

ENGINEERING REPORT

DA#:	DA2019/272
Applicant:	Greenplace Pty Ltd
Proposal:	Subdivision (1 lot + balance) and Retirement Village and associated works
Address:	Lot 201, River Street, Swansea
Zone:	General Residential
Report completed by (Name & date):	Matthew Stirling 17 August 2020

Brief Description	
Describe proposal	<p>The application proposes to subdivide a single residential zoned lot into 2 and build a retirement village on one lot. This lot covers a previously proposed 7 lots from the original subdivision.</p> <p>The retirement village consists of 67 units, 3 meeting rooms, spa/physio centre and a managers residence. The development is proposed in 2 stages.</p> <p>The subject lot is part of an approved subdivision (SU04032). Approval was issued in 2013. 6 lots of the proposed 32 lots have been subdivided and titles issued. The proponent claims changing market conditions and demographics have resulted in the proposed retirement village being a better use of the land.</p>
Describe parking and access (existing and proposed)	<p>ACCESS</p> <p>The site is located on the urban zoned fringe of Swansea. It has frontage to the constructed River Street to the east and unmade 'Noyes' Street to the west. The existing site access is via River Street. This is a minor council 'rural' road with a seal width of approximately 5m and gravel shoulders for most of its length. The road has kerb on the western side for the most southern 200m. The existing access appears to be gravel and sight distance standards appear to be met¹. The access may also be used by neighbouring properties although there do not appear to be any legal rights to do so.</p> <p>Immediately north of the existing access River Street traverses Saltwater Creek. It is unclear what drainage structures are under this road and if the road becomes impassable to the north in times of flood. If so access is retained to the site via Tasman Highway.</p> <p>2 x all movement accesses are proposed to the site as well as separate entry/exit. All accesses come off separate existing or new roads. Access to a managers residence is proposed via a driveway directly off River Street. Another all movement access is proposed to stage 1 of the development via a new public road (Noyes Street) off River Street. Separate in and out accesses are proposed to stage 2 via another new public road off Noyes Street.</p>

	<p>A TIA was submitted with the application that did not identify an issues apart from possible restricted sight distance to the carpark access off the new Noyes Road.</p> <p>PARKING A total of 62 off street parking spaces are proposed.</p> <p>In stage 1 (which includes 29 units, the spa/physio and managers house) is proposed to include 33 undercover parking spaces. Stage 2 (which includes 41 units) is proposed to include 29 parking spaces.</p> <p>No visitor parking is proposed for the tenants or meeting rooms/spa/physio. No parking is shown for commercial vehicles (garbage, deliveries, servicing etc).</p> <p>A Bushfire report was submitted with the application. Separate assessments are made of the development and subdivision. The report is inadequate and mentions the stage 2 circulation roadway is greater than 200m and no roads proposed as part of the subdivision. Road will need to comply with Bushfire standards including turning heads. A condition requiring Noyes Street to be constructed to the new internal subdivision Road with a Bushfire compliant turning head is recommended.</p> <p>¹ Information sourced from the LIST website.</p>
<p>Describe Stormwater (existing and proposed)</p>	<p>The undeveloped site falls from west to east toward the rear of the existing residential properties on River Street and River Street itself. River Street and the properties fronting it have a piped stormwater system that discharges to the south.</p> <p>A concept stormwater drainage report and plan and report accompanied the application. This proposes two site connections to the proposed public stormwater system draining the new public road. This public system is then shown discharging to Saltwater Creek upstream of River Street.</p> <p>The new public road off Noyes Road in stage 2 is proposed to discharge to the south into adjoining land before entering a natural watercourse.</p> <p>The report mentions the minor system is designed to suit a 5% AEP or 1 in 20 year event and major overland system to suit a 1% AEP event carrying runoff clear of downstream properties and discharging to the River Street road reserve.</p> <p>The development triggers WSUD and proposes to include rainwater tanks, grassed swales and ponds.</p> <p>Driveway surfaces are shown discharging to grassed swales or ponds, all roofs are proposed to be captured by tanks totalling 80,000L and used for uses such as 'irrigation'.</p> <p>The report mentions the stormwater drainage and WSUD meets the requirements of E7.0 but does not clearly address the code and specifically A3 (b) "stormwater runoff will be no greater than pre-existing runoff or any increase can be accommodated within existing or upgraded public stormwater infrastructure."</p>

	<p>Most of the site discharges to the drainage structure under River Street. The report makes no mention of the size/capacity of this structure, whether the road currently overtops etc. Whilst it is expected that the site discharge volume is only a small portion of the overall volume given the size of the upstream catchment, the development will increase public pressure to improve flood immunity and safety of the floodway.</p> <p>Curiously the pipework to the on site water tanks is to cater for the 1 in 100 year event but only 1 x 10,000L tank is to service buildings B, C & D. This type of arrangement may not reduce peak flows as much as claimed.</p>
Sewer and Water	Sewer and Water reticulation is available. The application was referred to TasWater who have provided pre-lodgement advice that the development can be serviced.
Additional Comments	Garbage collection is proposed via kerbside collection adjacent the Noyes Street access and via the internal roadway for the upper area.

Road and Railway Assets Applies? Y	Clause:	Proposed	Complies or N/A	Provide brief detail of discretion and any condition required:
Existing road accesses and junctions	E5.5.1 A3 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.	AADT will increase from 0 to approximately 140 for 67 units (spread over multiple accesses).	N	Conditions to include provision of civil drawings for new roads and accesses.
Existing level crossings	E5.5.2		N/A	
Development adjacent to roads and railways	E5.6.1		N/A	
New Road accesses and junctions	E5.6.2 A1		N/A	
No. of Road accesses and junctions	E5.6.2 A2	2 x all movement accesses and separate entry and exits.	N	Accesses are considered reasonable (& come off separate roads) given size and nature of the development.

		(If considering roads individually then meets the code)		<p>Accesses are supported by a TIA.</p> <p>Conditions to include provision of civil drawings for new roads and accesses.</p>
New Level Crossings	E5.6.3		N/A	
Sight distance at accesses, junctions and level crossings	<p>E5.6.4</p> <p>Sight distances at: (a) an <u>access</u> or <u>junction</u> must comply with the Safe Intersection Sight Distance shown in Table E5.1</p> <p>For a 50km/h speed limit table E5.1 requires a minimum sight distance of 80m</p>	Sight distance at the access to the underground carpark off Noye Street is unlikely to meet Table E5.1 but is likely to meet Table 4.2 of AS2890.1.	N	Civil drawings to consider sight distance and possibly restrict on street parking on the eastern approach to the Noye Street carpark access.
Parking & Access Code Applies? Y	Clause:	Proposed	Complies or N/A	Provide brief detail of discretion and any condition required:
Number of Car Parking Spaces	<p>E6.6.1 A1</p> <p>1 for each dwelling and 1 visitor space for every 4 dwellings (84 required)</p>	<p>62 + 2 spaces proposed.</p> <p>No visitor parking is provided.</p>	N	<p>Carparking does not meet the code (84+2) total required) and no visitor parking provided (17 required).</p> <p>The TIA mentions not all retiree's will have a vehicle and services are within 400 to 800m walk.</p> <p>Condition for the new Noyes Street to be a width that accommodates on street parking – min. 8.9m wide or indented parking.</p>
Number of Accessible Car Parking Spaces	E6.6.2	<p>0</p> <p>According to TIA not required for retirement village use.</p>	N/A	

Number of Motorcycle Parking Spaces	E6.6.3		N/A	
Number of Bicycle Parking Spaces	E6.6.4		N/A	
Number of Accesses	E6.7.1 A1	2 proposed in Stage 2 to new road.	N	The accesses are separate entry/exit and are not expected to impact pedestrian, traffic safety etc.
Design of Accesses	E6.7.2 A1	<p>Single width driveway to managers residence.</p> <p>6m wide (two-way) and 3m wide (where one-way) access to underground carpark.</p> <p>3.5m separate entry/exit to upper parking with 3.5 to 4m wide one way circulation roadway.</p> <p>No provision appears to be made for commercial vehicle access/service vehicles access. Upper circulation roadway is designed for B99 vehicles but provides access to garbage collection.</p>	N	<p>Include standard condition for accesses and circulation roadways to be in accordance AS2890.1 & 2</p> <p>Include condition for parking/civil plans.</p> <p>Consideration to be given to including a loading zone east of the Noyes Street access to permit garbage collection and maintain sight distance.</p>
Passing	E6.7.3 A1	See above	Y	
Turning	E6.7.4 A1	On site turning is provided	Y	
Layout	E6.7.5 A1	Layout appears to comply with AS2890.1	Y	Include standard condition.
Surfacing	E6.7.6 A1	?	Y	Include standard condition.
Lighting	E6.7.7 A1		?	Include condition for lighting
Landscaping of Parking Areas	E6.7.8 A1			Refer to Planning

Design of Motorcycle Parking Areas	E6.7.9 A1		N/A	
Design of Bicycle Parking Facilities	E6.7.10 A1 & A2		N/A	
Bicycle End of Trip Facilities	E6.7.11 A1		N/A	
Siting of Car Parking	E6.7.12 A1		N/A GRZ	
Facilities for Commercial Vehicles	E6.7.13 A1	Internal driveway does not provide any commercial vehicle parking or maneavring.	N/A	Include condition for the upper circulation roadway to be designed to suit turn paths of a MRV including parking clear of the circulation roadway. Include condition for the lower circulation roadway to be designed to suit the turn paths of a SRV including parking clear of the circulation roadway.
Access to a Road	E6.7.14 A1		Y	
Stormwater Code Applies? Y	Clause:	Proposed	Complies or N/A	Provide brief detail of discretion and any condition required:
Gravity Connection	E7.7.1 A1	Discharge to new public main and ultimately Saltwater Creek	Y	
WSUD	E7.7.1 A2	Roofs to rainwater tanks. Driveway surfaces to grassed swales and ponds.	Y	Include standard condition. Include condition for Part 5 agreement to preserve WSUD.
Minor SW system	E7.7.1 A3	Roofs to rainwater tanks. Driveway surfaces to grassed swales and ponds and ultimately 2 x connection points to a new public main.	Y	Condition for detailed design prior to commencement of works or issuing a plumbing permit.

Major SW system	E7.7.1 A4	Overland flow directed to River Street and clear of downstream residential properties.	Y	Condition for detailed design prior to commencement of works or issuing a plumbing permit.
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Representations	
Representation	Brief Response
N/A	

Conditions

Subdivision

General

1. The use or development must be carried out substantially in accordance with the application for planning approval, the endorsed drawings and with the conditions of this permit and must not be altered or extended without the further written approval of Council.
2. Engineering design drawings the subdivision works are to be submitted and approved by Council's General Manager Engineer prior to lodging applications for building and plumbing permits.
3. All works required by the subdivision of the land are to be included in the subdivision engineering drawings and undertaken by contractors approved by Council's General Manager.

Transfer of reserves

4. All roads or footways must be shown as "Road" or "Footway" on the Final Plan of Survey and transferred to the Council by Memorandum of Transfer submitted with the Final Plan of Survey.

Easements

5. Easements must be created over all drains, pipelines, wayleaves and services in accordance with the requirements of the Council's Municipal Engineer. The cost of locating and creating the easements shall be at the subdivider's full cost.

Final plan

6. A final approved plan of survey and schedule of easements as necessary, together with two (2) copies, must be submitted to Council for sealing for each stage. The final approved plan

of survey must be substantially the same as the endorsed plan of subdivision and must be prepared in accordance with the requirements of the Recorder of Titles.

7. Prior to Council sealing the final plan of survey for each stage, security for an amount clearly in excess of the value of all outstanding works and maintenance required by this permit must be lodged with the Brighton Council. The security must be in accordance with section 86(3) of the *Local Government (Building & Miscellaneous Provisions) Council 1993*. The amount of the security shall be determined by the Council's Municipal Engineer in accordance with Council Policy 6.3 following approval of any engineering design drawings and shall not be less than \$5,000.
8. All conditions of this permit, including either the completion of all works and maintenance or payment of security in accordance with this permit, must be satisfied before the Council seals the final plan of survey for each stage. It is the subdivider's responsibility to notify Council in writing that the conditions of the permit have been satisfied.
9. The subdivider must pay any Titles Office lodgment fees direct to the Recorder of Titles.

Landscaping

10. The road reserves and public open space must be landscaped by trees or plants in accordance with a landscape plan prepared by a landscape architect or other person approved by Council, and submitted to Council for endorsement with the engineering drawings. The landscape plan must show the areas to be landscaped, the form of landscaping, and the species of plants and estimates of the cost of the works.

Engineering

11. The subdivision must be carried out in accordance with the *Tasmanian Subdivision Guidelines October 2013 (attached)*.
12. Engineering design drawings, to the satisfaction of the Council's Municipal Engineer, must be submitted to and approved by Council before any works associated with development of the land commence.
13. Engineering design drawings are to be prepared by a qualified and experienced civil engineer, or other person approved by Council's Municipal Engineer, in accordance with the *Tasmanian Subdivision Guidelines October 2013*, and must show –
 - a) all existing and proposed services required by this permit;
 - b) all existing and proposed roadwork required by this permit;
 - c) measures to be taken to provide sight distance in accordance with the relevant standards of the planning scheme;
 - d) measures to be taken to limit or control erosion and sedimentation;
 - e) any other work required by this permit.
14. Approved engineering design drawings will remain valid for a period of 2 years from the date of approval of the engineering drawings.
15. Subdivision works must be carried out under the direct supervision of an approved practising professional civil engineer engaged by the subdivider and approved by the Council's Municipal Engineer.

Water quality

16. A soil and water management plan (here referred to as a '**SWMP**') prepared in accordance with the guidelines Soil and Water Management on Building and Construction Sites, by the Derwent Estuary Programme and NRM South, must be approved by Council's Municipal Engineer before development of the land commences.
17. Temporary run-off, erosion and sediment controls must be installed in accordance with the approved SWMP and must be maintained at full operational capacity to the satisfaction of Council's Municipal Engineer until the land is effectively rehabilitated and stabilised after completion of the development.
18. The topsoil on any areas required to be disturbed must be stripped and stockpiled in an approved location shown on the detailed soil and water management plan for reuse in the rehabilitation of the site. Topsoil must not be removed from the site until the completion of all works unless approved otherwise by the Council's Municipal Engineer.
19. All disturbed surfaces on the land, except those set aside for roadways, footways and driveways, must be covered with top soil and, where appropriate, re-vegetated and stabilised to the satisfaction of the Council's Municipal Engineer.

Services

20. The Subdivider must pay the cost of any alterations and/or reinstatement to existing services, Council infrastructure or private property incurred as a result of the proposed subdivision works. Any work required is to be specified or undertaken by the authority concerned.
21. Property services must be contained wholly within each lots served or an easement to the satisfaction of the Council's Municipal Engineer or responsible authority.

Telecommunications and electrical reticulation

22. Electrical and telecommunications services must be provided to each lot in accordance with the requirements of the responsible authority and to the satisfaction of Council's Municipal Engineer.
23. Street Lighting must be provided in accordance with the requirements of the responsible authority and to the satisfaction of Council's Municipal Engineer.
24. Prior to the work being carried out a drawing of the electrical reticulation and street lighting, and telecommunications reticulation in accordance with the appropriate authority's requirements and relevant Australian Standards must be submitted to and endorsed by the Council's Municipal Engineer.
25. Prior to sealing the final plan of survey the developer must submit to Council:
 - (a) A "Provisioning of Telecommunications Infrastructure – Confirmation of final payment" or "Certificate of Practical Completion of Developer's Activities" from NBN Co.
Go to, <https://www.nbnco.com.au/develop-or-plan-with-the-nbn/new-developments/applications.html>
 - (b) Written advice from TasNetworks confirming that all conditions of the Agreement between the Owner and authority have been complied with and that future lot owners will not be liable for network extension or upgrade costs, other than individual property connections at the time each lot is further developed.

Drainage

26. The developer must provide a minor stormwater drainage system designed to comply with all of the following:
 - (a) be able to accommodate a storm with an ARI of 20 years 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.
27. The developer is to provide a major stormwater drainage system designed to accommodate a storm with an ARI of 100 years.
28. The developer is to provide a stormwater property connection to each lot in accordance with Council standards and to the satisfaction of Council's Municipal Engineer.
29. Prior to the approval of Engineering Design Drawings the developer must submit an amended Stormwater Management Design Report, including detailed calculations in accordance with Australian Rainfall and Runoff 2019, clearly demonstrating compliance with the conditions of this permit, for approval by Council's General Manager. The report must be prepared and certified by an experienced and practicing Civil Engineer. Once approved the amended report will form part of the endorsed documents.
30. Upon completion of works the engineer certifying the Stormwater Management Design Report must provide certification that the stormwater system has been constructed in accordance with the approved report.

Roadworks

31. Roadworks and drainage must be constructed in accordance with the standard drawings prepared by the IPWE Aust. (Tasmania Division) and to the requirements of Council's Municipal Engineer.
32. Unless approved otherwise by Council's General Manager roadworks must include -
 - a) Noyes Street and new subdivision road
 1. Minimum road reserve width of 18 metres;
 2. Fully paved, sealed and drained carriageway with a minimum carriageway width (face of kerb to face of kerb) of 8.9 metres or alternatively a minimum carriageway width of 6.9m with indented bus/on-street parking of a minimum additional width of 2.3m
 3. Concrete kerb and channel on both sides;
 4. Concrete footpaths 1.50 metres wide on the development side;
 5. Underground drains.
 6. Compliance with bushfire standards for public roads
 7. Sealed turning head in accordance with Council standards and bushfire requirements at the end of each stage.
 - b) River Street

1. Fully paved, sealed and drained carriageway widening to provide on-street parking of a minimum additional width of 2.3m.
2. Concrete footpaths 1.50 metres wide on the development side to connect to the existing footpath to the south.

33. All carriageway surface courses must be constructed with a 10 mm nominal size hotmix asphalt with a minimum compacted depth of 35 mm in accordance with standard drawings and specifications prepared by the IPWE Aust. (Tasmania Division) and the requirements of Council's Municipal Engineer.
34. Kerb ramps must be provided to accommodate the needs of people with disabilities in accordance with standard drawings prepared by the IPWE Aust. (Tasmania Division) and to the requirements of Council's Municipal Engineer.

Staging

35. Unless otherwise approved by Councils General Manager stage 1 roadworks are to include construction of Noyes Street up to the junction with the proposed southern side road including provision for on street parking.

Tas Water

36. The development must meet all required Conditions of approval specified by Tas Water Submission to Planning Authority Notice, [insert Taswater response]

Construction Amenity

37. The development must only be carried out between the following hours unless otherwise approved by the Council's General Manager
- | | | | | | |
|---|-------|----|----|------|----|
| • Monday to Friday | 7:00 | AM | to | 6:00 | PM |
| • Saturday | 8:00 | AM | to | 6:00 | PM |
| • Sunday and State-wide public holidays | 10:00 | AM | to | 6:00 | PM |
38. All subdivision works associated with the development of the land must be carried out in such a manner so as not to unreasonably cause injury to, or unreasonably prejudice or affect the amenity, function and safety of any adjoining or adjacent land, and of any person therein or in the vicinity thereof, by reason of -
- (a) emission from activities or equipment related to the use or development, including noise and vibration, which can be detected by a person at the boundary with another property; and/or
 - (b) transport of materials, goods or commodities to or from the land; and/or
 - (c) appearance of any building, works or materials.
39. Any accumulation of vegetation, building debris or other unwanted material must be disposed of by removal from the land in an approved manner. No burning of such materials on-site will be permitted unless approved in writing by the Council's General Manager.

40. Public roadways or footpaths must not be used for the storage of any construction materials or wastes, for the loading/unloading of any vehicle or equipment; or for the carrying out of any work, process or tasks associated with the subdivision during the construction period.

Maintenance and Defects Liability Period

41. The subdivision must be placed onto a 12 month maintenance and defects liability period following the completion of the works in accordance with the approved engineering plans, permit conditions and Council Policy.

'As constructed' drawings

42. Prior to the works being placed on the maintenance and defects liability period "as constructed" drawings and data for all engineering works provided as part of this approval must be provided to Council to the satisfaction of the Council's Municipal Engineer. These drawings and data sheets must be prepared by a qualified and experienced civil engineer or other person approved by the Municipal Engineer in accordance with Council's Guidelines for As Constructed Data.

DEVELOPMENT

Agreements

- 1) An agreement pursuant to Part 5 of the *Land Use Planning and Approvals Act 1993* must be entered into, prior to occupancy of any of the dwelling, to the effect that:
 - a. the stormwater detention system must be maintained to ensure quality is maintained and water is conveyed so as not to create any nuisance to adjacent properties.
 - b. The number of parking spaces required by this permit will be maintained and kept available on site.
 - c. the owner/body corporate must provide written agreement allowing Councils waste collection contractor to enter the site and indemnify Council and said contractor from any damage arising from the collection of waste from the site.
- 2) Agreement(s) made pursuant to Part 5 of the *Land Use Planning and Approvals Act 1993* must bind the current owner and his/her successors in title and must be prepared on a blank instrument form and registered with the Recorder of Titles in accordance with Section 78 of the *Land Use Planning and Approvals Act 1993* by the applicant at no cost to Council.

General

- 3) The spa, physio and meeting rooms must only be for the use of residents.

Advice: No parking has been provided for these specific uses.

Services

- 4) The developer must pay the cost of any alterations and/or reinstatement to existing services, Council infrastructure or private property incurred as a result of the development. Any work required is to be specified or undertaken by the authority concerned.

- 5) Any services located under the proposed driveway are to be provided with trafficable covers to the requirements of the relevant authority and Council's Municipal Engineer.

Parking and Access

- 6) Parking and access must be generally in accordance with the approved plan and to the satisfaction of Council's Municipal Engineer.

7) The managers vehicle access from River Street must be in accordance with the following;

- (a) Councils Standard Drawings;
- (b) A minimum of 3.6m wide;
- (c) Be constructed in reinforced concrete;

8) The access from the new section of Noyes Street must be in accordance with the following;

- (a) Councils Standard Drawings;
- (b) A minimum of 6m wide;
- (c) Be constructed in reinforced concrete;

9) The access from the new section of the new southern road must be in accordance with the following;

- (a) Councils Standard Drawings;
- (b) A minimum of 4.0m wide;
- (c) Be constructed in reinforced concrete;

- 10) At least sixty four (64) light vehicle parking spaces, including two (2) for the managers residence must be provided on the land at all times for the use of the occupiers, in accordance with Standards Australia (2004): Australian Standard AS 2890.1 - 2004 – Parking Facilities Part 1: Off Street Car Parking; Standards Australia, Sydney.

11) Unless approved otherwise by Council's General Manager a commercial vehicle parking space must be provided on site for each of the vehicle circulation roadways.

- 12) Unless approved otherwise by Council's Municipal Engineer the internal private driveways and areas set-aside for parking and associated access and turning must be provided in accordance with Standards Australia (2004): Australian Standard AS 2890.1 - 2004 – Parking Facilities Part 1: Off Street Car Parking; Australia Standard AS 2890.2 – 2002, Parking facilities - Part 2: Off-Street, Commercial vehicle facilities, Sydney and include all of the following;

- (a) A minimum trafficable width of 3.0m for the stage 1 carpark access and 4.0m for the stage 2 carpark access (one way).
- (b) Suit the turn paths of a MRV for the upper circulation roadway and SRV for the lower,
- (c) Constructed with a durable all weather pavement and surfaced with concrete, asphalt or pavers.
- (d) Drained to an approved stormwater system.
- (e) Permit on site turning.

- 13) 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, or as otherwise approved by Council’s General Manager.

14) A parking plan prepared and certified by a qualified civil engineer or other person approved by Council’s Municipal Engineer must be submitted to Council prior to or in conjunction with lodgement of Building Application. The parking plan is to include:

- pavement details,
- design surface levels and gradients,
- drainage,
- turning paths,
- dimensions,
- line marking,
- signage,
- pedestrian access,
- lighting

and shall form part of the permit when approved.

15) The completed parking and associated turning areas and access must be certified by a practicing civil engineer to the effect that they have been constructed in accordance with the endorsed drawings and specifications approved by Council before the use commences.

16) All areas set-aside for parking and associated turning, and access must be completed before the use commences and must continue to be maintained to the satisfaction of the Council’s Municipal Engineer.

Stormwater

17) Drainage from the proposed development must drain to the legal discharge point by gravity to the satisfaction of Council’s Municipal Engineer and in accordance with a Plumbing permit issued by the Permit Authority in accordance with the *Building Act 2016*.

18) The Developer is to incorporate Water Sensitive Urban Design Principles into the development for the treatment and disposal of stormwater. These Principles will be in accordance with the Water Sensitive Urban Design Procedures for Stormwater Management in Southern Tasmania and to the satisfaction of the Council’s Municipal Engineer.

19) The developer must provide a minor stormwater drainage system designed to comply with all of the following:

- a) be able to accommodate a storm with an ARI of 20 years 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

20) The developer is to provide a major stormwater drainage system designed to accommodate a storm with an ARI of 100 years.

- 21) The driveways must be drained to minimise surface runoff over the footpath or to the adjoining road in accordance with the requirements of the Municipal Engineer and a Plumbing Permit issued by the Permit Authority in accordance with the Building Act 2016.
- 22) Prior to the commencement of works or the issue of a plumbing permit, detailed plans and calculations of the stormwater drainage system, including treatment, detention and outfalls must be prepared by a suitably qualified civil engineer and be submitted to Councils General Manager for approval.
- 23) The completed stormwater treatment systems, detention and outfalls must be certified by a practicing civil engineer to the effect that they have been constructed in accordance with the endorsed drawings and specifications approved by Council before the use commences.

Staging

- 24) The provision of internal carparking is to be as shown on the approved documents. The provision of external carparking is to be as shown in the subdivision conditions.

Tas Water

- 25) The development must meet all required Conditions of approval specified by Tas Water Submission to Planning Authority Notice [insert Taswater response]

Soil and Water Management

- 26) Before any work commences a soil and water management plan (SWMP) prepared in accordance with the guidelines *Soil and Water Management on Building and Construction Sites*, by the Derwent Estuary Programme and NRM South, must be approved by Council's General Manager before development of the land commences. The SWMP shall form part of this permit when approved.
- 27) Before any work commences install temporary run-off, erosion and sediment controls in accordance with the recommendations of the approved SWMP and maintain these controls at full operational capacity until the land is effectively rehabilitated and stabilised after completion of the development in accordance with the guidelines *Soil and Water Management on Building and Construction Sites*, by the Derwent Estuary Programme and NRM South and to the satisfaction of Council's General Manager.

Construction amenity

- 28) The development must only be carried out between the following hours unless otherwise approved by the Council's Manager Strategic Planning:
 - Monday to Friday 7:00 a.m. to 6:00 p.m.
 - Saturday 8:00 a.m. to 6:00 p.m.
 - Sunday and State-wide public holidays 10:00 a.m. to 6:00 p.m.
- 29) All works associated with the development of the land shall be carried out in such a manner so as not to unreasonably cause injury to, or prejudice or affect the amenity, function and safety of any adjoining or adjacent land, and of any person therein or in the vicinity thereof, by reason of:
 - (a) Emission of noise, artificial light, vibration, odour, fumes, smoke, vapour, steam, ash, dust, waste water, waste products, grit or otherwise.
 - (b) The transportation of materials, goods and commodities to and from the land.
 - (c) Obstruction of any public footway or highway.
 - (d) Appearance of any building, works or materials.

- 30) Any accumulation of vegetation, building debris or other unwanted material must be disposed of by removal from the site in an approved manner. No burning of such materials on site will be permitted unless approved in writing by the Council's Manager Strategic Planning.
- 31) Public roadways or footpaths must not be used for the storage of any construction materials or wastes, for the loading/unloading of any vehicle or equipment; or for the carrying out of any work, process or tasks associated with the project during the construction period.
- 32) The developer must make good and/or clean any footpath, road surface or other element damaged or soiled by the development to the satisfaction of the Council's Municipal Engineer.

ADVICE

- A. The owner is advised that an engineering plan assessment and inspection fee of 1% of the value of the approved engineering works, or a minimum of \$300.00, must be paid to Council in accordance with Council's fee schedule.
- B. All approved engineering design drawings will form part of this permit on and from the date of approval.