marginal habitat for this species and there was no



evidence of the skipper or larvae within these plants (evidence of skipper includes distinctive feeding marks on leaf stems and larvae shelters).

3. Development Impacts

The following section outlines the impacts of the proposed subdivision development on the natural values of the lot.

Subdivision Proposal

The proposed subdivision will see 9 new lots and a balance lot created within the area of the lot zoned as General Residential (Figure 5) and an additional lot containing the remaining native vegetation which borders Knocklofty Reserve (Lot 200 on Plan). As there is no Biodiversity Protection Area designated across the portion of the site to be developed a natural values assessment of this area was not carried out. There is a mature white gum with hollows and a mature blue gum are present within the land zoned as general residential however these trees have not been assessed as part of the impacted to be offset as they are outside the biodiversity protection area.

The subdivision is however within a Bushfire Prone Area (as per E1.0 of the HIPC) and as such a bushfire hazard assessment and Bushfire Hazard Management Plan are required for the subdivision.

Area to be impacted

The HMA for lots 5 - 9 extends upslope to the west for a distance of 10m onto land outside of the individual lots (onto proposed Lot 200 which may be transferred to the HCC in the future) (Figure 6). Approximately half of this additional land contains native vegetation (estimated as 850m² of DGL) which will need to be altered to reduce the fuel loads. This will involve the removal of all understorey vegetation and the shrub layer. Mature trees can be retained provided there is separation between canopies of a least 2m and there is separation between the ground and the canopy (may require pruning of lower branches). The other half of the HMA contains an existing fire trail.

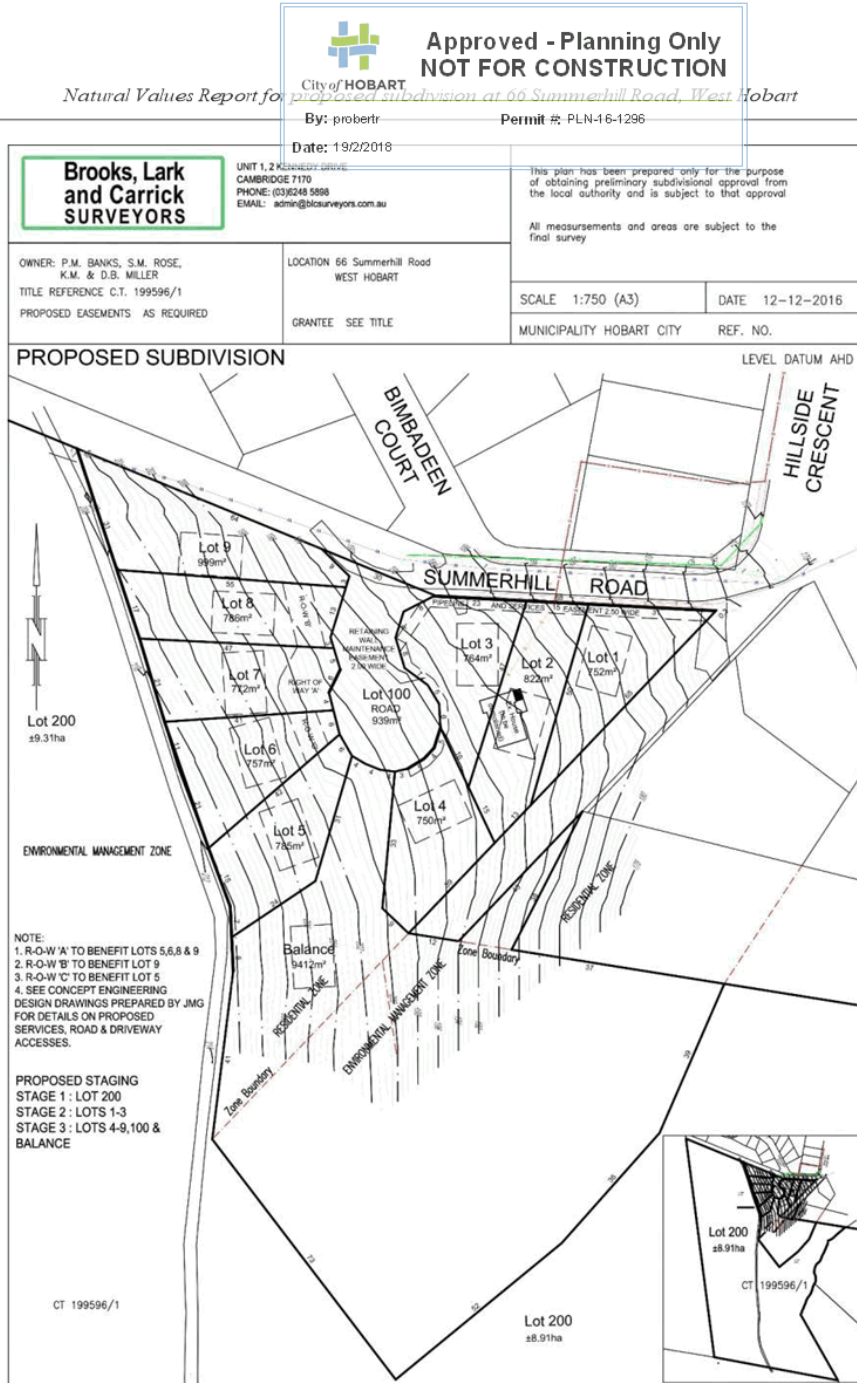


Figure 5 – Subdivision proposal (reproduced from Brooks Lark and Carrick Subdivision Plan).



The HMA will also extend downslope of proposed lots 1, 2, 4 and the Balance lot (Figure 6). The majority of the HMA will be within cleared land which will require limited clearance of exotic vegetation and scattered regrowth native species; whilst an estimated 2400m² of degraded DGL vegetation will also need to be managed to significantly reduce the fuel loads. As mentioned previously this will include the clearance of the understorey and shrub layer however trees can be retained provided there is protection between trees. When selecting trees to be retained blue gums should be preferred as they provide potential swift parrot foraging habitat.

This equates to an area of approximately 3250m² that needs to be modified to meet bushfire requirements.

Requirements under the Biodiversity Code (E10.0)

The clearance of vegetation within the HMA that is also within the Biodiversity Protection Area must meet Performance Criteria as per the Biodiversity Code (E10.0) per the Hobart Interim Planning Scheme 2015. As such development within this area must comply with the objective and criteria of the Biodiversity Code (E10.0).

The biodiversity values of the vegetation (DGL) under E10.7.1 is 'high due to the presence of the vegetation community listed as threatened under the Nature Conservation Act 2002.

As such the following performance criteria must be addressed (text in bold provides comment on each criteria);

- i. *development is designed and located to minimise impacts, having regard to constraints such as topography or land hazard and the particular requirements of the development; **The proposed subdivision is on land zoned as General Residential that is predominantly cleared. The majority of the HMA is within degraded land with only 1/3 of the area containing an intact vegetation community. As such the design of the subdivision minimises impact on priority nature values as much as possible. In addition the DGL vegetation to be impacted is severely degraded by weed infestations and the more intact healthy vegetation is retained.***


Approved - Planning Only
NOT FOR CONSTRUCTION
 City of HOBART
Natural Hazards Report for proposed subdivision at 66 Summerhill Road, West Hobart
 By: probctr Permit #: PLN-16-1206
 Date: 19/2/2018

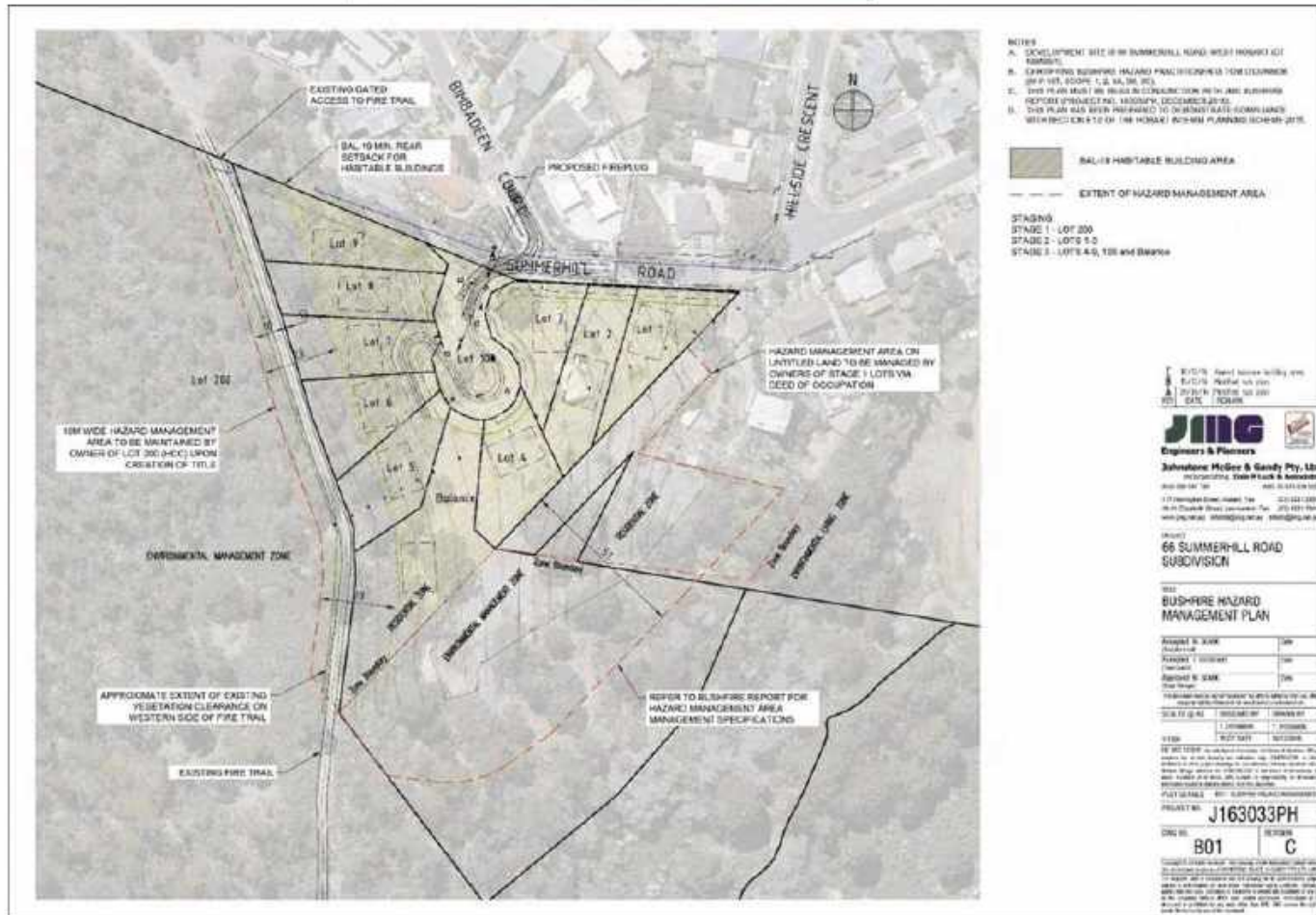


Figure 6 – Bushfire Hazard Management Plan (Reproduced from Drawing B01 v3 - Project # J163033PH) JMG Engineers and Planners



Natural Values Report for proposed subdivision at 66 Summerhill Road, West Hobart

- ii. impacts resulting from future bushfire hazard management measures are minimised as far as reasonably practicable through appropriate siting of any building area; **The subdivision is design to meet BAL19 separation distances which is a minimum requirement. The building envelopes have been located on each lot so as to minimise clearance to the west and to the south east of the general residential area the HMA is predominantly located within cleared land or degraded vegetation.**
- iii. high priority biodiversity values outside the area impacted by subdivision works, the building area and the area likely impacted by future bushfire hazard management measures are retained and protected by appropriate mechanisms on the land title; **The remaining DGL (outside HMA) on the title is to be retained and will not be impacted. The vegetation (Lot 200 on survey drawing) may be transferred to the HCC in the future. This vegetation is generally in better condition with fewer woody weeds present than the area to be cleared.**
- iv. *special circumstances exist*; **Development can comply with (b) and (c):**
- (b) ongoing management cannot ensure the survival of the high priority biodiversity values on the site and there is little potential for recruitment or for long term persistence. **Due to the high level of woody weeds in the site the only trees are likely to persist in the area to be cleared without significant long term management.**
- (c) the extent of proposed removal of high priority biodiversity values on the site is insignificant relative to the extent of the community elsewhere in the vicinity. **Less than 0.1% of the DGL within immediate area will be impacted.**

4. Summary & Recommendations

The impacts of a proposed subdivision on the natural values of land at 60 Summerhill Road, West Hobart were assessed during a site survey in July 2016. In particular the impact of the required Bushfire Hazard Management Areas on the land than is zoned Environmental Management and is within a Biodiversity Protection Area were assessed.



Some additional natural values occur on the land zoned general residential including mature blue gums and white gums however this impact is not assessed as part of this report as they occur within the general residential zone and a NVR of this area is not required under the scheme.

The vegetation to be impacted (for the establishing of the HMA) is generally in poor condition with significant infestations of the declared weeds boneseed, gorse and pampas grass. The control of these weeds as part of the development may be required to prevent the spread of weeds of the site.

The area of vegetation which was classified as blue gum forest (DGL - listed as a threatened vegetation community under the *Nature Conservation Act 2002*) contained a layer of blue gum saplings and some smaller trees however the understorey was also largely degraded by weeds. Some mature trees (in particular blue gums) can be retained within the HMA provided there is minimum 2m separation between canopies and there is separation between the ground and the canopy.

No threatened flora species were recorded on the site and the habitat for threatened fauna species was limited to blue gum saplings- which provide a minor foraging resources; and some habitat for the eastern barred bandicoot. Due to the present of large area of similar vegetation in better condition adjacent to the site the impact on the fauna habitat is very limited.

The removal of the vegetation was able to meet the performance criteria under E10. 0 for a high priority community due to its degraded condition and the presence of the adjoining DGL forest (on proposed Lot 200 which may be transferred to the HCC) and within the Knocklofty Reserve.

Overall the proposed subdivision will have very limited impacts on the natural values in the local vicinity.



Natural Values Report for proposed subdivision at 66 Summerhill Road, West Hobart

Appendix 1 – Species list for 66 Summerhill Road, West Hobart

Recorder: J. Kelman Date: 19th July 2016

e = endemic i = introduced d = declared weed

Dicotyledonae

| Family name | Species name | Common name |
|--------------|--|------------------------|
| ASTERACEAE | | |
| e | <i>Bedfordia salicina</i> | Tasmanian Blanket Leaf |
| i | <i>Chrysanthemoides monilifera subsp. monilifera</i> | Boneseed |
| i | <i>Cirsium vulgare</i> | Spear Thistle |
| i | <i>Hypochoeris radicata</i> | Cat's ear |
| | <i>Senecio linearifolius var. linearifolius</i> | |
| i | <i>Sonchus oleraceus</i> | Sow Thistle |
| BORAGINACEAE | | |
| i | <i>Myosotis sylvatica</i> | |
| EPACRIDACEAE | | |
| | <i>Astroloma humifusum</i> | Native Cranberry |
| | <i>Lissanthe strigosa subsp. subulata</i> | |
| FABACEAE | | |
| i | <i>Cytisus scoparius</i> | Scotch Broom |
| i | <i>Ulex europaeus</i> | Gorse |
| FUMARIACEAE | | |
| i | <i>Fumaria muralis</i> | Fumitory |
| GENTIANACEAE | | |
| i | <i>Centaurium erythraea</i> | Common centaury |



Natural Values Report for proposed subdivision at 66 Summerhill Road, West Hobart

MIMOSACEAE

Acacia dealbata subsp. *dealbata* Silver Wattle

MYRTACEAE

Eucalyptus globulus subsp. *globulus* Tasmanian Blue Gum

e *Eucalyptus pulchella* White peppermint

Eucalyptus viminalis subsp. *viminalis* White gum

OXALIDACEAE

Oxalis perennans Native Oxalis

PITTOSPORACEAE

Bursaria spinosa subsp. *Spinosa* Prickly box

PRIMULACEAE

i *Anagallis arvensis* var. *arvensis* Scarlet Pimpernel

PROTEACEAE

Banksia marginata Silver Banksia

ROSACEAE

i *Cotoneaster franchetii* Cotoneaster

i *Rubus fruticosus* Blackberry

SANTALACEAE

Exocarpos cupressiformis Native Cherry

SAPINDACEAE

Dodonaea viscosa subsp. *spatulata*

Monocotyledonae

Family name **Species name** **Common name**

CYPERACEAE

Natural Values Report for proposed subdivision at 66 Summerhill Road, West Hobart



Gahnia radula
Lepidosperma laterale

Variable Sword-sedge

IRIDACEAE

Diplarrena moraea

White Flag Iris

JUNCACEAE

Juncus pallidus

Pale Rush

POACEAE

Austrodanthonia caespitosa

Common Wallaby-grass

Austrostipa mollis

Soft Spear Grass

i *Cortaderia selloana*

Pampas Grass

i *Dactylis glomerata*

Cock's Foot

Poa labillardierei var. *labillardierei*

Tussock Grass

XANTHORRHOEACEAE

Lomandra longifolia

Sagg



HOBART INTERIM PLANNING SCHEME 2015

PSA-18-2 AMENDMENT INSTRUMENT OF CERTIFICATION

It is hereby certified that draft Amendment PSA-18-2 to the Hobart Interim Planning Scheme 2015 meets the requirements specified in section 32 of the former provisions of the *Land Use Planning and Approvals Act 1993*.

The Common Seal of the Hobart City Council is fixed hereon, pursuant to Council's resolution of ????

in the presence of:

.....General Manager

.....Deputy General Manager

Date:



JMG Ref: J203072PH

3 December 2020

General Manager

Brighton Council

Via email - development@brighton.tas.gov.au

Attn: Richard Cuskelly

Dear Richard,

APPLICATION FOR PLANNING PERMIT

DA2020/00306 - 75 & 77 FOUCHE AVENUE, OLD BEACH

Please refer to the following with regards to the 'request for additional information letter' received from Brighton Council, dated 26 November 2020.

The required additional information is addressed in sequence below. It is noted that the provided information adds to or supersedes information provided as part of the submission to Council on 5 November 2020 (the previous submission), specifically:

- Attachment B supersedes Appendix B; and
- Attachment C supersedes Appendix D.

Privacy (Private Open Space).

1) Provide an amended submission (plans and written report) showing windows U5 W13, U6 W15, U7 W13 and U8 W15 to comply with Acceptable Solution 10.4.6 A2 (a)(iv) or (b). Alternatively, provide an amended submission justifying how the proposal is considered to meet Performance Criteria 10.4.6 (b).

Attachment A provides additional information addressing how the proposal satisfies Performance Criteria P2 (b) of *Clause 10.4.6 Privacy for all dwellings*.

This information supersedes the response on pp 26 to 27 of the Planning Report (v1.2 dated 30 Oct 2020).

Staging

2) Provide an amended staging plan clearly showing the extent of works provided in Stage 1 (including vehicular access to the proposed sewage pump station).

The revised proposal plans in Attachment B provide details on Sheet 01q/21.

117 Harrington Street

Hobart 7000

Phone (03) 6231 2555

Fax (03) 6231 1535

infohbt@jmg.net.au

49-51 Elizabeth Street

Launceston 7250

Phone (03) 6334 5548

Fax (03) 6331 2954

infofntn@jmg.net.au

Johnstone McGee &

Gandy Pty Ltd

ABN 76 473 834 852

ACN 009 547 139

as trustee for Johnstone

McGee & Gandy

Unit Trust

www.jmg.net.au

Parking and Access

3) *Provide clarification on how the garbage truck will access the site given there is proposed to be a remote-controlled security gate.*

In addition to the information included on p11 of the previous submission and further verbal advice from Council, any final design of the entry will be negotiated with Council to facilitate garbage truck access to the site. A design based on a security code in combination with a keypad near the gate would be acceptable. It is requested that Council include the preferred requirements in the conditions of any planning permit issued.

4) *Provide amended swept path diagram for service vehicles (i.e. garbage truck) showing clearances to fences, entry gate, parked vehicles and bin collection area.*

Appendix A of the revised Concept Services Report (Attachment C) provides a sweep path diagram for the service vehicle required to service the proposed pump station and also details the “single coat seal turning area” as part of Stage 1. The single coat seal is provided as a temporary solution to enable construction access for Stage 2, with the final two seal coat being applied as part of the Stage 2 workplan.

Attachment B Sheet 01k/21 provides details of the service vehicle (garbage truck) sweep path.

5) *Provide amended swept path diagrams clearly showing that vehicles can turn at the end of the aisles without encroaching on parking spaces.*

Attachment B Sheets 01l/21 and 01n/21 provide details of the vehicle sweep paths available at the end of the aisles.

Specifically:

- Sheet 01l/21 shows the vehicle sweep path at the end of the first internal aisle; and
- Sheet 01n/21 shows the vehicle sweep path at the end of the second internal aisle and the available vehicle sweep path in the middle of the first internal aisle for vehicles parked in visitor car parking space number 5.

It is considered that these diagrams demonstrate that there is sufficient space for vehicle manoeuvring that is clear of resident and visitor car parking spaces.

6) *Provide swept path diagram for access to parking space V1 when garbage bins are placed out for collection.*

Attachment B Sheet 01m/21 provides details of the access to space V1 in relation to the bin collection area.

7) Provide amended swept path diagrams clearly showing that a vehicle parking in visitor space V5 can turn whilst maintaining the required clearance to a car parked in space U3P2.

Attachment B Sheet 01n/21 provides details of the turning path for a vehicle parking in visitor space V5, shown it remains clear of the parking space of U3 P2.

Stormwater

8) Provide an amended stormwater servicing plan showing the location of the stormwater treatment systems.

Appendix A and Appendix B of the updated Concept Services Report (Attachment C) provide plans showing the proposed stormwater infrastructure locations on the subject site.

9) Provide typical details for the installation of the proposed SW treatment systems.

The updated Concept Services Report (Attachment C) provides information on the Stormwater System Concept on page 5. It is noted that “*there are many proprietary systems on the market and other systems will be investigated during the detailed design phase to ensure that the optimum system is selected.*”

We trust this satisfies Council’s request however if further information or clarification is required with respect to this request, please contact me on 6231 2555 or at planning@jmg.net.au or iboss@jmg.net.au .

Yours faithfully

JOHNSTONE McGEE & GANDY PTY LTD



**INDRA BOSS
TOWN PLANNER**

Encl. Attachment A - *Clause 10.4.6 Privacy for all dwelling P2* (b) response.
Attachment B - Revised proposal plans, including staging plan and vehicle manoeuvring plans.
Attachment C - Updated Concept Services Report

ATTACHMENT A

Clause 10.4.6 Privacy for all dwelling P2 (b) response

Attachment A – Clause 10.4.6 P2 (b) response

The proposal plans demonstrate that Units 1 to 11 inclusive have windows to rooms with a floor level higher than 1m above NGL. Units 12 to 15 inclusive do not have windows to habitable rooms with a floor level higher than 1m above NGL (refer to Elevation Plans).

Of units 1 to 11; those adjacent to side boundaries, namely units 1, 4, 8, 5, 9, and 11 have side boundary setbacks of at least three metres compliant with Acceptable Solution A2 (a) (i). As per the Location Plan, none of the units have windows located within 4m of the rear boundary and hence all are compliant with A2 (a) (ii). As per the attached Site Plan Sheet 2 Ground Floor (01b/21) to 3 Ground Floor (01c/21) and Site Plan Sheet 5 First Floor (01e/21) to 6 First Floor (01f/21) all multiple dwelling windows are more than 6m from a window or glazed door to a habitable room of another dwelling on the site and are considered compliant with A2 (a) (iii).

As per the Perspective View 1 (01o/21) the upstairs south facing living room and kitchen windows of Units 5, 6, 7 and 8 are located in rooms with floor levels higher than 1m above NGL. Based on Site Plan Sheet 5 (First Floor) (01e/21) the separation distance between these windows and the private open space (POS) of Units 9, 10 and 11 is as shown in Table A below:

Table A Summary of window setbacks to POS Window to POS separation analysis

| <i>Unit</i> | <i>Window Number & location</i> | <i>Distance to POS (i.e. dividing fence) & Unit No.</i> | <i>Comments</i> |
|-------------|-------------------------------------|---|--------------------------------|
| 5 | W13 Living room - south wall | To Unit 11 – 4m | Not compliant with A2 (a) (iv) |
| 5 | W13 Living room - south wall | To Unit 10 – 6.5m at nearest point towards north west of POS | Compliant with A2 (a) (iv) |
| 5 | W14 Living room – west wall | At right angles to dividing fence between Units, setback range from 5.0m to 8.3m | Not compliant with A2 (a) (iv) |
| 5 | W15 Kitchen – south wall | To Unit 11 – 7.3m | Compliant with A2 (a) (iv) |
| 6 | W15 Living room - south wall | To Unit 11 – 4.0m | Not compliant with A2 (a) (iv) |
| 6 | W15 Living room - south wall | To Unit 10 -4.0m | Not compliant with A2 (a) (iv) |
| 6 | 14 Living room – east wall | At right angles to dividing fence between Units, setback range from 5.0m to 6.5m from Unit 10 POS | Not compliant with A2 (a) (iv) |
| 6 | W15 Kitchen – south wall | To Unit 10 – 7.3m | Compliant with A2 (a) (iv) |
| 7 | W13 Living Room - South wall | To Unit 10 – 4.0m at nearest point north east of POS | Not compliant with A2 (a) (iv) |
| 7 | W13 Living Room - South wall | To Unit 9 – 7.3m at nearest point north west of POS | Compliant with A2 (a) (iv) |
| 7 | W14 Living room – west wall | At right angles to dividing fence between Units, setback range from 5.0m to 6.5m from Unit 10 POS | Not compliant with A2 (a) (iv) |
| 7 | W15 Kitchen – south wall | To Unit 10 – 7.3m | Compliant with A2 (a) (iv) |
| 8 | W15 Living room – south wall | To unit 10– 4m at nearest point north of POS | Not compliant with A2 (a) (iv) |
| 8 | W15 Living room – south wall | To Unit 9 – 4m at nearest point north of POS | Not compliant with A2 (a) (iv) |
| 8 | W14 Living room – east wall | At right angles to dividing fence between Units, setback range from 5.0m to 6.5 m from Unit 9 POS | Not compliant with A2 (a) (iv) |
| 8 | W13 Kitchen – south wall | To Unit 9 – 7.3m | Compliant with A2 (a) (iv) |

Based on the above, the proposal is not compliant with all applicable elements of Acceptable Solution A2 (a). Options outlined in Acceptable Solution A2 (b) are not considered appropriate as such offset and screening would result in designs for Units 5 to 8 that are considered likely to

unreasonably impact on the amenity of these units. Accordingly, the Performance Criterion P2 have been addressed.

The above assessment demonstrates that all Units other than Units 5, 6, 7 and 8 are designed to satisfy P2 (a) (by virtue of setback). P2 (c) is not considered as applicable to the proposal as there are no adjoining vacant lots.

The south facing kitchen windows of Units 5, 6, 7 and 8 with a 7.3m setback to the dividing fence also satisfy P2(a) by virtue of their setback distance.

The east facing living room windows of Units 6 and 8, and the west facing living room windows of Units 5 and 7, are oriented at right angles to the POS of the units located to the south. The setback distance to the dividing fence ranges from 5m to 8.3m. The 5m setback would require a person to lean out of the window to gain a view of the POS of the unit to the south. It is anticipated that people looking out from these windows would generally be 6m away from the POS of the units to the south, so that the 'right angle' view field minimises the opportunity for overlooking.

The south facing living room windows of Units 5, 6, 7 and 8 are set back 4m from the dividing fences of the units to the south (which in effect functions like a rear lot boundary) and a total of 7.4m from the minimum defined POS area immediately adjacent to the living areas of Units 9,10 and 11, which is the area most likely to be heavily used by future residents.

To minimise the potential for overlooking of both the general POS and the minimum POS area of Units 9, 10 and 11 from the living room windows of Units 5, 6, 7 and 8; the following measures are proposed:

- Provide additional screening (at 30% transparency) 0.6m above the 1.8m internal unit fence separating these units, to a total height of 2.4m to further decrease the sight line angle, as shown on Units 5 & 6 Elevations Sheet 1 (Sheet 07/21) in Attachment B, and noted to apply to the fence line between all Type 2 and Type 3 Units; and
- As an additional measure, mature deciduous plantings (for example ornamental pear trees as shown below in Figure A), which can be pruned to provide solid screening in summer (when the POS is most likely to be used) are included along the internal fence on the land associated with Units 5, 6, 7, 8, 9, 10 and 11, see also Landscaping Plan Sheet 2 (01h/21) of the proposal plans in Attachment B.



Figure A: Example of ornamental pear tree (source: Google Street view)

The combination of these measures is considered to achieve the Clause objective, namely *“To provide reasonable opportunity for privacy for dwellings”*. Accordingly, the proposal is considered to satisfy the applicable Performance Criteria P2 (a) and (b) with P2 (c) not applicable to the proposed development.

ATTACHMENT B

**Revised proposal plans, including staging plan
and vehicle manoeuvring plans**



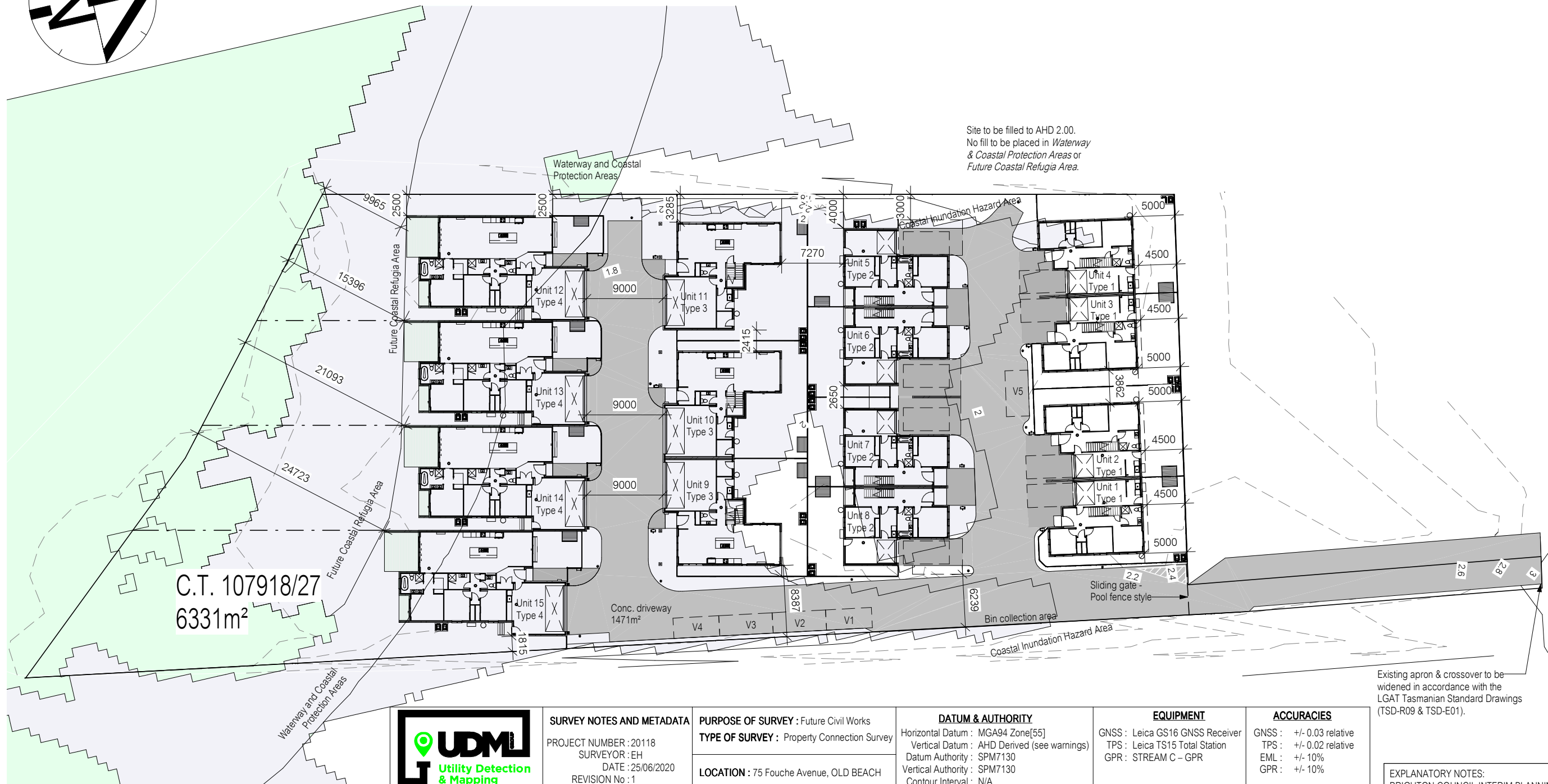
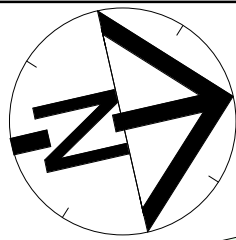
WH712552 - PROPOSED VILLANUEVA DEVELOPMENT
75 Fouche Avenue
OLD BEACH

| SHEET | DRAWING TITLE | SHEET | DRAWING TITLE |
|-------|------------------------------------|-------|-----------------------------------|
| 01 | J LOCATION PLAN | 06 | D UNITS 5 & 6 GROUND FLOOR PLAN |
| 01a | J SITE PLAN SHEET 1 (GROUND FLOOR) | 06a | C UNITS 5 & 6 FIRST FLOOR PLAN |
| 01b | J SITE PLAN SHEET 2 (GROUND FLOOR) | 07 | J UNITS 5 & 6 ELEVATIONS SHEET 1 |
| 01c | J SITE PLAN SHEET 3 (GROUND FLOOR) | 07a | J UNITS 5 & 6 ELEVATIONS SHEET 2 |
| 01d | J SITE PLAN SHEET 4 (FIRST FLOOR) | 08 | D UNITS 7 & 8 GROUND FLOOR PLAN |
| 01e | J SITE PLAN SHEET 5 (FIRST FLOOR) | 08a | C UNITS 7 & 8 FIRST FLOOR PLAN |
| 01f | J SITE PLAN SHEET 6 (FIRST FLOOR) | 09 | I UNITS 7 & 8 ELEVATIONS SHEET 1 |
| 01g | J LANDSCAPING PLAN SHEET 1 | 09a | I UNITS 7 & 8 ELEVATIONS SHEET 2 |
| 01h | J LANDSCAPING PLAN SHEET 2 | 10 | I UNITS 9 & 10 GROUND FLOOR PLAN |
| 01i | J LANDSCAPING PLAN SHEET 3 | 10a | I UNITS 9 & 10 FIRST FLOOR PLAN |
| 01j | J SOIL AND WATER MANAGEMENT PLAN | 11 | I UNITS 9 & 10 ELEVATIONS SHEET 1 |
| 01k | J MANOEUVRING PLAN SHEET 1 | 11a | I UNITS 9 & 10 ELEVATIONS SHEET 2 |
| 01l | J MANOEUVRING PLAN SHEET 2 | 12 | I UNIT 11 GROUND FLOOR PLAN |
| 01m | J MANOEUVRING PLAN SHEET 3 | 12a | I UNIT 11 FIRST FLOOR PLAN |
| 01n | J MANOEUVRING PLAN SHEET 4 | 13 | J UNIT 11 ELEVATIONS SHEET 1 |
| 01o | J SITE PERSPECTIVE VIEW 1 | 13a | I UNIT 11 ELEVATIONS SHEET 2 |
| 01p | J SITE PERSPECTIVE VIEW 2 | 14 | UNIT 12 FLOOR PLAN |
| 01q | J STAGING PLAN | 15 | UNIT 12 ELEVATIONS SHEET 1 |
| 02 | UNITS 1 & 2 GROUND FLOOR PLAN | 15a | UNIT 12 ELEVATIONS SHEET 2 |
| 02a | UNITS 1 & 2 FIRST FLOOR PLAN | 16 | UNIT 13 FLOOR PLAN |
| 03 | UNITS 1 & 2 ELEVATIONS SHEET 1 | 17 | UNIT 13 ELEVATIONS |
| 03a | UNITS 1 & 2 ELEVATIONS SHEET 2 | 18 | UNIT 14 FLOOR PLAN |
| 04 | UNITS 3 & 4 GROUND FLOOR PLAN | 19 | I UNIT 14 ELEVATIONS |
| 04a | UNITS 3 & 4 FIRST FLOOR PLAN | 20 | UNIT 15 FLOOR PLAN |
| 05 | UNITS 3 & 4 ELEVATIONS SHEET 1 | 21 | UNIT 15 ELEVATIONS |
| 05a | UNITS 3 & 4 ELEVATIONS SHEET 2 | | |

Refer to documentation provided by Gandy & Roberts Consulting Engineers for drainage design.

| | | | | | |
|-----|---|--------------|-------|---------|--------------------------------------|
| J | Council RFI: Provide privacy screens & ornamental pear trees to fences between Type 2 & Type 3 units, update staging plan to allow for vehicular access to sewage pump station, move V1-4 and bin collection area to allow more clearance for garbage truck, provide swept paths for end of aisles, V1 swept path and clarify V5 swept path. Update all relevant plans. | 1 Dec. 2020 | ST | CK | 01 - 01q, 07, 07a, 13 |
| I | Reduce Type 3 floor plans by 200mm, change Type 2 roof pitches to 5° & 8.5°. Provide building envelope for U14. Update all relevant plans. | 29 Oct. 2020 | ST | CK | 01 - 01q, 07, 07a, 09, 09a - 13a, 19 |
| H | Further information to address RFI. | 26 Oct. 2020 | ST | CK | 01 - 01q, 07, 13 |
| G | Changes to Type 3 layout. Update relevant plans. | 21 Oct. 2020 | ST | CK | 01 - 01p, 10 - 13a |
| F | Council RFI: Provide new layout for Type 3 units (U9 - U11), centre fence between Type 2 & 3, amend driveway around neighbouring ROW, show dimension from V4 to fence, provide turning for V5. Update all relevant plans. | 20 Oct. 2020 | ST | CK | 01 - 01p, 10 - 13a |
| E | Provide Staging Plan | 1 Sept 2020 | ST | SF | 01p |
| D | Provide fill to yard of types 2 & 3 to allow for drainage. Provide skylights to type 3, modify front yard of type 4's. | 25 Aug 2020 | ST | CK | 01 - 01m, 06, 07 - 08, 09 - 13a |
| C | CLIENT CHANGES: Additional windows to Type 2 upper floor, modify access door to garage to Type 3's. | 19 Aug 2020 | ST | CK | 06a - 07a, 08a - 10, 12 |
| | DA PLAN SET | 19 Aug 2020 | ST | CK | 01 - 21 |
| B | Revised layout for Type 2 layouts to fit additional unit | 7 Aug 2020 | ST | N/A | Prelim plans |
| A | Changes to prelim layout and design | 28 July 2020 | ST | N/A | Prelim plans |
| No. | Amendment | Date | Drawn | Checked | Sheet |

| | | | | | |
|---|--|---|---|---|---|
| Notes • Builder to verify all dimensions and levels on site prior to commencement of work • All work to be carried out in accordance with the current National Construction Code. • All materials to be installed according to manufacturers specifications. • Dimensions to take precedence over scale. • Do not scale from these drawings. | Designer: ANOTHER PERSPECTIVE PTY LTD PO BOX 21 NEW TOWN LIC. NO. CC2204H (A. Strugnell) Ph: (03) 6231 4122 Fx: (03) 6231 4166 Email: info@anotherperspective.com.au | Client / Project info PROPOSED VILLANUEVA DEVELOPMENT 75 Fouche Avenue OLD BEACH | Soil Classification: Title Reference: Floor Areas: Porch / Deck Areas: Wind Speed: Climate Zone: Alpine Zone: Corrosion Environment: Certified BAL: Designed BAL: (Refer to Standard Notes for Explanation) | TBC CT107918/27 Refer to Floor Plans Refer to Floor Plans TBC 7 N/A Moderate TBC TBC | COVER SHEET WH712552 Date 13 July 2020 Sheet 00/21 |
| | | | | | |



C.T. 107918/27
6331m²

LEGEND:

- Coastal Inundation Hazard Area
- Future Coastal Refugia Area
- Waterway and Coastal Protection Areas
- Concrete driveway (common area)
- Concrete paths and driveway (associated with unit)

Total driveway area: 1471m²
Total path area: 85.58m²

Clothes line

10.4.8 A1 - Waste Storage
Min 1.5m² per unit (15 units)
22.50m² provided



SURVEY NOTES AND METADATA

PROJECT NUMBER : 20118
SURVEYOR : EH
DATE : 25/06/2020
REVISION No : 1

PURPOSE OF SURVEY : Future Civil Works
TYPE OF SURVEY : Property Connection Survey

LOCATION : 75 Fouché Avenue, OLD BEACH

DATUM & AUTHORITY

Horizontal Datum : MGA94 Zone[55]
Vertical Datum : AHD Derived (see warnings)
Datum Authority : SPM7130
Vertical Authority : SPM7130
Contour Interval : N/A

EQUIPMENT

GNSS : Leica GS16 GNSS Receiver
TPS : Leica TS15 Total Station
GPR : STREAM C – GPR

ACCURACIES

GNSS : +/- 0.03 relative
TPS : +/- 0.02 relative
EML : +/- 10%
GPR : +/- 10%

GENERAL COMMENTS AND DISCLAIMER:

This survey has been compiled using a combination of conventional and UG Service Detection survey techniques. The survey from which this model was created was carried out to comply with the requirements of the client as set out in the scope of works contained in the survey instructions/brief for this project. Anybody who uses this survey for any purpose other than that for which it was carried out does so at his or her own risk. Any public utilities and services shown in this model have been located by using visible surface features and underground service detection techniques. Please note that not all buried pipes, cables and ducts can be detected and mapped in consideration of their depth, location, material type, geology and proximity to other utilities. Even an appropriate and professionally executed survey may not be able to achieve a 100% detection rate. Property boundary overlays, where supplied, vary in accuracy but are generally to 0.5m. Therefore a Land Survey, as defined under the Surveying Act 2002, should be undertaken before any construction activity is carried out on or near the land boundaries depicted by this model. Survey control information is regarded as suitable for the survey and correct at the time of survey, but should be verified before being used for any purpose.

QUALITY LEVELS: Subsurface Utility Information (SUI)
 QL-D: Quality level D is the lowest of the four quality levels. The attribute information and metadata of a subsurface utility shall be compiled from existing records, cursory site inspection and/or oral recollection.
 QL-C: Quality level C is described as a surface feature correlation or an interpretation of the approximate location and attributes of a subsurface utility asset using a combination of existing records (and/or oral recollection) and a site survey of visible evidence.
 QL-B: Quality level B provides relative subsurface feature location in three dimensions.
 QL-A: Quality level A is the highest quality level and consists of the positive identification of the attribute and location of a subsurface utility to an absolute accuracy in three dimensions. It is the only quality level that defines a subsurface utility as 'validated'.

DO NOT COPY WITHOUT THIS NOTE

Existing apron & crossover to be widened in accordance with the LGAT Tasmanian Standard Drawings (TSD-R09 & TSD-E01).

EXPLANATORY NOTES:
BRIGHTON COUNCIL INTERIM PLANNING SCHEME

| | |
|---|--|
| 10.4.1 - Residential density for multiple dwellings | |
| A1 | (a) Site Density: Min. 325m ² per unit 6171m ² / 15 (units) = 411.4m ² provided |
| 10.4.3 - Site coverage and private open space for all dwellings | |
| A1 | (a) Site Coverage: Max. 50% of site = 3085.5m ² Proposed site coverage: 2102.63m ² (34.07%) |
| | (c) Impervious Surfaces: Min. 25% of site to be free of impervious surfaces = 1542.75m ² Proposed area free of impervious surfaces: 3036.19m ² (49.20%) |

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| No. | Date | Int. |

Amendment changes as per cover sheet

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Designer:

ANOTHER PERSPECTIVE PTY LTD
PO BOX 21
NEW TOWN
LIC. NO. CC2204H (A. Strugnell)
Ph: (03) 6231 4122
Fx: (03) 6231 4166
Email:
info@anotherperspective.com.au

Client / Project info

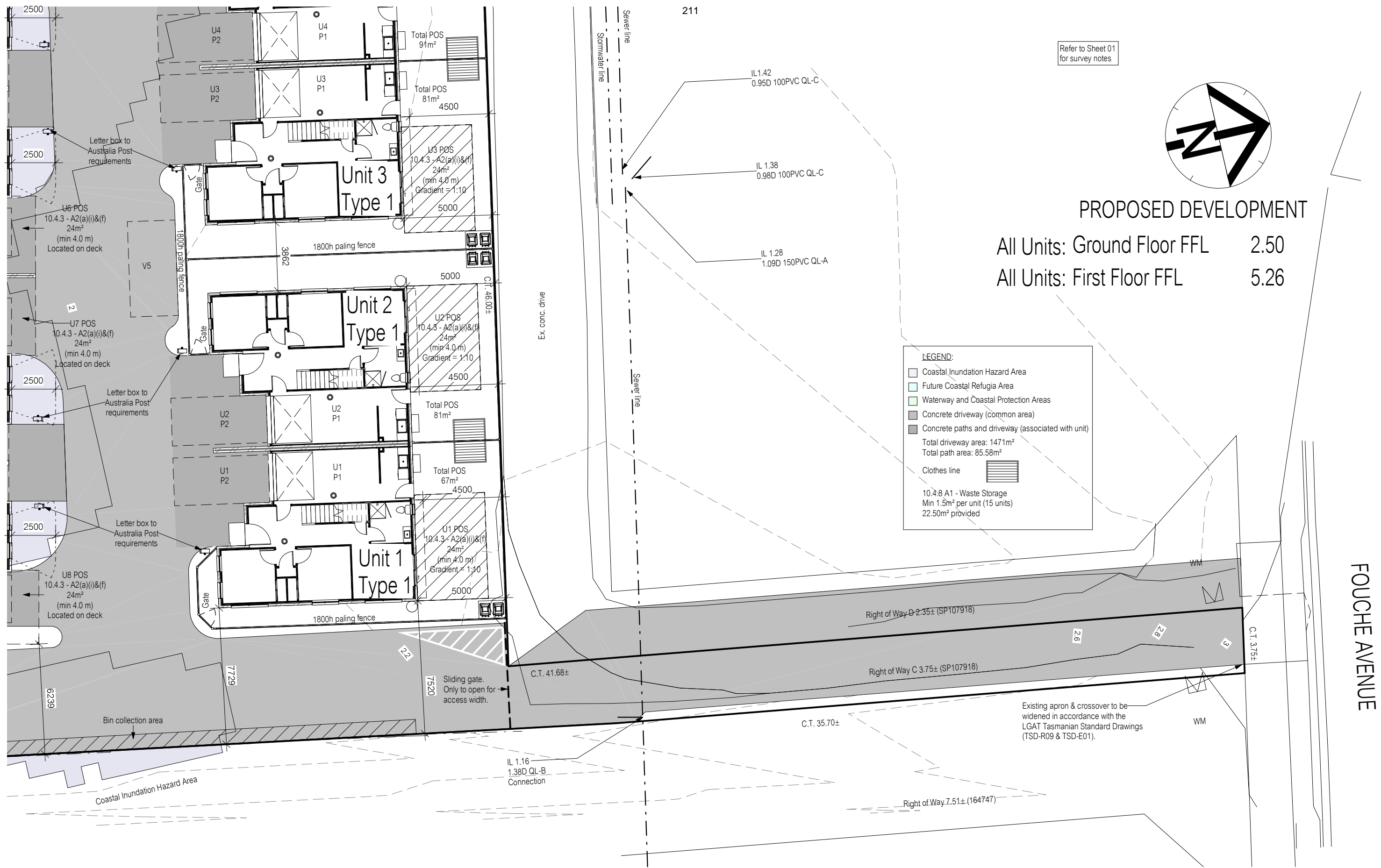
PROPOSED VILLANUEVA DEVELOPMENT

75 Fouché Avenue
OLD BEACH

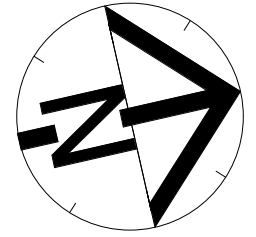


LOCATION PLAN

| | | |
|-------|--------------|----------|
| Drawn | ST | WH712552 |
| Date | 13 July 2020 | Sheet |
| Scale | 1:500 | 01/21 |



Refer to Sheet 01 for survey notes



PROPOSED DEVELOPMENT

All Units: Ground Floor FFL 2.50
 All Units: First Floor FFL 5.26

LEGEND:

- Coastal Inundation Hazard Area
- Future Coastal Refugia Area
- Waterway and Coastal Protection Areas
- Concrete driveway (common area)
- Concrete paths and driveway (associated with unit)

Total driveway area: 1471m²
 Total path area: 85.58m²

Clothes line

10.4.8 A1 - Waste Storage
 Min 1.5m² per unit (15 units)
 22.50m² provided

FOUCHE AVENUE

| | | |
|-----|--------------|------|
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Amendment changes as per cover sheet

Notes

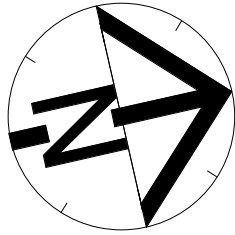
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 PROPOSED VILLANUEVA DEVELOPMENT
 75 Fouche Avenue
 OLD BEACH



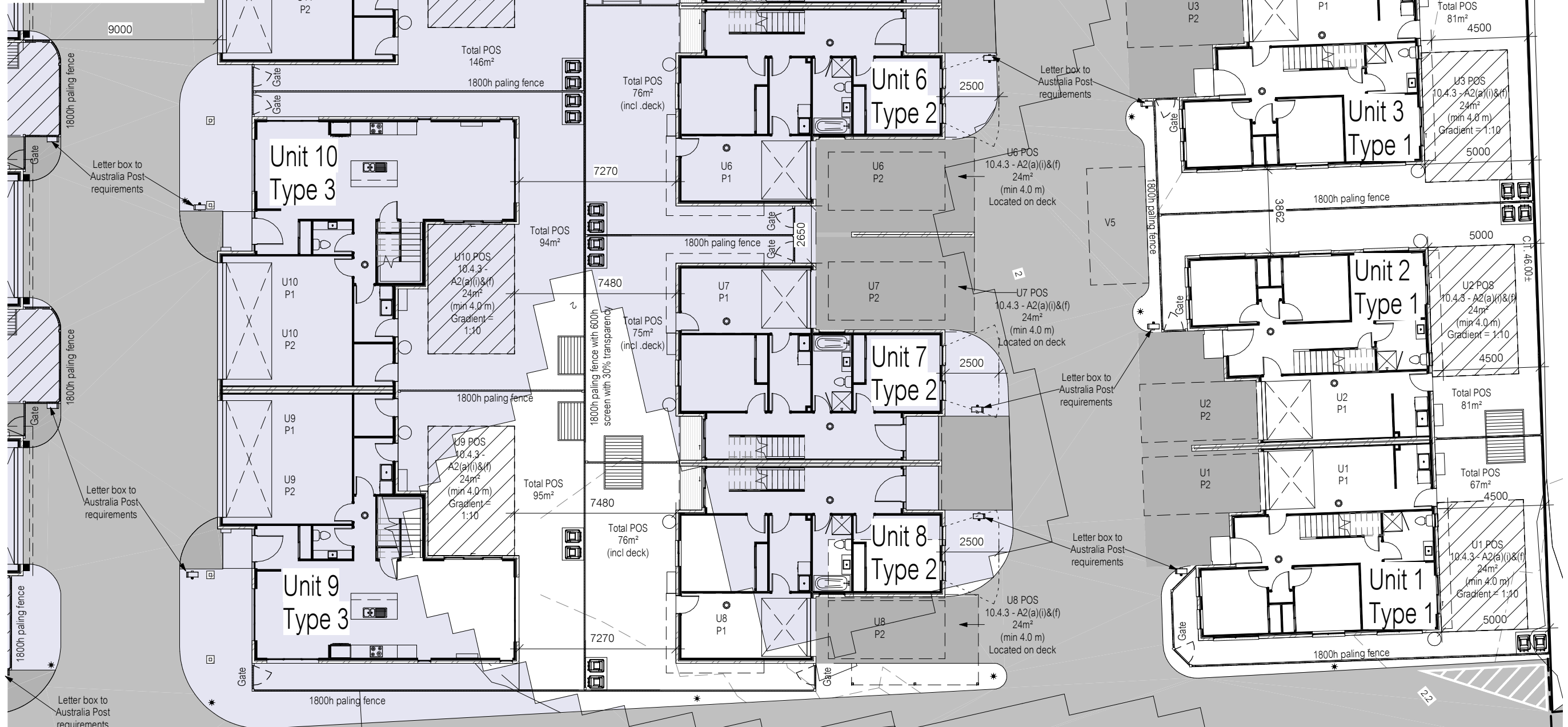
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|----------------------------------|--------------|----------|
| Drawn | ST | WH712552 |
| Date | 13 July 2020 | Sheet |
| Scale | 1:200 | 01a/21 |



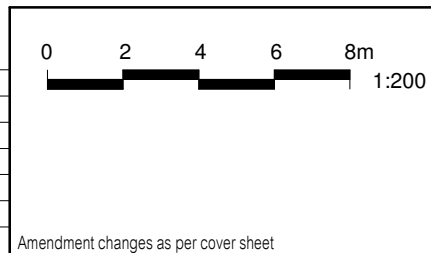
PROPOSED DEVELOPMENT

Ground Floor FFL 2.50

First Floor FFL 5.26



| | | |
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Refer to Sheet 01 for survey notes

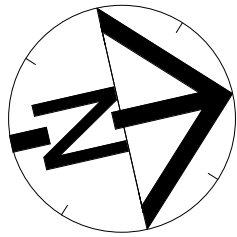
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 75 Fouche Avenue
 OLD BEACH



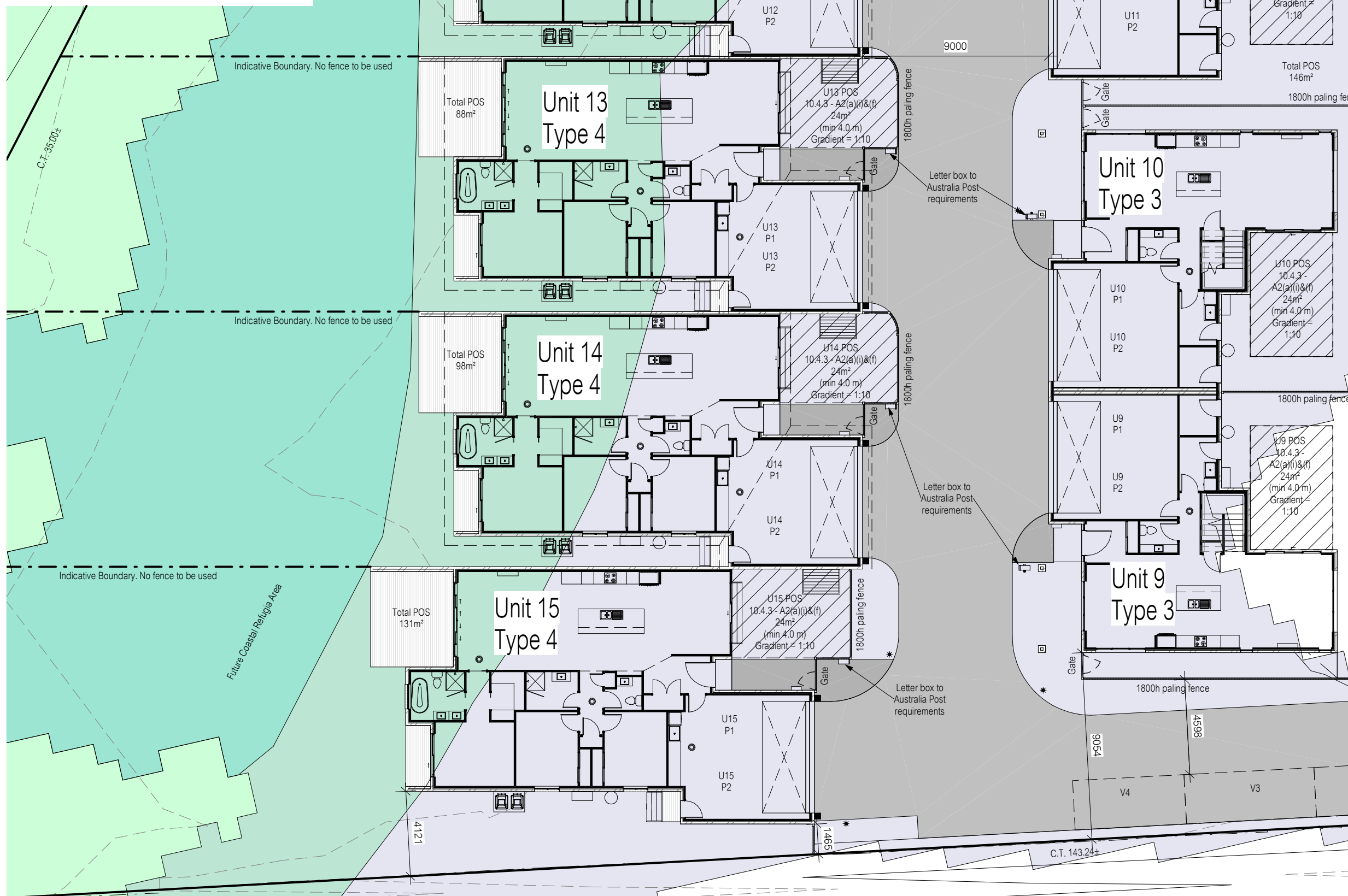
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|----------------------------------|--------------|----------|
| Drawn | ST | WH712552 |
| Date | 13 July 2020 | Sheet |
| Scale | 1:200 | 01b/21 |



PROPOSED DEVELOPMENT

Ground Floor FFL 2.50

First Floor FFL 5.26



LEGEND:

- Coastal Inundation Hazard Area
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- Waterway and Coastal Protection Areas
- Concrete driveway (common area)
- Concrete paths and driveway (associated with unit)

Total driveway area: 1471m²
Total path area: 85.58m²

Clothes line

10.4.8 A1 - Waste Storage
Min 1.5m² per unit (15 units)
22.50m² provided

Refer to Sheet 01 for survey notes

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- Amendment changes as per cover sheet**
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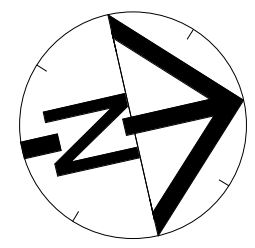
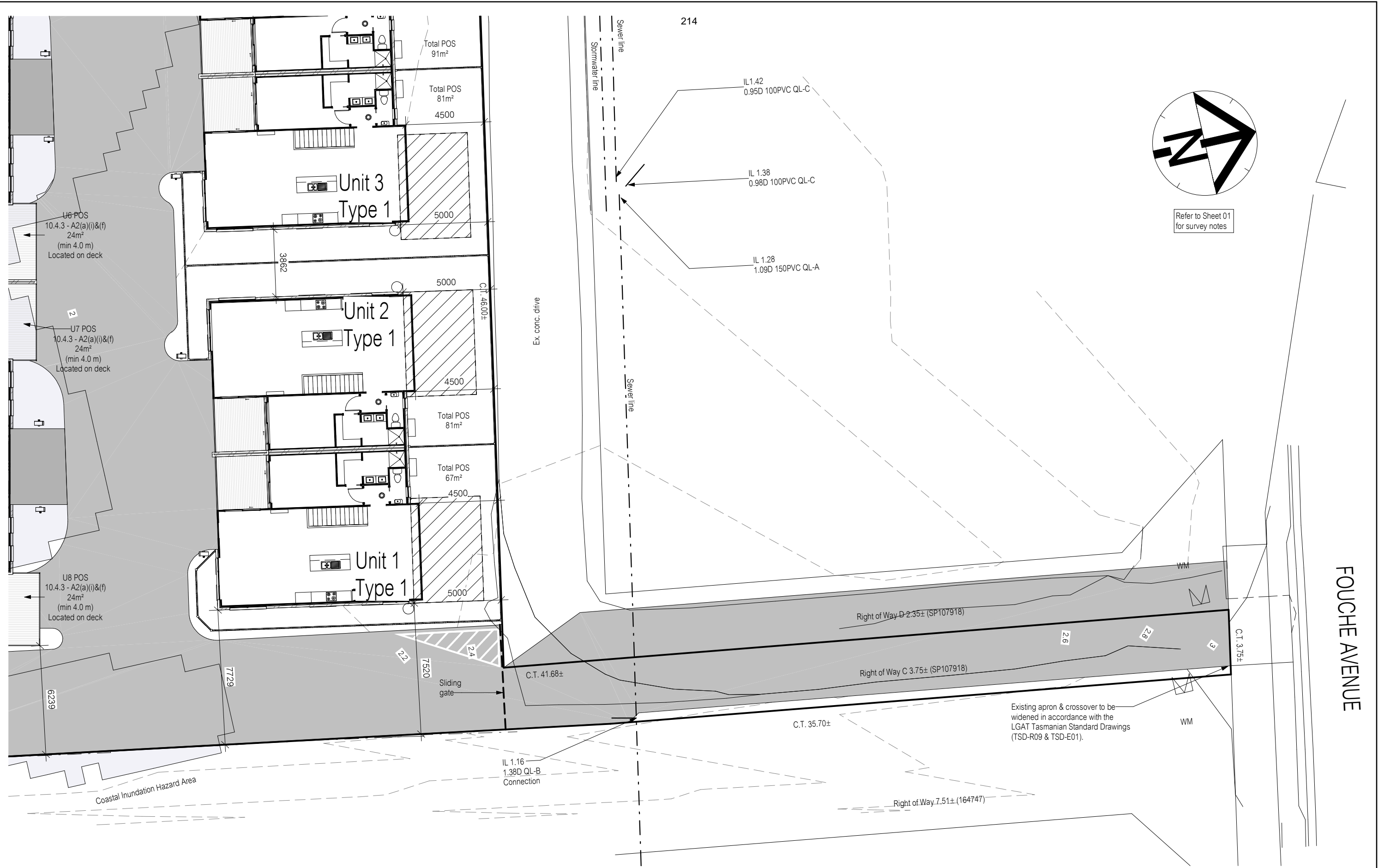
PROPOSED VILLANUEVA DEVELOPMENT
75 Fouche Avenue
OLD BEACH

0 2 4 6 8m
1:200



SITE PLAN SHEET 3 (GROUND FLOOR)

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| Drawn | ST | WH712552 |
| Date | 13 July 2020 | Sheet |
| Scale | 1:200 | 01c/21 |



Refer to Sheet 01
for survey notes

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Amendment changes as per cover sheet

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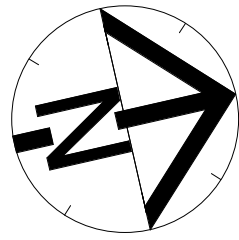
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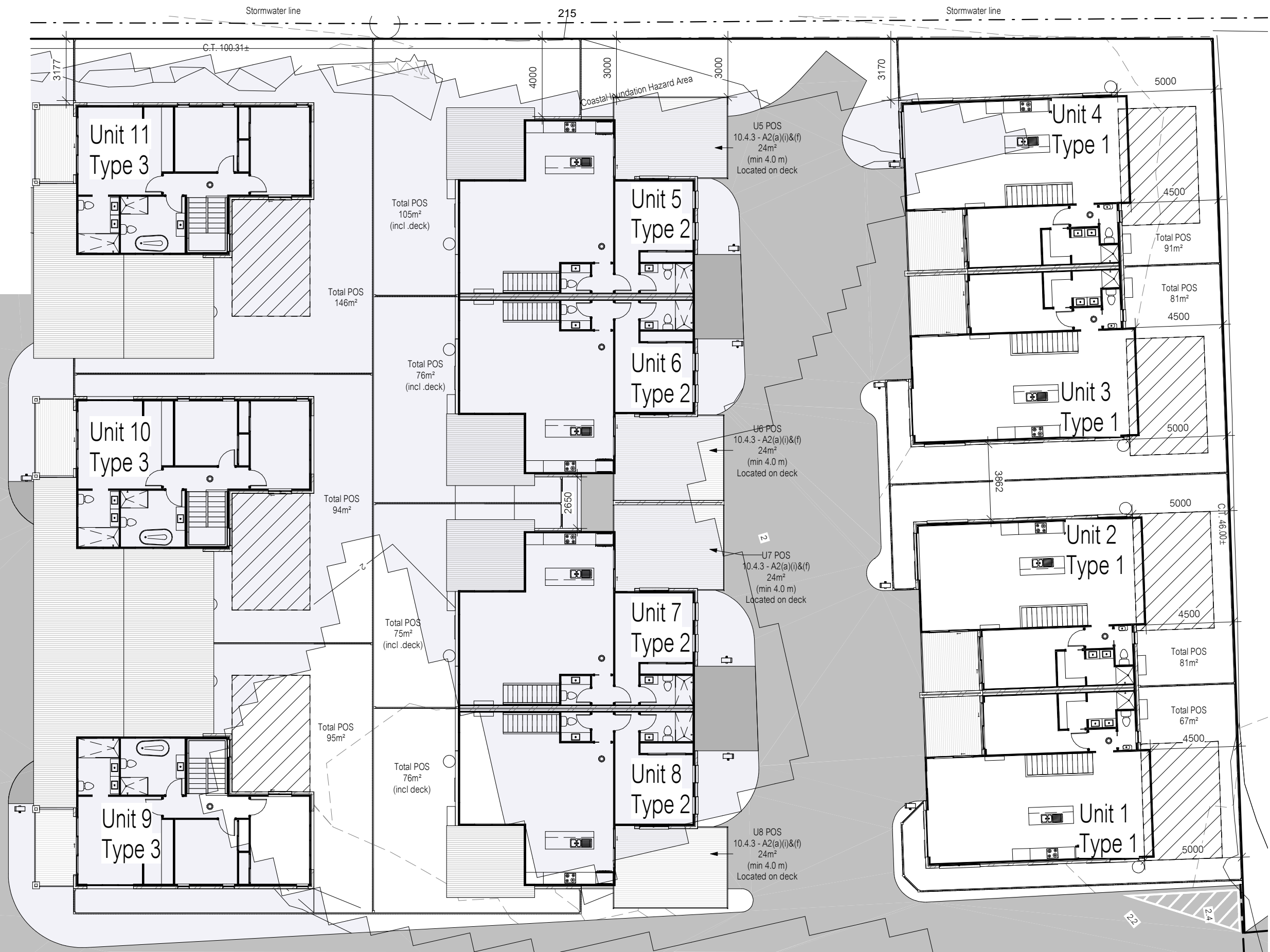
Client / Project info
PROPOSED VILLANUEVA DEVELOPMENT
75 Fouche Avenue
OLD BEACH



| SITE PLAN SHEET 4 (FIRST FLOOR) | | |
|---------------------------------|----------------|----------|
| Drawn | ST | WH712552 |
| Date | 25 August 2020 | Sheet |
| Scale | 1:200 | 01d/21 |



Refer to Sheet 01
for survey notes



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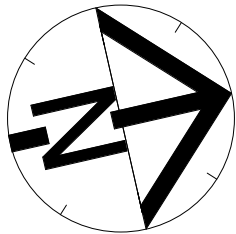
Client / Project info
PROPOSED VILLANUEVA DEVELOPMENT
75 Fouche Avenue
OLD BEACH



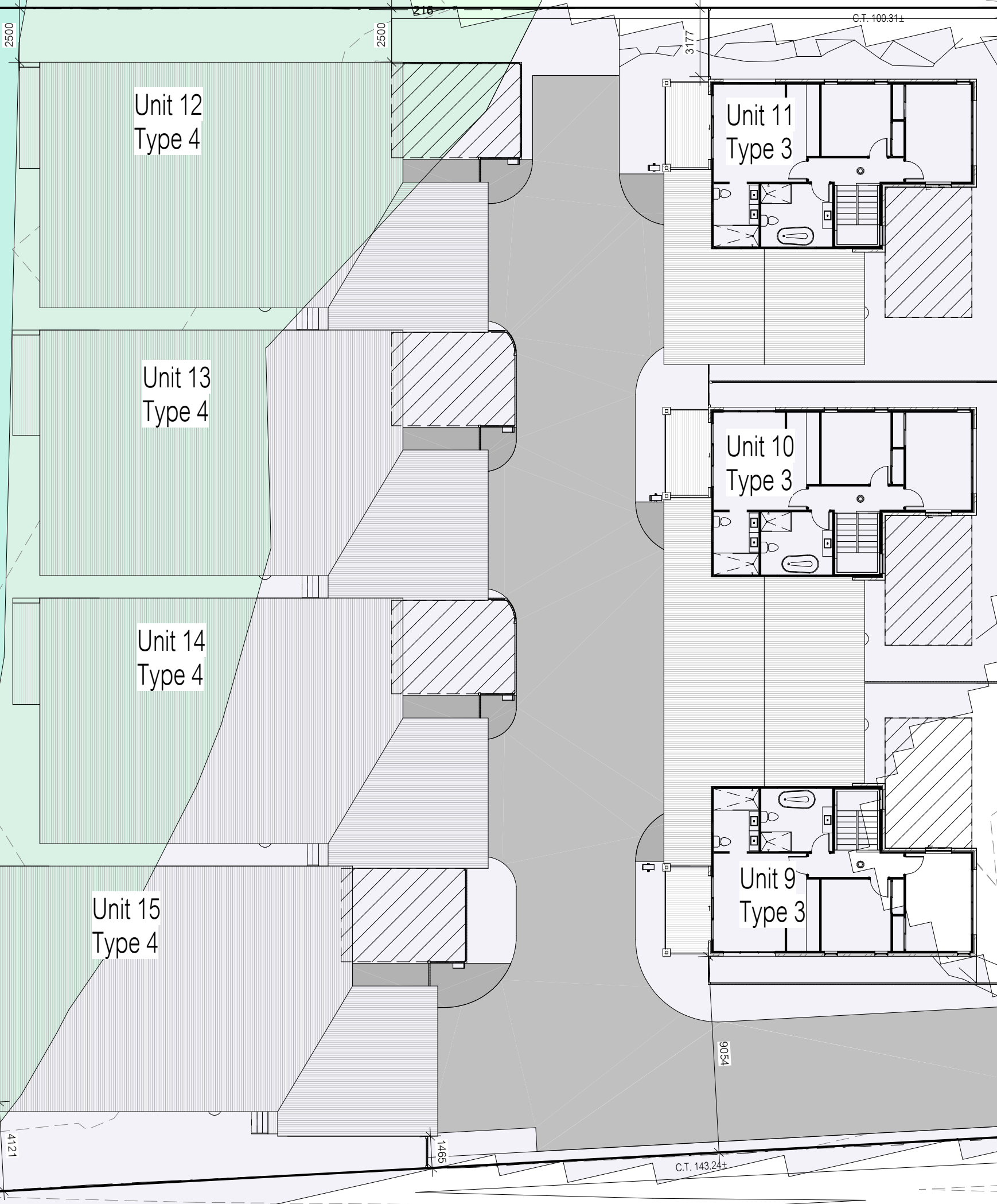
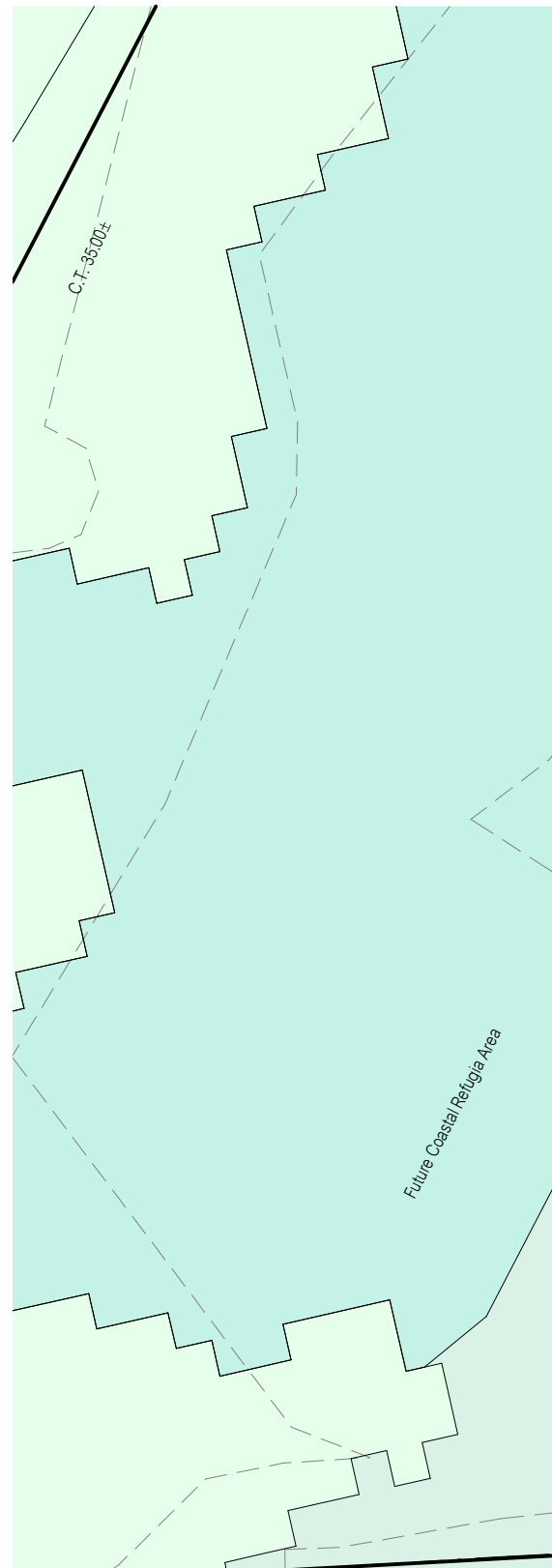
SITE PLAN SHEET 5 (FIRST FLOOR)

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| Drawn | ST | WH712552 |
| Date | 25 August 2020 | Sheet |
| Scale | 1:200 | |

01e/21



Refer to Sheet 01
for survey notes



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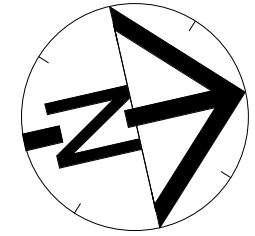
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Client / Project info

PROPOSED VILLANUEVA DEVELOPMENT
 75 Fouche Avenue
 OLD BEACH

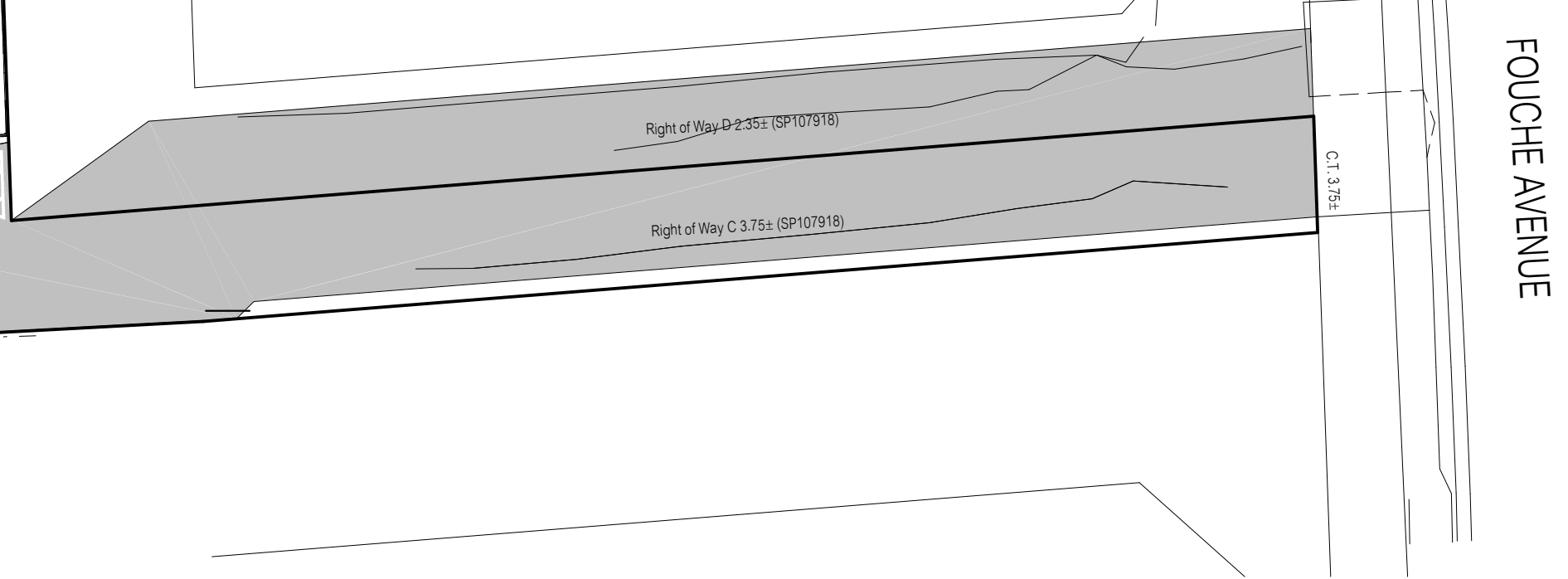


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| SITE PLAN SHEET 6 (FIRST FLOOR) | | |
| Drawn | ST | WH712552 |
| Date | 25 August 2020 | Sheet |
| Scale | 1:200 | 01f/21 |



| | |
|--|-------------------------|
| | Myoporum Yareena |
| | Leucophyta brownii nana |
| | Correa alba |
| | Ornamental Pear Tree |
| | Banksia Sentinel |
| | Bollard light |

NOTE:
Outdoor lighting is to be provided in communal areas throughout the site. Outdoor lighting must be designed, baffled & located to prevent any adverse effect on adjoining land, and be in accordance with clause 3.1 "Basis of Design" and clause 3.6 "Car Parks" in AS/NZS 1158.3.1:2005 Lighting for roads and public spaces Part 3.1: Pedestrian area (Category P) lighting.



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Amendment changes as per cover sheet

Notes

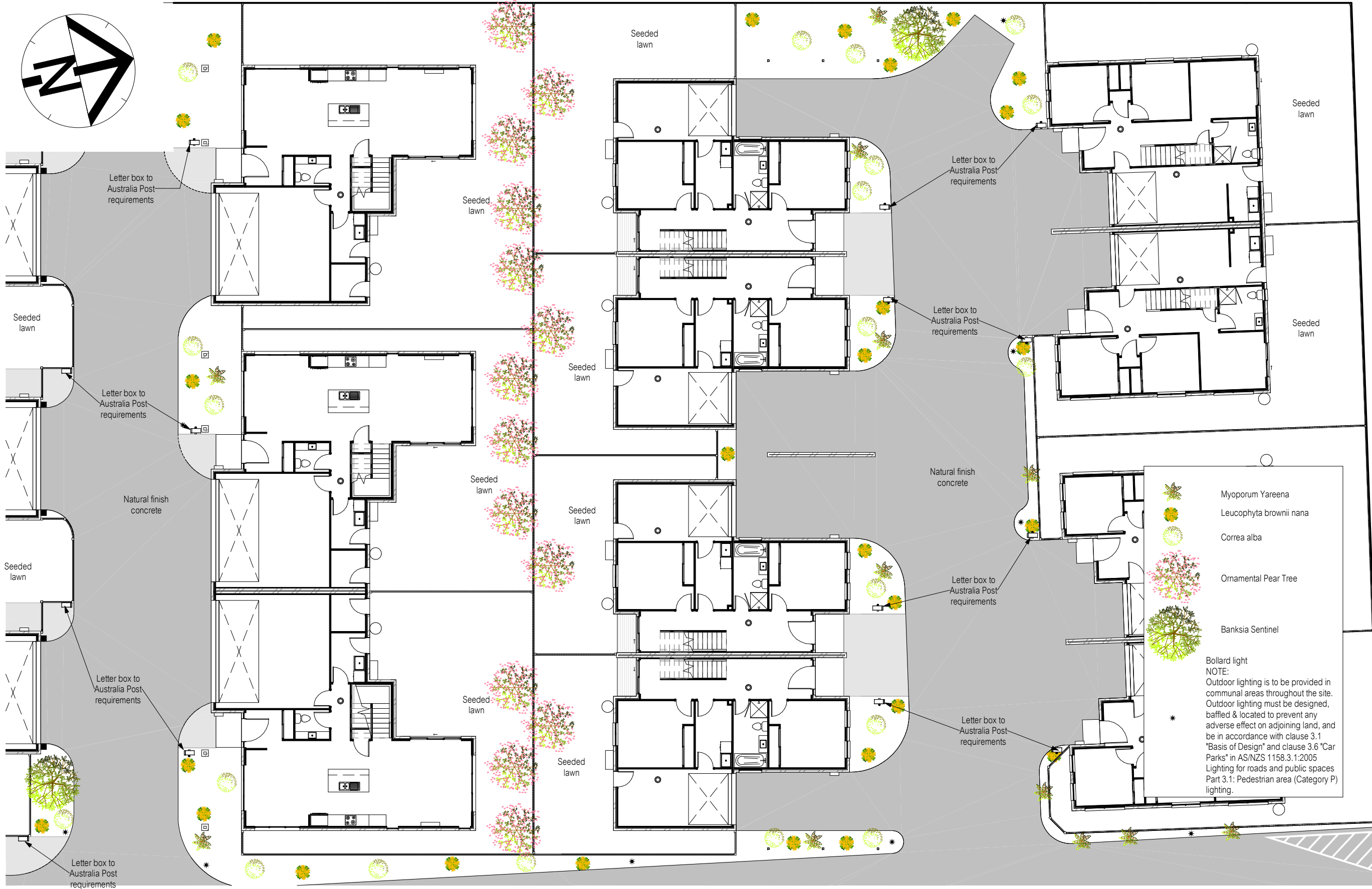
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Client / Project info
PROPOSED VILLANUEVA DEVELOPMENT
75 Fouche Avenue
OLD BEACH



| | | |
|--------------------------|--------------|----------|
| LANDSCAPING PLAN SHEET 1 | | |
| Drawn | ST | WH712552 |
| Date | 17 July 2020 | Sheet |
| Scale | 1:200 | 01g/21 |



- Myoporum Yareena
 - Leucophyta brownii nana
 - Correa alba
 - Ornamental Pear Tree
 - Banksia Sentinel
- Bollard light
NOTE:
Outdoor lighting is to be provided in communal areas throughout the site. Outdoor lighting must be designed, baffled & located to prevent any adverse effect on adjoining land, and be in accordance with clause 3.1 "Basis of Design" and clause 3.6 "Car Parks" in AS/NZS 1158.3.1:2005 Lighting for roads and public spaces Part 3.1: Pedestrian area (Category P) lighting.

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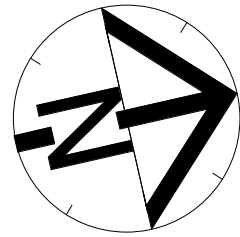
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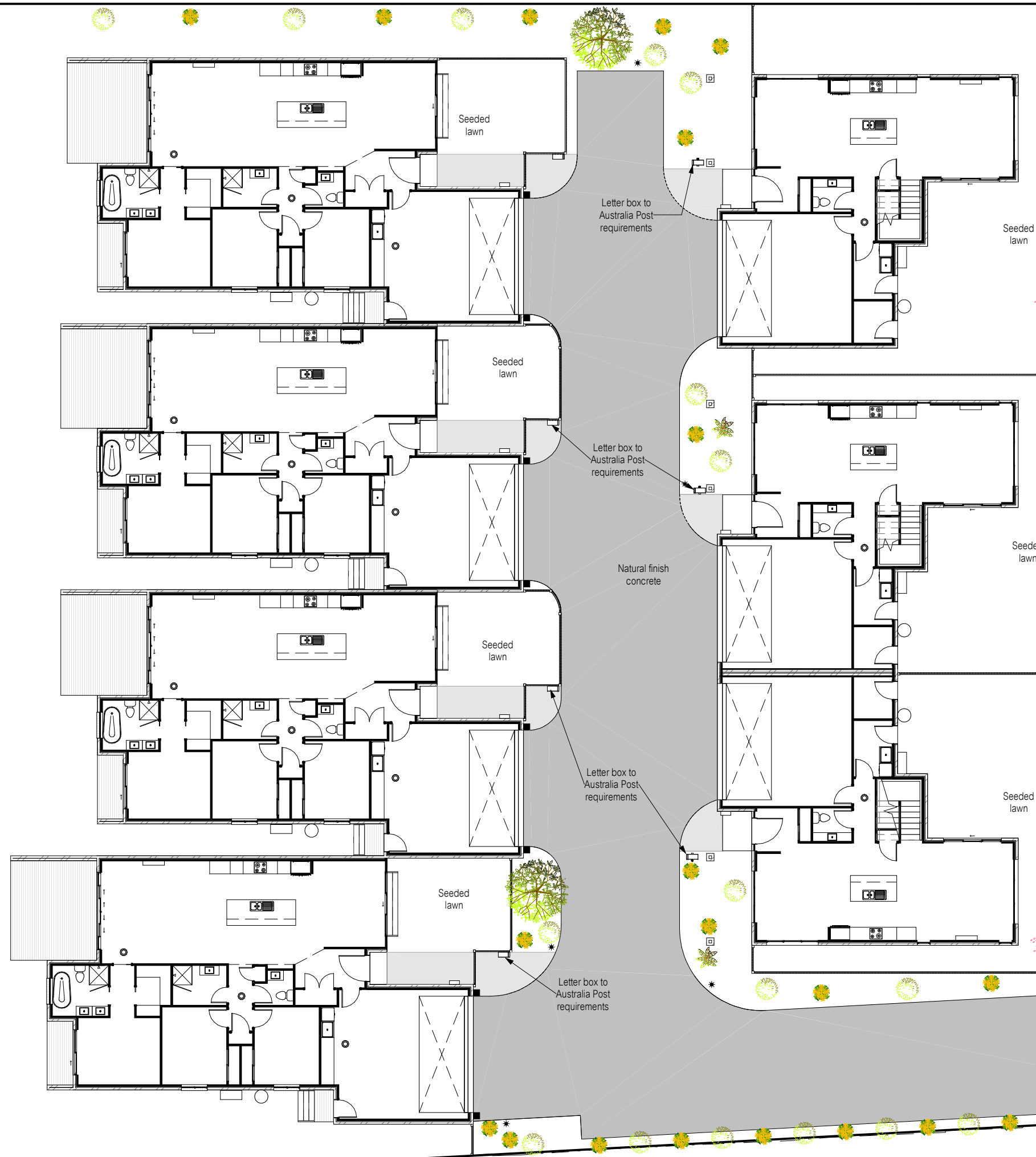
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| LANDSCAPING PLAN SHEET 2 | | |
| Drawn | ST | WH712552 |
| Date | 17 July 2020 | Sheet |
| Scale | 1:200 | 01h/21 |



 Myoporum Yareena
 Leucophyta brownii nana
 Correa alba
 Ornamental Pear Tree
 Banksia Sentinel

Bollard light
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 Outdoor lighting is to be provided in communal areas throughout the site. Outdoor lighting must be designed, baffled & located to prevent any adverse effect on adjoining land, and be in accordance with clause 3.1 "Basis of Design" and clause 3.6 "Car Parks" in AS/NZS 1158.3.1:2005 Lighting for roads and public spaces Part 3.1: Pedestrian area (Category P) lighting.

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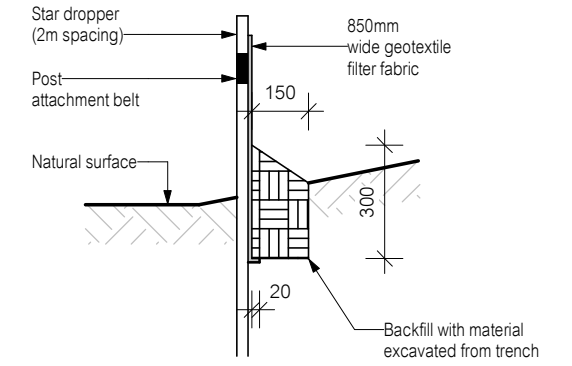
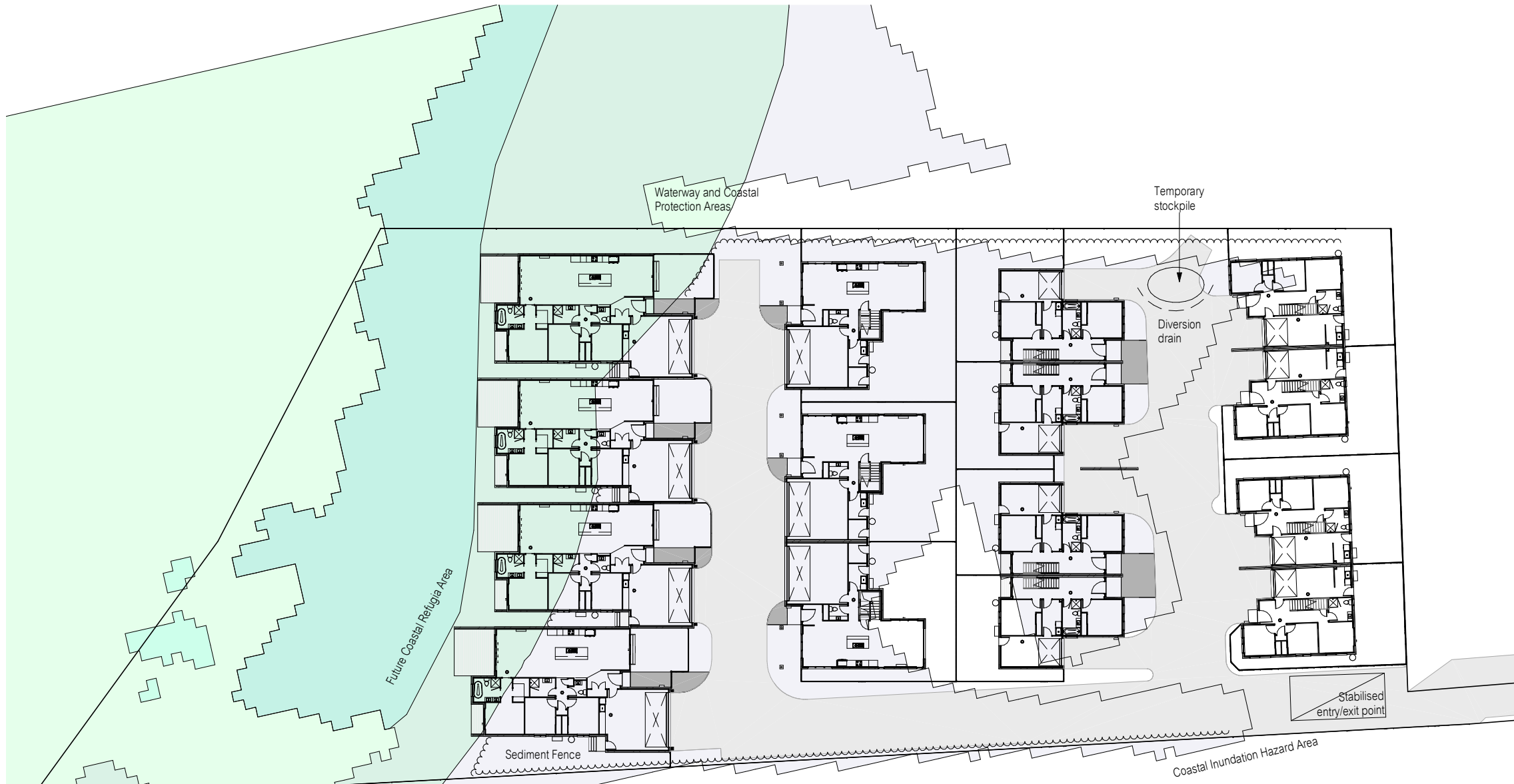
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75 Fouche Avenue
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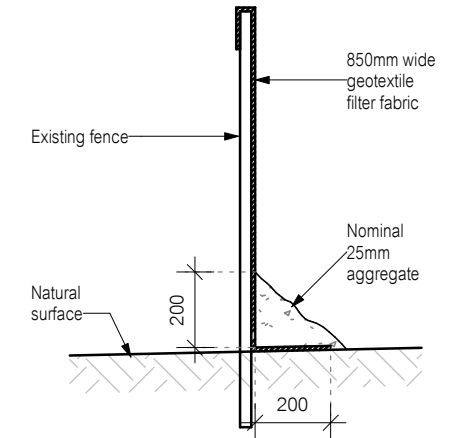


LANDSCAPING PLAN SHEET 3

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| Drawn | ST | WH712552 |
| Date | 17 July 2020 | Sheet |
| Scale | 1 : 200 | 01i/21 |

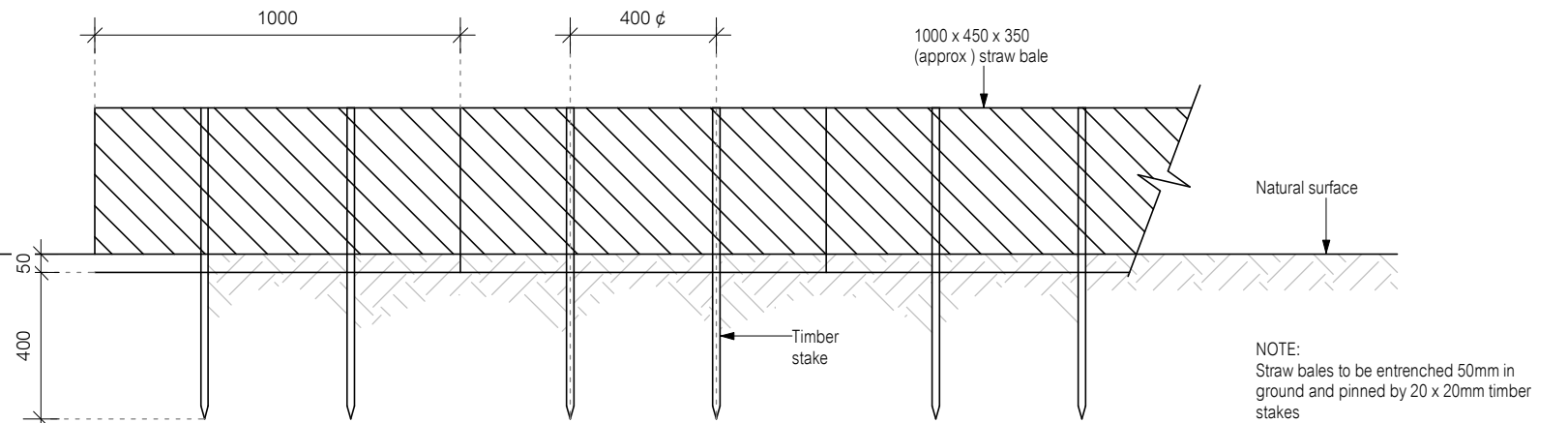


SILT STOP TYPE 1
TEMPORARY FENCE 1:20



SILT STOP TYPE 2
EXISTING FENCE 1:20

- NOTES:
- Sediment and erosion control measures sufficient to prevent sediment from leaving the site must be installed prior to any disturbance to the site.
 - All erosion and sediment control structures to be inspected each working day and maintained in good working order.
 - All ground cover vegetation outside the immediate building area to be preserved during the building phase.
 - All erosion and sediment control measures to be installed prior to commencement of major earthworks.
 - Stockpiles of clayey material to be covered with an impervious sheet.
 - Roof water downpipes to be connected to the permanent underground stormwater drainage system as soon as practical after roof is laid.
- Diversion drains are to be connected to a legal discharge point (Council stormwater system, watercourse or road drain).
 - Sediment retention traps installed around the inlets to the stormwater system to prevent sediment & other debris blocking the drains



NOTE:
Straw bales to be entrenched 50mm in ground and pinned by 20 x 20mm timber stakes

SOIL AND WATER MANAGEMENT PLAN

SHEET: 03
SCALE: 1 : 500

STRAW BALE SEDIMENT TRAP SECTION DETAIL

SCALE 1:20

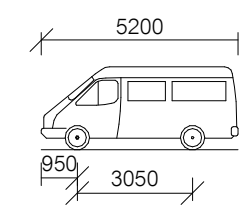
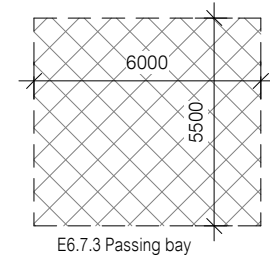
| | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
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| <table border="1"> <tr> <td>J</td> <td>1 Dec. 2020</td> <td>ST</td> </tr> <tr> <td>I</td> <td>29 Oct. 2020</td> <td>ST</td> </tr> <tr> <td>H</td> <td>26 Oct. 2020</td> <td>ST</td> </tr> <tr> <td>G</td> <td>21 Oct. 2020</td> <td>ST</td> </tr> <tr> <td>F</td> <td>20 Oct. 2020</td> <td>ST</td> </tr> <tr> <td>D</td> <td>25 Aug 2020</td> <td>ST</td> </tr> <tr> <td>No.</td> <td>Date</td> <td>Int.</td> </tr> </table> | | | J | 1 Dec. 2020 | ST | I | 29 Oct. 2020 | ST | H | 26 Oct. 2020 | ST | G | 21 Oct. 2020 | ST | F | 20 Oct. 2020 | ST | D | 25 Aug 2020 | ST | No. | Date | Int. | Amendment changes as per cover sheet | | Notes • Builder to verify all dimensions and levels on site prior to commencement of work • All work to be carried out in accordance with the current National Construction Code. • All materials to be installed according to manufacturers specifications. • Dimensions to take precedence over scale. • Do not scale from these drawings. | | Designer: ANOTHER PERSPECTIVE PTY LTD PO BOX 21 NEW TOWN LIC. NO. CC2204H (A. Strugnelli) Ph: (03) 6231 4122 Fx: (03) 6231 4166 Email: info@anotherperspective.com.au | | Client / Project info PROPOSED VILLANUEVA DEVELOPMENT 75 Fouche Avenue OLD BEACH | | | | SOIL AND WATER MANAGEMENT PLAN Drawn ST WH712552 Date 19 August 2020 Sheet Scale As indicated 01j/21 | |
| J | 1 Dec. 2020 | ST | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
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| F | 20 Oct. 2020 | ST | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| D | 25 Aug 2020 | ST | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| No. | Date | Int. | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |



IL 1.42
0.95D 100PVC QL-C

IL 1.38
0.98D 100PVC QL-C

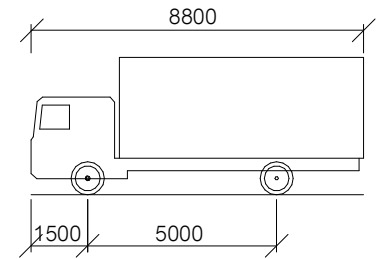
IL 1.28
1.09D 150PVC QL-A



B99 Vehicle (Realistic min radius) (2004)

| | |
|-----------------------------|--------|
| Overall Length | 5.200m |
| Overall Width | 1.940m |
| Overall Body Height | 2.200m |
| Min Body Ground Clearance | 0.312m |
| Track Width | 1.840m |
| Lock to Lock Time | 4.00s |
| Curb to Curb Turning Radius | 6.250m |

* Manoeuvring has been achieved using 'autotrack 10' Manoeuvring software.



MRV - Medium Rigid Vehicle

| | |
|-----------------------------|---------|
| Overall Length | 8.800m |
| Overall Width | 2.500m |
| Overall Body Height | 3.633m |
| Min Body Ground Clearance | 0.428m |
| Track Width | 2.500m |
| Lock to Lock Time | 4.00s |
| Curb to Curb Turning Radius | 10.000m |

* Manoeuvring has been achieved using 'autotrack 10' Manoeuvring software.

| | | |
|-----|--------------|------|
| J | 1 Dec. 2020 | ST |
| I | 29 Oct. 2020 | ST |
| H | 26 Oct. 2020 | ST |
| G | 21 Oct. 2020 | ST |
| F | 20 Oct. 2020 | ST |
| D | 25 Aug 2020 | ST |
| No. | Date | Int. |

Amendment changes as per cover sheet

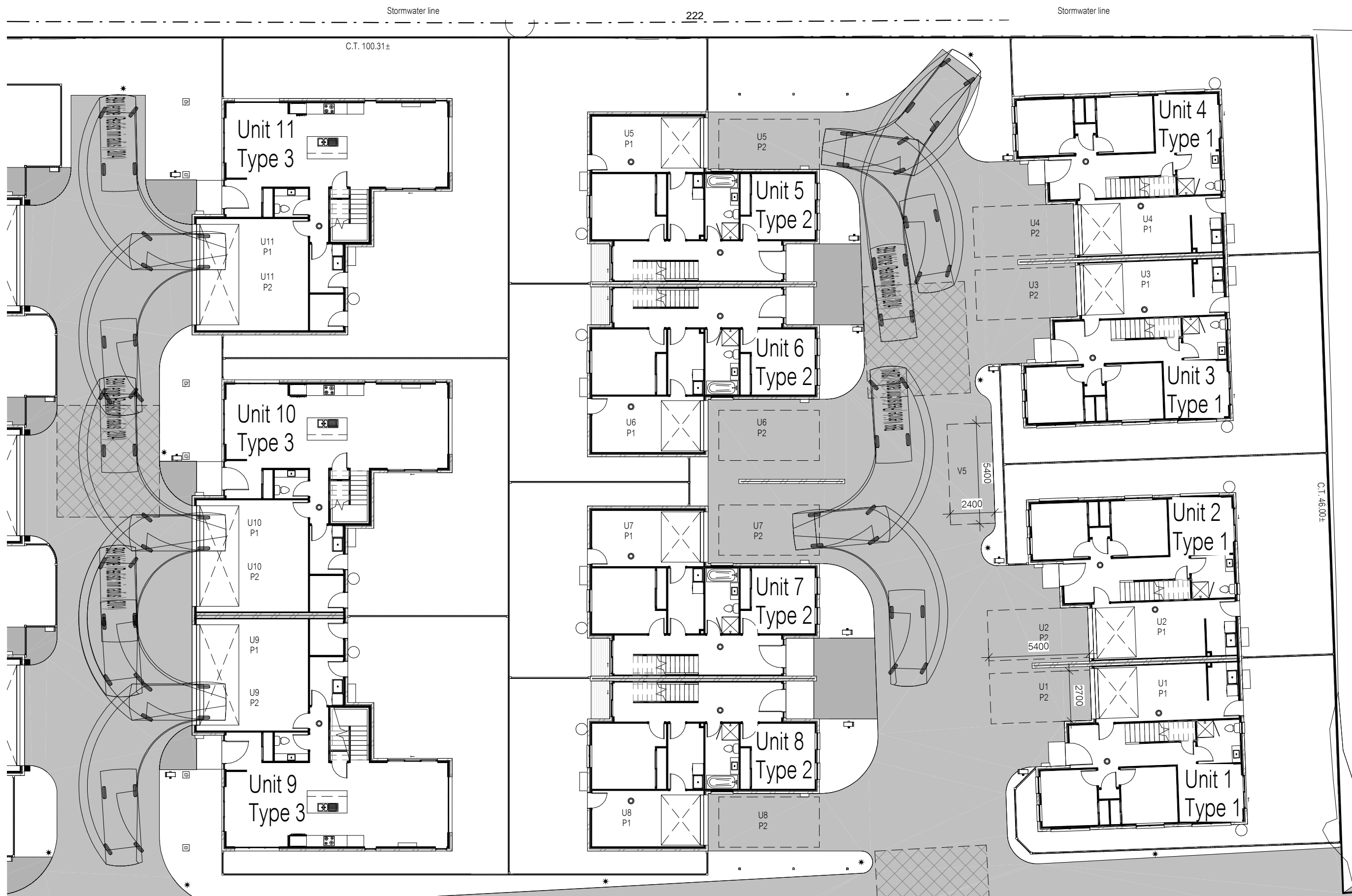
- Notes
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 - Dimensions to take precedence over scale.
 - Do not scale from these drawings.

Designer:
ANOTHER PERSPECTIVE PTY LTD
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Fx: (03) 6231 4166
Email:
info@anotherperspective.com.au

Client / Project info
PROPOSED VILLANUEVA DEVELOPMENT
75 Fouche Avenue
OLD BEACH



| | | |
|--------------------------|----------------|----------|
| MANOEUVRING PLAN SHEET 1 | | |
| Drawn | ST | WH712552 |
| Date | 19 August 2020 | Sheet |
| Scale | 1:200 | 01k/21 |



| | | |
|-----|--------------|------|
| J | 1 Dec. 2020 | ST |
| I | 29 Oct. 2020 | ST |
| H | 26 Oct. 2020 | ST |
| G | 21 Oct. 2020 | ST |
| F | 20 Oct. 2020 | ST |
| D | 25 Aug 2020 | ST |
| No. | Date | Int. |

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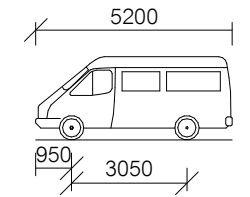
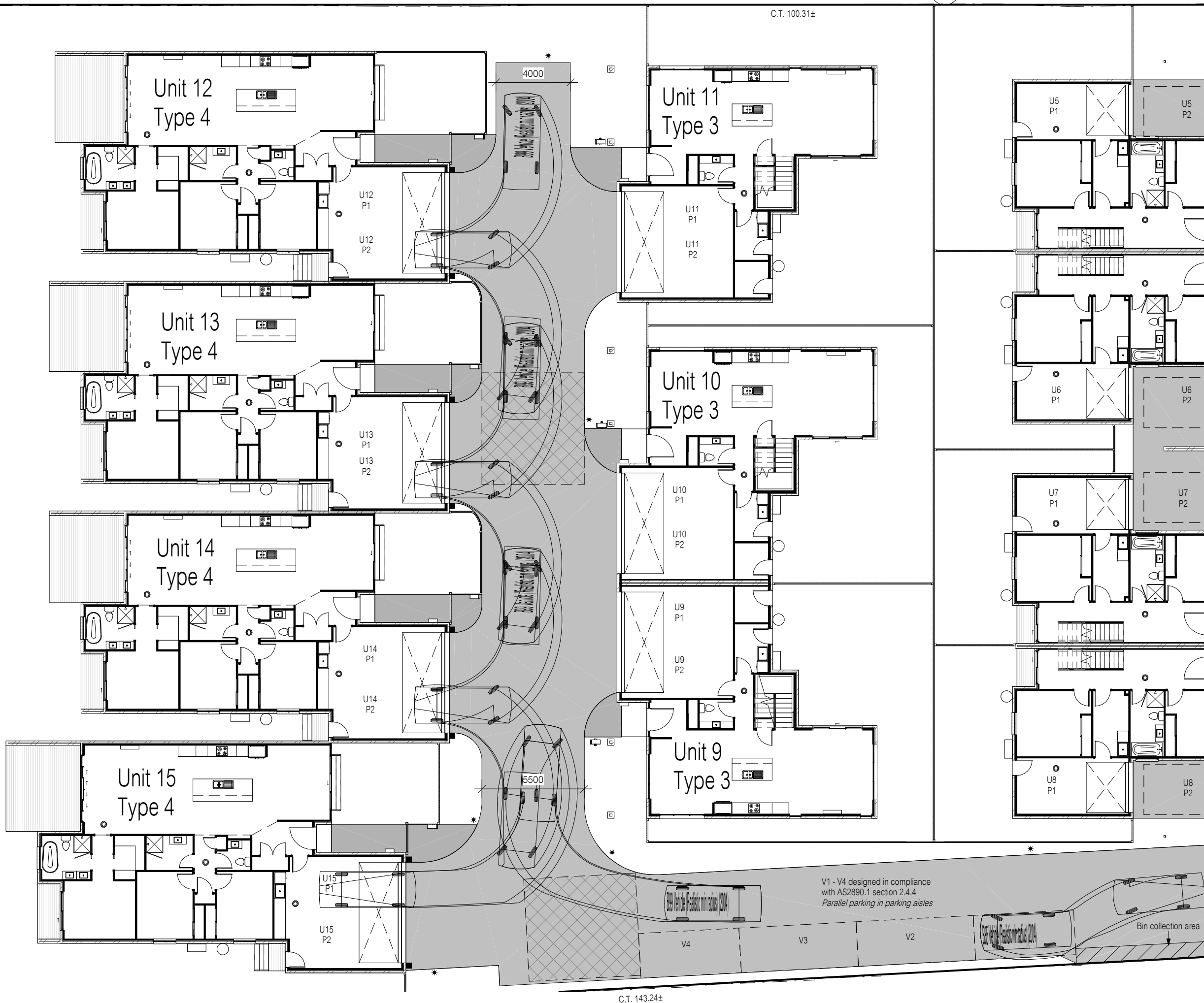
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 75 Fouche Avenue
 OLD BEACH



MANOEUVRING PLAN SHEET 2

| | | |
|-------|----------------|----------|
| Drawn | ST | WH712552 |
| Date | 19 August 2020 | Sheet |
| Scale | 1:200 | |

011/21



B99 Vehicle (Realistic min radius) (2004)

- Overall Length 5.200m
- Overall Width 1.940m
- Overall Body Height 2.200m
- Min Body Ground Clearance 0.312m
- Track Width 1.840m
- Lock to Lock Time 4.00s
- Curb to Curb Turning Radius 6.250m

* Manoeuvring has been achieved using 'autotrack 10' Manoeuvring software.

| | | |
|-----|--------------|------|
| J | 1 Dec. 2020 | ST |
| I | 29 Oct. 2020 | ST |
| H | 26 Oct. 2020 | ST |
| G | 21 Oct. 2020 | ST |
| F | 20 Oct. 2020 | ST |
| D | 25 Aug 2020 | ST |
| No. | Date | Int. |

Amendment changes as per cover sheet

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PROPOSED VILLANUEVA DEVELOPMENT
 75 Fouche Avenue
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MANOEUVRING PLAN SHEET 3

| | | |
|-------|----------------|----------|
| Drawn | ST | WH712552 |
| Date | 19 August 2020 | Sheet |
| Scale | 1:200 | 01m/21 |

V1 - V4 designed in compliance with AS2890.1 section 2.4.4 Parallel parking in parking aisles

Bin collection area

C.T. 100.31±

C.T. 46.00±



| | | |
|-----|--------------|------|
| J | 1 Dec. 2020 | ST |
| I | 29 Oct. 2020 | ST |
| H | 26 Oct. 2020 | ST |
| No. | Date | Int. |

Amendment changes as per cover sheet

- Notes
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MANOEUVRING PLAN SHEET 4

| | | |
|-------|-----------------|----------|
| Drawn | ST | WH712552 |
| Date | 26 October 2020 | Sheet |
| Scale | 1:200 | 01n/21 |



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|-----|--------------|------|
| J | 1 Dec. 2020 | ST |
| I | 29 Oct. 2020 | ST |
| H | 26 Oct. 2020 | ST |
| G | 21 Oct. 2020 | ST |
| F | 20 Oct. 2020 | ST |
| No. | Date | Int. |

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Shadows shown for stylisations purpose only

- Notes
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PROPOSED VILLANUEVA DEVELOPMENT
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| | | |
|-------------------------|--------------|----------|
| SITE PERSPECTIVE VIEW 1 | | |
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| Date | 22 July 2020 | Sheet |
| Scale | | 010/21 |
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| | | |
|-----|--------------|------|
| J | 1 Dec. 2020 | ST |
| I | 29 Oct. 2020 | ST |
| H | 26 Oct. 2020 | ST |
| G | 21 Oct. 2020 | ST |
| F | 20 Oct. 2020 | ST |
| No. | Date | Int. |

Amendment changes as per cover sheet
Shadows shown for stylisations purpose only

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Client / Project info
PROPOSED VILLANUEVA DEVELOPMENT
75 Fouche Avenue
OLD BEACH



| | | |
|-------------------------|--------------|----------|
| SITE PERSPECTIVE VIEW 2 | | |
| Drawn | ST | WH712552 |
| Date | 27 July 2020 | Sheet |
| Scale | | 01p/21 |
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| | | |
|-----|--------------|------|
| J | 1 Dec. 2020 | ST |
| I | 29 Oct. 2020 | ST |
| H | 26 Oct. 2020 | ST |
| G | 21 Oct. 2020 | ST |
| F | 20 Oct. 2020 | ST |
| E | 1 Sept 2020 | ST |
| No. | Date | Int. |

Amendment changes as per cover sheet

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 - All materials to be installed according to manufacturers specifications.
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 - Do not scale from these drawings.

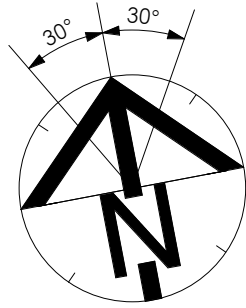
Designer:
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Client / Project info
 PROPOSED VILLANUEVA DEVELOPMENT
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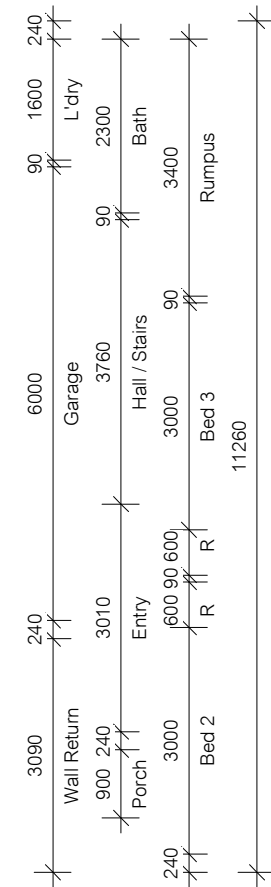
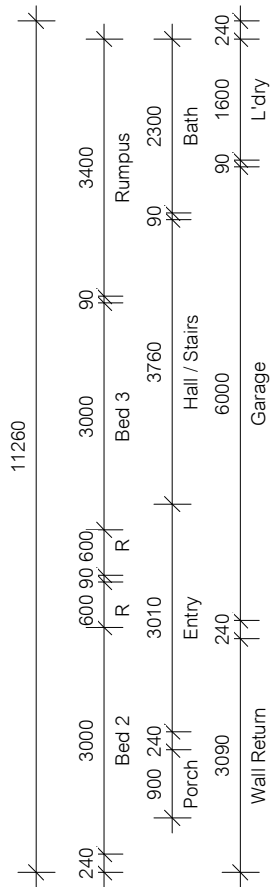
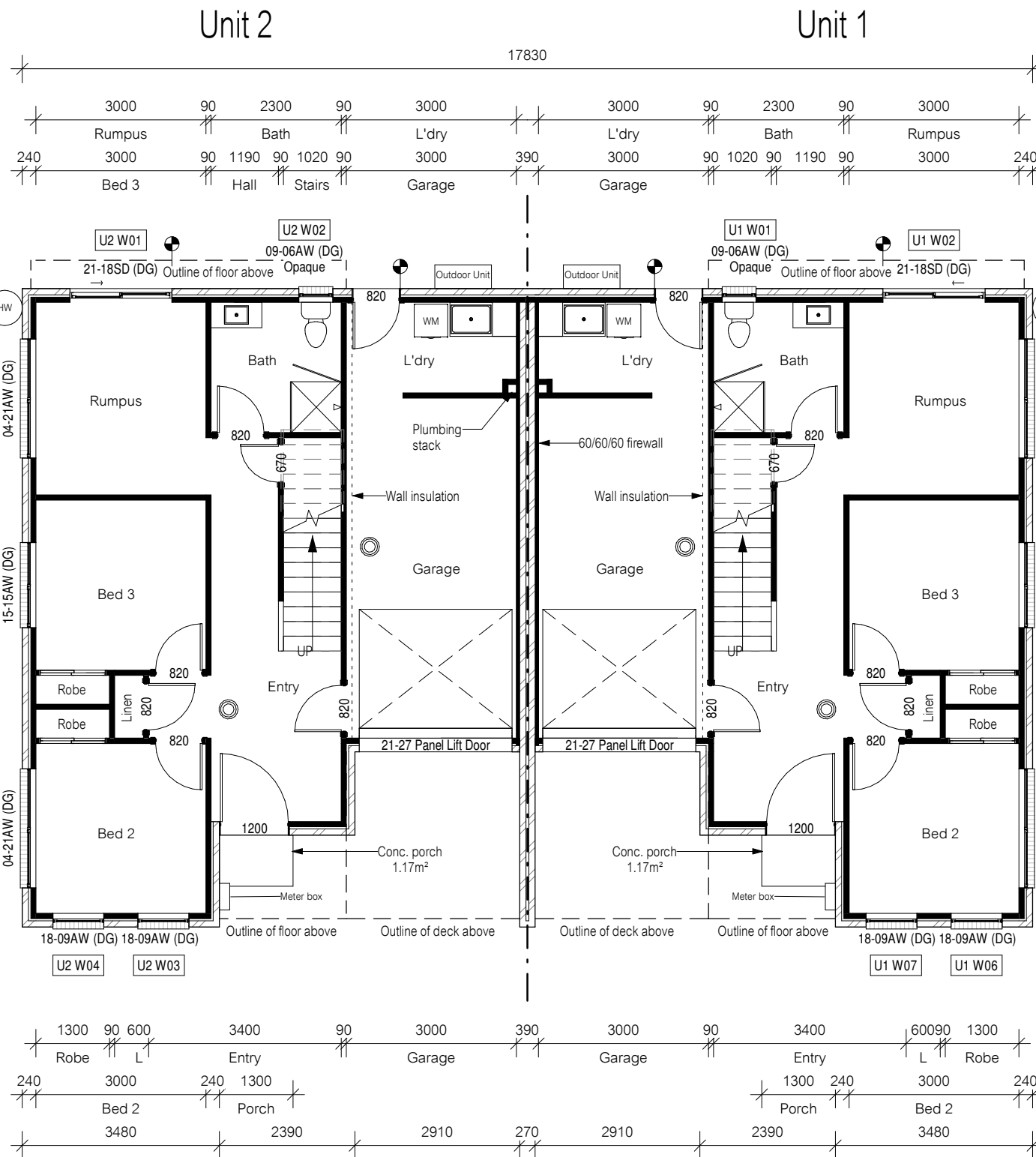


STAGING PLAN

| | | |
|-------|------------------|----------|
| Drawn | ST | WH712552 |
| Date | 1 September 2020 | Sheet |
| Scale | 1 : 500 | 01q/21 |



10.4.4
U2 W01 & U1 W02
satisfy A1



Unit 1 Ground Floor Area = 87.10m²
Unit 2 Ground Floor Area = 87.10m²
Total Ground Floor Area = 174.20m²

- Articulation joints
- Smoke Alarm (interconnected where more than 1)

All window sizes to be checked and/or confirmed on site prior to ordering glazing units

- Notes
- Builder to verify all dimensions and levels on site prior to commencement of work
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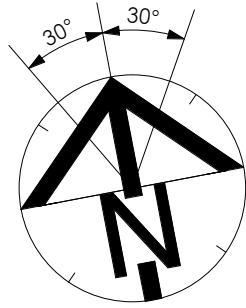
Designer:
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Client / Project info
PROPOSED VILLANUEVA DEVELOPMENT
75 Fouche Avenue
OLD BEACH

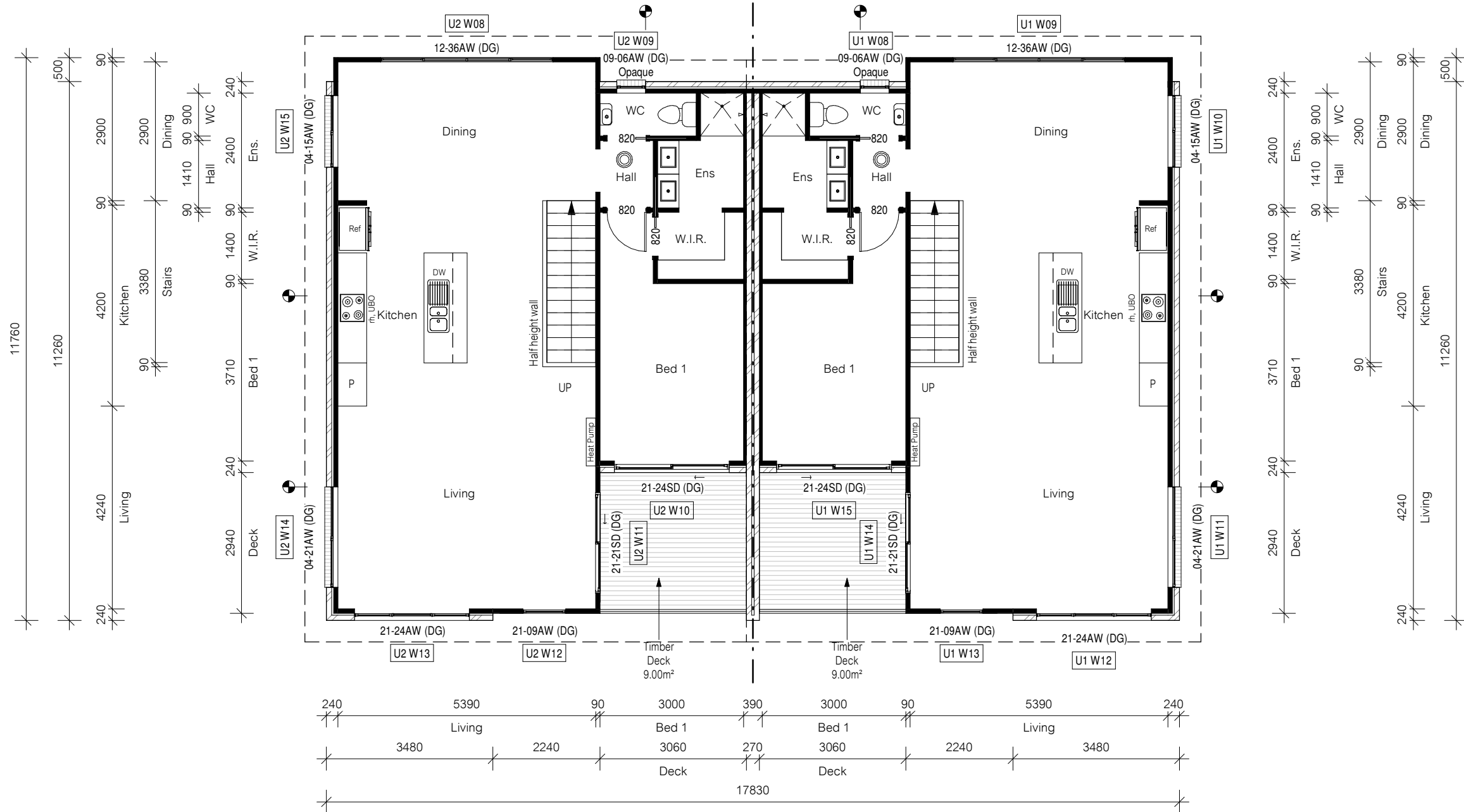
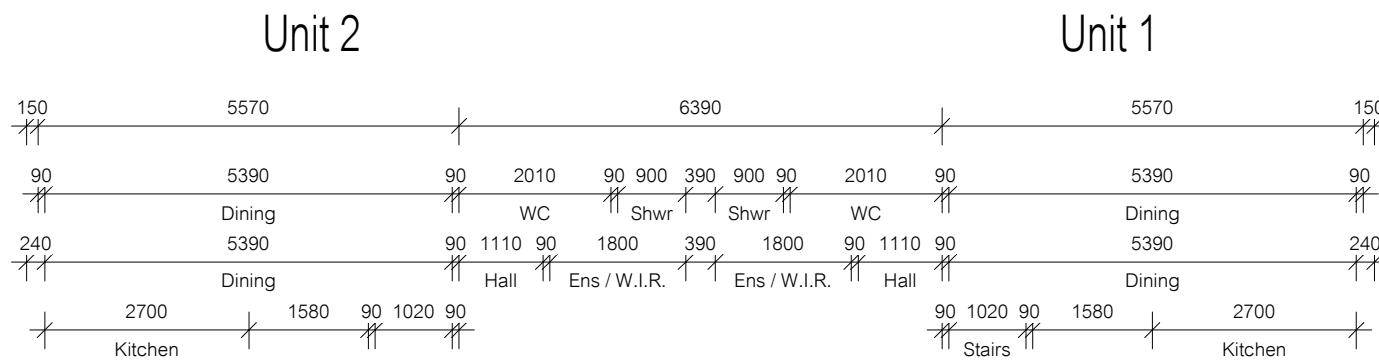


| UNITS 1 & 2 GROUND FLOOR PLAN | | |
|-------------------------------|-------------|----------|
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| Date | 8 July 2020 | Sheet |
| Scale | 1:100 | 02/21 |
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10.4.4
U2 W08 & U1 W09
satisfy A1



Unit 1 First Floor Area = 92.96m²
Unit 2 First Floor Area = 92.96m²
Total First Floor Area = 185.92m²

Articulation joints

Smoke Alarm (interconnected where more than 1)

All window sizes to be checked and/or confirmed on site prior to ordering glazing units

- Notes
- Builder to verify all dimensions and levels on site prior to commencement of work
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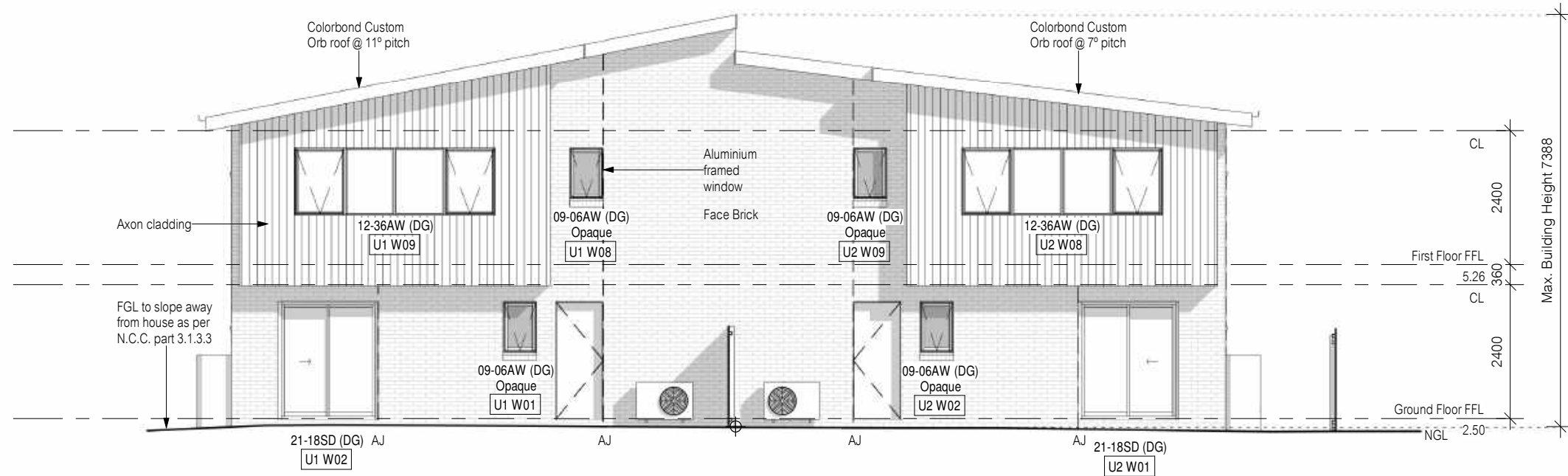
Client / Project info
PROPOSED VILLANUEVA DEVELOPMENT
75 Fouche Avenue
OLD BEACH



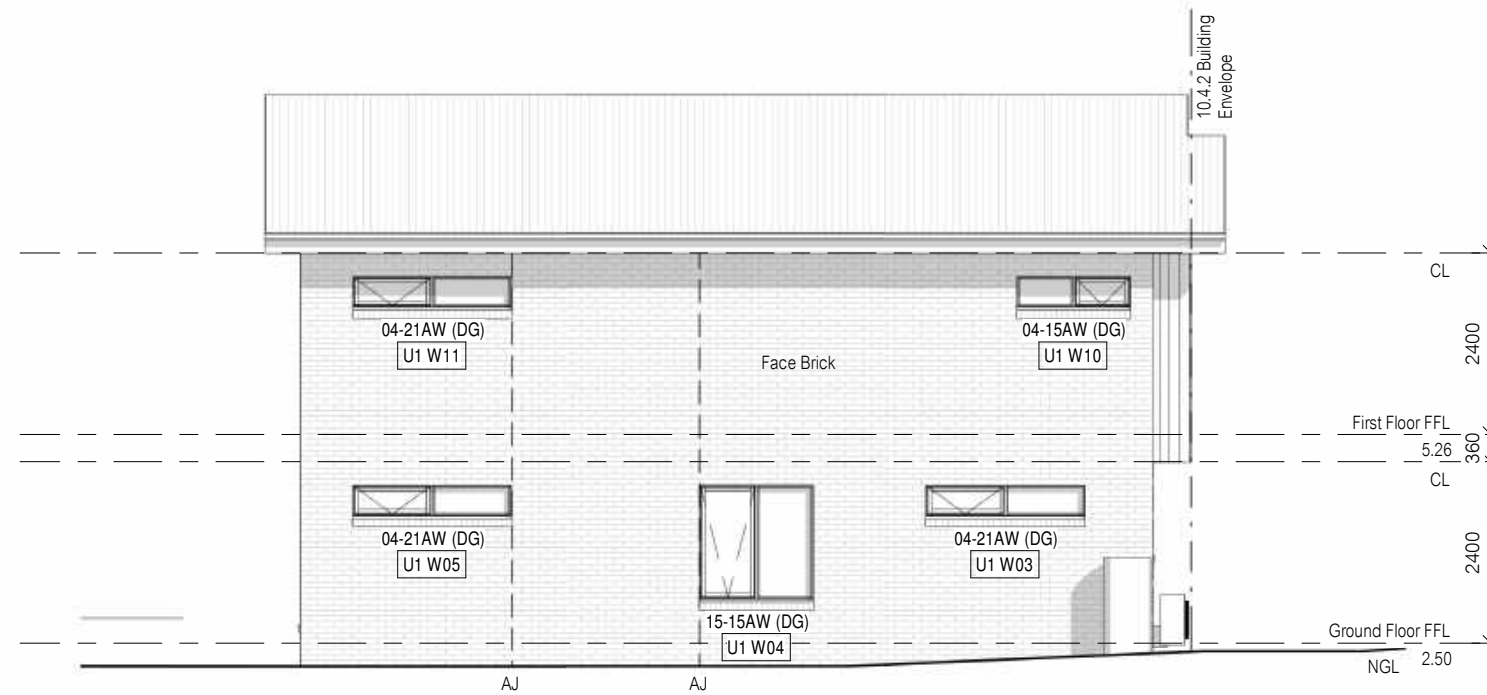
| UNITS 1 & 2 FIRST FLOOR PLAN | | |
|------------------------------|-------------|----------|
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|-----|------|------|
| No. | Date | Int. |
|-----|------|------|

Amendment changes as per cover sheet



UNITS 1 & 2 NORTH ELEVATION



UNITS 1 & 2 EAST ELEVATION

All window sizes to be checked and/or confirmed on site prior to ordering glazing units

- Notes
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Client / Project info
 PROPOSED VILLANUEVA DEVELOPMENT
 75 Fouche Avenue
 OLD BEACH



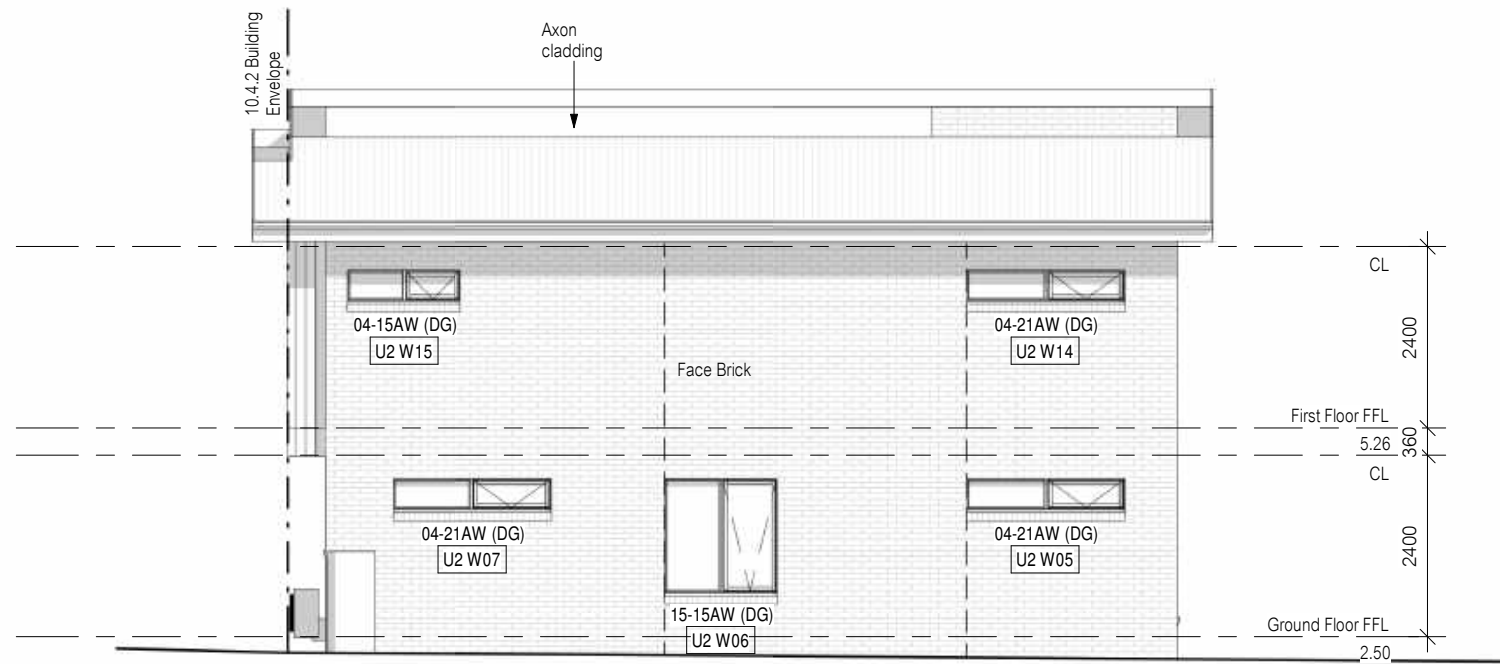
UNITS 1 & 2 ELEVATIONS SHEET

| | |
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| 1 | |
| Drawn | ST WH712552 |
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|-----|------|------|--------------------------------------|---|



UNITS 1 & 2 SOUTH ELEVATION



UNITS 1 & 2 WEST ELEVATION

All window sizes to be checked and/or confirmed on site prior to ordering glazing units

- Notes
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Client / Project info
 PROPOSED VILLANUEVA DEVELOPMENT
 75 Fouche Avenue
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UNITS 1 & 2 ELEVATIONS SHEET

2

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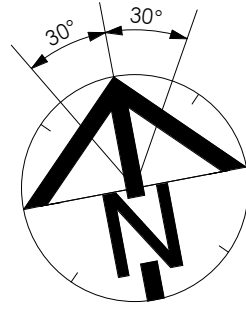
Date 19 August 2020 Sheet

Scale 1:100

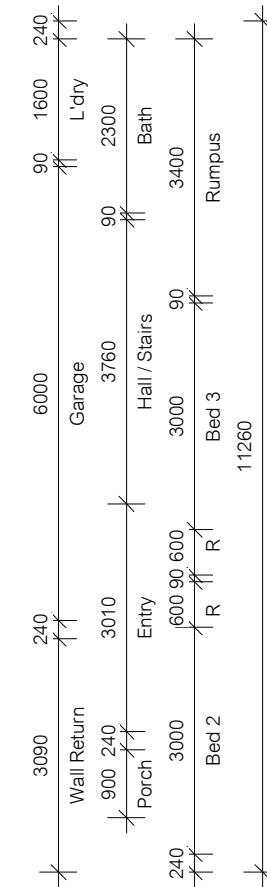
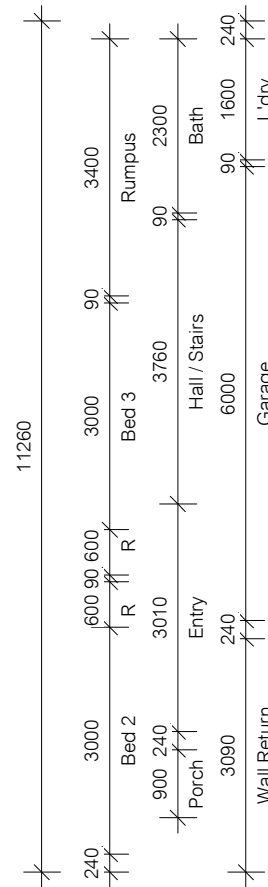
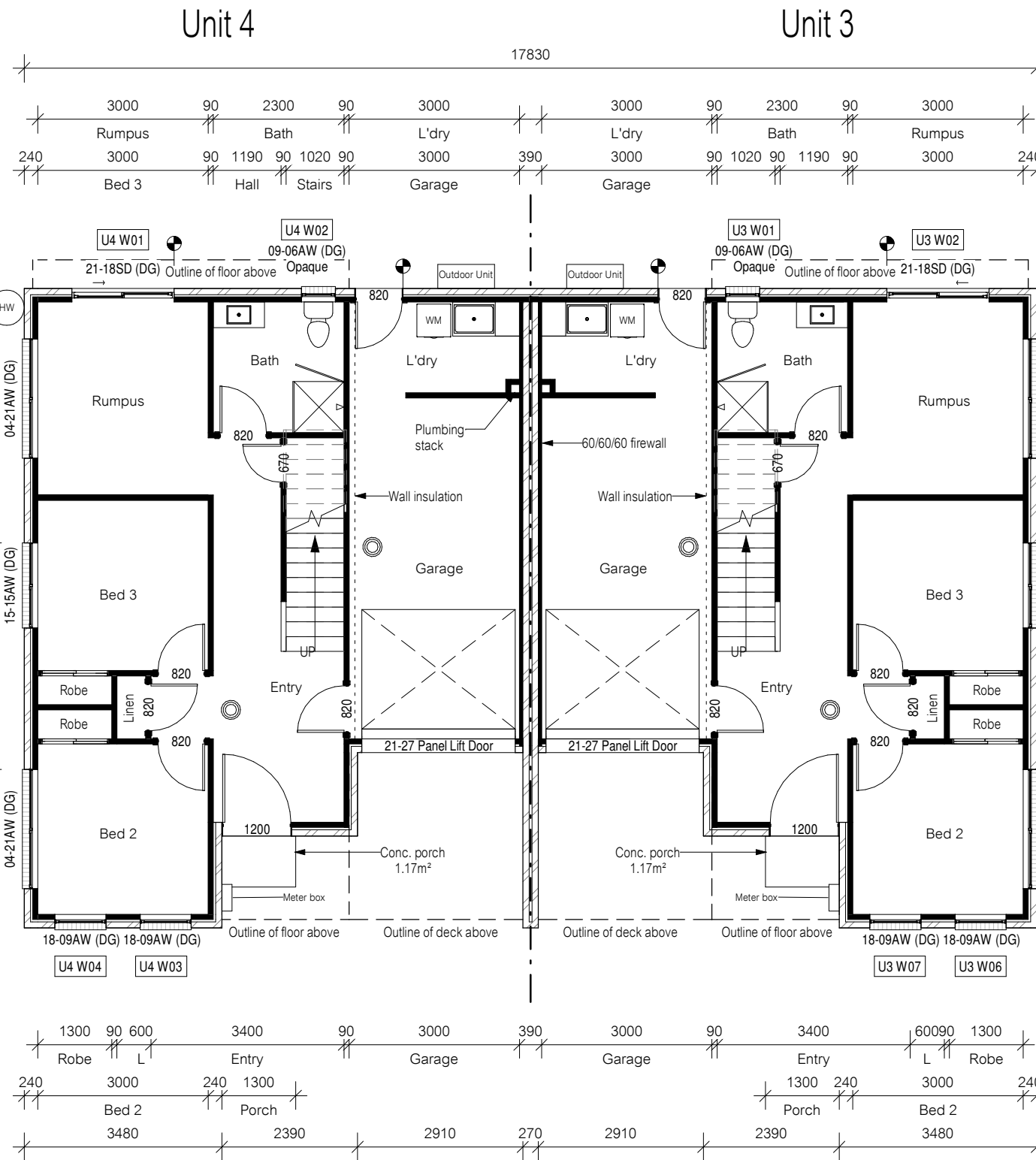
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10.4.4
U4 W01 & U3 W02
satisfy A1



Unit 3 Ground Floor Area = 87.10m²
Unit 4 Ground Floor Area = 87.10m²
Total Ground Floor Area = 174.20m²

- Articulation joints
- ⊙ Smoke Alarm (interconnected where more than 1)

All window sizes to be checked and/or confirmed on site prior to ordering glazing units

- Notes
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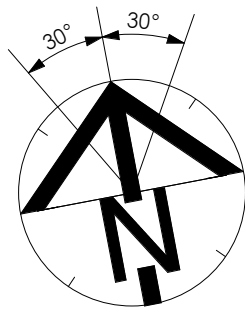
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PROPOSED VILLANUEVA DEVELOPMENT
75 Fouche Avenue
OLD BEACH



UNITS 3 & 4 GROUND FLOOR PLAN

| | | |
|-------------|----------------|----------|
| Drawn | ST | WH712552 |
| Date | 19 August 2020 | Sheet |
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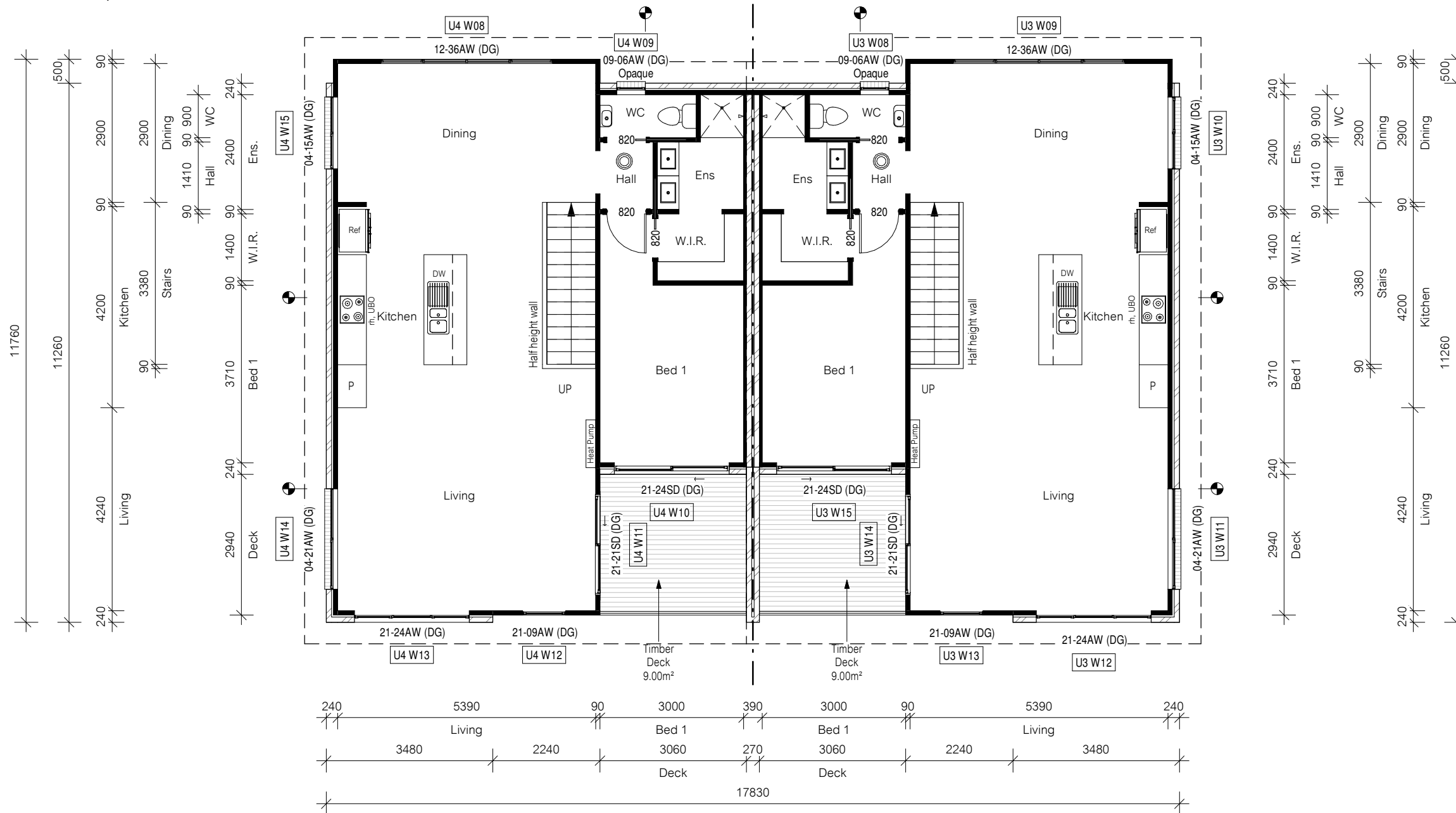
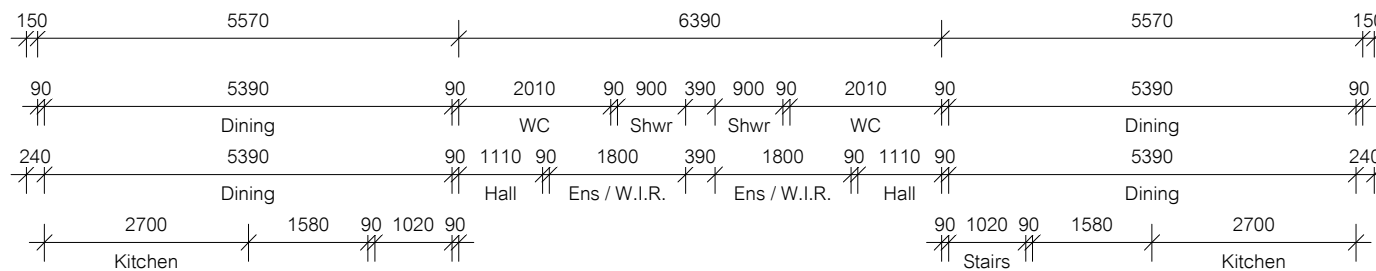
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|-----|------|------|--------------------------------------|
| No. | Date | Int. | Amendment changes as per cover sheet |
|-----|------|------|--------------------------------------|



10.4.4
U4 W08 & U3 W09
satisfy A1

Unit 4

Unit 3



Unit 3 First Floor Area = 92.96m²
 Unit 4 First Floor Area = 92.96m²
 Total First Floor Area = 185.92m²

All window sizes to be checked and/or confirmed on site prior to ordering glazing units

- Notes
- Builder to verify all dimensions and levels on site prior to commencement of work
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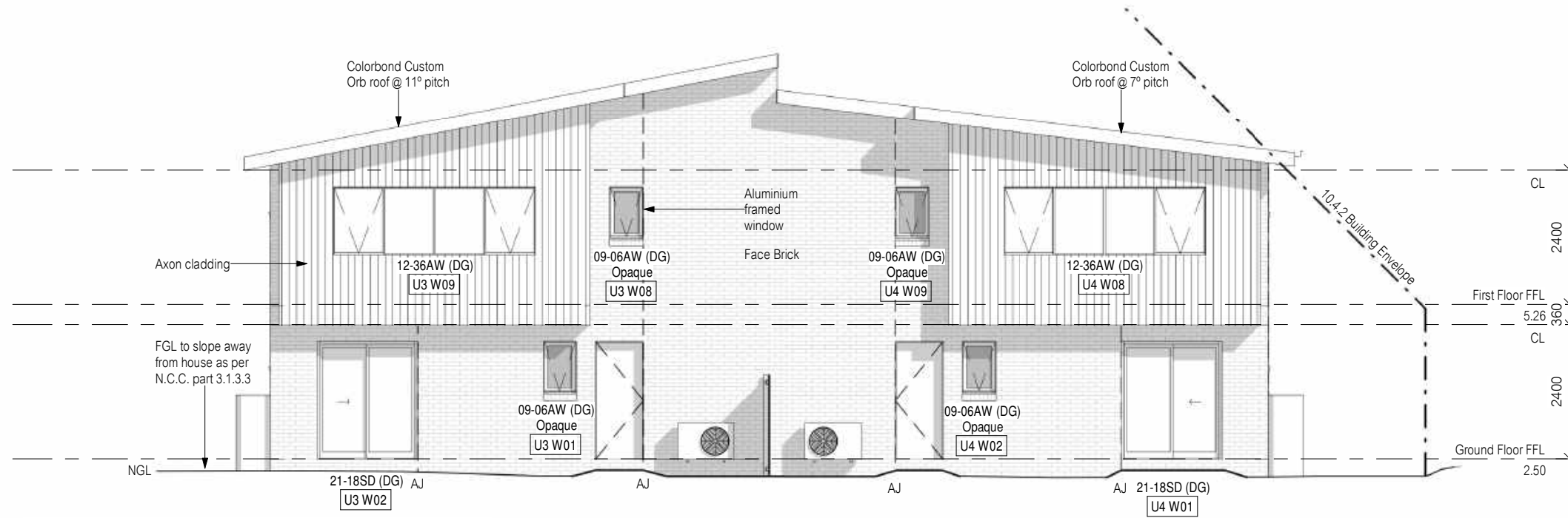
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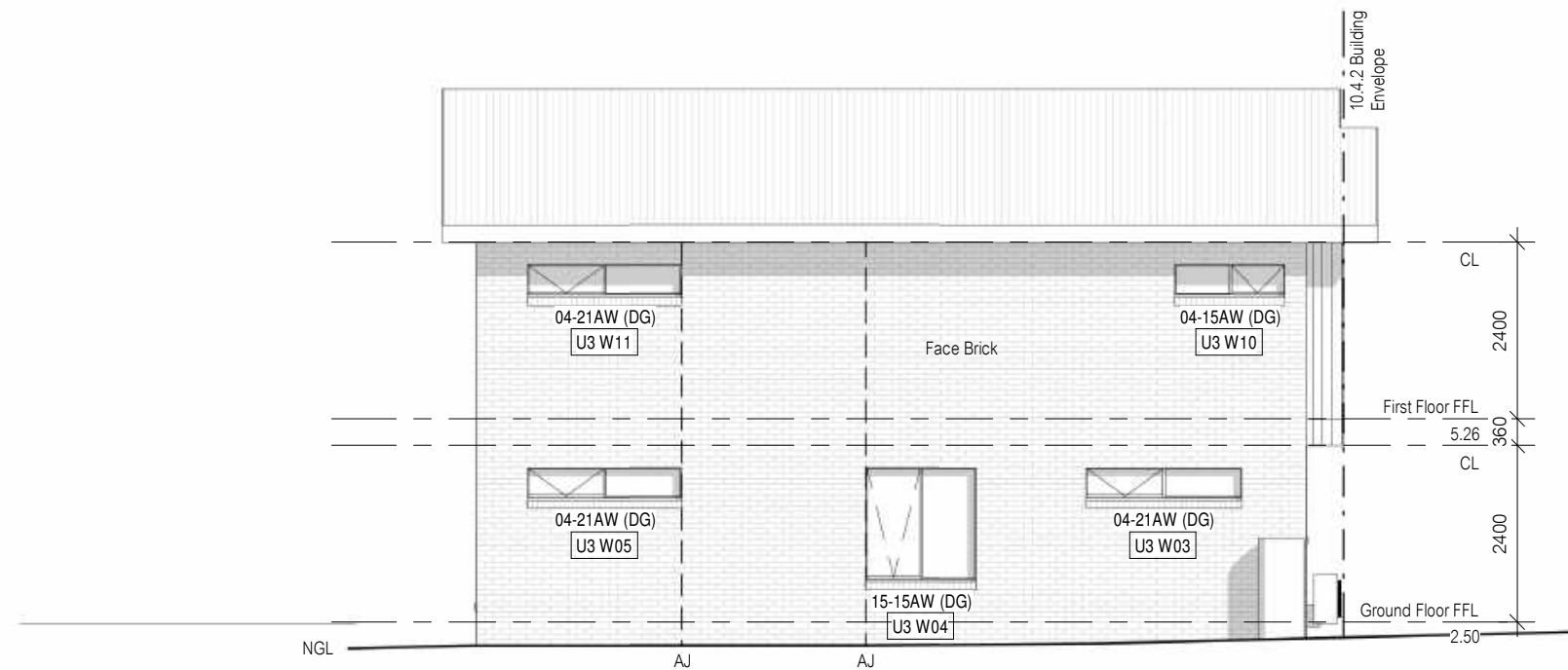
| UNITS 3 & 4 FIRST FLOOR PLAN | | |
|------------------------------|----------------|----------|
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Amendment changes as per cover sheet



UNITS 3 & 4 NORTH ELEVATION



UNITS 3 & 4 EAST ELEVATION

All window sizes to be checked and/or confirmed on site prior to ordering glazing units

- Notes
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Client / Project info
 PROPOSED VILLANUEVA DEVELOPMENT
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UNITS 3 & 4 ELEVATIONS SHEET

1

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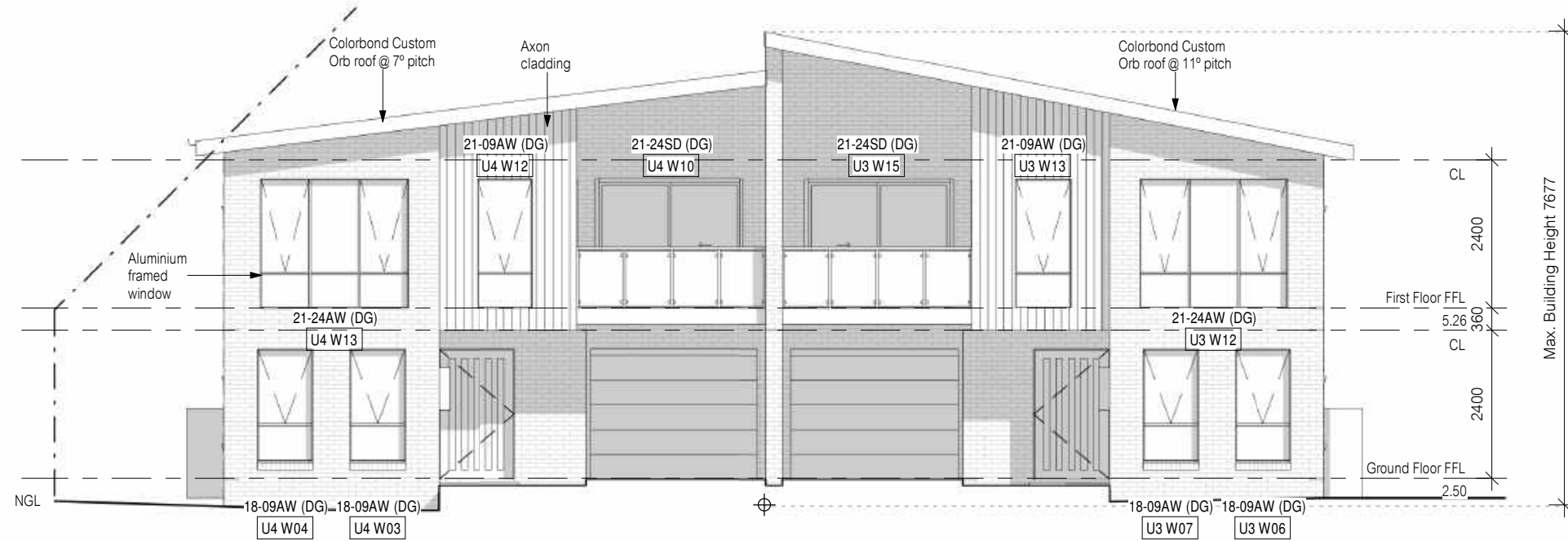
Date 19 August 2020 Sheet

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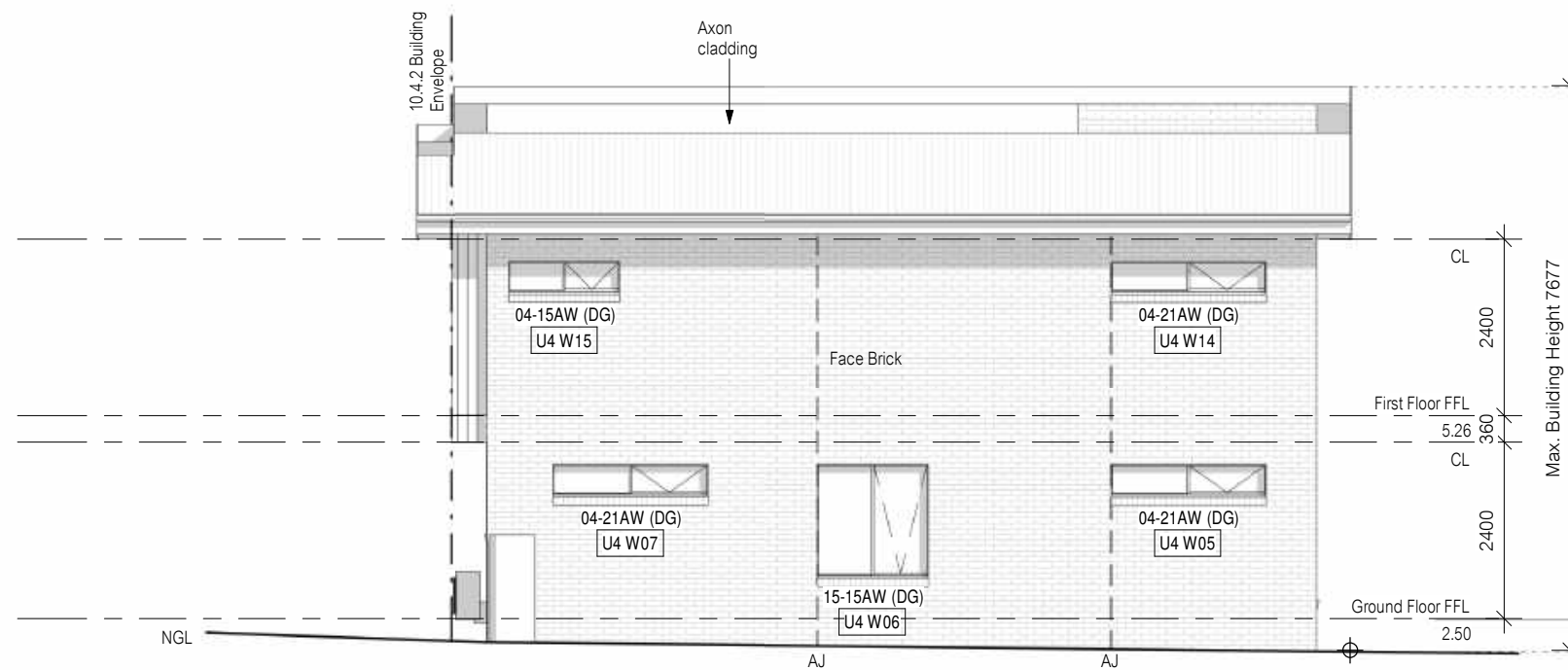
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|-----|------|------|--------------------------------------|---|



UNITS 3 & 4 SOUTH ELEVATION



UNITS 3 & 4 WEST ELEVATION

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UNITS 3 & 4 ELEVATIONS SHEET

2

Drawn ST WH712552

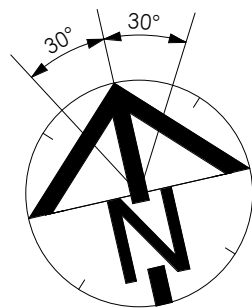
Date 19 August 2020 Sheet

Scale 1:100

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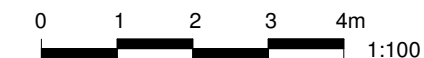
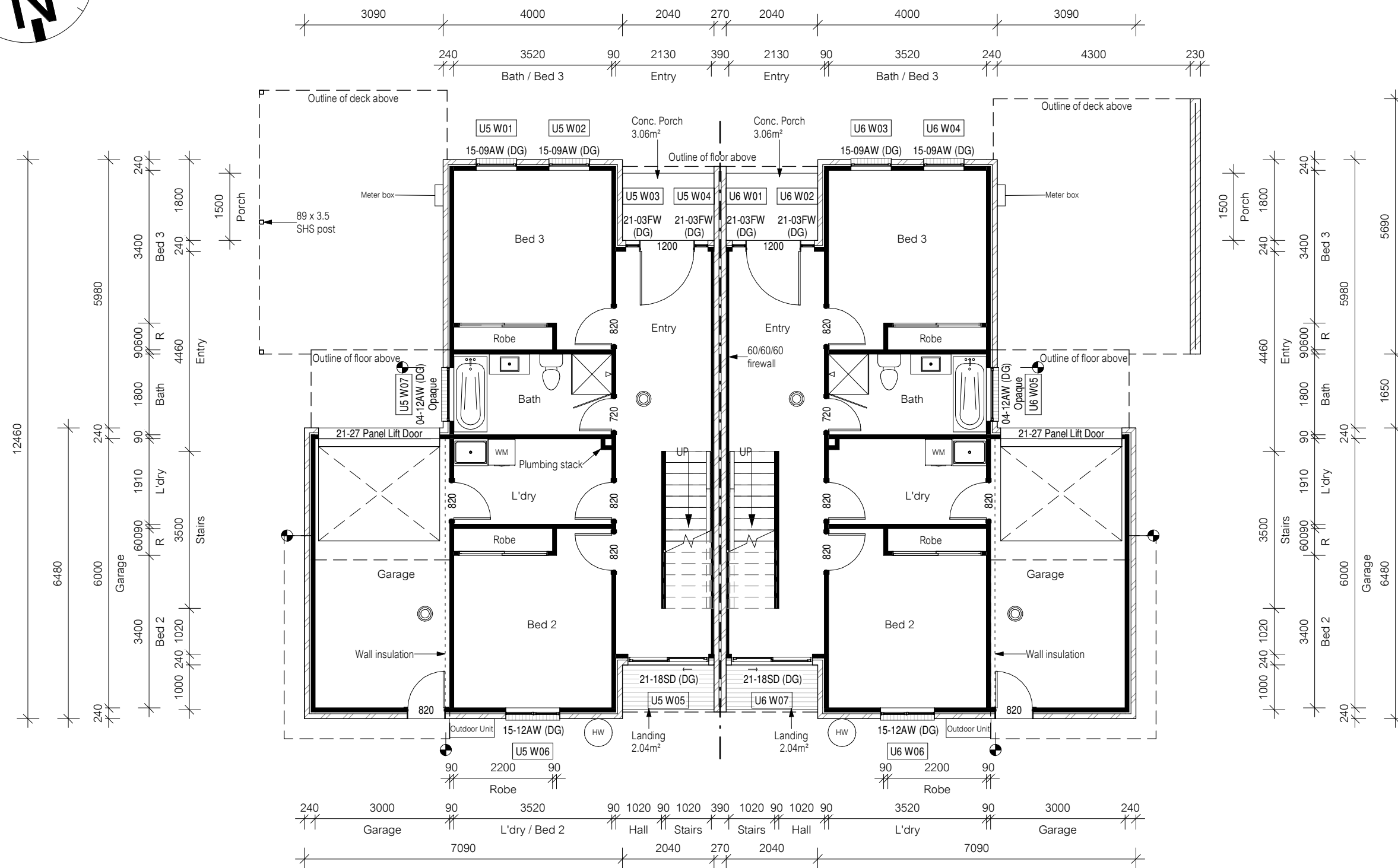
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| No. | Date | Int. | Amendment changes as per cover sheet | Shadows shown for stylisation purposes only |
|-----|------|------|--------------------------------------|---|



Unit 5

Unit 6



Unit 5 Ground Floor Area = 90.44m²
 Unit 6 Ground Floor Area = 90.44m²
 Total Ground Floor Area = 180.88m²

- Articulation joints
- ⊙ Smoke Alarm (interconnected where more than 1)

All window sizes to be checked and/or confirmed on site prior to ordering glazing units

- Notes
- Builder to verify all dimensions and levels on site prior to commencement of work
 - All work to be carried out in accordance with the current National Construction Code.
 - All materials to be installed according to manufacturers specifications.
 - Dimensions to take precedence over scale.
 - Do not scale from these drawings.

Designer:
 ANOTHER PERSPECTIVE PTY LTD
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 Fx: (03) 6231 4166
 Email:
 info@anotherperspective.com.au

Client / Project info
 PROPOSED VILLANUEVA DEVELOPMENT
 75 Fouche Avenue
 OLD BEACH

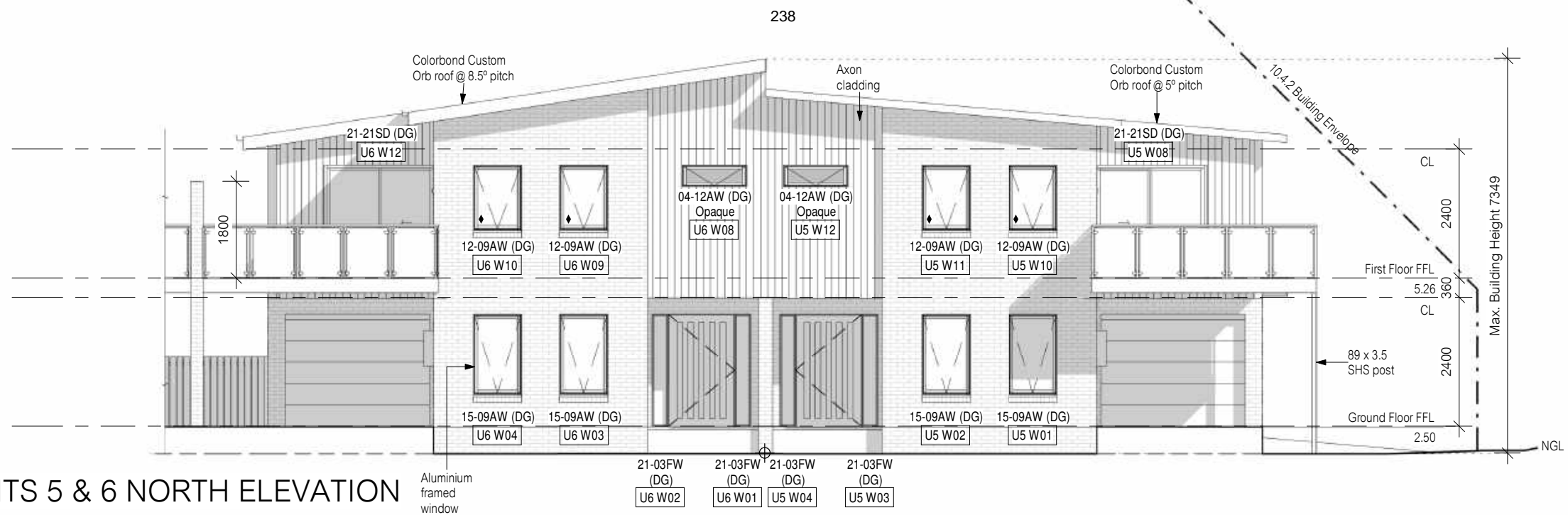


UNITS 5 & 6 GROUND FLOOR PLAN

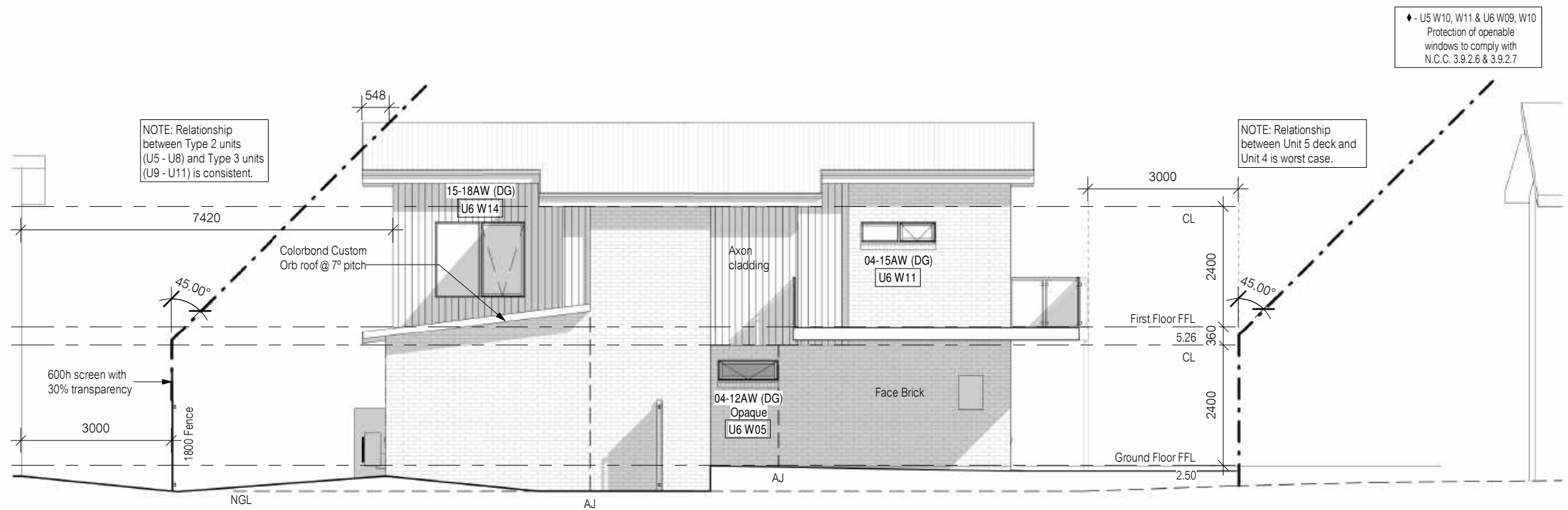
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| D | 25 Aug 2020 | ST |
| No. | Date | Int. |

Amendment changes as per cover sheet



UNITS 5 & 6 NORTH ELEVATION



UNITS 5 & 6 EAST ELEVATION

| No. | Date | Int. |
|-----|--------------|------|
| J | 1 Dec. 2020 | ST |
| I | 29 Oct. 2020 | ST |
| H | 26 Oct. 2020 | ST |
| D | 25 Aug 2020 | ST |
| C | 19 Aug 2020 | ST |

LEGEND:
NGL - - - -
FGL - - - -

Amendment changes as per cover sheet

All window sizes to be checked and/or confirmed on site prior to ordering glazing units

Shadows shown for stylisation purposes only

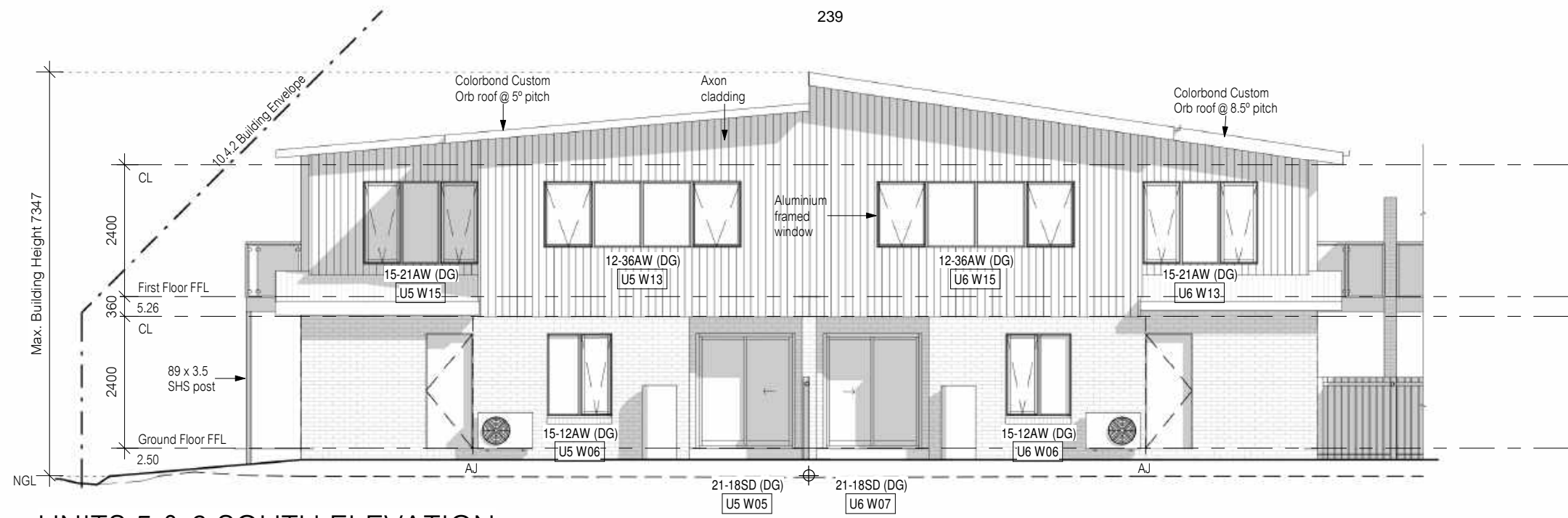
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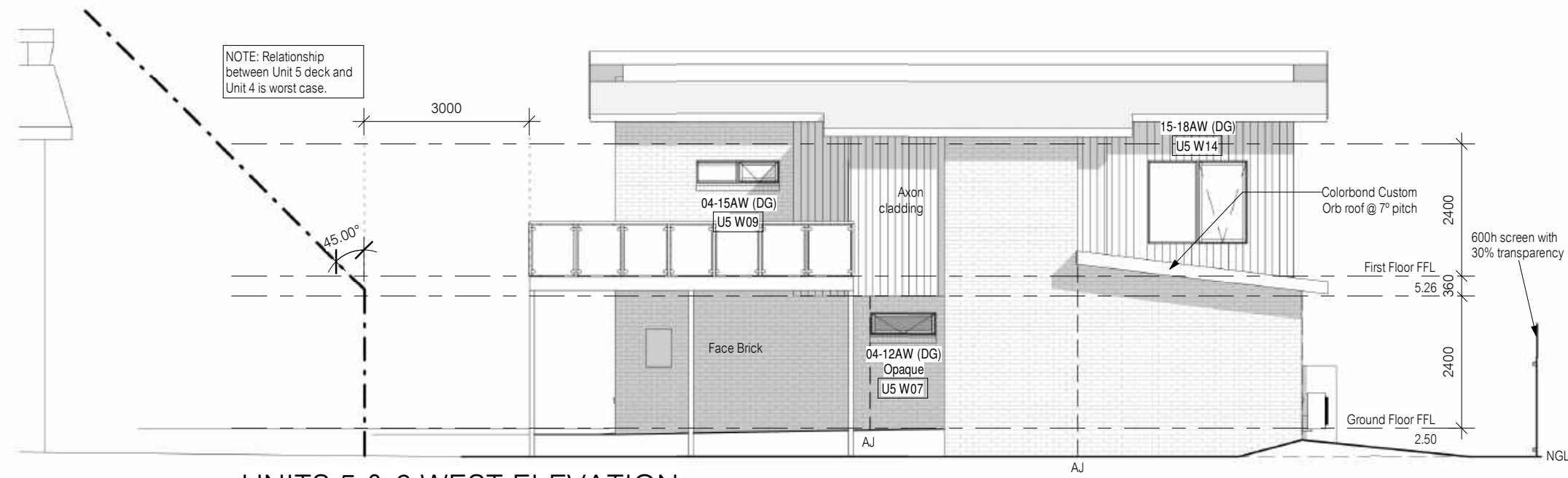
Client / Project info
PROPOSED VILLANUEVA DEVELOPMENT
75 Fouche Avenue
OLD BEACH



| UNITS 5 & 6 ELEVATIONS SHEET | |
|------------------------------|----------------------|
| 1 | |
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| Date | 14 August 2020 Sheet |
| Scale | 1:100 |
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UNITS 5 & 6 SOUTH ELEVATION



UNITS 5 & 6 WEST ELEVATION

LEGEND:
NGL - - - -
FGL - - - -

All window sizes to be checked and/or confirmed on site prior to ordering glazing units

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Client / Project info
PROPOSED VILLANUEVA DEVELOPMENT
75 Fouche Avenue
OLD BEACH

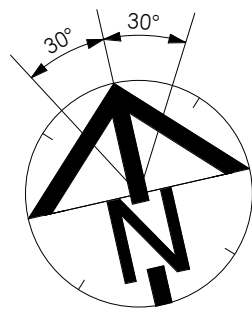


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| UNITS 5 & 6 ELEVATIONS SHEET | |
| 2 | |
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| Date | 14 August 2020 Sheet |
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|-----|--------------|------|
| J | 1 Dec. 2020 | ST |
| I | 29 Oct. 2020 | ST |
| D | 25 Aug 2020 | ST |
| C | 19 Aug 2020 | ST |
| No. | Date | Int. |

Amendment changes as per cover sheet

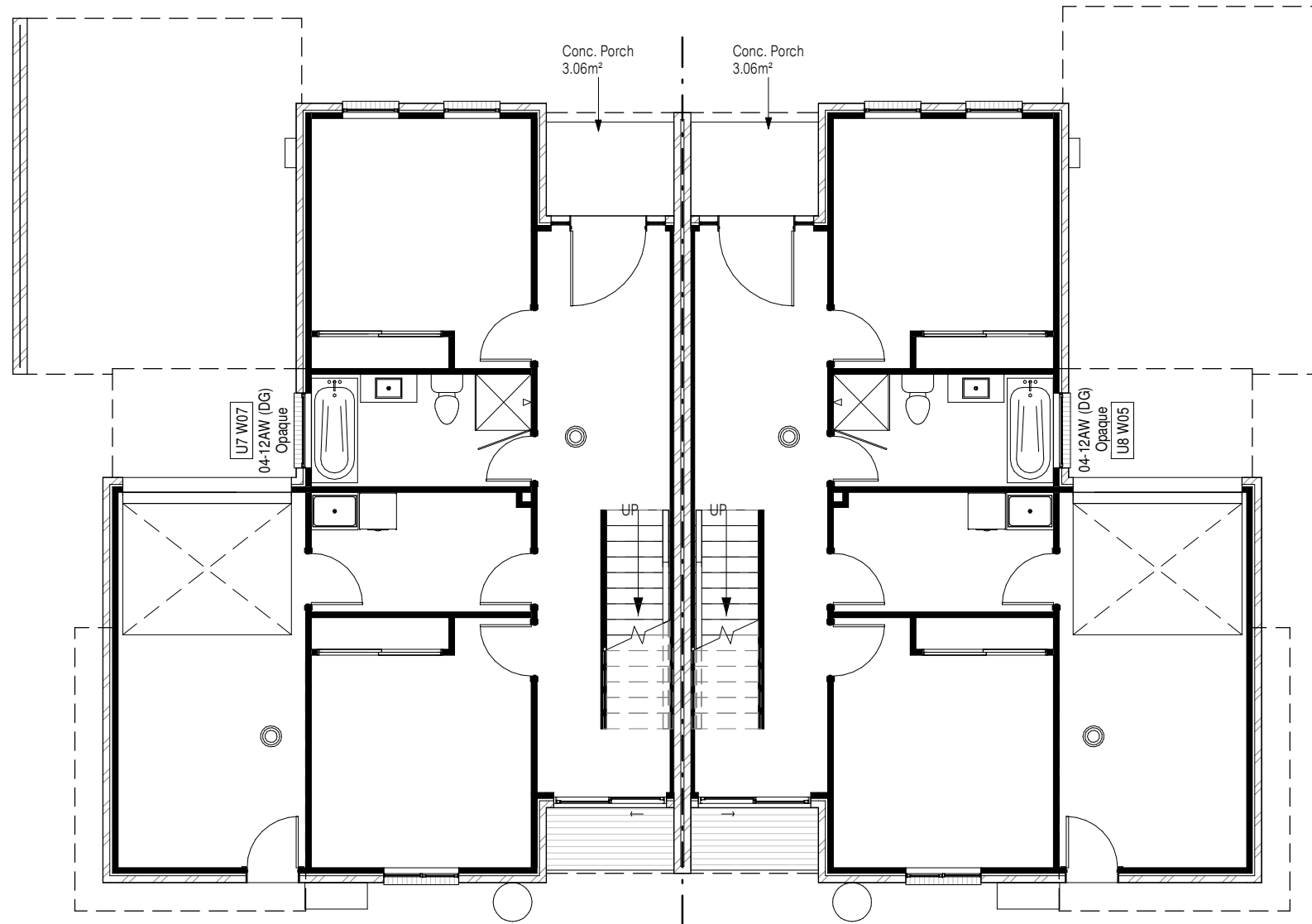
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240

Unit 7

Unit 8



Unit 5 Ground Floor Area = 90.44m²
 Unit 6 Ground Floor Area = 90.44m²
 Total Ground Floor Area = 181.88m²

- Articulation joints
- ⊙ Smoke Alarm (interconnected where more than 1)

All window sizes to be checked and/or confirmed on site prior to ordering glazing units

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 75 Fouche Avenue
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UNITS 7 & 8 GROUND FLOOR PLAN

Drawn ST WH712552

Date 19 August 2020 Sheet

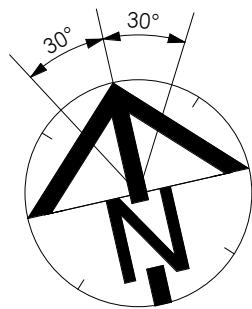
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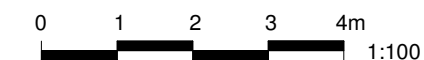
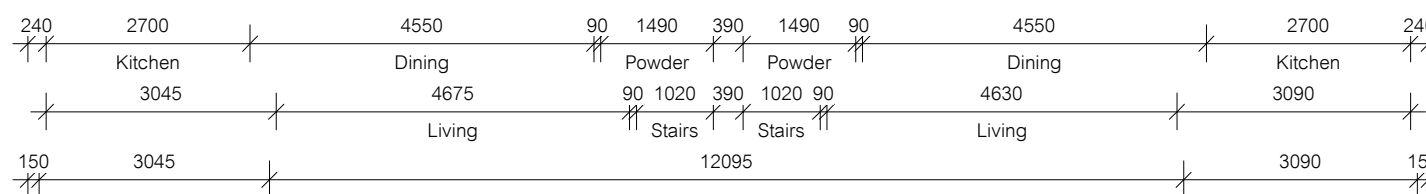
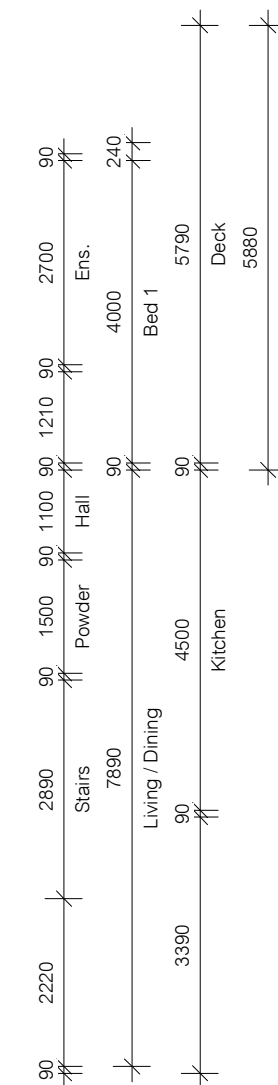
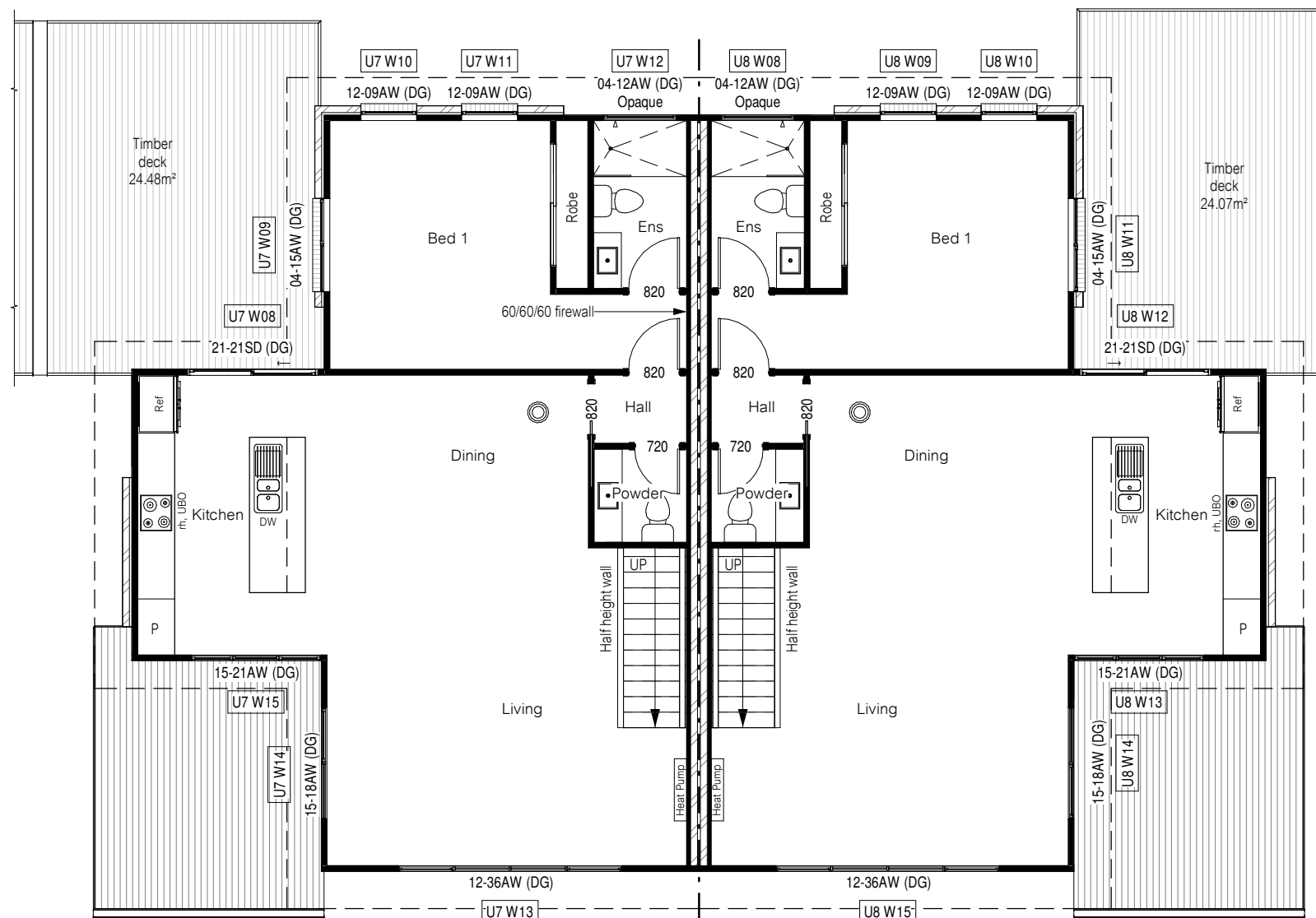
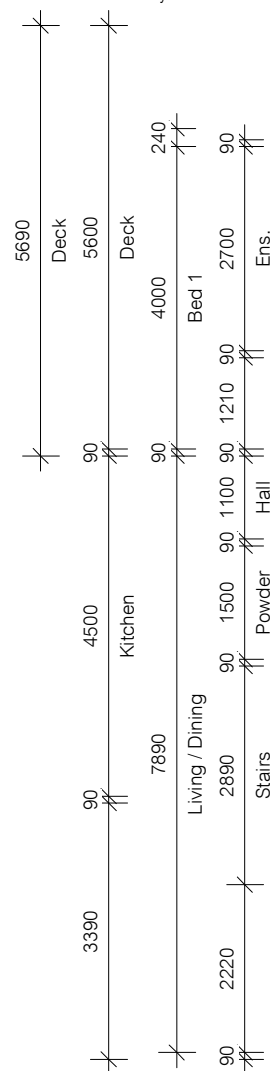
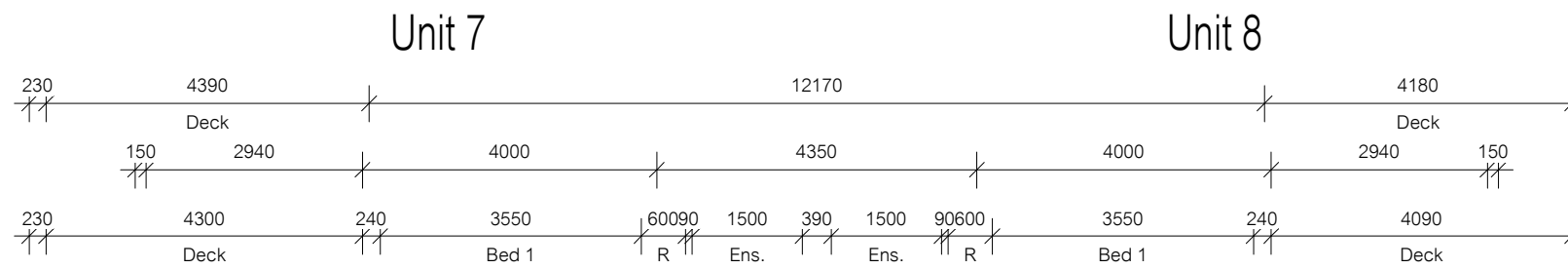
08/21

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| D | 25 Aug 2020 | ST |
| No. | Date | Int. |

Amendment changes as per cover sheet



10.4.4
U7 W08 & U8 W12
satisfy A1



Unit 5 First Floor Area = 89.30m²
Unit 6 First Floor Area = 89.30m²
Total First Floor Area = 178.60m²

Articulation joints

Smoke Alarm (interconnected where more than 1)

All window sizes to be checked and/or confirmed on site prior to ordering glazing units

Notes

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PROPOSED VILLANUEVA DEVELOPMENT
75 Fouche Avenue
OLD BEACH



UNITS 7 & 8 FIRST FLOOR PLAN

Drawn ST WH712552

Date 19 August 2020 Sheet

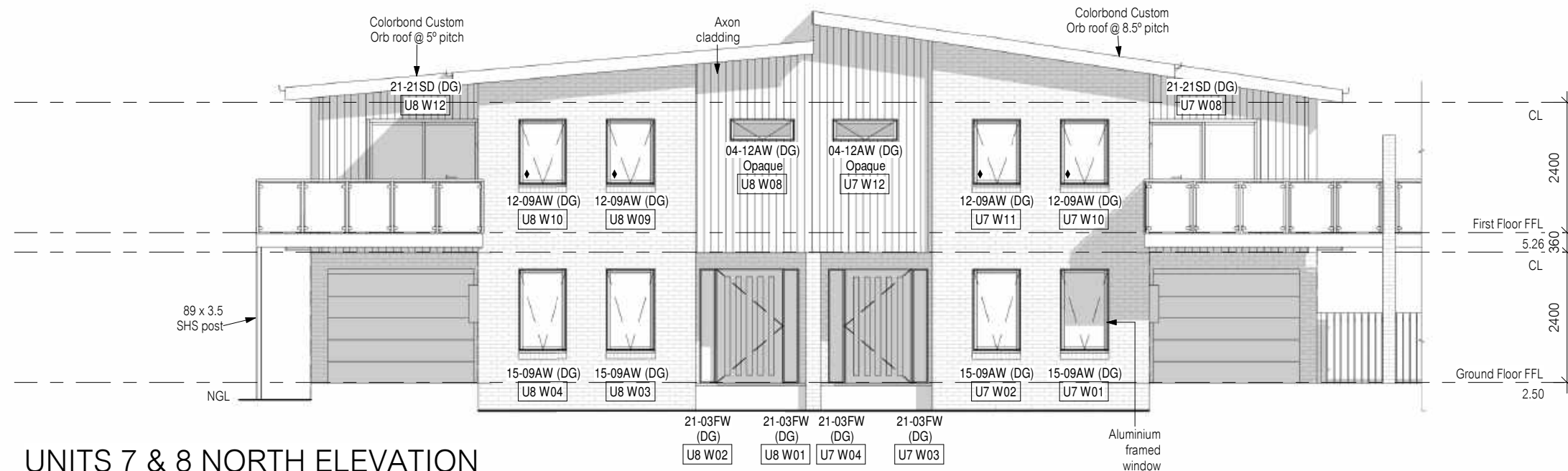
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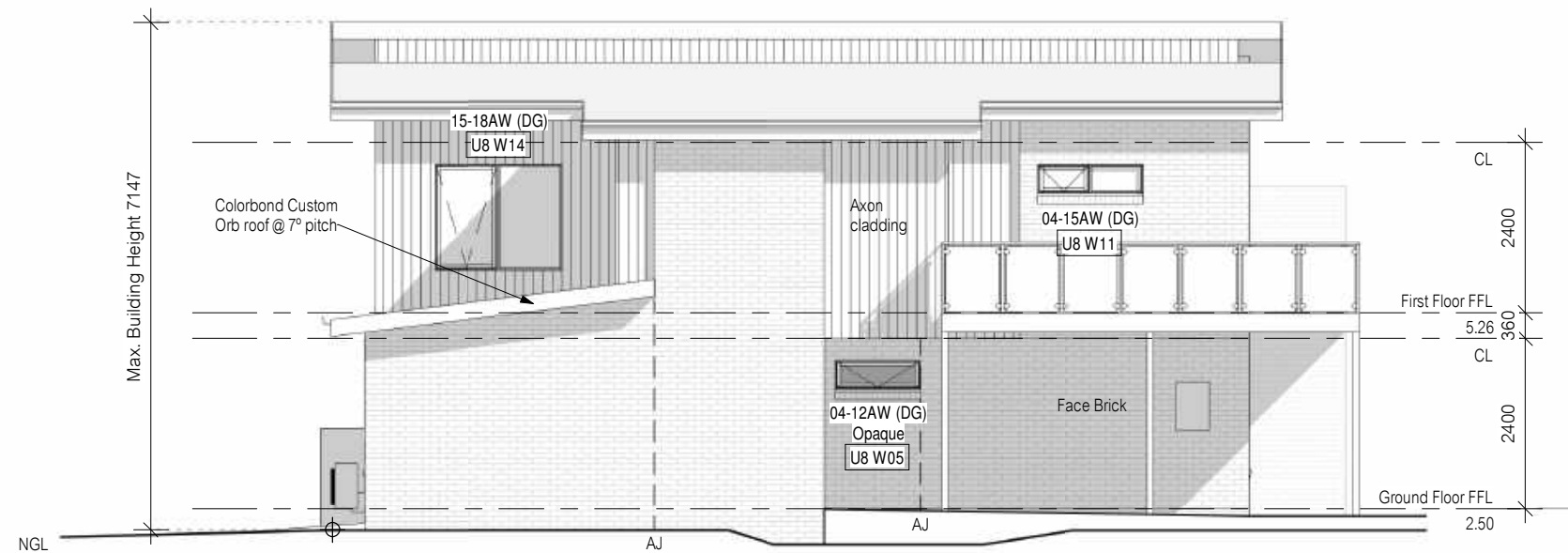
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| C | 19 Aug 2020 | ST |
| No. | Date | Int. |

Amendment changes as per cover sheet



UNITS 7 & 8 NORTH ELEVATION

◆ U7 W10, W11 & U8 W09, W10
Protection of openable windows to comply with N.C.C. 3.9.2.6 & 3.9.2.7



UNITS 7 & 8 EAST ELEVATION

All window sizes to be checked and/or confirmed on site prior to ordering glazing units

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PROPOSED VILLANUEVA DEVELOPMENT
75 Fouche Avenue
OLD BEACH



UNITS 7 & 8 ELEVATIONS SHEET

1

Drawn ST WH712552

Date 19 August 2020 Sheet

Scale 1:100

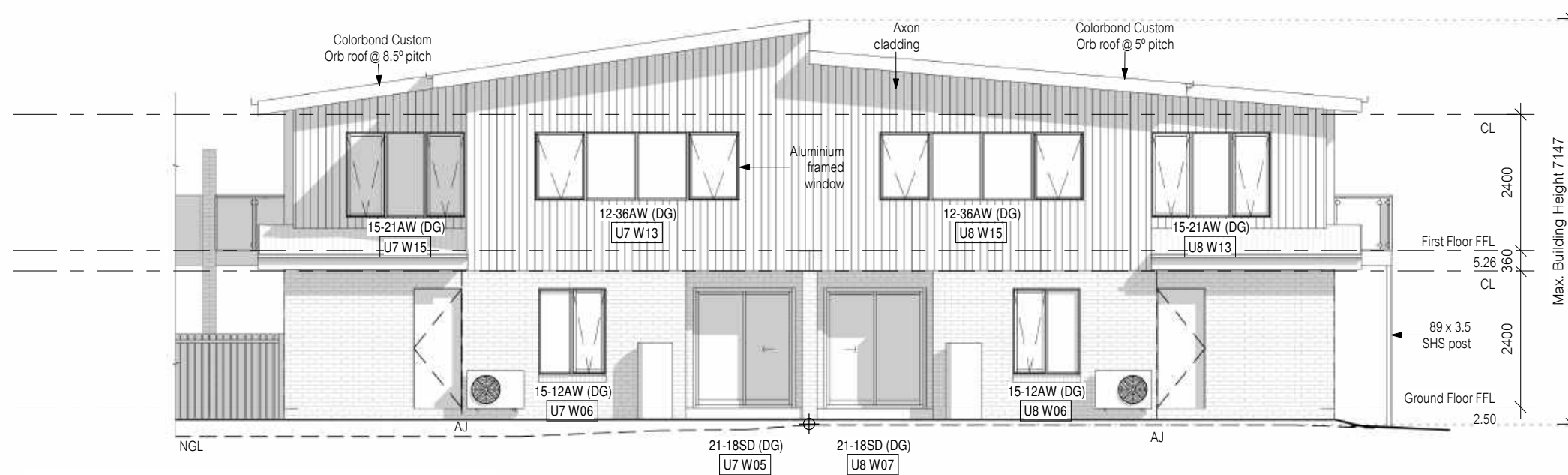
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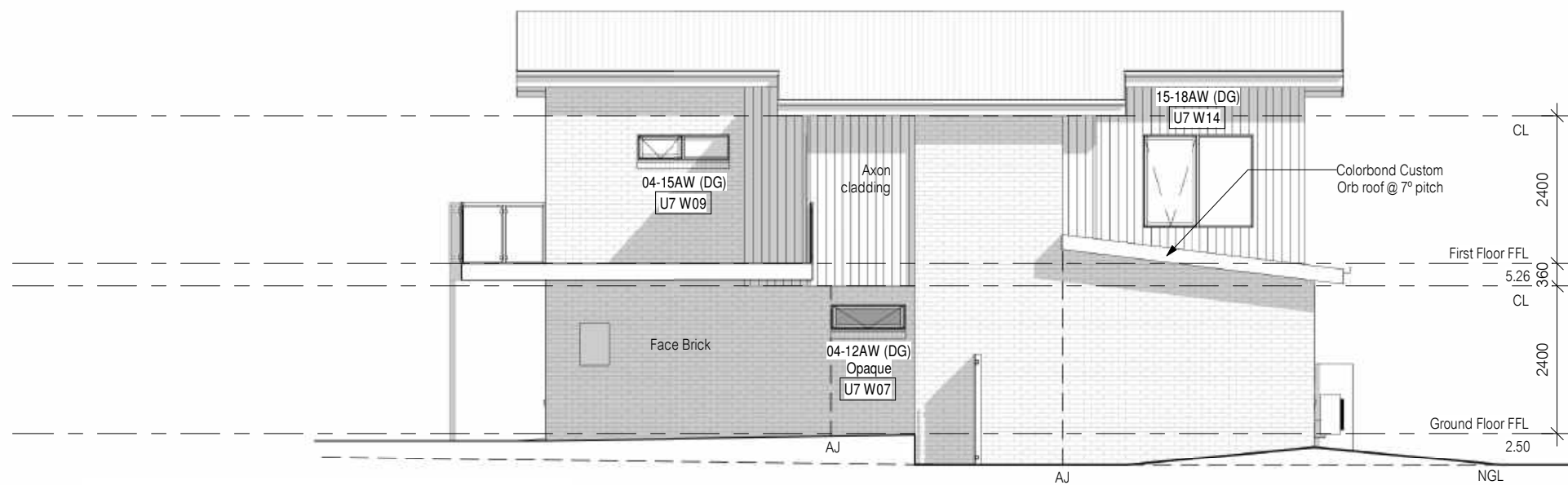
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|-----|--------------|------|
| I | 29 Oct. 2020 | ST |
| D | 25 Aug 2020 | ST |
| C | 19 Aug 2020 | ST |
| No. | Date | Int. |

Amendment changes as per cover sheet

Shadows shown for stylisation purposes only



UNITS 7 & 8 SOUTH ELEVATION



UNITS 7 & 8 WEST ELEVATION

| No. | Date | Int. |
|-----|--------------|------|
| I | 29 Oct. 2020 | ST |
| D | 25 Aug 2020 | ST |
| C | 19 Aug 2020 | ST |

LEGEND:
 NGL - - - -
 FGL - - - -

Amendment changes as per cover sheet

All window sizes to be checked and/or confirmed on site prior to ordering glazing units

Shadows shown for stylisation purposes only

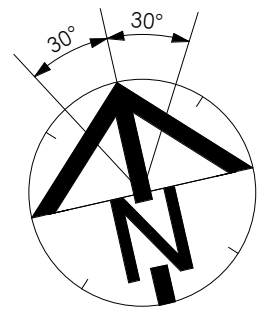
- Notes
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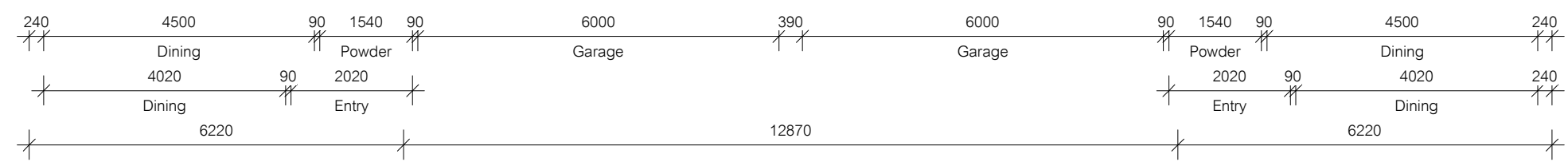
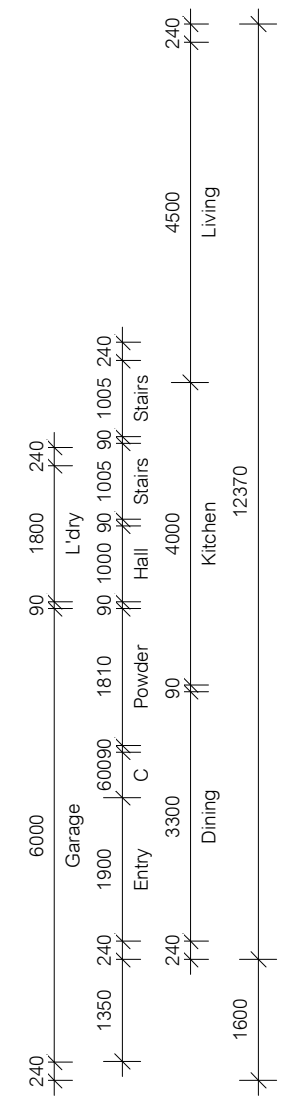
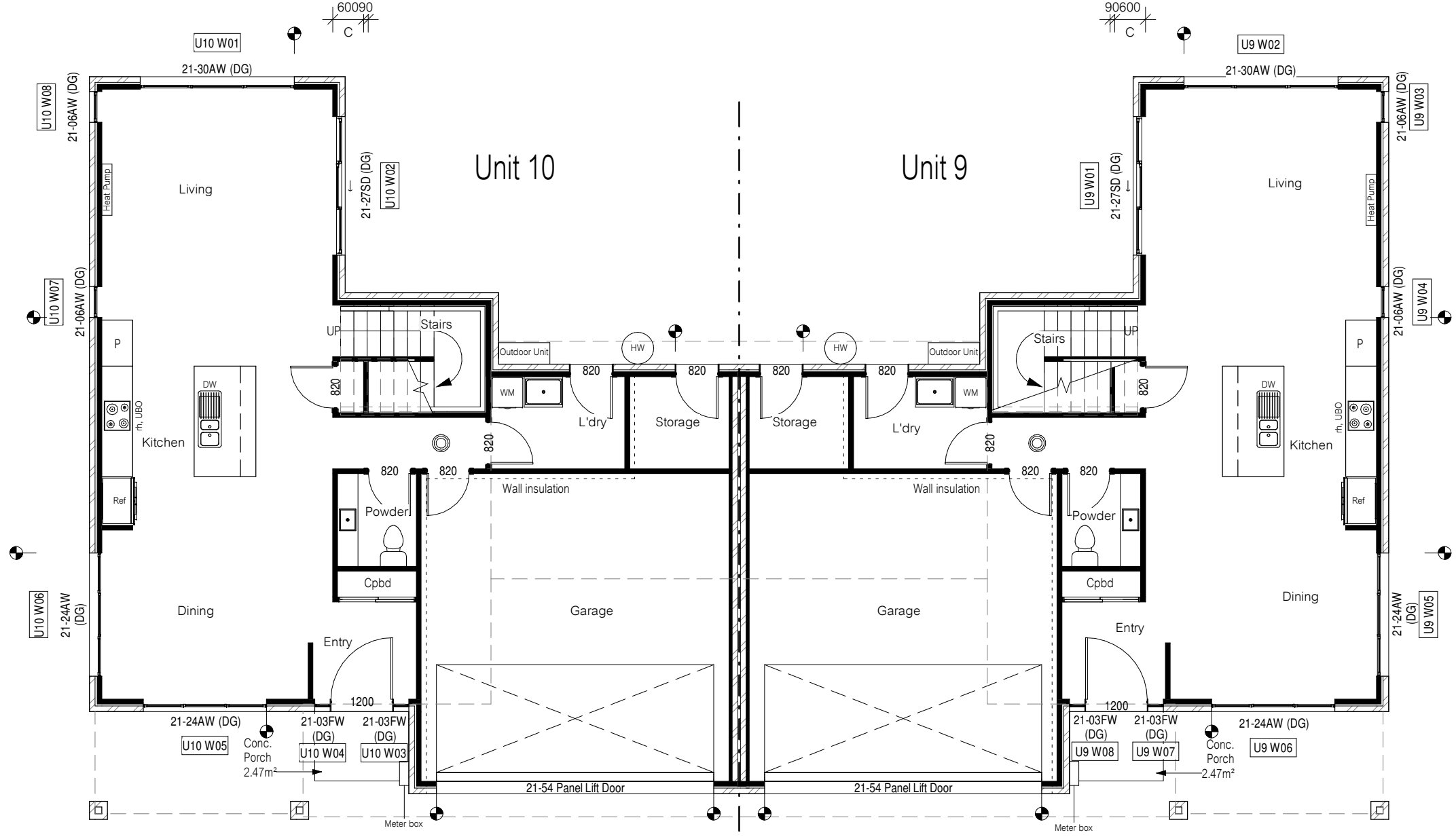
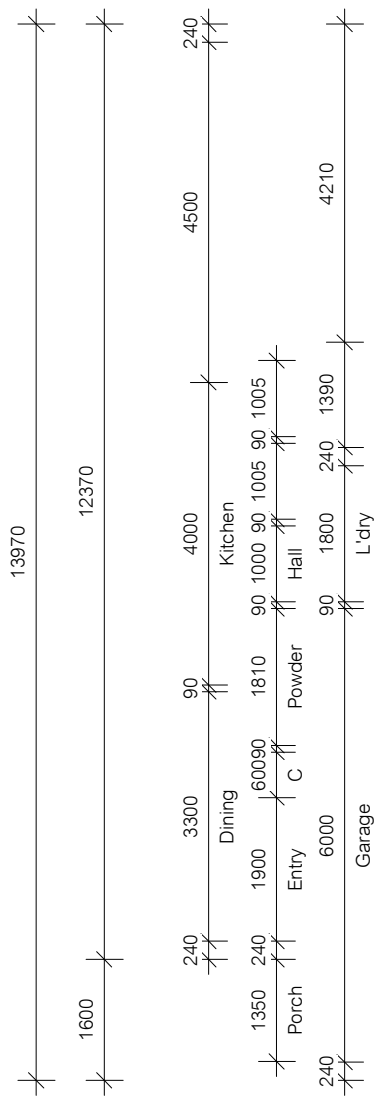
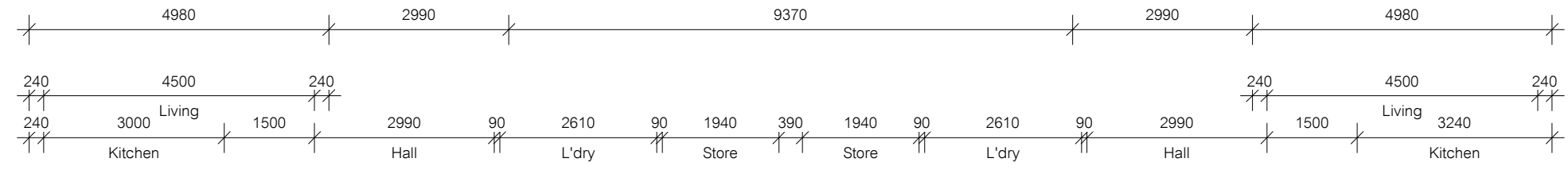
Client / Project info
 PROPOSED VILLANUEVA DEVELOPMENT
 75 Fouche Avenue
 OLD BEACH



| UNITS 7 & 8 ELEVATIONS SHEET | |
|------------------------------|----------------------|
| 2 | |
| Drawn | ST WH712552 |
| Date | 19 August 2020 Sheet |
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10.4.4
U10 W01 & U9 W03
satisfy A1



| No. | Date | Int. |
|-----|--------------|------|
| I | 29 Oct. 2020 | ST |
| G | 21 Oct. 2020 | ST |
| F | 20 Oct. 2020 | ST |
| D | 25 Aug 2020 | ST |
| C | 19 Aug 2020 | ST |

Unit 9 Ground Floor Area = 128.01m²
 Unit 10 Ground Floor Area = 128.01m²
 Total Ground Floor Area = 256.03m²

Articulation joints

Smoke Alarm (interconnected where more than 1)

Amendment changes as per cover sheet

All window sizes to be checked and/or confirmed on site prior to ordering glazing units

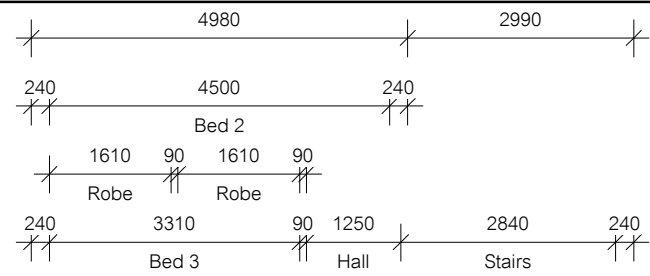
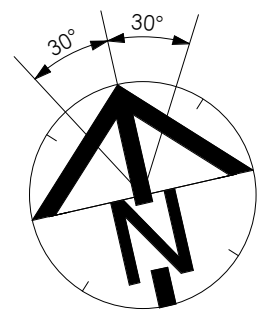
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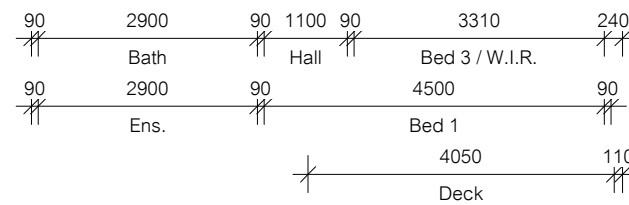
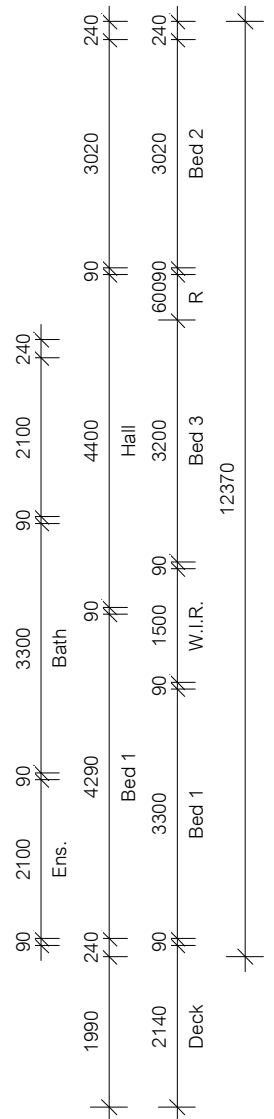
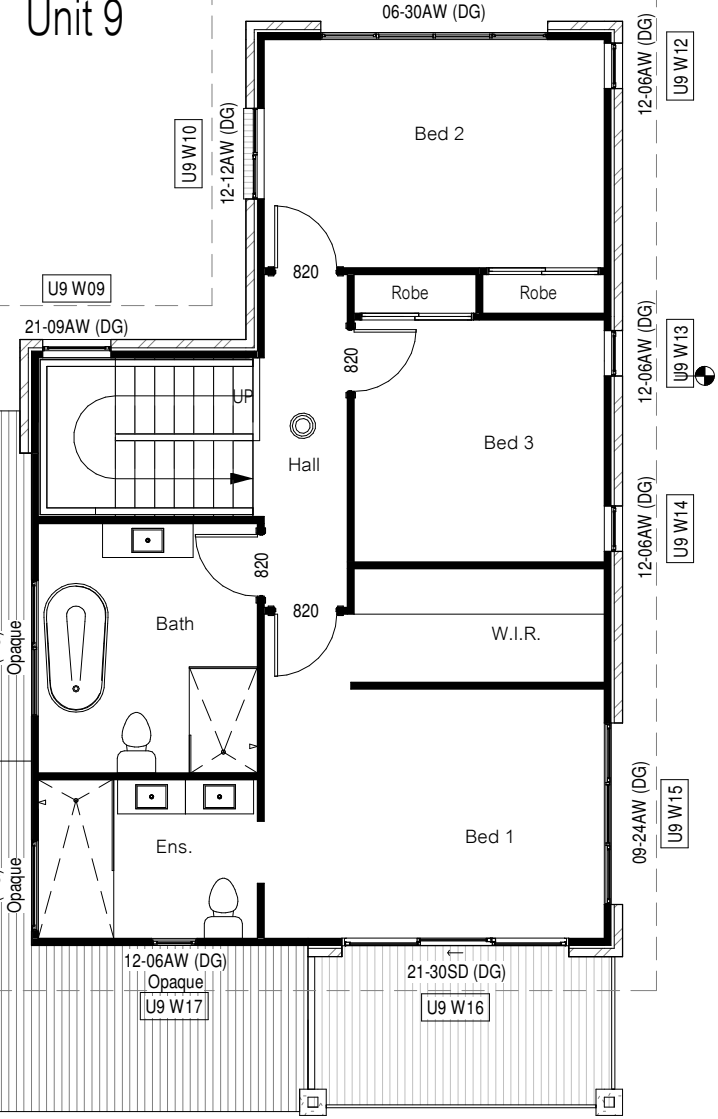
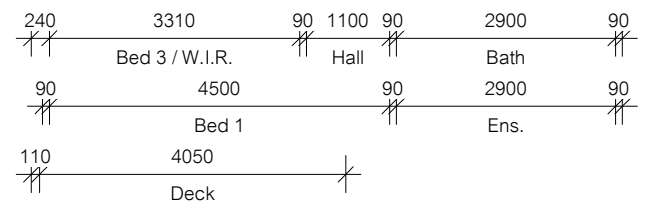
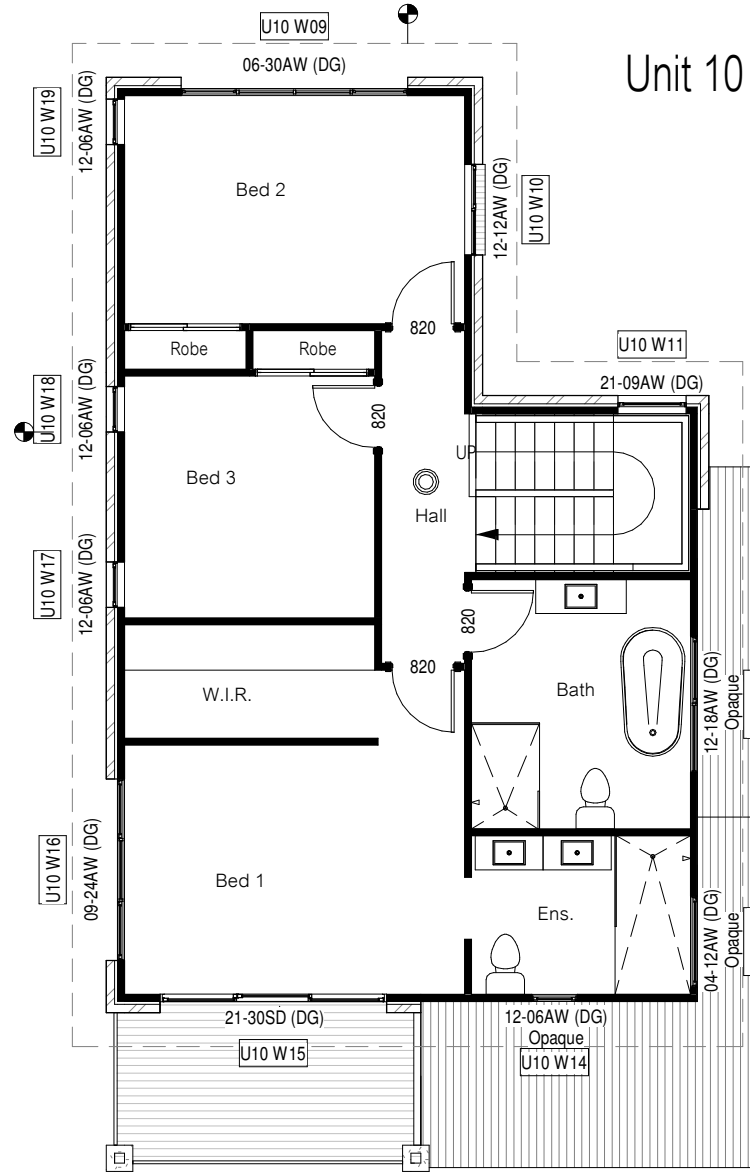
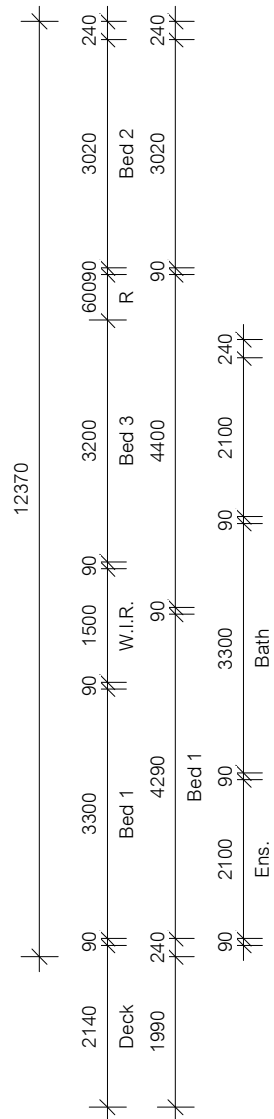
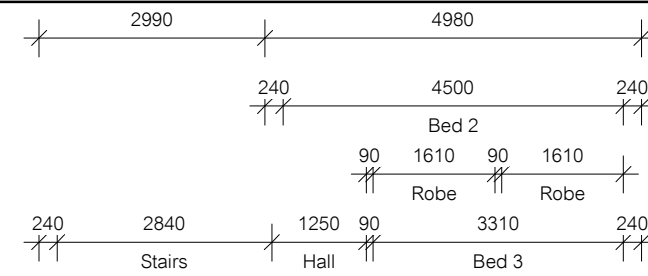
Client / Project info
 PROPOSED VILLANUEVA DEVELOPMENT
 75 Fouche Avenue
 OLD BEACH



| UNITS 9 & 10 GROUND FLOOR PLAN | |
|--------------------------------|-------------------|
| Drawn | ST WH712552 |
| Date | 7 July 2020 Sheet |
| Scale | 1:100 |
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245



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|-----|--------------|------|
| I | 29 Oct. 2020 | ST |
| G | 21 Oct. 2020 | ST |
| F | 20 Oct. 2020 | ST |
| D | 25 Aug 2020 | ST |
| No. | Date | Int. |

Unit 9 First Floor Area = 77.23m²
 Unit 10 First Floor Area = 77.23m²
 Total First Floor Area = 154.46m²

Articulation joints

Smoke Alarm (interconnected where more than 1)

Amendment changes as per cover sheet

All window sizes to be checked and/or confirmed on site prior to ordering glazing units

Notes

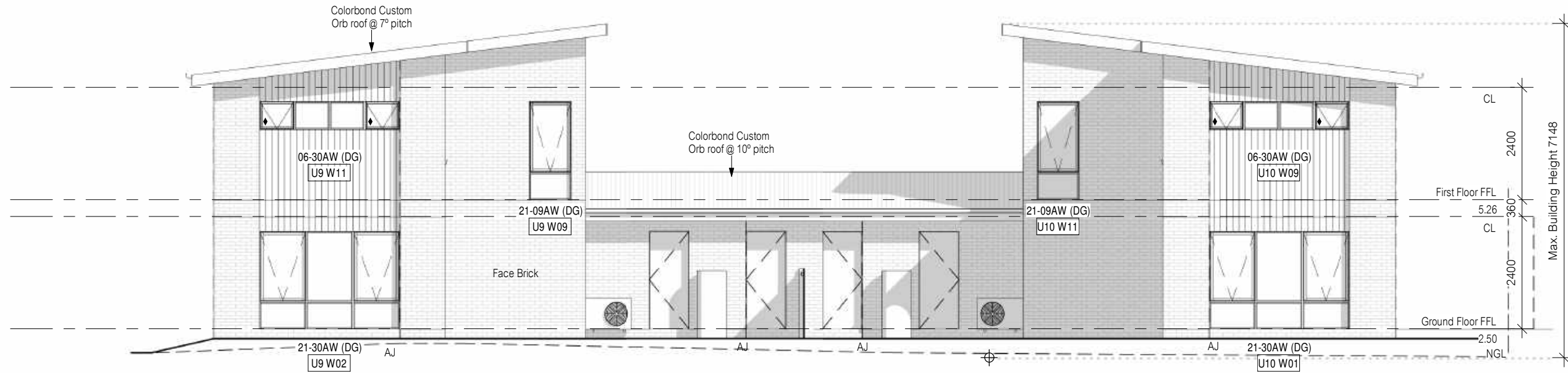
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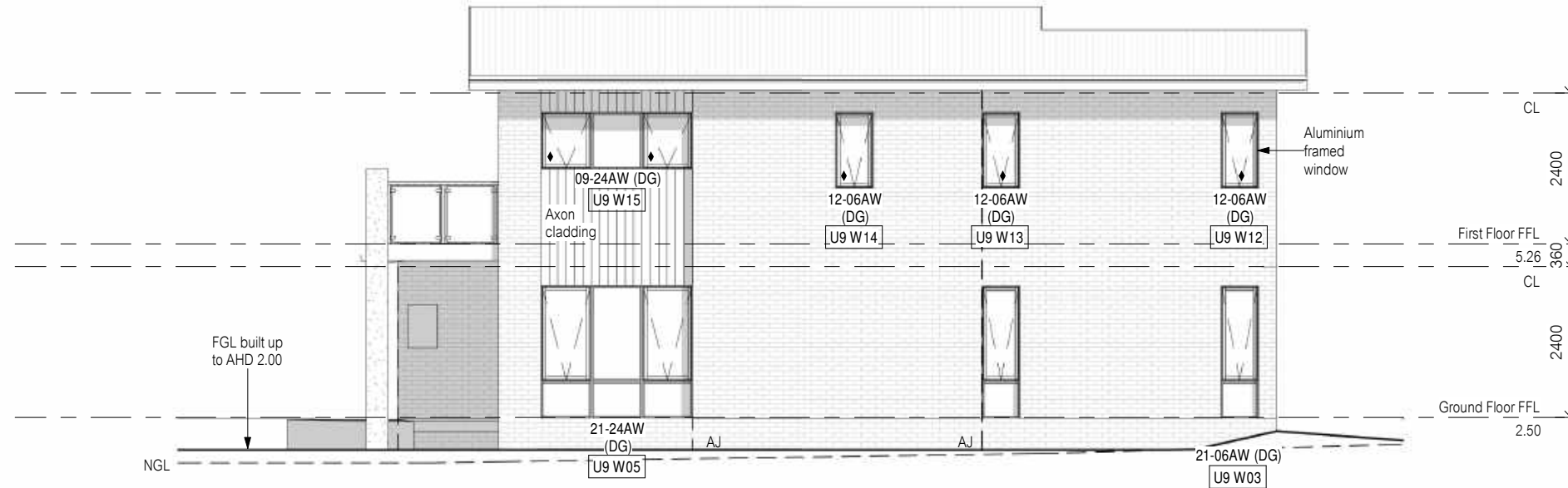


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| UNITS 9 & 10 FIRST FLOOR PLAN | |
| Drawn | ST WH712552 |
| Date | 7 July 2020 Sheet |
| Scale | 1:100 10a/21 |



UNITS 9 & 10 NORTH ELEVATION

◆ - U9 W09 - W14 & U10 W08, W09, W15 - W18
Protection of openable windows to comply with N.C.C. 3.9.2.6 & 3.9.2.7



UNITS 9 & 10 EAST ELEVATION

| | | |
|-----|--------------|------|
| I | 29 Oct. 2020 | ST |
| G | 21 Oct. 2020 | ST |
| F | 20 Oct. 2020 | ST |
| D | 25 Aug 2020 | ST |
| No. | Date | Int. |

LEGEND:
NGL - - - -
FGL - - - -

All window sizes to be checked and/or confirmed on site prior to ordering glazing units

Amendment changes as per cover sheet

Shadows shown for stylisation purposes only

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Client / Project info
PROPOSED VILLANUEVA DEVELOPMENT
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OLD BEACH



UNITS 9 & 10 ELEVATIONS
SHEET 1

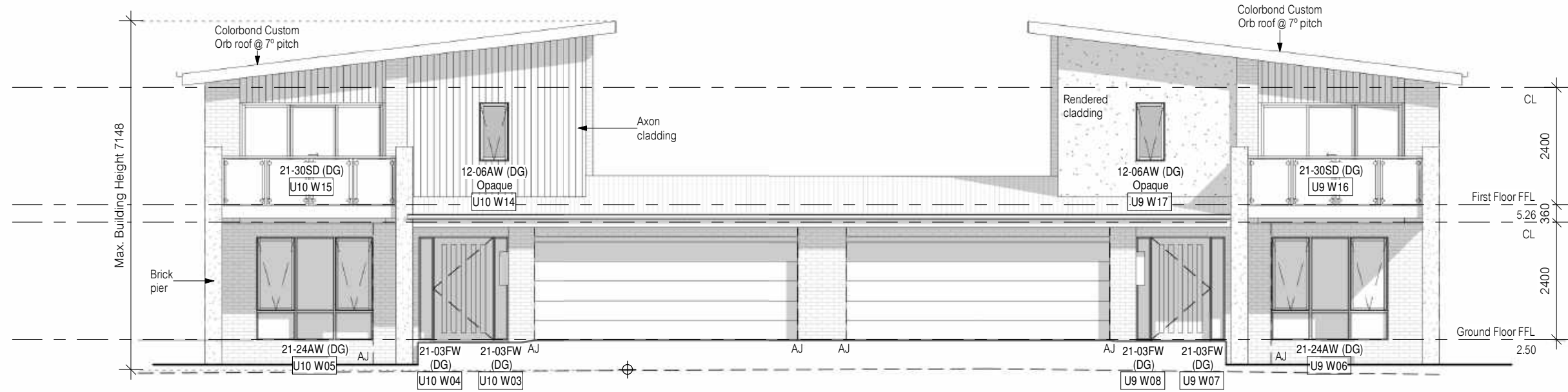
Drawn ST WH712552

Date 19 August 2020 Sheet

Scale 1:100

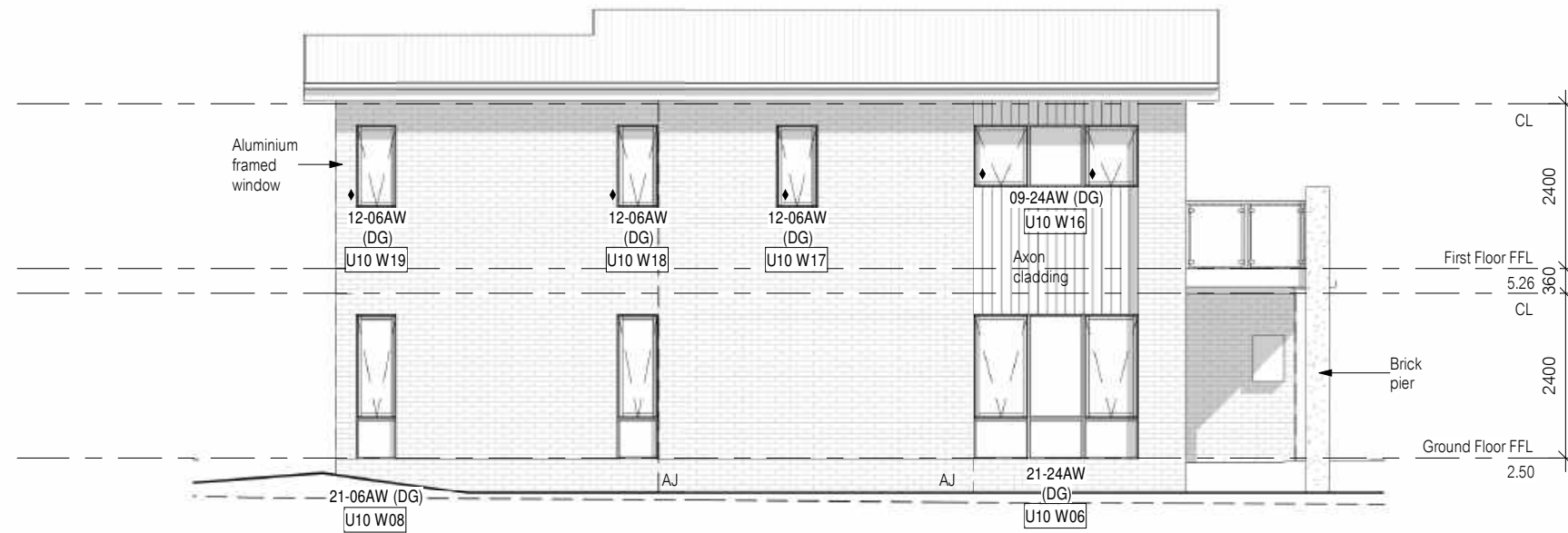
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UNITS 9 & 10 SOUTH ELEVATION

◆ - U9 W09 - W14 & U10 W08, W09, W15 - W18
Protection of openable windows to comply with N.C.C. 3.9.2.6 & 3.9.2.7



UNITS 9 & 10 WEST ELEVATION

| No. | Date | Int. |
|-----|--------------|------|
| I | 29 Oct. 2020 | ST |
| G | 21 Oct. 2020 | ST |
| F | 20 Oct. 2020 | ST |
| D | 25 Aug 2020 | ST |

LEGEND:
NGL - - - -
FGL - - - -

Amendment changes as per cover sheet

All window sizes to be checked and/or confirmed on site prior to ordering glazing units

Shadows shown for stylisation purposes only

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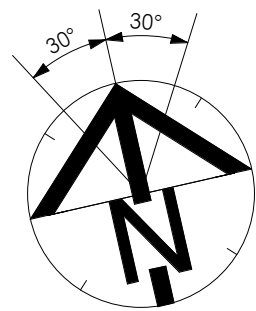
UNITS 9 & 10 ELEVATIONS
SHEET 2

Drawn ST WH712552

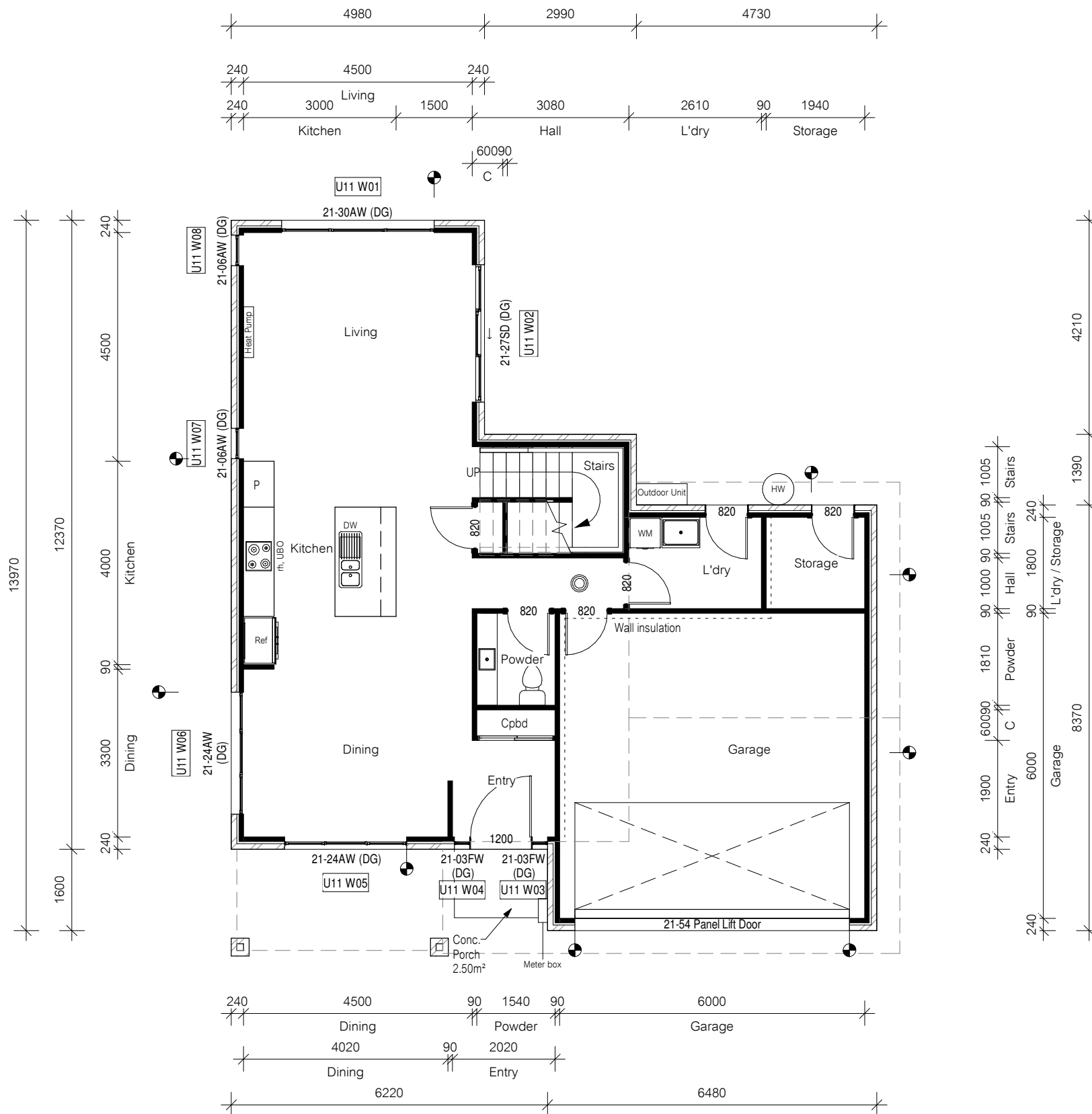
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10.4.4
U11 W01 satisfies A1



| No. | Date | Int. |
|-----|--------------|------|
| I | 29 Oct. 2020 | ST |
| G | 21 Oct. 2020 | ST |
| F | 20 Oct. 2020 | ST |
| D | 25 Aug 2020 | ST |
| C | 19 Aug 2020 | ST |

Ground Floor Area = 128.39m²

Articulation joints

Smoke Alarm (interconnected where more than 1)

Amendment changes as per cover sheet

All window sizes to be checked and/or confirmed on site prior to ordering glazing units

Notes

- Builder to verify all dimensions and levels on site prior to commencement of work
- All work to be carried out in accordance with the current National Construction Code.
- All materials to be installed according to manufacturers specifications.
- Dimensions to take precedence over scale.
- Do not scale from these drawings.

Designer:

ANOTHER PERSPECTIVE PTY LTD
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info@anotherperspective.com.au

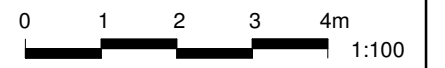
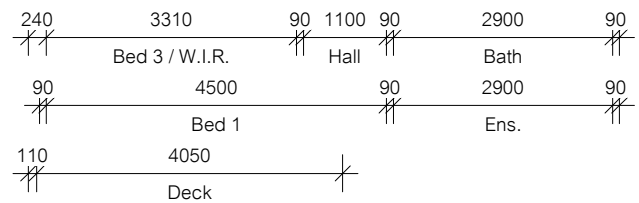
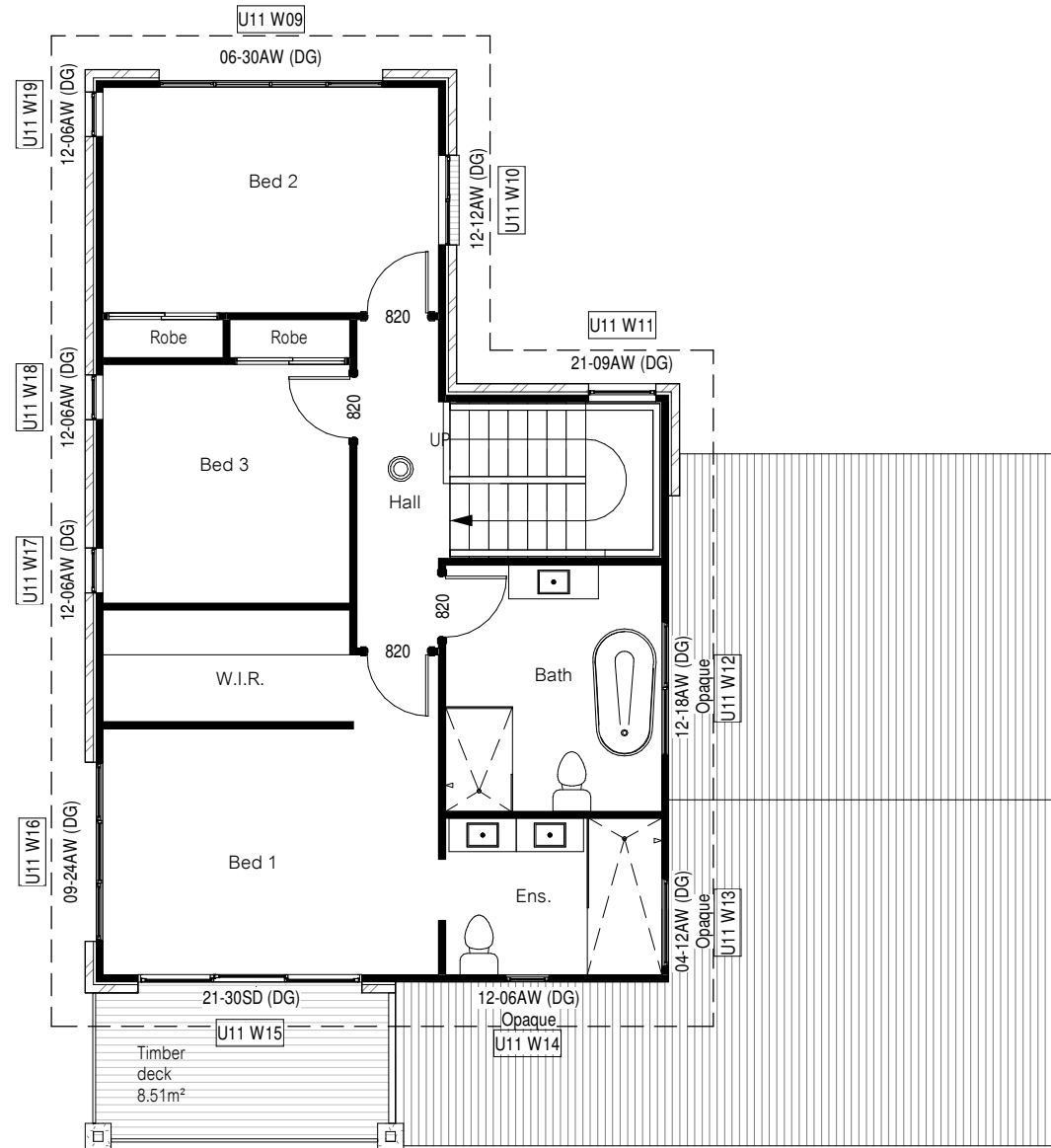
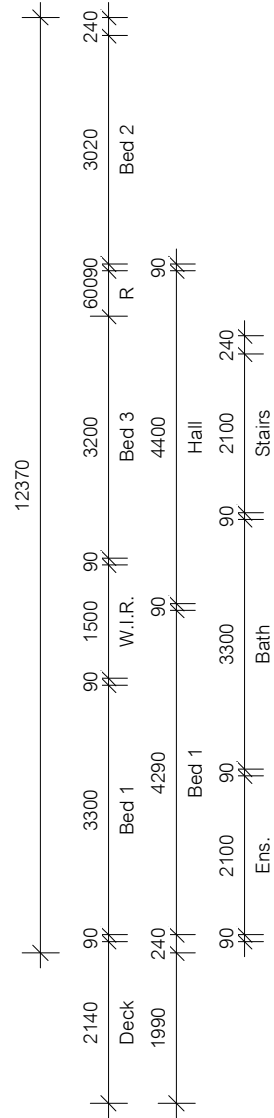
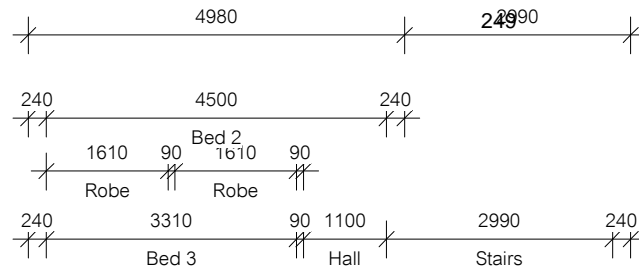
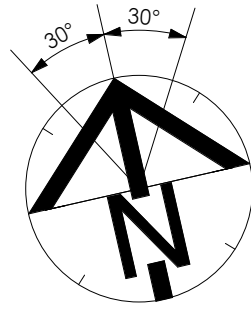
Client / Project info

PROPOSED VILLANUEVA DEVELOPMENT

75 Fouche Avenue
OLD BEACH



| UNIT 11 GROUND FLOOR PLAN | |
|---------------------------|----------------------|
| Drawn | ST WH712552 |
| Date | 19 August 2020 Sheet |
| Scale | 1:100 |
| Copyright © | 12/21 |



| | | |
|-----|--------------|------|
| I | 29 Oct. 2020 | ST |
| G | 21 Oct. 2020 | ST |
| F | 20 Oct. 2020 | ST |
| D | 25 Aug 2020 | ST |
| No. | Date | Int. |

First Floor Area = 77.23m²

Articulation joints

Smoke Alarm (interconnected where more than 1)

All window sizes to be checked and/or confirmed on site prior to ordering glazing units

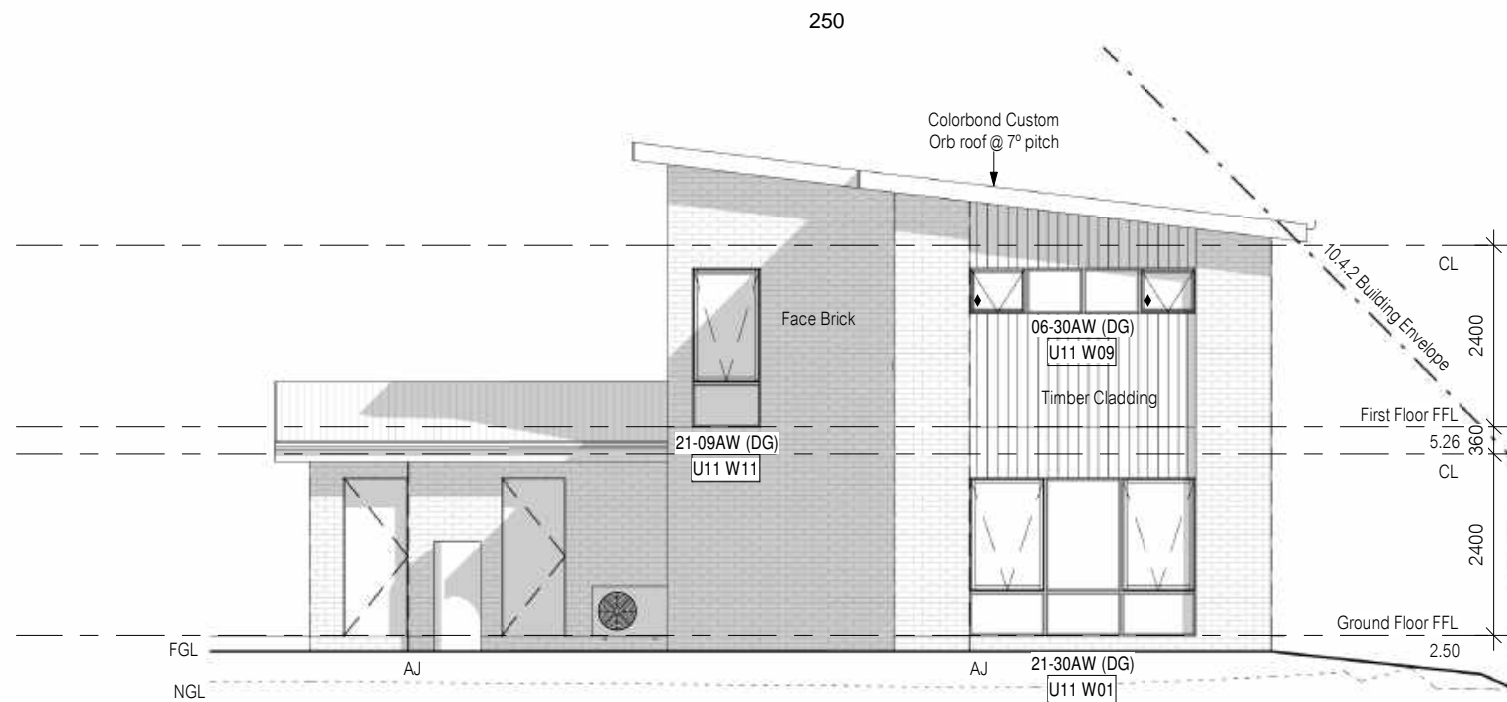
- Notes
- Builder to verify all dimensions and levels on site prior to commencement of work
 - All work to be carried out in accordance with the current National Construction Code.
 - All materials to be installed according to manufacturers specifications.
 - Dimensions to take precedence over scale.
 - Do not scale from these drawings.

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 Email:
 info@anotherperspective.com.au

Client / Project info
 PROPOSED VILLANUEVA DEVELOPMENT
 75 Fouche Avenue
 OLD BEACH

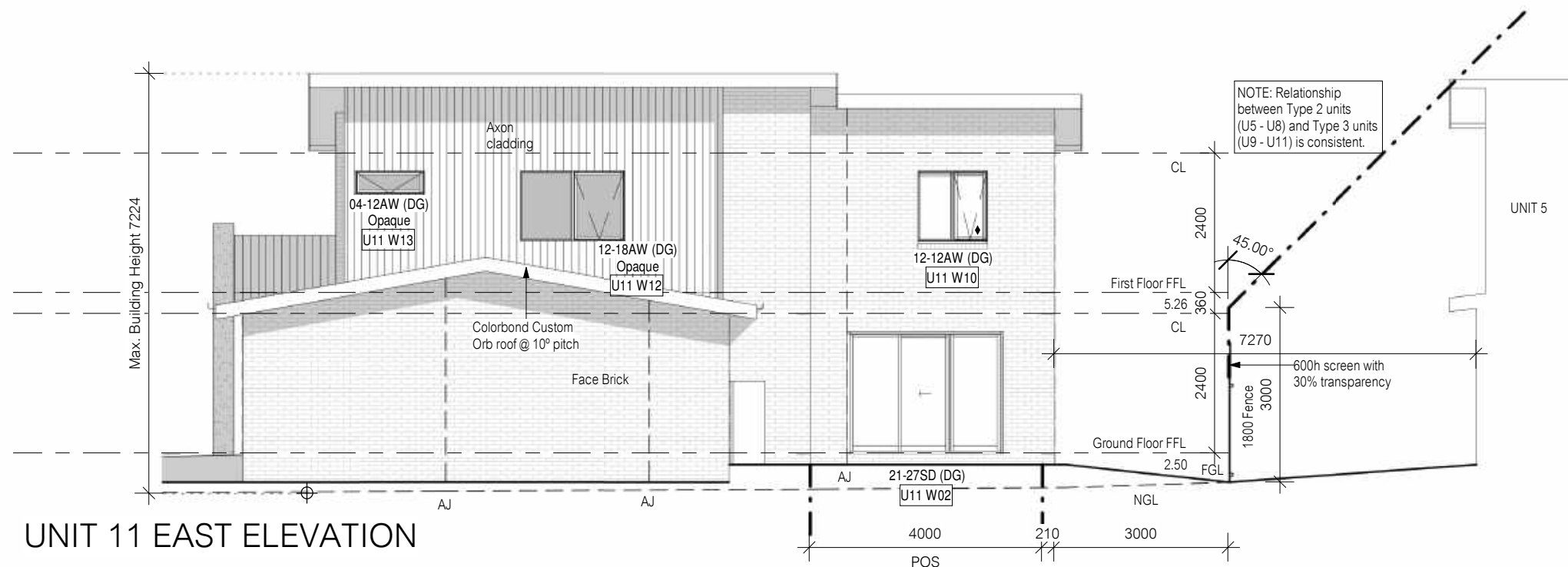


| | |
|--------------------------|----------------------|
| UNIT 11 FIRST FLOOR PLAN | |
| Drawn | ST WH712552 |
| Date | 19 August 2020 Sheet |
| Scale | 1:100 |
| Copyright © | 12a/21 |



UNIT 11 NORTH ELEVATION

◆ - U11 W08, W09, W15 - W18
Protection of openable windows to comply with N.C.C. 3.9.2.6 & 3.9.2.7



UNIT 11 EAST ELEVATION

| No. | Date | Int. |
|-----|--------------|------|
| J | 1 Dec. 2020 | ST |
| I | 29 Oct. 2020 | ST |
| H | 26 Oct. 2020 | ST |
| G | 21 Oct. 2020 | ST |
| F | 20 Oct. 2020 | ST |
| D | 25 Aug 2020 | ST |

LEGEND:
NGL - - - -
FGL - - - -

All window sizes to be checked and/or confirmed on site prior to ordering glazing units

Amendment changes as per cover sheet

Shadows shown for stylisation purposes only

Notes

- Builder to verify all dimensions and levels on site prior to commencement of work
- All work to be carried out in accordance with the current National Construction Code.
- All materials to be installed according to manufacturers specifications.
- Dimensions to take precedence over scale.
- Do not scale from these drawings.

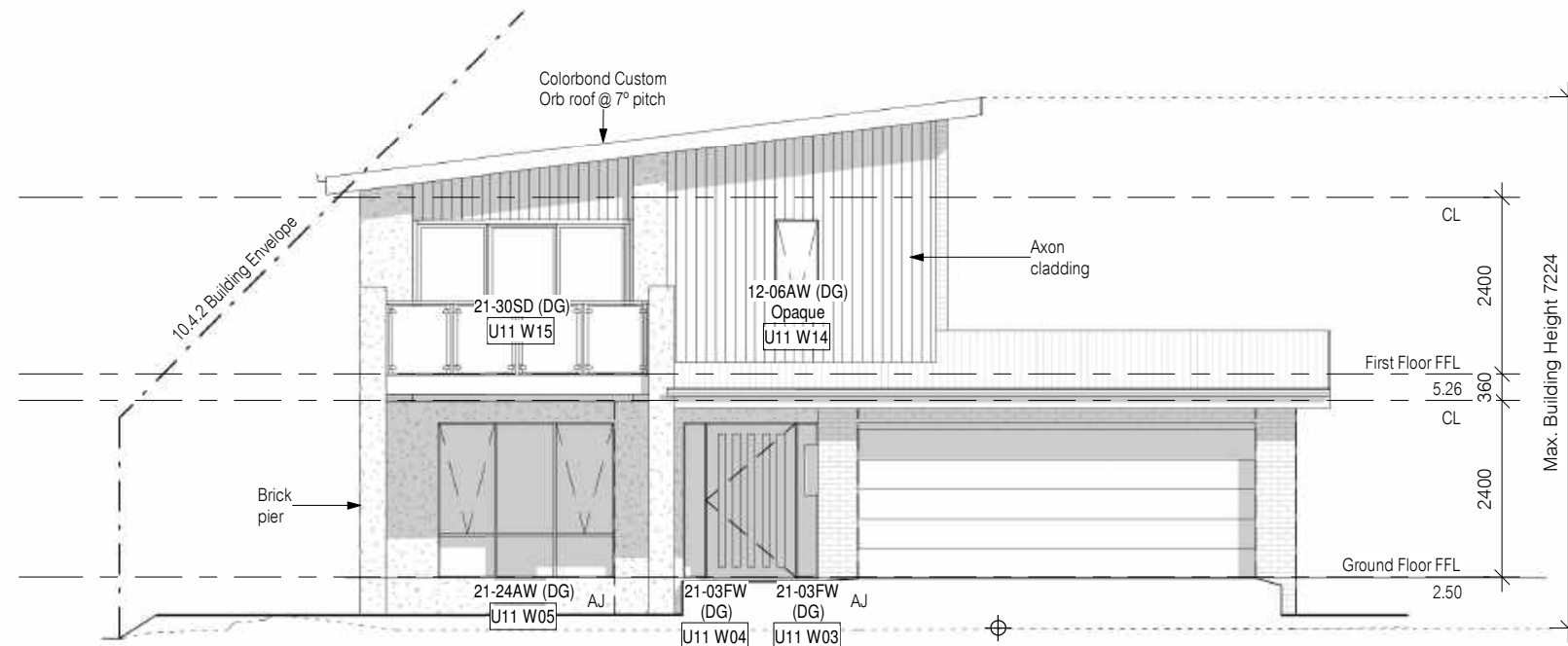
Designer:
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Client / Project info
PROPOSED VILLANUEVA DEVELOPMENT
75 Fouche Avenue
OLD BEACH



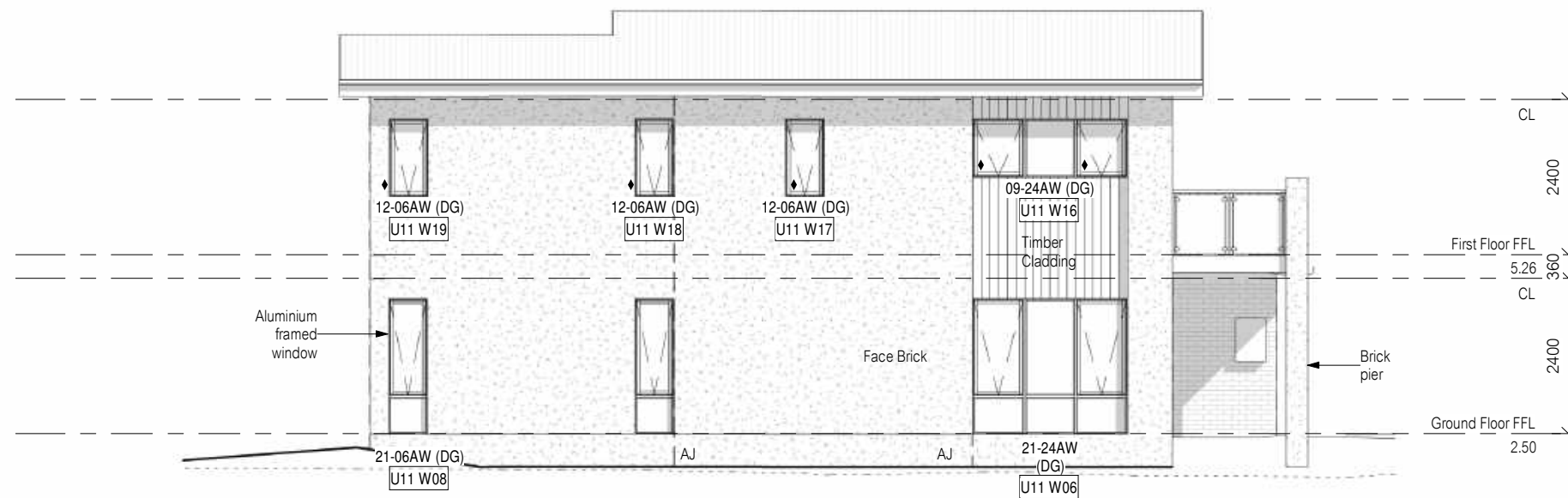
UNIT 11 ELEVATIONS SHEET 1

| | | |
|-------------|----------------|----------|
| Drawn | ST | WH712552 |
| Date | 19 August 2020 | Sheet |
| Scale | 1:100 | 13/21 |
| Copyright © | | |



UNIT 11 SOUTH ELEVATION

◆ - U11 W08, W09, W15 - W18
Protection of openable windows to comply with N.C.C. 3.9.2.6 & 3.9.2.7



UNIT 11 WEST ELEVATION

| No. | Date | Int. |
|-----|--------------|------|
| I | 29 Oct. 2020 | ST |
| G | 21 Oct. 2020 | ST |
| F | 20 Oct. 2020 | ST |
| D | 25 Aug 2020 | ST |

LEGEND:
NGL - - - -
FGL - - - -

All window sizes to be checked and/or confirmed on site prior to ordering glazing units

Amendment changes as per cover sheet

Shadows shown for stylisation purposes only

Notes

- Builder to verify all dimensions and levels on site prior to commencement of work
- All work to be carried out in accordance with the current National Construction Code.
- All materials to be installed according to manufacturers specifications.
- Dimensions to take precedence over scale.
- Do not scale from these drawings.

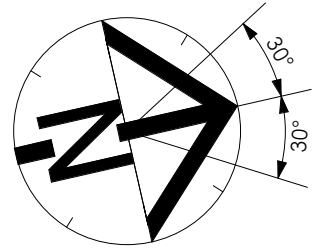
Designer:
ANOTHER PERSPECTIVE PTY LTD
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Client / Project info
PROPOSED VILLANUEVA DEVELOPMENT
75 Fouche Avenue
OLD BEACH

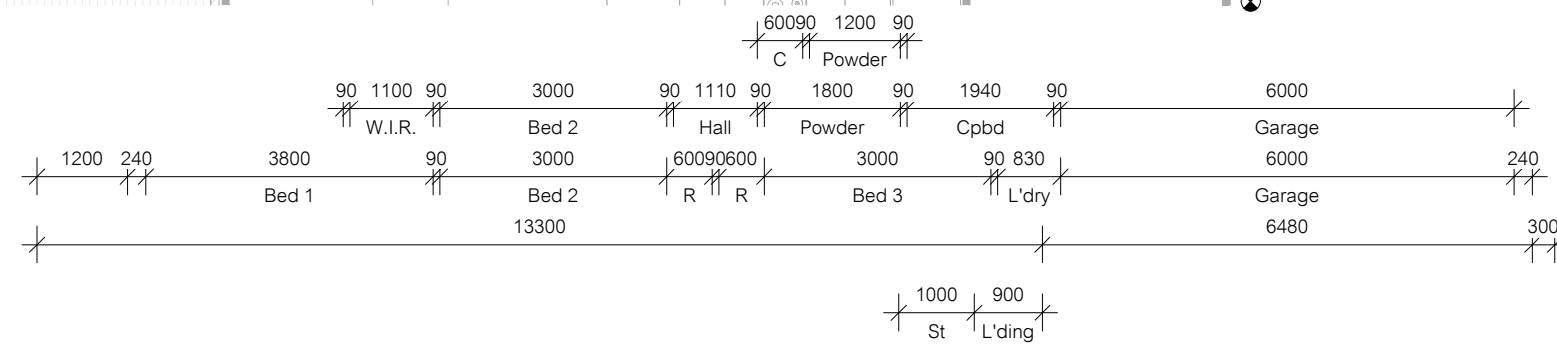
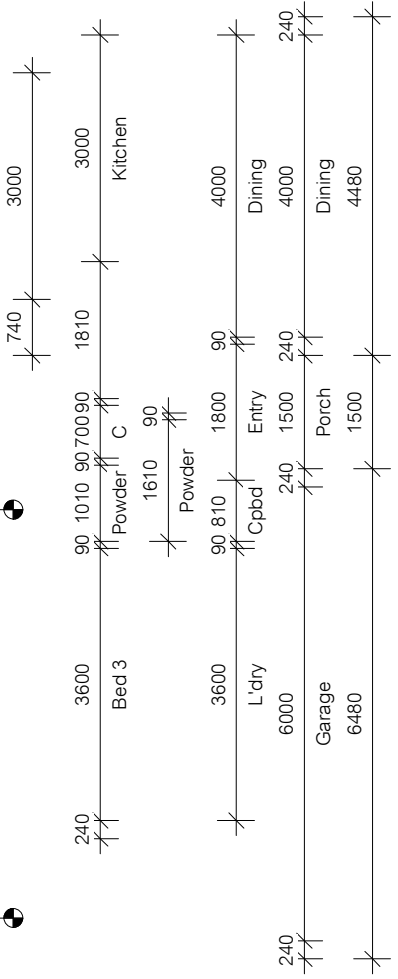
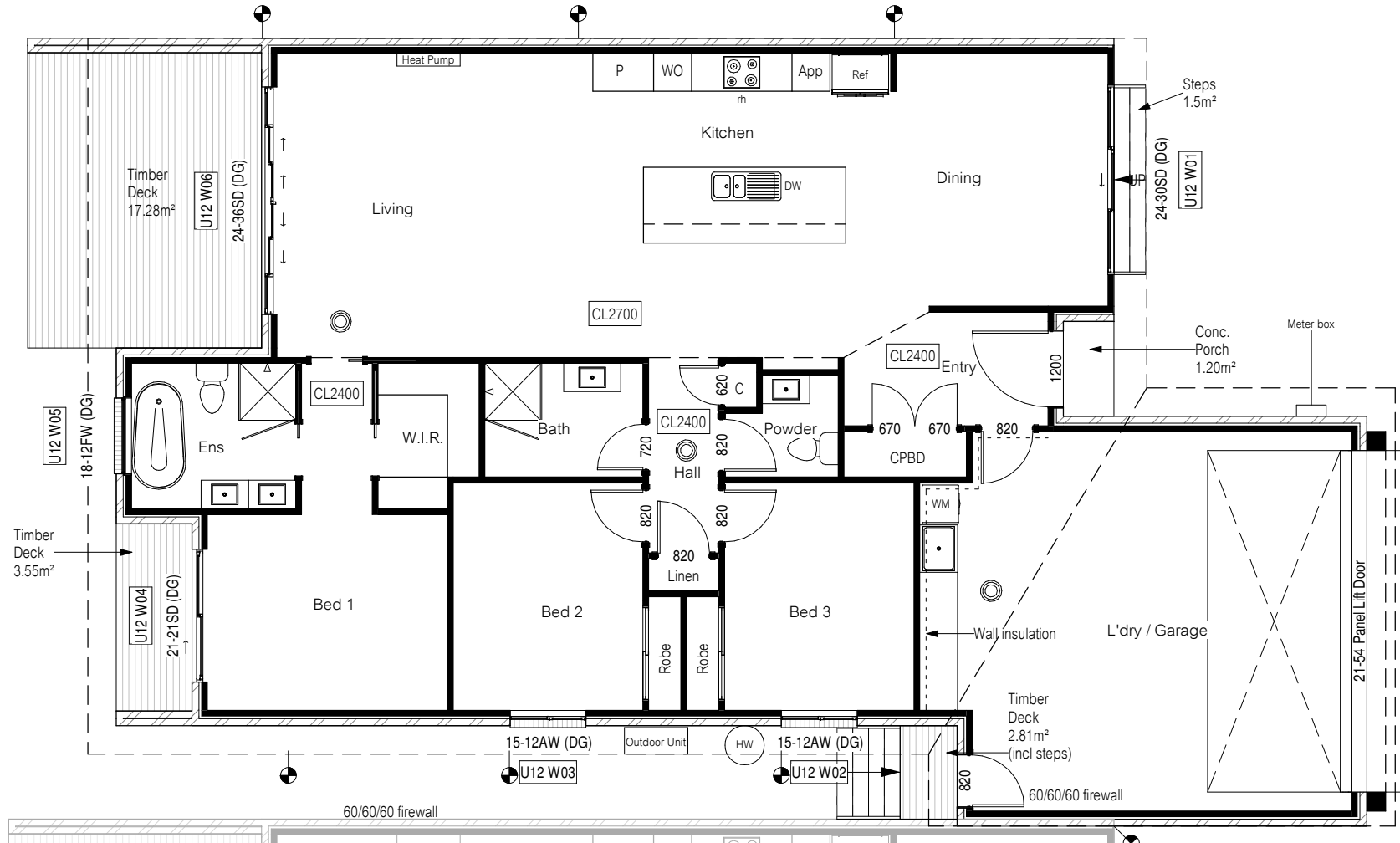
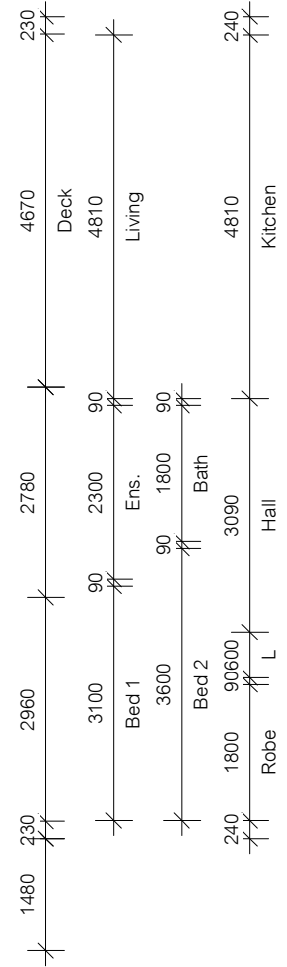
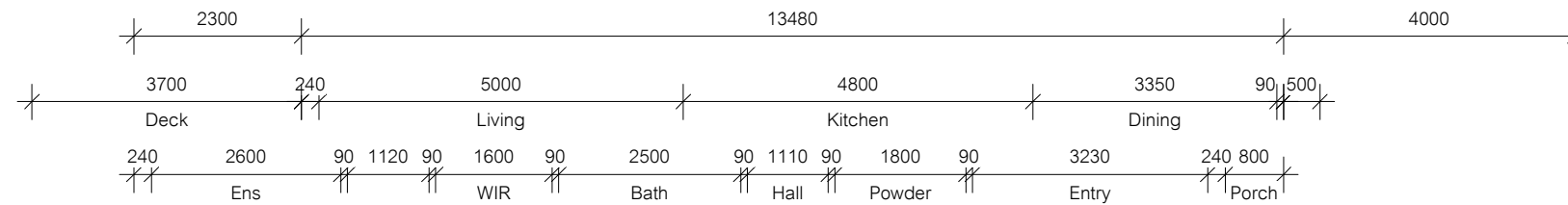


UNIT 11 ELEVATIONS SHEET 2

| | | |
|-------------|----------------|----------|
| Drawn | ST | WH712552 |
| Date | 19 August 2020 | Sheet |
| Scale | 1:100 | 13a/21 |
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10.4.4
U12 W01 satisfy A1



Ground Floor Area = 185.09m²

Articulation joints

Smoke Alarm (interconnected where more than 1)

All window sizes to be checked and/or confirmed on site prior to ordering glazing units

- Notes
- Builder to verify all dimensions and levels on site prior to commencement of work
 - All work to be carried out in accordance with the current National Construction Code.
 - All materials to be installed according to manufacturers specifications.
 - Dimensions to take precedence over scale.
 - Do not scale from these drawings.

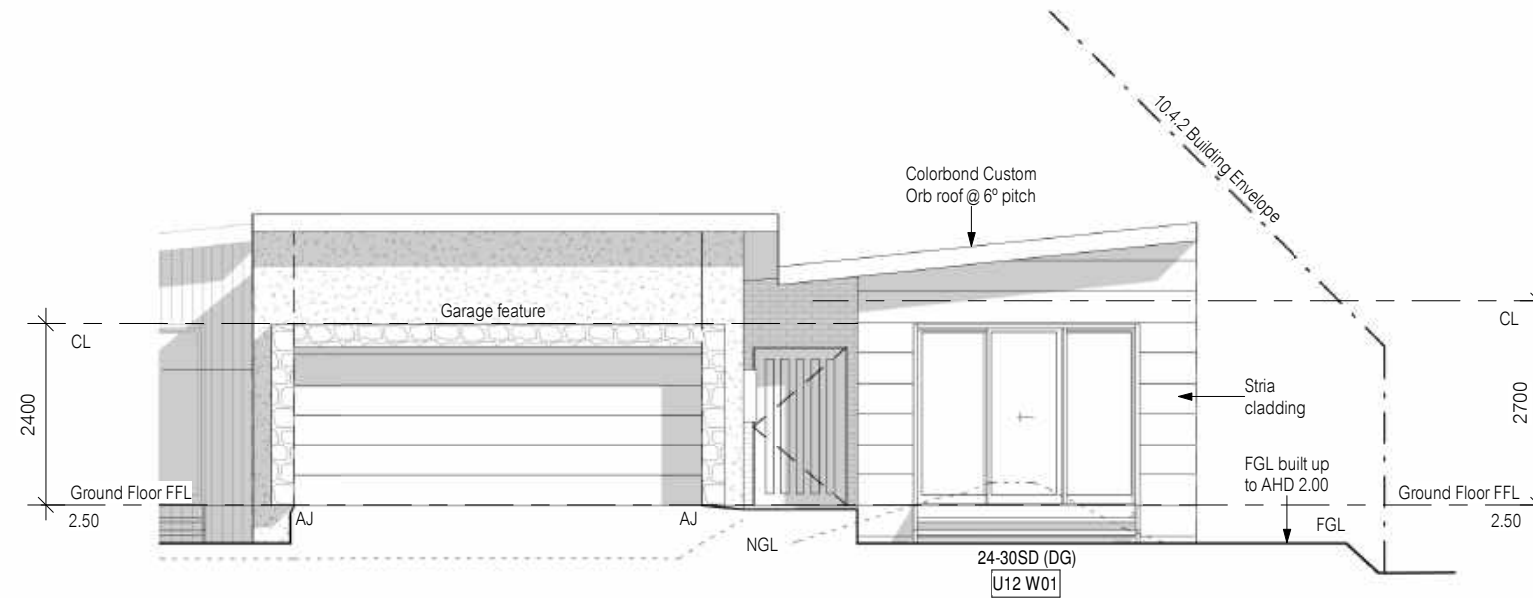
Designer:
ANOTHER PERSPECTIVE PTY LTD
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Client / Project info
PROPOSED VILLANUEVA DEVELOPMENT
75 Fouche Avenue
OLD BEACH

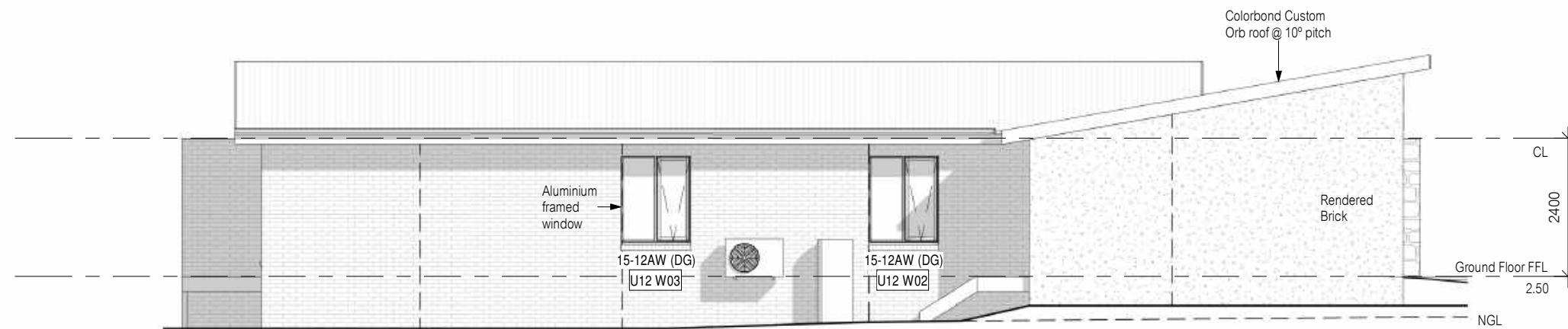


| UNIT 12 FLOOR PLAN | |
|--------------------|----------------------|
| Drawn | ST WH712552 |
| Date | 18 August 2020 Sheet |
| Scale | 1:100 |
| Copyright @ 14/21 | |

| No. | Date | Int. | Amendment changes as per cover sheet |
|-----|------|------|--------------------------------------|
|-----|------|------|--------------------------------------|



UNIT 12 NORTH ELEVATION



UNIT 12 EAST ELEVATION

LEGEND:
 NGL - - - -
 FGL ————

All window sizes to be checked and/or confirmed on site prior to ordering glazing units

- Notes
- Builder to verify all dimensions and levels on site prior to commencement of work
 - All work to be carried out in accordance with the current National Construction Code.
 - All materials to be installed according to manufacturers specifications.
 - Dimensions to take precedence over scale.
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 info@anotherperspective.com.au

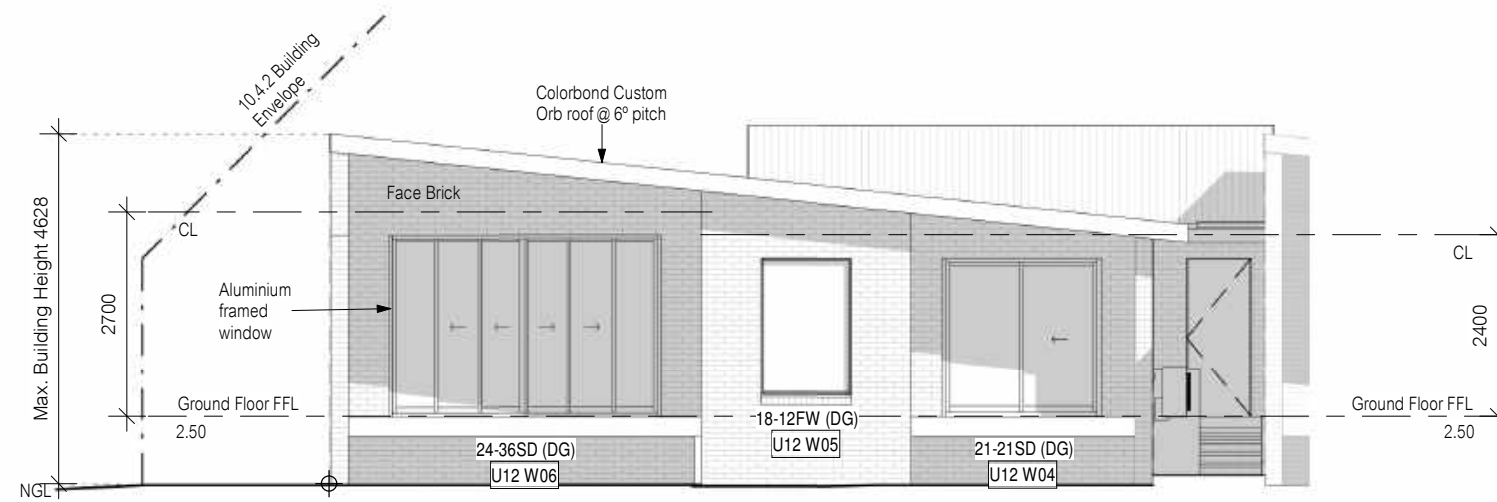
Client / Project info
 PROPOSED VILLANUEVA DEVELOPMENT
 75 Fouche Avenue
 OLD BEACH



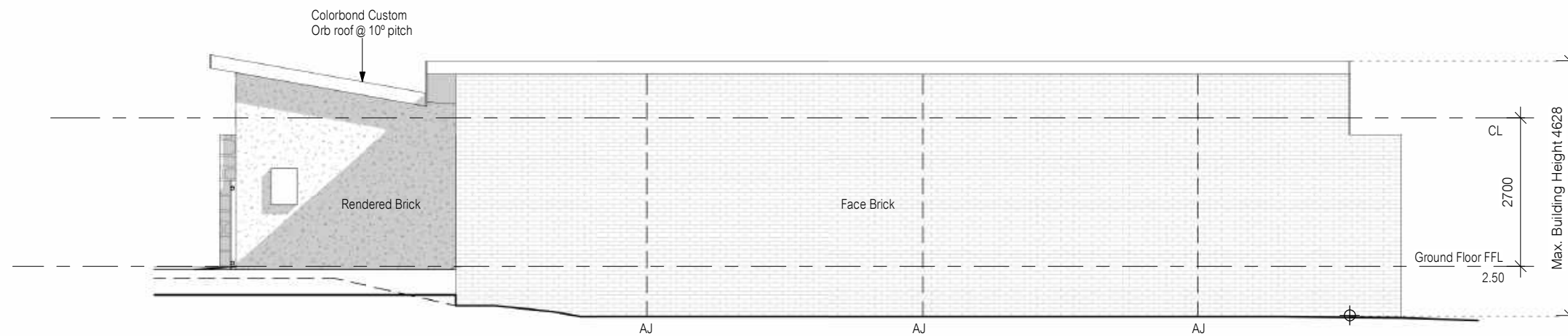
UNIT 12 ELEVATIONS SHEET 1

| | | |
|-------------|----------------|----------|
| Drawn | ST | WH712552 |
| Date | 19 August 2020 | Sheet |
| Scale | 1:100 | 15/21 |
| Copyright © | | |


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|-----|------|------|--------------------------------------|---|
| No. | Date | Int. | Amendment changes as per cover sheet | Shadows shown for stylisation purposes only |
|-----|------|------|--------------------------------------|---|

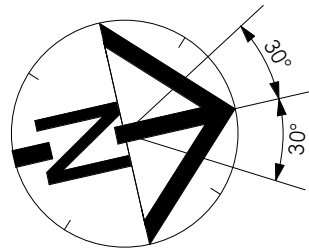


UNIT 12 SOUTH ELEVATION

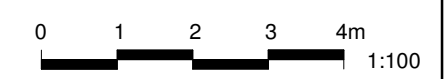
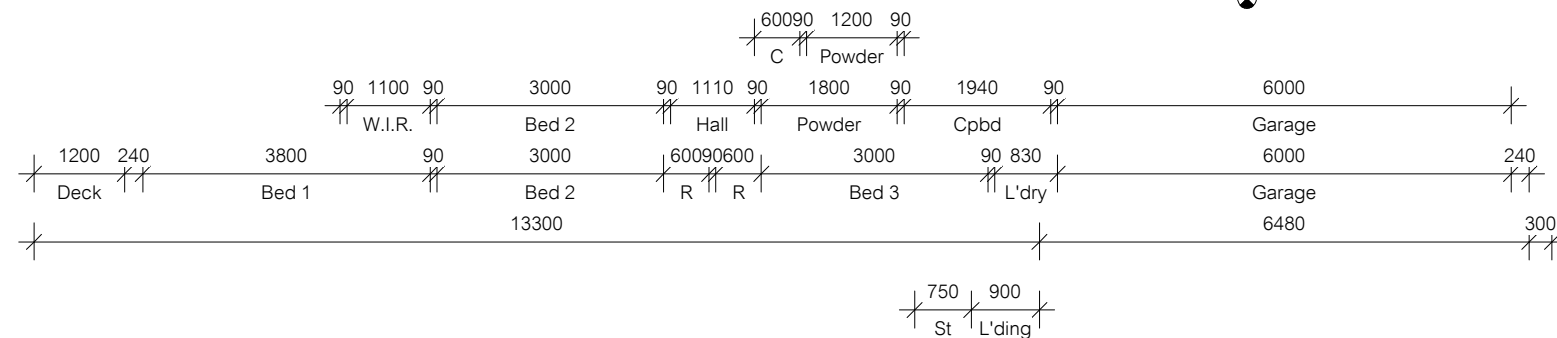
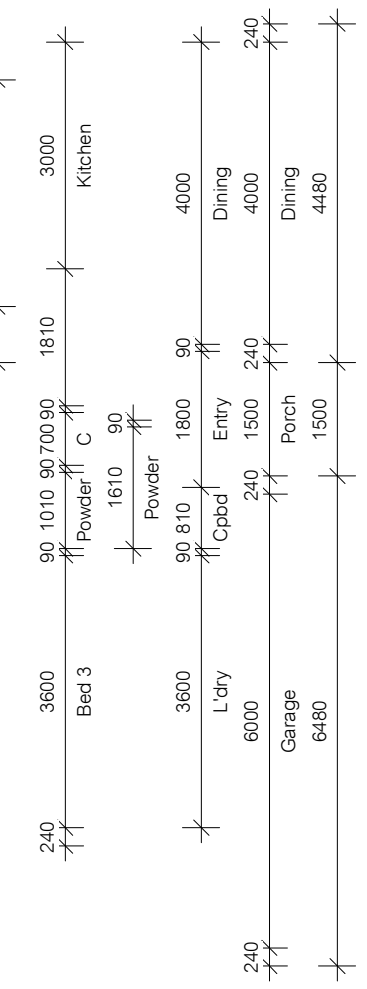
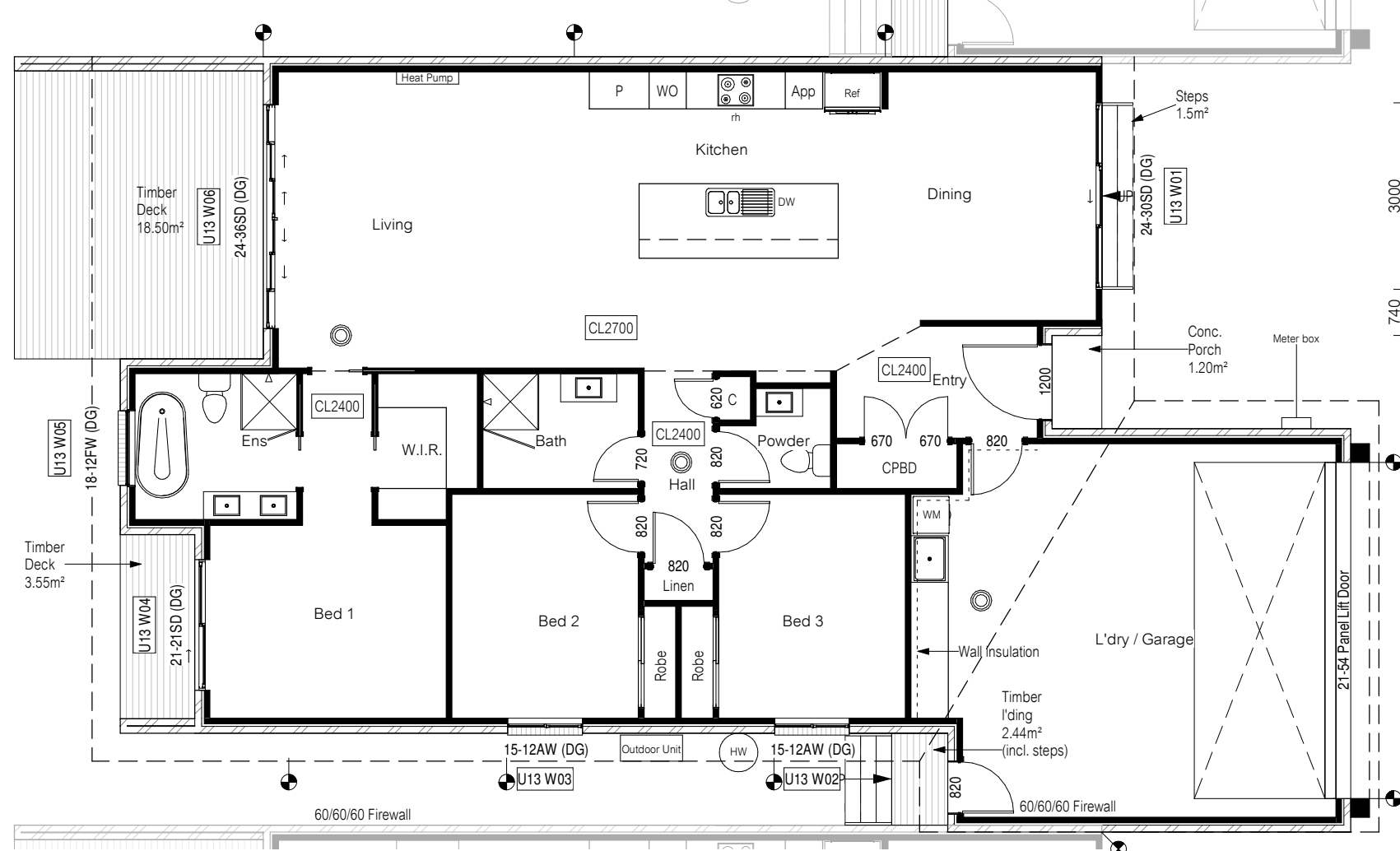
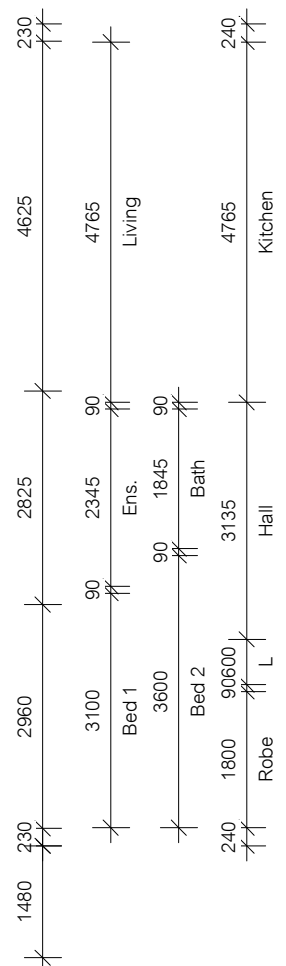
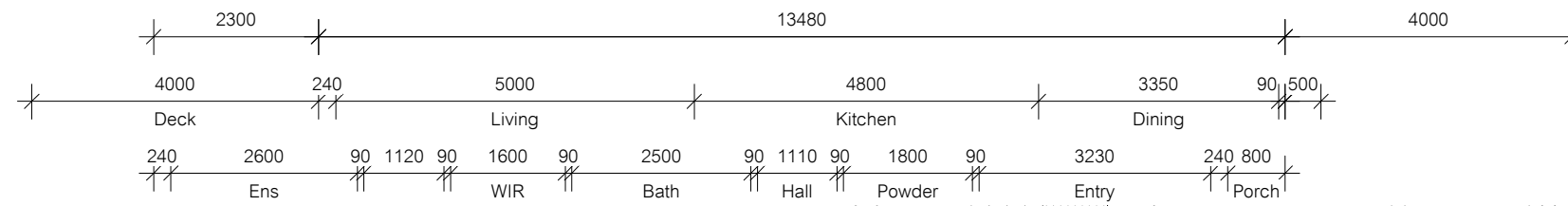


UNIT 12 WEST ELEVATION

| | | | | | | | | |
|---|--|---|--|--|---|-----------------------------------|---|--|
| <p>LEGEND: NGL - - - - FGL ————</p> | <p>All window sizes to be checked and/or confirmed on site prior to ordering glazing units</p> | <p>Notes</p> <ul style="list-style-type: none"> • Builder to verify all dimensions and levels on site prior to commencement of work • All work to be carried out in accordance with the current National Construction Code. • All materials to be installed according to manufacturers specifications. • Dimensions to take precedence over scale. • Do not scale from these drawings. | <p>Designer:</p> <p>ANOTHER PERSPECTIVE PTY LTD PO BOX 21 NEW TOWN LIC. NO. CC2204H (A. Strugnell) Ph: (03) 6231 4122 Fx: (03) 6231 4166 Email: info@anotherperspective.com.au</p> | <p>Client / Project info</p> <p>PROPOSED VILLANUEVA DEVELOPMENT 75 Fouche Avenue OLD BEACH</p> |  | <p>UNIT 12 ELEVATIONS SHEET 2</p> | | |
| | | | <p>No.</p> | <p>Date</p> | | <p>Int.</p> | <p>Amendment changes as per cover sheet</p> | <p>Shadows shown for stylisation purposes only</p> |
| | | | | | | <p>Date</p> | <p>19 August 2020</p> | <p>Sheet</p> |
| | | | | | | <p>Scale</p> | <p>1 : 100</p> | <p>15a/21</p> |
| | | | | | | <p>Copyright @</p> | | |



10.4.4
U13 W01 satisfy A1



Ground Floor Area = 185.09m²

- Articulation joints
- Smoke Alarm (interconnected where more than 1)

All window sizes to be checked and/or confirmed on site prior to ordering glazing units

- Notes
- Builder to verify all dimensions and levels on site prior to commencement of work
 - All work to be carried out in accordance with the current National Construction Code.
 - All materials to be installed according to manufacturers specifications.
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Designer:
ANOTHER PERSPECTIVE PTY LTD
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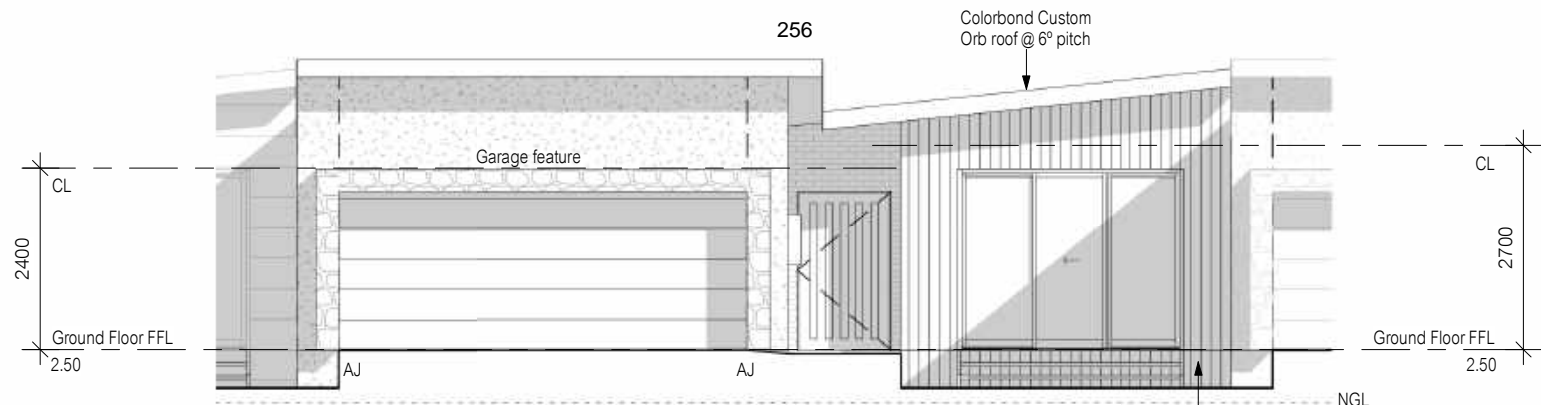
Client / Project info
PROPOSED VILLANUEVA DEVELOPMENT
75 Fouche Avenue
OLD BEACH



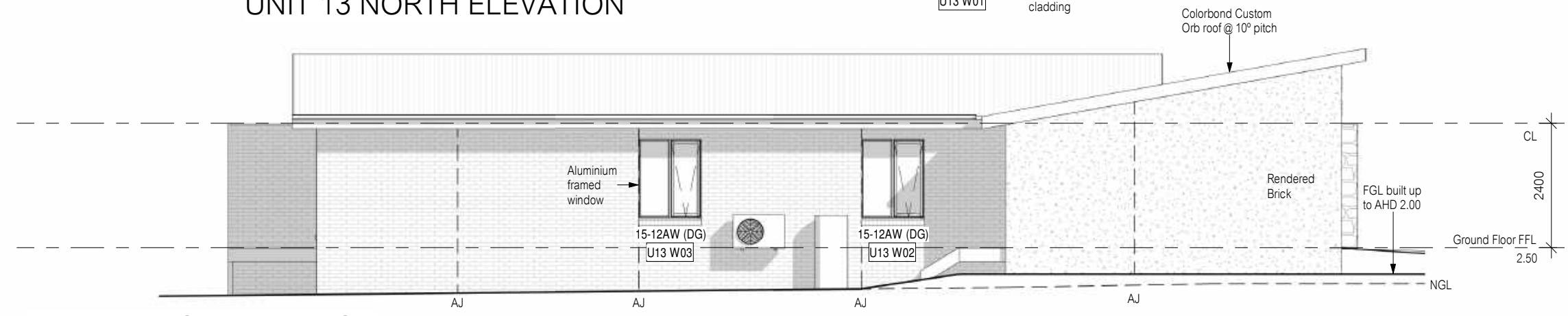
| UNIT 13 FLOOR PLAN | |
|--------------------|----------------------|
| Drawn | ST WH712552 |
| Date | 19 August 2020 Sheet |
| Scale | 1:100 |
| Copyright © 16/21 | |

| | | |
|-----|------|------|
| No. | Date | Int. |
|-----|------|------|

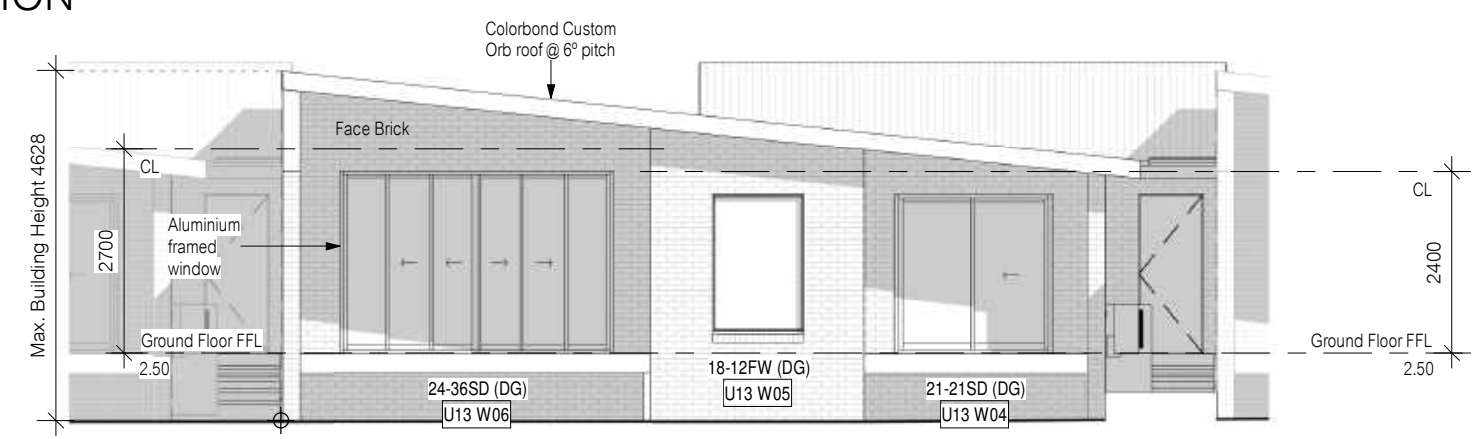
Amendment changes as per cover sheet



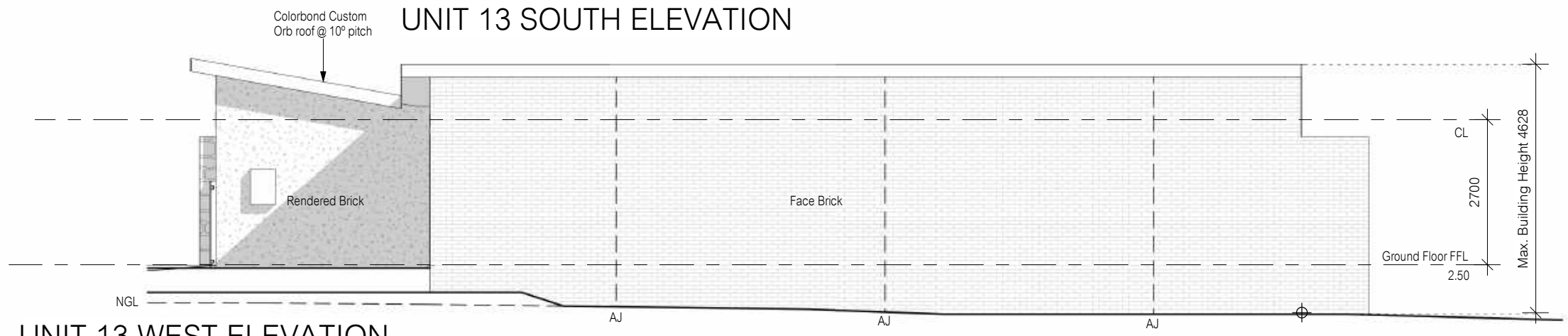
UNIT 13 NORTH ELEVATION



UNIT 13 EAST ELEVATION

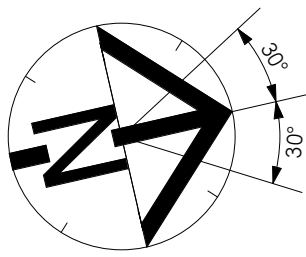


UNIT 13 SOUTH ELEVATION

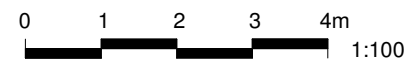
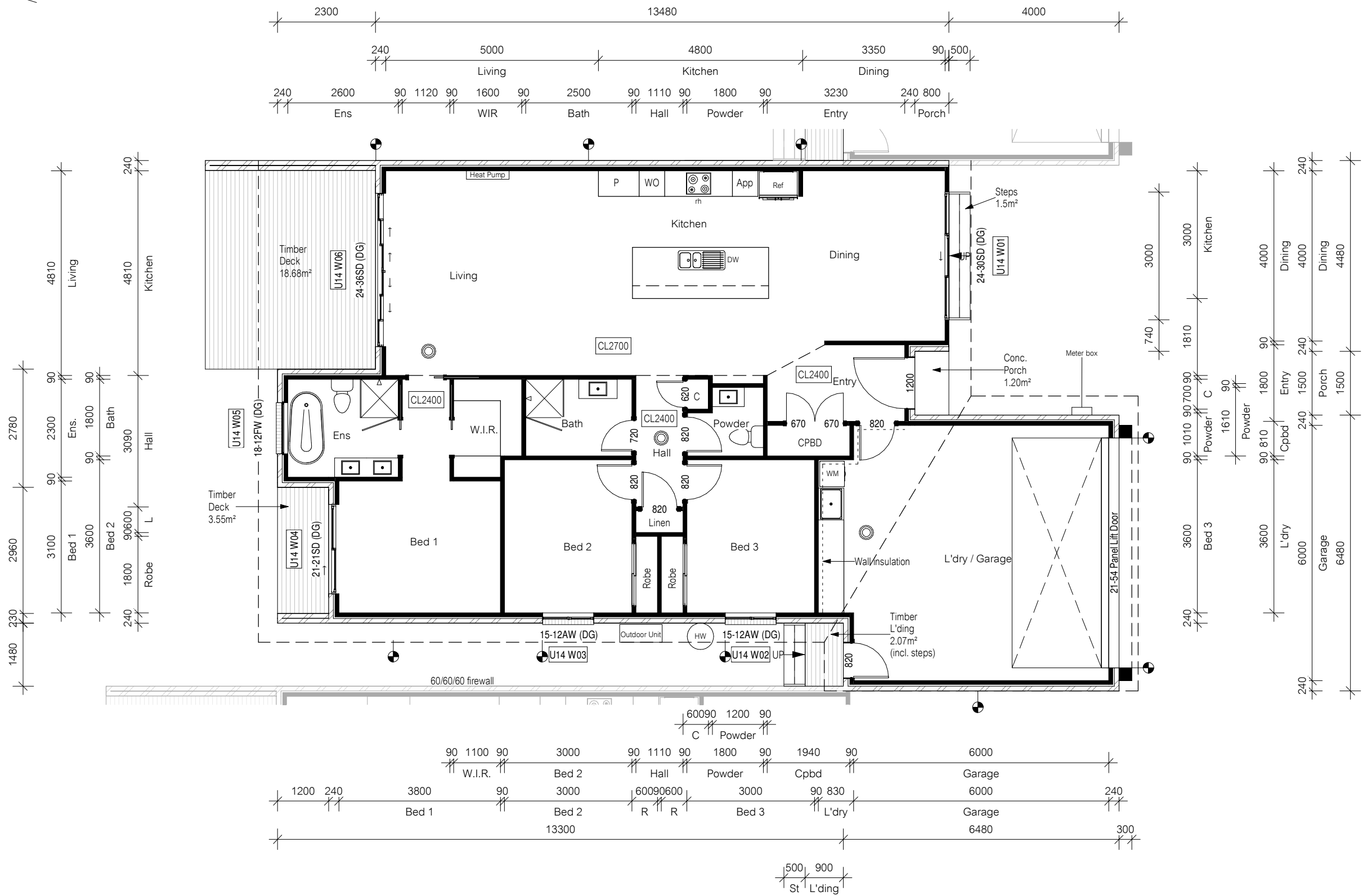


UNIT 13 WEST ELEVATION

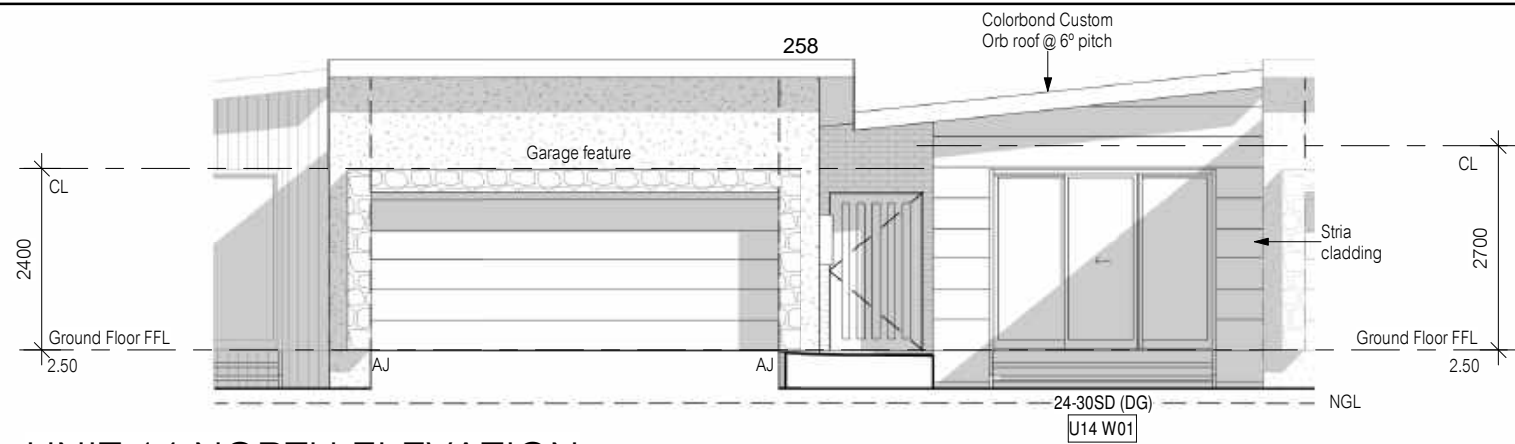
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|---|----------------|----------|--|--|---|--|--|--|---|--|------------------------------|----|---------------------------|------|----------------|-------|-------|-------|--|-------------|--|-------|
| <p>LEGEND: NGL - - - - FGL ————</p> | | | <p>All window sizes to be checked and/or confirmed on site prior to ordering glazing units</p> | | <p>Notes</p> <ul style="list-style-type: none"> • Builder to verify all dimensions and levels on site prior to commencement of work • All work to be carried out in accordance with the current National Construction Code. • All materials to be installed according to manufacturers specifications. • Dimensions to take precedence over scale. • Do not scale from these drawings. | | <p>Designer:</p> <p>ANOTHER PERSPECTIVE PTY LTD PO BOX 21 NEW TOWN LIC. NO. CC2204H (A. Strugnell) Ph: (03) 6231 4122 Fx: (03) 6231 4166 Email: info@anotherperspective.com.au</p> | | <p>Client / Project info</p> <p>PROPOSED VILLANUEVA DEVELOPMENT 75 Fouche Avenue OLD BEACH</p> | | <p>m WILSON MULTI</p> | | <p>UNIT 13 ELEVATIONS</p> | | | | | | | | | |
| No. | Date | Int. | Amendment changes as per cover sheet | | Shadows shown for stylisation purposes only | | | | <table border="1"> <tr> <td>Drawn</td> <td>ST</td> <td>WH712552</td> </tr> <tr> <td>Date</td> <td>19 August 2020</td> <td>Sheet</td> </tr> <tr> <td>Scale</td> <td>1:100</td> <td></td> </tr> <tr> <td colspan="2">Copyright ©</td> <td>17/21</td> </tr> </table> | | Drawn | ST | WH712552 | Date | 19 August 2020 | Sheet | Scale | 1:100 | | Copyright © | | 17/21 |
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| Date | 19 August 2020 | Sheet | | | | | | | | | | | | | | | | | | | | |
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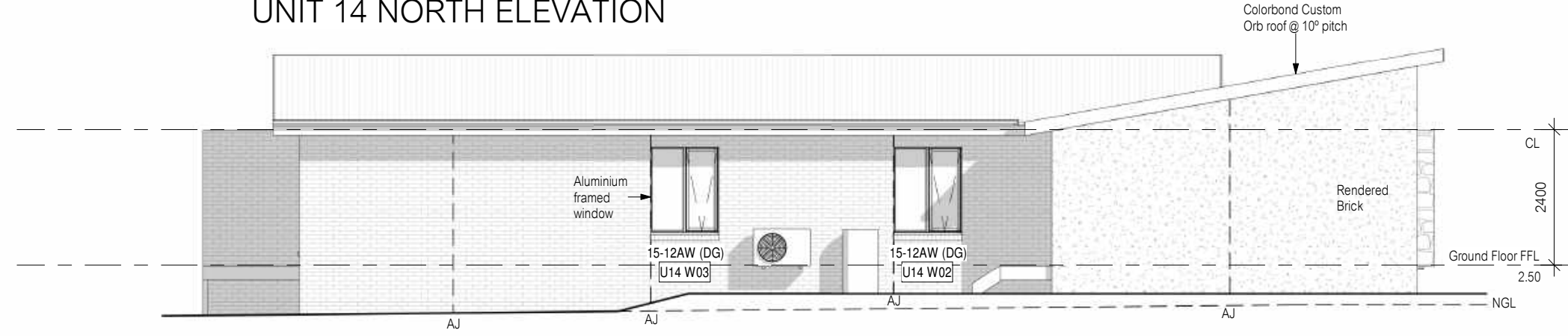
10.4.4
U14 W01 satisfy A1



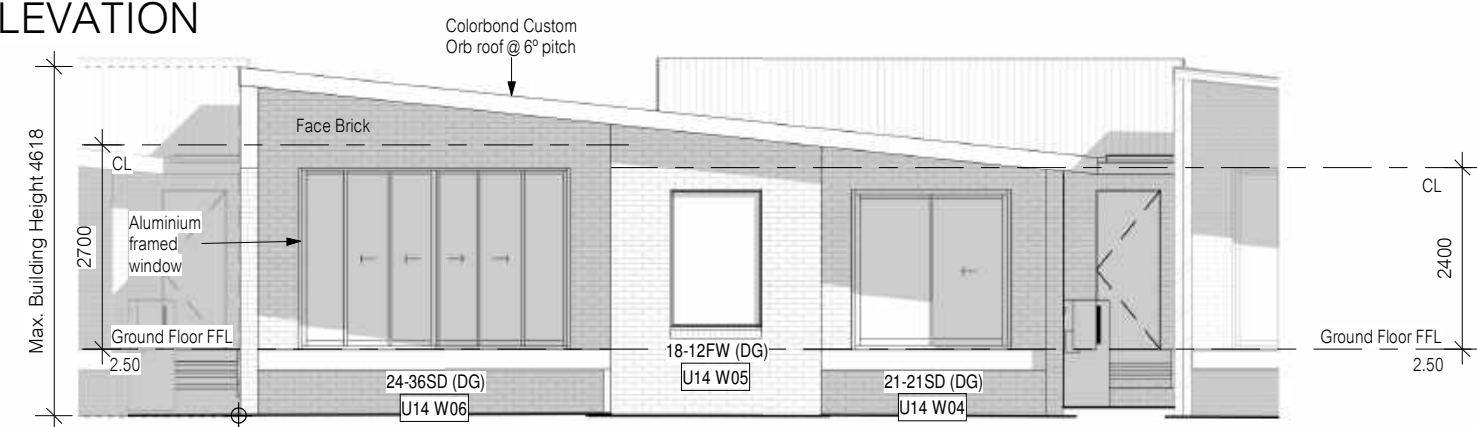
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|---|---|---|---|--|---|--|---|-------|
| No. Date Int. Amendment changes as per cover sheet | Ground Floor Area = 185.09m ² ● Articulation joints ⊙ Smoke Alarm (interconnected where more than 1) | All window sizes to be checked and/or confirmed on site prior to ordering glazing units | Notes • Builder to verify all dimensions and levels on site prior to commencement of work • All work to be carried out in accordance with the current National Construction Code. • All materials to be installed according to manufacturers specifications. • Dimensions to take precedence over scale. • Do not scale from these drawings. | Designer: ANOTHER PERSPECTIVE PTY LTD PO BOX 21 NEW TOWN LIC. NO. CC2204H (A. Strugnell) Ph: (03) 6231 4122 Fx: (03) 6231 4166 Email: info@anotherperspective.com.au | Client / Project info PROPOSED VILLANUEVA DEVELOPMENT 75 Fouche Avenue OLD BEACH | | UNIT 14 FLOOR PLAN | |
| | | | | Drawn ST WH712552 | | | Date 19 August 2020 Sheet | 18/21 |
| | | Scale 1:100 | Copyright © | | | | | |



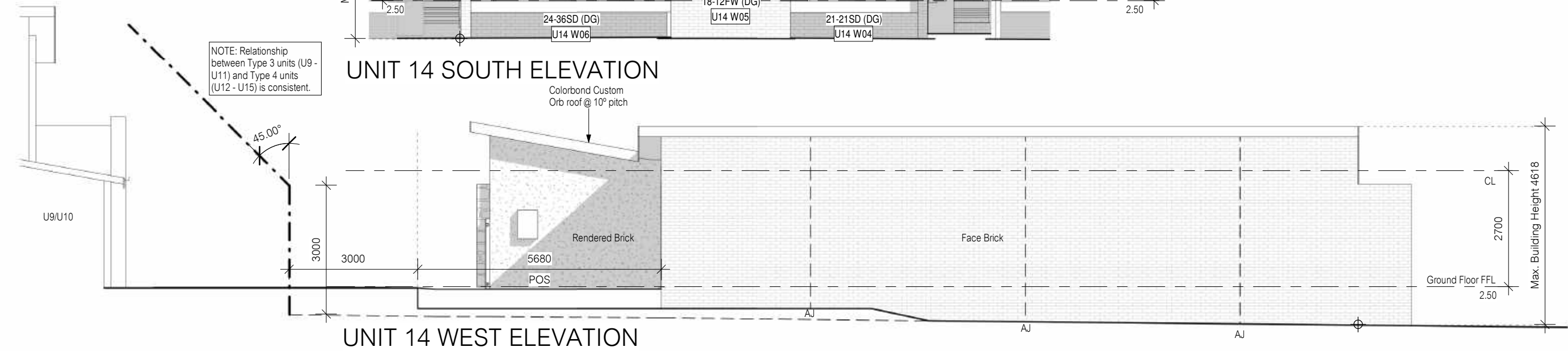
UNIT 14 NORTH ELEVATION



UNIT 14 EAST ELEVATION



UNIT 14 SOUTH ELEVATION



UNIT 14 WEST ELEVATION

NOTE: Relationship between Type 3 units (U9 - U11) and Type 4 units (U12 - U15) is consistent.

LEGEND:
NGL - - - -
FGL - - - -

All window sizes to be checked and/or confirmed on site prior to ordering glazing units

- Notes
- Builder to verify all dimensions and levels on site prior to commencement of work
 - All work to be carried out in accordance with the current National Construction Code.
 - All materials to be installed according to manufacturers specifications.
 - Dimensions to take precedence over scale.
 - Do not scale from these drawings.

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info@anotherperspective.com.au

Client / Project info
PROPOSED VILLANUEVA DEVELOPMENT
75 Fouche Avenue
OLD BEACH

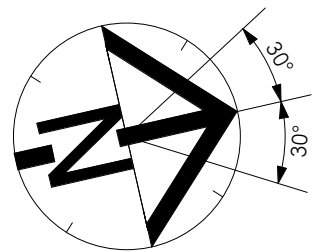


| UNIT 14 ELEVATIONS | | |
|--------------------|----------------|----------|
| Drawn | ST | WH712552 |
| Date | 19 August 2020 | Sheet |
| Scale | 1 : 100 | 19/21 |
| Copyright © | | |

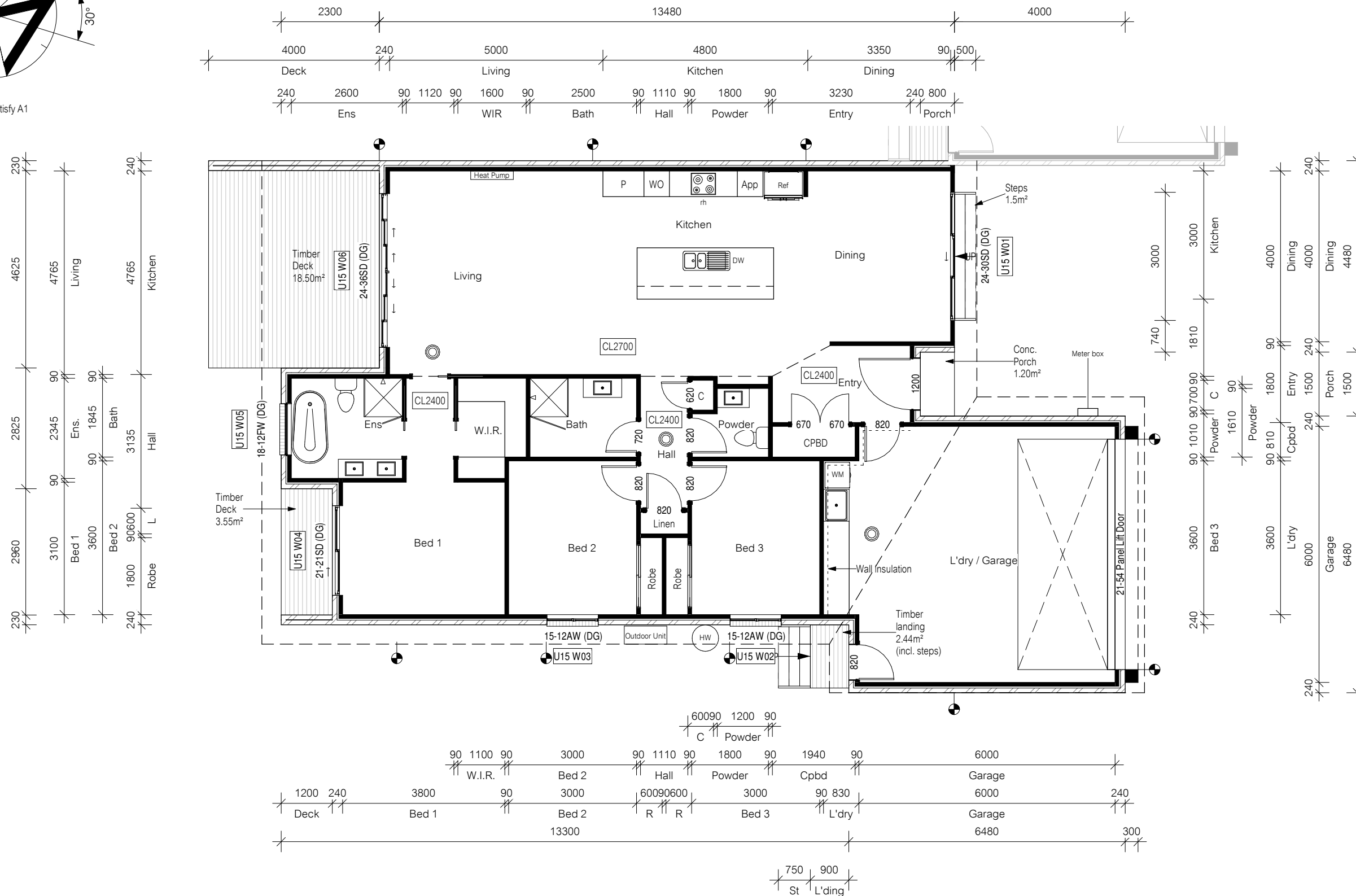
| No. | Date | Int. |
|-----|--------------|------|
| I | 29 Oct. 2020 | ST |

Amendment changes as per cover sheet

Shadows shown for stylisation purposes only



10.4.4
U15 W01 satisfy A1



Ground Floor Area = 185.09m²

- Articulation joints
- Smoke Alarm (interconnected where more than 1)

All window sizes to be checked and/or confirmed on site prior to ordering glazing units

- Notes
- Builder to verify all dimensions and levels on site prior to commencement of work
 - All work to be carried out in accordance with the current National Construction Code.
 - All materials to be installed according to manufacturers specifications.
 - Dimensions to take precedence over scale.
 - Do not scale from these drawings.

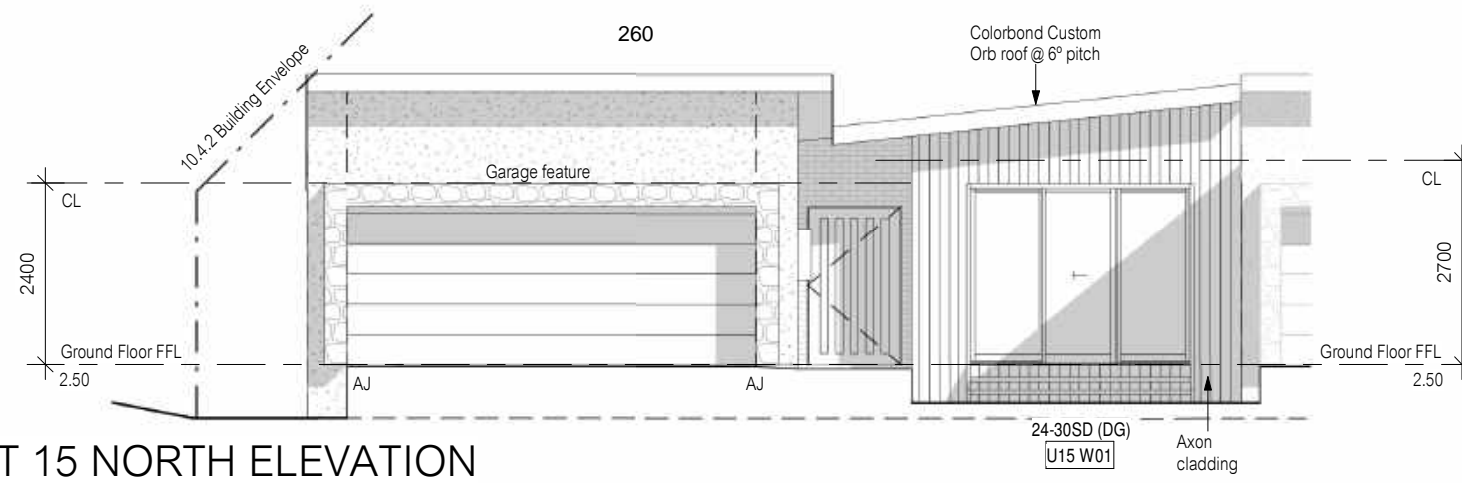
Designer:
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Client / Project info
PROPOSED VILLANUEVA DEVELOPMENT
75 Fouche Avenue
OLD BEACH

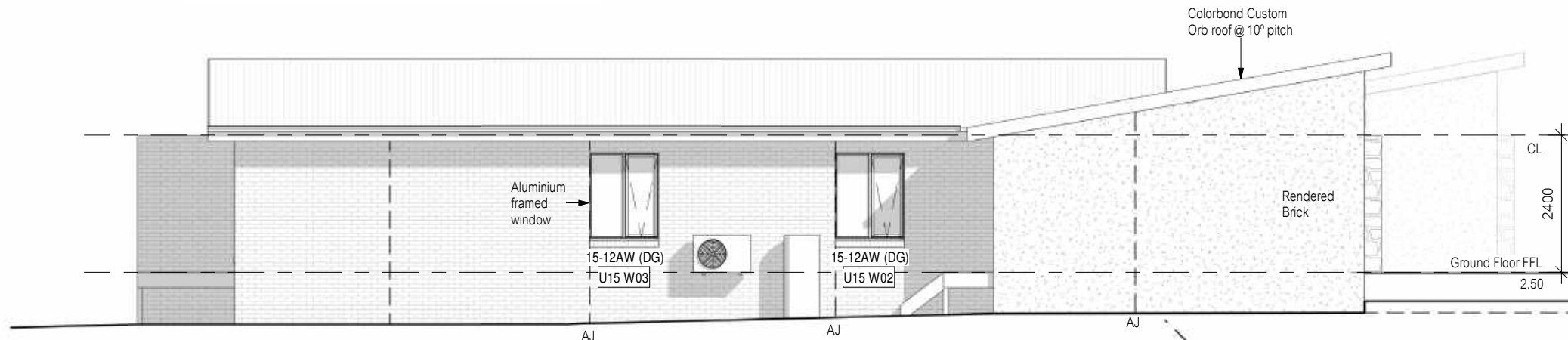


| UNIT 15 FLOOR PLAN | |
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| Date | 19 August 2020 Sheet |
| Scale | 1:100 |
| Copyright © 20/21 | |

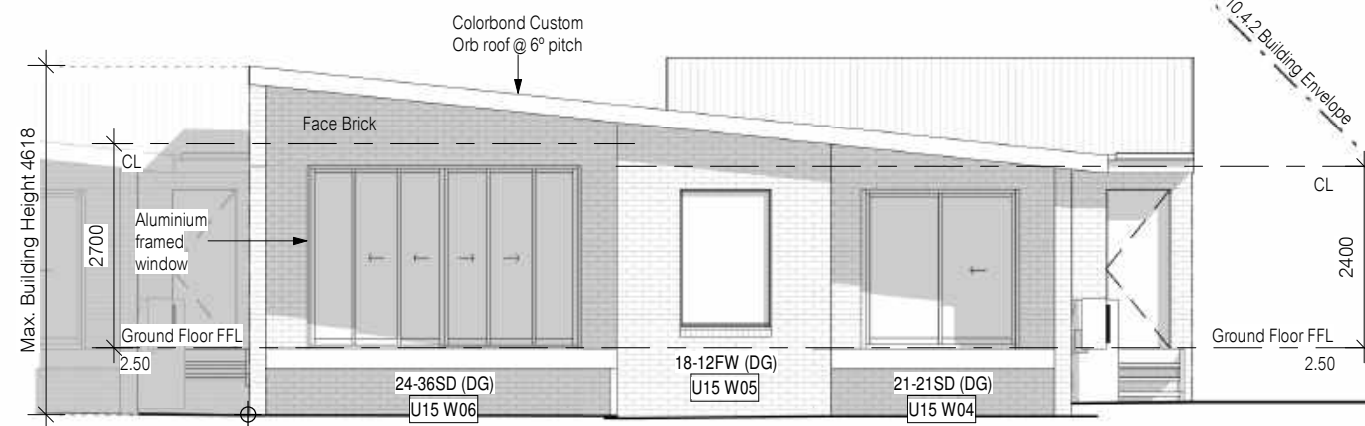
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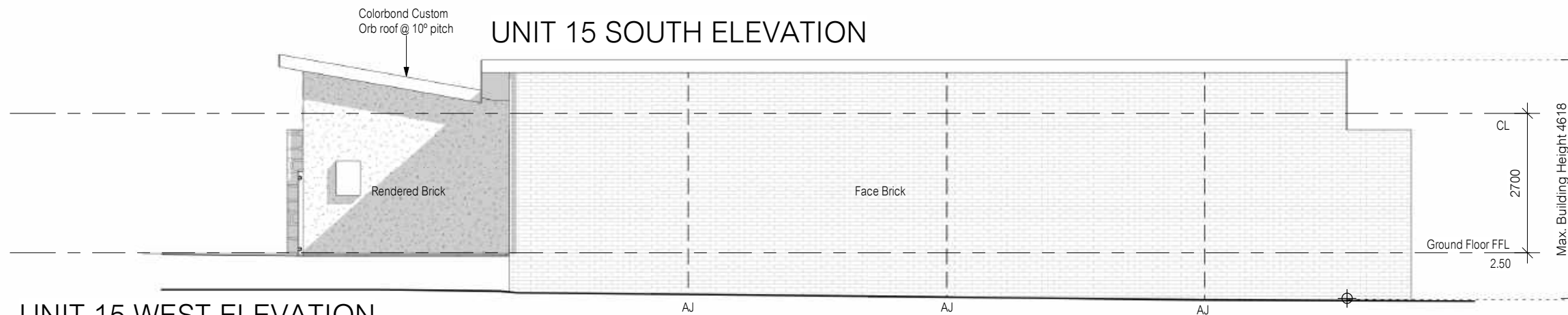
UNIT 15 NORTH ELEVATION



UNIT 15 EAST ELEVATION



UNIT 15 SOUTH ELEVATION



UNIT 15 WEST ELEVATION

LEGEND:
NGL - - - -
FGL ————

All window sizes to be checked and/or confirmed on site prior to ordering glazing units

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75 Fouche Avenue
OLD BEACH



UNIT 15 ELEVATIONS

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| Scale | 1:100 | 21/21 |
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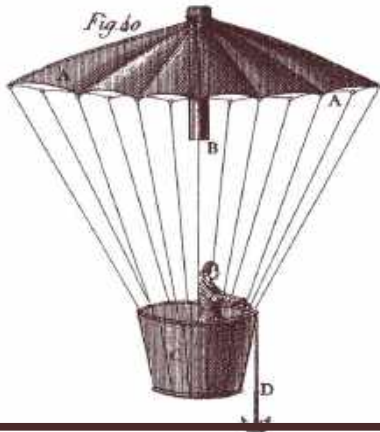
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ATTACHMENT C

Updated Concept Services Report



Concept Services Report

Planning Scheme Compliance & Existing Infrastructure
Assessment

75 Fouche Avenue, Old beach
for Wilson Homes

30/11/2020

Version control

| Revision | Description | Issue date | Issued by |
|----------|-------------------|------------|--------------|
| 1 | Review | 22/08/2020 | Simon Palmer |
| 2 | Planning Approval | 24/08/2020 | Simon Palmer |
| 3 | Planning Approval | 26/10/2020 | Simon Palmer |
| 4 | Planning Approval | 30/11/2020 | Simon Palmer |

PROJECT NUMBER 20.0336
REPORT AUTHOR Simon Palmer

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1 Background

A fifteen-unit residential development is proposed for 75 Fouche Avenue, Old Beach. In order to comply with Brighton Council planning scheme requirements, Gandy and Roberts have been engaged to provide a concept services report in support of the development application.

2 Planning Scheme Requirements

The current Brighton Interim Planning Scheme 2015 requires that this development manages stormwater in compliance with the Stormwater Management Code. Code requirements for this development are:

Acceptable Solution A2 of Clause E7.7.1 Stormwater Drainage and Disposal states:

A stormwater system for a new development must incorporate water sensitive urban design principles^{R1} for the treatment and disposal of stormwater if any of the following apply:

- (a) the size of new impervious area is more than 600 m²;*
- (b) new car parking is provided for more than 6 cars;*
- (c) a subdivision is for more than 5 lots.*

This development meets criteria (a) and (b) of the clause and therefore water sensitive urban design principles must be incorporated into the design of stormwater management for the site.

Acceptable Solution A3 of Clause E7.7.1 Stormwater Drainage and Disposal states:

A minor stormwater drainage system must be designed to comply with all of the following:

- (a) be able to accommodate a storm with an ARI of 20 years in the case of non-industrial zoned land and an ARI of 50 years in the case of industrial zoned land, when the land serviced by the system is fully developed;*
- (b) stormwater runoff will be no greater than pre-existing runoff or any increase can be accommodated within existing or upgraded public stormwater infrastructure.*

This development incorporates a minor stormwater drainage system, therefore the design must satisfy both criterion (a) and criterion (b) of Acceptable Solution A3. As the development is located within a general residential zone, the 20 year ARI storm must be accommodated in the design.

^{R1} *Water Sensitive Urban Design Engineering Procedures for Stormwater Management in Southern Tasmania or the Model for Urban Stormwater Improvement Conceptualisation (MUSIC), a nationally recognised stormwater modelling software package used to assess land development proposals based on local conditions including rainfall, land use and topography, is recognised as current best practice.*

3 Stormwater Management

3.1 Water Sensitive Urban Design

3.1.1 Performance Criteria

Performance Criteria P2 of Clause E7.7.1 requires:

A stormwater system for a new development must incorporate a stormwater drainage system of a size and design sufficient to achieve the stormwater quality and quantity targets in accordance with the State Stormwater Strategy 2010, as detailed in Table E7.1 unless it is not feasible to do so.

The acceptable stormwater quality and quantity targets are:

80% reduction in the average annual load of total suspended solids (TSS) based on typical urban stormwater TSS concentrations.

45% reduction in the average annual load of total phosphorus (TP) based on typical urban stormwater TP concentrations.

45% reduction in the average annual load of total nitrogen (TN) based on typical urban stormwater TN concentrations.

Stormwater quantity requirements must always comply with requirements of the local authority including catchment-specific standards. All stormwater flow management estimates should be prepared according to methodologies described in Australian Rainfall and Runoff (Engineering Australia 2004) or through catchment modelling completed by a suitably qualified person.

3.1.2 Stormwater System Concept

A stormwater treatment system for the proposed development could incorporate the following design elements:

- 'SPEL' Hydrochannels – 1 provided per unit plus each driveway pit to be a 1m length of Hydrochannel; totalling 26 1 m units. A concept installation detail is shown in Figure 1. Refer

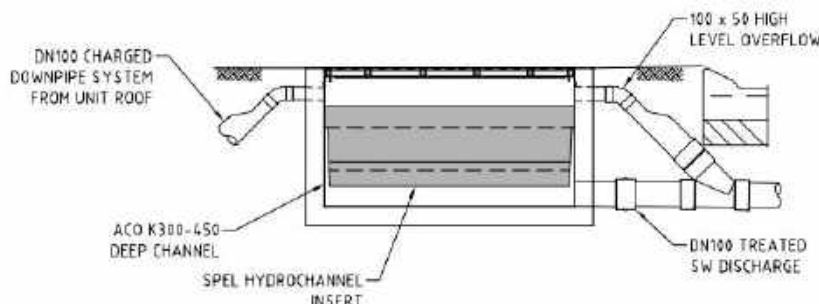


Figure 1 Concept Detail SPEL Hydrochannel

There are many proprietary treatment systems on the market and other systems will be investigated during the detailed design phase to ensure that the optimum system is selected.

3.1.3 MUSIC Modelling

MUSIC V6.2.1 was used to model the performance of the indicated stormwater system. The model predicted the following performance outcomes:

- Total Suspended Solids reduction of 80%
- Total Phosphorus reduction of 77%
- Total Nitrogen reduction of 51%
- Gross Pollutants reduction of 99%

3.1.4 Conclusion

The development can be designed to satisfy Objective P2 of Clause E7.7.1.

3.2 Existing Infrastructure System Performance

3.2.1 20 Year ARI Storm Event

A hydrological analysis of the local catchment was undertaken in XP storm 2019 using the methods recommended by Australian Rainfall and Runoff (ARR) 2019. The catchment was analysed based on satellite imagery, with the catchment determined to consist of approximately 4000 m² impervious surface and a nominal allowance of 500 m² of pervious surface. Rainfall data for the site was extracted from the Bureau of Meteorology (BOM), with an increase of 16% applied to account for an increase due to climate change at the year 2090, and temporal patterns were downloaded from the ARR Data Hub.

A comparison between the storm durations at 5% AEP indicated that the 10-minute storm event was the critical duration for this catchment. Storm pattern eight was determined to be the median pattern for this event, and the flow output for this storm event used for the assessment.

3.2.2 Stormwater Runoff

The pre-development site is fully pervious and runoff from the site has been calculated as 15 L/s. The post-development site is approximately 54% impervious and the runoff from the site has been calculated as 91 L/s.

The site discharges to an existing public DN300 RCP stormwater main located on the eastern boundary of 77 Fouche Avenue. The existing stormwater network has been analysed and found to be of insufficient capacity to accept the additional run off. Hydraulic analysis has been undertaken and it is proposed to upgrade approximately 60 m of the existing DN300 council stormwater main to DN375 to provide the additional capacity for this development. XP storm 2019 was used to undertake the analysis with Figure 2 showing the hydraulic grade line resulting from upgrading part of the stormwater network.

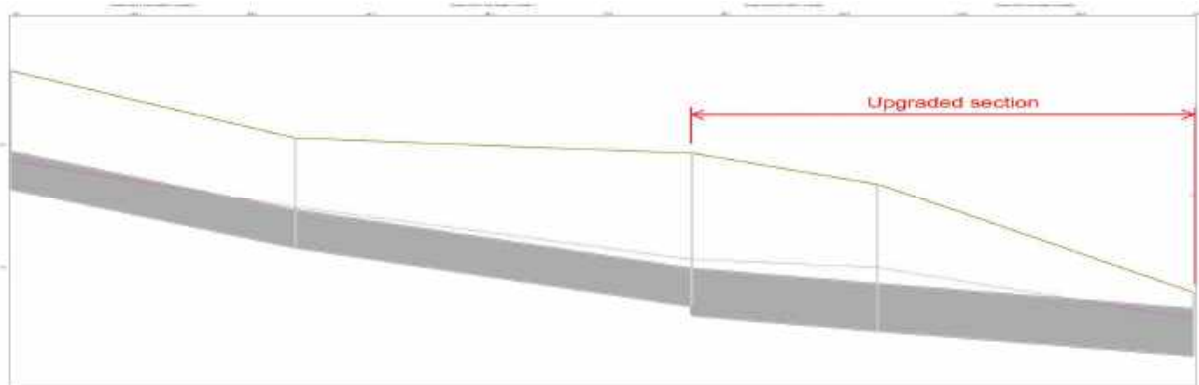


Figure 2. Hydraulic Grade Line Analysis of the Upgraded Stormwater Network

The increased runoff can be accommodated in upgraded public stormwater infrastructure meeting the acceptable solution of Clause E7.7.1.

The additional runoff entering the stormwater system results in an increased discharge velocity at the downstream endwall of 0.3 m/s to 1.5 m/s. Austroads AGRD05B-13 Table 3.1 indicates that the allowable outlet velocities for sandy or silty clay is in the range of 1.0-1.5 m/s. Based on this it is unlikely that erosion of soils will occur however a 2 m length of rock with minimum rock size, d_{50} , of 100 mm will be provided. Energy dissipation is only required for velocities exceeding 5 m/s (Austroads AGRD05B-13).

3.2.3 Conclusion

The development can be designed to satisfy Objective A3 of Clause E7.7.1 of the Hobart Interim Planning Scheme 2015.

3.3 Private Infrastructure System Performance

The GES Coastal Vulnerability Assessment, July 20202, indicates that the projected 2100 IPS normal river water level will be 0.88 m AHD. The existing stormwater outlet invert is at a level of 0.84 m AHD indicating that in 2100 the outlet may be submerged by 40 mm. Analysis of the existing system with pre-development conditions and the predicted 2100 river water level is shown in Figure 3. Analysis of the upgraded system with post-development conditions and the predicted 2100 river water level is shown in Figure 4. The proposed upgraded public post-development system will perform satisfactorily under normal conditions.

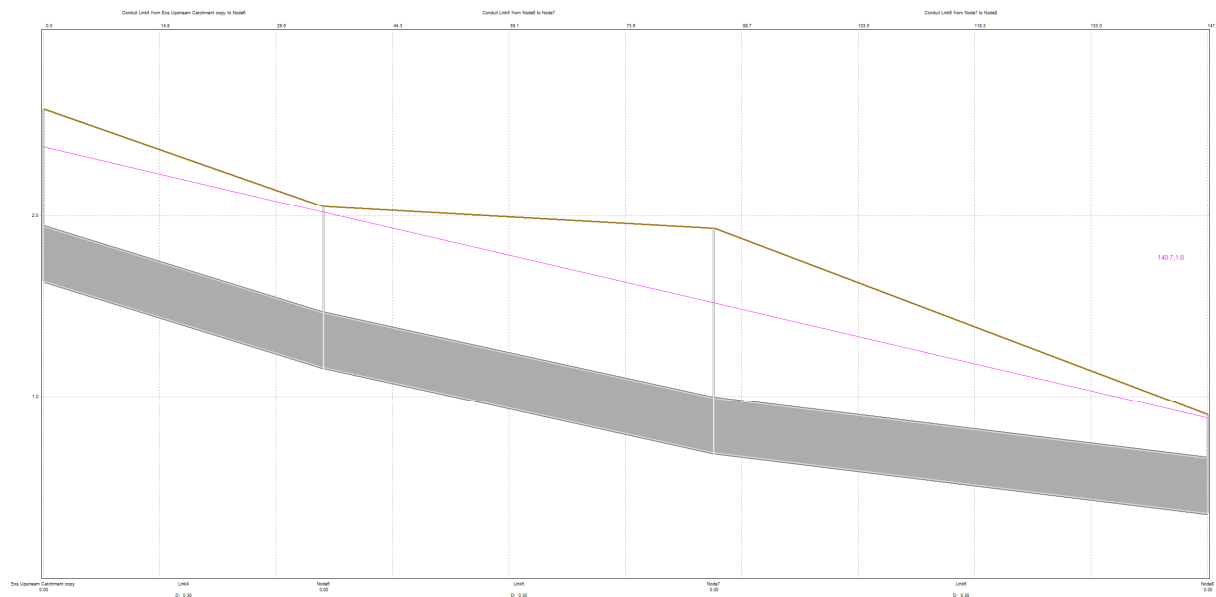


Figure 3. Pre-development analysis with tailwater of 0.88 m AHD (2100 Sea Level)

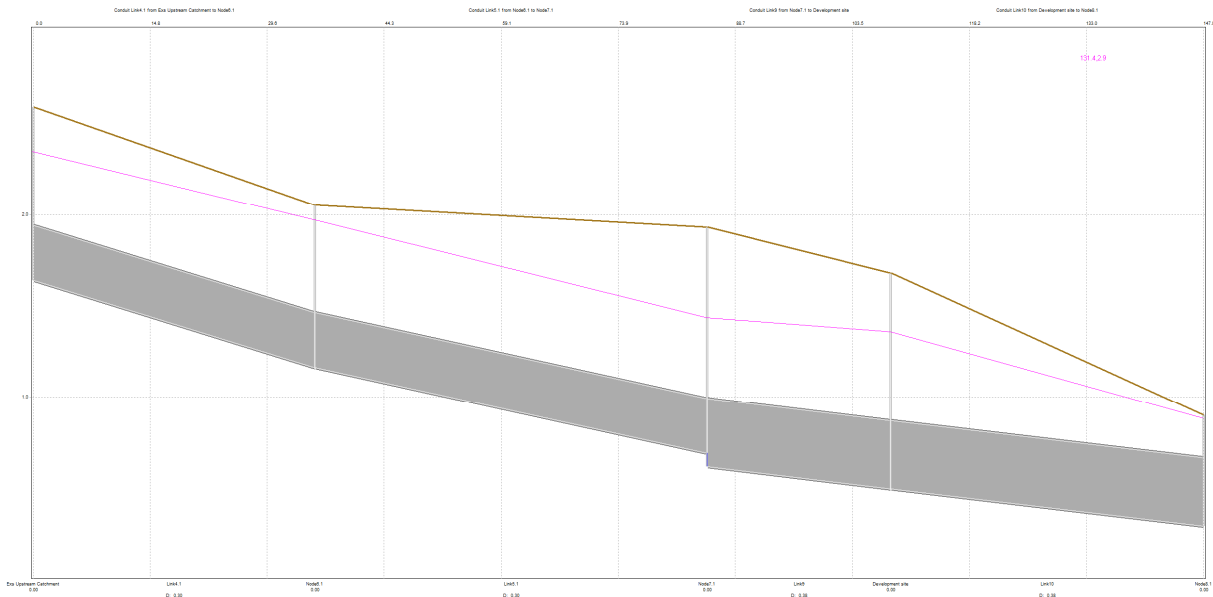


Figure 4. Post-development analysis with tailwater of 0.88 m AHD (2100 Sea Level)

The GES Coastal Vulnerability Assessment, July 20202, indicates that the projected 2070 IPS still water level will be 1.69 m AHD. It is important to note that this level is based on the 1% AEP storm tide event. Analysis of the existing system pre-development coinciding with this event is shown in Figure 5. Analysis of the upgraded system with post-development conditions and the predicted 2100 still water level is shown in Figure 6. In either the pre-development or post-development condition the stormwater lids within 77 Fouche Avenue will be lifted. During this event escaping stormwater will run to the foreshore without causing issues for nearby residences. The post-development system performance is similar to the pre-development system performance and is therefore considered acceptable.

Internally, the private stormwater infrastructure will surcharge in the 1% AEP storm tide event at the driveway pit near Unit 15, refer Figure 7. Surcharging stormwater will flow overland along the same flow paths as the 1% AEP rainfall event. In the 1% AEP rainfall event surcharging of private pits does not occur.

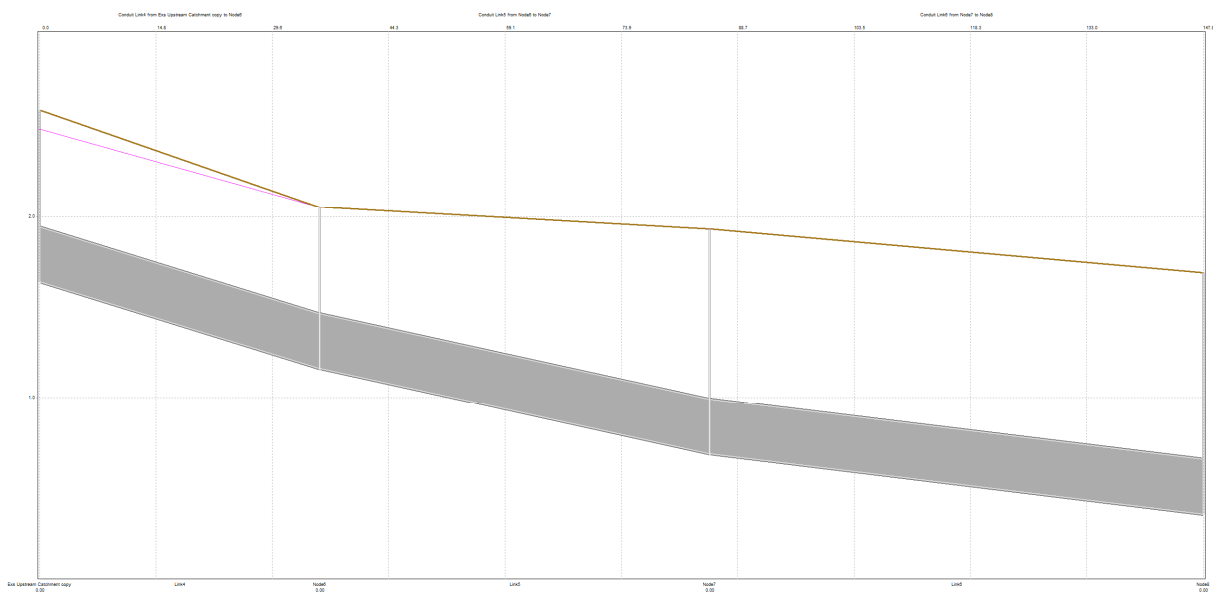


Figure 5. Pre-development analysis with tailwater of 1.69 m AHD (2070 still water level)

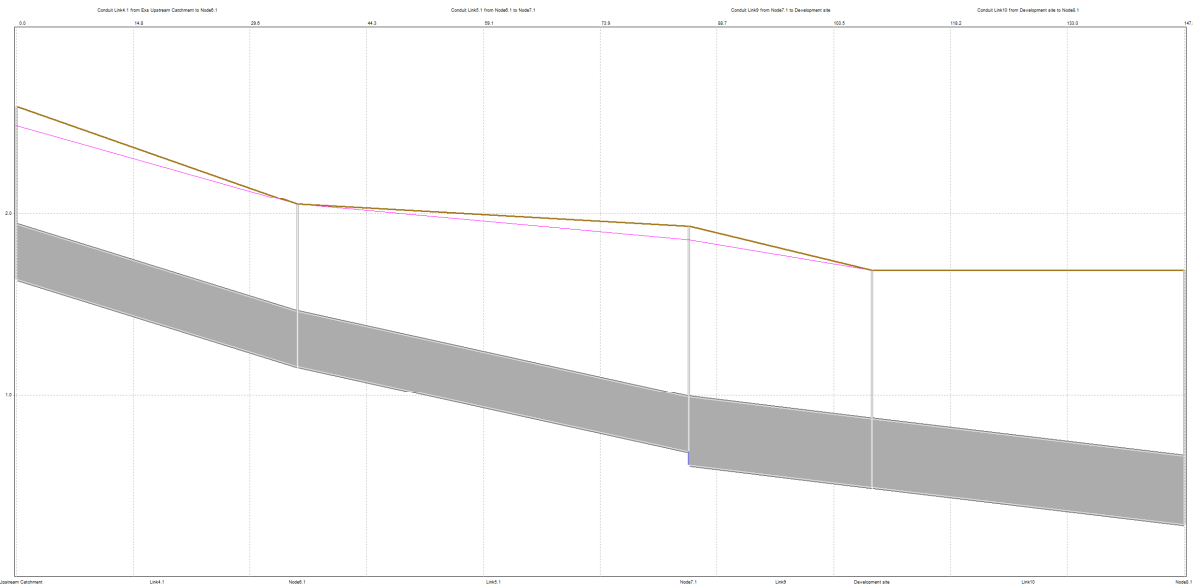


Figure 6. Post-development analysis with tailwater of 1.69 m AHD (2070 still water level)

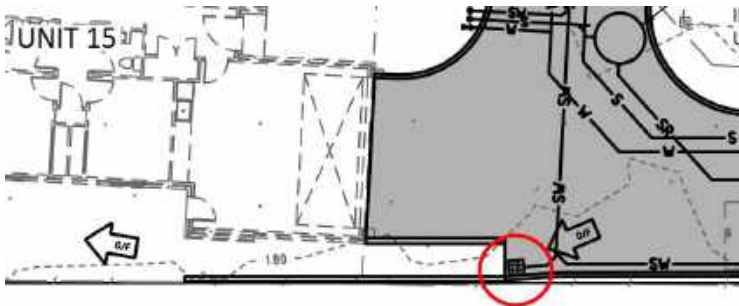


Figure 7. Post-development analysis with tailwater of 1.69 m AHD (2070 still water level) – pit surcharge

The private sewage pump station shall be a fully enclosed/sealed system and the projected 2100 IPS sea level of 0.88 m AHD will have no impact on the system. The watertight lid of the pump station shall be set at a level of 2.35 m AHD providing 150 mm freeboard to the 2100 IPS 1% AEP storm event and 270 mm freeboard to the 2100 IPS 1% AEP storm tide event. Measures will be undertaken, as described in Section 4.2.1, to ensure that the pump station prevents saline water into entering Taswater's sewerage network.

3.4 Overland Flow Paths

3.4.1 Provision for predicted flows

Overland flow paths can be catered for within the development site to ensure that the effect on adjacent properties is no worse post development versus predevelopment. JMG in their Overland Flow Assessment report, refer Appendix B – Overland Flow Assessment, identified that any impermeable barrier to the northern boundary of the site had the potential to re-direct 0.12 m³/s west to the adjacent property. To mitigate this a permeable barrier will be provided on the northern boundary with a 100 mm gap to the bottom of the fence. The height of this gap equates to the pre-development flow depth on the northern boundary to provide an unhindered flow path. The rear of units 1-4 will be shaped to contain this flow and then direct it, via a shallow channel on the western boundary, to the rear of the site.

The driveway on the eastern boundary will also contain and direct overland flow to the eastern side of Unit 15 thereby conveying flows to the rear of the site. The existing surface levels to the east of Unit 15 are such that the flow will generally be contained within the site.

3.4.2 Risk Management

During significant storm events overland flows have the potential to be a hazard for people and property. The hazard for a particular time during an event is defined by flow depth and velocity relationships. The risk profile for people is shown in Table 1 (with mass (kg) x height (m) categories) and for vehicles in Table 2. This calculation is based on the maximum depth and velocity during the storm but is only applicable to people trapped within the flood waters. If people are mobile and have enough warning, they will leave an area that could be flooded, which in a built-up area may mean retreating to an upper level of a sturdy building or moving to higher ground.

Table 1. Flood hazard for people

| DV (m ² s ⁻¹) | Children (H.M = 25 to 50) | Adults (H.M > 50) |
|--------------------------------------|--|--|
| 0 | Safe | Safe |
| 0–0.4 | Low Hazard if depth < 0.5 m and velocity < 3 m/s otherwise Extreme Hazard | Low Hazard if depth < 1.2 m and velocity < 3 m/s otherwise Extreme Hazard |
| 0.4–0.6 | Significant Hazard; Dangerous to most if depth < 0.5 m and velocity < 3 m/s otherwise Extreme Hazard | |
| 0.6–0.8 | Extreme Hazard; Dangerous to all | Moderate Hazard; Dangerous to some if depth < 1.2 m and velocity < 3 m/s otherwise Extreme Hazard |
| 0.8–1.2 | | Significant Hazard; Dangerous to most if depth < 1.2 m and velocity < 3 m/s otherwise Extreme Hazard |
| > 1.2 | | Extreme Hazard; Dangerous to all |

Table 2. Flood hazard for vehicles

| | Small passenger | Large passenger | Large 4WD |
|--|-----------------|-----------------|-----------|
| Length (m) | < 4.3 | > 4.3 | > 4.5 |
| Kerb Weight (kg) | < 1250 | > 1250 | > 2000 |
| Ground clearance (m) | < 0.12 | > 0.12 | > 0.22 |
| Limiting still water depth ¹ (m) | 0.3 | 0.4 | 0.5 |
| Limiting high velocity flow depth ² (m) | 0.1 | 0.15 | 0.2 |
| Limiting velocity ³ (m/s) | 3 | 3 | 3 |
| Equation of stability | DV = 0.3 | DV = 0.45 | DV = 0.6 |

¹at velocity = 0 m/s, ²at velocity = 3 m/s, ³at low depth

For the 1% AEP event the depth by velocity (DxV) relationship for the overland flow path to the rear of Units 1 to 4 and along the western boundary is 0.05 m²s⁻¹ which is considered generally safe for people, vehicles, and buildings. The flow on the driveway, on the eastern boundary, has a maximum velocity of 3.6 m/s with a maximum depth of 113 mm against the eastern kerb. This velocity is higher than recommended but there are no economically viable measures achievable to reduce the velocity to the recommended maximum of 3 m/s. There is an approximately 2.4 m wide strip on the high side of the driveway with a maximum DxV of 0.21 m²s⁻¹ (d < 100 mm & V < 3 m/s) which is considered generally safe for people and vehicles and would allow residents to walk or drive off the site safely. There is the potential for parked vehicles in the visitor parking to move in a significant overland flow event; however, vehicles would tend to rotate into the kerb and it would be expected that they would become wedged on the kerb. Regardless, in the unlikely event vehicles moved further the proposed walls adjacent Unit 15 would prevent any further movement. This possibility is not considered to be likely and the consequences do not represent significant risk to residents.

4 Sewer and Water Services

4.1 Existing Infrastructure

4.1.1 Sewer

A DN150 PVC sewer gravity main runs along the northern end of the site with an existing DN100 property connection available in the north eastern corner of the lot. The existing lot connection will be abandoned and replaced with a new DN150 lot connection. Refer Drawing C020 in Appendix A.

4.1.2 Water

A DN200 water main runs along Fouche Avenue on the development side of the road reservation. An existing water connection services the lot but is undersized and will require upgrading to a large connection for this development. Refer Drawing C020 in Appendix A.

4.1.3 Site Investigations

UDM Group undertook service locating and surveying at the site in July 2020. Sewer and water property connections were verified on site. Refer UDM Group's Property Connection Report in Appendix B.

4.2 Service Requirements for Proposed Development

4.2.1 Sewer

The site falls towards the river and therefore a gravity connection to the existing infrastructure is not achievable. The site is partially subject to inundation; the Brighton Interim Planning Scheme 2015 Code E15.0 describes Inundation Prone Areas with Table E15.1 Coastal Inundation High, Medium & Low Hazard Areas indicating an inundation level at RL2.2 m (excluding freeboard) for the 1% Annual Exceedance Probability for the year 2100.

A private sewer pump station will be required to service the development. The pump station cover will be set 150 mm above the projected inundation level at RL2.35 m. Overflow Relief Gullies for the site will also be set at the same level at RL2.35 m.

The pump station sizing will comply with the Gravity Sewerage Code of Australia WSA02-2014-3.1, The Sewage Pumping Code of Australia WSA04-205-2.1 and Taswater Supplements to these codes. The largest proposed units are 3 bedrooms and 2 storeys high, representing an Equivalent Tenement (ET) value of 1, based on code RM03. For simplicity, all units have been considered under this ET Code. The calculated flows are presented in Table 1.

Table 3. Pump Design Criteria

| Design Factor | Unit |
|--------------------------------------|------------------------|
| Total ET's | 15 |
| Average Dry Weather Flow (ADWF) | 0.08 L/s |
| Peak Dry Weather Flow (PDWF) | 0.70 L/s |
| Design Flow (DF) | 1.48 L/s |
| Emergency Storage Required (8 hours) | 2300 Litres |
| Cut In / Cut Out Volume Required | 162 Litres |
| Pump Duty | 1.50 L/s @ 8.00m |
| Rising Main Specification | DN63 HDPE Cream Stripe |

As the overflow relief gullies are below the inundation level, including freeboard, the pump station will be provided with a moisture sensor to prevent pumping in flood events or alternatively an Iplex ORC

will be provided to each unit. The protection measure adopted will be assessed during the detailed design phase.

4.2.2 Water

Preliminary modelling has estimated the water service requirements as:

Domestic Supply = 2.21 L/s at 600 kPa

The National Construction Code does not mandate the requirement for fire protection for this development. Fire hydrants are in Fouche Avenue and it is not proposed to provide additional on-site firefighting facilities.

4.3 Conclusion

The development can be adequately serviced by the existing Taswater infrastructure.

5 Private Infrastructure Access

The development has a private sewage pump station which will require intermittent servicing by commercial vehicles. The Parking and Access Code Clause E6.7.13 Facilities for Commercial Vehicles requires facilities to provide for commercial vehicles on site, as appropriate.

Acceptable Solution A1 of the clause states:

Commercial vehicle facilities for loading, unloading or manoeuvring must be provided on-site in accordance with Australian Standard for Off-street Parking, Part 2 : Commercial. Vehicle Facilities AS 2890.2:2002, unless:

- a) *the delivery of all inward bound goods is by a single person from a vehicle parked in a dedicated loading zone within 50 m of the site;*
- b) *the use is not primarily dependent on outward delivery of goods from the site.*

AS 2890.2 is primarily concerned with sites undertaking commercial activities and as such this clause does not strictly apply to this development. However, the sewage pump station will require attendance by commercial vehicles and therefore accessibility by suitable service vehicles requires consideration.

The sewage pump station requires on-going maintenance with annual maintenance inspections recommended to confirm that all components are functioning correctly. Sludge will build-up in the pump station wet well over time and this will require vacuum extraction; it is anticipated that this will occur on a two-yearly cycle but would not occur more frequently than annually. The vacuum truck would turn at the first internal junction and reverse down to the pump station. This is a short reverse manoeuvre on a straight section of driveway which can be readily managed by prior notification to residents and appropriate traffic management during the process. As shown in Figure 8 a small rigid vehicle, as defined in AS 2890.2, can perform a 3 point turn at the second junction. The ability of a medium rigid vehicle, as defined in AS 2890.2, to turn at the first junction is indicated on Another Perspective's drawing 01k/21. An indicative maintenance regime for the system is shown in Table 4.

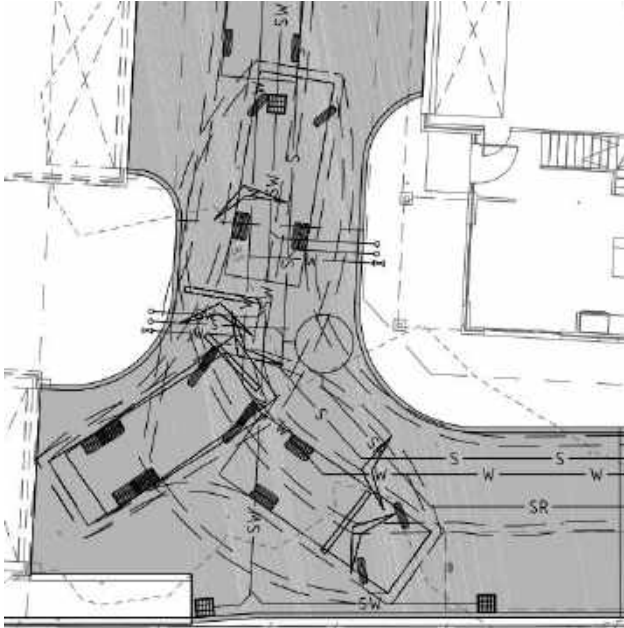


Figure 8 Small Rigid Vehicle Swept Path

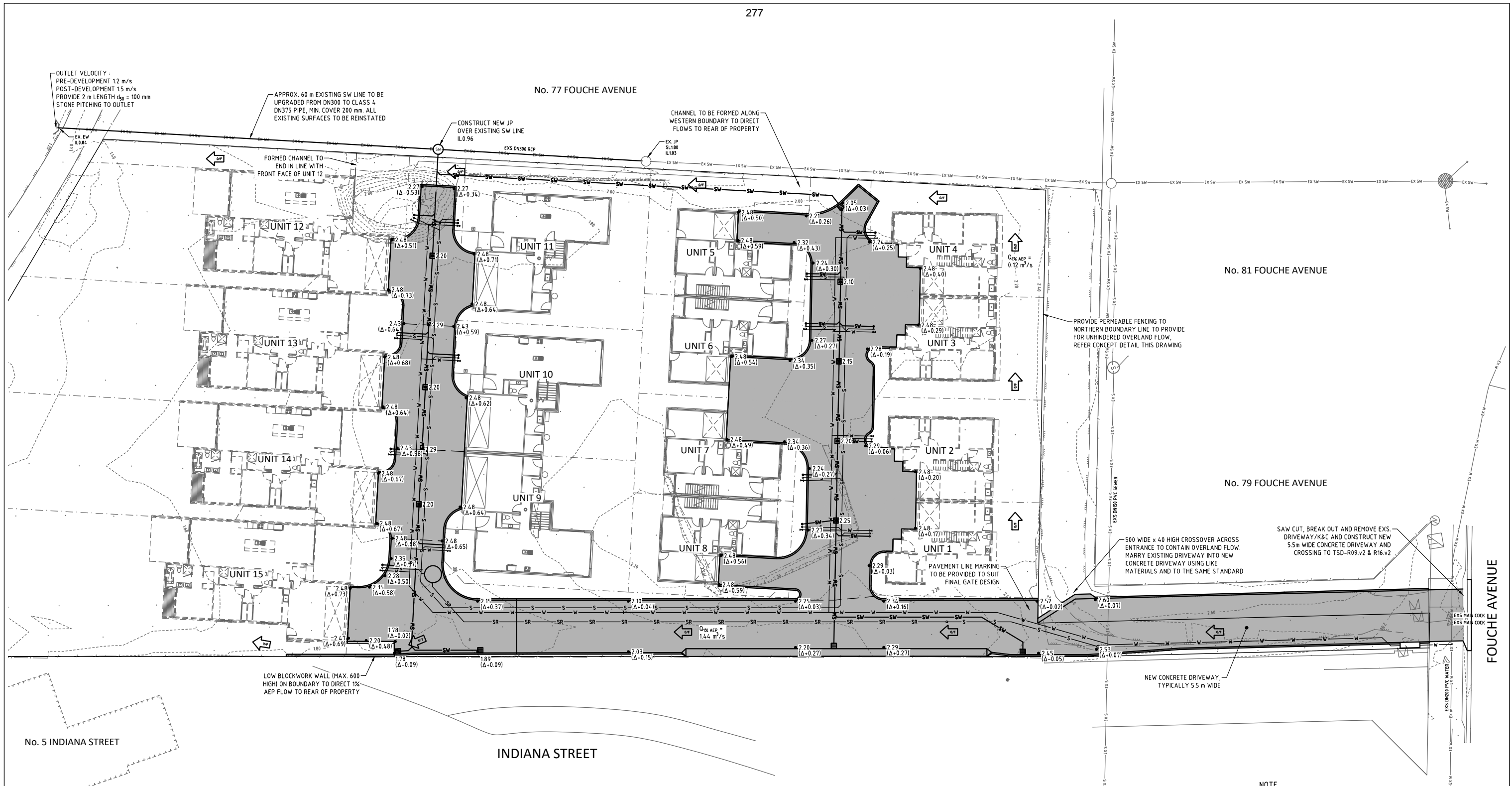
Table 4 Indicative Sewage Treatment Pump Station Maintenance Regime

| | Description of Typical Activities | Vehicle | Frequency |
|---------------|---|----------------------|-------------------------------|
| Minor Service | Check that pumps, level-sensor float switches and alarms are functioning correctly. Inspection of pump for abnormalities. | Small rigid vehicle | Every 12 months |
| Major Service | As for minor service plus vacuum truck removal of sludge build up | Medium rigid vehicle | As required; approx. 2 yearly |

5.1 Conclusion

The private sewage pump station can be adequately serviced by the commercial vehicles expected to be used to maintain the facilities.

Appendix A – Drawings



No. 81 FOUCHE AVENUE

No. 79 FOUCHE AVENUE

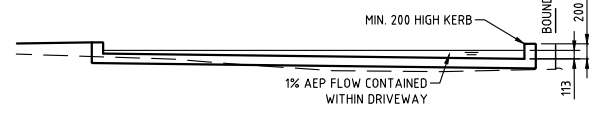
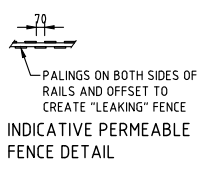
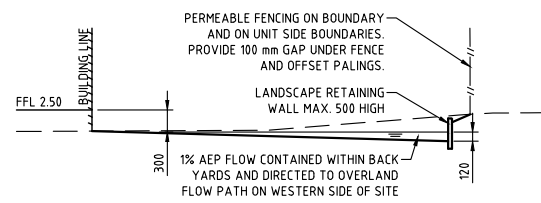
No. 5 INDIANA STREET

INDIANA STREET

FOUCHE AVENUE

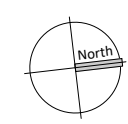
NOTE
REFER TO GANDY AND ROBERTS' CONCEPT SERVING REPORT FOR A PLANNING SCHEME COMPLIANCE STATEMENT AND EXISTING SERVICE INFRASTRUCTURE ASSESSMENT.

- LEGEND**
- OVERLAND FLOW PATH
 - EXISTING WATER SUPPLY
 - PROPOSED WATER SUPPLY
 - EXISTING SEWER
 - PROPOSED SEWER
 - EXISTING STORMWATER
 - PROPOSED STORMWATER



| REV | DESCRIPTION | APP'D | DATE | REV | DESCRIPTION | APP'D | DATE |
|-----|-------------------|-------|------------|-----|-------------|-------|------|
| C | PLANNING APPROVAL | SP | 30.11.2020 | | | | |
| B | PLANNING APPROVAL | SP | 26.10.2020 | | | | |
| A | PLANNING APPROVAL | SP | 22.08.2020 | | | | |

THIS DRAWING HAS NOT BEEN APPROVED FOR CONSTRUCTION



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TASMANIA 7017
DRAWING TITLE
STAGE 1 & 2: SITE AND STORMWATER PLAN

0 50mm SCALE 1:200@A1

| DESIGNED | DRAWN | CHECKED |
|----------|---------|----------|
| SP | SP | GR |
| PROJECT | DRAWING | REVISION |
| 20.0353 | C010 | C |

Appendix B – Overland Flow Assessment

OVERLAND FLOW ASSESSMENT

**75 FOUCHE AVENUE,
OLD BEACH.**

August 2020

Version Number V2



Engineers & Planners
Your Vision is Our Mission

| Issuing Office: 117 Harrington Street, Hobart 7000 | | | | | | | |
|---|------------|-----------------------|------------|--|---------|--|----------|
| JMG Project No. J203072PH | | | | | | | |
| Document Issue Status | | | | | | | |
| Ver. | Issue Date | Description | Originator | | Checked | | Approved |
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| 2.1 | Response to (A & B)..... | 3 |
| 2.2 | Response to (C)..... | 4 |
| 3. | Conclusion | 4 |

| | | |
|--------------|---|--|
| Attachment A | - | Overland Flow Path Analysis - Drawings C01 & C02 |
| Attachment B | - | Maximum Pre-Developed Flow Depth - HEC-RAS Output |
| Attachment C | - | Gandy & Roberts Site and Stormwater Plan C010 |
| Attachment D | - | Maximum Post-Developed Flow Depth - HEC-RAS Output |
| Attachment E | - | Pre & Post Developed Flow Cross-Sections |

1. Introduction

JMG Engineers & Planners have been commissioned by Wilson Homes to assess overland flow in the area surrounding 75 Fouche Avenue, Old Beach. This information will be used by Gandy & Roberts to detail a stormwater network that meets the requirements of the Brighton Interim Planning Scheme 2015, specifically clause E15.5.1 (A), (B) & (C).

E15.5.1 Application Requirements

In addition to any other application requirements, the planning authority must require the applicant for a development involving landfill to provide an assessment by a suitably qualified person, accompanied by any necessary engineering detail, outlining the following:

- (A) existing overland flow paths associated with rainfall events and coastal processes affecting the subject land,*
- (B) how existing flow paths enter onto the subject land from adjoining land and how the flow paths exit onto adjoining land,*
- (C) how any modifications to flow paths proposed on the land impact on the flow paths relied on by nearby and adjoining land,*
- (D) how any proposed infrastructure and techniques will ensure the net discharge of stormwater does not exceed pre-development levels and water quality characteristics of receiving waters are maintained or improved;*
- (E) a site survey from a qualified land surveyor identifying the location of the Coastal Inundation High, Medium and Low Hazard Areas pursuant to the AHD levels provided in Table E15.1, if the proposed development site is within the Coastal Inundation Hazard*

2. Analysis and Assessment against E15.5.1

2.1 Response to (A & B)

This response focusses on the impact to overland flow paths associated with rainfall and site fill. The impact on coastal processes resulting from fill are considered negligible. The area of new fill relative to the area of water in the river, for any cross-section through the subject site is trivial - there will be no discernible increase in water height due to fill.

The existing overland flow paths associated with a rainfall event have been modelled using HEC-RAS software and considers the following:

- A 1% AEP rainfall intensity was used for all calculations.
- As the design is assessing major event flooding the piped network has not been considered.
- The topography of the local area has been derived from LIDAR data sourced at <https://elevation.fsdf.org.au/> and accessed on the 19th August 2020. Specifically, GeoScience of Australia Lidar Tiles;
 - GreaterHobartLiDAR2013_5215263_01_001
 - GreaterHobartLiDAR2013_5225263_01_001

- Lidar data has been used to define the upstream catchment and overland flow paths for all areas, as it offers better continuity of surface levels (and associated flow paths) when compared to meshing with detailed survey.
- Detailed survey of the subject site was provided by registered surveyors Utility Detection & Mapping to determine property boundaries, location of driveway etc.
- A map of the upstream catchment is included as Attachment A, C01 & C02. Critical design information and assumptions (including those specific to HEC-RAS) are documented on these drawing.
- All assumptions relating to existing topography were verified on site.
- Attachment B shows the maximum depth of flow for the pre-developed site.

2.2 Response to (C)

The inclusion of fill, as per sketch Attachment C, was added to the existing surface as a solid object to form the “post-developed” surface, this was then analysed in HEC-RAS to determine the effect of the proposed development on adjoining properties.

The change in topography redistributes water from existing flow paths and results in increasing inundation to properties adjacent the side boundaries, 77 Fouche Avenue and those on the eastern boundary at Duval Place.

These flows have been calculated along four cross-sections, detailed attachment A, and are summarised below in Table 1.

| Flow Line | Flow Volume (m3/sec) | | |
|------------------------------|----------------------|----------------|----------|
| | PRE-DEVELOPED | POST-DEVELOPED | INCREASE |
| Flow Line - Driveway | 1.47 | 1.48 | 0.01 |
| Flow Line - Right of Way | 0.16 | 0.28 | 0.12 |
| Flow Line - Western Boundary | 0.2 | 0.32 | 0.12 |
| Flow Line - Eastern Boundary | 1.44 | 1.44 | 0 |

Table 1

While these volumes are minor relative to the intensity of the rainfall event analysed, JMG recommend the inclusion of stormwater infrastructure dedicated to managing these flow volumes.

The specification of such infrastructure is beyond the scope of this report.

Attachment D displays the HEC-RAS output of the maximum flow depth for the post-developed site.

Attachment E displays the HEC-RAS output across the given flow cross-sections.

3. Conclusion

The flood modelling undertaken indicates that any increased overland flows resulting from the proposed development is minor and should be managed via engineering solutions.

The details contained within this report are considered to provide the relevant information to enable Gandy and Roberts to design a suitable stormwater management solution for the site.

Attachment A



NOTE:
CONTOUR INTERVAL 1m

| | | |
|-----|------------|------------|
| P1 | 18.08.2020 | FOR REPORT |
| REV | DATE | REMARK |

SAFETY IN DESIGN REPORT
In accordance with the Workplace Health & Safety Acts and Regulations JMG have considered the potential hazards and risks that are specific to this design.

| | |
|---|-----|
| The following risks which are unique to this design have been identified: | NIL |
| This report does not relieve contractors from their responsibilities under the Act to identify, report, mitigate and manage all aspects of risk and safety. | |



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PROJECT
**75 FOUCHE AVENUE
UNIT DEVELOPMENT
OLD BEACH**

TITLE
**OVERLAND FLOW PATH
ANALYSIS**

| | | |
|----------------------------|-----------------|------|
| Accepted (Discipline Head) | Discipline Head | Date |
| Accepted (Team Leader) | Team Leader | Date |
| Approved (Group Manager) | Group Manager | Date |

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PLOT DETAILS CIVIL3DBASE - REVISED DEM'S.DWG

PROJECT NO. **J203072PH**

| | |
|------------|----------|
| DWG NO. | REVISION |
| C01 | A |

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UPSTREAM CATCHMENT
FLOW LENGTH

UPSTREAM CATCHMENT
FLOW AREA 185,681m²

ALL UPSTREAM CATCHMENT FLOW
CONCENTRATED AT LOCAL SAG POINT.
T.O.C 10 MINUTES
FLOW RATE 3.659m³/SEC

FLOW OF 3.659m³/SEC APPLIED AS
UPSTREAM BOUNDARY CONDITION

FLOW AREA MODELLED IN HEC-RAS
(MAX. FLOW OF UPSTREAM CATCHMENT APPLIED AT T.O.C. 10min).
TOTAL MODEL DURATION 30 MIN.

MANNINGS N = 1.0 (EXTREMELY HIGH) FOR BUILDINGS (HATCHED BLUE
DOTS). AS PER ADVICE FROM AUSTRALIAN WATER SCHOOL TUTORIALS
MANNINGS N = 0.016 (ASPHALT) FOR ALL REMAINING AREAS

DOWNSREAM BOUNDARY
CONDITION NORMAL DEPTH.
NOM. SLOPE 1%

75 FOUCHE AVENUE
SUBJECT SITE

77 FOUCHE AVENUE



NOTE:
CONTOUR INTERVAL 1m

| | | |
|-----|------------|------------|
| P1 | 18.08.2020 | FOR REPORT |
| REV | DATE | REMARK |

SAFETY IN DESIGN REPORT
In accordance with the Workplace Health & Safety Acts and Regulations JMG have considered the potential hazards and risks that are specific to this design.

| | |
|---|-----|
| The following risks which are unique to this design have been identified: | NIL |
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PROJECT
**75 FOCHE AVENUE
UNIT DEVELOPMENT
OLD BEACH**

TITLE
**OVERLAND FLOW PATH
ANALYSIS**

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|----------------------------|-----------------|------|
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| Accepted (Team Leader) | Team Leader | Date |
| Approved (Group Manager) | Group Manager | Date |

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PLOT DETAILS CIVIL3DBASE - REVISED DEM'S.DWG

PROJECT NO. **J203072PH**

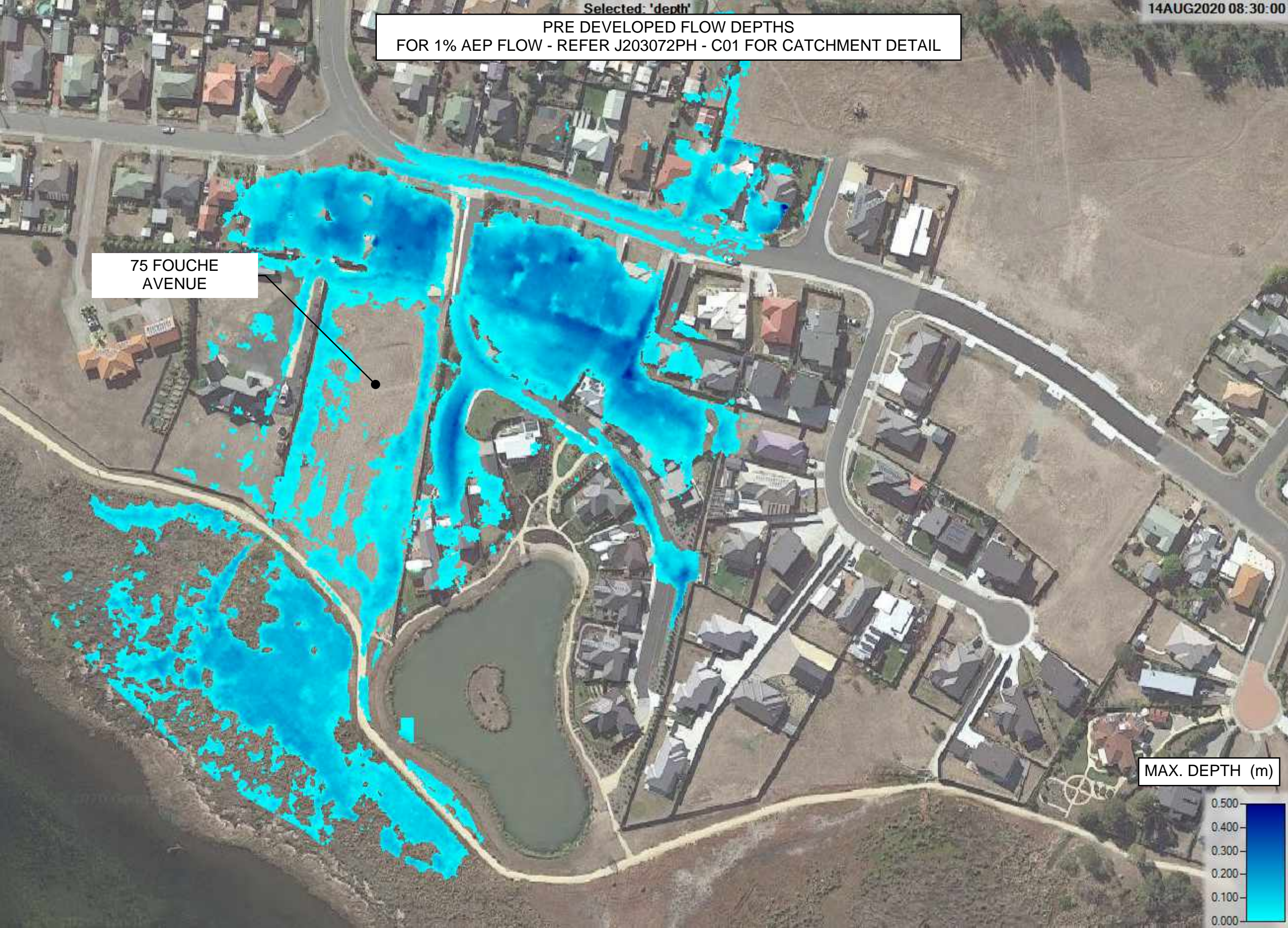
| | |
|------------|----------|
| DWG NO. | REVISION |
| C02 | A |

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Attachment B

Selected: 'depth'
PRE DEVELOPED FLOW DEPTHS
FOR 1% AEP FLOW - REFER J203072PH - C01 FOR CATCHMENT DETAIL

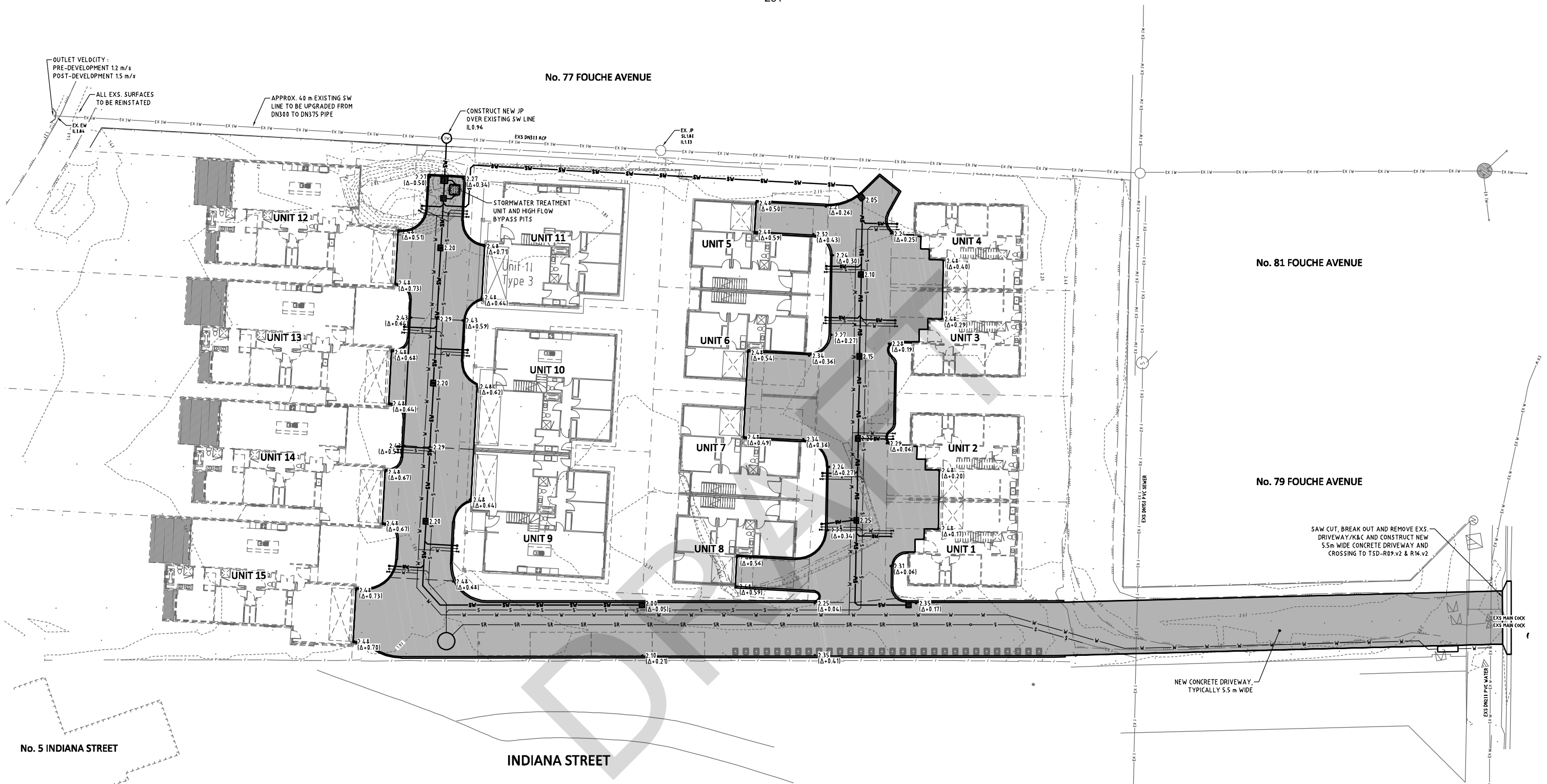
75 FOUCHE AVENUE



MAX. DEPTH (m)



Attachment C



NOTE
REFER TO GANDY AND ROBERTS' CONCEPT SERVICING REPORT FOR A PLANNING SCHEME COMPLIANCE STATEMENT AND EXISTING SERVICE INFRASTRUCTURE ASSESSMENT.

LEGEND

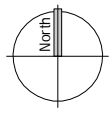
| | |
|--|-----------------------|
| | EXISTING WATER SUPPLY |
| | PROPOSED WATER SUPPLY |
| | EXISTING SEWER |
| | PROPOSED SEWER |
| | EXISTING STORMWATER |
| | PROPOSED STORMWATER |

| REV | DESCRIPTION | APP'D | DATE |
|-----|-------------------|-------|------------|
| A | PLANNING APPROVAL | SP | 18.08.2020 |

| REV | DESCRIPTION | APP'D | DATE |
|-----|-------------|-------|------|
| | | | |

THIS DRAWING HAS NOT BEEN APPROVED FOR CONSTRUCTION

NOTE :
Choose the appropriate North Point via pull down arrow (click on block to activate) and rotate if necessary.



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VILLANUEVA DEVELOPMENT
75 FOUCHE AVENUE OLD BEACH
TASMANIA 7017
DRAWING TITLE
SITE AND STORMWATER PLAN

| DESIGNED | DRAWN | CHECKED |
|----------|---------|----------|
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| PROJECT | DRAWING | REVISION |
| 20.0353 | C010 | A |

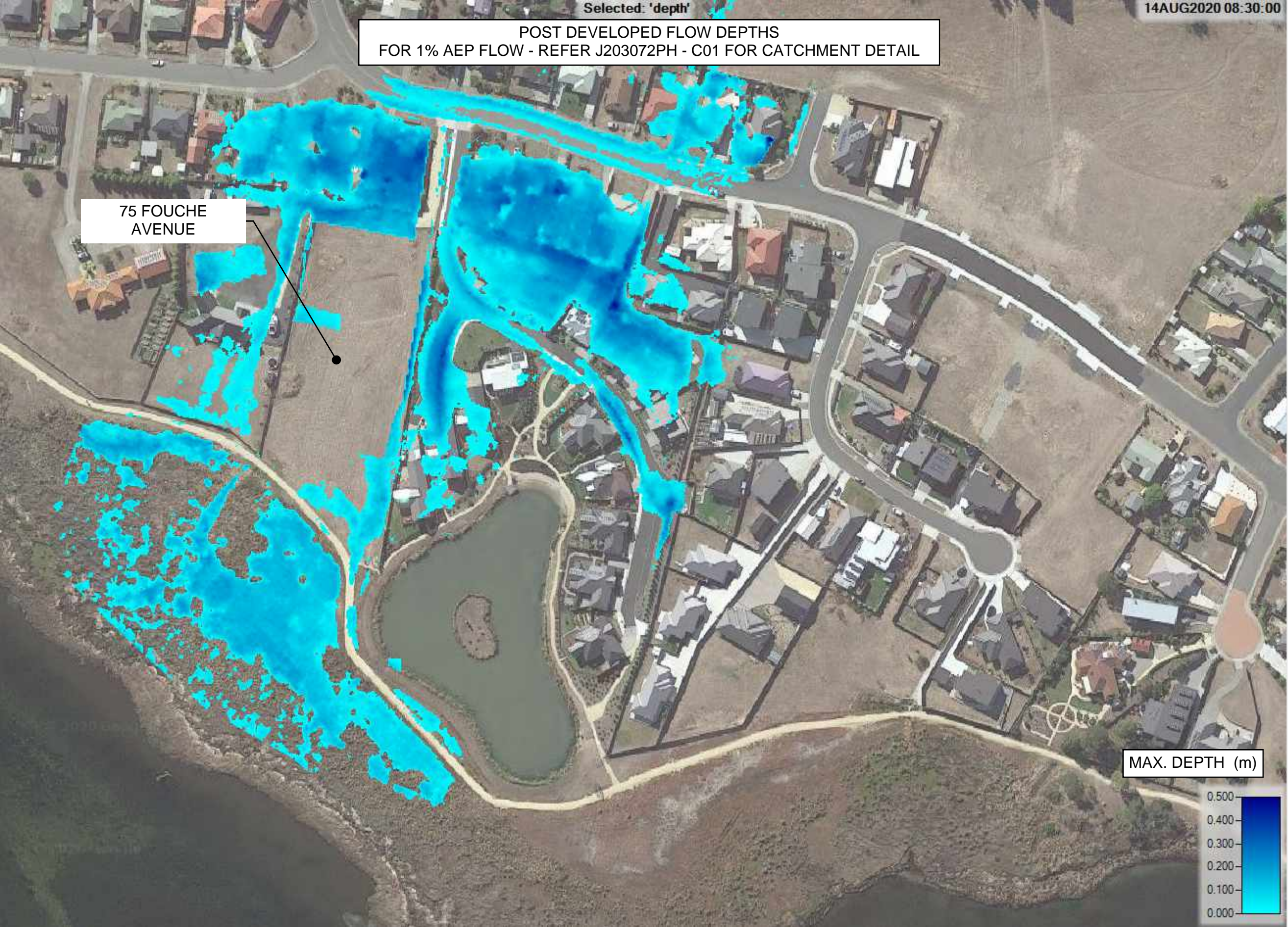
SCALE 1:200@A1

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 18/08/2020 10:52:00 AM
 20.0353_010.dwg

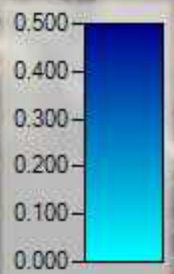
Attachment D

POST DEVELOPED FLOW DEPTHS
FOR 1% AEP FLOW - REFER J203072PH - C01 FOR CATCHMENT DETAIL

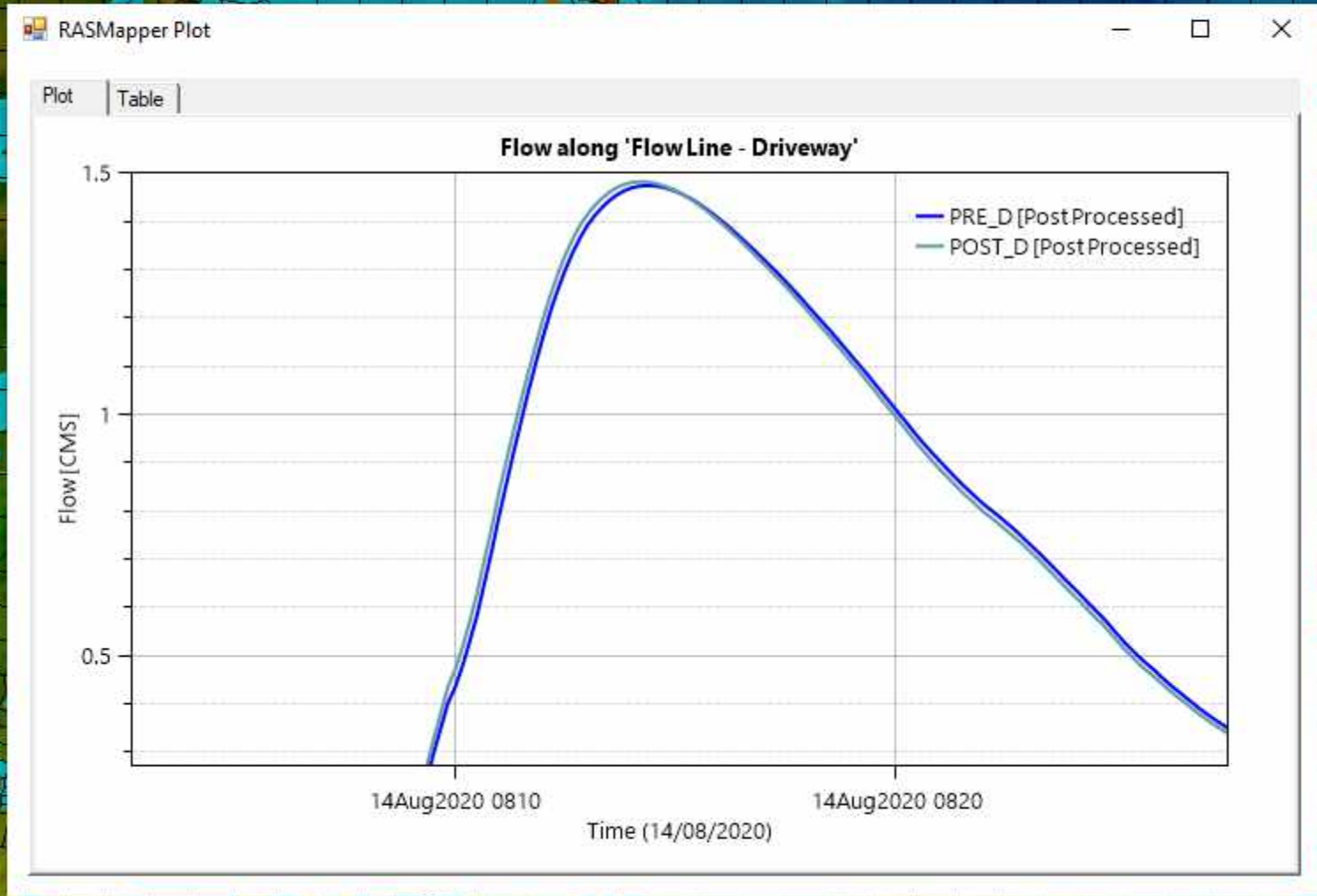
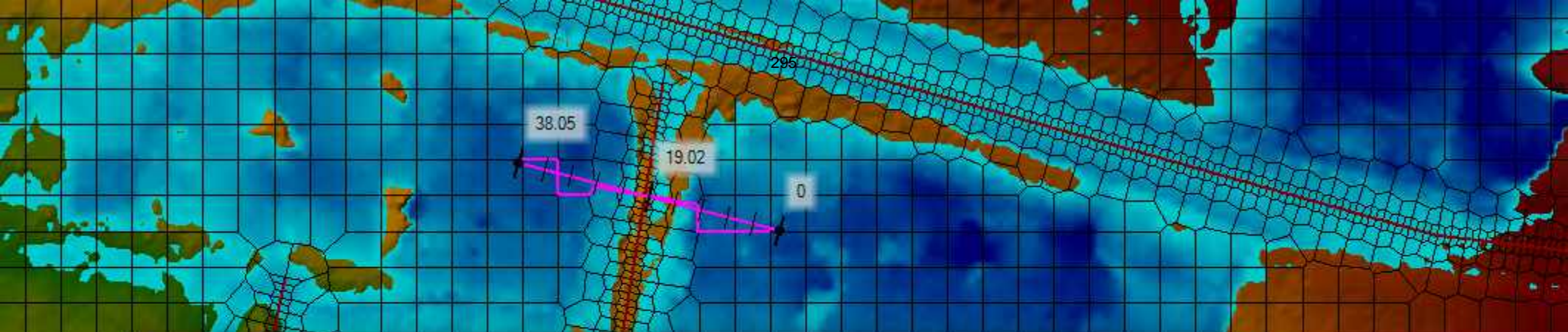
75 FOUCHE
AVENUE

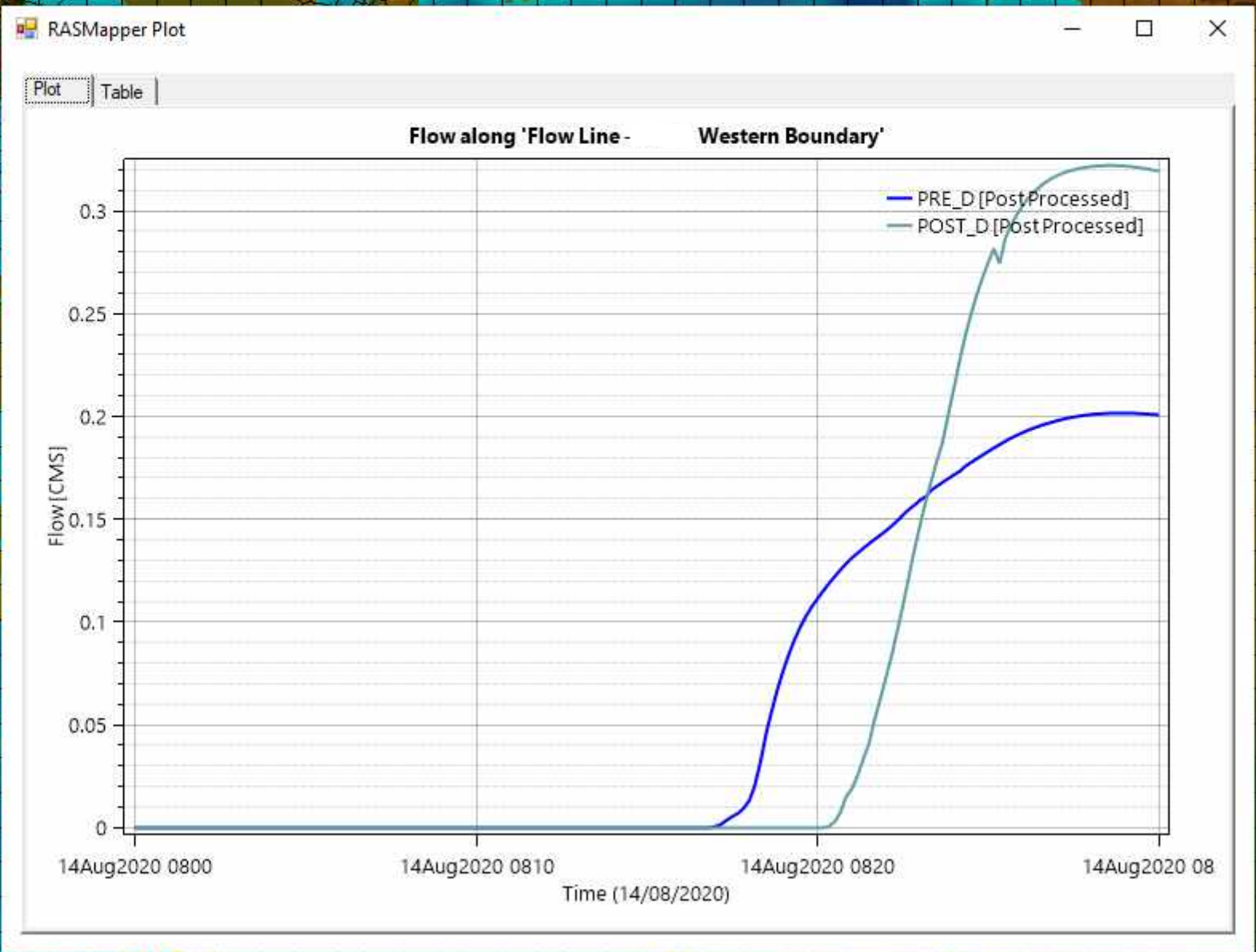
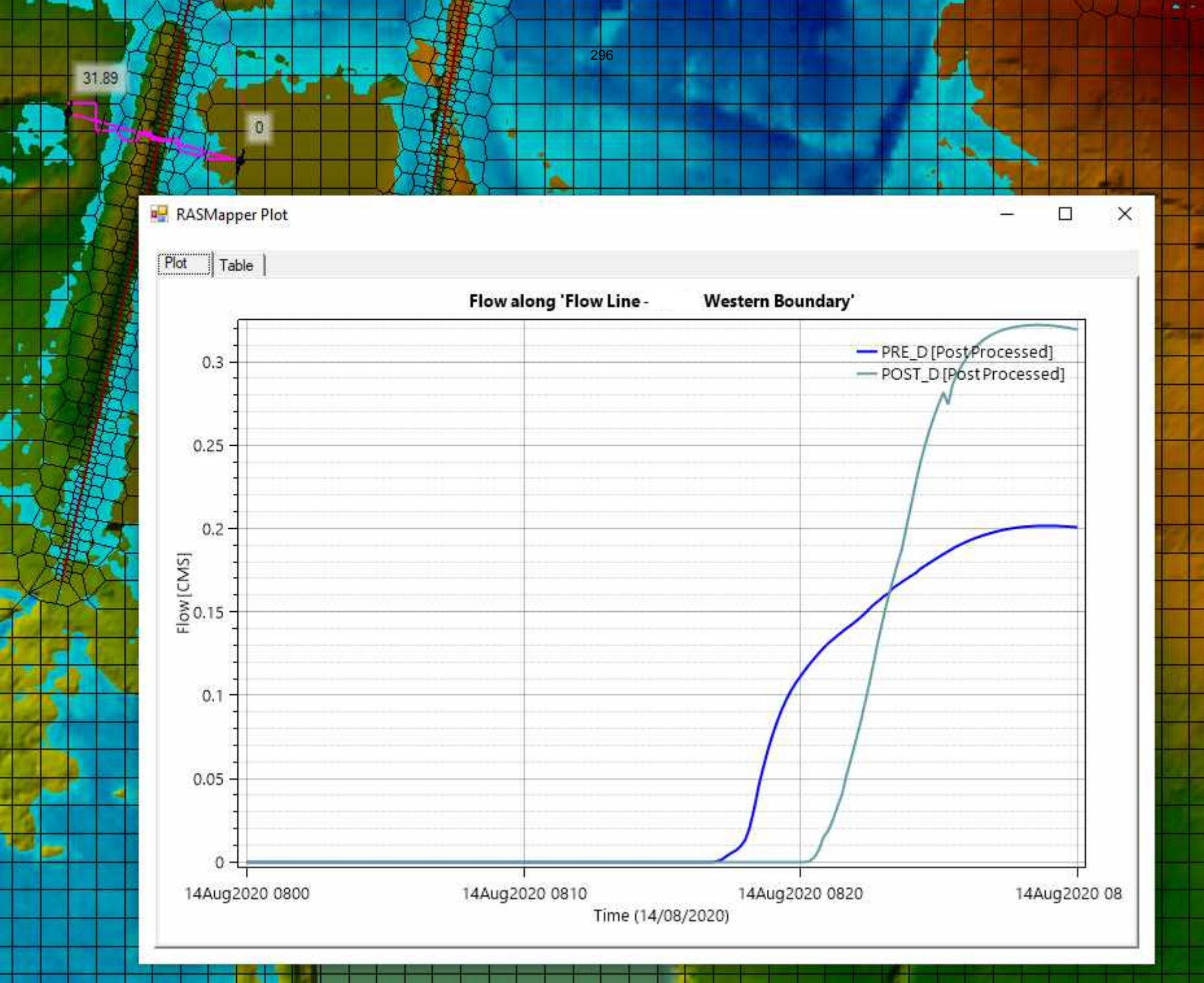


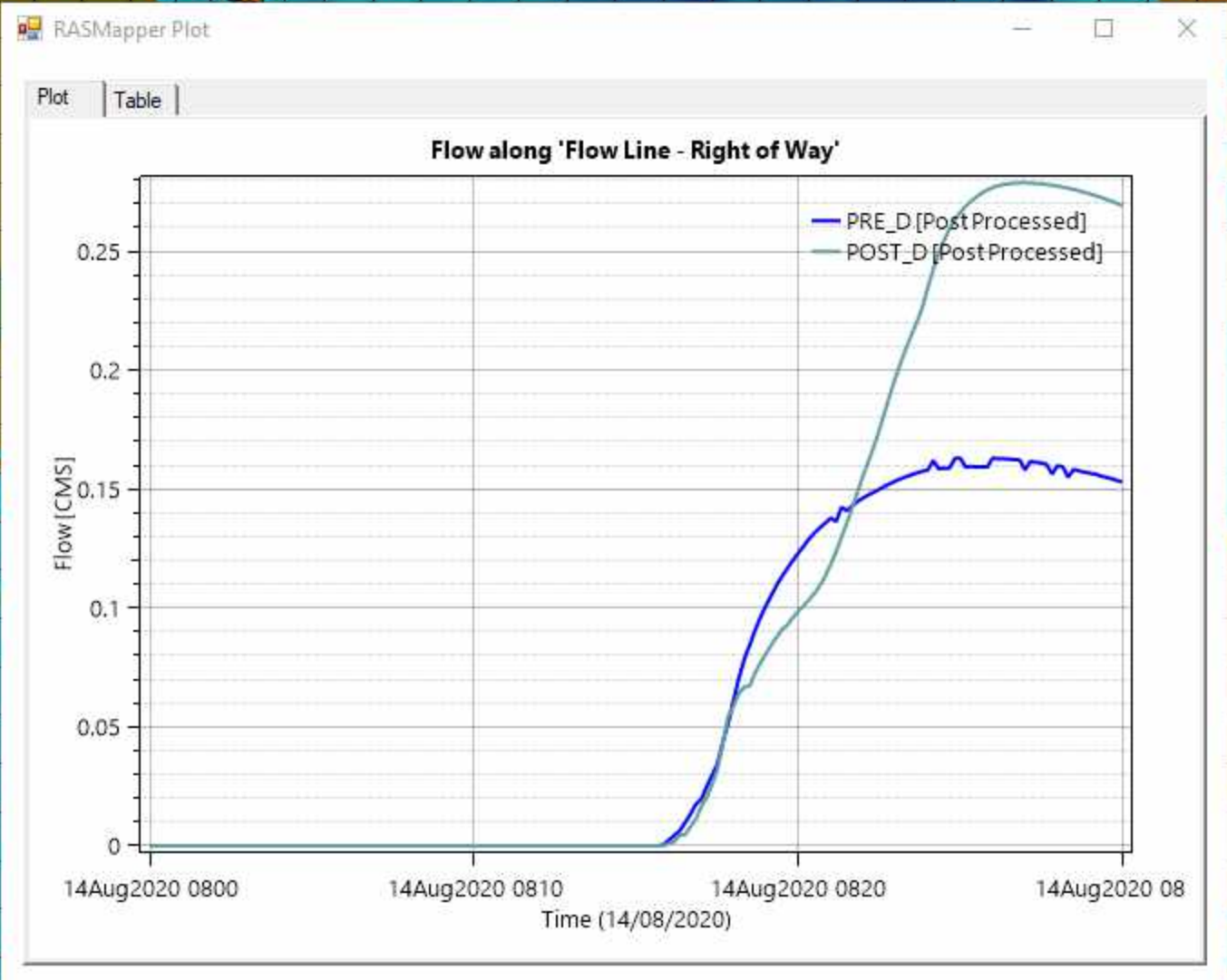
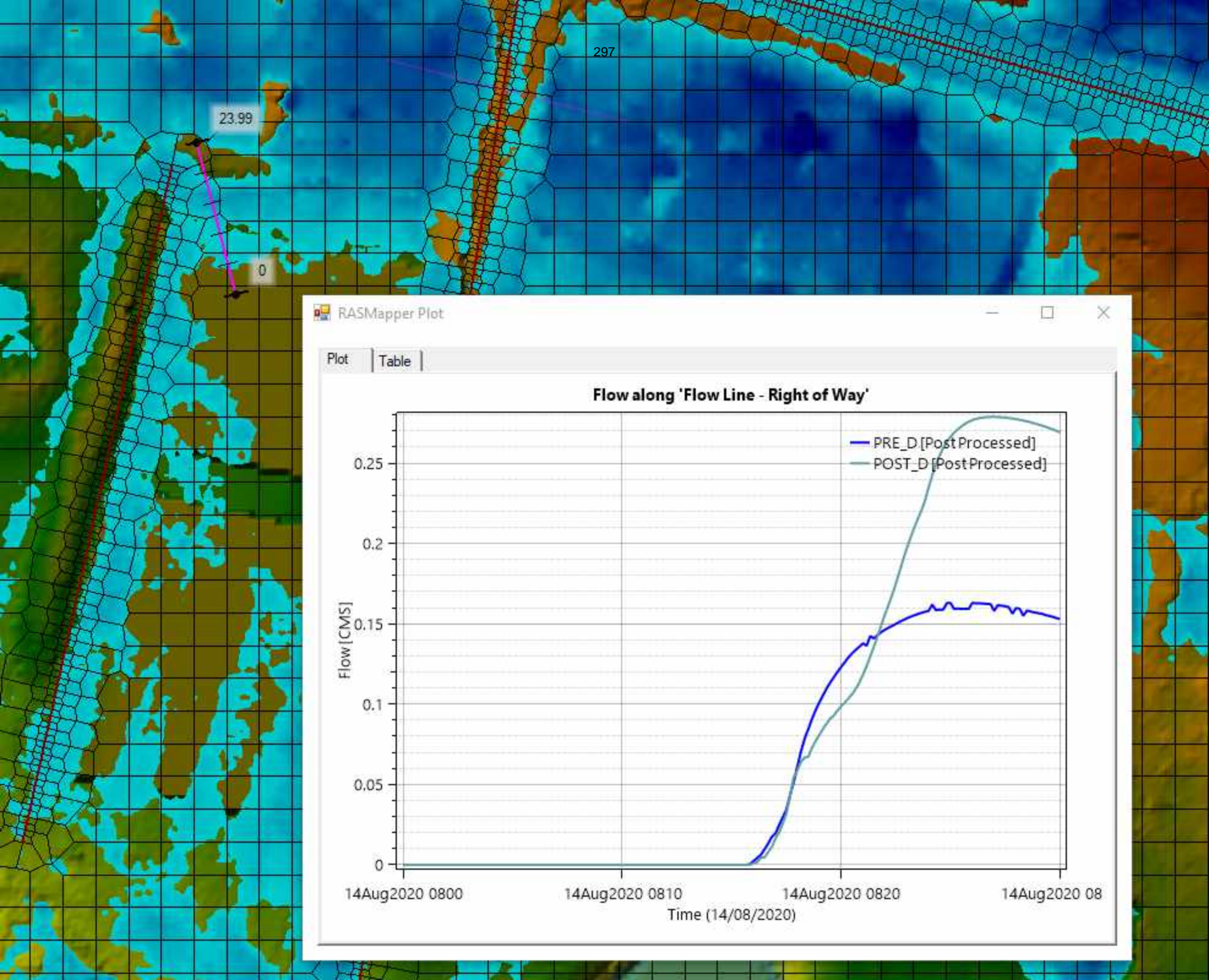
MAX. DEPTH (m)

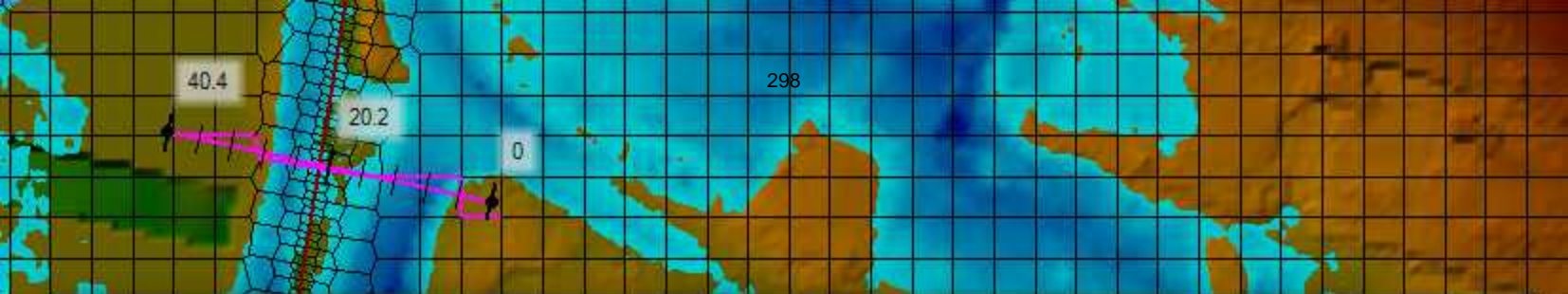


Attachment E





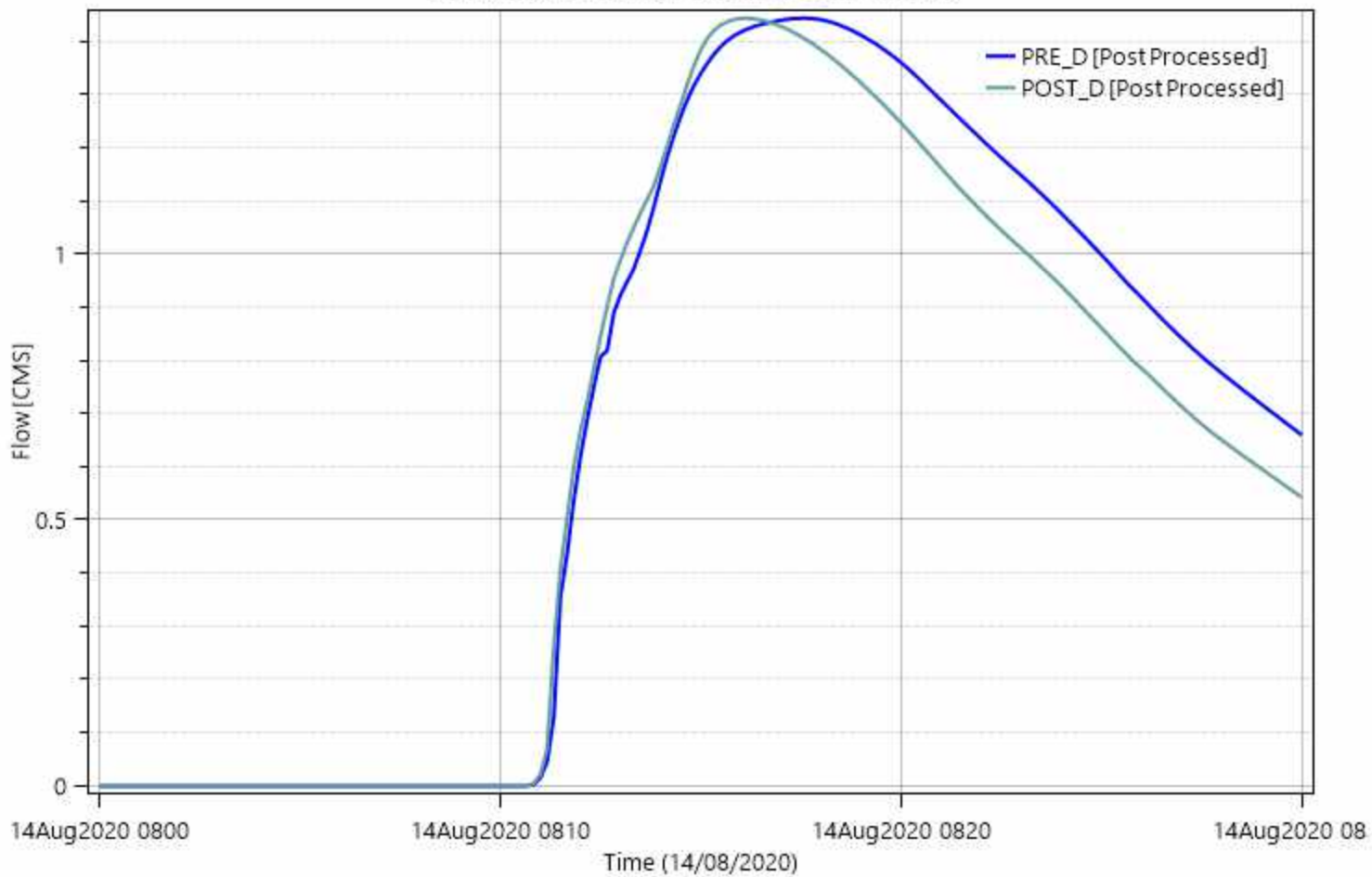


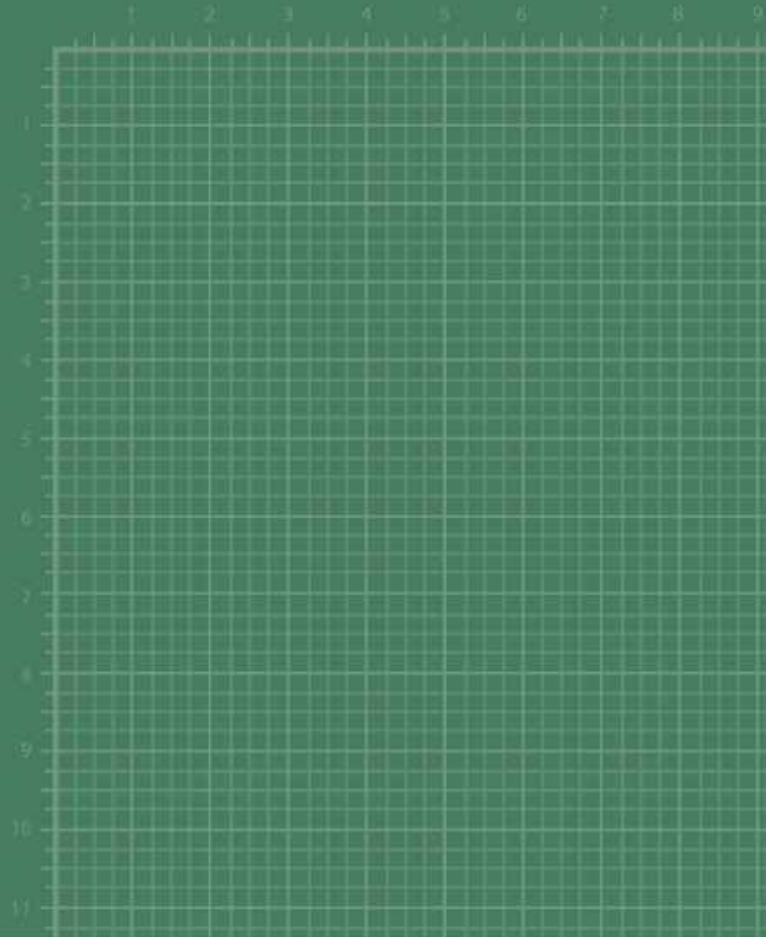


RASMapper Plot

Plot | Table

Flow along 'Flow Line - Eastern Boundary'





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Appendix C – UDM Property Connection Report



UDM Group – Property Connection Report

Client: Wilson Homes

Location: 75 Fouche Ave, Old Beach, TAS

UDM Group Project Reference: 20118

Utility Surveyor: E. Hall

17/07/2020





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| Storm Water | 9 |
| Reason: | 9 |
| Sewer | 9 |
| Reason: | 9 |
| Water | 9 |
| Reason: | 9 |



Site Overview:

UDM Group has been contracted by Wilson Homes to locate Sewer, Stormwater, and water connections for the lot 75 Fouche Ave, Old Beach.





Inspection Camera Report:

Stormwater and Sewer initially searched for using the inspection camera, from manholes to find the property connection if the connection itself was not running directly into the manholes.

The Stormwater was inspected from the headwall. However, due to high water level was unable to get any usable footage until 21 meters into the pipe.

The Sewer was inspected from the pit at the rear of 67 Fouche Ave to 81 Fouche Ave. Taswater cleared the main before inspection and was able to locate the connection for 75 Fouche



EMI (Electro Magnetic Induction) Report:

The water meter was located with a 32mm PE80b connection.

The water meter no: 12W131521





Site Photos:

Sewer Connection:





Water:









Property Connections Review:

Storm Water

Stormwater main was surveyed and inspected

Reason:

Water level at headwall high until 21 meters into the pipe

Sewer

Sewer main was successfully located and inspected was able to locate connection

Reason:

N/A

Water

Water meter located and surveyed

Reason:

N/A

Appendix D – Stormwater Treatment Layout



PLANNING REPORT

FOR WILSON HOMES

75 FOUCHE AVE, OLD BEACH MULTIPLE DWELLINGS



October 2020



Johnstone McGee & Gandy Pty Ltd

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| 1.1 | 22 Sep 2020 | Updated with staging information | IEB | 22/9 | AS | 22/9 | MSC | 22/9 |
| 1.2 | 30 Oct 202 | Updated with revised plans to respond to RFI of 25 Sep 2020 | IEB | 29/10 | IEB | 30/10 | | |

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Appendix A - Title Information / Owner Notification letters

Appendix B - Proposal Plans (including staging plan)

Appendix C - Traffic Impact Assessment

Appendix D - Concept Services Report

Appendix E - Natural Values Assessment

Appendix F - Coastal Vulnerability Assessment

Executive Summary

JMG Engineers and Planners have been engaged by Wilson Homes to prepare a planning permit application for the proposed development of 15 multiple dwellings at 75 Fouche Avenue, Old Beach.

75 Fouche Ave, Old Beach is identified as CT 107918/27 and is an internal lot with an access strip that is subject to a burdening Right of Way (ROW) associated with the access to 77 Fouche Ave, Old Beach (identified as 110178/26). 75 Fouche Ave, Old Beach has a reciprocal ROW over that portion of the access strip forming part of 77 Fouche Ave, Old Beach. The proposal involves upgrades to existing public stormwater infrastructure located within the easement burdening 77 Fouche Ave and traversing into the Crown Land (CT 35960/3) to the south.

This planning report has assessed the proposed development against the applicable provisions of the *Brighton Interim Planning Scheme 2015*, and provides the supporting information required as per *clause 8.1 Application Requirements* of the Scheme.

The proposed development of 15 multiple dwellings at 75 Fouche Avenue, Old Beach involves:

- Provision of road access by means of a shared access strip with 77 Fouche Ave;
- Land fill to 2.00m AHD;
- 15 multiple dwellings, including 4 single storey and 11 double storey dwellings;
- All proposed dwellings would:
 - incorporate 3 bedrooms;
 - be provided with 2 dedicated off street car parking spaces per dwelling;
 - have a minimum floor height of 2.50m AHD;
 - be provided with individual letter boxes, clothes lines and storage areas for two waste bins;
- Provision of internal circulation roadways that provide:
 - 5 on-site visitor car parks;
 - vehicle manoeuvring and passing areas compliant with applicable Australian standards;
 - landscaping and lighting of communal areas compliant with Applicable Australian standards;
 - a common waste bin collection area;
- Provision of all associated services infrastructure and connections into existing public networks; and,
- Street number sign (0.5m² and non-illuminated) which is exempt from requiring a planning permit.

The proposed development is to be staged into two stages as follows:

- Stage 1 delivering Units 1 to 8 inclusive, the vehicle access and internal roadways to service Stage 1; in addition to the water, sewage and stormwater infrastructure for the entire proposal;
- Stage 2 delivering Units 9 to 15 inclusive and the associated internal roadways.

The proposal has been assessed to trigger performance criteria with respect to the following provisions:

- *Road and Railway Assets Code:*
 - *E5.5.1 Existing road accesses and junctions, Performance Criteria P3;*
 - *E5.6.4 Sight distance at accesses, junctions and level crossing, Performance Criteria P1;*
- *Parking and Access Code:*
 - *E6.6.3 Number of Motorcycle Parking Spaces, Performance Criteria P1;*
 - *E6.7.3 Vehicular Passing Areas along an Access, Performance Criteria P;*
 - *E6.7.7 Lighting of Parking Areas, Performance Criteria P1;*
 - *E6.7.13 Facilities for Commercial Vehicles , Performance Criteria P1;*
- *Stormwater Management Code:*

- *E7.7.1 Stormwater Drainage and Disposal, Performance Criteria P2;*
- *Waterway and Coastal Protection Code:*
 - *E11.7.1 Building and Works, Performance Criteria P1;*
- *Inundation Prone Areas Code:*
 - *E15.7.5 Riverine, Coastal Investigation Area, Low, Medium, High Inundation Hazard Areas*

The report demonstrates that the proposal is able to either comply with relevant Acceptable Solutions or is able to satisfy applicable Performance Criteria and ought to be supported by the Planning Authority.

1 Introduction

JMG Engineers and Planners have been engaged by Wilsons Homes to prepare a planning permit application for the proposed development of 15 multiple dwellings at 75 Fouche Avenue, Old Beach.

The proposed 15 multiple dwellings include 4 single storey and 11 double storey buildings, all incorporating 3 bedrooms, and provided with 2 dedicated off street car parking spaces per dwelling.

The proposal includes the provision of internal roads and all associated services infrastructure and connections into existing public networks.

The proposed development is to be staged into two stages as follows:

- Stage 1 delivering Units 1 to 8 inclusive, the vehicle access and internal roadways to service Stage 1; in addition to the water, sewage and stormwater infrastructure for the entire proposal;
- Stage 2 delivering Units 9 to 15 inclusive and the associated internal roadways.

This document provides an assessment of the proposed development against the applicable provisions of the *Brighton Interim Planning Scheme 2015*, from here on referred to as the Scheme, and provides the supporting information required as per *clause 8.1 Application Requirements* of the Scheme.

The report first describes the site of the proposed development in Section 2, and then provides an overview of the proposal in Section 3, followed by the assessment against the applicable zone and code provisions of the Scheme in Section 4, concluding with Section 5. The report includes a number of Appendices containing expert reports addressing specific Scheme provisions and are referenced throughout as applicable.

The report demonstrates that the proposal is able to either comply with relevant Acceptable Solutions or is able to satisfy applicable Performance Criteria.

2 Site Location & Context

The subject site involves three lots; 75 Fouche Ave, Old Beach (identified as CT 107918/27), 77 Fouche Ave, Old Beach (identified as CT 110178/25) (see Table 1) and a portion of the Crown Land (CT 35960/3) to the south. The Fouche Ave lots are internal lots with Right of Way access easements over the access strip of the adjoining lot. For details see Title Information in Appendix A.

Table 1 - Titles Subject to Development

| Property | Title Reference | Owner | Notification/Consent |
|--------------------------|--|------------------------------|---------------------------|
| 75 Fouche Ave, Old Beach | 107918/27 | S.J. Heenan and T.A. Heenan | Owner Advice letter |
| 77 Fouche Ave, Old Beach | 110178/25 (formerly part of lot 107918/100) | P.C. Ross and B. Wardlaw | Owner Advice letter (ROW) |
| Fouche Ave, Old Beach | 35960/3 | DPIPWE (Crown Land Services) | Owner Consent |

The two access strips have an existing cross over onto Fouche Ave, generally compliant with applicable LGAT standards (see Figure 1). Should Council require minor works to be undertaken it is considered reasonable that such works are included as conditions on any planning permit issued for the proposal.



Figure 1 Existing cross over to Fouche Ave (Source Google Street view 2018)



Figure 2 Aerial image of subject site (Source LISTmap)

The site area to be developed is approximately 6171m² (CT 107918/27) plus approximately 164m² within the ROW area over the 77 Fouche Avenue access strip. 75 Fouche Ave is vacant land while 77 Fouche Ave is developed with a single residential dwelling, see Figure 2.

The subject site is located within an existing residential area developed with single and multiple dwellings as shown in Figure 3. 75 Fouche Ave forms part of the existing as yet undeveloped land in the area and the proposed development will contribute to the established urban fabric.



Figure 3 75 Fouche Ave in context of surrounding area (Source LISTmap)



Figure 4 Metro Bus route along Fouche Ave (Source LISTmap)

The area is serviced by public transport (Metro busses) running along Fouche Ave with bus stops located within 200m of the subject site access (see Figure 4). Fouche Ave provides direct access onto the East Derwent Highway at its eastern extent and terminates onto Jetty Road at its western extent. The area is well serviced with passive recreation public infrastructure, including Lennox Park within 150m walking distance to the north and the Council maintained footway along the Derwent River bank with accesses from Sun Valley Drive, 400m walking distance to the west and Calm Place 350m walking distance to the east.

The subject site is fully serviced by TasWater reticulated sewer and water infrastructure; see Figure 5 and Figure 6.



Figure 5 TasWater Full service water area highlighted in blue (Source LISTmap)



Figure 6 TasWater Full service sewer area highlighted in magenta (Source LISTmap)

The properties are not registered with Tasmanian Heritage and are not located within a Heritage Precinct.

3 Proposed Use & Development

The proposal is for a total of 15 multiple dwellings include 4 single storey and 11 double storey buildings, all incorporating 3 bedrooms, and each provided with 2 dedicated off street car parking spaces, as per the summary in Table 2.

Table 2 Summary of multiple dwelling configuration

| Unit No | Unit Type | Dwelling Storeys | No. of Bedrooms | Car Spaces |
|----------------|------------------|-------------------------|--|----------------------------|
| 1 | 1 | 2 | 3 (1 up, 2 down) plus downstairs rumpus room | 1 x garage plus 1 x jockey |
| 2 | 1 | 2 | 3 (1 up, 2 down) plus downstairs rumpus room | 1 x garage plus 1 x jockey |
| 3 | 1 | 2 | 3 (1 up, 2 down) plus downstairs rumpus room | 1 x garage plus 1 x jockey |
| 4 | 1 | 2 | 3 (1 up, 2 down) plus downstairs rumpus room | 1 x garage plus 1 x jockey |
| 5 | 2 | 2 | 3 (1 up, 2 down) | 1 x garage plus 1 x jockey |
| 6 | 2 | 2 | 3 (1 up, 2 down) | 1 x garage plus 1 x jockey |
| 7 | 2 | 2 | 3 (1 up, 2 down) | 1 x garage plus 1 x jockey |
| 8 | 2 | 2 | 3 (1 up, 2 down) | 1 x garage plus 1 x jockey |
| 9 | 3 | 2 | 3 (1 up, 2 down) | 2 x garage |
| 10 | 3 | 2 | 3 (1 up, 2 down) | 2 x garage |
| 11 | 3 | 2 | 3 (1 up, 2 down) | 2 x garage |
| 12 | 4 | 1 | 3 (downstairs) | 2 x garage |
| 13 | 4 | 1 | 3 (downstairs) | 2 x garage |
| 14 | 4 | 1 | 3 (downstairs) | 2 x garage |
| 15 | 4 | 1 | 3 (downstairs) | 2 x garage |

Five (5) additional off street car parking spaces are provided for visitors for a total of 55 on-site car parking spaces.

Units are provided with private open space directly accessible from living areas (including rumpus rooms), either at ground level or from upper storey decks. Decks are located and oriented to maximise solar access.

The proposed development layout has been specifically designed to not impact on any land within the Future Coastal Refugia overlay. Proposed Units 12, 13, 14 and 15 are located closest to the River Derwent and have been located to remain entirely north of the Future Coastal Refugia Area.

It is noted that the proposed upgrade to the public stormwater infrastructure within the easement burdening 77 Fouche Ave and within the Crown Land will occur with a portion of the Future Coastal Refugia overlay area. However, such works are considered exempt from the Code by virtue of Clause E11.4.1 (l) *works within 2 m of existing infrastructure including roads, tracks, footpaths, cycle paths, drains, sewers, pipelines and telecommunications facilities for the maintenance, repair, upgrading or replacement of such infrastructure.*

The site is fenced along the side boundaries as shown in Figure 7. To avoid any works in the Future Coastal Refugia Area the only new fencing proposed is along the lot's northern extent where it adjoins the westward bound portion of the access strip servicing 77 Fouche Avenue; and internal fencing between units. It is noted that the internal fencing between units 12 to 15 inclusive, terminates at the boundary to the Future Coastal Refugia Area. A remote controlled security gate is proposed at the end of the shared access strip, where it enters the main section of the 75 Fouche Avenue lot.



Figure 7 Existing side boundary fencing at 75 Fouche Avenue

Arrangements for on-site waste collection will be made via Brighton Council, each unit is provided with its own dedicated bin storage area, with provision for a bin collection area designed along the eastern side boundary of the lot.

The proposal includes three internal roads, one extending on from the access strip along the eastern side boundary and two lateral roads providing access to the multiple dwellings. Landscaping and lighting of public areas is proposed in accordance with Australian Standards.

The proposal design includes connection to existing TasWater infrastructure and existing Brighton Council stormwater infrastructure, located in an easement burdening 77 Fouche Ave.

Detailed proposal information and application supporting information is provided in the following Appendices attached to this report:

- Appendix A - Title information and owner notification letters;
- Appendix B - Proposed development plans (including staging plans);
- Appendix C - Traffic Impact Assessment (TIA);
- Appendix D - Concept Services Report (CSR);
- Appendix E - Natural Values Assessment (NVA); and
- Appendix F - Coastal Vulnerability Assessment (CVA).

The appendices documents have been prepared by suitably qualified persons and are relied upon for the assessment of the proposal against the applicable Scheme provisions.

4 Planning Assessment

4.1 Brighton Interim Planning Scheme 2015

The subject site is within the General Residential Zone of the Scheme. The Crown Land is zoned Open Space. Zoning of the subject site and surrounding land is shown in Figure 8.

The land is subject to the following overlays:

- Coastal Inundation Hazard Area (Low & Medium Risk); and

- Waterway and Coastal Protection Area including Future Coastal Refugia Area.

Figure 9 and Figure 10 show the extent of the overlays on the subject site.



Figure 8 Land zoning of the subject site and surrounding area (Source LISTmap)

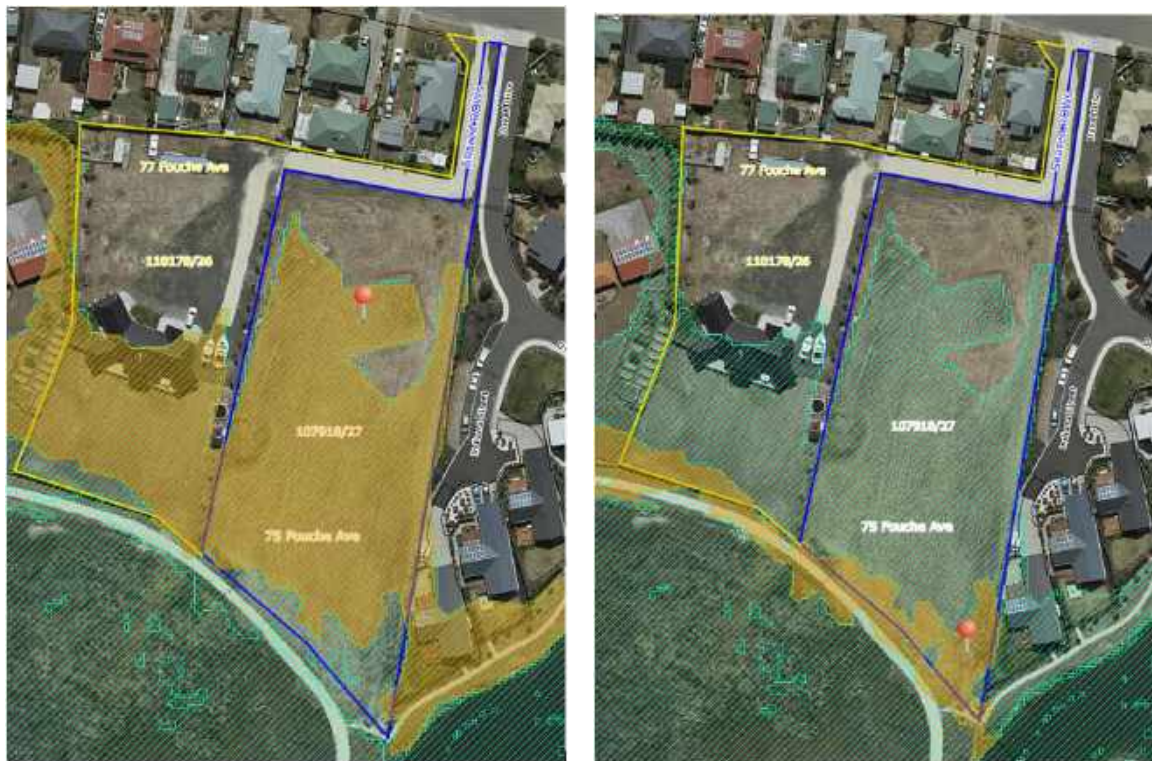


Figure 9 Coastal Inundation Hazard Area indicated by tan coloured areas: Low Risk - image on left and Medium Risk - image on right (Source LISTmap)



Figure 10 Waterway and Coastal Protection area overlay, dark blue hatched area in left image; Future Coastal Refugia Area light blue hatched area in right image (Source LISTmap)

In addition to the above overlay codes, the proposal must also be considered against the following code provisions:

- E5.0 Road and Railway Assets Code;
- E6.0 Parking and Access Code;
- E7.0 Stormwater Management Code; and
- E17.0 Signs Code.

The proposed use is for residential multiple dwellings, which are classified as a permitted use in *clause 10.2 Use Table* of the Scheme. The use standards contained at *10.3 Use Standards* are not applicable to the development as it is not for:

- Non-Residential Use; or
- Visitor Accommodation; or
- Local Shop.

The works within the Open Space zone are for minor utilities and will be underground, and accordingly are best described by the Utilities use class and are classified as No Permit Required as per *clause 19.2 Use Table*.

Minor utilities is a defined term in the Scheme and means:

use of land for utilities for local distribution or reticulation of services and associated infrastructure such as a footpath, cycle path, stormwater channel, water pipes, retarding basin, telecommunication lines or electricity substation and power lines up to but not exceeding 110Kv.

Therefore, in the following section of this report the proposal is assessed against the applicable General Residential zone provisions and then against the above listed code provisions of the Scheme.

4.1.1 10.4 Development Standards for Residential Buildings and Works

10.4.1 Residential density for multiple dwellings

| | |
|---|---|
| Objective: | |
| <i>To provide for suburban densities for multiple dwellings that:</i> | |
| <i>(a) make efficient use of suburban land for housing; and</i> | |
| <i>(b) optimise the use of infrastructure and community services.</i> | |
| A1 | P1 |
| <i>Multiple dwellings must have a site area per dwelling of not less than:</i> | <i>Multiple dwellings must only have a site area per dwelling that is less than 325 m², or that specified for the applicable density area in Table 10.4.1, if the development will not exceed the capacity of infrastructure services and:</i> |
| <i>(a) 325m²; or</i> | <i>(a) is compatible with the density of the surrounding area; or</i> |
| <i>(b) if within a density area specified in Table 10.4.1 below and shown on the planning scheme maps, that specified for the density area.</i> | <i>(b) provides for a significant social or community housing benefit and is in accordance with at least one of the following:</i> |
| | <i>(i) the site is wholly or partially within 400 m walking distance of a public transport stop;</i> |
| | <i>(ii) the site is wholly or partially within 400 m walking distance of a business, commercial, urban mixed use, village or inner residential zone.</i> |

Site area per dwelling is a defined term in the Scheme and means:

the area of the site (excluding any access strip) divided by the number of dwellings.

where access strip is defined as *land, the purpose of which is to provide access to a road.*

Based on the folio plan for CT 107918/27 (refer Appendix A) the area of the entire lot, inclusive of the access strip, is 6331m². As shown by the explanatory notes on the Location Plan (Sheet 01/21) in Appendix B, the main area of the lot (excluding the access strip) is calculated to be 6171m² resulting in a site area per dwelling of 411.4m². The proposal therefore complies with Acceptable Solution A1 (a).

10.4.2 Setbacks and building envelope for all dwellings

| |
|--|
| Objective: |
| <i>To control the siting and scale of dwellings to:</i> |
| <i>(a) provide reasonably consistent separation between dwellings on adjacent sites and a dwelling and its frontage; and</i> |
| <i>(b) assist in the attenuation of traffic noise or any other detrimental impacts from roads with high traffic volumes; and</i> |
| <i>(c) provide consistency in the apparent scale, bulk, massing and proportion of dwellings; and</i> |
| <i>(d) provide separation between dwellings on adjacent sites to provide reasonable opportunity for daylight and sunlight to enter habitable rooms and private open space.</i> |

| | |
|---|--|
| <p>A1</p> <p><i>Unless within a building area, a dwelling, excluding protrusions (such as eaves, steps, porches, and awnings) that extend not more than 0.6 m into the frontage setback, must have a setback from a frontage that is:</i></p> <p><i>(a) if the frontage is a primary frontage, at least 4.5 m, or, if the setback from the primary frontage is less than 4.5 m, not less than the setback, from the primary frontage, of any existing dwelling on the site; or</i></p> <p><i>(b) if the frontage is not a primary frontage, at least 3 m, or, if the setback from the frontage is less than 3 m, not less than the setback, from a frontage that is not a primary frontage, of any existing dwelling on the site; or</i></p> <p><i>(c) if for a vacant site with existing dwellings on adjoining sites on the same street, not more than the greater, or less than the lesser, setback for the equivalent frontage of the dwellings on the adjoining sites on the same street; or</i></p> <p><i>(d) if the development is on land that abuts a road specified in Table 10.4.2, at least that specified for the road.</i></p> | <p>P1</p> <p><i>A dwelling must:</i></p> <p><i>(a) have a setback from a frontage that is compatible with the existing dwellings in the street, taking into account any topographical constraints; and</i></p> <p><i>(b) if abutting a road identified in Table 10.4.2, include additional design elements that assist in attenuating traffic noise or any other detrimental impacts associated with proximity to the road.</i></p> |
|---|--|

75 Fouche Ave is an internal lot and as shown in the Scheme’s *Diagram 10.4.2D*, the required setback is 4.5m from the rear boundary of the lot in front. In this proposal the lot in front forms part of the access strip to 77 Fouche Ave.

As shown in the attached Location Plan provided in Appendix B, the setback between Units 1 to 4 from this boundary is 5m at ground level and 4.5m at the upper storey. All other multiple dwellings are set back further, being located south of this first row of multiple dwellings.

The proposal is compliant with Acceptable Solution A1(a).

| Acceptable Solutions | Performance Criteria |
|--|---|
| <p>A2</p> <p><i>A garage or carport must have a setback from a primary frontage of at least:</i></p> <p><i>(a) 5.5 m, or alternatively 1 m behind the façade of the dwelling; or</i></p> <p><i>(b) the same as the dwelling façade, if a portion of the dwelling gross floor area is located above the garage or carport; or</i></p> <p><i>(c) 1 m, if the natural ground level slopes up or down at a gradient steeper than 1 in 5 for a distance of 10 m from the frontage.</i></p> | <p>P2</p> <p><i>A garage or carport must have a setback from a primary frontage that is compatible with the existing garages or carports in the street, taking into account any topographical constraints.</i></p> |

As shown on the Location Plan the garages associated with the front row of units (Units 1 to 4 inclusive) are located along the southern façade of the dwellings on average 13m from the primary frontage. Garages associated with multiple dwellings 5 to 15 inclusive, are set further south again. Accordingly, the proposed garages are set back more than 5.5m from the primary frontage.

The proposal is compliant with Acceptable Solution A2 (a).

| Acceptable Solutions | Performance Criteria |
|---|---|
| <p>A3</p> <p><i>A dwelling, excluding outbuildings with a building height of not more than 2.4 m and protrusions (such as eaves, steps, porches, and awnings) that extend not more than 0.6 m horizontally beyond the building envelope, must:</i></p> <p><i>(a) be contained within a building envelope (refer to Diagrams 10.4.2A, 10.4.2B, 10.4.2C and 10.4.2D) determined by:</i></p> <p><i>(i) a distance equal to the frontage setback or, for an internal lot, a distance of 4.5 m from the rear boundary of a lot with an adjoining frontage; and</i></p> <p><i>(ii) projecting a line at an angle of 45 degrees from the horizontal at a height of 3 m above natural ground level at the side boundaries and a distance of 4 m from the rear boundary to a building height of not more than 8.5 m above natural ground level; and</i></p> <p><i>(b) only have a setback within 1.5 m of a side boundary if the dwelling:</i></p> <p><i>(i) does not extend beyond an existing building built on or within 0.2 m of the boundary of the adjoining lot; or</i></p> <p><i>(ii) does not exceed a total length of 9 m or one-third the length of the side boundary (whichever is the lesser).</i></p> | <p>P3</p> <p><i>The siting and scale of a dwelling must:</i></p> <p><i>(a) not cause unreasonable loss of amenity by:</i></p> <p><i>(i) reduction in sunlight to a habitable room (other than a bedroom) of a dwelling on an adjoining lot; or</i></p> <p><i>(ii) overshadowing the private open space of a dwelling on an adjoining lot; or</i></p> <p><i>(iii) overshadowing of an adjoining vacant lot; or</i></p> <p><i>(iv) visual impacts caused by the apparent scale, bulk or proportions of the dwelling when viewed from an adjoining lot; and</i></p> <p><i>(b) provide separation between dwellings on adjoining lots that is compatible with that prevailing in the surrounding area.</i></p> |

The development will include land fill to some of the site and is designed to ensure that all building floor levels are above 2.5m AHD. The proposal plans differentiate between Natural Ground Level (NGL dashed line) and Fill Ground Level (FGL solid line) on the elevation plans for those units located in areas of the site that will be filled. All building envelope height calculations are based on NGL. It is noted that in some areas of the site (such as proposed Unit 12 site near western boundary) the FGL will be lower than or equal to the existing NGL. In such instances the building envelope height is shown as being taken from the FGL height.

The building envelope for the proposed development is defined by the outer extent of multiple dwelling as follows:

- Units 1, 2, 3 and 4 along the northern (i.e. front) boundary;
- Units 4, 5, 11 and 12 along the western boundary;
- Units 12, 13, 14 and 15 along the southern (i.e. rear) boundary; and
- Units 1, 8, 9 and 15 along the eastern boundary.

Table 3 Summary of building envelope assessment

| Unit Number | Boundary | Setback (m) | Envelope compliant (Yes/No) | Appendix B Sheet No. | Comments |
|-------------|------------------|------------------------------|-----------------------------|----------------------|---|
| 1 | Northern (front) | 4.5 | Yes | 03/21 & 03a/21 | East elevation & west elevation diagrams - eaves minor protrusion of 0.5m |
| 2 | Northern (front) | 4.5 | Yes | 03/21 & 03a/21 | East elevation & west elevation diagrams - eaves minor protrusion of 0.5m |
| 3 | Northern (front) | 4.5 | Yes | 05/21 & 05a/21 | East elevation & west elevation diagrams - eaves minor protrusion of 0.5m |
| 4 | Northern (front) | 4.5 | Yes | 05/21 & 05a/21 | East elevation & west elevation diagrams - eaves minor protrusion of 0.5m |
| 4 | Western | 2.8 (north) 3.17 (south) | Yes | 05/21 & 05a/21 | North elevation & south elevation diagrams- eaves minor protrusion of 0.5m |
| 5 | Western | 3 (north) 4 (south) | Yes | 07/21 & 07a/21 | North elevation & south elevation diagrams |
| 11 | Western | 3.28 (north & south) | Yes | 13/21 & 13a/21 | North elevation & south elevation diagrams - eaves minor protrusion of 0.5m |
| 12 | Western | 2.5 (north & south) | Yes | 15/21 & 15a/21 | North elevation & south elevation diagrams |
| 12 | Southern (rear) | 9.96 | Yes | 15/21 & 15a/21 | East elevation & west elevation diagrams (based on set back and rear dwelling heights) |
| 13 | Southern (rear) | 15.39 | Yes | 17/21 | East elevation & west elevation diagrams (based on set back and rear dwelling heights) |
| 14 | Southern (rear) | 21.09 | Yes | 19/21 | East elevation & west elevation diagrams (based on set back and rear dwelling heights) |
| 15 | Southern (rear) | 24.72 | Yes | 21/21 | East elevation & west elevation diagrams (based on set back and rear dwelling heights) |
| 1 | Eastern | 7.52 (north) 7.72 (south) | Yes | 03/21 & 03a/21 | South elevation & north elevation diagrams (based on setback and building height) |
| 8 | Eastern | 6.23 (north) | Yes | 09a/21 | South elevation diagram (based on setback and building height) |
| 9 | Eastern | 8.37 (north) | Yes | 11/21 & 11a/21 | North & south elevation diagrams |
| 15 | Eastern | 1.46 (north) 2.1 (south) | Yes | 21/21 | North elevation diagram (roof minor 0.1m protrusion) & south elevation diagram For the garage which extends for 6.48m along the eastern boundary. Remainder of dwelling is set back more than 3m from the side boundary. |

As shown in the proposal plans in Appendix B and the above summary table (

Table 3) the proposal is compliant with:

- Acceptable Solution A3 (a) (i) and (ii) for Units 1 to 14 inclusive; and
- Acceptable Solution A3 (a) (i) and A3 (b) (ii) for Unit 15.

The proposal is considered compliant with applicable provisions of Acceptable Solution A3.

10.4.3 Site coverage and private open space for all dwellings

| | |
|--|---|
| <p>Objective: To provide:</p> <p>(a) for outdoor recreation and the operational needs of the residents; and</p> <p>(b) opportunities for the planting of gardens and landscaping; and</p> <p>(c) private open space that is integrated with the living areas of the dwelling; and</p> <p>(d) private open space that has access to sunlight.</p> | |
| <p>Acceptable Solutions</p> <p>A1</p> <p>Dwellings must have:</p> <p>(a) a site coverage of not more than 50% (excluding eaves up to 0.6m); and</p> <p>(b) for multiple dwellings, a total area of private open space of not less than 60m² associated with each dwelling, unless the dwelling has a finished floor level that is entirely more than 1.8m above the finished ground level (excluding a garage, carport or entry foyer); and</p> <p>(c) a site area of which at least 25% of the site area is free from impervious surfaces.</p> | <p>Performance Criteria</p> <p>P1</p> <p>Dwellings must have:</p> <p>(a) private open space that is of a size and dimensions that are appropriate for the size of the dwelling and is able to accommodate:</p> <p>(i) outdoor recreational space consistent with the projected requirements of the occupants and, for multiple dwellings, take into account any communal open space provided for this purpose within the development; and</p> <p>(ii) operational needs, such as clothes drying and storage; and</p> <p>(b) reasonable space for the planting of gardens and landscaping.</p> |

Site coverage is a defined term that means:

the proportion of a site (excluding any access strip) covered by roofed buildings.

Impervious surfaces is not a defined term in the scheme and is understood to have its ordinary meaning of a surface that does not allow water to penetrate into the ground.

The explanatory notes on the Location Plan, include explanatory notes that provide details of the proposed development including:

- (a) the proposed site coverage for the development is 2012.63m², which equates to 34.07% of the site excluding the access strip; compliant with A1 (a); and
- (c) the proposed impervious surface area of the site is calculated as 3125.9 m² (being 2012.63m² site coverage plus 1113.27m² driveways), which represents 50.65% of the site (excluding the access strip). Hence, the proposal is calculated to retain 49.35% of the site area free of impervious surfaces (excluding the access strip) compliant with A1 (c).

With respect to A1 (b) the private open space for each dwelling is shown on the attached Site Plan Sheets 2 and 3 (Ground Floor) and Site Plan Sheets 4 to 6 (First Floor); and is located for the units as per the summary table (

Table 4) below.

Table 4 Summary of private open space per unit

| Unit No. | Area (m ²) at Ground level | Area (m ²) ground floor decks | | Area (m ²) at 1 st floor deck | Total Area (m ²) | Compliant (Yes/No) |
|----------|--|---|------|--|------------------------------|--------------------|
| 1 | 67 | n/a | | 9 | 76 | Yes |
| 2 | 81 | n/a | | 9 | 90 | Yes |
| 3 | 81 | n/a | | 9 | 90 | Yes |
| 4 | 91 | n/a | | 9 | 100 | Yes |
| 5 | 79 | 2 | | 24 | 105 | Yes |
| 6 | 50 | 2 | | 24 | 76 | Yes |
| 7 | 49 | 2 | | 24 | 75 | Yes |
| 8 | 50 | 2 | | 24 | 76 | Yes |
| 9 | 86.5 | n/a | | 8.49 | 95 | Yes |
| 10 | 85.5 | n/a | | 8.49 | 94 | Yes |
| 11 | 137.5 | n/a | | 8.49 | 146 | Yes |
| 12 | 64.17 | 17.28 | 3.55 | n/a | 85 | Yes |
| 13 | 65.95 | 18.5 | 3.55 | n/a | 88 | Yes |
| 14 | 75.77 | 18.68 | 3.55 | n/a | 98 | Yes |
| 15 | 108.95 | 18.5 | 3.55 | n/a | 131 | Yes |

For Units 6, 7 and 8 the private open space area at the ground level is less than 60m², however as these units are provided with 24m² north facing decks on the first floor, it is considered that the total private open space requirement is achieved.

For Units 12, 13, 14 and 15 it is anticipated that any future strata titling of the land is expected to create strata title boundaries as extensions from the western walls of the dwellings to the rear property boundary, as shown by the dashed lines on Site Plan Sheet 3 (Ground Floor) Sheet 01c/21 in Appendix B . The proposal plans do not show internal fences along such future strata boundaries, as the proposal is specifically designed to not require any works to be undertaken in the Future Coastal Refugia Area. Therefore, for the purposes of assessment against this clause provision, the ground floor private open space area is calculated as including only the area between the internal & boundary fences and the Future Coastal Refugia area (as delineated on Site Plan Sheet 3 (Ground Floor)). For these units, this area in conjunction with the rear decks and the north facing private open spaces is calculated to provide a total private open space area greater than 60m², thereby achieving compliance with A1 (b)

The proposal is considered compliant with Acceptable Solution A1 (a), (b) and (c).

| Acceptable Solutions | Performance Criteria |
|---|--|
| <p>A2</p> <p>A dwelling must have an area of private open space that:</p> <p>(a) is in one location and is at least:</p> <p>(i) 24 m²; or</p> <p>(ii) 12 m², if the dwelling is a multiple dwelling with a finished floor level that is entirely more than 1.8 m above the finished ground level (excluding a garage, carport or entry foyer); and</p> <p>(b) has a minimum horizontal dimension of:</p> <p>(i) 4 m; or</p> <p>(ii) 2 m, if the dwelling is a multiple dwelling with a finished floor level that is entirely more than 1.8 m above the finished ground level (excluding a garage, carport or entry foyer); and</p> | <p>P2</p> <p>A dwelling must have private open space that:</p> <p>(a) includes an area that is capable of serving as an extension of the dwelling for outdoor relaxation, dining, entertaining and children's play and that is:</p> <p>(i) conveniently located in relation to a living area of the dwelling; and</p> <p>(ii) orientated to take advantage of sunlight.</p> |

| | |
|---|--|
| <p>(c) is directly accessible from, and adjacent to, a habitable room (other than a bedroom); and</p> <p>(d) is not located to the south, south-east or south-west of the dwelling, unless the area receives at least 3 hours of sunlight to 50% of the area between 9.00am and 3.00pm on the 21st June; and</p> <p>(e) is located between the dwelling and the frontage, only if the frontage is orientated between 30 degrees west of north and 30 degrees east of north, excluding any dwelling located behind another on the same site; and</p> <p>(f) has a gradient not steeper than 1 in 10; and</p> <p>(g) is not used for vehicle access or parking.</p> | |
|---|--|

The attached Site Plan Sheets were used to undertake an assessment of the proposal against the Acceptable Solution provisions as shown in Table 5 below.

Table 5 Summary of Private open space attributes

| Unit No. | A2 (a) (i) [in one location and 24m ²] | A2 (a) (ii) [if multiple dwelling entirely above 1.8m floor level] | A2 (b) (i) [min. horizontal dimension of 4m] | A2 (b) (ii) [min. horizontal dimension of 2m if entirely above 1.8m floor level] | A2(c) [directly accessible from & adjacent to a habitable room other than a bedroom] | A2 (d) [not located to the south, south-east or south-west unless received min 3hrs sun to 50% of the area between 9am and 3pm on 21 June] | A2 (e) [is located between the dwelling and the frontage, only if 30degrees east or west of north, excluding any dwelling located behind another on the same site] | A2 (f)[gradient not steeper than 1 in 10] | A2 (g) [not used for vehicle parking] |
|----------|--|--|--|--|--|--|--|---|---------------------------------------|
| 1 | Y - Grnd Flr (to rear) | n/a | Yes | n/a | Yes -Rumpus Room | n/a locted to the north | Yes - north between dwelling and frontage fence (of the internal lot) | Yes | Yes |
| 2 | Y - Grnd Flr (to rear) | n/a | Yes | n/a | Yes -Rumpus Room | n/a locted to the north | Yes - north between dwelling and frontage fence (of the internal lot) | Yes | Yes |
| 3 | Y - Grnd Flr (to rear) | n/a | Yes | n/a | Yes -Rumpus Room | n/a locted to the north | Yes - north between dwelling and frontage fence (of the internal lot) | Yes | Yes |
| 4 | Y - Grnd Flr (to rear) | n/a | Yes | n/a | Yes -Rumpus Room | n/a locted to the north | Yes - north between dwelling and frontage fence (of the internal lot) | Yes | Yes |
| 5 | Y - 1st Flr deck (to front) | n/a | Yes | n/a | Yes - Kitchen | n/a locted to the north | n/a located behind another on the same site | Yes | Yes |
| 6 | Y - 1st Flr deck (to front) | n/a | Yes | n/a | Yes - Kitchen | n/a locted to the north | n/a located behind another on the same site | Yes | Yes |
| 7 | Y - 1st Flr deck (to front) | n/a | Yes | n/a | Yes - Kitchen | n/a locted to the north | n/a located behind another on the same site | Yes | Yes |
| 8 | Y - 1st Flr deck (to front) | n/a | Yes | n/a | Yes - Kitchen | n/a locted to the north | n/a to the north | Yes | Yes |
| 9 | Y - Grnd Flr (to rear) | n/a | Yes | n/a | Yes -Living | n/a locted to the north/west | n/a to the north | Yes | Yes |
| 10 | Y - Grnd Flr (to rear) | n/a | Yes | n/a | Yes -Living | n/a locted to the north/east | n/a to the north | Yes | Yes |
| 11 | Y - Grnd Flr (to rear) | n/a | Yes | n/a | Yes -Living | n/a locted to the north/east | n/a to the north | Yes | Yes |
| 12 | Y- Grnd Flr (to front) | n/a | Yes | n/a | Yes - Dining | n/a locted to the north | n/a located behind another on the same site | Yes | Yes |
| 13 | Y- Grnd Flr (to front) | n/a | Yes | n/a | Yes - Dining | n/a locted to the north | n/a located behind another on the same site | Yes | Yes |
| 14 | Y- Grnd Flr (to front) | n/a | Yes | n/a | Yes - Dining | n/a locted to the north | n/a located behind another on the same site | Yes | Yes |
| 15 | Y- Grnd Flr (to front) | n/a | Yes | n/a | Yes - Dining | n/a locted to the north | n/a located behind another on the same site | Yes | Yes |

Accordingly, the proposal is considered compliant with all applicable elements of Acceptable Solution A2.

10.4.4 Sunlight and overshadowing for all dwellings

| | |
|---|---|
| Objective: | |
| To provide: | |
| <i>(a) the opportunity for sunlight to enter habitable rooms (other than bedrooms) of dwellings; and</i> | |
| <i>(b) separation between dwellings on the same site to provide reasonable opportunity for daylight and sunlight to enter habitable rooms and private open space.</i> | |
| Acceptable Solutions | Performance Criteria |
| A1 | P1 |
| <i>A dwelling must have at least one habitable room (other than a bedroom) in which there is a window that faces between 30 degrees west of north and 30 degrees east of north (see Diagram 10.4.4A).</i> | <i>A dwelling must be sited and designed so as to allow sunlight to enter at least one habitable room (other than a bedroom).</i> |

Compliance with the above Acceptable Solution A1 for each proposed dwelling is summarised below in Table 6.

Table 6 Assessment of window orientation for A1

| Unit No. | A1 Habitable Room window (other than a bedroom) within 30 degrees of north | |
|----------|--|----------------------------|
| | Ground Floor | First Floor |
| 1 | W02 (Rumpus) Sheet 02/21 | W09 (Dining) Sheet 02a/21 |
| 2 | W01 (Rumpus) Sheet 02/21 | W08 (Dining) Sheet 02a/21 |
| 3 | W02 (Rumpus) Sheet 04/21 | W09 (Dining) Sheet 04a/21 |
| 4 | W01 (Rumpus) Sheet 04/21 | W08 (Dining) Sheet 04a/21 |
| 5 | n/a | W08 (Kitchen) Sheet 06a/21 |
| 6 | n/a | W12 (Kitchen) Sheet 06a/21 |
| 7 | n/a | W08 (Kitchen) Sheet 08a/21 |
| 8 | n/a | W12 (Kitchen) Sheet 08a/21 |
| 9 | W02 (Living) Sheet 10/21 | n/a |
| 10 | W01 (Living) Sheet 10/21 | n/a |
| 11 | W01 (Living) Sheet 12/21 | n/a |
| 12 | W01 (Dining) Sheet 14/21 | n/a |
| 13 | W01 (Dining) Sheet 16/21 | n/a |
| 14 | W01 (Dining) Sheet 18/21 | n/a |
| 15 | W01 (Dining) Sheet 20/21 | n/a |

The proposal is considered compliant with Acceptable Solution A1.

| Acceptable Solutions | Performance Criteria |
|---|---|
| <p>A2</p> <p><i>A multiple dwelling that is to the north of a window of a habitable room (other than a bedroom) of another dwelling on the same site, which window faces between 30 degrees west of north and 30 degrees east of north (see Diagram 10.4.4A), must be in accordance with (a) or (b), unless excluded by (c):</i></p> <p><i>(a) The multiple dwelling is contained within a line projecting (see Diagram 10.4.4B):</i></p> <p style="padding-left: 40px;"><i>(i) at a distance of 3 m from the window; and</i> <i>(ii) vertically to a height of 3 m above natural ground level and then at an angle of 45 degrees from the horizontal.</i></p> <p><i>(b) The multiple dwelling does not cause the habitable room to receive less than 3 hours of sunlight between 9.00 am and 3.00 pm on 21st June.</i></p> <p><i>(c) That part, of a multiple dwelling, consisting of:</i></p> <p style="padding-left: 40px;"><i>(i) an outbuilding with a building height no more than 2.4 m; or</i> <i>(ii) protrusions (such as eaves, steps, and awnings) that extend no more than 0.6 m horizontally from the multiple dwelling.</i></p> | <p>P2</p> <p><i>A multiple dwelling must be designed and sited to not cause unreasonable loss of amenity by overshadowing a window of a habitable room (other than a bedroom), of another dwelling on the same site, that faces between 30 degrees west of north and 30 degrees east of north (see Diagram 10.4.4A).</i></p> |

The multiple dwelling layout has been designed to ensure that all the dwellings located north of another dwelling on the same site are contained within the required envelopes as described in the Acceptable Solution.

Elevation plans in Appendix B demonstrate the compliance with this clause as follows:

- Units 5 & 6 Elevations Sheets 1 & 2 (Sheet 07/21 and Sheet 07a/21) show that Units 1 to 4 are contained within the envelope described by (a) (i) and (ii) with respect to the units to the south, namely Units 5 to 8;
- Unit 11 Elevations Sheet 1 (Sheet 13/21) shows that Units 5 to 8 are contained within the envelope described by (a) (i) and (ii) with respect to the units to the south, namely Units 9 to 11, with a minor protrusion as per (c) (ii);
- Unit 14 Elevations Sheet (Sheet 19/21) show that Units 9 to 11 are contained within the envelope described by (a) (i) and (ii) with respect to the units to the south, namely Units 12 to 15.

Based on the above the proposal is considered comply with Acceptable Solution A2 (a) and (c).

| Acceptable Solutions | Performance Criteria |
|---|--|
| <p>A3</p> <p><i>A multiple dwelling, that is to the north of the private open space, of another dwelling on the same site, required in accordance with A2 or P2 of subclause 10.4.3, must be in accordance with (a) or (b), unless excluded by (c):</i></p> <p><i>(a) The multiple dwelling is contained within a line projecting (see Diagram 10.4.4C):</i></p> <p style="padding-left: 40px;"><i>(i) at a distance of 3 m from the northern edge of the private open space; and</i> <i>(ii) vertically to a height of 3 m above natural ground level and then at an angle of 45 degrees from the horizontal.</i></p> | <p>P3</p> <p><i>A multiple dwelling must be designed and sited to not cause unreasonable loss of amenity by overshadowing the private open space, of another dwelling on the same site, required in accordance with A2 or P2 of subclause 10.4.3.</i></p> |

(b) The multiple dwelling does not cause 50% of the private open space to receive less than 3 hours of sunlight between 9.00 am and 3.00 pm on 21st June.

(c) That part, of a multiple dwelling, consisting of:

- (i) an outbuilding with a building height no more than 2.4 m; or*
- (ii) protrusions (such as eaves, steps, and awnings) that extend no more than 0.6 m horizontally from the multiple dwelling.*

The multiple dwelling layout has been designed to ensure that all the dwellings located north of another dwelling on the same site are contained within the required envelopes as described in the Acceptable Solution.

Elevation plans in Appendix B demonstrate the compliance with this clause as follows:

- Units 5 & 6 Elevations Sheets 1 & 2 (Sheet 07/21 and Sheet 07a/21) show that Units 1 to 4 are contained within the envelope described by (a) (i) and (ii) with respect to the units to the south, namely Units 5 to 8;
- Unit 11 Elevations Sheet 1 (Sheet 13/21) shows that Units 5 to 8 are contained within the envelope described by (a) (i) and (ii) with respect to the units to the south, namely Units 9 to 11, with a minor protrusion as per (c) (ii);
- Unit 14 Elevations Sheet (Sheet 19/21) show that Units 9 to 11 are contained within the envelope described by (a) (i) and (ii) with respect to the units to the south, namely Units 12 to 15.

Based on the above the proposal is considered comply with Acceptable Solution A2 (a) and (c).

10.4.5 Width of openings for garages and carports for all dwellings - Not Applicable

| | |
|---|---|
| Objective: | |
| <i>To reduce the potential for garage or carport openings to dominate the primary frontage.</i> | |
| Acceptable Solutions | Performance Criteria |
| A1 | P1 |
| <i>A garage or carport within 12 m of a primary frontage (whether the garage or carport is free-standing or part of the dwelling) must have a total width of openings facing the primary frontage of not more than 6 m or half the width of the frontage (whichever is the lesser).</i> | <i>A garage or carport must be designed to minimise the width of its openings that are visible from the street, so as to reduce the potential for the openings of a garage or carport to dominate the primary frontage.</i> |

None of the garages that are within 12m of the primary frontage would face the frontage; rather they would face into the development site. Accordingly, this standard is considered not applicable to the proposed development.

10.4.6 Privacy for all dwellings

| | |
|--|--|
| Objective: | |
| <i>To provide reasonable opportunity for privacy for dwellings.</i> | |
| Acceptable Solutions | Performance Criteria |
| A1 | P1 |
| <i>A balcony, deck, roof terrace, parking space, or carport (whether freestanding or part of the dwelling), that has a finished surface or floor level more than 1 m above natural ground level must have a permanently fixed screen to a height of at least 1.7 m above the finished surface or floor level, with a uniform transparency of no more than 25%, along the sides facing a:</i> | <i>A balcony, deck, roof terrace, parking space or carport (whether freestanding or part of the dwelling) that has a finished surface or floor level more than 1 m above natural ground level, must be screened, or otherwise designed, to minimise overlooking of:</i> <i>(a) a dwelling on an adjoining lot or its private open space; or</i> |

| | |
|---|--|
| <p><i>(a) side boundary, unless the balcony, deck, roof terrace, parking space, or carport has a setback of at least 3 m from the side boundary; and</i></p> <p><i>(b) rear boundary, unless the balcony, deck, roof terrace, parking space, or carport has a setback of at least 4 m from the rear boundary; and</i></p> <p><i>(c) dwelling on the same site, unless the balcony, deck, roof terrace, parking space, or carport is at least 6 m:</i></p> <p style="padding-left: 40px;"><i>(i) from a window or glazed door, to a habitable room of the other dwelling on the same site; or</i></p> <p style="padding-left: 40px;"><i>(ii) from a balcony, deck, roof terrace or the private open space, of the other dwelling on the same site.</i></p> | <p><i>(b) another dwelling on the same site or its private open space; or</i></p> <p><i>(c) an adjoining vacant residential lot.</i></p> |
|---|--|

All carports and car parking spaces are at ground level. Units 12 to 15 have decks less than 1m above natural ground level and are excluded from this analysis. Units 1 to 11 have decks more than 1m above natural ground level and are considered further against the clause provisions.

Only Units 5, 8, 9 and 11 have decks adjacent to side boundaries but all are set back 3m or more (see Location Plan) compliant with A1 (a). As per the Location Plan none of the decks are within 4m of the rear boundary and hence all decks are compliant with A1 (b).

The decks of Units 1, 2, 3 and 4 are:

- more than 6m to the habitable room windows of Units 5, 6, 7 and 8 compliant with A1 (c) (i) and,
- more than 6m to the 1st floor decks (private open space) of Units 5, 6, 7 and 8 compliant with A1 (c) (ii).

Hence Units 5, 6, 7 and 8 are also considered compliant relative to Units 1, 2, 3 and 4. Units 5 to 8 also have decks less than 1m above natural ground level on the southern side, which are excluded from this analysis. These units also have decks located on their northern elevation, however as these do not overlook the habitable room windows or private open spaces of Units 9, 10 and 11 to the south are therefore also considered compliant with A1 (c) (i) and A1 (c) (ii).

The south facing decks of Units 9, 10 and 11 are:

- more than 9m from the habitable room windows of Units 12, 13, 14, and 15 compliant with A1 (c) (i) and,
- more than 6m from the ground floor private open space of Units 12, 13, 14 and 15 compliant with A1 (c) (ii).

Based on the above the proposal is considered compliant with all applicable elements of Acceptable Solution A1.

| Acceptable Solutions | Performance Criteria |
|---|---|
| <p>A2</p> <p><i>A window or glazed door, to a habitable room, of a dwelling, that has a floor level more than 1 m above the natural ground level, must be in accordance with (a), unless it is in accordance with (b):</i></p> <p><i>(a) The window or glazed door:</i></p> <p style="padding-left: 40px;"><i>(i) is to have a setback of at least 3 m from a side boundary; and</i></p> <p style="padding-left: 40px;"><i>(ii) is to have a setback of at least 4 m from a rear boundary; and</i></p> <p style="padding-left: 40px;"><i>(iii) if the dwelling is a multiple dwelling, is to be at least 6 m from a window or glazed</i></p> | <p>P2</p> <p><i>A window or glazed door, to a habitable room of dwelling, that has a floor level more than 1 m above the natural ground level, must be screened, or otherwise located or designed, to minimise direct views to:</i></p> <p><i>(a) window or glazed door, to a habitable room of another dwelling; and</i></p> <p><i>(b) the private open space of another dwelling; and</i></p> <p><i>(c) an adjoining vacant residential lot.</i></p> |

| | |
|--|--|
| <p><i>door, to a habitable room, of another dwelling on the same site; and</i></p> <p><i>(iv) if the dwelling is a multiple dwelling, is to be at least 6 m from the private open space of another dwelling on the same site.</i></p> <p><i>(b) The window or glazed door:</i></p> <p><i>(i) is to be offset, in the horizontal plane, at least 1.5 m from the edge of a window or glazed door, to a habitable room of another dwelling; or</i></p> <p><i>(ii) is to have a sill height of at least 1.7 m above the floor level or has fixed obscure glazing extending to a height of at least 1.7 m above the floor level; or</i></p> <p><i>(iii) is to have a permanently fixed external screen for the full length of the window or glazed door, to a height of at least 1.7 m above floor level, with a uniform transparency of not more than 25%.</i></p> | |
|--|--|

The proposal plans demonstrate that Units 1 to 11 inclusive have windows to rooms with a floor level higher than 1m above NGL. Units 12 to 15 inclusive do not have windows to habitable rooms with a floor level higher than 1m above NGL (refer to the attached Elevation Plans).

Of units 1 to 11; units 1, 4, 8, 5, 9, and 11 have side boundary setbacks of at least three metres compliant with Acceptable Solution A2 (a) (i). As per the Location Plan, none of the units have windows located within 4m of the rear boundary and hence all are compliant with A2 (a) (ii).

As per the attached Site Plan Sheet 2 to 3 Ground Floor and Site Plan Sheet 5 to 6 First Floor all multiple dwelling windows are more than 6m from a window or glazed door to a habitable room of another dwelling on the site and are considered compliant with A2 (a) (iii).

As per the attached Site Plan Sheet 2 to 3 Ground Floor and Site Plan Sheet 5 to 6 First Floor all multiple dwelling windows are more than 6m from the private open space of another dwelling on the site and are considered compliant with A2 (a) (v).

Accordingly the proposal is considered to comply with Acceptable Solution A2 (a).

| Acceptable Solutions | Performance Criteria |
|---|---|
| <p>A3</p> <p><i>A shared driveway or parking space (excluding a parking space allocated to that dwelling) must be separated from a window, or glazed door, to a habitable room of a multiple dwelling by a horizontal distance of at least:</i></p> <p><i>(a) 2.5 m; or</i></p> <p><i>(b) 1 m if:</i></p> <p><i>(i) it is separated by a screen of at least 1.7 m in height; or</i></p> <p><i>(ii) the window, or glazed door, to a habitable room has a sill height of at least 1.7 m above the shared driveway or parking space, or has fixed obscure glazing extending to a height of at least 1.7 m above the floor level.</i></p> | <p>P3</p> <p><i>A shared driveway or parking space (excluding a parking space allocated to that dwelling), must be screened, or otherwise located or designed, to minimise detrimental impacts of vehicle noise or vehicle light intrusion to a habitable room of a multiple dwelling.</i></p> |

The proposal plans (Appendix B) demonstrate that the two shared driveways oriented east to west, are setback by a minimum of 2.5m for all windows and glazed doors to habitable rooms with the exception of:

- the ground floor bedroom window of Units 1 to 3 and Units 5 to 8;
- the first floor living room windows of Units 1 to 3; and
- the first floor bedroom windows of Units 5 to 8.

As shown in Site Perspective View 2 there are also a number of windows facing the shared driveway oriented north to east, including:

- ground floor bedroom and rumpus room windows of Unit 1 which are set back less than 2.5m from the shared driveway;
- the upstairs living and dining room windows, which have a sill height of 1.7m above floor level;
- the ground floor dining room window and upstairs bedroom window of Unit 9, which are both setback 2.9m from the shared driveway.

Accordingly the proposal is considered compliant with:

- A3 (a) for habitable room windows and glazed doors for Units 4, and 9 to 15 inclusive;
- A3 (b) (i) for the ground floor bedroom windows of Units 1 to 3 inclusive, the ground floor rumpus room of Unit 1, as the proposal includes a 1.8m screening fence between the windows and the shared driveways as shown in Site Plan Sheet 2 (Ground Floor) and Perspective View 1 and 2; and,
- A3 (b) (ii) for:
 - the upstairs living room windows of Units 1 to 3 inclusive as these would have sill heights greater than 1.7m above the shared driveways; and
 - The upstairs bedroom windows of Units 5 to 8 as these would have sill heights greater than 1.7m above the shared driveways.

That leaves the ground floor bedroom windows of Units 5 to 8 (which as shown on Site Plan Sheet 2 (Ground Floor) have setback that are not fully compliant with the 2.5m setback requirement of A3 (a).

It is proposed that these windows can be provided with a screen of at least 1.7m in height to come into compliance with A3 (b) (i).

It is considered appropriate that a condition to that effect could be included in any planning permit issued.

Accordingly the proposal is considered able to comply with all applicable elements of Acceptable Solution A3.

10.4.7 Frontage fences for all dwellings

| | |
|--|--|
| Objective: | |
| <i>To control the height and transparency of frontage fences to:</i> | |
| <p>(a) provide adequate privacy and security for residents; and</p> <p>(b) allow the potential for mutual passive surveillance between the road and the dwelling; and</p> <p>(c) provide reasonably consistent height and transparency.</p> | |
| Acceptable Solutions | Performance Criteria |
| <p>A1</p> <p>A fence (including a free-standing wall) within 4.5 m of a frontage must have a height above natural ground level of not more than:</p> <p>(a) 1.2 m if the fence is solid; or</p> <p>(b) 1.8 m, if any part of the fence that is within 4.5 m of a primary frontage has openings above a height of 1.2 m which provide a uniform transparency of not less than 30% (excluding any posts or uprights).</p> | <p>P1</p> <p>A fence (including a free-standing wall) within 4.5 m of a frontage must:</p> <p>(a) provide for the security and privacy of residents, while allowing for mutual passive surveillance between the road and the dwelling; and</p> <p>(b) be compatible with the height and transparency of fences in the street, taking into account the:</p> <p>(i) topography of the site; and</p> |

| | |
|--|--|
| | <i>(ii) traffic volumes on the adjoining road.</i> |
|--|--|

Frontage is a defined term in the Scheme that means

a boundary of a lot which abuts a road.

As the subject site is an internal lot where the only boundary abutting a road is the access strip boundary, which is not proposed to be fenced or gated given the right of way considerations, this clause is considered not applicable to the proposal.

10.4.8 Waste storage for multiple dwellings

| | |
|--|---|
| Objective: | |
| <i>To provide for the storage of waste and recycling bins for multiple dwellings.</i> | |
| Acceptable Solutions | Performance Criteria |
| <p>A1</p> <p><i>A multiple dwelling must have a storage area, for waste and recycling bins, that is an area of at least 1.5 m² per dwelling and is within one of the following locations:</i></p> <p><i>(a) in an area for the exclusive use of each dwelling, excluding the area in front of the dwelling; or</i></p> <p><i>(b) in a communal storage area with an impervious surface that:</i></p> <p style="padding-left: 40px;"><i>(i) has a setback of at least 4.5 m from a frontage; and</i></p> <p style="padding-left: 40px;"><i>(ii) is at least 5.5 m from any dwelling; and</i></p> <p style="padding-left: 40px;"><i>(iii) is screened from the frontage and any dwelling by a wall to a height of at least 1.2 m above the finished surface level of the storage area.</i></p> | <p>P1</p> <p><i>A multiple dwelling development must provide storage, for waste and recycling bins, that is:</i></p> <p><i>(a) capable of storing the number of bins required for the site; and</i></p> <p><i>(b) screened from the frontage and dwellings; and</i></p> <p><i>(c) if the storage area is a communal storage area, separated from dwellings on the site to minimise impacts caused by odours and noise.</i></p> |

As shown in Site Plan Sheets 1 to 3 (Ground Floor), each unit is provided with a 1.5m² area to the side or rear for the exclusive storage of waste and recycling bins, compliant with A1 (a).

It is proposed that collection arrangement will be made via Council, for private waste collection vehicles to enter the site and empty the bins, located in the communal bin collection area along the eastern side boundary as shown in Location Plan. It is anticipated that residents would take their bins to and from this area on a weekly basis as if it were a typical “kerb side” collection arrangement.

The proposal is considered compliant with Acceptable Solution A1.

4.2 E 5.0 Road and Railway Assets Code

The proposed development will intensify the use of an vehicle crossing and accordingly the code must be considered as per Clause E 5.2.1 (b).

E 5.5 Use Standards

E5.5.1 Existing road accesses and junctions

| | |
|--|---|
| Objective: | |
| <i>To ensure that the safety and efficiency of roads is not reduced by increased use of existing accesses and junctions.</i> | |
| Acceptable Solution | Performance Criteria |
| <p>A1</p> <p><i>The annual average daily traffic (AADT) of vehicle movements, to and from a site, onto a category 1 or category 2 road, in an area subject to a speed limit of more than 60km/h , must not increase by more than 10% or 10 vehicle movements per day, whichever is the greater.</i></p> | <p>P1</p> <p><i>Any increase in vehicle traffic to a category 1 or category 2 road in an area subject to a speed limit of more than 60km/h must be safe and minimise any adverse impact on the efficiency of the road, having regard to:</i></p> <ul style="list-style-type: none"> <i>(a) the increase in traffic caused by the use;</i> <i>(b) the nature of the traffic generated by the use;</i> <i>(c) the nature of the road;</i> <i>(d) the speed limit and traffic flow of the road;</i> <i>(e) any alternative access to a road;</i> <i>(f) the need for the use;</i> <i>(g) any traffic impact assessment; and</i> <i>(h) any written advice received from the road authority.</i> |

Fouche Avenue is not a category 1 or 2 road, accordingly A1 is considered as not applicable.

| | |
|---|--|
| Acceptable Solution | Performance Criteria |
| <p>A2</p> <p><i>The annual average daily traffic (AADT) of vehicle movements, to and from a site, using an existing access or junction, in an area subject to a speed limit of more than 60km/h, must not increase by more than 10% or 10 vehicle movements per day, whichever is the greater.</i></p> | <p>P2</p> <p><i>Any increase in vehicle traffic at an existing access or junction in an area subject to a speed limit of more than 60km/h must be safe and not unreasonably impact on the efficiency of the road, having regard to:</i></p> <ul style="list-style-type: none"> <i>(a) the increase in traffic caused by the use;</i> <i>(b) the nature of the traffic generated by the use;</i> <i>(c) the nature and efficiency of the access or the junction;</i> <i>(d) the nature and category of the road;</i> <i>(e) the speed limit and traffic flow of the road;</i> <i>(f) any alternative access to a road;</i> <i>(g) the need for the use;</i> <i>(h) any traffic impact assessment; and</i> <i>(i) any written advice received from the road authority.</i> |

The speed limit along Fouche Avenue is 50 km/hr accordingly A2 is considered as not applicable.

| Acceptable Solution | Performance Criteria |
|---|--|
| <p>A3</p> <p><i>The annual average daily traffic (AADT) of vehicle movements, to and from a site, using an existing access or junction, in an area subject to a speed limit of 60km/h or less, must not increase by more than 20% or 40 vehicle movements per day, whichever is the greater.</i></p> | <p>P3</p> <p><i>Any increase in vehicle traffic at an existing access or junction in an area subject to a speed limit of 60km/h or less, must be safe and not unreasonably impact on the efficiency of the road, having regard to:</i></p> <p><i>(a) the increase in traffic caused by the use;</i></p> <p><i>(b) the nature of the traffic generated by the use;</i></p> <p><i>(c) the nature and efficiency of the access or the junction;</i></p> <p><i>(d) the nature and category of the road;</i></p> <p><i>(e) the speed limit and traffic flow of the road;</i></p> <p><i>(f) any alternative access to a road;</i></p> <p><i>(g) the need for the use;</i></p> <p><i>(h) any traffic impact assessment; and</i></p> <p><i>(i) any written advice received from the road authority.</i></p> |

The results of the Traffic Impact Assessment (TIA), dated August 2020 are provided in Appendix C. Traffic generation is estimated to be 90 vehicles per day, with 9 vehicles per hour during peak morning and evening periods for the proposed development. Due to the shared access arrangements with 77 Fouche Avenue, the number of combined vehicle movements on the shared access strip are estimated at 100 vehicles per day with 10 vehicles per hour for peak morning and evening hours.

As the subject site is undeveloped at present these project volumes do not comply with Acceptable Solution A3 and the above performance criteria must be considered.

Operational impact of the increased traffic activity is assessed in Section 6.1 of the TIA (p11) with sight distance conditions assessed in Section 6.2 (p12). A summary with respect to the sub-clauses of Performance Criteria P3 is as follows:

- a) The estimated increase in traffic (as outlined above) when considered in the context of the projected traffic growth on Fouche Avenue over the next 10 years is likely to:
 - i. “generate conflicting traffic volumes of around 110 vehicles per hour in peak hour periods”,
 - ii. “intersection and junctions reach practical capacity when the total conflicting traffic volumes are around 1500 vehicles per hour”,
 - iii. “there is driveway immediately adjacent to the eastern side of the development...it is expected this driveway carries some 100-110 vehicles per day, with 10% of this traffic during peak traffic periods”,
 - iv. “the interaction between traffic to and from these two driveways will not create any safety or operational issues at their junction with Fouche Avenue”.
- b) The predominant vehicles will be sedans and passenger vehicles, postal delivery vehicles (motorcycles and/or small vans) every second day, with weekly B99 garbage collection vehicle;
- c) Sight distances have been measured as ranging from 68m to 150m and are considered “sufficient for the speed environment” (p15 TIA). The shared access strip with 77 Fouche Avenue has a “straight horizontal alignment on a fairly flat grade” (p15 TIA) and is 6m;

- d) Fouche Avenue has kerb and gutter plus a footpath along both sides of the road, with a sealed road width between kerb faces of around 10m (p7 TIA) and provides connection from the surrounding residential development to Jetty Road and East Derwent Highway;
- e) Fouche Avenue has a speed limit of 50Km/hr;
- f) There are no alternative accesses to the subject site;
- g) The land is zoned general residential and the proposed residential use is a permitted use in the zone. Greater Hobart continues to experience population growth of approximately 1.5% per annum (3,100 people in 2016-17¹ and 3,400 in 2018-19²). Such growth is greater than the rest of the state where the population increased by only 9% over the same time. The vacant residential land on the eastern shore of the Derwent is providing for this continued population growth and notwithstanding the current Covid-19 Pandemic, the underlying demand is expected to remain. Hence the proposed development is considered necessary to meet the anticipated post Pandemic demand for residential dwellings;
- h) The TIA is provided in Appendix C and contains a more detailed analysis of the proposal against the E5.0 and E6.0 Code provisions of the Scheme; and
- i) No specific traffic advice was received from Council other than to provide a Traffic Impact Assessment for the proposed development.

The traffic generated by the proposal is considered to be safe and to not unreasonably impact on the efficiency of the road having due regard to all elements of Performance Criteria P3.

E5.5.2 Existing level crossings - Not Applicable

The proposed development does not impact on any existing Level Crossings.

E5.6 Development Standards

E5.6.1 Development adjacent to road and railways - Not Applicable

The proposed development is not adjacent to a category 1 or 2 road or a rail network.

E5.6.2 Road accesses and junctions

| Objective: | |
|--|---|
| <i>To ensure that the safety and efficiency of roads is not reduced by the creation of new accesses and junctions.</i> | |
| Acceptable Solution | Performance Criteria |
| A1 <i>No new access or junction to roads in an area subject to a speed limit of more than 60km/h.</i> | P1 <i>For roads in an area subject to a speed limit of more than 60km/h, accesses and junctions must be safe and not unreasonably impact on the efficiency of the road, having regard to:</i> <i>(a) the nature and frequency of the traffic generated by the use;</i> <i>(b) the nature of the road;</i> <i>(c) the speed limit and traffic flow of the road;</i> <i>(d) any alternative access;</i> <i>(e) the need for the access or junction;</i> <i>(f) any traffic impact assessment; and</i> |

¹ <https://www.abc.net.au/news/2018-10-30/will-hobarts-population-hit-300000-within-a-decade/10432464>

² <https://www.abs.gov.au/ausstats/abs@.nsf/Latestproducts/3218>.

| | |
|--|--|
| | (g) any written advice received from the road authority. |
|--|--|

The speed limit along Fouche Ave is 50 km/hr accordingly A1 is considered as not applicable.

| Acceptable Solution | Performance Criteria |
|---|---|
| <p>A2</p> <p>No more than one access providing both entry and exit, or two accesses providing separate entry and exit, to roads in an area subject to a speed limit of 60km/h or less.</p> | <p>P2</p> <p>For roads in an area subject to a speed limit of 60km/h or less, accesses and junctions must be safe and not unreasonably impact on the efficiency of the road, having regard to:</p> <p>(a) the nature and frequency of the traffic generated by the use;</p> <p>(b) the nature of the road;</p> <p>(c) the speed limit and traffic flow of the road;</p> <p>(d) any alternative access to a road;</p> <p>(e) the need for the access or junction;</p> <p>(f) any traffic impact assessment; and</p> <p>(g) any written advice received from the road authority.</p> |

As shown by the photos in the TIA (Photograph 3.1 p6 Appendix C) there is an existing access to 75 Fouche Avenue from the road. The access strip is unsealed beyond the crossover and is shared with 77 Fouche Avenue. The existing access provides both entry and exit to the road, which has a speed limit of 50km/hr.

The proposal is considered compliant with Acceptable Solution A2.

E5.6.3 New level crossings

Not Applicable.

E5.6.4 Sight distance at accesses, junctions and level crossings

| Objective: | |
|--|---|
| <p>To ensure that accesses, junctions and level crossings provide sufficient sight distance between vehicles and between vehicles and trains to enable safe movement of traffic.</p> | |
| Acceptable Solution | Performance Criteria |
| <p>A1</p> <p>Sight distances at:</p> <p>(a) an access or junction must comply with the Safe Intersection Sight Distance shown in Table E5.1; and</p> <p>(b) rail level crossings must comply with AS1742.7 Manual of uniform traffic control devices - Railway crossings, Standards Association of Australia.</p> | <p>P1</p> <p>The design, layout and location of an access, junction or rail level crossing must provide adequate sight distances to ensure the safe movement of vehicles, having regard to:</p> <p>(a) the nature and frequency of the traffic generated by the use;</p> <p>(b) the frequency of use of the road or rail network;</p> <p>(c) any alternative access;</p> <p>(d) the need for the access, junction or level crossing;</p> <p>(e) any traffic impact assessment;</p> |

| | |
|--|--|
| | <p>(f) any measures to improve or maintain sight distance; and</p> <p>(g) any written advice received from the road or rail authority.</p> |
|--|--|

In section 6.2 *Assessment of Available Sight Distance* of the TIA (p12), *Table E5.1* of this Scheme code is assessed as not applicable to the proposal as it is understood to “[address] requirements in regard to public road intersections (including sight distances at public road junctions and public accesses)”. The proposed development does not involve a new junction or propose changes to existing public road junctions or public accesses.

However, A1 (a) makes no distinction between public and private accesses. Therefore, should Council be of a different view and *Table E5.1* is relevant, then based on the estimated sight distance at the property access, A1 (a) is not met and the proposal would need to be assessed against P1. As the proposed development does not involve a rail crossing A1 (b) is not applicable.

An assessment against the sub-clauses of Performance Criteria P1 is as follows:

- a) The estimated increase in traffic for the shared access is estimated likely to be in the order of 100 vehicles per day and 10 vehicles per hour during peak hour periods. Vehicles will predominantly be sedans and passenger vehicles, postal delivery vehicles (motorcycles and/or small vans), with weekly B99 garbage collection vehicle;
- b) The estimated “daily passing traffic volume along Fouche Avenue past the development site is around 600-800 vehicles per day, with around 10% of this passing traffic occurring during peak hour periods” (p8 TIA). Traffic generation from the proposal in context of the existing traffic on Fouche Avenue (including a 10 years growth allowance), will still be well below practical capacity of the road network to accommodate conflicting traffic (p11 TIA);
- c) There are no alternative accesses to the subject site;
- d) The access is existing and will require minor changes to the “gutter crossover to the development” (p15 TIA). Advice has been received from Council that this can be dealt with via a planning permit condition and subsequent “works in road reserve” application and works permit;
- e) The TIA provided in Appendix C and contains a more detailed analysis of the proposal against the E5.0 and E6.0 Code provisions of the Scheme
- f) Sight distances have been measured as ranging from 68m to 150m and are considered “sufficient for the speed environment” (p15 TIA). The “vegetation in the nature strip on the eastern side of the driveway to number 73 Fouche Avenue [Duval Drive] is starting to obstruct the view to the east for motorists entering Fouche Avenue”... “it is recommended Council takes steps to have the vegetation addressed so that it does not become a safety problem” (p15 TIA).
- g) Not applicable - the proposal does not involve a rail network.

The design, layout and location of the access is considered to provide adequate sight distance to ensure the safe movement of vehicles having due regard to all elements of Performance Criteria P1.

4.3 E 6.0 Parking and Access Code

E 6.6 Use Standards

E6.6.1 Number of Car Parking Spaces

| Objective | |
|--|---|
| <p>To ensure that:</p> <p>(a) there is enough car parking to meet the reasonable needs of all users of a use or development, taking into account the level of parking available on or outside of the land and the access afforded by other modes of transport.</p> <p>(b) a use or development does not detract from the amenity of users or the locality by:</p> <p style="padding-left: 40px;">(i) preventing regular parking overspill;</p> <p style="padding-left: 40px;">(ii) minimising the impact of car parking on heritage and local character.</p> | |
| Acceptable Solution | Performance Criteria |
| <p>A1</p> <p>The number of on-site car parking spaces must be:</p> <p>(a) no less than the number specified in Table E6.1;</p> <p>except if:</p> <p style="padding-left: 40px;">(i) the site is subject to a parking plan for the area adopted by Council, in which case parking provision (spaces or cash-in-lieu) must be in accordance with that plan;</p> | <p>P1</p> <p>The number of on-site car parking spaces must be sufficient to meet the reasonable needs of users, having regard to all of the following:</p> <p>(a) car parking demand;</p> <p>(b) the availability of on-street and public car parking in the locality;</p> <p>(c) the availability and frequency of public transport within a 400m walking distance of the site;</p> <p>(d) the availability and likely use of other modes of transport;</p> <p>(e) the availability and suitability of alternative arrangements for car parking provision;</p> <p>(f) any reduction in car parking demand due to the sharing of car parking spaces by multiple uses, either because of variation of car parking demand over time or because of efficiencies gained from the consolidation of shared car parking spaces;</p> <p>(g) any car parking deficiency or surplus associated with the existing use of the land;</p> <p>(h) any credit which should be allowed for a car parking demand deemed to have been provided in association with a use which existed before the change of parking requirement, except in the case of substantial redevelopment of a site;</p> <p>(i) the appropriateness of a financial contribution in lieu of parking towards the cost of parking facilities or other transport facilities, where such facilities exist or are planned in the vicinity;</p> <p>(j) any verified prior payment of a financial contribution in lieu of parking for the land;</p> <p>(k) any relevant parking plan for the area adopted by Council;</p> <p>(l) the impact on the historic cultural heritage significance of the site if subject to the Local Heritage Code;</p> |

The proposal includes fifteen (15) multiple dwellings each comprising 3 bedrooms. The proposal provides for a total of thirty five (35) off street car parking spaces, including five off street visitor car parking spaces (a).

The proposal is considered to be compliant with Acceptable Solution A1.

E6.6.2 Number of Car Parking Spaces for People with a Disability

| Objective: | |
|--|--|
| <i>To ensure that a use or development provides sufficient accessible car parking for people with a disability.</i> | |
| Acceptable Solution | Performance Criteria |
| A1 <i>Car parking spaces provided for people with a disability must:</i> <i>(a) satisfy the relevant provisions of the Building Code of Australia;</i> <i>(b) be incorporated into the overall car park design;</i> <i>(c) be located as close as practicable to the building entrance.</i> | P1 <i>No Performance Criteria.</i> |

The proposal is for 15 multiple dwellings, which are categorised in the Building Code of Australia as either Class 1a or Class 2 buildings. The BCA does not require car parking spaces to be provided for people with a disability for either class of building. Accordingly, this use standard is not applicable to the development.

E6.6.3 Number of Motorcycle Parking Spaces -

| Objective: | |
|--|---|
| <i>To ensure enough motorcycle parking is provided to meet the needs of likely users of a use or development.</i> | |
| Acceptable Solution | Performance Criteria |
| A1 <i>The number of on-site motorcycle parking spaces provided must be at a rate of 1 space to each 20 car parking spaces after the first 19 car parking spaces except if bulky goods sales, (rounded to the nearest whole number). Where an existing use or development is extended or intensified, the additional number of motorcycle parking spaces provided must be calculated on the amount of extension or intensification, provided the existing number of motorcycle parking spaces is not reduced.</i> | P1 <i>The number of on-site motorcycle parking spaces must be sufficient to meet the needs of likely users having regard to all of the following, as appropriate:</i> <i>(a) motorcycle parking demand;</i> <i>(b) the availability of on-street and public motorcycle parking in the locality;</i> <i>(c) the availability and likely use of other modes of transport;</i> <i>(d) the availability and suitability of alternative arrangements for motorcycle parking provision.</i> |

The proposal includes the provision of 35 off street parking spaces, but no specific provisions are made for on-site motorcycle parking spaces, hence Acceptable Solution A1 is not met and the Performance Criteria P1 must be considered.

An assessment against the sub-elements of Performance Criteria P1 follows:

- a) Each dwelling is provided with dedicated parking for two cars. In addition, there is secure private space associated with each dwelling should residents have motorcycles instead of, or in addition to cars. The available secure areas associated with each dwelling are considered likely to meet any requirement for motorcycle parking

requirements. Visitors to the site are likely to be visiting specific residents and therefore it is reasonable to expect that visiting motorcyclists could use the dedicated visitor parking facilities, or, if these facilities are occupied park, their motorcycles the secure private space associated with each dwelling;

- b) The development site is an internal lot and although there is on-street parking available, it is considered likely that visitors will enter the site and park as outlined above;
- c) As detailed in the TIA (p9) the availability of Metro Tasmania bus services and the proximity of bus stops “means that public transport will be a viable alternative for some of the trips generated by the development”;
- d) Refer to the response to a) above.

The number of on-site motorcycle parking spaces is considered sufficient to meet the needs of likely uses having due regard to all sub-elements of Performance Criteria P1.

E6.6.4 Number of Bicycle Parking Spaces - Not Applicable

Table E6.2 has no requirements in the Residential Use Class for multiple dwellings. Accordingly, this use standard is not applicable to the development.

E 6.7 Development Standards

E6.7.1 Number of Vehicular Accesses

| Objective | |
|--|---|
| <p><i>To ensure that:</i></p> <p><i>(a) safe and efficient access is provided to all road network users, including, but not limited to: drivers, passengers, pedestrians, and cyclists, by minimising:</i></p> <ul style="list-style-type: none"> <i>(i) the number of vehicle access points; and</i> <i>(ii) loss of on-street car parking spaces;</i> <p><i>(b) vehicle access points do not unreasonably detract from the amenity of adjoining land uses;</i></p> <p><i>(c) vehicle access points do not have a dominating impact on local streetscape and character.</i></p> | |
| Acceptable Solution | Performance Criteria |
| <p>A1</p> <p><i>The number of vehicle access points provided for each road frontage must be no more than 1 or the existing number of vehicle access points, whichever is the greater.</i></p> | <p>P1</p> <p><i>The number of vehicle access points for each road frontage must be minimised, having regard to all of the following:</i></p> <p><i>(a) access points must be positioned to minimise the loss of on-street parking and provide, where possible, whole car parking spaces between access points;</i></p> <p><i>(b) whether the additional access points can be provided without compromising any of the following:</i></p> <ul style="list-style-type: none"> <i>(i) pedestrian safety, amenity and convenience;</i> <i>(ii) traffic safety;</i> <i>(iii) residential amenity on adjoining land;</i> <i>(iv) streetscape;</i> <i>(v) cultural heritage values if the site is subject to the Local Historic Heritage Code;</i> |

| | |
|--|---|
| | (vi) the enjoyment of any 'al fresco' dining or other outdoor activity in the vicinity. |
|--|---|

There is an existing access and crossover to the site and the proposal will retain this as the vehicle access point to Fouche Ave.

The proposal is considered compliant with Acceptable Solution A1.

E6.7.2 Design of Vehicular Accesses

| Objective | |
|--|---|
| <i>To ensure safe and efficient access for all users, including drivers, passengers, pedestrians and cyclists by locating, designing and constructing vehicle access points safely relative to the road network.</i> | |
| Acceptable Solution | Performance Criteria |
| A1 <i>Design of vehicle access points must comply with all of the following:</i> <i>(a) in the case of non-commercial vehicle access; the location, sight distance, width and gradient of an access must be designed and constructed to comply with section 3 - "Access Facilities to Off-street Parking Areas and Queuing Areas" of AS/NZS 2890.1:2004 Parking Facilities Part 1: Off-street car parking;</i> <i>(b) in the case of commercial vehicle access; the location, sight distance, geometry and gradient of an access must be designed and constructed to comply with all access driveway provisions in section 3 "Access Driveways and Circulation Roadways" of AS2890.2 - 2002 Parking facilities Part 2: Off-street commercial vehicle facilities.</i> | P1 <i>Design of vehicle access points must be safe, efficient and convenient, having regard to all of the following:</i> <i>(a) avoidance of conflicts between users including vehicles, cyclists and pedestrians;</i> <i>(b) avoidance of unreasonable interference with the flow of traffic on adjoining roads;</i> <i>(c) suitability for the type and volume of traffic likely to be generated by the use or development;</i> <i>(d) ease of accessibility and recognition for users.</i> |

The access driveway design is considered on p15 to 16 of the TIA and will require minor changes to the "gutter crossover to the development". Advice has been received from Council that this can be dealt with via a planning permit condition and subsequent "works in road reserve" application and works permit.

The TIA provides additional information with regards to how the proposal will provide for safe and efficient access including for the users of the proposed development and the existing users on surrounding properties, including occupants of 77 Fouche Ave.

Acceptable Solution A1 (b) is not applicable as the access is considered a non-commercial vehicle access.

The proposal is considered to comply with the applicable elements of Acceptable Solution A1.

E6.7.3 Vehicular Passing Areas along an Access

| Objective | |
|--|--|
| <i>To ensure that:</i> | |
| <i>(a) the design and location of access and parking areas creates a safe environment for users by minimising the potential for conflicts involving vehicles, pedestrians and cyclists;</i> <i>(b) use or development does not adversely impact on the safety or efficiency of the road network as a result of delayed turning movements into a site.</i> | |
| Acceptable Solution | Performance Criteria |
| A1 <i>Vehicular passing areas must:</i> <i>(a) be provided if any of the following applies to an access:</i> | P1 <i>Vehicular passing areas must be provided in sufficient number, dimension and siting so that the access is safe, efficient and convenient, having regard to all of the following:</i> |

| | |
|--|--|
| <p>(i) it serves more than 5 car parking spaces;</p> <p>(ii) is more than 30 m long;</p> <p>(iii) it meets a road serving more than 6000 vehicles per day;</p> <p>(b) be 6 m long, 5.5 m wide, and taper to the width of the driveway;</p> <p>(c) have the first passing area constructed at the kerb;</p> <p>(d) be at intervals of no more than 30 m along the access.</p> | <p>(a) avoidance of conflicts between users including vehicles, cyclists and pedestrians;</p> <p>(b) avoidance of unreasonable interference with the flow of traffic on adjoining roads;</p> <p>(c) suitability for the type and volume of traffic likely to be generated by the use or development;</p> <p>(d) ease of accessibility and recognition for users.</p> |
|--|--|

As the proposed driveway serves more than 5 car parking spaces and is more than 30m long, vehicle passing areas are therefore required. As shown in Location Plan, the access strip and main eastern portion of the internal driveway are not specifically shown with passing bays and accordingly the proposal is assessed against Performance Criteria P1. The relevant aspects are considered in detail in pages 15 to 19 of the TIA, including but not limited to the following:

- a) The likely vehicle movements is anticipated to be low with “an average of not more than 1 vehicle every seven minutes” and “the number of pedestrians or cyclists expected to use the circulation road will also be relatively low, expected at no more than the level of vehicle activity. Vehicles and pedestrians/cyclists will therefore meet quite infrequently along the circulation road. The proposed driveway and circulation road widths are considered sufficient for expected level of traffic and pedestrian activity...in a shared zone environment....[vehicle] speed at not more than 20km/hr and clear forward sight lines” (p19);
- b) “Pedestrian sight triangles at the junction of the circulation roadway with Fouche Avenue will be more than required by AS28901”; further information as to the sight lines at the access strip into the development site proper are provided on p16 of the TIA, and include recommendations for appropriate fencing to maintain appropriate levels of visibility.
- c) “Design of the circulation road grade and width with the provision of passing of vehicles is quite sufficient for the low traffic generation by the development. This includes days when there are garbage bins placed along the circulation road” (p19 TIA);
- d) The driveway and cross over will be readily discernible to pedestrians, cyclists and motorists. “The splayed fence on the western side (left of existing vehicles), 6m wide circulation road plus the 2.3m wide nature strip ensure good sight lines between exiting drivers and pedestrians on Fouche Avenue footpath” (p 18 TIA).

It is considered that the proposal provides for sufficient areas, suitably dimensioned and sited so that the access is safe, efficient and convenient having due regard to all elements of Performance Criteria P1.

E 6.7.4 On-Site Turning

| | |
|--|---|
| Objective | |
| <i>To ensure safe, efficient and convenient access for all users, including drivers, passengers, pedestrians and cyclists, by generally requiring vehicles to enter and exit in a forward direction.</i> | |
| Acceptable Solution | Performance Criteria |
| <p>A1</p> <p><i>On-site turning must be provided to enable vehicles to exit a site in a forward direction, except where the access complies with any of the following:</i></p> <p>(a) it serves no more than two dwelling units;</p> <p>(b) it meets a road carrying less than 6000 vehicles per day.</p> | <p>P1</p> <p><i>On-site turning may not be required if access is safe, efficient and convenient, having regard to all of the following:</i></p> <p>(a) avoidance of conflicts between users including vehicles, cyclists, dwelling occupants and pedestrians;</p> <p>(b) avoidance of unreasonable interference with the flow of traffic on adjoining roads;</p> |

| | |
|--|---|
| | <p>(c) suitability for the type and volume of traffic likely to be generated by the use or development;</p> <p>(d) ease of accessibility and recognition for users;</p> <p>(e) suitability of the location of the access point and the traffic volumes on the road.</p> |
|--|---|

Manoeuvring Plan Sheets 1, 2 and 3 show that there is sufficient area provided on site for vehicles to manoeuvre so as to exit car parking spaces and the site in a forward direction. See also the analysis on p17 of the TIA in Appendix C.

The proposal is considered compliant with Acceptable Solution A1.

E 6.7.5 Layout of Parking Areas

| | |
|--|--|
| Objective | |
| To ensure that parking areas for cars (including assessable parking spaces), motorcycles and bicycles are located, designed and constructed to enable safe, easy and efficient use. | |
| Acceptable Solution | Performance Criteria |
| <p>A1</p> <p>The layout of car parking spaces, access aisles, circulation roadways and ramps must be designed and constructed to comply with section 2 "Design of Parking Modules, Circulation Roadways and Ramps" of AS/NZS 2890.1:2004 Parking Facilities Part 1: Off-street car parking and must have sufficient headroom to comply with clause 5.3 "Headroom" of the same Standard.</p> | <p>P1</p> <p>The layout of car parking spaces, access aisles, circulation roadways and ramps must be safe and must ensure ease of access, egress and manoeuvring on-site.</p> |

The analysis of parking area design (p18 to 19 TIA) concludes that "with all dimensions meeting the requirements of AS2890.1, the parking spaces will be compliant with AS 2890.1 and hence the planning scheme."

The proposal is considered compliant with Acceptable Solution A1.

E6.7.6 Surface Treatment of Parking Areas

| | |
|---|--|
| Objective | |
| To ensure that parking spaces and vehicle circulation roadways do not detract from the amenity of users, adjoining occupiers or the environment by preventing dust, mud and sediment transport. | |
| Acceptable Solution | Performance Criteria |
| <p>A1</p> <p>Parking spaces and vehicle circulation roadways must be in accordance with all of the following;</p> <p>(a) paved or treated with a durable all-weather pavement where within 75m of a property boundary or a sealed roadway;</p> <p>(b) drained to an approved stormwater system,</p> <p>provided that the standard of paving and drainage complies with the adopted standards of the Council.</p> | <p>P1</p> <p>Parking spaces and vehicle circulation roadways must not unreasonably detract from the amenity of users, adjoining occupiers or the quality of the environment through dust or mud generation or sediment transport, having regard to all of the following:</p> <p>(a) the suitability of the surface treatment;</p> <p>(b) the characteristics of the use or development;</p> <p>(c) measures to mitigate mud or dust generation or sediment transport.</p> |

The proposed off-street parking and vehicle circulation roadways will be concreted and drained to an approved stormwater system. Please refer to the attached Location Plan and Site and Stormwater Plan in the attached Concept Services Plan (Appendix of D).

Stage 1 of the proposed Civil plan will implement the on-site stormwater infrastructure for the entire proposal, so that run off from impervious surfaces will be collected and managed during both Stage 1 and 2 of the development.

The proposal is considered to comply with Acceptable Solution A1 (a) and (b).

E6.7.7 Lighting of Parking Areas

| Objective | |
|---|---|
| <p>To ensure parking and vehicle circulation roadways and pedestrian paths used outside daylight hours are provided with lighting to a standard which:</p> <p>(a) enables easy and efficient use; (b) promotes the safety of users; (c) minimises opportunities for crime or anti-social behaviour; and (d) prevents unreasonable light overspill impacts.</p> | |
| Acceptable Solution | Performance Criteria |
| <p>A1</p> <p>Parking and vehicle circulation roadways and pedestrian paths serving 5 or more car parking spaces, used outside daylight hours, must be provided with lighting in accordance with clause 3.1 "Basis of Design" and clause 3.6 "Car Parks" in AS/NZS 1158.3.1:2005 Lighting for roads and public spaces Part 3.1: Pedestrian area (Category P) lighting.</p> | <p>P1</p> <p>Parking and vehicle circulation roadways and pedestrian paths used outside daylight hours must be provided with lighting to a standard which satisfies all of the following:</p> <p>(a) enables easy and efficient use of the area; (b) minimises potential for conflicts involving pedestrians, cyclists and vehicles; (c) reduces opportunities for crime or anti-social behaviour by supporting passive surveillance and clear sight lines and treating the risk from concealment or entrapment points; (d) prevents unreasonable impact on the amenity of adjoining users through light overspill; (e) is appropriate to the hours of operation of the use.</p> |

The attached Landscaping Plans Sheets 1 to 3 and the Site Perspective Views 1 and 2 provide details of the proposed landscaping and outdoor lighting to the common areas of the site. Given the nature of the development the circulation road should not require the higher level of design as required by AS1185, which is a standard that applies to public road and public places. As the proposed landscaping and outdoor lighting to the common areas of the site do not comply with Acceptable Solution A1, the proposed development is assessed against the Performance Criteria P1 as follows:

- a) the proposed location of lighting in the communal area, namely at regular distances along the northern side of the main internal driveway, at either side of the entry to, centrally and at the end of each of the two lateral driveways, enables easy and efficient use of the area;
- b) the lighting is to be positioned in the communal garden areas of the development and will not impinge on the shared driveway areas but rather illuminate them to minimise potential conflict between pedestrians, cyclists and vehicles;
- c) the lighting in combination with the straight layout of the internal circulation driveways is considered to reduce opportunities for crime or anti-social behaviour, maintain clear sight lines, reduce risk from concealment or entrapment and provide opportunities for passive surveillance, especially from the upper storey of Units 1 to 8 and the downstairs living areas of Units 9 to 11;
- d) the proposed lighting will be designed to provide baffled illumination to the communal areas, based on the requirements of the Building Code of Australia (p18 TIA); and,
- e) will be able to be controlled via timers to maintain appropriate levels of illumination at all times.

It is considered that based on the above the parking and vehicle circulation roadways and pedestrian paths relied on for use outside daylight hours would be designed to a standard that satisfies all elements of Performance Criteria P1.

E6.7.8 Landscaping of Parking Areas

| Objective | |
|--|---|
| <p><i>To ensure that large parking and circulation areas are landscaped to:</i></p> <p><i>(a) relieve the visual impact on the streetscape of large expanses of hard surfaces;</i></p> <p><i>(b) screen the boundary of car parking areas to soften the amenity impact on neighbouring properties;</i></p> <p><i>(c) contribute to the creation of vibrant and liveable places;</i></p> <p><i>(d) reduce opportunities for crime or anti-social behaviour by maintaining clear sightlines.</i></p> | |
| Acceptable Solution | Performance Criteria |
| <p>A1</p> <p><i>Landscaping of parking and circulation areas must be provided where more than 5 car parking spaces are proposed. This landscaping must be no less than 5 percent of the area of the car park, except in the Central Business Zone where no landscaping is required.</i></p> | <p>P1</p> <p><i>Landscaping of parking and circulation areas accommodating more than 5 cars must satisfy all of the following:</i></p> <p><i>(a) relieve the visual impact on the streetscape of large expanses of hard surfaces;</i></p> <p><i>(b) soften the boundary of car parking areas to reduce the amenity impact on neighbouring properties and the streetscape;</i></p> <p><i>(c) reduce opportunities for crime or anti-social behaviour by maintaining passive surveillance opportunities from nearby public spaces and buildings.</i></p> |

The proposed landscaping, for the common areas of the site, are shown in the attached Landscaping Plans Sheet 1 to 3. The shared internal circulation driveway area is estimated to occupy an area of approximately 890m², of which 65m² is associated with the 5 visitor car parks; 44.5m² and 3.25m² respectively equate to 5% of these areas. Although the landscaped area is not specifically dimensioned on the plans based on the scale of the plans it is demonstrated that the proposed landscaping will occupy more than the minimum requirement of 5%.

The proposal is considered compliant with Acceptable Solution A1.

E6.7.9 Design of Motorcycle Parking Areas - Not Applicable

| Objective | |
|--|---|
| <p><i>To ensure that motorcycle parking areas are located, designed and constructed to enable safe, easy and efficient use.</i></p> | |
| Acceptable Solution | Performance Criteria |
| <p>A1</p> <p><i>The design of motorcycle parking areas must comply with all of the following:</i></p> <p><i>(a) be located, designed and constructed to comply with section 2.4.7 "Provision for Motorcycles" of AS/NZS 2890.1:2004 Parking Facilities Part 1: Off-street car parking;</i></p> <p><i>(b) be located within 30 m of the main entrance to the building.</i></p> | <p>P1</p> <p><i>The design of motorcycle parking areas must provide safe, obvious and easy access for motorcyclists having regard to all of the following:</i></p> <p><i>(a) providing clear sightlines from the building or the public road to provide adequate passive surveillance of the parking facility and the route from the parking facility to the building;</i></p> <p><i>(b) avoiding creation of concealment points to minimise the risk.</i></p> |

The proposal does not include any dedicated provisions for motorcycle parking as outlined in the earlier response to *clause E6.6.3 Number of Motorcycle Parking Spaces*. Accordingly this clause is considered as not applicable to the development.

E6.7.10 Design of Bicycle Parking Facilities

Not Applicable.

E6.7.11 Bicycle End of Trip Facilities

Not Applicable.

E6.7.12 Siting of Car Parking

Not Applicable within the General Residential Zone.

E6.7.13 Facilities for Commercial Vehicles

| Objective | |
|---|---|
| <i>To ensure that facilities for commercial vehicles are provided on site, as appropriate.</i> | |
| Acceptable Solution | Performance Criteria |
| <p>A1</p> <p><i>Commercial vehicle facilities for loading, unloading or manoeuvring must be provided on-site in accordance with Australian Standard for Off-street Parking, Part 2 : Commercial. Vehicle Facilities AS 2890.2:2002, unless:</i></p> <p><i>(a) the delivery of all inward bound goods is by a single person from a vehicle parked in a dedicated loading zone within 50 m of the site;</i></p> <p><i>(b) the use is not primarily dependent on outward delivery of goods from the site.</i></p> | <p>P1</p> <p><i>Commercial vehicle arrangements for loading, unloading or manoeuvring must not compromise the safety and convenience of vehicular traffic, cyclists, pedestrians and other road users.</i></p> |

The site is not a commercial site, and although there is sufficient on street parking for delivery of inbound goods by a single person within 50 metres of the site; it is not via a dedicated loading zone. Therefore, A1 (a) is not met and the Performance Criteria P1 must be considered. It is noted that the site is not primarily dependent on the outward delivery of goods from the site and therefore A1 (b) is considered not applicable to the development.

The proposal design as shown on the attached Manoeuvring Plan Sheet 1 shows that provision has been made for a Medium Rigid Vehicle (MRV) garbage vehicle to enter the site, perform a three point turn in order to collect bins from the communal collection area, and then exit the site in a forward direction, compliant with AS 2890.1 (p19 TIA). Similarly, smaller commercial vans (B99) are also provided for.

The Concept Services Report (Appendix D) provides further information and sweep paths (Section 5, p12) for the commercial vehicles that may be required to service the on site stormwater infrastructure and provides details of proposed maintenance arrangements.

Therefore, the development is considered to provide appropriate facilities for commercial vehicles for manoeuvring on site so as to not compromise the safety and convenience of vehicular traffic, cyclists, pedestrians and other road users.

The proposal is considered to satisfy Performance Criteria P1.

E6.7.14 Access to a Road

| | |
|---|--|
| Objective | |
| To ensure that access to the road network is provided appropriately. | |
| Acceptable Solution | Performance Criteria |
| <i>A1</i> <i>Access to a road must be in accordance with the requirements of the road authority.</i> | <i>P1</i> <i>No Performance Criteria.</i> |

The existing crossover to the shared access strip is considered to be generally in conformance with the requirements of the road authority. The previous comments with respect to clause E6.7.2 and the notations on Location Plan should be noted, which articulate the proposed upgrading of the existing apron and crossover to be widened in accordance with LGAT Tasmanian Standard Drawings TSD-R09 and TSD- E01.

The proposal is considered compliant with Acceptable Solution A1.

4.4 E 7.0 Stormwater Management Code

This code applies to all development requiring management of stormwater.

E7.7 Development Standards

Supporting information for the following clauses is contained in the CSR in Appendix D.

E7.7.1 Stormwater Drainage and Disposal

| Objective: | |
|---|---|
| <i>To ensure that stormwater quality and quantity is managed appropriately.</i> | |
| Acceptable Solution | Performance Criteria |
| A1 <i>Stormwater from new impervious surfaces must be disposed of by gravity to public stormwater infrastructure.</i> | P1 <i>Stormwater from new impervious surfaces must be managed by any of the following:</i> <i>(a) disposed of on-site with soakage devices having regard to the suitability of the site, the system design and water sensitive urban design principles</i> <i>(b) collected for re-use on the site;</i> <i>(c) disposed of to public stormwater infrastructure via a pump system which is designed, maintained and managed to minimise the risk of failure to the satisfaction of the Council.</i> |

As shown on the Site and Stormwater Plan provided within the CSR, stormwater from the development will be directed into the existing Council stormwater infrastructure on the land to the west of the subject site.

The proposal is considered compliant with Acceptable Solution A1.

| Acceptable Solution | Performance Criteria |
|--|---|
| A2 <i>A stormwater system for a new development must incorporate water sensitive urban design principles R1 for the treatment and disposal of stormwater if any of the following apply:</i> <i>(a) the size of new impervious area is more than 600 m²;</i> <i>(b) new car parking is provided for more than 6 cars;</i> <i>(c) a subdivision is for more than 5 lots.</i> | P2 <i>A stormwater system for a new development must incorporate a stormwater drainage system of a size and design sufficient to achieve the stormwater quality and quantity targets in accordance with the State Stormwater Strategy 2010, as detailed in Table E7.1 unless it is not feasible to do so.</i> |

The proposal will provide new impervious surfaces greater than 660m² and new car parking for more than 6 cars, thereby requiring incorporation of water sensitive urban design principles in any stormwater management solution.

The proposal includes mechanical treatment of stormwater to achieve the stormwater quality and quantity targets of the State Stormwater Strategy. Details are provided on pages 5 of the CSR (Appendix D) which concludes that the proposed installation of SPEL Hydrosystem 800 and SPEL Stormsacks can achieve the required targets of *Table E7.1*.

The proposal is considered to satisfy Performance Criteria P2.

| Acceptable Solution | Performance Criteria |
|----------------------------|--|
| A3 | P3 <i>No Performance Criteria.</i> |

A minor stormwater drainage system must be designed to comply with all of the following:

(a) be able to accommodate a storm with an ARI of 20 years in the case of non-industrial zoned land and an ARI of 50 years in the case of industrial zoned land, when the land serviced by the system is fully developed;

(b) stormwater runoff will be no greater than pre-existing runoff or any increase can be accommodated within existing or upgraded public stormwater infrastructure.

The proposal incorporates a minor stormwater drainage system and must comply with A3 (a) and (b). The development is located within a general residential zone so that only the ARI of 20 years needs to be considered. Page 6 of the CSR (Appendix D) provides an analysis of the stormwater runoff generated by the proposed development and has identified the need to upgrade the existing Council stormwater main on the adjoining land. With the proposed upgrade it is considered that the proposal is able to achieve compliance with A3 (a) and A3 (b) for an ARI of 20 years storm event.

The proposal is considered compliant with Acceptable Solution A3.

| Acceptable Solution | Performance Criteria |
|--|--|
| A4 <i>A major stormwater drainage system must be designed to accommodate a storm with an ARI of 100 years.</i> | P4 <i>No Performance Criteria.</i> |

The proposal would not affect a major drainage system and accordingly this clause is considered not applicable to the proposal.

As shown within Appendix D1 the stormwater infrastructure for the entire proposal will be provided as part of Stage 1, so that the run off from impervious surfaces will be collected and managed during both Stage 1 and Stage 2 of the proposed development.

4.5 E11.0 Waterway and Coastal Protection Code

As shown on the attached Location Plan, proposed Units 12 to 15 will be partially located within the Waterway and Coastal Protection Overlay Area. The development has been specifically designed to avoid any works in the Future Coastal Refugia Area. The proposal includes minor Utilities works, namely an upgrade to the public stormwater infrastructure, which is located within the Future Coastal Refugia Area. However, such works are considered exempt from the Code by virtue of Clause E11.4.1 (l) *works within 2 m of existing infrastructure including roads, tracks, footpaths, cycle paths, drains, sewers, pipelines and telecommunications facilities for the maintenance, repair, upgrading or replacement of such infrastructure.*

To enable an assessment against the Code a Natural Values Assessment by North Barker Ecosystem Service, dated 12 August 2020 (the NVA) is included in Appendix E. Based on the expert report, the proposal is considered to require assessment against *Clause E11.7.1 Building and Works*, as follows.

| | |
|--|--|
| Objective: | |
| <i>To ensure that buildings and works in proximity to a waterway, the coast, identified climate change refugia and potable water supply areas will not have an unnecessary or unacceptable impact on natural values.</i> | |
| Acceptable Solution | Performance Criteria |
| A1 <i>Building and works within a Waterway and Coastal Protection Area must be within a building area on a plan of subdivision approved under this planning scheme.</i> | P1 <i>Building and works within a Future Coastal Refugia Area must satisfy all of the following:</i> <i>(a) allow for the landward colonisation of wetlands and other coastal habitats from adjacent areas;</i> <i>(b) not be landfill;</i> <i>(c) avoid creation of barriers or drainage networks that would prevent future tidal inundation;</i> <i>(d) ensure coastal processes of deposition or erosion can continue to occur;</i> <i>(e) avoid or mitigate impact on natural values;</i> <i>(f) avoid or mitigate impact on littoral vegetation;</i> <i>(g) works are undertaken generally in accordance with 'Wetlands and Waterways Works Manual' (DPIWE, 2003) and "Tasmanian Coastal Works Manual" (DPIPWE, Page and Thorp, 2010).</i> |

The proposed building and works are not located within a building area on a plan of subdivision and accordingly the application needs to be considered against Performance Criteria P1. An assessment against the sub-clauses of this clause is provided on pages 10 to 11 of the NVA in Appendix E. A Soil and Water Management Plan is provided in Appendix B. The NVA concludes that the site is highly disturbed and contains no natural values of conservation significance. Therefore, the proposal meets the relevant Performance Criteria of the Code (p3 NVA).

Accordingly the proposal is considered to satisfy all applicable elements of Performance Criteria P1.

| | |
|--|--|
| Acceptable Solution | Performance Criteria |
| A2 <i>Building and works within a Future Coastal Refugia Area must be within a building area on a plan of subdivision approved under this planning scheme.</i> | P2 <i>Building and works within a Future Coastal Refugia Area must satisfy all of the following:</i> <i>(a) allow for the landward colonisation of wetlands and other coastal habitats from adjacent areas;</i> |

| | |
|--|---|
| | <p>(b) not be landfill;</p> <p>(c) avoid creation of barriers or drainage networks that would prevent future tidal inundation;</p> <p>(d) ensure coastal processes of deposition or erosion can continue to occur;</p> <p>(e) avoid or mitigate impact on natural values;</p> <p>(f) avoid or mitigate impact on littoral vegetation;</p> <p>(g) works are undertaken generally in accordance with 'Wetlands and Waterways Works Manual' (DPIWE, 2003) and "Tasmanian Coastal Works Manual" (DPIPWE, Page and Thorp, 2010).</p> |
|--|---|

The proposal has been specifically designed to avoid the need for works within the Future Coastal Refugia Area mapped on the site. Accordingly, it is considered that this provision is not applicable to the proposal.

| Acceptable Solution | Performance Criteria |
|--|--|
| <p>A3</p> <p><i>Buildings and works within a Potable Water Supply Area must be within a building area on a plan of subdivision approved under this planning scheme.</i></p> | <p>P3</p> <p><i>Buildings and works within a Potable Water Supply Area must satisfy all of the following:</i></p> <p>(a) ensure no detriment to potable water supplies;</p> <p>(b) be in accordance with the requirements of the water and sewer authority.</p> |

The proposal is not located within a Potable Water Supply Area. Accordingly, it is considered that this provision is not applicable to the proposal.

| Acceptable Solution | Performance Criteria |
|--|--|
| <p>A4</p> <p><i>Development must involve no new stormwater point discharge into a watercourse, wetland or lake.</i></p> | <p>P4</p> <p><i>Development involving a new stormwater point discharge into a watercourse, wetland or lake must satisfy all of the following:</i></p> <p>(a) risk of erosion and sedimentation is minimised;</p> <p>(b) any impacts on natural values likely to arise from erosion, sedimentation and runoff are mitigated and managed;</p> <p>(c) potential for significant adverse impact on natural values is avoided.</p> |

The proposal is designed to direct stormwater into the existing Council infrastructure on the adjoining property to the west (refer to Appendix A in the CSR). No new no stormwater discharges into a watercourse, or wetlands are proposed.

The proposal is considered compliant with Acceptable Solution A4.

4.6 E 15.0 Inundation Prone Areas Code

The proposed development will occur on land identified within the Coastal Inundation Medium and Low Hazard Areas (see Figures 3 and 4). Accordingly, the proposal must be considered against the provisions of the Code as per *Clause E15.2.1 (a) (i)*. Furthermore, parts of the site are proposed to be filled to AHD 2.00, except for areas identified to be within the Waterway and Coastal Protection Area and Future Coastal Refugia Area as shown on Location Plan.

As per clause *E15.5 Application Requirements* an Overland Flow Assessment was undertaken by JMG Engineers and Planners and is included as Appendix B to the Gandy and Roberts CSR (Appendix D). It is noted that all dwellings are proposed to have a minimum floor height of 2.5m AHD. The attached Coastal Vulnerability Assessment (CVA) prepared by GEO-Environmental Solutions provides specific technical details to enable an assessment against relevant provisions of the Code, and is provided in Appendix F.

E15.6 Use Standard

The development site is vacant land and this clause is considered not applicable.

E 15.7.2 Coastal Inundation Medium Hazard Areas

A table provided within the CVA (*Table 1 Summary of Site Areas Falling within Potential Coastal Vulnerability Zone*, p11) identifies that the proposed development is not within the medium risk overlay, and accordingly it is considered that this clause is not applicable.

It is noted that the proposed works within the Crown Land are located within the Medium Hazard are, however as the development is not for a building, these clause provisions are not triggered.

E15.7.3 Coastal Inundation Low Hazard Areas

The table referred to above within the CVA (*Table 1 Summary of Site Areas Falling within Potential Coastal Vulnerability Zone*, p11) identifies that 70% of the site is within the low risk overlay.

| Objective: | |
|--|---|
| <i>To ensure that low risk from coastal inundation is appropriately managed and takes into account the use of the buildings.</i> | |
| Acceptable Solution | Performance Criteria |
| A1 | P1 |
| A new habitable building must comply with the following: (a) floor level no lower than the Minimum Level for the Coastal Inundation Low Hazard Area in Table E15.1; | A new habitable building must satisfy all of the following: (a) risk to users of the site, adjoining or nearby land is acceptable; (b) risk to adjoining or nearby property or public infrastructure is acceptable; (c) risk to buildings and other works arising from wave run-up is adequately mitigated through siting, structural or design methods; (d) need for future remediation works is minimised; (e) access to the site will not be lost or substantially compromised by expected future sea level rise either on or off-site; |

| | |
|--|---|
| | <i>(f) provision of any developer contribution required pursuant to policy adopted by Council for coastal protection works.</i> |
|--|---|

The proposed development is for 15 Multiple Dwellings, which will have floor levels no lower than the relevant Minimum Level for the Coastal Inundation Low Hazard Area provided in *Table E15.1*. 2.5m is the minimum level shown in *Table E15.1* for Old Beach, for an AEP1pct 2100 event. As noted above, all dwellings are proposed to have a minimum floor height of 2.5m AHD. Refer also to the Elevation Plans for each proposed multiple dwelling in Appendix B.

The proposed development is compliant with Acceptable Solution A1.

| Acceptable Solution | Performance Criteria |
|---|--|
| A2 <i>An extension to a habitable building must comply with either of the following:</i> <i>(a) floor level of habitable rooms is no lower than the Minimum Level for the Coastal Inundation Low Hazard Area in Table E15.1;</i> <i>(b) floor area is no more than 60 m2.</i> | P2 <i>An extension to a habitable building must satisfy all of the following:</i> <i>(a) floor level is no lower than existing floor level;</i> <i>(b) risk to users of the site, adjoining or nearby land is not increased;</i> <i>(c) risk to adjoining or nearby property or public infrastructure is not increased.</i> |

The proposal is not for an extension to a habitable building. Accordingly, it is considered that A2 is not applicable to the development.

| Acceptable Solution | Performance Criteria |
|---|--|
| A3 <i>A non-habitable building, an outbuilding or a Class 10b building under the Building Code of Australia, must have a floor area no more than 60 m2.</i> | P3 <i>A non-habitable building must satisfy all of the following:</i> <i>(a) risk to users of the site, adjoining or nearby land is acceptable;</i> <i>(b) risk to adjoining or nearby property or public infrastructure is acceptable;</i> <i>(c) risk to buildings and other works arising from wave run-up is adequately mitigated through siting, structural or design methods;</i> <i>(d) need for future remediation works is minimised;</i> <i>(e) provision of any developer contribution required pursuant to policy adopted by Council for coastal protection works,</i> <i>except if it is development dependent on a coastal locationR1.</i> |

The proposal is not for a non-habitable building, an outbuilding or a Class 10b building. Accordingly, it is considered that A3 is not applicable to the proposal.

E15.7.4 Riverine Inundation Hazard Areas - Not Applicable

This clause is considered not applicable as it is considered more appropriate to assess the development against the provisions of *clause E15.7.3 Coastal Inundation Low Hazard Areas*, as per the preceding section of this report.

E15.7.5 Riverine, Coastal Investigation Area, Low, Medium, High Inundation Hazard Areas

| | |
|---|--|
| Objective: | |
| <i>(a) To ensure that landfill and mitigation works do not unreasonably increase the risk from riverine, watercourse and inland flooding, and risk from coastal inundation.</i> | |
| <i>(b) To ensure that the risk to waste water management from riverine, watercourse and inland flooding, and risk from coastal inundation is appropriately managed.</i> | |
| Acceptable Solution | Performance Criteria |
| A1 | P1 |
| <i>For landfill, or solid walls greater than 5 m in length and 0.5 m in height, there is no acceptable solution.</i> | <i>Landfill, or solid walls greater than 5 m in length and 0.5 m in height, must satisfy all of the following:</i> <i>(a) no adverse affect on flood flow over other property through displacement of overland flows;</i> <i>(b) the rate of stormwater discharge from the property must not increase;</i> <i>(c) stormwater quality must not be reduced from pre-development levels.</i> |

Parts of the development site are proposed to be filled to AHD 2.00, except for areas identified as within the Waterway and Coastal Protection Area and Future Coastal Refugia Area as shown on the Location Plan. The site elevation ranges from 1.3m (southern boundary) to 3m (northern boundary) and the site level will generally be increased to 2m north of the Units 12 to 15. Elevation diagrams in Appendix B provide details of Natural Ground Level versus Fill Ground Level, which indicates that in some areas of the site the fill will be greater than 0.5m. In addition, the southern walls below floor level of Units 12 to 15 inclusive will be greater than 5m in length.

Therefore, the proposal is not compliant with Acceptable Solution A1 and the Performance Criteria P1 must be considered, as follows:

a) The Overland Flow Assessment (p3 of Appendix B of the CSR) states that the “impact on coastal processes resulting from fill are considered negligible. The area of new fill relative to the area of water in the river, for any cross-section through the subject site is trivial, there will be no discernible increase in water height due to fill”.

Similarly the CVA (Appendix E) identifies that “there is a low risk that the proposed four units closest to the river will cause an adverse effect on flood water displacement.

The Overland Flow Assessment provided within the attached CSR (p4 of Appendix B of the CSR) analyses the overland flows post development and identifies that the changed topography will result in “increasing inundation to properties adjacent [to] the side boundaries, 77 Fouche Avenue and Duval Place...these volumes are minor relative to the intensity of the rainfall event analysed...inclusion of stormwater infrastructure dedicated to managing these flow volumes” is recommended.

The CSR (p 7) provides details of the proposed site design solutions to ensure that the additional overland flows post development are not displaced onto other properties, including:

- i. Raising the northern boundary fences of Units 1 to 4, 100mm above NGL, to maintain a permeable barrier;
- ii. The rear of the private open space of Units 1 to 4 “will be shaped to contain this flow and then direct it, via a shallow channel on the western boundary to the rear of the site”; and
- iii. The driveway on the eastern side boundary will direct overland flow to the eastern side of Unit 15...the existing surface levels...are such that the flow will generally be contained within the site.

b) The CSR (p 6) identifies that any increased runoff from the development “can be accommodated in upgraded public stormwater infrastructure”; and,

c) There is no data on the stormwater quality of the site which is currently undeveloped. The CSR (p 5) modelled the performance of the proposed stormwater system, as achieving the

requirements of the State Stormwater Strategy (please refer to the assessment against clause E7.7.1 *Stormwater Drainage and Disposal* in this report). Accordingly, it is considered that stormwater quality will not be reduced from pre-development levels.

The CVA (p17) concludes that the proposed development is within the lowest risk bounds and the development works at the site are acceptable. Based on the above, the proposal is considered to demonstrate that it is able to satisfy all elements of Performance Criteria P1.

| Acceptable Solution | Performance Criteria |
|---|---|
| A2 <i>No acceptable solution.</i> | P2 <i>Mitigation measures, if required, must satisfy all of the following:</i> <i>(a) be sufficient to ensure habitable rooms will be protected from flooding and will be able to adapt as sea levels rise;</i> <i>(b) not have a significant effect on flood flow.</i> |

The proposal does not include any mitigation measures as the building design itself ensures that habitable rooms will be protected from flooding. Accordingly, this provision is considered not applicable to the proposal.

| Acceptable Solution | Performance Criteria |
|--|---|
| A3 <i>A land application area for onsite wastewater management must comply with all of the following:</i> <i>(a) horizontal separation distance from high water mark or from the top of bank of a watercourse or lake must be no less than 100 m;</i> <i>(b) vertical separation distance from the water table must be no less than 1.5 m.</i> | P3 <i>A land application area for onsite wastewater management must satisfy all of the following:</i> <i>(a) horizontal separation distance from high water mark or from the top of bank of a watercourse or lake must satisfy all of the following:</i> <i>(i) be no less than 15 m,</i> <i>(ii) effluent must be no less than secondary treated effluent standard and applied through a subsurface land application system,</i> <i>(iii) the average gradient is no more than 16 degrees;</i> <i>(b) vertical separation distance from the water table must satisfy all of the following:</i> <i>(i) be no less than 0.6 m, (whether 'in ground' or by use of a raised bed),</i> <i>(ii) effluent must be no less than secondary treated effluent standard and applied through a subsurface land application system.</i> |

The site is fully serviced by TasWater sewer infrastructure. Accordingly, this provision is considered not applicable to the proposal.

E15.7.6 Development Dependent on Coastal Location

Not applicable as the proposed development is not dependent on a coastal location.

4.7 E 17.0 Signs Code

The Code applies to the continuous display and use of all signs as per Clause E17.2.1.

The proposal will require the provision of a street number to identify the development from Fouche Avenue. A non-illuminated sign no larger than 0.5m² is proposed to be erected on the gate to the development site at the end of the shared access strip.

A Street Number sign is an exempt sign, where the area is no more than 0.5m² (refer Table E17.1 Exempt Signs); which is also the applicable sign standard in Table E17.2. Street number signs are permitted signs in the General Residential Zone. The proposed signage is considered exempt as per clause E17.4.1 as it is a sign that is listed in Table E17.1 as exempt from requiring a permit and:

- (a) it will not be attached to any historic building fabric;
- (b) it is compliant with the sign standard in Table E17.2 and
 - (i) with respect to Clause E17.6.1 Use of Signs;
 - is a permitted sign in Table E.17.3 compliant with Acceptable Solution A1;
 - A2 is not applicable - it is a residential site;
 - The sign will not contain flashing lights, compliant with Acceptable Solution A3; and,
 - The sign will not be illuminated, compliant with A4;
 - (ii) with respect to clause E17.7.1 Standards for Signs;
 - The proposed sign complies with the sign standard in Table E.17.2 and is a permitted sign in Table E17.3, and is thereby compliant with Acceptable Solution A1;
 - A2 is not applicable - it is a residential site;
 - The sign will not obscure Statutory or Tourist Information Signs, compliant with Acceptable Solution A3; and
 - The sign will not resemble a Statutory Sign, compliant with Acceptable Solution A4.

5. Conclusion & Recommendations

This planning report has assessed the proposed development against the applicable provisions of the *Brighton Interim Planning Scheme 2015*, and provides the supporting information required as per *clause 8.1 Application Requirements* of the Scheme.

The proposed development of 15 multiple dwellings at 75 Fouche Avenue, Old Beach involves:

- Provision of road access by means of a shared access strip with 77 Fouche Ave;
- Land fill to 2.00m AHD;
- 15 multiple dwellings, including 4 single storey and 11 double storey dwellings,
- All proposed dwellings would:
 - incorporate 3 bedrooms;
 - be provided with 2 dedicated off street car parking spaces per dwelling;
 - have a minimum floor height of 2.50m AHD;
 - be provided with individual letter boxes, clothes lines and storage areas for two waste bins;
- Provision of internal circulation roadways that provide:
 - 5 on-site visitor car parks;
 - vehicle manoeuvring and passing areas compliant with applicable Australian standards;
 - landscaping and lighting of communal areas compliant with Applicable Australian standards;
 - a common waste bin collection area;
- Provision of all associated services infrastructure and connections into existing public networks; and
- Street number sign (0.5m² and non-illuminated) which is exempt from requiring a planning permit.

The proposed development is to be stage into two stages as follows:

- Stage 1 delivering Units 1 to 8 inclusive, the vehicle access and internal roadways to service Stage 1; in addition to the water, sewage and stormwater infrastructure for the entire proposal;
- Stage 2 delivering Units 9 to 15 inclusive and the associated internal roadways.

The proposal has been assessed to trigger performance criteria with respect to the following provisions:

- *Road and Railway Assets Code:*
 - *E5.5.1 Existing road accesses and junctions, Performance Criteria P3;*
 - *E5.6.4 Sight distance at accesses, junctions and level crossing, Performance Criteria P1;*
- *Parking and Access Code:*
 - *E6.6.3 Number of Motorcycle Parking Spaces, Performance Criteria P1;*
 - *E6.7.3 Vehicular Passing Areas along an Access, Performance Criteria P;*
 - *E6.7.7 Lighting of Parking Areas, Performance Criteria P1;*
 - *E6.7.13 Facilities for Commercial Vehicles , Performance Criteria P1;*
- *Stormwater Management Code:*
 - *E7.7.1 Stormwater Drainage and Disposal, Performance Criteria P2;*
- *Waterway and Coastal Protection Code:*
 - *E11.7.1 Building and Works, Performance Criteria P1;*
- *Inundation Prone Areas Code:*
 - *E15.7.5 Riverine, Coastal Investigation Area, Low, Medium, High Inundation Hazard Areas*

The report demonstrates that the proposal is able to either comply with relevant Acceptable Solutions or is able to satisfy applicable Performance Criteria and ought to be supported by the Planning Authority.

APPENDIX C

Traffic Impact Assessment



TRAFFIC IMPACT ASSESSMENT

**PROPOSED
RESIDENTIAL UNIT DEVELOPMENT**

**75 FOUCHE AVENUE
OLD BEACH**

OCTOBER 2020



TRAFFIC IMPACT ASSESSMENT

PROPOSED

RESIDENTIAL UNIT DEVELOPMENT

75 FOUCHE AVENUE

OLD BEACH

OCTOBER 2020

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ATTACHMENTS:

Attachment A - Design drawings of proposed layout of residential unit development

Attachment B – Metro route bus services and timetable for Old Beach

REFERENCES:

- Australian Standard AS 1742.2-2009 – Manual of uniform traffic control devices Part 2: Traffic control devices for general use
- AUSTRROADS – Guide to Road Safety Part 6: Road Safety Audit (2009)
- AUSTRROADS – Guide to Traffic Management Part 6: Intersections, Interchanges and Crossings (2019)
- Department of State Growth publication: *A Framework for Undertaking Traffic Impact Assessments (2007)*
- AUSTRROADS – Guide to Traffic Management Part 12: Traffic Impacts of Developments (2019)
- Australian Standard AS 2890 – Parking Facilities, Part 1 – Off-street car parking
- Australian Standard AS 2890 – Parking Facilities, Part 2 – Off-street commercial vehicle facilities
- Road Traffic Authority NSW – Guide to Traffic Generating Developments, 2002
- Road and Maritime Services (Transport) - Guide to Traffic Generating Developments; Updated traffic surveys (August 2013)
- Brighton Interim Planning Scheme 2015

1. INTRODUCTION

A planning application will be lodged with the Brighton Council for the development of 15 residential units at 75 Fouche Avenue in Old Beach.

A full Traffic Impact Assessment (TIA) report has been prepared in support of the development.

This TIA report considers the existing road and traffic characteristics along Fouche Avenue in the area of the development site. An assessment is made of the traffic activity that the residential unit development will generate and the effect that this traffic will have on Fouche Avenue.

Consideration is given to the access arrangements and available sight distances at the junction of the circulation road to the development site with Fouche Avenue. An assessment is also made of the circulation road and parking aisle arrangements, internal vehicle traffic circulation and parking provisions within the development site having regard to current applicable Australian standards and the requirements of the Brighton Interim Planning Scheme (2015).

This report is based on the Department of State Growth publication: *A Framework for Undertaking Traffic Impact Assessments*, with regard also given to Austroads – Guide to Traffic Management Part 12.

The techniques used in the investigation and assessment incorporate best practice road safety and traffic management principles.

2. SITE DESCRIPTION

The proposed development site is located at the southern side of Fouche Avenue, around 120m to the southeast of the intersection of Fouche Avenue with Jetty Road.

Development in the surrounding area is residential and the development site is zoned as 'residential'.

The location of the development site has been highlighted on the extract from the area map for this area, seen in Figure 2.1.



Figure 2.1: Extract from area map showing location of proposed development site

3. DEVELOPMENT PROPOSAL

The proposed development at 75 Fouche Avenue is the construction of 15 residential units. The units will all have three bedrooms.

As well as providing access to the proposed 15 residential units, the circulation road also provides access, as a shared right of way, to the existing dwelling at No.77 Fouche Avenue.

The circulation road will have a 6.0m width on a fairly flat grade to the driveway to No.77 Fouche Avenue and 5.5m beyond, to the two parking aisles for the proposed development.

There will be a total of 30 car parking spaces on the development site for the residents and five car parking spaces for visitors.

Seven of the residential units will have two car parking spaces within a garage, the other eight units will have one garage parking space and one jockey parking space.

Design drawings of the proposed development site layout and units are included with this report as Attachment A.

A view of the access to the development site is seen in Photograph 3.1.



Photograph 3.1: View of current access driveway to development site (gravel drive on right)

4. EXISTING ROAD AND TRAFFIC ENVIRONMENT

4.1 Road Characteristics

The one street of relevance to the proposed residential unit development under consideration is Fouche Avenue.

In the area of the development site, Fouche Avenue passes through a horizontal curve on a downgrade from Jetty Road, to the northwest to the development site, then has a straight and fairly flat alignment to the east.

Fouche Avenue has kerb and gutter plus a footpath along both sides of the road. The sealed road width between kerb faces is around 10m.

Views along the Fouche Avenue approaches to the development site driveway are seen in Photographs 4.1 and 4.2.



Photograph 4.1: View east along Fouche Avenue towards development site on right



Photograph 4.2: View west along Fouche Avenue towards development site on left

4.2 Traffic Activity

In order to have some knowledge of the traffic activity past the development site, reference has been made to previous turning traffic volume surveys on Jetty Road approaching East Derwent Highway and also Fouche Avenue at the East Derwent Highway. An estimate has been made of the passing traffic volume based on these data, the connecting road network and number of dwellings that this section of Fouche Avenue would service for access.

It is estimated the daily passing traffic volume along Fouche Avenue past the development site is around 600-800 vehicles/day, with around 10% of this passing traffic occurring during peak hour periods.

4.3 Crash Record

All crashes that result in personal injury are required to be reported to Tasmania Police. Tasmania Police record all crashes that they attend. Any crashes that result in property damage only, which are reported to Tasmania Police, are also recorded even though they may not visit the site.

Details of reported crashes are collated and recorded on a computerised database that is maintained by DSG.

Information was requested from DSG about any reported crashes along Fouche Avenue over the last five and a half years since January 2015.

There have been no reported crashes along Fouche Avenue over this period of time.

The only crashes common to Fouche Avenue are five reported crashes that occurred at the Fouche Avenue/Clives Avenue/East Derwent Highway roundabout controlled intersection.

The crashes are not related to traffic movements along Fouche Avenue.

The reported crash history does not identify any safety issues in the vicinity of the development site.

4.4 Public Transport Availability

Metro Tasmania operates a bus service through this part of Old Beach.

Bus service between Bridgewater and the Rosny or Glenorchy interchanges travels via Fouche Avenue. There are also peak hour services to the Hobart interchange in the morning and from the Hobart interchange in the afternoon.

The bus stops are within the desirable maximum 400m walking distance between residential development and public bus services for both directions of travel. The bus stop for inbound travel is around 200m away and for outbound traffic, only around 100m away.

Bus route map and timetable for these services are included with this report as Attachment B.

The proximity of the bus stops means that public transport will be a viable alternative for some of the trips generated by the development.

5. TRAFFIC GENERATION BY THE DEVELOPMENT

As outlined in Section 3 of this report, the development being proposed is the construction of 15 residential units on the site at Fouche Avenue with all units to have three bedrooms.

In considering the traffic activity that each residential unit will generate when occupied, guidance is normally sought from the New South Wales, Road Traffic Authority document – Guide to Traffic Generating Developments. The RTA guide is a nationally well accepted document that provides advice on trip generation rates and vehicle parking requirements for new developments.

The updated 'Technical Direction' to the Guide dated August 2013 advises that the trip generation for residential dwellings in regional areas of New South Wales is 7.4 trips/dwelling/day.

This is fairly consistent with findings by this consultant for dwellings in Tasmania. Surveys in the built-up areas of Tasmania over a number of years have found that typically this figure is 8.0 trips/dwelling/day with smaller residential units generating around 4 trips/unit/day and larger units generating around 6 trip/unit/day.

Given the development's proximity to public bus services, the actual traffic generation by the units will probably be at the lower end of the above range for units. However, as all the units will have three bedrooms, it will be assumed the traffic generation will be 6 trips/unit/day.

With the proposed development of 15 residential units, the traffic generation by the proposed development is estimated to be 90 vehicles/day which equates to some 9 vehicles/hour during the morning and afternoon peak hours.

6. TRAFFIC ASSESSMENT AND IMPACT

This section of the report evaluates the impact of the expected traffic that will be generated by the proposed residential unit development on passing traffic volumes.

An assessment has been made of the adequacy of available intersection sight distances along Fouche Avenue at the driveway to the development site and consideration has been given to the proposed internal site layout with respect to traffic circulation and parking as well as pedestrian access.

6.1 Operational Impact of Increased Traffic Activity

The proposed 15 unit development is expected to generate around 90 vehicles/day and 9 vehicles/hour at peak traffic times of the day.

The existing dwelling at 77 Fouche Avenue will be generating around 8 vehicles/day and this traffic will share the use of the circulation road to the development site.

Therefore, the total traffic volume using the circulation road will be around 100 vehicles/day and around 10 vehicles/hour.

The total passing traffic volume along Fouche Avenue has been estimated at up to 80 vehicles/hour during peak traffic periods.

If traffic growth were assumed to be 2% per annum, this would equate to a 22% increase over ten years. Applying ten years' growth to the passing traffic and adding the estimated trip generation associated with the proposed development, would result in conflicting traffic volumes of around 110 vehicles/hour in the peak hour periods.

Intersections and junctions reach practical capacity when the total conflicting approach traffic volumes are around 1,500 vehicles/hour. It can be concluded that the traffic activity at the driveway junction will operate without any significant queuing or delay.

The increased traffic activity associated with the development will also therefore not create any operational traffic issues on the immediate surrounding road network.

There is a driveway immediately adjacent to the eastern side of the driveway to the development site which also provides access to some 16 dwellings. It is expected this driveway carries some 100-110 vehicles/day, with 10% of this traffic during peak traffic periods.

The interaction between traffic movements to and from these two driveways will not create any safety or operational issues at their junction with Fouche Avenue.

Vehicle priorities at such locations are well defined in Road Rules which require a vehicle entering Fouche Avenue to give way to any vehicle on Fouche Avenue, including vehicles turning into either driveway.

The only time when motorist will need to resolve priority is when a vehicle on both driveways approaches Fouche Avenue at about the same time. In such instances, the two vehicles will come to a stop at the gutter crossover, each driver will be aware of the other, and both will work out who should proceed first into Fouche Avenue.

Such an occurrence will be quite infrequent given there will be only 10-11 vehicles/hour two-way on each driveway. Furthermore, such situations are not uncommon along streets with closely located driveway along both sides of the street.

6.2 Assessment of Available Sight Distances

The Brighton Interim Planning Scheme addresses sight distances in Code E5 and Code E6.

The origins of Table E5.1 in Code E5 are from old editions of the Austroads Guidelines where it states that these required sight distances applied to intersections (public road intersections).

Therefore, it is taken that Code E5 addresses requirements in regard to public road intersections (including sight distances at public roads junctions and public accesses) and Code E6 applies to accesses to private property.

Clause 6.7.2 that the sight distance for a private access driveway must be designed and constructed to comply with Section 3 – “Access Facilities to Off-street Parking Areas and Queuing Areas” of AS/NZS 2890.1:2004 Parking Facilities Part 1: Off-street car parking. In this case the Code requirements relate to private property access driveways.

AS 2890.1 clearly addresses accesses to private property and the sight distance requirement in this standard have been produced to allow a lesser standard to normal Austroads guidelines, at the request of local government.

The sight lines along Fouche Avenue to and from the driveway to the development site are seen in Photographs 6.1 to 6.4.

The available sight distances have been measured to be:

- over 150m between an approaching vehicle from the east and a vehicle either entering Fouche Avenue or turning right into the driveway;
- around 75m to an approaching vehicle from the northwest from a vehicle entering Fouche Avenue; and
- around 68m between an approaching vehicle from the northwest and a vehicle waiting to turn right into the driveway.



Photograph 6.1: View to east along Fouche Avenue from driveway to development site



Photograph 6.2: View to northwest along Fouche Avenue from driveway to development site



Photograph 6.3: View to east along Fouche Avenue from vehicle turning right into driveway to development site



Photograph 6.4: View to northwest along Fouche Avenue from rear of vehicle turning right into driveway to development site

The current speed limit along Fouche Avenue is 50km/h. It has been estimated that the approach 85th percentile speed of vehicles from the northwest is around 45km/h, while for westbound vehicles, it is closer to the speed limit.

The desirable sight distances for an 85th percentile speed of 50km/h, based on Figure 3.2 of AS 2890.1 is 69m.

The available sight distances between turning and approaching vehicle at the development site driveway will be quite sufficient for the speed environment.

Notwithstanding this, as can be appreciated from the view in Photograph 6.1, vegetation growing in the nature strip on the eastern side of the driveway to No.73 Fouche Avenue is starting to obstruct the view to the east for motorist entering Fouche Avenue from the driveway to this development site and also the driveway to No.73 Fouche Avenue.

It is recommended council takes step to have the vegetation addressed so that it does not become a safety problem. While it needs to be lower than one metre in height, if not addressed properly it will continue to grow back into the required line of sight.

6.3 Internal Traffic Access, Circulation and Car Parking

The design of the internal circulation road, parking aisles and parking arrangements which will service the residential units and existing dwelling is shown on the development site layout drawings in Attachment A.

Relevant design elements of the proposed site layout related to the traffic and parking design are discussed below.

Access driveway design

The circulation road into the development site will have a straight horizontal alignment on a fairly flat grade from Fouche Avenue, past the driveway to No.77 Fouche Avenue and first parking aisle, as well as up to the second parking aisle. The circulation road width will be 6.0m to the driveway to No.77 Fouche Avenue and 5.5m beyond.

The driveway will meet Fouche Avenue immediately adjacent to the driveway to the Old Beach Waterfront Estate, another multiple dwelling development.

As discussed in Section 6.1 of this report, this other driveway is not considered a safety or operational concern, the only intervention being attention to vegetation growing in the nature strip to improve the line of sight to the east.

The gutter crossover to the development site will need to be slightly modified by removing the short section of kerb face (see in Photograph 3.1) so that the

gutter crossover has a double width to align with two lane driveway into the development site.

The driveway to No.77 Fouche Avenue will junction with the right of way circulation road into the development site at a point around 40m from Fouche Avenue. The circulation road design at this location allows for standard B99 car turns to and from the driveway.

At this junction of the driveway to No.77 Fouche Avenue and the driveway into the development site at No.75 Fouche Avenue, the property title shows that there is a small triangular piece of land which protrudes into the rights of way in this area, such that vehicles entering and exiting No.75 Fouche Avenue do not have right of way over this piece of land.

This will be enforced with a fence installed across this part of the right of way (plus sliding security gate across the driveway to No.75 Fouche Avenue), as seen on the attached drawings.

The remaining available width for vehicles to enter and exit No.75 Fouche Avenue to the eastern property boundary is 3.54m. This is sufficient to allow passage of vehicles, including service vehicles, to enter and exit the property at 75 Fouche Avenue.

It recommended the proposed fence across the right of way (western side of access) and the gate be of low high, no more than 1.0m high, the fence sufficient to prevent vehicle access to and from 75 Fouche Avenue. It should also have a design that allows for a clear view through fence and gate.

This will ensure motorist approaching the fence and gate when entering and exiting 75 Fouche Avenue or when entering 77 Fouche Avenue will be able to see one another and allow one motorist to give way to the other.

It will also allow motorists leaving 77 Fouche Avenue (turning left from that property) to move into the right of way to gain a line of sight both along the right of way towards Fouche Avenue as well as into 75 Fouche Avenue before proceeding Fouche Avenue without conflicting with other vehicle movements.

This area will function much like a narrowing with a passing area on each side, so there will not be any safety issues. There will not be any operational issue in this area because the traffic through this area will be only around 10 vehicles/hour. At this traffic volume, the need for vehicles to give way will be infrequent and queueing will only ever be one vehicle which will stop quite briefly.

It is noted that the edge of the sealed driveway past the fence is around 0.5m from the eastern property boundary and the garbage truck swept path does not quite fit. It is recommended that council set a condition in the permit that trafficable width of the driveway be widening with the seal up to the fence line for a distance of 10m each way from the fence across the driveway.

Within the development site, the design proposes four visitor parking spaces along the eastern side of the circulation road between the two parking aisles.

On waste collection days the bins will be placed along the eastern side of the circulation road just inside the property and in the area opposite the junction of the first parking aisle.

The circulation road within the development site will have a width of 5.5m, which allows for unimpeded two way traffic, apart from the area at the four visitor parking spaces. If these visitor parking spaces are all occupied, the distance between passing areas at each end is around 30m.

On waste collection days, when the bins line the circulation road, the width of the circulation road will be reduced to a one lane traffic movement for a distance of around 60m when including the visitor parking bays.

This will not create any operational issue on such days due the lower traffic use of this part of the circulation road.

The planning scheme refers to a requirement for passing bays every 30m, but it does not directly include a consideration of the number of vehicle movements that any development under consideration will generate.

A use of the circulation road at a rate of 9 vehicles/hour (two way) or less is a very low level of traffic activity.

Based on four vehicles/hour in one direction having to give way to five vehicles/hour in the opposite direction on the circulation road on these days, the probability of an opposed vehicle being delayed (have to give way) will on average be around 1.6% to 2%. The average delay to vehicles over the one hour period will be less than 1 second.

This is based on the travel speed of between 15km/h and 20km/h along the circulation road over a distance of 65m (one lane distance between passing points).

It should be noted that AS 2890.1 indicates much higher two way traffic volumes than the above can be accommodated in a one way road before passing areas are required.

The 5.m width of the circulation road in this area is sufficient to accommodate the traffic activity. Allowing for a 2.4m wide parallel parking (2.1m bay plus 300mm clearance), the remaining trafficable width will be 3.1m. there will not be any barrier or raised kerb on the side of the units, therefore there is not a requirement for an additional 300mm in the trafficable width through this area.

Car parking supply

Clause E6.5.1 of the Brighton Interim Planning Scheme requires 2 car parking spaces per unit plus 1 dedicated visitor parking space per 3 units for multiple dwelling developments with residential units that have two or more bedrooms and where the development is on an internal lot.

The required car parking supply is 30 resident car parking spaces plus five visitor parking spaces for the 15 unit development.

There will be 35 car parking spaces on the site for the residents and visitors of the units.

The jockey parking for some of the units is an acceptable form of parking as both parking spaces at each unit will be for the same dwelling.

The site does not require any disabled parking spaces.

The overall parking supply will be sufficient to meet the planning scheme requirements.

Parking area design

The grade along the two parking aisles and in the manoeuvring areas at each garage and parking bay will be quite flat.

The required turn paths of vehicles have been checked and found to be adequate for three-point turns by B85B99 cars for all manoeuvres to and from all parking spaces.

The specific dimensions that have been assessed include the following:

- The two parking aisles will have a sufficient width and passing areas, which is in accordance with minimum requirements of AS 2890.1;
- The minimum width of the parking aisles will be 5.5m, but it will be at least 7.0m in all manoeuvring areas at the entry/exit to parking bays and garages, which is more than the 5.8m required minimum (as detailed in Figure 2.2 of AS 2890.1 for Class 1A 90-degree parking);
- All standard parking spaces will be 5.4m long and wider than 2.4m wide, the minimum width for User Class 1A - residential parking (as detailed in Figure 2.2 of AS 2890.1 for 90-degree parking);
- There will be at least a 300mm side clearance at all parking spaces for door opening and manoeuvring (as detailed in Figures 2.3 and 5.2 of AS 2890.1);
- There will be a sufficient turnaround area for cars at the end of each parking aisle (the available 9m depth and at least 3m lateral width in the manoeuvring area is quite sufficient for a car to turnaround. This

includes visitors to turnaround at the end of the first parking aisle and park in visitor parking bay 5 and exit the bay in a forward direction;

- The height clearance will be a minimum of 2.1m through the garage door (this is normal for standard garage door installations) and a minimum of 2.4m in other trafficable areas with a height clearance limitation;
- Garages will have a door opening widths of 2.7m and 5.4m and the apron width will be at least 7m, which is sufficient for manoeuvring (as detailed in Figure 5.4 of AS 2890.1);
- The parallel visitor car parking spaces are designed to have a width of 2.4m and length of 6.3m with end bays to have a width of 5.4m; which is in accordance with requirement of Figure 2.5 of AS 2890.1.

With all dimensions meeting the requirements of AS 2890.1, the parking spaces will be compliant with AS 2890.1 and hence the planning scheme.

It is understood Council is accepting that garbage trucks enter the site to collect waste. There will be sufficient space for garbage trucks to turnaround at the junction of the first parking aisle and manoeuvre along the circulation to empty all the bins, then exit in a forward direction.

Lighting will be provided along the circulation road to a sufficient level for the traffic environment, based on the requirements of the Building Code of Australia. The circulation road should not require the higher level of lighting as required AS 1185, which is a standard that applies to public roads and public places.

6.4 Pedestrian and Bicycle Access

The level of traffic activity will be quite low at an average of not more than 1 vehicle every seven minutes.

The number of pedestrians or cyclists expected to use the circulation road will also be relatively low, expected at no more than the level of vehicle activity.

Vehicles and pedestrians/cyclist will therefore meet quite infrequently along the circulation road.

The proposed driveway and circulation road widths are considered sufficient for expected level of traffic and pedestrian activity to accommodate both in a shared zone environment where vehicles speed will be quite low, at no more than 20km/h and clear forward sight lines.

Pedestrian sight triangles at the junction of the circulation road with Fouche Avenue will be more than required by AS 2890.1. The splayed fence on the western side (left side of exiting vehicles), the 6m wide circulation road plus

the 2.3m wide nature strip ensure good sight lines between exiting drivers and pedestrians on the Fouche Avenue footpath.

7. SUMMARY AND RECOMMENDATIONS

This Traffic Impact Assessment has been prepared in support of the planning application to the Brighton Council for the construction of 15 residential units at 75 Fouche Avenue in Old Beach.

The assessment has reviewed the existing road and traffic environment along Fouche Avenue in the area of the development site.

Fouche Avenue has a 10.0 metre wide roadway along its length with a footpath along both sides.

The daily traffic volume along Fouche Avenue passing the development site is estimated to be 600-800 vehicles/day.

The reported crash history does not highlight any safety issues along Fouche Avenue.

The likely traffic generation associated with the proposed development has been calculated at 90 vehicles/day which equates to some 9 vehicle/hour during the morning and afternoon peak hours.

The increased traffic activity associated with the development will not create any operational traffic issues on the surrounding road network.

The available sight distances along Fouche Avenue to and from the driveway to the proposed development will be sufficient for the speed environment along Fouche Avenue.

However, it is recommended council takes steps to have the vegetation growing in the nature strip on the eastern side of the driveway to No.73 Fouche Avenue is addressed so that it does not become a safety problem.

In order to address the right of way access issue at the junction of the driveways to No.75 Fouche Avenue and No.77 Fouche Avenue, it is recommended the prohibited access be enforced with a fence installed across the right of way (plus sliding security gate across the driveway to No.75 Fouche Avenue).

The remaining available width for will be quite sufficient to allow passage of vehicles, including service vehicles, to enter and exit the property at 75 Fouche Avenue.

It recommended the proposed fence across the right of way (western side of access) and the gate be of low high, no more than 1.0m high, the fence sufficient to prevent vehicle access to and from 75 Fouche Avenue. It should also have a design that allows for a clear view through fence and gate.

There will not be any operational issue in this area because the traffic through this area will be only around 10 vehicles/hour. At this traffic volume, the need for vehicles to give way will be infrequent and queueing will only ever be one vehicle which will stop quite briefly.

It is also recommended that council set a condition in the permit that trafficable width of the driveway be widening with the seal up to the fence line for a distance of 10m each way from the fence across the driveway to better accommodate passage of services vehicles/garbage trucks.

There will be 35 car parking spaces on the site for the residents and visitors of the units which is sufficient to meet the planning scheme requirements.

Design of the circulation road grade and width with the provision for passing of vehicles is quite sufficient for the low traffic generation by the development. This includes days when there are garbage bins placed along the circulation road.

The required turn paths of vehicles have been checked and found to be adequate for three-point turns by B85/B99 cars for all manoeuvres to and from all garages and parking spaces. The dimensions of all parking spaces and manoeuvring areas, will be compliant with AS 2890.1.

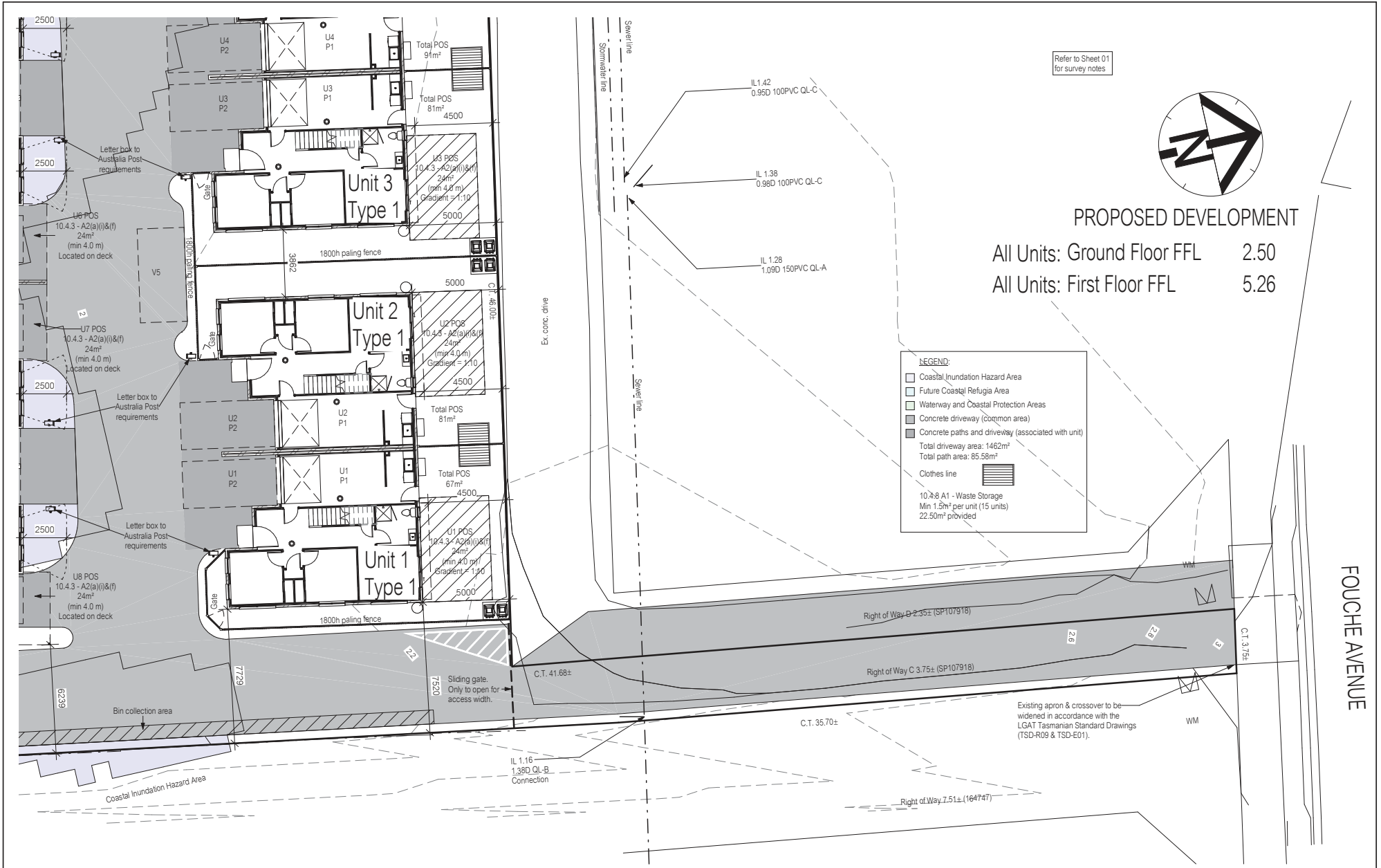
No special or additional measures are considered necessary for pedestrians or cyclist using the circulation road and parking aisles.

Garbage trucks enter the site to collect waste and there will be sufficient space for the trucks to turnaround on-site to exit in a forward direction.

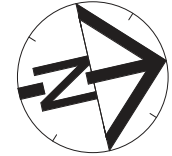
Lighting will be provided along the circulation road to a sufficient level for the traffic environment.

There are route bus services in this part of Old Beach including along Fouche Avenue, with bus stops for both directions of travel within less than 400m walking distance.

Overall, it has been concluded that the proposed residential unit development can be supported on traffic grounds as it will not give rise to any adverse safety or operational traffic issues.



Refer to Sheet 01 for survey notes



PROPOSED DEVELOPMENT

All Units: Ground Floor FFL 2.50
 All Units: First Floor FFL 5.26

LEGEND:

- Coastal Inundation Hazard Area
- Future Coastal Refugia Area
- Waterway and Coastal Protection Areas
- Concrete driveway (common area)
- Concrete paths and driveway (associated with unit)
- Total driveway area: 1462m²
- Total path area: 85.58m²
- Clothes line
- 10.38 A1 - Waste Storage
- Min 1.5m² per unit (15 units)
- 22.50m² provided



| | | |
|-----|--------------|------|
| H | 26 Oct. 2020 | ST |
| G | 21 Oct. 2020 | ST |
| F | 20 Oct. 2020 | ST |
| D | 25 Aug 2020 | ST |
| No. | Date | Int. |

Amendment changes as per cover sheet

- Notes**
- Builder to verify all dimensions and levels on site prior to commencement of work.
 - All work to be carried out in accordance with the current National Construction Code.
 - All materials to be installed according to manufacturers specifications.
 - Dimensions to take precedence over scale.
 - Do not scale from these drawings.

Designer:
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Client / Project info
 PROPOSED VILLANUEVA DEVELOPMENT
 75 Fouché Avenue
 OLD BEACH



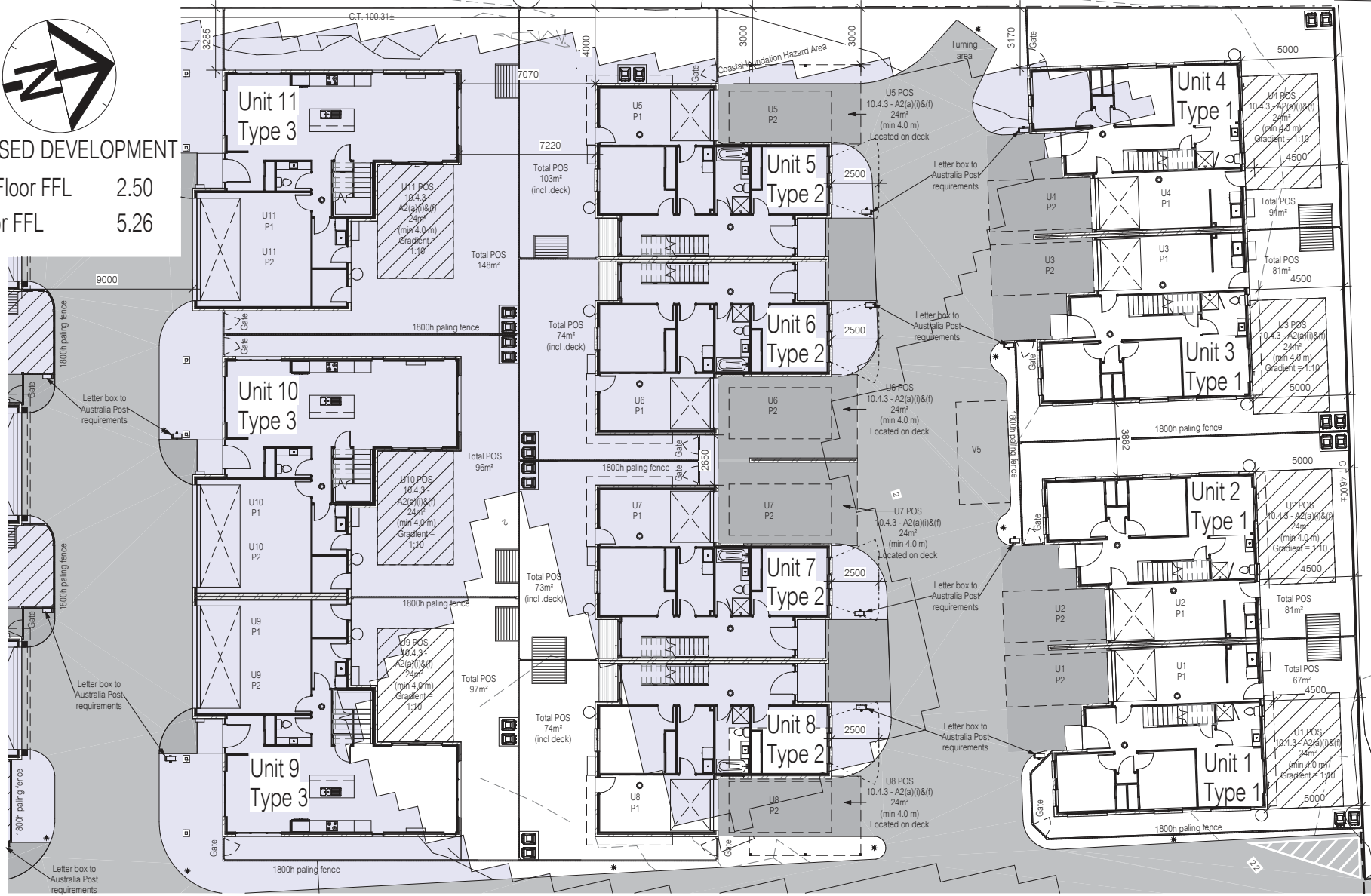
| SITE PLAN SHEET 1 (GROUND FLOOR) | | |
|----------------------------------|--------------|----------|
| Drawn | ST | WH712552 |
| Date | 13 July 2020 | Sheet |
| Scale | 1:200 | |
| | | 01a/21 |

FOUCHE AVENUE



PROPOSED DEVELOPMENT

Ground Floor FFL 2.50
 First Floor FFL 5.26



Refer to Sheet 01 for survey notes

- Notes**
- Builder to verify all dimensions and levels on site prior to commencement of work.
 - All work to be carried out in accordance with the current National Construction Code.
 - All materials to be installed according to manufacturers specifications.
 - Dimensions to take precedence over scale.
 - Do not scale from these drawings.

Designer:
 ANOTHER PERSPECTIVE PTY LTD
 PO BOX 21
 NEW TOWN
 LIC. NO. CC2204H (A. Strugnelli)
 Ph: (03) 6231 4122
 Fx: (03) 6231 4166
 Email:
 info@anotherperspective.com.au

Client / Project info
 PROPOSED VILANUJEVA DEVELOPMENT
 75 Fouche Avenue
 OLD BEACH



SITE PLAN SHEET 2 (GROUND FLOOR)

| | | |
|-------|--------------|----------|
| Drawn | ST | WH712552 |
| Date | 13 July 2020 | Sheet |
| Scale | 1:200 | |

01b/21

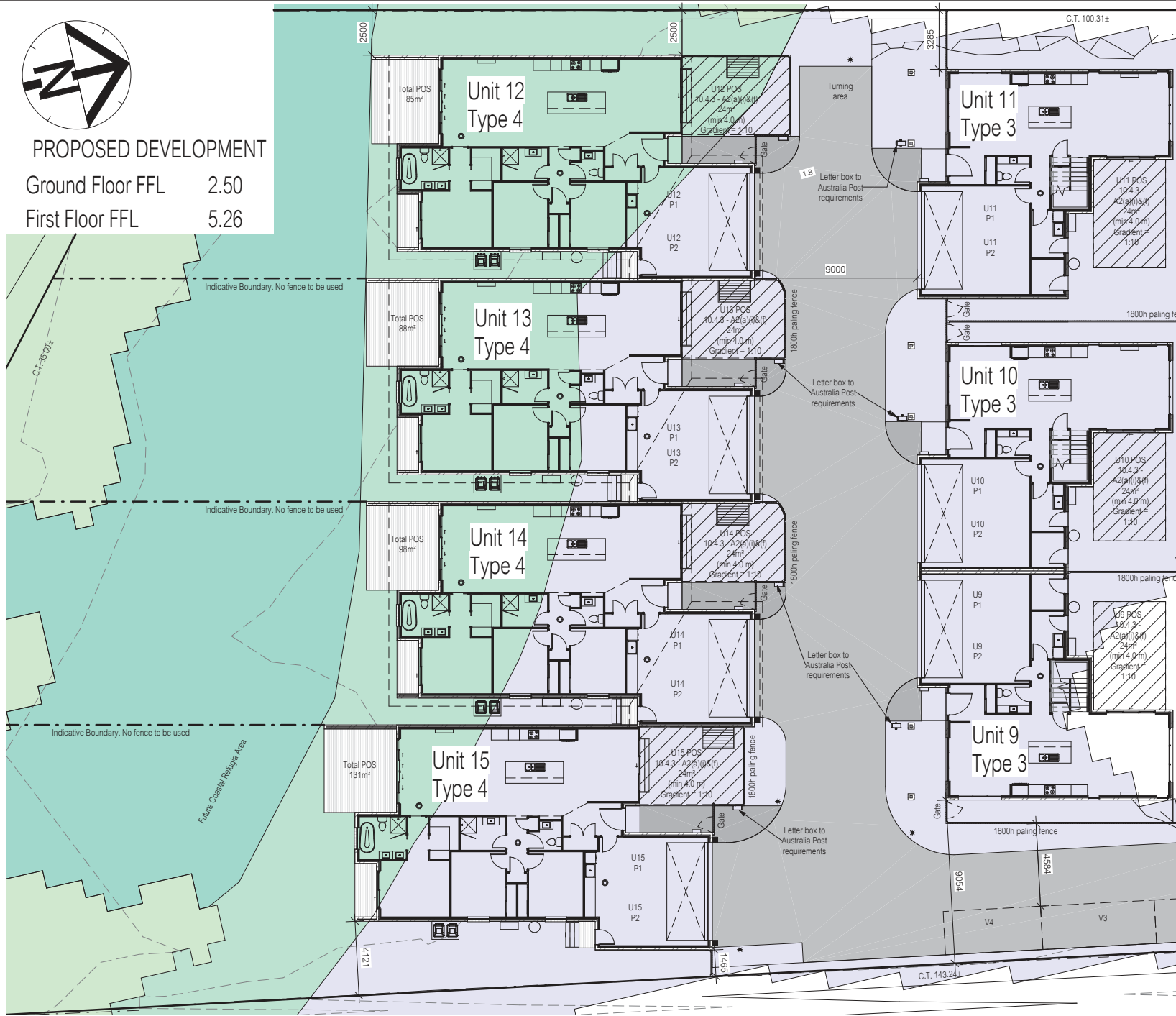
| | | |
|-----|--------------|------|
| H | 26 Oct. 2020 | ST |
| G | 21 Oct. 2020 | ST |
| F | 20 Oct. 2020 | ST |
| D | 25 Aug 2020 | ST |
| No. | Date | Int. |

Amendment changes as per cover sheet



PROPOSED DEVELOPMENT

Ground Floor FFL 2.50
 First Floor FFL 5.26



LEGEND:

- Coastal Inundation Hazard Area
- Future Coastal Refugia Area
- Waterway and Coastal Protection Areas
- Concrete driveway (common area)
- Concrete paths and driveway (associated with unit)

Total driveway area: 1462m²
 Total path area: 85.58m²

Clothes line

10.4.8 A1 - Waste Storage
 Min 1.5m² per unit (15 units)
 22.50m² provided

Refer to Sheet 01 for survey notes

| | | |
|-----|--------------|------|
| H | 26 Oct. 2020 | ST |
| G | 21 Oct. 2020 | ST |
| F | 20 Oct. 2020 | ST |
| D | 25 Aug 2020 | ST |
| No. | Date | Int. |

- Amendment changes as per cover sheet
- Notes
- Builder to verify all dimensions and levels on site prior to commencement of work
 - All work to be carried out in accordance with the current National Construction Code.
 - All materials to be installed according to manufacturers specifications.
 - Dimensions to take precedence over scale.
 - Do not scale from these drawings.

Designer:

ANOTHER PERSPECTIVE PTY LTD
 PO BOX 21
 NEW TOWN
 L.I.C. NO. CC2204H (A. Strugnell)
 Ph: (03) 6231 4122
 Fx: (03) 6231 4166
 Email: info@anotherperspective.com.au

Client / Project info

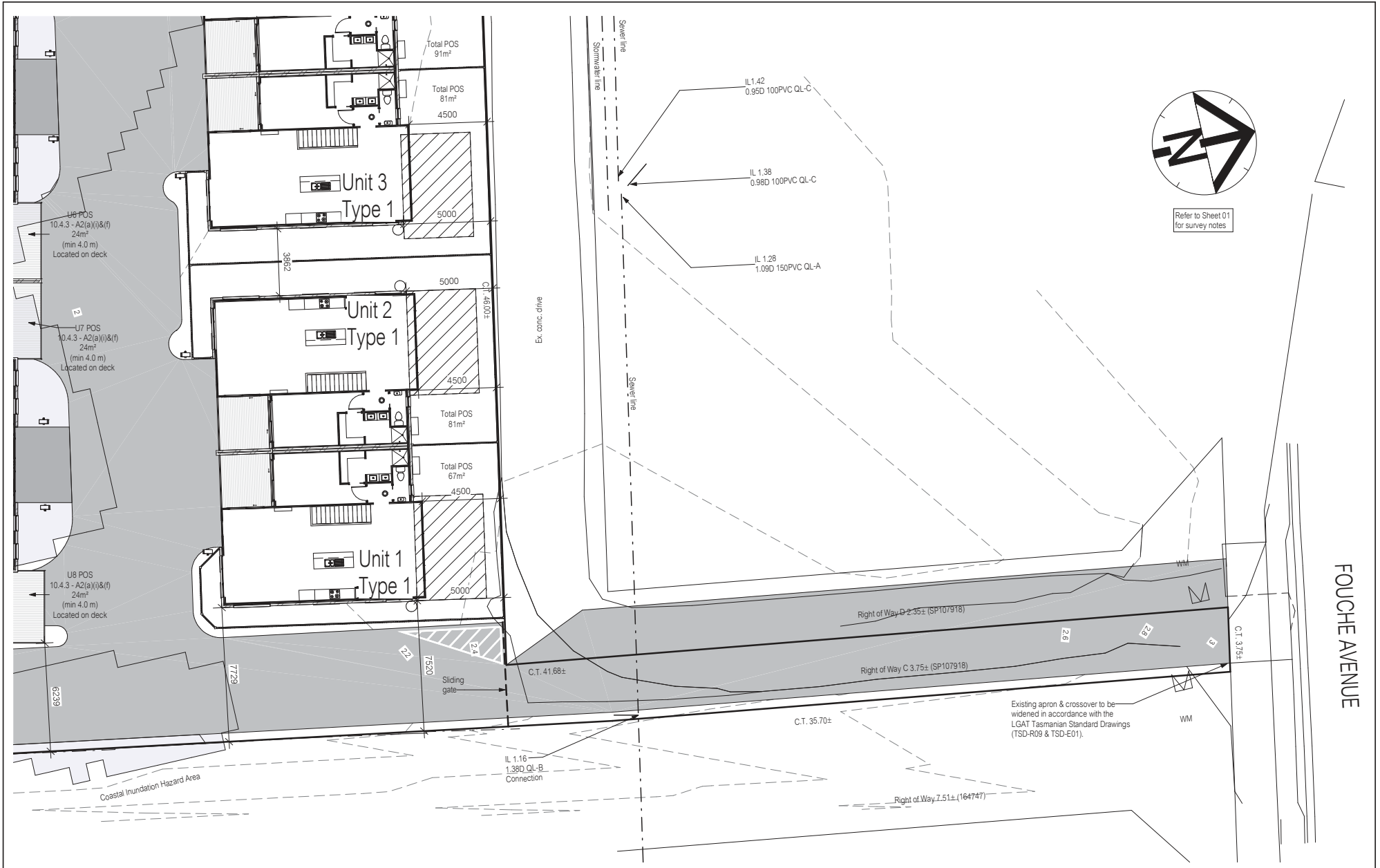
PROPOSED VILLANUEVA DEVELOPMENT
 75 Fouche Avenue
 OLD BEACH

0 2 4 6 8m
 1:200



SITE PLAN SHEET 3 (GROUND FLOOR)

| | | |
|-------|--------------|----------|
| Drawn | ST | WH712552 |
| Date | 13 July 2020 | Sheet |
| Scale | 1:200 | 01c/21 |



| | | |
|-----|--------------|------|
| H | 26 Oct. 2020 | ST |
| G | 21 Oct. 2020 | ST |
| F | 20 Oct. 2020 | ST |
| D | 25 Aug 2020 | ST |
| No. | Date | Int. |

Amendment changes as per cover sheet

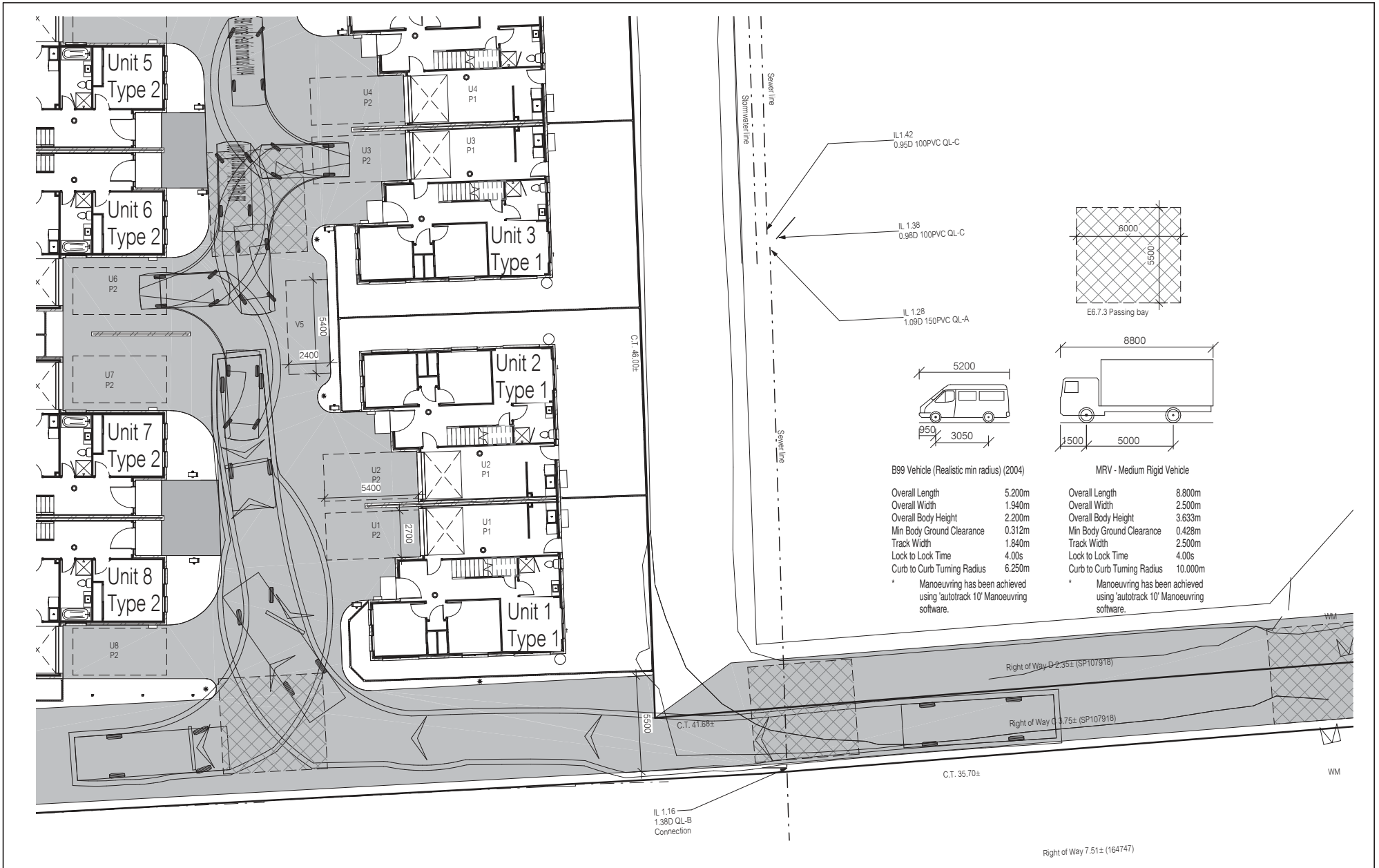
- Notes
- Builder to verify all dimensions and levels on site prior to commencement of work.
 - All work to be carried out in accordance with the current National Construction Code.
 - All materials to be installed according to manufacturers specifications.
 - Dimensions to take precedence over scale.
 - Do not scale from these drawings.

Designer:
 ANOTHER PERSPECTIVE PTY LTD
 PO BOX 21
 NEW TOWN
 LIC. NO. CC2204H (A. Strugnelli)
 Ph: (03) 6231 4122
 Fx: (03) 6231 4166
 Email:
 info@anotherperspective.com.au

Client / Project info
 PROPOSED VILLANUEVA DEVELOPMENT
 75 Fouche Avenue
 OLD BEACH



| | | |
|---------------------------------|----------------|----------|
| SITE PLAN SHEET 4 (FIRST FLOOR) | | |
| Drawn | ST | WH712552 |
| Date | 25 August 2020 | Sheet |
| Scale | 1:200 | 01d/21 |



| | | |
|-----|--------------|------|
| H | 26 Oct. 2020 | ST |
| G | 21 Oct. 2020 | ST |
| F | 20 Oct. 2020 | ST |
| D | 25 Aug 2020 | ST |
| No. | Date | Int. |

Amendment changes as per cover sheet

- Notes
- Builder to verify all dimensions and levels on site prior to commencement of work.
 - All work to be carried out in accordance with the current National Construction Code.
 - All materials to be installed according to manufacturers specifications.
 - Dimensions to take precedence over scale.
 - Do not scale from these drawings.

Designer:
ANOTHER PERSPECTIVE PTY LTD
PO BOX 21
NEW TOWN
LIC. NO. CC2204H (A. Strugnelli)
Ph: (03) 6231 4122
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Email:
info@anotherperspective.com.au

Client / Project info
PROPOSED VILLANUEVA DEVELOPMENT
75 Fouche Avenue
OLD BEACH



| | | |
|--------------------------|----------------|----------|
| MANOEUVRING PLAN SHEET 1 | | |
| Drawn | ST | WH712552 |
| Date | 19 August 2020 | Sheet |
| Scale | 1:200 | |
| | | 01k/21 |



EFFECTIVE 17 MARCH 2019

530, X30, 696

Gagebrook & Old Beach to Hobart City & Rosny Park

| ROUTE NUMBER | ROUTE |
|--------------|------------------------------------|
| 530 | Bridgewater to Glenorchy |
| X30 | Bridgewater to Hobart City EXPRESS |
| 696 | Bridgewater to Rosny Park |

Also shows route 522



WHO OPERATES MY SERVICE?



522, 530, X30, 696

metrotas.com.au

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Online trip information
transport.tas.gov.au



EFFECTIVE 17 MARCH 2019

530, X30, 696



from Bridgewater towards Rosny Park, Glenorchy & Hobart City

| Monday to Friday | | | | | | | | | | | | | | | | |
|------------------|------------------------------------|------|------|------|------|------|-------|------|------|------|------|-------|-------|-------|-------|-------|
| map ref | ROUTE NUMBER | 530 | X30 | 530 | 696 | X30 | 530 | X30 | 530 | 530 | 696 | 530 | 530 | 696 | 530 | |
| | | am | am | am | am | am | am | am | am | am | am | am | am | am | pm | |
| B | Bridgewater Plaza, Green Point Rd | - | - | - | - | - | - | - | - | - | - | - | - | - | - | |
| A | Bridgewater, Cove Hill Fair | 6:30 | 6:45 | 6:55 | 7:14 | 7:15 | w7:25 | 7:40 | 7:55 | 8:31 | 9:04 | 9:48 | 10:04 | 11:04 | 11:48 | 12:04 |
| B | Bridgewater Plaza, Green Point Rd | 6:32 | 6:48 | 6:57 | 7:17 | 7:18 | w7:27 | 7:43 | 7:57 | 8:33 | 9:06 | 9:51 | 10:06 | 11:06 | 11:51 | 12:06 |
| C | Fisher Dr/Lamprill Circle | 6:37 | 6:51 | 7:02 | - | 7:21 | w7:32 | 7:46 | 8:02 | 8:38 | 9:11 | - | 10:11 | 11:11 | - | 12:11 |
| D | Gagebrook, Sattler St/Tottenham Rd | 6:44 | 6:58 | 7:09 | - | 7:28 | w7:39 | 7:53 | 8:09 | 8:45 | 9:18 | - | 10:18 | 11:18 | - | 12:18 |
| E | Gagebrook, Gage Rd (Tivoli) | 6:49 | 7:03 | 7:14 | - | 7:34 | w7:44 | 7:59 | 8:14 | 8:50 | 9:23 | - | 10:23 | 11:23 | - | 12:23 |
| F | Old Beach, Jetty Rd/Morrisby Rd | 6:54 | 7:09 | 7:20 | 7:25 | 7:40 | w7:50 | 8:05 | 8:20 | 8:56 | 9:28 | 9:59 | 10:28 | 11:28 | 11:59 | 12:28 |
| G | Old Beach, Clives Ave | 6:56 | 7:11 | 7:22 | 7:27 | 7:42 | w7:52 | 8:07 | 8:22 | 8:58 | 9:30 | 10:01 | 10:30 | 11:30 | 12:01 | 12:30 |
| H | Otago, Otago Bay Rd | 7:03 | 7:17 | 7:29 | 7:34 | 7:49 | w7:59 | 8:14 | 8:29 | 9:05 | 9:37 | 10:08 | 10:37 | 11:37 | 12:08 | 12:37 |
| I | Risdon Vale, Linden Rd | - | - | - | 7:45 | - | - | - | - | - | - | 10:19 | - | - | 12:19 | - |
| J | Rosny Park Interchange | - | - | - | 8:09 | - | - | - | - | - | - | 10:41 | - | - | 12:41 | - |
| K | Elwick Racecourse, Goodwood Rd | 7:10 | 7:22 | 7:36 | - | 7:55 | s8:06 | 8:20 | 8:36 | 9:12 | 9:44 | - | 10:44 | 11:44 | - | 12:44 |
| L | Glenorchy, Elwick Rd | 7:11 | - | 7:37 | - | - | s8:07 | - | 8:37 | 9:13 | 9:45 | - | 10:45 | 11:45 | - | 12:45 |
| M | Glenorchy Interchange Stop G | 7:15 | - | 7:42 | - | - | s8:12 | - | 8:42 | 9:18 | 9:49 | - | 10:49 | 11:49 | - | 12:49 |
| N | Lutana, Brooker Ave/Ashbolt Cres | - | 7:28 | - | - | 8:02 | - | 8:27 | - | - | - | - | - | - | - | - |
| O | Hobart City, Collins St | - | 7:38 | - | - | 8:14 | - | 8:39 | - | - | - | - | - | - | - | - |

| Monday to Friday (cont) | | | | | | | | | | | | | | | |
|-------------------------|------------------------------------|------|------|------|------|------|------|------|------|------|------|-------|-------|--------|-------|
| map ref | ROUTE NUMBER | 530 | 696 | 530 | 530 | 530 | 696 | 530 | 530 | 522 | 522 | 522 | 522 | 522 | 522 |
| | | pm | pm | pm | pm | pm | pm | pm | pm | pm | pm | pm | pm | pm | am |
| B | Bridgewater Plaza, Green Point Rd | - | - | - | - | - | - | - | - | 8:55 | 9:55 | 10:55 | 11:55 | f12:55 | - |
| A | Bridgewater, Cove Hill Fair | 1:04 | 1:48 | 2:04 | 3:04 | 3:45 | 3:53 | 4:20 | 5:05 | 6:15 | 9:04 | 10:04 | 11:04 | 12:04 | f1:04 |
| B | Bridgewater Plaza, Green Point Rd | 1:06 | 1:51 | 2:06 | 3:06 | 3:48 | 3:56 | 4:22 | 5:07 | 6:17 | - | - | - | - | - |
| C | Fisher Dr/Lamprill Circle | 1:11 | - | 2:11 | 3:11 | 3:54 | - | 4:27 | 5:12 | 6:22 | 9:14 | 10:14 | 11:14 | 12:14 | f1:14 |
| D | Gagebrook, Sattler St/Tottenham Rd | 1:18 | - | 2:18 | 3:18 | 4:08 | - | 4:34 | 5:19 | 6:29 | 9:25 | 10:25 | 11:25 | 12:25 | f1:25 |
| E | Gagebrook, Gage Rd (Tivoli) | 1:23 | - | 2:23 | 3:23 | 4:12 | - | 4:39 | 5:24 | 6:34 | - | - | - | - | - |
| F | Old Beach, Jetty Rd/Morrisby Rd | 1:28 | 1:59 | 2:28 | 3:28 | - | 4:04 | 4:44 | 5:29 | 6:39 | - | - | - | - | - |
| G | Old Beach, Clives Ave | 1:30 | 2:01 | 2:30 | 3:30 | - | 4:06 | 4:46 | 5:31 | 6:41 | - | - | - | - | - |
| H | Otago, Otago Bay Rd | 1:37 | 2:08 | 2:37 | 3:37 | - | 4:13 | 4:53 | 5:38 | 6:48 | - | - | - | - | - |
| I | Risdon Vale, Linden Rd | - | 2:19 | - | - | - | 4:24 | - | - | - | - | - | - | - | - |
| J | Rosny Park Interchange | - | 2:41 | - | - | - | 4:47 | - | - | - | - | - | - | - | - |
| K | Elwick Racecourse, Goodwood Rd | 1:44 | - | 2:44 | 3:44 | - | - | 5:00 | 5:45 | 6:55 | - | - | - | - | - |
| L | Glenorchy, Elwick Rd | 1:45 | - | 2:45 | 3:45 | - | - | 5:01 | 5:46 | 6:56 | - | - | - | - | - |
| M | Glenorchy Interchange Stop G | 1:49 | - | 2:49 | 3:49 | - | - | 5:05 | 5:50 | 7:00 | - | - | - | - | - |
| N | Lutana, Brooker Ave/Ashbolt Cres | - | - | - | - | - | - | - | - | - | - | - | - | - | - |
| O | Hobart City, Collins St | - | - | - | - | - | - | - | - | - | - | - | - | - | - |

WHO OPERATES
MY SERVICE?

Metro

522, 530, X30, 696

metrotas.com.au

13 22 01



Tasmanian
Government

Online trip information
transport.tas.gov.au



EFFECTIVE 17 MARCH 2019

530, X30, 696

| Saturday | | | | | | | | | | | | | | | | |
|----------|--|------|-------|-------|-------|-------|------|------|------|------|------|------|------|------|-------|-------|
| map ref | ROUTE NUMBER | 530 | 530 | 530 | 530 | 530 | 530 | 530 | 530 | 530 | 530 | 522 | 522 | 522 | 522 | 522 |
| | | am | am | am | am | pm | pm | pm | pm | pm | pm | pm | pm | pm | pm | pm |
| | Bridgewater Plaza , Green Point Rd | - | - | - | - | - | - | - | - | - | - | 7:03 | 7:57 | 8:57 | 9:57 | 10:57 |
| | Bridgewater , Cove Hill Fair | 8:24 | 9:24 | 10:24 | 11:24 | 12:24 | 1:24 | 2:24 | 3:24 | 4:24 | 5:24 | 7:11 | 8:05 | 9:05 | 10:05 | 11:05 |
| | Bridgewater Plaza , Green Point Rd | 8:26 | 9:26 | 10:26 | 11:26 | 12:26 | 1:26 | 2:26 | 3:26 | 4:26 | 5:26 | - | - | - | - | - |
| | Fisher Dr/Lamprill Circle | 8:31 | 9:31 | 10:31 | 11:31 | 12:31 | 1:31 | 2:31 | 3:31 | 4:31 | 5:31 | 7:20 | 8:14 | 9:14 | 10:14 | 11:14 |
| | Gagebrook , Sattler St/Tottenham Rd | 8:38 | 9:38 | 10:38 | 11:38 | 12:38 | 1:38 | 2:38 | 3:38 | 4:38 | 5:38 | 7:30 | 8:24 | 9:24 | 10:24 | 11:24 |
| | Gagebrook , Gage Rd (Tivoli) | 8:43 | 9:43 | 10:43 | 11:43 | 12:43 | 1:43 | 2:43 | 3:43 | 4:43 | 5:43 | - | - | - | - | - |
| | Old Beach , Jetty Rd/Morrisby Rd | 8:48 | 9:48 | 10:48 | 11:48 | 12:48 | 1:48 | 2:48 | 3:48 | 4:48 | 5:48 | - | - | - | - | - |
| | Old Beach , Clives Ave | 8:50 | 9:50 | 10:50 | 11:50 | 12:50 | 1:50 | 2:50 | 3:50 | 4:50 | 5:50 | - | - | - | - | - |
| | Otago , Otago Bay Rd | 8:57 | 9:57 | 10:57 | 11:57 | 12:57 | 1:57 | 2:57 | 3:57 | 4:57 | 5:57 | - | - | - | - | - |
| | Elwick Racecourse , Goodwood Rd | 9:04 | 10:04 | 11:04 | 12:04 | 1:04 | 2:04 | 3:04 | 4:04 | 5:04 | 6:04 | - | - | - | - | - |
| | Glenorchy , Elwick Rd | 9:05 | 10:05 | 11:05 | 12:05 | 1:05 | 2:05 | 3:05 | 4:05 | 5:05 | 6:05 | - | - | - | - | - |
| | Glenorchy Interchange Stop G | 9:09 | 10:09 | 11:09 | 12:09 | 1:09 | 2:09 | 3:09 | 4:09 | 5:09 | 6:09 | - | - | - | - | - |

| Saturday (cont) | | | |
|-----------------|--|-------|-------|
| map ref | ROUTE NUMBER | 522 | 522 |
| | | pm | am |
| | Bridgewater Plaza , Green Point Rd | 11:57 | 12:57 |
| | Bridgewater , Cove Hill Fair | 12:05 | 1:05 |
| | Bridgewater Plaza , Green Point Rd | - | - |
| | Fisher Dr/Lamprill Circle | 12:14 | 1:14 |
| | Gagebrook , Sattler St/Tottenham Rd | 12:24 | 1:24 |
| | Gagebrook , Gage Rd (Tivoli) | - | - |
| | Old Beach , Jetty Rd/Morrisby Rd | - | - |
| | Old Beach , Clives Ave | - | - |
| | Otago , Otago Bay Rd | - | - |
| | Elwick Racecourse , Goodwood Rd | - | - |
| | Glenorchy , Elwick Rd | - | - |
| | Glenorchy Interchange Stop G | - | - |

| Sunday/Public Holidays | | | | | | | | | | | | | | | |
|------------------------|--|------|-------|-------|-------|------|------|------|------|------|------|------|------|------|-------|
| map ref | ROUTE NUMBER | 522 | 522 | 522 | 522 | 522 | 522 | 522 | 522 | 522 | 522 | 522 | 522 | 522 | 522 |
| | | am | am | am | pm | pm | pm | pm | pm | pm | pm | pm | pm | pm | pm |
| | Bridgewater Plaza , Green Point Rd | 9:01 | 10:01 | 11:01 | 12:01 | 1:01 | 2:01 | 3:01 | 4:01 | 5:01 | 6:01 | 7:01 | 7:57 | 8:57 | 9:57 |
| | Bridgewater , Cove Hill Fair | 9:10 | 10:10 | 11:10 | 12:10 | 1:10 | 2:10 | 3:10 | 4:10 | 5:10 | 6:10 | 7:10 | 8:06 | 9:06 | 10:06 |
| | Fisher Dr/Lamprill Circle | 9:20 | 10:20 | 11:20 | 12:20 | 1:20 | 2:20 | 3:20 | 4:20 | 5:20 | 6:20 | 7:19 | 8:15 | 9:15 | 10:15 |
| | Gagebrook , Sattler St/Tottenham Rd | 9:30 | 10:30 | 11:30 | 12:30 | 1:30 | 2:30 | 3:30 | 4:30 | 5:30 | 6:30 | 7:28 | 8:24 | 9:24 | 10:24 |

Explanations

- Wheelchair accessible bus
- f Service operates on Friday nights only
- s Service operates on school days only
- w Service operates on school days only and travels via Howard Rd and Acton Cres, Goodwood

WHO OPERATES MY SERVICE?

522, 530, X30, 696

metrotas.com.au

13 22 01



Online trip information
transport.tas.gov.au



EFFECTIVE 17 MARCH 2019

530, X30, 696



from Hobart City, Glenorchy & Rosny Park towards Bridgewater

| Monday to Friday | | | | | | | | | | | | | | | | |
|------------------|------------------------------------|------|------|------|------|------|------|------|-------|-------|-------|-------|-------|------|------|------|
| map ref | ROUTE NUMBER | 522 | 530 | 530 | 530 | 530 | 530 | 530 | 530 | 696 | 530 | 530 | 696 | 530 | 530 | 530 |
| | | am | am | am | am | am | am | am | am | am | am | pm | pm | pm | pm | pm |
| ○ | Hobart City Interchange Stop F | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - |
| ○ | Lutana, Brooker Ave/Bowen Rd | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - |
| ○ | Glenorchy Interchange Stop C | - | - | - | - | 7:43 | 8:41 | 9:12 | 10:12 | - | 11:12 | 12:12 | - | 1:12 | 2:12 | 2:55 |
| ○ | Elwick Racecourse, Goodwood Rd | - | - | - | - | 7:45 | 8:43 | 9:14 | 10:14 | - | 11:14 | 12:14 | - | 1:14 | 2:15 | 2:58 |
| ○ | Rosny Park Interchange Stop G | - | - | - | - | - | - | - | - | 10:53 | - | - | 12:53 | - | - | - |
| ○ | Risdon Vale, Linden Rd | - | - | - | - | - | - | - | - | 11:16 | - | - | 1:16 | - | - | - |
| ○ | Otago, Otago Bay Rd | - | - | - | - | 7:53 | 8:51 | 9:22 | 10:22 | 11:26 | 11:22 | 12:22 | 1:26 | 1:22 | 2:24 | 3:07 |
| ○ | Old Beach, Clives Ave | - | - | - | - | 7:59 | 8:57 | 9:28 | 10:28 | 11:31 | 11:28 | 12:28 | 1:31 | 1:28 | 2:31 | 3:14 |
| ○ | Old Beach, Jetty Rd/Morrisby Rd | - | - | - | - | 8:02 | 9:00 | 9:31 | 10:31 | 11:34 | 11:31 | 12:31 | 1:34 | 1:31 | 2:34 | 3:17 |
| ○ | Gagebrook, Gage Rd (Tivoli) | - | 6:43 | 7:13 | 7:43 | 8:06 | 9:04 | 9:35 | 10:35 | - | 11:35 | 12:35 | - | 1:35 | 2:38 | 3:21 |
| ○ | Gagebrook, Sattler St/Tottenham Rd | 5:30 | 6:48 | 7:18 | 7:48 | 8:11 | 9:09 | 9:40 | 10:40 | - | 11:40 | 12:40 | - | 1:40 | 2:43 | 3:26 |
| ○ | Fisher Dr/Crosby Pl | 5:37 | 6:56 | 7:26 | 7:56 | 8:19 | 9:17 | 9:48 | 10:48 | - | 11:48 | 12:48 | - | 1:48 | 2:51 | 3:33 |
| ○ | Bridgewater Plaza, Green Point Rd | - | 7:02 | 7:32 | 8:02 | 8:25 | 9:23 | 9:54 | 10:54 | 11:42 | 11:54 | 12:54 | 1:42 | 1:54 | 2:57 | 3:39 |
| ○ | Bridgewater, Cove Hill Fair | 5:43 | 7:05 | 7:35 | 8:05 | 8:28 | 9:26 | 9:57 | 10:57 | 11:45 | 11:57 | 12:57 | 1:45 | 1:57 | 3:00 | 3:42 |
| ○ | Bridgewater Plaza, Green Point Rd | 5:51 | - | - | - | - | - | - | - | - | - | - | - | - | - | - |

| Monday to Friday (cont) | | | | | | | | | | | | | | | |
|-------------------------|------------------------------------|------|------|------|------|------|------|------|------|------|------|------|------|-------|-------|
| map ref | ROUTE NUMBER | 696 | 530 | X30 | 696 | 530 | X30 | X30 | 530 | X30 | 530 | 530 | 522 | 522 | 522 |
| | | pm | pm | pm | pm | pm | pm | pm | pm | pm | pm | pm | pm | pm | pm |
| ○ | Hobart City Interchange Stop F | - | - | 3:41 | - | - | 4:43 | 5:21 | - | 6:20 | - | - | - | - | - |
| ○ | Lutana, Brooker Ave/Bowen Rd | - | - | 3:50 | - | - | 4:53 | 5:32 | - | 6:29 | - | - | - | - | - |
| ○ | Glenorchy Interchange Stop C | - | 3:45 | - | - | 4:45 | - | - | 5:45 | - | 6:45 | 7:45 | - | - | - |
| ○ | Elwick Racecourse, Goodwood Rd | - | 3:48 | 3:56 | - | 4:48 | 4:59 | 5:39 | 5:48 | 6:35 | 6:48 | 7:48 | - | - | - |
| ○ | Rosny Park Interchange Stop G | 3:33 | - | - | 4:33 | - | - | - | - | - | - | - | - | - | - |
| ○ | Risdon Vale, Linden Rd | 3:57 | - | - | 4:58 | - | - | - | - | - | - | - | - | - | - |
| ○ | Otago, Otago Bay Rd | 4:07 | 3:58 | 4:03 | 5:08 | 4:57 | 5:07 | 5:47 | 5:57 | 6:42 | 6:57 | 7:57 | - | - | - |
| ○ | Old Beach, Clives Ave | 4:12 | 4:05 | 4:08 | 5:13 | 5:04 | 5:13 | 5:53 | 6:04 | 6:47 | 7:04 | 8:04 | - | - | - |
| ○ | Old Beach, Jetty Rd/Morrisby Rd | 4:15 | 4:08 | 4:11 | 5:16 | 5:07 | 5:16 | 5:56 | 6:07 | 6:50 | 7:07 | 8:07 | - | - | - |
| ○ | Gagebrook, Gage Rd (Tivoli) | - | 4:12 | 4:16 | - | 5:11 | 5:21 | 6:01 | 6:11 | 6:55 | 7:11 | 8:11 | - | - | - |
| ○ | Gagebrook, Sattler St/Tottenham Rd | - | 4:18 | 4:23 | - | 5:16 | 5:28 | 6:08 | 6:16 | 7:02 | 7:16 | 8:16 | 8:44 | 9:43 | 10:43 |
| ○ | Fisher Dr/Crosby Pl | - | 4:26 | 4:29 | - | 5:24 | 5:34 | 6:14 | 6:24 | 7:08 | 7:24 | 8:24 | 8:52 | 9:51 | 10:51 |
| ○ | Bridgewater Plaza, Green Point Rd | 4:23 | 4:32 | 4:34 | 5:24 | 5:30 | 5:39 | 6:19 | 6:30 | 7:13 | 7:30 | 8:30 | - | - | - |
| ○ | Bridgewater, Cove Hill Fair | 4:26 | 4:35 | 4:37 | 5:27 | 5:33 | 5:43 | 6:23 | 6:33 | 7:16 | 7:33 | 8:33 | 8:58 | 9:58 | 10:58 |
| ○ | Bridgewater Plaza, Green Point Rd | - | - | - | - | - | - | - | - | - | - | - | 9:08 | 10:08 | 11:08 |

WHO OPERATES
MY SERVICE?

Metro

522, 530, X30, 696

metrotas.com.au

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Tasmanian
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| map ref | ROUTE NUMBER | 522 | 530 | 530 | 530 | 530 | 530 | 530 | 530 | 530 | 530 | 522 | 522 | 522 | 522 |
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| M | Glenorchy Interchange Stop C | - | 9:59 | 10:59 | 11:59 | 12:59 | 1:59 | 2:59 | 3:59 | 4:59 | 5:59 | - | - | - | - |
| K | Elwick Racecourse, Goodwood Rd | - | 10:02 | 11:02 | 12:02 | 1:02 | 2:02 | 3:02 | 4:02 | 5:02 | 6:02 | - | - | - | - |
| H | Otago, Otago Bay Rd | - | 10:11 | 11:11 | 12:11 | 1:11 | 2:11 | 3:11 | 4:11 | 5:11 | 6:11 | - | - | - | - |
| G | Old Beach, Clives Ave | - | 10:15 | 11:15 | 12:15 | 1:15 | 2:15 | 3:15 | 4:15 | 5:15 | 6:15 | - | - | - | - |
| F | Old Beach, Jetty Rd/Morrisby Rd | - | 10:17 | 11:17 | 12:17 | 1:17 | 2:17 | 3:17 | 4:17 | 5:17 | 6:17 | - | - | - | - |
| E | Gagebrook, Gage Rd (Tivoli) | - | 10:21 | 11:21 | 12:21 | 1:21 | 2:21 | 3:21 | 4:21 | 5:21 | 6:21 | - | - | - | - |
| D | Gagebrook, Sattler St/Tottenham Rd | 7:35 | 10:26 | 11:26 | 12:26 | 1:26 | 2:26 | 3:26 | 4:26 | 5:26 | 6:26 | 7:37 | 8:37 | 9:37 | 10:37 |
| C | Fisher Dr/Crosby Pl | 7:43 | 10:34 | 11:34 | 12:34 | 1:34 | 2:34 | 3:34 | 4:34 | 5:34 | 6:34 | 7:45 | 8:45 | 9:45 | 10:45 |
| B | Bridgewater Plaza, Green Point Rd | - | 10:40 | 11:40 | 12:40 | 1:40 | 2:40 | 3:40 | 4:40 | 5:40 | 6:40 | - | - | - | - |
| A | Bridgewater, Cove Hill Fair | 7:52 | 10:43 | 11:43 | 12:43 | 1:43 | 2:43 | 3:43 | 4:43 | 5:43 | 6:43 | 7:54 | 8:54 | 9:54 | 10:54 |
| B | Bridgewater Plaza, Green Point Rd | 8:03 | - | - | - | - | - | - | - | - | - | 8:04 | 9:04 | 10:04 | 11:04 |

| Sunday/Public Holidays | | | | | | | | | | | | |
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| D | Gagebrook, Sattler St/Tottenham Rd | 8:40 | 9:40 | 10:40 | 11:40 | 12:40 | 1:40 | 2:41 | 3:41 | 4:41 | 5:43 | 6:43 |
| C | Fisher Dr/Crosby Pl | 8:48 | 9:48 | 10:48 | 11:48 | 12:48 | 1:48 | 2:49 | 3:49 | 4:49 | 5:51 | 6:51 |
| A | Bridgewater, Cove Hill Fair | 8:57 | 9:57 | 10:57 | 11:57 | 12:57 | 1:57 | 2:58 | 3:58 | 4:58 | 6:00 | 7:00 |
| B | Bridgewater Plaza, Green Point Rd | 9:07 | 10:07 | 11:07 | 12:07 | 1:07 | 2:07 | 3:08 | 4:08 | 5:08 | 6:10 | 7:10 |

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APPENDIX E

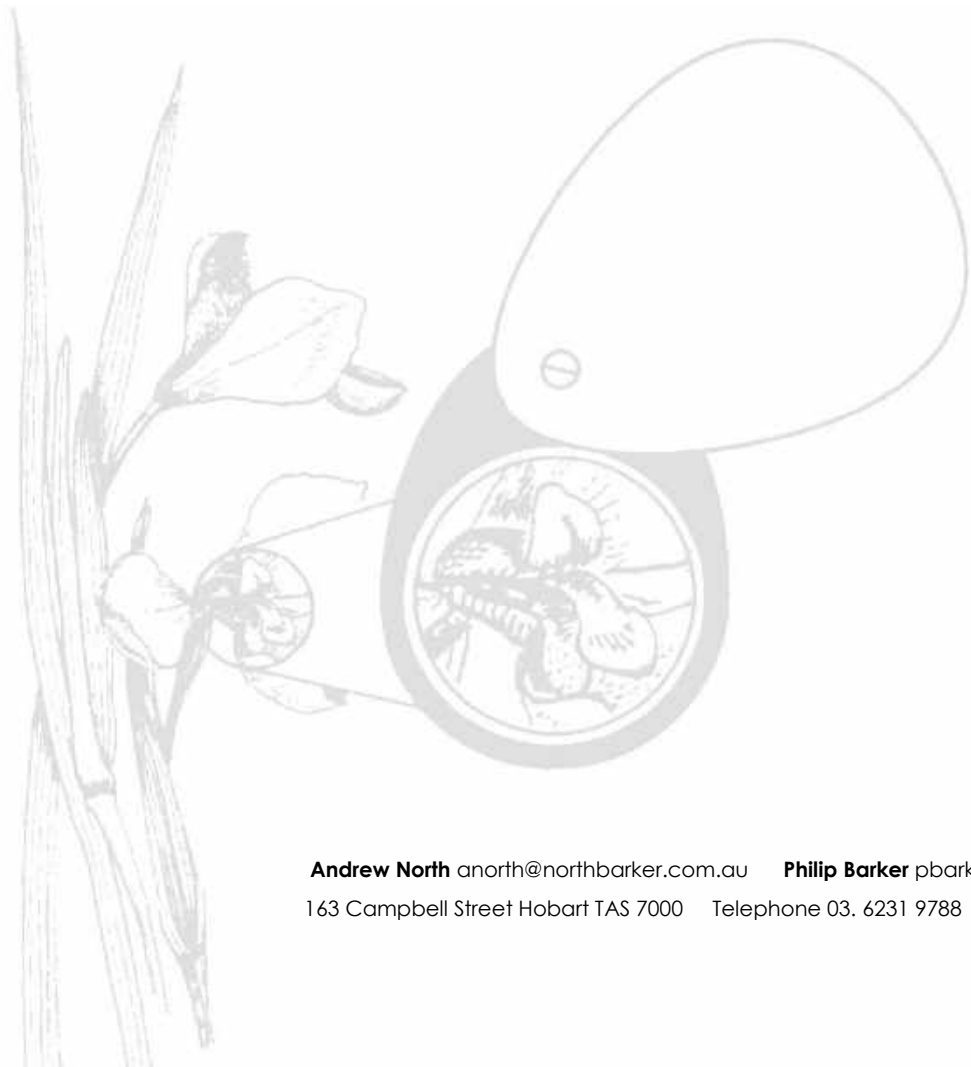
Natural Values Assessment



75 Fouche Ave, Old Beach Natural Values Comment

12th August 2020

For Johnstone, Mcgee & Gandy Pty Ltd (JMG028)



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Date of Survey and Photos: 30th of July 2020 (Cody McCracken)

Report: Richard White and Cody McCracken

Project Management: Richard White (rwhite@northbarker.com.au)

Summary

JMG approached North Barker Ecosystems Services to assess natural values as part of the development application for 75 Fouche Ave, Old Beach. A proportion of the development (4 units) is within a portion of the Waterway and Coastal Protection Area (WCPA) overlay (that also includes an area of the Future Coastal Refugia area outside the proposed impact area). Accordingly, the Performance Criteria of the WCPA Code which reference natural values need to be addressed.

During our assessment of all the WCPA in the lot (including the Future Coastal Refugia area) we found no natural values of conservation significance. The area is a highly modified patch of disturbed land with introduced species forming a notable component of the flora throughout the site. Native elements do remain in places with a species of wallaby grass (*Rytidosperma setaceum*) dominating in some areas north of the WCPA. Although some saltmarsh species do occur in the Future Coastal Refugia area, these are sparse (<15 %); this area is highly disturbed with introduced species (especially *Plantago cononopus*) dominating the flora.

It is our assessment that the proposal can meet the Performance Criteria of the Waterway and Coastal Protection Area Code.

1. Background

A housing complex is proposed at 75 Fouche Ave, Old Beach. At the southern end, four of the units in the proposal area overlap with an area of approximately ~2030 m² under the Waterways and Coastal Protection Area (WCPA) overlay of the Brighton Interim Planning Scheme 2015. Part of this area (~1295 m²), but outside the impact footprint, is also covered by the Future Coastal Refugia (FCR) overlay. Brighton Council have requested an assessment of the area covered by the WCPA, including the FCR area, with an emphasis on the potential for the presence of EPBC listed saltmarsh community.

JMG approached North Barker Ecosystems Services to undertake an assessment of the area and to provide comment in terms of a response to the natural values components of the WCPA Code; in particular, the Performance Criteria P1 and P2 under the Clause E11.7.1 Building and Works. Accordingly, this report details the findings of our assessment and addresses the WCPA Code.

2. Findings

Vegetation

Overall, the site is a highly modified area of cleared/regenerating land with a dominant component of introduced species. Common introduced species include *Dactylis glomerata*, *Bromus diandrus*, *Lolium perenne*, and *Trifolium repens*. In the area north of the WCPA, the native component is still prevalent in places, with the native wallaby grass *Rytidosperma setaceum* dominating (Plate 1). The changes in the area occur at too small a scale to apply meaningful TASVEG mapping units to express this change. Regardless, the areas that have more introduced species may be best mapped as the TASVEG unit agricultural land (FAG), while wallaby grass dominated areas more resemble a disturbance-induced lowland grass complex (GCL).

The FCR area at the southern section of the site (outside the building area) is a highly disturbed area dominated by introduced species such as *Plantago coronopus subsp. coronopus*, *Dactylis glomerata*, *Bromus diandrus*, *Lolium perenne*, *Trifolium repens* (Plate 2). Native species do occur in this area, and they do include some saltmarsh species, but they are a minor component of the flora (<15%), and insufficient to map as a saltmarsh community. Saltmarsh species in this area include *Sarcocornia quinqueflora* (small patches in the south east corner, Plate 3), *Distichlis distichophylla*, *Ficinia nodosa*, *Juncus kraussii* and *Rytidosperma setaceum*.

In the area where the proposal overlaps with the WCPA overlay, the vegetation grades from the highly modified area in the FCR to the areas where the native component (almost entirely *Rytidosperma setaceum*) is more prevalent. Throughout this area, introduced species are a notable component of the flora (*Dactylis glomerata*, *Bromus diandrus*, *Lolium perenne* and *Pennisetum clandestinum*), and the natural values in terms of flora and fauna habitat are very limited given the high level of historical disturbance throughout the area.

Fennel (*Foeniculum vulgare*) occurs sporadically on the site and is listed as 'declared weeds' under the *Weed Management Act 1999*.



Plate 1: *Ryidosperma setaceum* is prevalent within exotic grass species at the northern end of the study area



Plate 2: Small cluster of *Sarcocornia quinqueflora* in the foreground with the dominant *Plantago coronopus* in the background



Plate 3: *Sarcocornia quinqueflora* (reddish patches) in the south eastern corner of the site.

3. E11 Waterways and Coastal Protection Code

The relevant parts of the WCPA Code are discussed below with regards to the findings of the natural values assessment. Clause E11.7.1 Building and Works, P1, P2.

P1

Building and works within a Waterway and Coastal Protection Area must satisfy all of the following:

a) avoid or mitigate impact on natural values;

The proposal area that overlaps with the WCPA Code is a highly modified, disturbed area with no potential for natural values of conservation significance. The proposal can meet this criterion.

b) mitigate and manage adverse erosion, sedimentation and runoff impacts on natural values;

The area south of the walkway (outside the proposal area) is intact saltmarsh and 'downstream' effects from the proposal (i.e. erosion, sedimentation and runoff) should be managed through a sediment and erosion control plan to ensure this area is not impacted by construction activities. With this plan in place the proposal can meet this criterion.

c) avoid or mitigate impacts on riparian or littoral vegetation;

Although some native species occur in this area, it does not resemble a riparian or littoral vegetation community. Accordingly, impacts to riparian or littoral vegetation are not anticipated. The proposal can meet this criterion.

d) maintain natural streambank and streambed condition, (where it exists);

The impact area is not a natural streambank or streambed. The proposal can meet this criterion.

e) maintain in-stream natural habitat, such as fallen logs, bank overhangs, rocks and trailing vegetation;

No such features occur in the impact area. The proposal can meet this criterion.

f) avoid significantly impeding natural flow and drainage;

No impact to natural flow or drainage is expected. The proposal can meet this criterion.

g) maintain fish passage (where applicable);

Not applicable.

h) avoid landfilling of wetlands;

The impact area is not in a wetland; not applicable.

i) works are undertaken generally in accordance with 'Wetlands and Waterways Works Manual' (DPIWE, 2003) and "Tasmanian Coastal Works Manual" (DPIPWE, Page and Thorp, 2010), and the unnecessary use of machinery within watercourses or wetlands is avoided.

P2

Building and works within a Future Coastal Refugia Area must satisfy all of the following:

a) allow for the landward colonisation of wetlands and other coastal habitats from adjacent areas;

As the proposed impact area is not covered by the Future Coastal Refugia area (FCR) the proposal will be able to satisfy all the criteria under P2. Regardless, the low density of saltmarsh species, and the prevalence of introduced species suggest that this area is unlikely to transition to saltmarsh in the near term.

b) not be landfill;

It is understood that no landfill in this area is planned. To ensure this is avoided this area should be demarcated to ensure no further impact occurs.

c) avoid creation of barriers or drainage networks that would prevent future tidal inundation;

Based on our understanding of the design no such infrastructure is planned in this area.

d) ensure coastal processes of deposition or erosion can continue to occur;

It is understood the proposal will not impact the FCR area and is not considered likely to have an impact on coastal processes in this area.

e) avoid or mitigate impact on natural values;

Natural values in the FCR in the lot are limited to a few native species that are significantly outcompeted by introduced species. The impact area is outside the FCR and no impact to natural values of any conservation significance is expected by the proposal. No mitigation is warranted.

f) avoid or mitigate impact on littoral vegetation;

Although some native species occur in this area, it does not resemble a riparian or littoral vegetation community. Accordingly, impacts to riparian or littoral vegetation are not anticipated. The proposal can meet this criterion.

g) works are undertaken generally in accordance with 'Wetlands and Waterways Works Manual' (DPIWE, 2003) and "Tasmanian Coastal Works Manual" (DPIPWE, Page and Thorp, 2010).

PC3 and PC4 are do not apply to natural values and are not dealt with here.

4. Recommendations

Based upon the findings of the survey the following recommendations have been made:

- Given the presence of a single declared weed species, the following best practices weed hygiene guidelines should be followed:
 - o *Keeping it clean - A Tasmanian field hygiene manual to prevent the spread of freshwater pests and pathogens* (Allen and Gartenstein, 2010)
 - o *Weed and Disease Planning and Hygiene Guidelines - Preventing the spread of weeds and diseases in Tasmania* (DPIPWE, Stewart and Askey-Doran, 2015)
- Construction works should avoid impacting or disturbing the Future Coastal Refugia Area i.e. vehicles and machinery should avoid driving in this area, fill or waste should not be stored in this area.

APPENDIX E

Coastal Vulnerability Assessment

GES

GEO-ENVIRONMENTAL
SOLUTIONS

COASTAL VULNERABILITY ASSESSMENT

75 Fouche Ave, Old Beach

CLIENT

Johnson, McGee & Gandy Pty Ltd

July 2020



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Executive Summary

Geo-Environmental Solutions Pty Ltd (GES) were contracted by Johnson, McGee & Gandy Pty Ltd to prepare a coastal inundation hazard assessment for a property at Old Beach. The project area consists of a single cadastral title (located at 75 Fouche Ave (The Site)). An application to conduct construction works has triggered the assessment in accordance with the Interim Planning Scheme (IPS) 2015.

The site has an area of approximately 6300 m² and appears to have its coastal boundary at the edge of the Derwent River. The elevation of the site ranges from 1.3 to 3.0 m AHD. The edge of the riverbank is lined with reeds, with a small area exposing underlying cobbles which lines the edge of the shoreline, providing some shoreline armouring.

The following can be concluded from the inundation assessment:

- In accordance with the Directors Determination (2020), the finished floor level of any proposed habitable room should be at or above 2.5 m AHD, which is compiled from site-specific design levels within the planning scheme inundation prone areas code Table 15.1 reference for Old Beach.
- The Tasmanian Building Regulations do not stipulate design finished floor levels for non-habitable rooms or buildings. If building in an IPAC Low overlay, habitable rooms may be addressed as a performance solution by means of a risk assessment.
- GES have identified that largest 1% AEP wave condition at the site is generated from a south westerly wind wave with a nearshore significant height of 0.7 m.
- Wave run up inundation levels for 2070 are calculated to be at 1.83 m AHD based on calculated 1% AEP wind waves from the west (the largest wave runoff at the site).
- Waves are largely attenuated by the shoreline platform and there is a low risk that the waves will cause adverse erosion affects at the site.
- It is recommended that the finished floor levels for habitable rooms are at or above 2.5 m AHD. On this basis, there is a low risk that the floors will be inundated by 2070 based on a 1% AEP event.
- By 2070, there is the potential for 1% AEP coastal inundation around the perimeter of the buildings proposed closest to the river, with site levels at 1.65 m and inundation levels at ~1.85.
- There is a low risk that the proposed four units closest to the river will cause an adverse effect on floodwater displacement.

The following are recommended from the risk assessment:

- It is recommended that finished floor levels of a habitable building must be constructed at or above 2.5 m AHD in accordance with the Tasmanian Building Regulations and the director's determination.
- There are no finished floor level elevation requirements for non-habitable buildings according to the 2016 Tasmanian Building Regulations or the IPS. A non-habitable building, an outbuilding, or a Class 10b building under the Building Code of Australia, must have a floor area of no more than 60 m² to meet acceptable solutions IPS E15.7.3 A3.
- GES discerns that non habitable buildings and non-habitable rooms of a habitable building should be constructed at least 0.1 m above the projected 1% AEP site wave runoff level for 2070 at 1.83 m AHD.
- Advice should be sought from a biologist on the proposed building and works within a refugia area, particularly in relation to landfilling and occupying areas which would be inhabited by refugia as identified by the refugia overlay.

List of Abbreviations

| | |
|---------|---|
| AHD(83) | Australian Height Datum |
| AEP | Annual Exceedance Probability |
| CEM | Coastal Engineering Model |
| CEHC | Coastal Erosion Hazards Code |
| DCP | Dynamic Cone Penetrometer |
| DEM | Digital Elevation Model |
| DPAC | Department of Premier and Cabinet |
| ERMP | Erosion Risk Management plan |
| GES | Geo-Environmental Solutions Pty Ltd |
| GIS | Geographical Information System |
| IPAC | Inundation Prone Areas Code |
| IPCC | Intergovernmental Panel on Climate Change |
| IPS | Interim Planning Scheme |
| LiDAR | Light Detection And Ranging |
| LIST | Land and Information System, Tasmania |
| MRT | Mineral Resources Tasmania |
| NCCOE | National Committee on Coastal and Ocean Engineering |
| SB | Soil Bore |
| SPM | Shoreline Protection Manual |
| SSP | Surf Similarity Parameter |
| SWAN | Simulating Waves Nearshore |
| TAFI | Tasmanian Aquaculture and Fisheries Institute |
| WRL | Water Research Laboratory (University of New South Wales) |

1 Introduction

Geo-Environmental Solutions Pty Ltd (GES) were contracted by Johnson, McGee & Gandy Pty Ltd to prepare a coastal inundation hazard assessment for a property at Old Beach. The project area consists of a single cadastral title (located at 75 Fouche Ave (The Site)). An application to conduct construction works has triggered the assessment in accordance with the Interim Planning Scheme (IPS) 2015.

2 Objectives

The objective of the site investigation is to:

- Identify which codes need to be addressed in terms of coastal vulnerability and identify the performance criteria relevant to the project which need addressing.
- Conduct a literature review of all geological, geomorphologic, hydrodynamic information and any 'First or Second Pass Assessments' which are relevant to the site;
- Conduct a detailed inundation hazard assessment.
- Conduct a site risk assessment for the proposed development ensuring relevant performance criteria are addressed; and
- Where applicable, provide recommendations on methods and design approach to reduce inundation impact.

3 Site Details

3.1 *Project Area Land Title*

The land studied in this report is defined by the following title reference:

- CT 107918/27 (75 Fouche Avenue);

This parcel of land is referred to as the 'Site' and/or the 'Project Area' in this report.

3.2 *Project Area Regional Coastal Setting*

The Project Area is located between Ferry Point and Brock Point (Figure 1). The site is subject to the following hydraulic influences:

- Wind fetch across the River Derwent from the west, southwest and the south and the following:
 - Wave setup; and
 - Wave run-up.
- Sea level rise; and
- Tides and associated water currents.



Figure 1 Site Location

3.3 Project Area Local Setting

The site has an area of approximately 6300 m² and appears to have its coastal boundary at the edge of the Derwent River. The elevation of the site ranges from 1.3 to 3.0 m AHD. The edge of the riverbank is lined with reeds, with a small area exposing underlying cobbles which lines the edge of the shoreline, providing some shoreline armouring.



Figure 2 Site Local Setting outlined in red (The LIST)

4 Building Controls

4.1 Building Design Life

This report presents a summary of the overall site risk to coastal erosion and inundation processes. This assessment has been conducted for the year 2070 which is representative of a ‘normal’ 50-year building design life category based on a 2018 baseline (ABCB 2015).

Per the Australian Building Code Board (ABCB 2015), when addressing building minimum design life:

‘The design life of buildings should be taken as ‘Normal’ for all building importance categories unless otherwise stated.’

As per Table 3-1, the building design life is 50 years for a normal building.

Table 3-1 Design life of building and plumbing installations and their components

| Building Design Life Category | Building Design Life (years) | Design life for components or sub systems readily accessible and economical to replace or repair (years) | Design life for components or sub systems with moderate ease of access but difficult or costly to replace or repair (years) | Design life for components or sub systems not accessible or not economical to replace or repair (years) |
|-------------------------------|------------------------------|--|---|---|
| Short | 1 < dl < 15 | 5 or dl (if dl < 5) | dl | dl |
| Normal | 50 | 5 | 15 | 50 |
| Long | 100 or more | 10 | 25 | 100 |

Note: Design Life (dl) in years

4.2 Habitable Room Finished Floor Levels

According to the Building Code of Australia, habitable rooms are defined as:

“a room used for normal domestic activities and:

- Includes a bedroom, living room, lounge room, music room, television room, kitchen, dining room, sewing room, study, playroom, family room, home theatre, and sunroom; but,
- Excludes a bathroom, laundry, water closet, pantry, walk-in wardrobe, corridor, hallway, lobby, photographic darkroom, clothes drying room, and other spaces of a specialised nature occupied neither frequently nor for extended periods.”

Non enclosed areas (such as a deck) are not defined as habitable.

4.2.1 Coastal Inundation Areas

The director’s determination reporting checklist for site hazards is presented in Appendix 1.

As identified in the directors Determination and regulation 56(3) of the Building Regulations 2016, the defined flood level is the level above the 0 metre Australian Height Datum with a one percent probability of being exceeded in a storm surge flooding event in the year 2100, as specified in the Coastal Inundation Hazard Band Levels List for the relevant locality in the relevant Local Provisions Schedule of the Tasmanian Planning Scheme.

According to Table E15.1 of the IPS:

For Old Beach, the 1% AEP flood level for 2100 plus 0.3 m freeboard is defined at 2.5 m AHD, and the defined flood level for the land is therefore set at 2.2 m AHD.

According to the Tasmanian Building regulations:

‘A person must not perform building work on a building on land that is subject to coastal inundation unless the floor level of each habitable room of the building being erected, re-erected or added as part of the work, is at least 300 millimetres above the defined flood level for the land.’

All habitable rooms at the site must therefore be constructed at 2.5 m AHD.

5 Interim Planning Scheme

5.1.1 Waterways & Coastal Protection Areas (WCPA) Overlay

Part of the site falls within the Waterways & Coastal Protection Areas (WCPA) overlay (Figure 3).



Figure 3 WCPA Overlay near the Site (The LIST)

5.1.2 Inundation Prone Areas Code (IPAC) Overlay

Part of the site falls within the high hazard Inundation Prone Areas Code (IPAC) overlay (Figure 4).



Figure 4 IPAC Overlay near the Site (The LIST)

5.1.3 Coastal Erosion Hazards Code (CEHC) Overlay

None of the site is within the Coastal Erosion Hazards Code (CEHC) overlay (Figure 5).



Figure 5 CEHC Overlay near the Site (The LIST)

5.2 Proposed Development

The proposed site layout plan is presented in Figure 6.

2013 Greater Hobart LIDAR has been used to interpret site inundation levels. The ground elevation around the closest building to the river/coastline is as low as 1.6 m AHD.

Table 1 Summary of Site Areas Falling Within Potential Coastal Vulnerability Zones

| Site Location | Elevation Range (m AHD) | WCPA (E11) Overlay | IPAC (E15) Overlay Low Risk | IPAC (E15) Overlay Medium Risk | IPAC (E15) Overlay High Risk | CEHC (E16) Overlay |
|----------------------|-------------------------|--------------------|-----------------------------|--------------------------------|------------------------------|--------------------|
| Proposed Development | 1.3 to 3.0 | 10% | 70% | - | - | - |

- Not within overlay

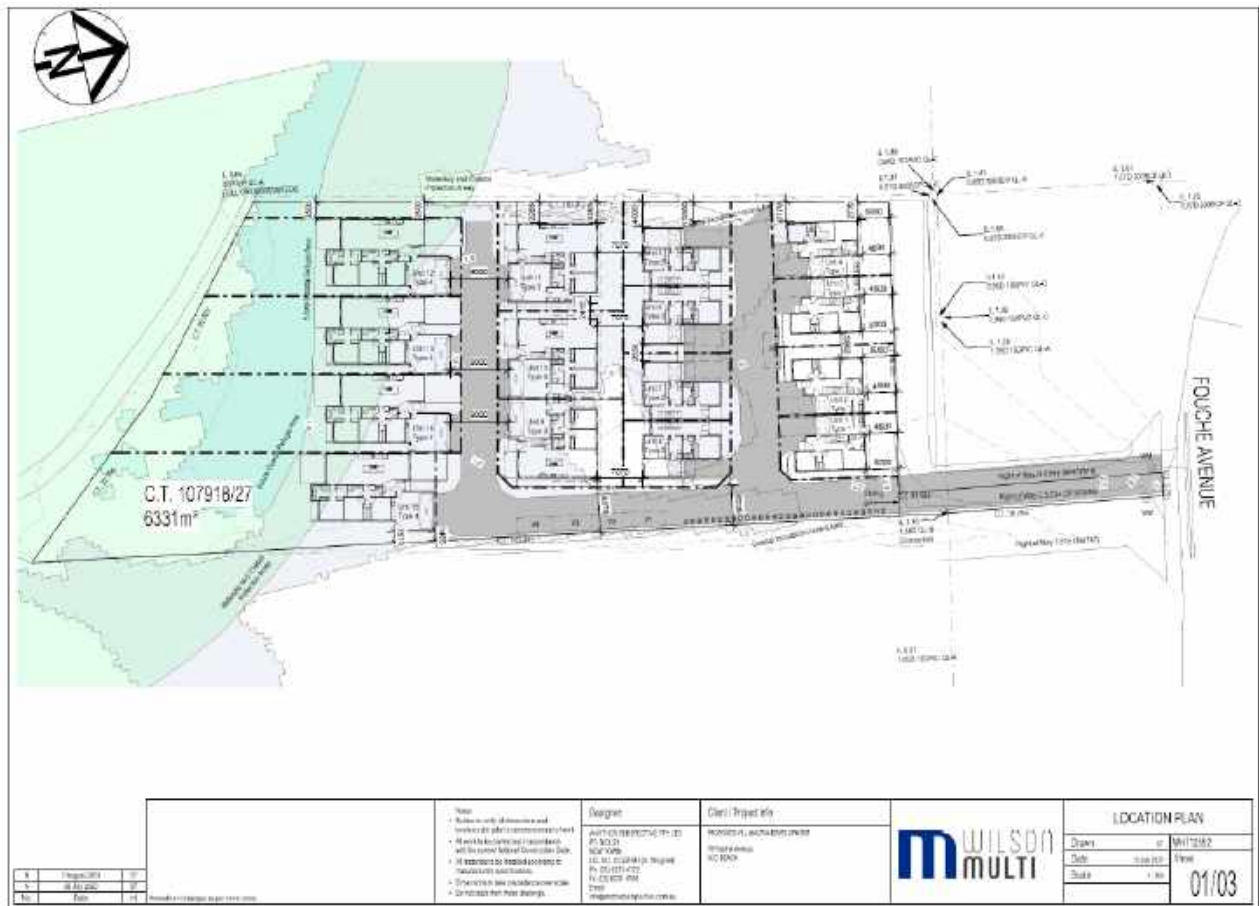


Figure 6 Proposed Site Layout

5.3 Acceptable Solutions

Where applicable, the need for further performance criteria compliance is summarised in Appendix 2.

5.3.1 Waterways and Coastal Protection Areas (WCPA)

E11.7.1 A1 Building and Works

*As the proposed building and works is within a WCPA area and is not within a building area on a plan of subdivision approved under this planning scheme, the proposed building **does not meet** E11.7.1 A1 acceptable solutions for buildings and works.*

5.3.2 Inundation Prone Areas Code (IPAC)

E15.7.3 A1 A new habitable building in the **Low** IPAC overlay

A new habitable building may be constructed provided the finished floor levels exceeds 2.5 m AHD and a risk assessment is conducted

E15.7.3 A3 A non-habitable building in the **Low** IPAC overlay

Must have a floor area of no greater than 60 m² unless subject to a risk assessment.

E15.7.5 For landfill, or solid walls greater than 5 m in length and 0.5 m in height

Up to 0.5 m of fill may be applied in the IPAC overlay without triggering this performance criteria. Infilling may be conducted in WCPA areas provided they are not classified as a wetland.

5.4 Performance Criteria

5.4.1 Building and Works

The following performance solutions are to be addressed:

- *E11.7.1 P1*
- *E15.7.3 P1*
- *E15.7.3 P3*
- *E15.7.5 P1*

Any potential building works (outbuilding or new dwelling) in an IPAC hazard overlay will be assessed as will be proposed building works in a WCPA overlay.

6 Site Physical Assessment

6.1 Site Geology

According to the MRT 1:25,000 mapping, the site geology comprises of 'older alluvium of river terrace, predominantly dolerite derived (Map Unit: Qpad).

6.2 Site Soil Assessment

A soil assessment was conducted for the site by GES (Figure 6). A push probe borehole was completed at the site. Hard dolerite has encountered between 0.8 and 1.6 m depth.

Table 2 Site Soil Profile

| Depth To (m) | | | | | | Horizon | Description |
|--------------|-----|-----|-----|-----|-----|---------|--|
| BH1 | BH2 | BH3 | BH4 | BH5 | BH6 | | |
| 0.1 | 0.1 | 0.2 | 0.2 | 0.3 | 0.2 | Fill | Dark Greyish Brown Clayey SAND (SC) , ~10-15% clay, weak polyhedral structure, slightly moist firm consistency, ~10% stones and gravels, disturbed appearance, variable boundary to |
| 0.5 | 0.8 | 0.7 | 0.8 | 0.8 | 0.7 | B2 | Dark Olive Brown CLAY (CH) , moderate polyhedral structure, slightly moist firm consistency, high plasticity, variable boundary to |
| 1.6 | | 1.0 | 1.4 | | | B3 | Pale Brown CLAY (CL) , weak polyhedral structure, slightly moist very stiff consistency, medium plasticity, ~20% stones and gravels, variable boundary to |
| 2.0 | 1.5 | 1.5 | 1.5 | 1.3 | 1.4 | BC | Brownish Yellow and Pale Brown Clayey GRAVELS (GC) , ~5% clay, weak polyhedral structure, slightly moist hard consistency, ~50% rocks and gravels, auger refusal on gravels |

6.3 NRM Assessment

The LIST presents a summary of the site coastal vulnerability over a 100 m section of the coastline near the site (Appendix 3). The site is reported to have the following geomorphic conditions:

- Soft muddy shore backed by low-lying unconsolidated sediment plains
- Intertidal or shallow subtidal mudflats
- Backshore type: marshy low-lying supratidal sediment flats; mostly saltmarsh

The site has the following natural values:

- Geovalue -2 (moderate geoconservation priority)
- Natural values index – 2 (medium integrated conservation value - CFEV)

6.4 Tasveg

Wetland (or any identified vegetation classes) have not been identified on the site. Infilling of wetlands is to be avoided within the WCPA overlay.

7 Inundation Assessment

7.1 Scope of Works

GES have conducted a site-specific assessment to determine the longer-term recession potential. The following assessment scope of works has been adopted for the site:

- Conduct targeted site-specific modelling;
- Assess site inundation levels for the proposed 50-year design life of the structure (to 2070) as well as for 2100;
- Conduct site specific hydrodynamic modelling to determine 1% AEP wave run-up and wave setup for 2070 which may impact on site erosion potential; and
- Use the hydrodynamic information to determine the likelihood of soft sediment erosion along the shoreline.

7.2 Site Baseline Seawater Levels

7.2.1 Storm Tide

Storm tide events may be defined in terms of the culmination of astronomical tide and storm surge events. Maximum storm tide inundation levels have been adopted for the site based on a 1% AEP that an inundation event will occur. Storm tide levels are obtained from the IPS (2015) inundation hazard tables.

The storm tide level adopted for the site 1.24 m

7.2.2 Sea Level Rise

The IPS (2015) has adopted the following sea level rise estimates-based RPC projections with reference to a 2010 baseline:

- 0.2 m rise by 2050; and
- 0.8 m rise by 2100.

Based on these figures, sea level elevations presented in Table 3 are applied to the site. 2070 projections are used reference the design life of the proposed structures.

Table 3 Present Day & Projected Inundation Levels for Various Scenarios

| Scenario | Present Day | Normal subsystems with 15 Year Design Life ¹ | Normal subsystems with 50 Year Design Life ² | Directors Determination Inundation Level ³ |
|-------------------------------------|-------------|---|---|---|
| Projected IPS Scenario for Brighton | 2020 IPS | 2035 IPS | 2070 IPS | 2100 IPS |
| Sea Levels (m AHD) | 0.11 | 0.18 | 0.47 | 0.88 |

1 Includes decks, retaining structures, wastewater treatment systems, and small non habitable buildings

2 Residential and commercial buildings and extensions as well as large non habitable buildings

3 The Directors Determination (2020) requires that building FFL's are compared against at 2100 1% AEP levels

7.2.3 Stillwater Levels

The effects of storm tide may be combined with sea levels projections to provide baseline water levels (reported in m AHD) which are referred to as still water level.

The still-water levels adopted for the site are presented in Table 4.

Table 4 1% ARI Stillwater Levels at the Site based on Present Day and 2070 Sea Level Projections

| Stillwater Elevations | 2020 IPS | 2070 IPS | 2100 IPS |
|---|-----------|-----------|----------|
| Sea Levels (m AHD) | 0.11 | 0.47 | 0.88 |
| Local 1% AEP Storm Tide Influence (above 0 m AHD) | 1.16 | 1.16 | 1.16 |
| Local Wind Setup (m)* | 0.06 | 0.06 | 0.04 |
| Wind Setup Direction | southwest | southwest | west |
| Summary (m AHD) | 1.33 | 1.69 | 2.08 |

7.3 Site Hydrodynamics

Coastal process hydrodynamics were assessed at the site. Information collected is used to assist in interpreting site specific:

- Maximum site inundation levels;
- Effects of storm inundation levels on site erosion;
- Longer term recession trends.

Without consideration of site hydrodynamic wave models, these potential hazards cannot be addressed. Depending on the planning requirements and the level of site risk, this information may or may not have not been utilised in the site inundation and/or erosion model. It is recognised however, that a site specific coastal processes study is imperative in any coastal vulnerability assessment which seeks to identify the potential hazards and potential risks to assets and life.

Nearshore wave heights are also calculated from localised wind conditions.

Where applicable, the wind fetch wave model has been developed based on the CEM (2008) and SPM (1984) formulations which interpret site bathymetry, topography and wind speeds.

Hydrodynamic risks are measured in terms of 1% AEP events. Site specific processes considered in this section include but are not limited to the following (some of which are detailed in Figure 8):

- Wave runup;
- Wave setup; and
- Wind setup.

A 300 mm freeboard value has been adopted by the IPS (2015) to account to for the Tasmanian Building Act 2000 regulations. Site hydrodynamic factors are included within this 300 mm freeboard zone which essentially defines any hydrodynamic inundation processes which are above the adopted still water levels. The 300 mm value will tend to overestimate inundation levels at some sites and underestimate inundation levels at other sites.

As wind setup, wave setup and wave runup normally occur simultaneously during storm surge events, these components are combined with extreme tide and storm surge predictions to provide maximum inundation levels for the site. Wave models have been generated for the site to define the site specific hazards.

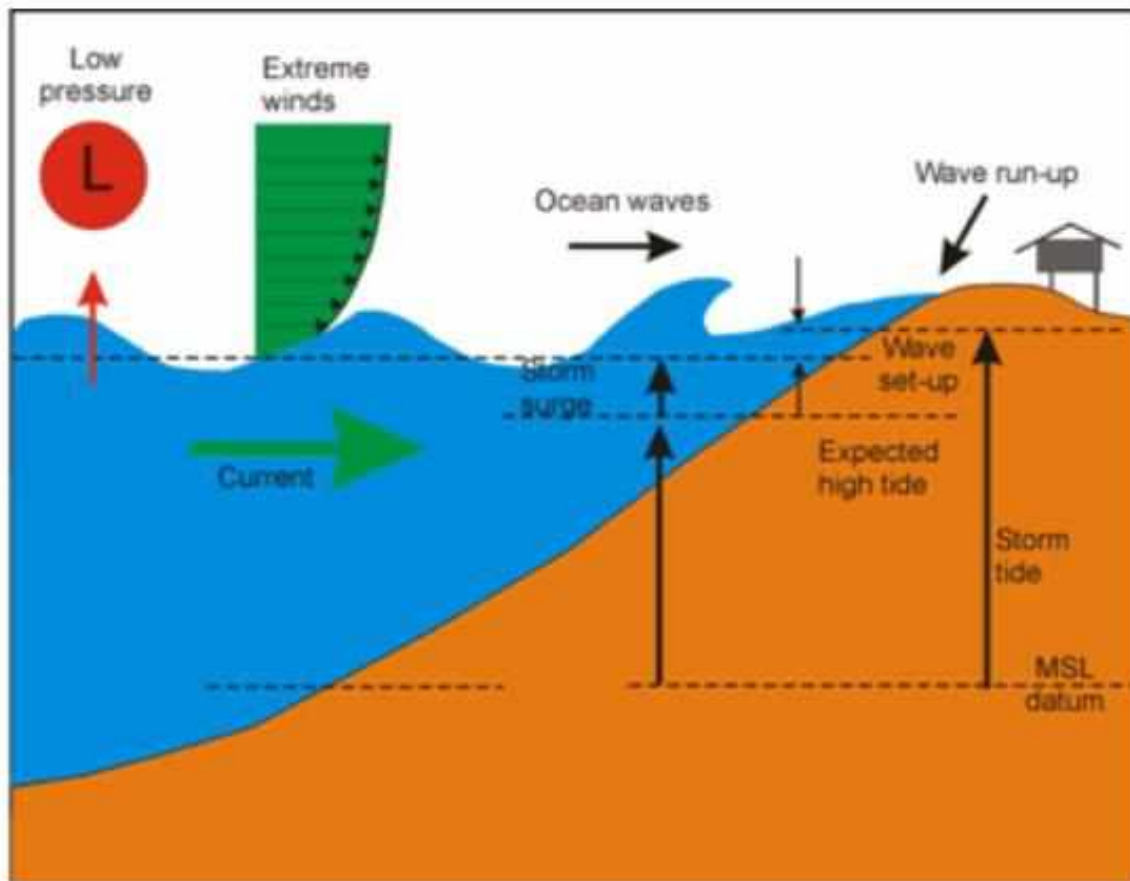


Figure 7 Hydrodynamic Parameters Associated with Storm Surge Events

7.3.1 Site Wave Conditions

Radials were used to derive local wave conditions at the site are presented in Appendix 4. Table 5 provides a summary of the dominant waves intercepting the site.

Table 5 Summary of Dominant Waves Intercepting the Site

| Wave Details | Local Wind Fetch | Local Wind Fetch | Local Wind Fetch |
|-------------------------------------|------------------|------------------|------------------|
| Direction | West | Southwest | South |
| Design Significant Wave Height (m)* | 0.8 | 0.7 | 0.7 |
| Design Wave Period (s)* | 2.2 | 2.2 | 2.2 |
| Approach Angle | 30 | 0 | 30 |

7.3.2 Dominant Wave Characteristics

The most dominant wave originates from a westerly wind wave (summarised in Table 6).

Table 6 Details of the Dominant Wave Intercepting the Site

| Wave Position | Parameter | Value | Value |
|-------------------------------------|------------------------|------------------|------------------|
| Nearshore (Design Significant Wave) | Origin | Local Wind Fetch | Local Wind Fetch |
| | Direction | West | Southwest |
| | Approach Angle | 30 | 0 |
| | Wave Height (m) | 0.7 | 0.7 |
| | Design Period (s) | 2.2 | 2.2 |
| Breaking | Breaker Height (m) | 0.8 | 0.8 |
| | Breaking Depth (m) | 1.2 | 1.0 |
| | Breaking Angle | 25 | 0 |
| | Nearshore Gradient (%) | 2.0 | 2.4 |

7.3.3 Nearshore Hydrodynamics

Hydrodynamic variables calculated for the site are presented in Table 7. Inundation levels at the site are calculated from these individual components combined with the stillwater levels.

Table 7 Site 1% AEP Wave Hydrodynamics Based on Present Day, 2070 & 2100 Scenarios

| Coastal Process | 2020 IPS | 2070 IPS | 2100 IPS |
|---|---------------------|---------------------|---------------------|
| Modelled Worst Case Scenario Combined Wave & Wind Setup | South-westerly Wind | South-westerly Wind | Westerly Wind |
| Wave Setup (m) | 0.13 | 0.13 | 0.14 |
| Wind Setup (m) | 0.06 | 0.06 | 0.04 |
| Wave Runup Scenario | South Westerly Wind | South Westerly Wind | South Westerly Wind |
| R2% Wave Runup Based on Mase (1989)* | 0.12 | 0.14 | 0.38 |

7.4 Site Inundation Levels

Table 8 presents a summary of the site inundation levels based on 1% AEP still water, wind setup where applicable, wave runup and wave setup inundation levels for present day and 2070 building design life scenarios.

Table 8 Site Coastal Inundation Levels Based on Present Day, 2070 & 2100 1% AEP Scenarios

| 1% AEP Inundation Levels (m AHD) | 2020 IPS | 2070 IPS | 2100 IPS |
|---|----------|----------|----------|
| Coastal Still Water Elevations Including Wind Setup | 1.33 | 1.69 | 2.08 |
| Wave Setup Inundation | 1.46 | 1.82 | 2.22 |
| R2% Wave Runup Elevations Based on (Mase 1989)* | 1.44 | 1.83 | 2.46 |

Wave runup at the site is expected to reach elevations of up to 1.44 m AHD under present conditions and approximately 1.83 m AHD by 2070 based on a 1% AEP present day storm event and projected sea levels (DPAC 2012).

7.5 Summary

The following can be concluded from the inundation assessment:

- In accordance with the Directors Determination (2020), the finished floor level of any proposed habitable room should be at or above 2.5 m AHD, which is compiled from site-specific design levels within the planning scheme inundation prone areas code Table 15.1 reference for Old Beach.
- The Tasmanian Building Regulations do not stipulate design finished floor levels for non-habitable rooms or buildings. If building in an IPAC Low overlay, habitable rooms may be addressed as a performance solution by means of a risk assessment.
- GES have identified that largest 1% AEP wave condition at the site is generated from a south westerly wind wave with a nearshore significant height of 0.7 m.
- Wave run up inundation levels for 2070 are calculated to be at 1.83 m AHD based on calculated 1% AEP wind waves from the west (the largest wave runup at the site).
- Waves are largely attenuated by the shoreline platform and there is a low risk that the waves will cause adverse erosion affects at the site.
- It is recommended that the finished floor levels for habitable rooms are at or above 2.5 m AHD. On this basis, there is a low risk that the floors will be inundated by 2070 based on a 1% AEP event.
- By 2070, there is the potential for 1% AEP coastal inundation around the perimeter of the buildings proposed closest to the river, with site levels at 1.65 m and inundation levels at ~1.85.
- There is a low risk that the proposed four units closest to the river will cause an adverse effect on floodwater displacement.

8 Risk Assessment

Qualitative risk assessment criteria have been developed to identify key risks that may arise from building works in areas that are vulnerable to erosion or inundation hazards.

The criteria are based on a risk assessment matrix consistent with Australian Standard AS4360 on Risk Management (AS4360). The qualitative assessment of risk severity and likelihood (Appendix 5) are used to help provide a qualitative risk assessment of performance criteria based upon the coastal vulnerability assessment completed for the site (Appendix 6).

GES has established from the qualitative risk assessment that the level of risk is within the lowest bounds and the proposed development works at the site are acceptable.

9 Recommendations

- It is recommended that finished floor levels of a habitable building must be constructed at or above 2.5 m AHD in accordance with the Tasmanian Building Regulations and the director's determination.
- There are no finished floor level elevation requirements for non-habitable buildings according to the 2016 Tasmanian Building Regulations or the IPS. A non-habitable building, an outbuilding, or a Class 10b building under the Building Code of Australia, must have a floor area of no more than 60 m² to meet acceptable solutions IPS E15.7.3 A3.
- GES discerns that non habitable buildings and non-habitable rooms of a habitable building should be constructed at least 0.1 m above the projected 1% AEP site wave runup level for 2070 at 1.83 m AHD.
- Advice should be sought from a biologist on the proposed building and works within a refugia area, particularly in relation to landfilling and occupying areas which would be inhabited by refugia as identified by the refugia overlay.

The site is in a low risk setting in terms of erosion susceptibility.



Kris Taylor BSc

Senor Environmental & Engineering Geologist

10 Limitations

The following limitations apply to this report:

- Wave modelling in accordance with the CEM (2008), the SPM (1984) and wind parameters from AS/NZS 1170.2:2011;
- Navionics, TAFI, Geoscience Australia and Australia Hydrographic Service bathymetry.
- Light Detection And Ranging (LIDAR) digital elevation model
- Storm surge observations where applicable
- The LIST cadastral information
- Photogrammetric modelling of historic coastal recession and/or progradation for the site was not undertaken. However, historic aerial photographs for the project area were reviewed and incorporated into a geographic information system enabling preliminary measurements of dune variations.
- The values estimated in this report provide an order of magnitude for assessing climate change impacts and in particular climate change induced sea level rise impacts. The information is based on a collation of existing information and data, with some site specific modelling for planning purposes.

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Appendix 1 Directors Determination & Building Regulations 2016 - Coastal Inundation Hazard Reporting

This coastal inundation hazard report has been prepared in accordance with methodology specified in the Directors Determination – Coastal Inundation Hazard Areas pursuant to section 20(1)(c) of the Building Act 2016 and regulation 51 of the Building Regulations 2016 (Document Version 1.0 Dated 6th February 2020).

This report has been prepared by Kris Taylor who has with 6 years direct experience and competence in the preparation of over 300 coastal inundation hazard assessment reports for residential and commercial developments for both the private and public sector. Amongst major commercial developments, reports have been prepared for the Kingsborough Council, Clarence Council, Sorell Council Flinders Island Council (Town Municipal Planning), and the Crown Land Authority.

Kris Taylor has a Bachelor of Science Degree with First Class Honours in Environmental Geology.

Practices used in this assessment are developed from recent literature, including regional public domain remote sensing, wave, sea level, and storm tide modelling data obtained through various government agencies. This data is refined to a local (site scale) using detailed bathymetry models and methods within the coastal engineering manual (CEM) as well as equations obtained from recent publications to determine wind setup, wave setup, and wave runup which is specific to the coastal setting.

Specific determinations regarding coastal hazard reporting as presented in the Director's Determination - Coastal Inundation Hazard Areas, Division 2, Section 4 'Coastal Inundation Hazard Reporting' are presented in the Table below.

Signature

A handwritten signature in black ink, appearing to read 'Kris Taylor', written in a cursive style.

Kris Taylor (BSc Hons)

Works in a Coastal Inundation Hazard Area

According to this director's determination, the following regulations are applicable for the works in a coastal inundation hazard area:

- (1) For the purposes of this Determination and regulation 56(3) of the Building Regulations 2016, the defined flood level is the level above the 0 metre Australian Height Datum with a one percent probability of being exceeded in a storm surge flooding event in the year 2100, as specified in the Coastal Inundation Hazard Band Levels List for the relevant locality in the relevant Local Provisions Schedule of the Tasmanian Planning Scheme.
- (2) Where land is not located in a specified locality, the defined flood level for the relevant municipal area average applies.
- (3) A coastal inundation hazard report must be prepared.
- (4) The design of the building footing system must be prepared by an engineer-civil.
- (5) The building design (including the footing system) must take into account the coastal inundation hazard report.
- (6) In determining an application for a Certificate of Likely Compliance, the building surveyor must:
 - (a) take into account the coastal inundation hazard report and any relevant coastal inundation management plan; and
 - (b) be satisfied that the proposed work will not cause or contribute to coastal inundation on the site, on adjacent land or of public infrastructure; and
 - (c) be satisfied that the proposed work can achieve and maintain a tolerable risk for the intended life of the building without requiring any specific coastal inundation protection measures.
- (7) In determining an application for a permit, the permit authority must take into account the coastal inundation hazard report and any relevant coastal inundation management plan.

| Report Determination Criteria | Coastal Inundation Hazard Report Compliance Checklist | Compliance | Specific Comments |
|-------------------------------|---|------------|---|
| 4. (1) | Report is prepared by a specified practitioner being a practitioner with relevant qualifications, experience and competence in the preparation of coastal inundation hazard reports | Yes | Up to date models, literature and methods are used in this assessment, which draw on regional and site-specific information to determine present day and forward projected site hazards. |
| 4. (1) (a) | Signed Declaration | Yes | Report Author: K Taylor |
| 4. (1) (b) | Conclusions based on consideration of the proposed work as to: | Yes | |
| 4. (1) (b) (i) | whether the work is likely to cause or contribute to coastal inundation on the land or on adjacent land or of public infrastructure; | Yes | |
| 4. (1) (b) (iii) | whether the work can achieve and maintain a tolerable risk for the intended life of the building having regard to: | Yes | <p>Modelling has been conducted with measures put in place to ensure that by the end of the building's lifetime, the risks are tolerable in line with the sites typical residential use and typical intensity of this use. This assessment is based on the intended use as outlined in the development application. All potential and site-specific inundation factors are considered to assess tolerable risks which include:</p> <ul style="list-style-type: none"> • Government sea level projections which are calibrated to the Local Government Authority area and scaled to the building design life (DPAC 2016), • Storm tide projections (combined 1% AEP storm surge and tides) which are calculated on a local scale (0.5 km accuracy) • Wind setup conditions specific to the site which are calculated from all wind fetch directions • Wave setup and wave runup based on detailed wave modelling which has been conducted, specific to the site: <ul style="list-style-type: none"> ○ Localised wind generated waves based on dominant wind fetch incidents and calculated based on 1% AEP wind velocity and durations. Nearshore wave parameters determined based on sea level compensated water depths (to building design life) and bathymetry attenuation. |
| | <ul style="list-style-type: none"> • the nature, intensity and duration of the use; | Yes | The risk assessment herein is based on the highest intensity of use which is residential use. Full occupancy duration is considered over the lifetime of the development. The full inundation extent is based on a 1% AEP event occurring at the end of the buildings design life. |
| | <ul style="list-style-type: none"> • the type, form and duration of any development; | Yes | This assessment is based on the specific plans as outlined in the development application, with the duration based on the building design life as defined herein. Particularly where wave runup is concerned, consideration is given to the presence of solid walls on ground versus buildings elevated above ground on piers, with both scenarios affecting the wave runup height against the building. Where necessary, consideration may need to be given to reinforcing the structure against the wave force load which is to be calculated. |
| | <ul style="list-style-type: none"> • the likely change in the risk across the intended life of the building; | Yes | As indicated in 4. (1) (b) (iii), consideration is given to risk in the most adverse of modelled consecutive 1% AEP storm conditions for the projected end life of the building. Where deemed necessary, a 0.3 m freeboard 'buffer' is to be applied to design 1% AEP stillwater level for the building end of life. |
| | <ul style="list-style-type: none"> • the ability to adapt to a change in the risk; | Yes | Engineering solutions may be applied if it is so desired to reduce the risk through hazard reduction. Increased risk may occur as a result of increased user vulnerability beyond what is modelled as a tolerable risk in this assessment. Eg. Changed site layout meaning reduced access during a floodwater event. Hazard reduction may include onsite wave attenuation structures such as wave breaker walls and/or revetments. |
| | <ul style="list-style-type: none"> • the ability to maintain access to utilities and services; | Yes | |

| | | | |
|------------|---|-----|---|
| | <ul style="list-style-type: none"> the need for specific coastal inundation hazard reduction or protection measures on the site; | Yes | Coastal inundation hazard reduction or protection measures are not recommended on the site based on the projected lifetime of the proposed development. |
| | <ul style="list-style-type: none"> the need for coastal inundation hazard reduction or protection measures beyond the boundary of the site; | NA | Coastal inundation hazard reduction or protection measures are not recommended beyond the boundary of the site based on the projected lifetime of the proposed development. |
| | <ul style="list-style-type: none"> any coastal inundation management plan in place for the site and/or adjacent land. | NA | Where necessary, a coastal inundation management plan may be developed where mitigation is deemed to be effective against adverse erosion conditions. |
| 4. (2) | protection measures for any hazardous chemical used, handled, generated or stored on the site, taking into consideration the potential risks of the hazardous chemical to human health and safety as a consequence of coastal erosion on the site or adjacent land. | Yes | GES are not aware of any proposal for hazardous chemicals to be used, handled, generated or stored on the site. It is recommended that if such chemicals are to be stored within the proposed extension, they are elevated above the designated inundation level. |
| 4. (3) | The coastal inundation hazard report must be prepared consistent with, and using the methodology of the Coastal Inundation Hazard Management Note. | Yes | This report is consistent with the Coastal Inundation Hazard Management Note |
| 4. (4) | The declaration format for a coastal inundation hazard report must contain: | Yes | |
| 4. (4) (a) | details of, and be signed by, the person who prepared or verified the report; | Yes | Report Author: K Taylor |
| 4. (4) (b) | confirmation they have the appropriate qualifications, expertise and level of current indemnity insurance; | Yes | |
| 4. (4) (c) | confirmation that the report has been prepared in accordance with the specified methodology. | Yes | |

Appendix 2 Planning Scheme Acceptable Solutions

Waterways and Coastal Protection Areas (WCPA)

| Standard | Code | Acceptable Solution | Performance Criteria | |
|-------------|--|--|--|----|
| Use | E11.6 | There are no use standards in this code. | | |
| Development | E11.7.1 Buildings & Works | A1 | Building and works within a Waterway and Coastal Protection Area must be within a building area on a plan of subdivision approved under this planning scheme. | P1 |
| | | A2 | Building and works within a Future Coastal Refugia Area must be within a building area on a plan of subdivision approved under this planning scheme. | P2 |
| | | A3 | Buildings and works within a Potable Water Supply Area must be within a building area on a plan of subdivision approved under this planning scheme. | P3 |
| | | A4 | Development must involve no new stormwater point discharge into a watercourse, wetland or lake. | P4 |
| | E11.7.2 Dependent on a Coastal Location | A1 | An extension to an existing boat ramp, car park, jetty, marina, marine farming shore facility or slipway must be no more than 20% of the size of the facility existing at the effective date. | P1 |
| | | A2 | No Acceptable Solution for dredging and reclamation. | P2 |
| | | A3 | No Acceptable Solution for coastal protection works initiated by the private sector. | P3 |
| Subdivision | E11.8.1 Subdivison | A1 | <p>Subdivision of a lot, all or part of which is within a Waterway and Coastal Protection Area, Future Coastal Refugia Area or Potable Water Supply Area must comply with one or more of the following:</p> <ul style="list-style-type: none"> a) be for the purpose of separation of existing dwellings; b) be for the creation of a lot for public open space, public reserve or utility; c) no works, other than boundary fencing works, are within a Waterway and Coastal Protection Area, Future Coastal Refugia Area or Potable Water Supply Area; d) the building area, bushfire hazard management area, services and vehicular access driveway are outside the Waterway and Coastal Protection Area, Future Coastal Refugia Area or Potable Water Supply Area. | P1 |

Inundation Prone Areas Code (IPAC)

| Standard | Code | Acceptable Solution | Performance Criteria |
|--|--|---|--|
| Use | E15.6 Change of Use | A1 Change of use of a non-habitable building to a habitable building or a use involving habitable rooms must comply with all of the following: a. floor level of habitable rooms is no less than the AHD level for the Coastal Inundation Low Hazard Area in Table E15.1; b. floor level of habitable rooms is no less than the AHD level for the 1% AEP plus 300mm if in an area subject to riverine flooding. | P1 |
| | Development | E15.7.1 High Coastal IPAC | A1 For a habitable building, including extensions to existing habitable buildings, there is no Acceptable Solution. |
| | | A2 A non-habitable building, an outbuilding or a Class 10b building under the Building Code of Australia, there is no acceptable solution. | P2 |
| E15.7.2 Medium Coastal IPAC | | A1 New habitable building - No Acceptable solution | P1 |
| | | A2 An extension to an existing habitable building must comply with one of the following: (a) new habitable rooms must comply with both of the following: I. Floor level no lower than the Minimum Level for the Coastal Inundation Low Hazard Area in Table E15.1, II. Floor area of the extension no more than 40 m ² from the date of commencement of this planning scheme; (b) new habitable rooms must be above ground floor | P2 |
| | | A3 A non-habitable building, an outbuilding or a Class 10b building under the Building Code of Australia, must have a floor area no more than 40 m ² . | P3 |
| E15.7.3 Low Coastal IPAC | | A1 A new habitable building must comply with the following: Floor level no lower than the Minimum Level for the Coastal Inundation Low Hazard Area in Table E15.1; | P1 |
| | | A2 An extension to a habitable building must comply with either of the following: (a) floor level of habitable rooms is no lower than the Minimum Level for the Coastal Inundation Low Hazard Area in Table E15.1; (b) floor area is no more than 60 m ² | P2 |
| | | A3 A non-habitable building, an outbuilding or a Class 10b building under the Building Code of Australia, must have a floor area no more than 60 m ² . | P3 |
| E15.7.4 Riverine IPAC | | A1 A new habitable building must have a floor level no lower than the 1% AEP (100 yr ARI) storm event plus 300 mm. | P1 |
| | | A2 An extension to an existing habitable building must comply with one of the following: a) floor level of habitable rooms is no lower than the 1% AEP (100 yr ARI) storm event plus 300 mm; b) floor area of the extension no more than 60 m ² as at the date of commencement of this planning scheme. | P2 |
| | | A3 The total floor area of all non-habitable buildings, outbuildings and Class 10b buildings under the Building Code of Australia, on a site must be no more than 60 m ² . | P3 |
| E15.7.5 Riverine & Coastal IPAC | | A1 For landfill, or solid walls greater than 5 m in length and 0.5 m in height, there is no acceptable solution. | P1 |
| | | A2 No acceptable solution where mitigation required | P2 |
| | | A3 A land application area for onsite wastewater management must comply with all of the following: a) horizontal separation distance from low water mark or from the top of bank of a watercourse or lake must be no less than 100 m; b) vertical separation distance from the water table must be no less than 1.5 m. | P3 |
| E15.7.6 Dependent on a Coastal Location | | A1 An extension to an existing boat ramp, car park, jetty, marina, marine farming shore facility or slipway must be no more than 20% of the size of the facility existing at the effective date. | P1 |
| | A2 No acceptable solution. | P2 | |
| | A3 No Acceptable Solution for coastal protection works initiated by the private sector. | P3 | |
| Subdi | E15.8.1 Medium and High IPAC | A1 No Acceptable Solution. | P1 |

Appendix 3 NRM Assessment

| Feature | |
|--|---|
| Segment Id | 16034 |
| Segment Length (m) | 100 |
| Minimum Vulnerability: Coastal Vulnerability Mapping | Not a minimal vulnerability shoreline |
| Cliff Vulnerability: Coastal Vulnerability Mapping | Not a cliffed shoreline |
| Unclassified Vulnerability: Coastal Vulnerability Mapping | Not an unclassified vulnerability shoreline |
| Erosion Vulnerability: Coastal Vulnerability Mapping | Not a soft clayey-gravelly or colluvial shoreline |
| Sandy Vulnerability: Coastal Vulnerability Mapping | Not a sandy shoreline |
| Muddy Vulnerability: Coastal Vulnerability Mapping | Soft muddy shore backed by low-lying unconsolidated sediment plains |
| Coastal Vulnerability0 | Muddy or silty shoreline |
| Coastal Vulnerability | Intertidal or shallow subtidal mudflats |
| Backshore Type Coastal Vulnerability | Marshy low-lying supratidal sediment flats; mostly saltmarsh |
| Artificial Shore | No |
| Industry1 500M | No industry present within 500m |
| Industry2 500M | No industry present within 500m |
| Industry3 500M | No industry present within 500m |
| Industry1 1Km | No industry present within 1km |
| Industry2 1Km | No industry present within 1km |
| Industry3 1Km | No industry present within 1km |
| Foreshore Structure1 | No structure present |
| Structure1 Use Frequency | NA |
| Foreshore Structure2 | No structure present |
| Structure2 Use Frequency | NA |
| Foreshore Structure3 | No structure present |
| Structure3 Use Frequency | NA |
| Foreshore Structure4 | No structure present |
| Structure4 Use Frequency | NA |
| Construction Level 100M | No construction |
| Construction Level 500M | Part construction |
| Cleared Level 100M | 76 - 100% |
| Cleared Level 500M | Mostly cleared |
| Recreation Use1 | Walking |
| Recreation Use1 Use Frequency | Medium use |
| Recreation Use2 | |
| Recreation Use2 Use Frequency | |
| Recreation Use3 | |
| Recreation Use3 Use Frequency | |
| Biological Feature Significance Value | |
| Protected Area | |
| Access1 | |
| Access2 | |
| Access3 | Walking |
| Access4 | |
| Access5 | |
| Vegetation Viability Coastal Values | Management required and/or high risk |
| Vegetation Significance Coastal Values | Non-threatened native |
| Coastal Values | Sensitive breeding or foraging habitat |
| Vegetation Condition Coastal Values | Weed invasion 50-90% cover |
| Habitat Condition SE Strategy | Not assessed |
| Conservation Significance SE Strategy | Not assessed |
| Reserve Class CAR | |

| | |
|--|---|
| Public Land Classification | Public Reserve |
| Coastal Zone Type PWS | |
| Marine Reserve | |
| LGA Reserve | |
| WHA | |
| Classification | 4 |
| Zoning | Recreation |
| Geomorphic Condition | Significantly disturbed |
| Actual Habitat Listed Significant SPP | |
| Potential Habitat Listed Significant SPP | |
| Geovalue | 1 |
| Sensitivity TGD | |
| Geomorphic Value | 2 |
| Tourism Use | No listed tourism use |
| European Heritage | Derwent River Conservation Area |
| Carcinus Maenas | Unknown |
| Crassostrea Gigas | Unlikely |
| Spartina Anglica | Absent |
| Undaria Pinnatifida | Unlikely |
| A Arenaria | Unlikely |
| A Populifolia | Unlikely |
| E Paralias | Unknown |
| E Villosa | Unlikely |
| T Junceiforme | Unlikely |
| Pollution Source1 500M | |
| Pollution Source2 500M | Urban stormwater outfall |
| Pollution Source3 500M | |
| Pollution Source1 1Km | |
| Pollution Source2 1Km | Urban stormwater outfall |
| Pollution Source3 1Km | |
| Biology Attribute Value | 2 |
| Geomorphic Attribute Value | 2 |
| Natural Value Index | 2 |
| Amenities Attribute Value | 5 |
| Recreational Tourism Value | 2 |
| Value0 | 1 |
| Human Use Value Index | 3 |
| Eco Disturbance Attribute Condition | 3 |
| Geomorphic Attribute Condition | 4 |
| Introduced Species Attribute Condition | 3 |
| Condition Index | 3 |
| Anthropogenic Modification Attribute Pressure | 2 |
| Pollution Attribute Pressure | 5 |
| Recreational Tourism Attribute Pressure | 4 |
| Pressure | 5 |
| Introduced Species Attribute Pressure | 2 |
| Pressure Index | 4 |
| Further Information | An explanatory report accompanies this dataset and can be obtained from http://www.aquenal.com.au/reports.htm or by emailing coastal.enquiries@environment.tas.gov.au |

Natural Values Index

Foreshores within or directly adjacent to protected natural areas are assumed to have a higher degree of naturalness compared to those adjacent to developed areas. This indicator aims to identify foreshores that are part of wider natural functioning systems, rather than focussing on individual ecological elements. High value protected areas are selected based on reservation status and the associated restrictions on activities.

Natural Value Index of 1

Significant community or habitat present.

Foreshores assigned the highest value score (i.e. a score of 1) under this indicator are those within or directly adjacent to a dedicated formal reserve equivalent to IUCN (International Union for Conservation of Nature) protected area management categories i, ii, iii, iv, or vi (see IUCN Guidelines for Applying Protected Area Management Categories (Dudley 2008) for Shore Base: A Coastal Management Tool Aquenal Pty Ltd 96 further detail). Formal reserves include National Parks, State Reserves, Game Reserves, Nature Reserves, Historic sites, Forest Reserves, Conservation areas, and areas with a Conservation Covenant.

Natural Value Index of 2

Medium Integrated Conservation Value (CFEV)

High value foreshores (i.e. those assigned a score of 2) are those within or directly adjacent to areas not listed under IUCN equivalents but included in other Informal Reserves, and State or Forestry Managed Land.

Geomorphic Attribute Value (Geomorphology)

Geomorphic value is derived from a calculation of geoconservation priority (Geovalue) and the sensitivity category applied to sites of geoconservation significance by the Tasmanian Geoconservation Database (TGD). Geovalues (Sharples and Mowling 2006) are designed to highlight coastal segments which are most likely to warrant management attention regarding the maintenance of geoconservation value.

Geovalue of 1

Indicates high geoconservation priority, with coastal segments having either the highest sensitivity to disturbance, and/or the most natural condition.

Geovalue of 2

Indicate moderate geoconservation priority.

Geovalue of 3

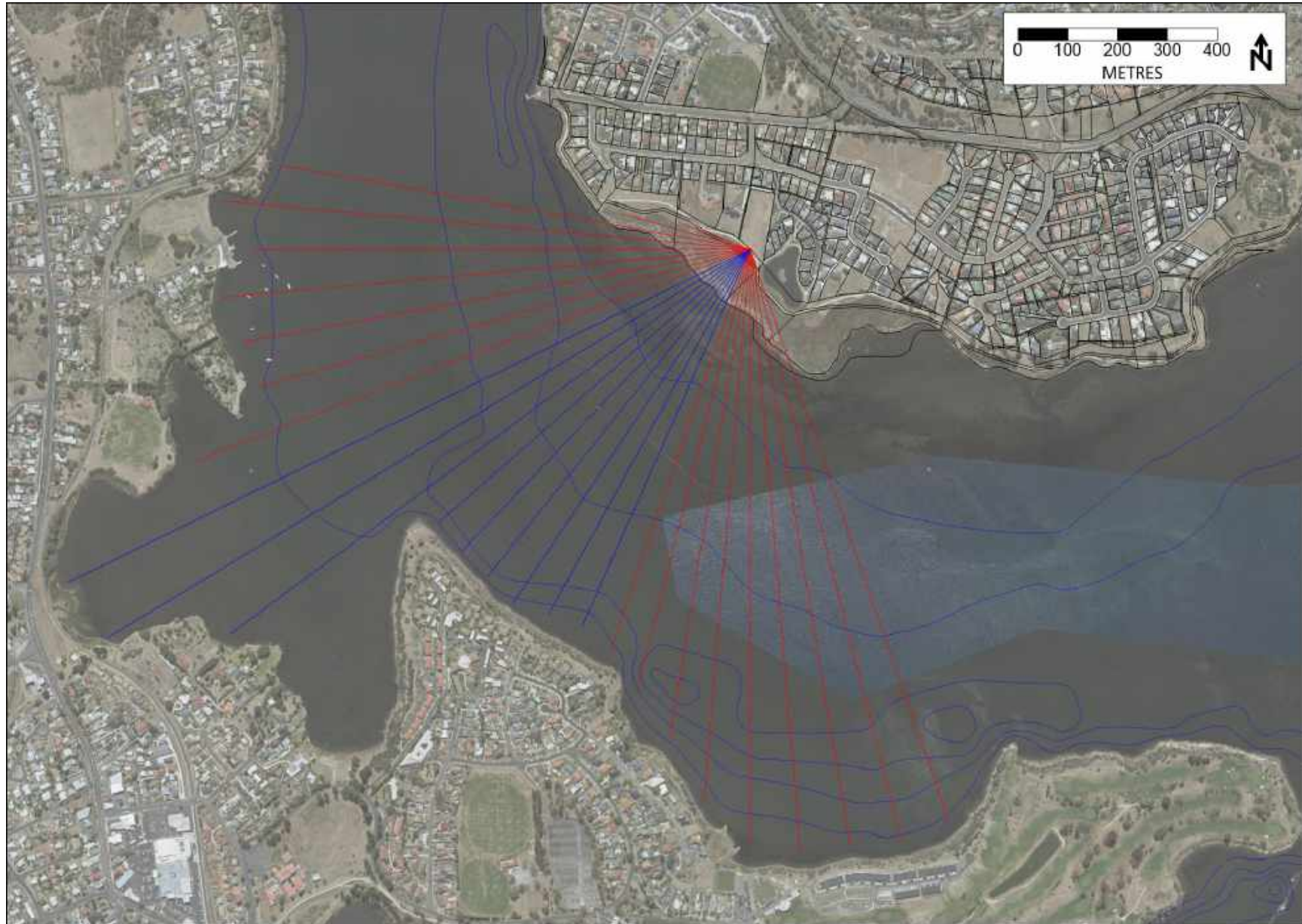
Indicate moderate to low geoconservation priority.

Geovalue of 4

Indicates lowest geoconservation priority where coastal segments are of low sensitivity to disturbance, yet are significantly disturbed. This mainly refers to hard rock shores that have been extensively modified.

See Sharples and Mowling (2006) for further information on calculation of Geovalues.

Appendix 4 Wave Modelling Figures



Appendix 5 Risk Assessment References

Consequence Index

| Consequence | Details - Storm Erosion and Inundation | Details – Waterways and Coastal Protection |
|---------------|--|--|
| Catastrophic | Loss of life, loss of significant environmental values due to a pollution event where there is not likely to be recovery in the foreseeable future. | Very serious environmental effects with impairment of ecosystem function. Long term, widespread effects on significant environment (eg. RAMSAR Wetland) |
| Major | Extensive injuries. Complete structural failure of development, destruction of significant property and infrastructure, significant environmental damage requiring remediation with a long-term recovery time. | Serious environmental impact effects with some impairment of ecosystem function. Relatively widespread medium-long term impacts. |
| Moderate | Treatment required, significant building or infrastructure damage i.e. loss of minor outbuildings such as car ports, garages and the like. Replacement of significant property components. linings, hard paved surfaces, cladding, flooring. Moderate environmental damage with a short-term natural or remedial recovery time. | Moderate effects on biological or physical environment (air, water) but not affecting ecosystem function. Moderate short term widespread impacts (e.g. significant spills) |
| Minor | Medium loss – repair of outbuildings and repair and minor replacement of building components of buildings. Replacement of floor/window coverings, some furniture through seepage (where applicable). Minor environmental damage easily remediated. | Minor effects on biological or physical environment. Minor short-term damage to small area of limited significance. |
| Insignificant | No injury, low loss – no replacement of habitable building components, some remediation of garden beds, gravel driveways etc. Environment can naturally withstand and recover without remediation. Inundation of the site, but ground based access is still readily available and habitable buildings are not inundated, including incorporated garages. | Limited damage to minimal area of low significance. |

Source: AN/NSW 4360:2004 Risk Management

Likelihood Index

| Level | Descriptor | Description | Guideline |
|-------|----------------|--|---|
| A | Almost Certain | Consequence is expected to occur in most circumstances. | Occurs more than once per month. |
| B | Likely | Consequence will probably occur in most circumstances. | Occurs once every 1 month – 1 year. |
| C | Occasionally | Consequence should occur at some time. | Occurs once every 1 year - 10 years. |
| D | Unlikely | Consequence could occur at some time. | Occurs once every 10 years – 100 years. |
| E | Rare | Consequence may only occur in exceptional circumstances. | Occurs less than once every 100 years. |

Source: AS/NZS 4360:2004 Risk Management

Qualitative Risk Matrix

| Likelihood of the Consequence | Maximum Reasonable Consequence | | | | |
|-------------------------------|--------------------------------|------------|--------------|------------|------------------|
| | (1) Insignificant | (2) Minor | (3) Moderate | (4) Major | (5) Catastrophic |
| (A) Almost certain | 11 High | 16 High | 20 Extreme | 23 Extreme | 25 Extreme |
| (B) Likely | 7 Moderate | 12 High | 17 High | 21 Extreme | 24 Extreme |
| (C) Occasionally | 4 Low | 8 Moderate | 13 High | 18 Extreme | 22 Extreme |
| (D) Unlikely | 2 Low | 5 Low | 9 Moderate | 14 High | 19 Extreme |
| (E) Rare | 1 Low | 3 Low | 6 Moderate | 10 High | 15 High |

Source: AS/NZS 4360:2004 Risk Management

Appendix 6 Quantitative Risk Assessment

E16.7.1 P1 Building and Works in a WCPA

| Performance Criteria E11.7.1 P1 Building and works within a Waterway and Coastal Protection Area must satisfy all of the following: | Relevance | Management Options | Managed Risk Assessment (where relevant) | | | Further Assessment Required |
|---|--|---|---|--------------|---------|-----------------------------|
| | | | Consequence | Likelihood | Risk | |
| (a) avoid or mitigate impact on natural values | The local area has a Natural Value Index of 2 indicating that it is not a high conservation value area (Appendix 3). The site is largely modified with introduced flora. | A soil and water management plan is required if there is proposed building works at the site. | Insignificant (1) | Rare (E) | Low (1) | No |
| (b) mitigate and manage adverse erosion, sedimentation and runoff impacts on natural values | Given the vegetation, there is a low risk that soil on the site will be subject to erosion. | | Minor (2) | Unlikely (D) | Low (5) | No |
| (c) avoid or mitigate impacts on riparian or littoral vegetation | The ecosystem is heavily degraded from upstream activities. | | Minor (2) | Unlikely (D) | Low (5) | No |
| (d) maintain natural streambank and streambed condition, (where it exists) | Not applicable | | | | | |
| (e) maintain in-stream natural habitat, such as fallen logs, bank overhangs, rocks and trailing vegetation | Not applicable | | | | | |
| (f) avoid significantly impeding natural flow and drainage | There is a low risk that the proposed dwellings will impede natural drainage and flow | | Minor (2) | Unlikely (D) | Low (5) | No |
| (g) maintain fish passage (where applicable); | Not applicable | | | | | |
| (h) avoid landfilling of wetlands | Wetland has not been identified within the proposed building envelope. | | Minor (2) | Unlikely (D) | Low (5) | No |
| (i) works are undertaken generally in accordance with 'Wetlands and Waterways Works Manual' (DPIWE, 2003) and "Tasmanian Coastal Works Manual" (DPIPWE, Page and Thorp, 2010), and the unnecessary use of machinery within watercourses or wetlands is avoided. | | Works are undertaken generally in accordance with 'Wetlands and Waterways Works Manual' (DPIWE, 2003) and "Tasmanian Coastal Works Manual" (DPIPWE, Page and Thorp, 2010), and the unnecessary use of machinery within watercourses or wetlands is avoided. | | | | |

NEW DWELLING – Coastal IPAC LOW

| Performance Criteria E15.7.3 P1 A new habitable building must satisfy all of the following: | Relevance | Management Options | Managed Risk Assessment (where relevant) | | | Further Assessment Required |
|--|--|---|---|-----------------|------------|-----------------------------|
| | | | Consequence | Likelihood | Risk | |
| (a) risk to users of the site, adjoining or nearby land is acceptable; | There is a low risk that the floors will be inundated within the building lifetime (2070) based on a 1% AEP event. Given the very low wave runup levels, there is a low risk that the proposed development will present a risk to users of the site, adjoining or nearby land. | Finished floor levels of habitable building must be constructed at 2.5 m AHD. | Minor (2) | Unlikely (D) | Low (5) | No |
| (b) risk to adjoining or nearby property or public infrastructure is acceptable; | Given 1% AEP wave runup levels for 2070, there is a low risk to adjoining or nearby property or public infrastructure is acceptable; | | Minor (2) | Unlikely (D) | Low (5) | No |
| (c) risk to buildings and other works arising from wave run-up is adequately mitigated through siting, structural or design methods; | For 2070, 1% AEP wave runup forces are minor on the site due to predominant wave attenuation across the river terrace. | | Minor (2) | Unlikely (D) | Low (5) | No |
| (d) need for future remediation works is minimised; | There will be no need for future remediation works within the lifetime of the proposed development. | | Minor (2) | Unlikely (D) | Low (5) | No |
| (e) access to the site will not be lost or substantially compromised by expected future sea level rise either on or off-site; | All access to the site is from higher ground. | | Minor (2) | Unlikely (D) | Low (5) | No |
| (f) provision of any developer contribution required pursuant to policy adopted by Council for coastal protection works; | No requirement for coastal protection works. | | Minor (2) | Unlikely (D) | Low (5) | No |

E15.7.3 P3 Non Habitable Building – Coastal IPAC LOW

| Performance Criteria E15.7.3 P3 A non-habitable building must satisfy all of the following: | Relevance | Management Options | Managed Risk Assessment (where relevant) | | | Further Assessment Required |
|--|--|---|---|-----------------|------------|-----------------------------|
| | | | Consequence | Likelihood | Risk | |
| (a) risk to users of the site, adjoining or nearby land is acceptable; | Low risk given 2070 timeframes | Non habitable buildings will need to be constructed at least 0.1 m above the 1.83 m AHD inundation levels based on a 1% AEP event for 2070. | Minor (2) | Unlikely (D) | Low (5) | No |
| (b) risk to adjoining or nearby property or public infrastructure is acceptable; | Given 1% AEP wave runup levels for 2070, there is a low risk to adjoining or nearby property or public infrastructure is acceptable; | See E15.7.3 P3 (a) | Minor (2) | Unlikely (D) | Low (5) | No |
| (c) need for future remediation works is minimised; | There will be no need for future remediation works within the lifetime of the proposed development. | See E15.7.3 P3 (a) | Minor (2) | Unlikely (D) | Low (5) | No |
| (d) provision of any developer contribution required pursuant to policy adopted by Council for coastal protection works, | No requirement for coastal protection works. | | Minor (2) | Unlikely (D) | Low (5) | No |

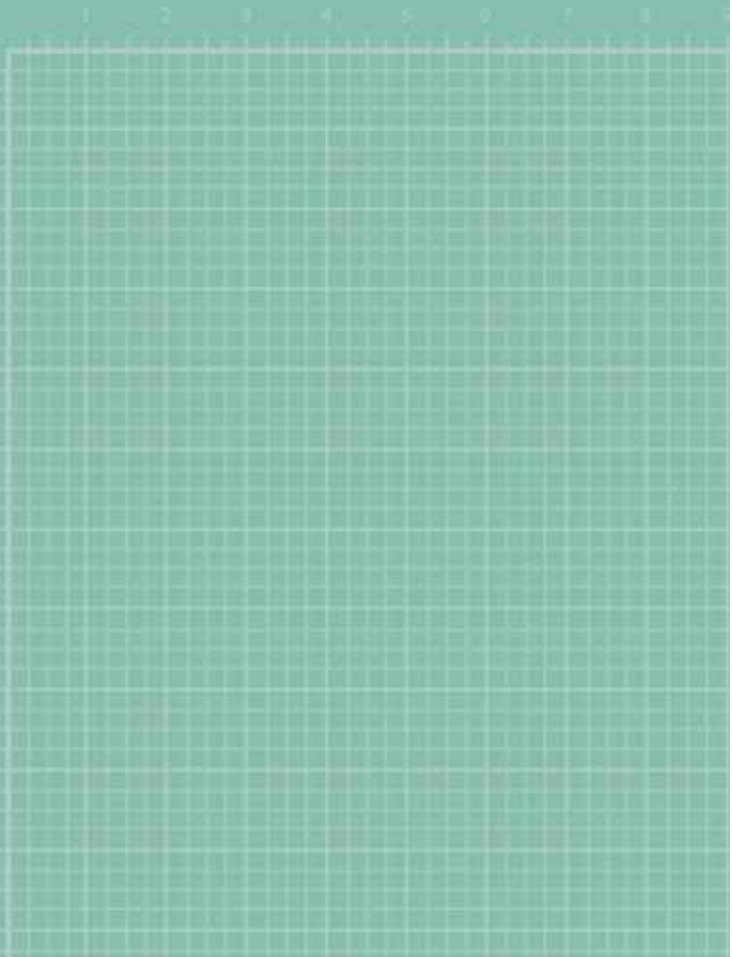
LANDFILL OR SOLID WALLS BUILT IN AN INUNDATION OVERLAY

Objective:

To ensure that landfill works do not unreasonably increase the risk from riverine, watercourse and inland flooding, and risk from coastal inundation.

| Performance Criteria E15.7.5 P1 Landfill, or solid walls greater than 5 m in length and 0.5 m in height, must satisfy all of the following: | Relevance | Management Options | Managed Risk Assessment (where relevant) | | | Further Assessment Required |
|--|--|--------------------|---|-----------------|------------|-----------------------------|
| | | | Consequence | Likelihood | Risk | |
| (a) no adverse effect on flood flow over other property through displacement of overland flows; | For 2070, 1% AEP wave runup forces are minor on the site due to predominant wave attenuation across the river terrace. | Not required | Minor (2) | Unlikely (D) | Low (5) | No |
| (b) the rate of stormwater discharge from the property must not increase; | Not applicable | Not required | Minor (2) | Unlikely (D) | Low (5) | No |
| (c) stormwater quality must not be reduced from pre-development levels. | Not applicable | Not required | Minor (2) | Unlikely (D) | Low (5) | No |

Note P2 not applicable as no mitigation measures required



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**APPLICATION FOR PLANNING PERMIT
DA2020/00306 – 75 & 77 FOUCHE AVENUE, OLD BEACH**

Waterway and Coastal Protection Code

Professional opinion by Dr Richard Wayne Barnes

Tuesday, February 2, 2021

1. INTRODUCTION

1.1. QUALIFICATION AND EXPERTISE

- 1.1.1 My name is RICHARD WAYNE BARNES.
- 1.1.2 My residential and business address is 32 Banticks Road, Mangalore, Tasmania.
- 1.1.3 I am a qualified urban and regional planner with Tertiary qualifications (Graduate Diploma in Urban and Regional Planning) from the University of New England (UNE) in Armidale, New South Wales. I am a Member of the Planning Institute of Australia.
- 1.1.4 I also hold the Tertiary qualifications of Bachelor of Science – University of Tasmania, 1994, Bachelor of Science (Hons, First Class) – UTAS 1995 and a Doctor of Philosophy (Plant Science) – UTAS 2000.
- 1.1.5 My working experience includes over 20 years as a planner, environmental specialist, and director of a planning/environmental consultancy firm. I have been a Director and Principal of Van Diemen Consulting Pty Ltd since 2009.

1.2 LIMITATIONS

- 1.2.1 I have conducted my planning assessment of the likely compliance of the DEVELOPMENT with respect to the Waterway and Coastal Protection Code using -
- (a) the provisions of the Brighton Interim Planning Scheme 2015,
 - (b) the engineering and architectural reports provided to me (listed in Section 2), and
 - (c) the Waterway and Coastal Protection Overlay in the LPS.
- 1.2.2 I have conducted a site assessment/visit of the SITE.

1.3 ACRONYMS AND ABBREVIATIONS

- 1.3.1 The table at 1.3.2 provides a listing of terms, abbreviations, and acronyms that I have used in this document.
- 1.3.2 TABLE OF TERMS AND ACRONYMS

The following have been used in this advice:

| Term/Acronym | Definition or meaning |
|----------------|---|
| COASTAL VALUES | means the values of coastal areas derived from their coastal habitat and vegetation, physical elements, landscape values, recreational values and economic values and the processes and functions that underpin them. |
| COUNCIL | Brighton Council |
| DEVELOPMENT | The development and associated activities described at 2.1.2 |
| LPS | Local Provisions Schedules |
| OVERLAY | The mapped Waterway and Coastal Protection Area |

| | |
|---------------------------|--|
| NATURAL VALUES | means biodiversity, environmental flows, natural streambank stability and stream bed condition, riparian vegetation, littoral vegetation, water quality, wetlands, river condition and waterway and/or coastal values |
| NATURAL VALUES ASSESSMENT | means an assessment by a suitably qualified person which is generally consistent with the Guidelines for Natural Values Assessment, (DPIPWE July 2009) and includes: (a) a survey of the site for natural values; (b) an assessment of the significance of the natural values of a site; (c) an assessment of the likely impact of the proposed development on natural values; (d) recommendations for the appropriate siting and design of proposed development to minimise likely impact on natural values; (e) recommendations for how the likely impact on natural values can be avoided, minimised or mitigated; (f) a site plan depicting the above information. |
| PLANNING REPORT | PLANNING REPORT FOR WILSON HOMES, 75 FOUCHE AVE, OLD BEACH, MULTIPLE DWELLINGS, JMG October 2020 |
| SITE | means the lot or lots on which a use or development is located or proposed to be located. In this case, it is the land contained at – <ul style="list-style-type: none"> • 75 Fouche Ave, Old Beach (identified as CT 107918/27), • 77 Fouche Ave, Old Beach (identified as 110178/26) and • Crown Land (CT 35960/3). |
| (the) Scheme | Brighton Interim Planning Scheme 2015 |

2. BASIS OF OPINION

2.1 BACKGROUND TO THE PROPOSED DEVELOPMENT

2.1.1 The PLANNING REPORT describes the development as 15 multiple dwellings at 75 Fouche Avenue, Old Beach and includes

- Provision of road access by means of a shared access strip with 77 Fouche Ave;
- Land fill to 2.00m AHD;
- 15 multiple dwellings, including 4 single storey and 11 double storey dwellings;
- All proposed dwellings would:
 - incorporate 3 bedrooms;
 - be provided with 2 dedicated off street car parking spaces per dwelling;
 - have a minimum floor height of 2.50m AHD;
 - be provided with individual letter boxes, clothes lines and storage areas for two

waste bins;

- Provision of internal circulation roadways that provide:
 - 5 on-site visitor car parks;
 - vehicle manoeuvring and passing areas compliant with applicable Australian standards;
 - landscaping and lighting of communal areas compliant with Applicable Australian standards;
 - a common waste bin collection area;
- Provision of all associated services infrastructure and connections into existing public networks; and,
- Street number sign (0.5m² and non-illuminated) which is exempt from requiring a planning permit.

2.2 SCOPE OF OPINION

2.2.1 I have been engaged by COUNCIL to provide a professional opinion on whether the DEVELOPMENT satisfies Clause E11.7.1 P1 (a – c) of the Waterway and Coastal Protection Code.

2.2.2 The development and use are proposed to occur on the SITE.

2.3 INFORMATION SOURCES

2.3.1 I have been provided the following, reports, drawings, and associated documents which I have read and considered in developing my opinion:

- a) JMG Ref: J203072PH, 3 December 2020 – letter ‘**APPLICATION FOR PLANNING PERMIT DA2020/00306 – 75 & 77 FOUCHE AVENUE, OLD BEACH**’
- b) Technical Drawings in ATTACHMENT B to JMG Ref: J203072PH (Revised proposal plans, including staging plan and vehicle manoeuvring plans). Notably drawings –
 - (i) 01/21 dated 13 July 2020,
 - (ii) 01c/21 dated 13 July 2020 and
 - (iii) 01f/21 dated 25 August 2020.
- c) Soil and Water management Plan, Sheet 01j/21 dated 19 August 2020 (part of ATTACHMENT B to JMG Ref: J203072PH).
- d) Report and drawings in ATTACHMENT C to JMG Ref: J203072PH (Updated Concept Services Report) and attachments to that report including –
 - (i) Appendix A – Drawings
 - (ii) Appendix B – Overland Flow Assessment, 75 FOUCHE AVENUE, OLD BEACH, JMG August 2020
- e) PLANNING REPORT FOR WILSON HOMES, 75 FOUCHE AVE, OLD BEACH, MULTIPLE

DWELLINGS, JMG October 2020.

- f) COASTAL VULNERABILITY ASSESSMENT, 75 Fouche Ave, Old Beach, Geo-Environmental Solutions P/L for Johnson, McGee & Gandy Pty Ltd, July 2020.
 - g) North Barker Ecosystem Services, 75 Fouche Ave, Old Beach, Natural Values Comment, 12th August 2020, For Johnstone, McGee & Gandy Pty Ltd (JMG028).
 - h) Two representations received during the advertising period.
- 2.3.2 I have had regard to the Brighton Interim Planning Scheme 2015 (accessible from iplan.tas.gov.au), specifically the relevant CODE provisions, being –
- a) E11. Waterway and Coastal Protection Code (ANNEXURE A).
- 2.3.3 I have had regard to existing electronic information sources about the SITE to which I have access, including infrastructure and cadastral related information from the Land Information System of Tasmania (TheLIST). I have accessed and reproduced some imagery from TheLIST, which is referenced as such.
- 2.3.4 My consideration and analyses of the Scheme planning matters relevant to the Scope are contained in Appendix 1.

3.1 CONCLUSION

- 3.1.1 Based on the planning considerations and my analyses set out in Appendix 1, it is my opinion that the development triggers the Waterway and Coastal Protection Code, notably 11.7.1 P1. The Performance Criteria for Clause E11.7.1 P1 must be satisfied.
- 3.1.2 There are in my opinion matters that are not adequately addressed to demonstrate compliance with Clause 11.7.1 P1 including the absence of a NATURAL VALUES ASSESSMENT.

The *Natural Values Comment* provided with the application¹ states –

‘During our assessment of all the WCPA in the lot (including the Future Coastal Refugia area) we found no natural values of conservation significance. The area is a highly modified patch of disturbed land with introduced species forming a notable component of the flora throughout the site. Native elements do remain in places with a species of wallaby grass (*Rytidosperma setaceum*) dominating in some areas north of the WCPA. Although some saltmarsh species do occur in the Future Coastal Refugia area, these are sparse (<15 %); this area is highly disturbed with introduced species (especially *Plantago cononopus*) dominating the flora.

It is our assessment that the proposal can meet the Performance Criteria of the Waterway and Coastal Protection Area Code.’

The Natural Values Comment is in my view too narrow in its assessment of the OVERLAY relative to buildings and works.

- 3.1.3 Based on my ‘Natural Values Assessment’ (Annexure C) the saltmarsh vegetation present in

¹ North Barker Ecosystem Services, 75 Fouche Ave, Old Beach, Natural Values Comment, 12th August 2020, For Johnstone, McGee & Gandy Pty Ltd (JMG028).

the OVERLAY is the *Subtropical and Temperate Coastal Saltmarsh* ecological community which listed as Vulnerable under the Commonwealth *Environment Protection and Biodiversity Conservation Act 1999* (see Conservation Advice prepared under the EPBC Act, ANNEXURE C)). The ecological community is a NATURAL VALUE (including a coastal value) and must be addressed even though it is not directly within the footprint of Units 12 to 15.

- 3.1.4 Of note is my agreement with one representor in relation to the significance of the saltmarsh community and that Units 12 to 15 pose a specific threat to adjacent NATURAL VALUES, and it is these buildings that occur within the OVERLAY.
- 3.1.5 Unless the application is withdrawn by the applicant, the planning authority must determine the application by –
- i) refusal,
 - ii) approval with conditions, or
 - iii) approval without conditions.
- 3.1.6 I am of the view that the application should be refused as there is substantial information lacking to demonstrate compliance with Clause E11.7.1 P1. The onus is on the applicant to demonstrate compliance with Clause 11.7.1 P1. The reasons for my opinion are –
- a) The DEVELOPMENT information does not include a NATURAL VALUES ASSESSMENT that adequately covers the full suite of matters listed in Clause 11.7.1 P1 – the information provided² is too narrow in its scope.
 - b) It is likely that NATURAL VALUES, such as the EPBC Act listed *Subtropical and Temperate Coastal Saltmarsh* ecological community, will be unnecessarily impacted by the DEVELOPMENT (namely Units 12 to 15, and Unit 11 if the LPS overlay is considered) because –
 - (i) there is no avoidance or mitigation of impact on natural values (at least one is known) required by Clause E11.7.1 P1(a);
 - (ii) there are no mitigation or management of run-off impacts on natural values required by Clause E11.7.1 P1(b); and
 - (iii) there is no avoidance or mitigation of impact on riparian or littoral vegetation required by Clause E11.7.1 P1(c).
 - c) It is likely that COASTAL VALUES³ which is encapsulated within the meaning of NATURAL VALUES will be impacted but there is no demonstration of compliance because there has not been an assessment of NATURAL VALUES. Notable in the meaning of COASTAL VALUES are ‘...landscape values, recreational values and economic values’. The presence of two-storey structures in the OVERLAY would likely impact local landscape values, especially of single-story dwellings within the same OVERLAY.
 - d) The Soil and Water Management Plan does not include best practice principles of the

² North Barker Ecosystem Services, 75 Fouche Ave, Old Beach, Natural Values Comment, 12th August 2020, For Johnstone, McGee & Gandy Pty Ltd (JMG028).

³ means the values of coastal areas derived from their coastal habitat and vegetation, physical elements, landscape values, recreational values and economic values and the processes and functions that underpin them.

Wetlands and Waterways Works Manual (DPIWE, 2003) nor does it contain any mitigation or management measures to demonstrate compliance with Clause E.11.7.1 P1 (a to c).

APPENDIX 1

PLANNING CONSIDERATIONS AND ANALYSES

A.1 CLASSIFICATION OF USE

A.1.1 The proposed development and use is *residential* and *utilities*.

A.2 ZONING AND OVERLAYS

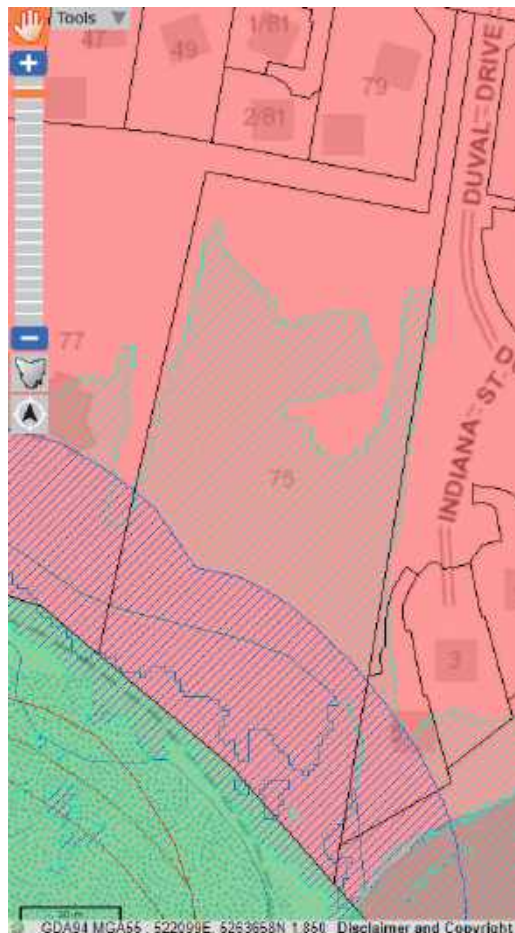
A.2.1 The SITE is in the *General Residential Zone* and *Open Space* zones.

A.2.2 Adjacent land is zoned *General Residential* and *Open Space*.

A.2.3 There are several Scheme Overlays on the SITE based on a search of TheLIST (www.thelist.tas.gov.au) planning layers tab including the Coastal Inundation Prone Area and Waterway and Coastal protection Areas and Future Coastal refugia Area.

Figure 2. Land Title Volume 132725 Folio 1 (75 Fouche Avenue)

Source: Aerial image/data layers sourced from TheLIST (www.thelist.tas.gov.au), sourced 30 January 2021.



522000

463

0 12.5 25 50 METERS

75 FOCHE AVENUE

DEVELOPMENT STAGE 1

DEVELOPMENT STAGE 2

UNIT 12

UNIT 15

WATERWAY AND COASTAL PROTECTION GUIDANCE LAYER (BUFFER AREA)

WATERWAY AND COASTAL PROTECTION GUIDANCE LAYER (WETLAND)

N

75 FOCHE AVENUE
AVENUE

ASSESSMENT

FIGURE I: 75 FOCHE AVENUE
SHOWING THE WATERWAY AND
COASTAL PROTECTION GUIDANCE
LAYER

TASMAP:
RICHMOND
5226

LGA:
BRIGHTON

BASE DATA BY TASMAP. © STATE OF TASMANIA
BASE IMAGE © GOOGLE EARTH

Van Diemen CONSULTING
PO Box 1 New Town TAS 7008



DATUM: GDA94
GRID: MGA ZONE 55
SCALE: @A4 - NA

CLIENT: BRIGHTON
COUNCIL

DATE: 28 JAN 2021

A.3 OPERATION OF THE SCHEME RELATIVE TO THE SCOPE

A.3.1 The Scheme under Clause 7.5 requires that a use or development must comply with each *applicable standard* in a zone, specific area plan or code.

A.3.2 Clause 7.5, which mandates compliance with *applicable standards*, is reproduced below –
‘7.5 Compliance with Applicable Standards

7.5.1 A use or development must comply with each applicable standard in a zone, specific area plan or code.

7.5.2 A standard in a zone, specific area plan or code is an applicable standard if:

(a) the proposed use or development will be on a site within a zone or the area to which a specific plan relates, or is a use or development to which the code applies; and

(b) the standard deals with a matter that could affect, or could be affected by, the proposed use or development.

7.5.3 Compliance for the purposes of subclause 7.5.1 consists of complying with the acceptable solution or the performance criterion for that standard.

7.5.4 The planning authority may consider the relevant objective in an applicable standard to help determine whether a use or development complies with the performance criterion for that standard.’

A.3.3 It is important to note that the planning authority may consider the **relevant objective** in an applicable standard to help determine whether a use or development complies with the performance criterion for that standard.

A.3.4 In this document I have assessed the use and development against what I believe are the *applicable standards* of the CODE.

A.3.5 I note the PLANNING REPORT (pg. 10) states –

‘It is noted that the proposed upgrade to the public stormwater infrastructure within the easement burdening 77 Fouche Ave and within the Crown Land will occur with a portion of the Future Coastal Refugia overlay area. However, such works are considered exempt from the Code by virtue of Clause E11.4.1 (l) *works⁴ within 2 m of existing infrastructure including roads, tracks, footpaths, cycle paths, drains, sewers, pipelines and telecommunications facilities for the maintenance, repair, upgrading or replacement of such infrastructure.*’

A.3.6 I note the PLANNING REPORT (pg. 13) states –

‘The works within the Open Space zone are for minor utilities⁵ and will be underground, and

⁴ Per the *Land Use Planning and Approvals Act 1993*, *works* includes any change to the natural or existing condition or topography of land including the removal, destruction or lopping of trees and the removal of vegetation or topsoil, but does not include forest practices, as defined in the *Forest Practices Act 1985*, carried out in State forests.

⁵ means use of land for utilities for local distribution or reticulation of services and associated infrastructure such as a footpath, cycle path, stormwater channel, water pipes, retarding basin, telecommunication lines or electricity substation and power lines up to but not exceeding 110Kv.

accordingly are best described by the Utilities [sic] use class and are classified as No Permit Required as per clause 19.2 Use Table.’

- A.3.7 I agree that an exemption (A.3.5) and No Permit Required status (A.3.6) could be applied for the works on Crown Land (administered by Property Services). Conditions can be imposed by Property Services on any works associated with the stormwater culvert/pipe upgrade.

A.4 E11 Waterway and Coastal Protection Code

- A.4.1 The purpose of this provision is to manage vegetation and soil disturbance in the vicinity of wetlands, watercourses, and the coastline in order to:

- (a) minimise impact on water quality, natural values including native riparian vegetation, river condition and the natural ecological function of watercourses, wetlands and lakes;
- (b) minimise impact on coastal and foreshore values, native littoral vegetation, natural coastal processes and the natural ecological function of the coast;
- (c) protect vulnerable coastal areas to enable natural processes to continue to occur, including the landward transgression of sand dunes, wetlands, saltmarshes and other sensitive coastal habitats due to sea-level rise.
- (d) minimise impact on water quality in potable water supply catchment areas.

- A.4.2 The Code applies to development (not use) within:

- (a) Waterway and Coastal Protection Areas;
- (b) Future Coastal Refugia Areas;
- (c) Potable Water Supply Areas.

- A.4.3 The Code applies because the development at the SITE intersects the *Waterway and Coastal Protection Area* of the Scheme. Notably, Units 12-15 intersect the OVERLAY.

- A.4.4 The *Waterway and Coastal Protection Area* of the Local Provisions Schedules (LPS) is also intersected by the DEVELOPMENT (see Figure 1), more so than the OVERLAY.

A.5 The applicability of Waterway and Coastal Protection Code

- A.5.1 The objective of Clause E11.7.1 is⁶ –

‘To ensure that buildings and works in proximity to a waterway, the coast, identified climate change refugia and potable water supply areas will not have an unnecessary or unacceptable impact on natural values⁷.’

- A.5.2 The DEVELOPMENT proposes to conduct works and install buildings in the OVERLAY (see

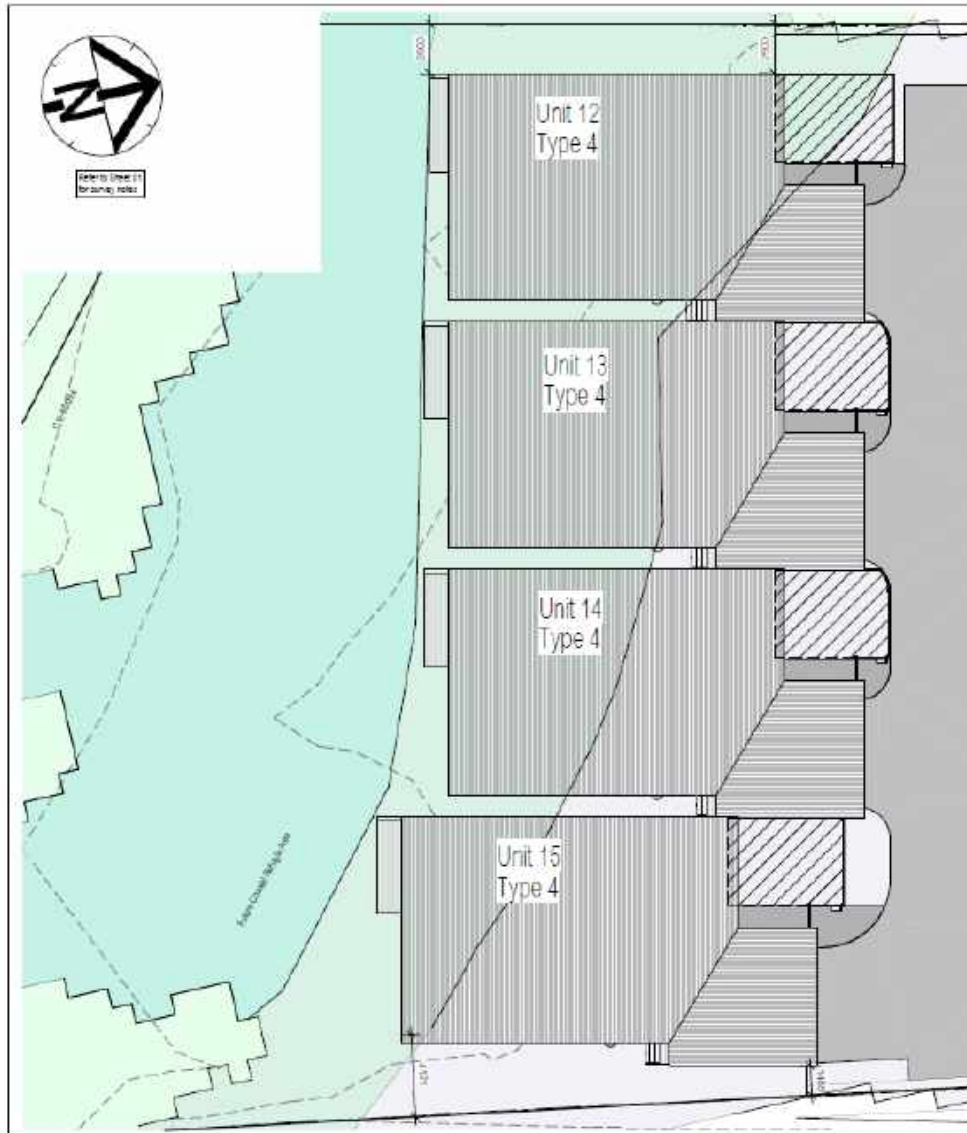
⁶ Clause 7.5.4 of the Scheme allows the planning authority to consider the relevant objective in an applicable standard to help determine whether a use or development complies with the performance criterion for that standard.

⁷ NATURAL VALUES is defined as ‘means biodiversity, environmental flows, natural streambank stability and stream bed condition, riparian vegetation, littoral vegetation, water quality, wetlands, river condition and waterway and/or coastal values.’

Figures 1 and 3). Notably, Units 12-15 intersect the OVERLAY.

Figure 3. Units 12 – 15 and the OVERLAY

Source: Drawing 1f/21



A.5.3 The objective of Clause E.11.7.1 suggests that the OVERLAY is more than a means to assess direct impact, rather the assessment should be for works and buildings within the OVERLAY and 'in the proximity' of where the OVERLAY is 'triggered'. Support for this approach is that some 'must be satisfied' matters in Clause E.11.7.1 PI include runoff impacts, sedimentation and adverse erosion impacts which are not necessarily constrained to the immediate impact location but could be impacts caused elsewhere (e.g., adjacent) in the OVERLAY by buildings and works occurring within the OVERLAY. For example, a building (which creates a large

impervious surface) may cause runoff impacts to natural values in the adjacent land or same land as the development. At the very least, buildings and works located within the OVERLAY should be assessed for impacts to NATURAL VALUES in the OVERLAY.

A.5.4 NATURAL VALUES includes elements that are further defined, such as COASTAL VALUES which includes landscape values, recreational values, and economic values. These considerations are not limited to, and should not be limited to, the immediate footprint of the DEVELOPMENT rather they must be considered in the context of the OVERLAY and those buildings and works that intersect with it. In this case, that is Unit 12 to 15.

A.5.5 There are in my opinion matters that are not adequately addressed to demonstrate compliance with Clause 11.7.1 P1 including the absence of a NATURAL VALUES ASSESSMENT. The Natural Values Comment provided with the application⁸ states –

‘During our assessment of all the WCPA in the lot (including the Future Coastal Refugia area) we found no natural values of conservation significance. The area is a highly modified patch of disturbed land with introduced species forming a notable component of the flora throughout the site. Native elements do remain in places with a species of wallaby grass (*Rytidosperma setaceum*) dominating in some areas north of the WCPA. Although some saltmarsh species do occur in the Future Coastal Refugia area, these are sparse (<15 %); this area is highly disturbed with introduced species (especially *Plantago cononopus*) dominating the flora.

It is our assessment that the proposal can meet the Performance Criteria of the Waterway and Coastal Protection Area Code.’

The Natural Values Comment is in my view too narrow in its assessment of the OVERLAY relative to buildings and works.

A.5.6 Based on my incomplete ‘Natural Values Assessment’ (Annexure C) the saltmarsh vegetation present in the OVERLAY is the *Subtropical and Temperate Coastal Saltmarsh* ecological community which listed as Vulnerable under the Commonwealth *Environment Protection and Biodiversity Conservation Act 1999* (see Conservation Advice prepared under the EPBC Act, ANNEXURE C)). The ecological community is a NATURAL VALUE (and a COASTAL VALUE which is encompassed by NATURAL VALUES) and must be addressed even though it is not directly within the footprint of Units 12 to 15.

A.5.7 Of note is my agreement with one representor in relation to the significance of the saltmarsh community and that Units 12 to 15 pose a specific threat to adjacent NATURAL VALUES, and it is these buildings that occur within the OVERLAY.

A.5.8 Unless the application is withdrawn by the applicant, the planning authority must determine the application by –

- i) refusal,
- ii) approval with conditions, or
- iii) approval without conditions.

⁸ North Barker Ecosystem Services, 75 Fouche Ave, Old Beach, Natural Values Comment, 12th August 2020, For Johnstone, McGee & Gandy Pty Ltd (JMG028).

DA2020_306 75 Fouche Avenue - Dr Richard Wayne Barnes _____

A.5.9 COMMENTS FOR CLAUSE E11.7.1 PERFORMANCE CRITERIA (A) TO (C)

The following comments are made in relation to Clause E.11.7.1 (a) to (c)

| P1 | Comments |
|--|--|
| Building and works within a Waterway and Coastal Protection Area must satisfy all of the following: | |
| (a) avoid or mitigate impact on natural values; | There are no 'natural values' (biodiversity) in the immediate footprint of buildings and works that are not otherwise exempt. Any encroachment of works outside a 2 m distance from existing infrastructure would void the exemption to the public stormwater infrastructure sought by the applicant for the upgrading of the end wall and rock lined channel. It is likely that NATURAL VALUES, such as the EPBC Act listed <i>Subtropical and Temperate Coastal Saltmarsh</i> ecological community, will be unnecessarily impacted by the DEVELOPMENT (namely Units 12 and 15, and Unit 11 if the LPS overlay is considered) because there is no avoidance or mitigation of impact on natural values (at least one is known) required by Clause E11.7.1 P1(a). |
| (b) mitigate and manage adverse erosion, sedimentation and runoff impacts on natural values; | It is likely that NATURAL VALUES, such as the EPBC Act listed <i>Subtropical and Temperate Coastal Saltmarsh</i> ecological community, will be unnecessarily impacted by the DEVELOPMENT (namely Units 12 and 15, and Unit 11 if the LPS overlay is considered) because there are no mitigation or management of run-off impacts on natural values required by Clause E11.7.1 P1(b). |
| (c) avoid or mitigate impacts on riparian ⁹ or littoral ¹⁰ vegetation; | It is likely that NATURAL VALUES, such as the EPBC Act listed <i>Subtropical and Temperate Coastal Saltmarsh</i> ecological community, will be unnecessarily impacted by the DEVELOPMENT (namely Units 12 and 15, and Unit 11 if the LPS overlay is considered) because there is no avoidance or mitigation of impact on riparian or littoral vegetation required by Clause E11.7.1 P1(c). |

⁹ means vegetation found within or adjacent to watercourses, wetlands, lakes, and recharge basins.

¹⁰ Not defined in the CODE; generally, means vegetation adjacent to a sea, lake or river that is close to the shore. It includes the intertidal zone to high water mark and can include wetlands.

ANNEXURES

ANNEXURE A –

Waterway and Coastal Protection Code (Brighton Interim Planning Scheme 2015)

ANNEXURE B –

NATURAL VALUES ASSESSMENT, BARNES JANUARY 2021

ANNEXURE C –

EXTRACT – SUMMARY OF THREATS

Environment Protection and Biodiversity Conservation Act 1999 (EPBC Act) (s266B)

Conservation Advice for SUBTROPICAL AND TEMPERATE COASTAL SALTMARSH

ANNEXURE A –

WATERWAY AND COASTAL PROTECTION CODE (Brighton Interim Planning Scheme 2015)

E11.0 Waterway and Coastal Protection Code

E11.1 Purpose

E11.1.1

The purpose of this provision is to manage vegetation and soil disturbance in the vicinity of wetlands, watercourses and the coastline in order to:

- (a) minimise impact on water quality, natural values including native riparian vegetation, river condition and the natural ecological function of watercourses, wetlands and lakes;
- (b) minimise impact on coastal and foreshore values, native littoral vegetation, natural coastal processes and the natural ecological function of the coast;
- (c) protect vulnerable coastal areas to enable natural processes to continue to occur, including the landward transgression of sand dunes, wetlands, saltmarshes and other sensitive coastal habitats due to sea-level rise.
- (d) minimise impact on water quality in potable water supply catchment areas.

E11.2 Application

E11.2.1

This code applies to development within:

- (a) Waterway and Coastal Protection Areas;
- (b) Future Coastal Refugia Areas;
- (c) Potable Water Supply Areas.

This code does not apply to use.

E11.3 Definition of Terms

E11.3.1

In this code, unless the contrary intention appears;

| | |
|---|---|
| buildings and works dependant on a coastal location | means buildings and works for which there is a demonstrated need to be located at a coastal location, and includes boat sales and storage, marine farming shore facilities, marine-related public open space & recreation facilities, pleasure boat facilities, roads & other utilities, wharves and food services facilities serving users of coastal areas. Dwellings are not included. |
| coastal values | means the values of coastal areas derived from their coastal habitat and vegetation, physical elements, landscape values, recreational values and economic values and the processes and functions that underpin them. |
| Future Coastal Refugia Area | means land within a Future Coastal Refugia Area shown on the planning scheme maps. |
| natural streambank and streambed condition | means the natural rate of erosion or accretion of the bank and bed of a watercourse and natural hydrological processes, as determined using The Tasmanian River Condition Index (TRCI): Physical Form Field Manual and Hydrology User's Manual (NRM South 2009). (This does not imply absolute stability as the bank and bed of all streams is subject to natural erosion over time. Thus, an unstable bank or bed is one that erodes at a faster rate than natural). |
| natural values | means biodiversity, environmental flows, natural streambank stability and stream bed condition, riparian vegetation, littoral vegetation, water quality, wetlands, river condition and waterway and/or coastal values. means an assessment by a suitably qualified person which is generally consistent with the Guidelines for Natural Values Assessment, (DPIPWE July 2009) and includes: <ul style="list-style-type: none"> (a) a survey of the site for natural values; (b) an assessment of the significance of the natural values of a site; |
| natural values assessment | <ul style="list-style-type: none"> (c) an assessment of the likely impact of the proposed development on natural values; (d) recommendations for the appropriate siting and design of proposed development to minimise likely impact on natural values; (e) recommendations for how the likely impact on natural values can be avoided, minimised or mitigated; |

| | |
|--------------------------------------|---|
| | (f) a site plan depicting the above information. |
| Potable Water Supply Area | means land within a Potable Water Supply Area shown on the planning scheme maps. |
| riparian vegetation | means vegetation found within or adjacent to watercourses, wetlands, lakes and recharge basins. |
| river condition | means condition of a waterway as determined using the Tasmanian River Condition Index (TRCI) (NRM South 2009). |
| soil and water management plan | means a specific site plan acceptable to the planning authority that details sediment and erosion control measures on building and construction sites prepared by a suitably qualified person in accordance with best practice guidelines. ^{R1} |
| soil disturbance | includes disturbance of the bed of a watercourse, wetland or lake. means land in either of the following; |
| | (a) within a Waterway and Coastal Protection Area shown on the planning scheme maps; |
| | (b) within the relevant distance from a watercourse, wetland, lake or the coast shown in Table E11.1; |
| Waterway and Coastal Protection Area | but does not include a piped watercourse or drainage line. If an inconsistency in regards to width exists between Table E11.1 and the Waterway and Coastal Protection Area shown on the planning scheme maps, the distance in Table E11.1 prevails. The categorisation of a watercourse, or a section of a watercourse, is defined by its depiction on the planning scheme maps by the Waterway and Coastal Protection Area regardless of the actual area of the catchment. |
| waterway values | means the values of watercourses and wetlands derived from their aquatic habitat and riparian vegetation, physical elements, landscape function, recreational function and economic function. |
| E11.3.R1 | <i>Soil and Water Management for Building and Construction Sites</i> (DPIPWE 2009?) and the <i>Wetlands and Waterways Works Manual</i> (DPIWE, 2003) are recognised as best practice guidelines. |

E11.4 Development Exempt from this Code

E11.4.1

The following development is exempt from this code:

- (a) development associated with a Level 2 Activity under the *Environmental Management and Pollution Control Act 1994*;
 - (b) development that does not involve clearing of vegetation or soil disturbance;
 - (c) development involving clearing or modification of vegetation or soil disturbance:
 - (i) on pasture, cropping, vineyard or orchard land;
 - (ii) within a private garden, public garden or park, national park or State-reserved land, provided the vegetation is not protected by a permit condition, an agreement made under Part 5 of the Act or a Covenant in Gross;
 - (d) forest operations, including clearing for agriculture, in accordance with a certified Forest Practices Plan;
 - (e) fire hazard management works in accordance with a bushfire hazard management plan endorsed by the Tasmanian Fire Service, Forestry Tasmania or the Parks and Wildlife Service on land owned or administered by the Crown or Council;
 - (f) fire hazard management works required in accordance with the *Fire Services Act 1979* or an abatement notice issued under the *Local Government Act 1993*;
 - (g) fire hazard management works for an existing dwelling in accordance with a bushfire hazard management plan endorsed by an accredited person as defined under the Bushfire Prone Areas Code, wherein the extent of clearing and soil disturbance is the minimum necessary for adequate protection from bushfire;
 - (h) the removal or destruction of declared weeds or local environmental weeds;
- works considered necessary by an agency or council to remedy an unacceptable risk to public or

- (i) private safety or to mitigate or prevent environmental harm;
- (j) works considered necessary by an agency or council for the protection of a water supply, watercourse, lake, wetland or tidal waters or coastal values as part of a management plan;
- (k) coastal protection works considered necessary by an agency or council that have been designed by a suitably qualified person;
- (l) works within 2 m of existing infrastructure including roads, tracks, footpaths, cycle paths, drains, sewers, pipelines and telecommunications facilities for the maintenance, repair, upgrading or replacement of such infrastructure;
- (m) works necessary to make safe power lines or for the maintenance, repair, upgrading or replacement of such infrastructure;
- (n) works for the purpose of erecting or maintaining a boundary fence;
 - (i) within 4 m of a boundary line if within the Rural Resource or Significant Agricultural Zones; or
 - (ii) within 2 m of a boundary line if in other zones;
- (o) The laying or installation in the Rural Resource Zone or the Significant Agricultural Zone, of irrigation pipes, that are directly associated with, and a subservient part of, an agricultural use.

E11.5 Application Requirements

E11.5.1

In addition to any other application requirements, the planning authority may require the applicant to provide any of the following information if considered necessary to determine compliance with performance criteria:

- (a) a natural values assessment;
- (b) a soil and water management plan;
- (c) a coastal processes assessment;

- (d) a site survey from a qualified land surveyor identifying the location of a Waterways and Coastal Protection Area, a Future Coastal Refugia Area or a Potable Water Supply Area, if uncertainty exists as to the relative location of the development site.

E11.6 Use Standards

There are no use standards in this code.

E11.7 Development Standards

E11.7.1 Buildings and Works

Objective:

To ensure that buildings and works in proximity to a waterway, the coast, identified climate change refugia and potable water supply areas will not have an unnecessary or unacceptable impact on natural values.

Acceptable Solutions

Performance Criteria

P1

Building and works within a Waterway and Coastal Protection Area must satisfy all of the following:

- (a) avoid or mitigate impact on natural values;
- (b) mitigate and manage adverse erosion, sedimentation and runoff impacts on natural values;
- (c) avoid or mitigate impacts on riparian or littoral vegetation;

A1

Building and works within a Waterway and Coastal Protection Area must be within a building area on a plan of subdivision approved under this planning scheme.

- (d) maintain natural streambank and streambed condition, (where it exists);
- (e) maintain in-stream natural habitat, such as fallen logs, bank overhangs, rocks and trailing vegetation;
- (f) avoid significantly impeding natural flow and drainage;
- (g) maintain fish passage (where applicable);
- (h) avoid landfilling of wetlands;
- (i) works are undertaken generally in accordance with 'Wetlands and Waterways Works Manual' (DPIWE, 2003) and "Tasmanian Coastal Works Manual" (DPIPWE, Page and Thorp, 2010), and the unnecessary use of machinery within watercourses or wetlands is avoided.

P2

Building and works within a Future Coastal Refugia Area must satisfy all of the following:

- (a) allow for the landward colonisation of wetlands and other coastal habitats from adjacent areas;
- (b) not be landfill;
- (c) avoid creation of barriers or drainage networks that would prevent future tidal inundation;
- (d) ensure coastal processes of deposition or erosion can continue to occur;
- (e) avoid or mitigate impact on natural values;
- (f) avoid or mitigate impact on littoral vegetation;
- (g) works are undertaken generally in accordance with 'Wetlands and Waterways Works Manual' (DPIWE, 2003) and "Tasmanian Coastal Works Manual" (DPIPWE, Page and Thorp, 2010).

P3

Buildings and works within a Potable Water Supply Area must satisfy all of the following:

- (a) ensure no detriment to potable water supplies;
- (b) be in accordance with the requirements of the water and sewer authority.

P4

Development involving a new stormwater point discharge into a watercourse, wetland or lake must satisfy all of the following:

- (a) risk of erosion and sedimentation is minimised;
- (b) any impacts on natural values likely to arise from erosion, sedimentation and runoff are mitigated and managed;
- (c) potential for significant adverse impact on natural values is avoided.

A2

Building and works within a Future Coastal Refugia Area must be within a building area on a plan of subdivision approved under this planning scheme.

A3

Buildings and works within a Potable Water Supply Area must be within a building area on a plan of subdivision approved under this planning scheme.

A4

Development must involve no new stormwater point discharge into a watercourse, wetland or lake.

Objective:

To ensure that buildings and works dependent on a coastal location are appropriately provided for, whilst minimising impact on natural values, acknowledging the economic, social, cultural and recreational benefits that arise from such development.

Acceptable Solutions**A1**

An extension to an existing boat ramp, car park, jetty, marina, marine farming shore facility or slipway must be no more than 20% of the size of the facility existing at the effective date.

A2

No Acceptable Solution for dredging and reclamation.

A3

No Acceptable Solution for coastal protection works initiated by the private sector.

Performance Criteria**P1**

Buildings and works must satisfy all of the following:

- (a) need for a coastal location is demonstrated;
- (b) new facilities are grouped with existing facilities, where reasonably practical;
- (c) native vegetation is retained, replaced or re-established so that overall impact on native vegetation is negligible;
- (d) building design responds to the particular size, shape, contours or slope of the land and minimises the extent of cut and fill;
- (e) impacts to coastal processes, including sand movement and wave action, are minimised and any potential impacts are mitigated so that there are no significant long-term impacts;
- (f) waste, including waste from cleaning and repairs of vessels and other maritime equipment and facilities, is managed in accordance with current best practice so that significant impact on natural values is avoided.

P2

Dredging or reclamation must satisfy all of the following:

- (a) be necessary to establish a new or expanded use or development or continue an existing use or development;
- (b) impacts on coastal processes that may lead to increased risk of inundation, including sand movement and wave action, are minimised and potential impacts are mitigated so that there are no significant long-term impacts;

P3

Coastal protection works initiated by the private sector must satisfy all of the following:

- (a) be designed by a suitably qualified person;
- (b) minimise adverse impact on coastal processes that may lead to increased risk of inundation, including wave action and behaviour, sediment dynamics, current and tidal flows in the area.

E11.8 Subdivision Standards**E11.8.1 Subdivision****Objective:**

To ensure that:

- works associated with subdivision in proximity to a waterway, the coast, identified climate change
- (a) refugia and potable water supply areas will not have an unnecessary or unacceptable impact on natural values;
- (b) future development likely to be facilitated by subdivision is unlikely to lead to an unnecessary or unacceptable impact on natural values.

Acceptable Solutions

A1

Subdivision of a lot, all or part of which is within a Waterway and Coastal Protection Area, Future Coastal Refugia Area or Potable Water Supply Area must comply with one or more of the following:

- (a) be for the purpose of separation of existing dwellings;
- (b) be for the creation of a lot for public open space, public reserve or utility;
- (c) no works, other than boundary fencing works, are within a Waterway and Coastal Protection Area, Future Coastal Refugia Area or Potable Water Supply Area;
- (d) the building area, bushfire hazard management area, services and vehicular access driveway are outside the Waterway and Coastal Protection Area, Future Coastal Refugia Area or Potable Water Supply Area.

A2

Subdivision is not prohibited by the relevant zone standards.

Performance Criteria

P1

Subdivision of a lot, all or part of which is within a Waterway and Coastal Protection Area, Future Coastal Refugia Area or Potable Water Supply Area, must satisfy all of the following:

- (a) minimise impact on natural values;
- (b) provide for any building area and any associated bushfire hazard management area to be either:
- (i) outside the Waterway and Coastal Protection Area, Future Coastal Refugia Area or Potable Water Supply Area; or
 - (ii) able to accommodate development capable of satisfying this code.
- (c) if within a Potable Water Supply Area, be in accordance with the requirements of the water and sewer authority.

P2

No performance criteria.

Table E11.1 Spatial Extent of Waterway and Coastal Protection Areas

Spatial Extent of Waterway and Coastal Protection Areas

| Watercourse, Wetland, other Waterbody or the Coast | Width |
|---|-------|
| Class 1: Watercourses named on the 1:100,000 topographical series maps, lakes, artificial water storages (other than farm dams), and the high water mark of tidal waters. | 40m |
| Class 2: Watercourses from the point where their catchment exceeds 100 ha. | 30m |
| Class 3: Watercourses carrying running water for most of the year between the points where their catchment is from 50 ha to 100 ha. | 20m |
| Class 4: All other watercourses carrying water for part or all of the year for most years. | 10m |
| Ramsar Wetlands: Wetlands listed under the Convention on Wetlands of International Importance, (the Ramsar Convention). | 100m |
| Other Wetlands: Wetlands not listed under the Ramsar Convention. | 50m |
| Operation of Table E11.1: Spatially defining 'width': | |

- (a) Width is measured from the top of bank or high water mark of tidal waters, watercourses or freshwater lakes.
- (b) In the case of watercourses, the Protection Area also includes the waterway itself, being between the top of the banks on either side.

Map E11.1 Waterway and Coastal Protection Areas - LISTmap

Open the full map extent (link to the [interactive map](#)).

LegendWaterway and Coastal Protection Areas

Note: This overlay map has been filtered to show only the selected overlay feature for the Planning Scheme currently being viewed. Please follow the interactive map link above and remove the overlay filter to display all overlays. All overlays can also be viewed in the Overlay Map at the end of this Planning Scheme.

Map E11.2 Future Coastal Refugia Areas - LISTmap

Open the full map extent (link to the [interactive map](#))

□

LegendFuture Coastal Refugia Area

Note: This overlay map has been filtered to show only the selected overlay feature for the Planning

Scheme currently being viewed.
Please follow the interactive map link above and remove the overlay filter to display all overlays. All overlays can also be viewed in the Overlay Map at the end of this Planning Scheme.

**ANNEXURE B –
'NATURAL VALUES ASSESSMENT', BARNES JANUARY 2021**

NATURAL VALUES ASSESSMENT

To aid the assessment process I have prepared the following information to **inform** the presence and location of natural values¹¹ on the SITE.

ASSESSMENT OF THE SIGNIFICANCE OF THE NATURAL VALUES OF A SITE

In the CODE, a Natural Values Assessment means an assessment by a suitably qualified person which is generally consistent with the Guidelines for Natural Values Assessment, (DPIPWE July 2009) and includes:

- (a) a survey of the site¹² for natural values;
- (b) an assessment of the significance of the natural values of a site;
- (c) an assessment of the likely impact of the proposed development on natural values;
- (d) recommendations for the appropriate siting and design of proposed development to minimise likely impact on natural values;
- (e) recommendations for how the likely impact on natural values can be avoided, minimised or mitigated;
- (f) a site plan depicting the above information.

I have not conducted a full Natural Values Assessment per the CODE requirements as that is for the applicant to conduct. I have focused on one matter, being vegetation, to demonstrate that at least a NATURAL VALUE of significance is present in the OVERLAY which has not been adequately addressed in the application; there are likely more such as fauna values (light and noise disturbance from 15 units (high density living) in an area where single dwellings is the norm) and water quality.



The OVERLAY is occupied on Crown Land by saltmarsh vegetation which is the EPBC 1999 Listed ecological community - *Subtropical and Temperate Coastal Saltmarsh*.

¹¹ means biodiversity, environmental flows, natural streambank stability and stream bed condition, riparian vegetation, littoral vegetation, water quality, wetlands, river condition and waterway and/or coastal values

¹² For the purpose of (a) the site is taken to be the SITE, which includes 75 and 77 Fouche Avenue and the adjacent Crown Land.



Saltmarsh extends to the track which forms the approximate southern boundary to 75 Fouche Avenue.

The fence is the eastern boundary of 75 Fouche Avenue.



Saltmarsh in excellent condition dominates the Crown land title in the OVERLAY.

The pasture grass at 75 Fouche Avenue is identified by the yellow arrow.

The Land at 75 and 77 Fouche Avenue lacks any natural values, other than water quality as an input to the adjacent saltmarsh and some saltmarsh species that occur sporadically in shallow topographic depressions.

The DEVELOPMENT is located adjacent to Crown Land that supports saltmarsh in excellent condition and of regional significance given the paucity of *succulent* dominated saltmarsh this far upstream in the Derwent River estuary – the patch at Old Beach is the largest most intact patch this far upstream.

The saltmarsh community present is the *Subtropical and Temperate Coastal Saltmarsh* ecological community listed as Vulnerable under the Commonwealth *Environment Protection and Biodiversity Conservation Act 1999* (see Conservation Advice prepared under the EPBC Act,

ANNEXURE C)).

AN ASSESSMENT OF THE LIKELY IMPACT OF THE PROPOSED DEVELOPMENT ON NATURAL VALUES

The DEVELOPMENT is partly located in the OVERLAY that triggers the CODE. The NATURAL VALUES in the OVERLAY are likely to be affected by water quality and quantity (periodicity, intensity) from stormwater generated by the addition of impervious surface (buildings including Units 12 to 15).

The *Concept Services Report Planning Scheme Compliance & Existing Infrastructure Assessment 75 Fouche Avenue, Old beach for Wilson Homes* (ATTACHMENT C to JMG Ref: J203072PH) states –

Page 6. 'The pre-development site is fully pervious and runoff from the site has been calculated as 15 L/s. The post-development site is approximately 54% impervious and the runoff from the site has been calculated as 91 L/s.'

Page 7. 'The additional runoff entering the stormwater system results in an increased discharge velocity at the downstream endwall of 0.3 m/s to 1.5 m/s. Austroads AGRD05B-13 Table 3.1 indicates that the allowable outlet velocities for sandy or silty clay is in the range of 1.0-1.5 m/s. Based on this it is unlikely that erosion of soils will occur however a 2 m length of rock with minimum rock size, d50, of 100 mm will be provided. Energy dissipation is only required for velocities exceeding 5 m/s (Austroads AGRD05B-13).'

If we consider the adjacent properties (Duval Drive) which has a stormwater outlet from a detention basin associated with that development, the infrequent, occasional, and probably low volume of freshwater addition to the saltmarsh has not caused any obvious ill-effects (impact) to the saltmarsh which is a key NATURAL VALUE in the OVERLAY. The saltmarsh is littoral and riparian vegetation.



The existing stormwater outlet has provided a freshwater source to enable the weed *Typha latifolia* to expand into the saltmarsh.

Additional freshwater would likely cause further expansion of this weed into the saltmarsh.



The existing culvert for stormwater drains directly into what should be saltmarsh dominated vegetation, rather it is *Typha latifolia* dominated.

Figure 1 shows the outlet location for the stormwater pipe on Crown land south of 75 Fouche Drive (yellow arrow) and the outlet of the detention basin at Duval Drive (blue arrow), east of the SITE.

The bright green colour of the outlet, highlighted by the yellow arrow, is from the weed *Typha latifolia* (bullrush) which has infiltrated what should otherwise be a brackish, saltmarsh dominated community. In contrast, the outlet of the Duval Drive detention basin shows no ill-effects to the saltmarsh because it would only occasionally (rather than frequently and consistently) provide a freshwater source to the saltmarsh.

The addition of more volume of freshwater, greater volumes/intensity of flows and more consistent flows of freshwater caused by Buildings and Works (the DEVELOPMENT) in the OVERLAY would cause a greater infiltration of weeds into the saltmarsh by favouring less saline tolerant species such as *Typha latifolia*. It would in my view impact substantially on the NATURAL VALUES present in the OVERLAY.

Key threats to *Subtropical and Temperate Coastal Saltmarsh* based on the Conservation Advice prepared under the EPBC Act (ANNEXURE C) that are of direct relevance to this planning matter include –

- **Altered hydrology/tidal restriction** - changes to tidal regime or tidal connection that result from development, land-use practices or infrastructure can lead to habitat loss, invasion of 'problem species' or modification of ecological function (Laegdsgaard *et al.*, 2009; Williams *et al.*, 2011).
- **Invasive species** - non-native weed species and other problem species (e.g. native species that can form monotypic stands) are increasingly replacing native Coastal Saltmarsh plants which limits biodiversity, changes vegetation structure and potentially alters ecosystem function, and in some cases fire regimes (Laegdsgaard *et al.*, 2009; VSS, 2011).



The outlet of the detention basin at Duval Drive demonstrates that only occasional flow or intermittent flow of freshwater into the saltmarsh has little impact to the species composition of the saltmarsh. That is, freshwater species and weeds are not favoured by the inputs of freshwater and nutrients.



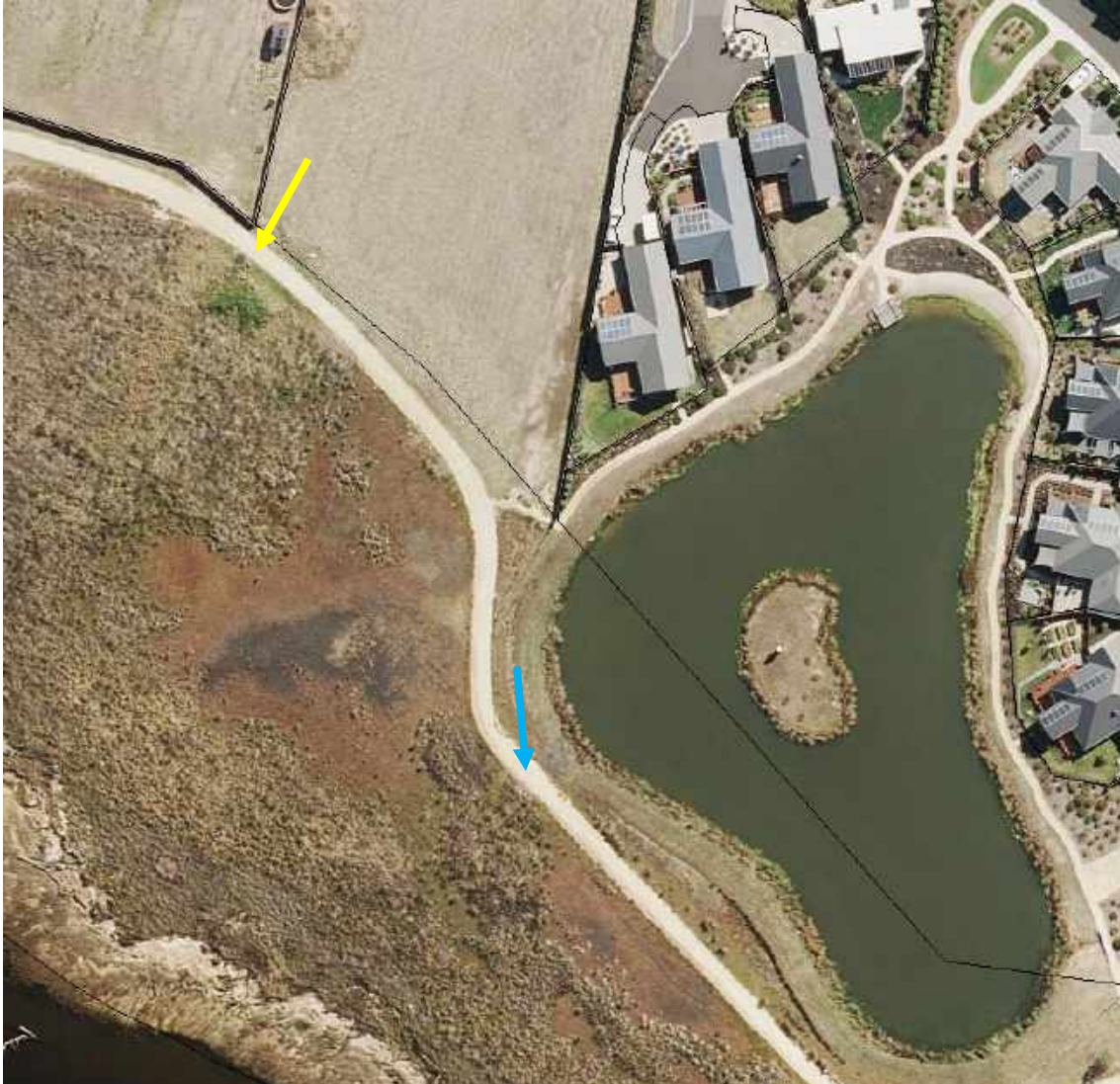
The outlet of the detention basin at Duval Drive (arrow) appears to only overflow occasionally and is not a constant and consistent source of freshwater such that the species composition of the saltmarsh is altered

The DEVELOPMENT will no doubt cause an increased impact to NATURAL VALUES in the OVERLAY by increasing freshwater volumes and/or reliability of the freshwater input favouring species in the saltmarsh. While the freshwater may only make the substrate and water brackish, it can favour species, such as *Typha latifolia* that then displace native species to change the composition of the ecological community.

The exact 'stormwater' contribution of the Buildings (Units 12 to 15, and the inclusion of part of Unit 11 in the LPS overlay) to the stormwater increase from the DEVELOPMENT overall is unknown as

those calculations have not been provided in the application.

Figure 1. Aerial image showing the detention basin outlet at Duval Drive (blue arrow) and the existing outlet location at 75 Fouche Drive (yellow arrow)



RECOMMENDATIONS FOR THE APPROPRIATE SITING AND DESIGN OF PROPOSED DEVELOPMENT TO MINIMISE LIKELY IMPACT ON NATURAL VALUES

A reduction in size or scale of the DEVELOPMENT may yield a better outcome to the NATURAL VALUES. Alternatively, a detention basin system may be an option.

Refusal of the application would be warranted if the impact to the NATURAL VALUES in the OVERLAY cannot be avoided or mitigated.

ANNEXURE C –

EXTRACT – SUMMARY OF THREATS, SUBTROPICAL AND TEMPERATE COASTAL SALTMARSH

Environment Protection and Biodiversity Conservation Act 1999 (EPBC Act) (s266B)

Conservation Advice for SUBTROPICAL AND TEMPERATE COASTAL SALTMARSH

2. SUMMARY OF THREATS

Coastal saltmarshes are recognised nationally and globally as ecosystems of immense ecological value which are increasingly under threat (Adam, 2002; Adam et al., 2008; Laegdsgaard et al., 2009; Saintilan, 2009c; VSS, 2011; SoE 2011 Committee, 2011). Due to their position along the coast, where land is often required for human settlement, coastal saltmarshes have experienced a long history of modification and destruction (Thomsen et al., 2009; VSS, 2011 and references therein). Where there is a landward barrier to the potential movement of coastal saltmarsh, the threats may be intensified (as there is no potential for movement inland). The concentration of (human) population growth and development in the coastal zone, particularly along the subtropical and temperate Australian coastline, and the sensitivity of coastal saltmarsh to changes in climate and sea level continue to exacerbate all threats to the ecological community.

A summary of key threats to the *Coastal Saltmarsh* ecological community is provided below, with further description provided in [Appendix C](#):

- ***Clearing and fragmentation*** - historical and contemporary vegetation clearing have resulted, and will continue to result in, loss or fragmentation of *Coastal Saltmarsh* habitat (Adam, 2002; Laegdsgaard et al., 2009). Many of the threats below cause or exacerbate this threat.
- ***'Land-claim' or infilling*** - land claim (conversion of saltmarsh to other uses), infilling and associated infrastructure are effectively an irreversible disturbance resulting in loss or permanent disconnection of coastal saltmarsh from the tide (Adam, 2002; Fairweather, 2011).
- ***Altered hydrology/tidal restriction*** - changes to tidal regime or tidal connection that result from development, land-use practices or infrastructure can lead to habitat loss, invasion of 'problem species' or modification of ecological function (Laegdsgaard et al., 2009; Williams et al., 2011).
- ***Invasive species*** - non-native weed species and other problem species (e.g. native species that can form monotypic stands) are increasingly replacing native *Coastal Saltmarsh* plants which limits biodiversity, changes vegetation structure and potentially alters ecosystem function, and in some cases fire regimes (Laegdsgaard et al., 2009; VSS, 2011; Harvey et al., 2011).
- ***Climate change*** - current and projected rises in temperature and sea level and increased storm events from climate change are considered severe threats to *Coastal Saltmarsh* that could result in landward retreat, transgression by mangroves, fragmentation and loss of habitat or function.
- ***Mangrove encroachment*** - over the past few decades *Coastal Saltmarsh* has been increasingly encroached on by mangrove along the south-east coast of Australia from Queensland to South Australia (Burton, 1982; Wilton, 2002; Saintilan, 2009a, b; Oliver et al., 2012; Saintilan and Rogers, 2012).
- ***Recreation*** - various recreational vehicles cause localised and widespread damage (and noise) to *Coastal Saltmarsh*, with documented decreases and disturbance to habitat and

fauna (e.g. nesting birds including ground egg layers) (Laegdsgaard et al., 2009; Spencer et al., 2009).

- **Pollution/litter** - pollution and litter from stormwater or dumping of waste can smother coastal saltmarsh plants and introduce contaminants such as heavy metals or organic chemicals (Adam, 2002; Laegdsgaard et al., 2009). Oil spills are also a major potential threat.
- **Eutrophication** - *Coastal Saltmarsh* is susceptible to a range of impacts from excess nitrogen from sewage and land-derived sources. Nitrogen can change patterns of productivity and species distribution, stimulate algal growth, and encourages non-saltmarsh vegetation to invade (Rose and McComb, 1992; Adam, 2002)
- **Acid Sulfate Soils** - actual or potential acid sulfate soils are found along much of the Australian coastline and therefore pose a threat to the ecological community (e.g. Adam, 2009; VSS, 2011). Acidification can have significant impacts on habitat quality, the health of aquatic organisms and biodiversity. (e.g., fish and shellfish kills, outbreaks of disease in fish, scalding of vegetation, and increases in nuisance algae) (Watkinson et al., 2000; ASEC, 2001; NRME, 2003; Fitzpatrick et al., 2009).
- **Grazing** - large-scale grazing by introduced farm animals is likely to impact on coastal saltmarsh vegetation, potentially changing composition and structure and adversely affecting rarer and more fragile species (Adam, 1990; Laegdsgaard et al., 2009).
- **Insect control** - controlling nuisance insects in *Coastal Saltmarsh* may involve the use of harmful insecticides or habitat modification such as runnelling, which alters drainage and tidal inundation patterns (Balla, 1994; Adam, 2002).
- **Evaporative salt production and other mining** - solar evaporative salt ponds are often constructed on *Coastal Saltmarsh*, thereby destroying vast areas of natural habitat (Adam, 2002; Bromberg Gedan et al., 2009). In South Australia, where the highest biodiversity of coastal saltmarsh occurs, vast areas are under lease for potential salt mining in the future (Fotheringham and Coleman, 2008). Shell-grit mining also occurs in some Victorian *Coastal Saltmarsh* (VSS, 2011).
- **Inappropriate fire regimes** - coastal saltmarsh vegetation is not well fire-adapted and fire is lethal to many species (Kirkpatrick and Glasby, 1981; VSS, 2011). Invasive problem species (e.g. *Juncus acutus* and *Baumea juncea*) may have high flammable fuel loads, putting *Coastal Saltmarsh* at risk (NSW SC, 2004).