Council Reference: **DA09/0701 LN35979**
Your Reference: **MP09_0166**

12 June 2013

The Director Urban Assessments
Department of Planning and Infrastructure
GPO Box 39
SYDNEY NSW 2001

Attention: Kim Johnston

Dear Ms Johnston

Development Application MP09_0166 (Council Reference DA09/0701) - 263 Lot Community Title Residential Subdivision (Department of Planning Application MP09_0166) at Lot 1 DP 169490 & Lot 1 DP 175235 & Lot 1 DP 304649 & Lot 1 DP 781687 & Lot 1 DP 781697 & Lot 40 DP 254416 & Lot 43 DP 254416; No. 37 Fraser Drive BANORA POINT; Lot 2 DP 778727; Parkes Lane TERRANORA

I refer to your letter dated 30 April 2013 in which you invite Council's comment on the Preferred Project Report for Altitude Aspire.

Were Council the consent authority for this application, it is unlikely that the proposal would be supported at this stage, due to the following unresolved issues:

1. Inconsistency with Tweed Development Control Plan Section B24 Area E – primarily with regard to landforming, housing typology, and lot layout.
2. Breakdown of negotiations regarding provision of a reticulated water supply to service the development.
3. Contamination and the need for a site audit statement.
4. Inadequate offsets for the loss of significant native vegetation
5. The proposed Park at Lot 820 needs to be made larger in a rectangular shape which would require the absorption of adjoining residential lots. The grades within this park need to be amended to ensure compliance with Tweed DCP Section A5.

Further, agreement has not been reached regarding creation of a mutually acceptable Voluntary Planning Agreement. Significant amendments relating to road, water, sewer, and stormwater infrastructure in the Preferred Project Report have delayed finalisation. However, Council has resolved to continue to pursue the Voluntary Planning Agreement subject to removal of Water & Sewer and the determination of road and stormwater matters in the Preferred Project Report.

In accordance with your requests Council staff have also prepared Draft Recommended Conditions of Consent in case you are of the view to approve the application. Where possible Council has drafted conditions to address the above outstanding matters. However as stipulated above if Council were the consent authority additional information from the applicant would be requested to address the above matters before any determination was issued.

The following report provides commentary on the Preferred Project Report and outlines the Council officer's assessment issues with the Preferred Project Report.

Bulk Earthworks (Overall Summary)

Due to the steep nature of the site there is very little (if any) of the original landform that will remain. This includes the natural gully that traverses the central portion of the site. It is noted that the Department of Planning & Infrastructure have previously opposed the loss of existing natural water bodies, but it appears unavoidable that to implement an appropriate stormwater management regime within the prevailing landform, the existing central gully and ancillary dams will need to be modified. The loss of native vegetation and known Endangered Ecological Communities from these locations will need to be addressed from an offsets perspective and these matters are addressed later in the report.

Bulk earthworks for the site have been amended such that 9.43% of the site requires cut/fill depths of 5m or more. This is now numerically compliant with Tweed Development Control Plan Section A5 and its association Design Specification D6 Site Regrading. This has been largely achieved by deleting areas of deep fill from the central drainage gully, and removal of allotments from this area. Overall the bulk earthworks are estimated to provide excess spoil of 146,500m^3. The applicant does not specify what will become of this spoil.

Staging of bulk earthworks is proposed in two phases. The first phase generally covers Stages 1-4 of the development, plus construction of one stormwater treatment basin in Stage 6 (central open drain) and the construction of a bund to provide detention storage in Stage 10. There is apparently insufficient material to undertake further works in the central open drain as part of Phase 1.

Stage 5 is excluded from Phase 1, creating a fragmented landforming pattern. Stage 5 also contains the road connection between Market Parade and the earlier stages of development, so this staging is undesirable (refer to traffic comments). Stage 5 contains considerable cut, so may assist in further works in the Stage 6 central open drain as part of Phase 1. It is therefore recommended that consent conditions be applied incorporating Stage 5 into Phase 1.

Cut and fill plans remain unclear, despite previous Council comments to the applicant, given that cut and fill depths use the same colour scheme, and are therefore indiscernible.

No erosion and sediment control plans are provided for the bulk earthworks phase, however the Stormwater Assessment and Management Plan (Annexure 8) provides for a sediment basin in each of the 10 development stages. Given the steep terrain, sensitivity of the receiving environment, and geotechnical issues with the site, further detail should have been provided by the applicant in this regard. However this issue can be addressed in detail with a future bulk earthworks Construction Certificate application.

There is also some potential for the applicant to vary road verge grades in their road cross sections (between allotment boundary and back of footpath) as depicted in Council's Standard Drawings. This could reduce the overall extent of earthworks.

Bulk Earthworks Phasing / Erosion & Sediment Control

Bulk earthworks are now intended to be carried out in two (previously three) phases, although it is noted that some sub-staging of Phase Two may be necessary to limit the extent of disturbed ground at any one time.

.

The applicant has now also provided an 'Interim Earthworks Phasing Plan' - SK4039 that nominates construction of the north-easternmost biofiltration basin as part of Phase One, to cater for stormwater runoff from the first three Stages of subdivision development.

This addresses one of the issues previously raised - as the first of the biofiltration basins was not intended for construction until Stage 6. Unfortunately the staging has remained unchanged but provided the north-eastern biofiltration basin is constructed and functional, no objections are raised to deferment of dedication to Stage 6. It is noted that the 'Stormwater Assessment & Management Plan' by Gilbert & Sutherland does not address staging of construction of the biofiltration basins to accord with the bulk earthworks, preferring to defer such considerations to *"the detailed design phase of the development."*

The amended earthworks plans have unfortunately not addressed prior concerns regarding interface treatment between phases / stages of development, nor has erosion and sediment control been addressed. These issues can be adequately addressed via consent conditions.

Bulk Earthworks Volumes and Balance

There appears to be some poor correlation and inconsistency in the amended bulk earthworks advices. I refer to Bulk Earthworks Phasing Plan SK 3562(D) and statements within the Preferred Project Report and Engineering Preferred Project Report. Even allowing for reasonable leeway, there are some concerns in accepting the applicant's amended information as presented, particularly on the plan. Irrespective of inconsistency with prior information, the calculations on 'Ultimate Earthworks Phasing Plan' SK 3562(D) and supporting statements in the Engineering PPR are accepted.

Council staff would have raised the following queries with the applicant:

- Plan SK 3562(D) nominates a total volume of 'cut' to be 408,600m^3 and a total volume of 'fill' to be 355,100m^3. Even if disregarding a bulking factor to the material won from the 'cut', there would appear to be a significant surplus of material – however the PPR's advise that a "balance of earthworks" will be achieved. (Perhaps the bulking factor has been inversely applied?)
- The plan provides amended earthworks area calculations to demonstrate numerical compliance with Tweed Design Specification D6. However comparison with Version 'B' of the same plan reveals the following anomalies:
    - The total site area for bulk earthworks has decreased from 36.21 ha to 31.5 ha – yet the only noticeable difference on the plan is an actual increase of total work area due to inclusion of depicted works within Parkes Lane, Market Parade, Fraser Drive, and the drainage bund. It is noted that a minor area within adjoining Lot 1 DP 798632 (which would have necessitated obtaining adjoining owner's consent) has now been excluded, but could not be responsible for the differences noted.
    - The *"cut area > 5m height"* has been significantly reduced from 1.42 ha to 0.81 ha – yet there is no discernable change to the depicted areas of cut on the plan.

      (The *"fill area > 5m depth"* has been marginally reduced from 2.18 ha to 2.16 ha and this is not expected to generate a noticeable difference on the plan.)

Internal Terracing / retaining walls

Engineering plans show a large number of inter-allotment retaining walls and batters throughout the site. These are shown to be limited in height to 1.2m, in order to comply with the numerical controls in Development Design Specification D6 - Site Regrading.

105 of the 255 residential allotments (41%) rely on these inter-allotment walls / batters, including one of the medium density sites. The Structural System Plan (Annexure 21, amended) shows that 28 of the 255 residential allotments (11%) are graded at between 0-7%, suitable for single slab on ground construction, largely as a result of these boundary walls and batters. All lots with grades exceeding 7% have nominated alternate building systems (stepped slabs, split level, suspended slabs, pole construction).

A non-compliance occurs on Engineering Drawing SK3617 (Annexure 11), which shows 1.2m high side boundary walls located on the property boundary, where Tweed DCP Section A5 and its associated Design Specification D6 Site Regarding Clause D6.05.6(c) requires these walls to be setback 0.9m from the boundary. This would allow room for fencing, landscaping, drainage and the like which is currently not catered for.

Some inconsistencies have also been noted between the retaining walls depicted on plan SK 3617(E) and cross-sections for Roads 5 and 9: Road 5 cross-sections ch.10.27 to ch.40 depict a retaining wall at the boundary of Lot 440; Road 9 ch.220 shows a retaining wall for the front of Lot 816 (southern end). These retaining walls are not depicted on plan SK 3617(E).

From a planning perspective Council's objective is to implement the intent of Tweed DCP Section B24 which specifically discourages terracing. The applicant has made an attempt with the Preferred Project Report to remove some of these internal retaining walls however the changes are rather limited and are not considered enough to ensure compliance with the DCP.

Council staff have serious concerns with the Structural System's Plan as follows:

STRUCTURAL SYSTEM PLAN

SLOPE TYPE	INDICATIVE STRUCTURAL SYSTEM	YIELD
FLAT 0-6°		
0-7%	SINGLE SLAB ON GROUND*	28 (9.2%)**
7-10%	STEPPED SLAB ON GROUND*	56 (18.4%)**
MODERATE 8-12°		
10-14%	STEPPED SLAB ON GROUND*	39 (12.7%)**
14-18%	SPLIT LEVEL*	25 (19.1%)**
18-21%	SLAB AND SUSPENDED FLOOR*	25 (11.2%)**
STEEP 25-36.3%		
21-25%	PART SLAB, PART PLATFORM*	36 (14.1%)**
25-28%	PART SLAB, PART PLATFORM*	11 (3.6%)**
28-32%	POLE CONSTRUCTION*	24 (7.9%)**
EXTREME >32%		
32-36%	POLE CONSTRUCTION*	7 (2.3%)**
> 36%	POLE CONSTRUCTION*	5 (1.6%)**
		256 LOTS (100%)

*Refer Table 4.7 of Section B24 for detailed description of indicative building types
**Percentage figure is based on dwelling numbers

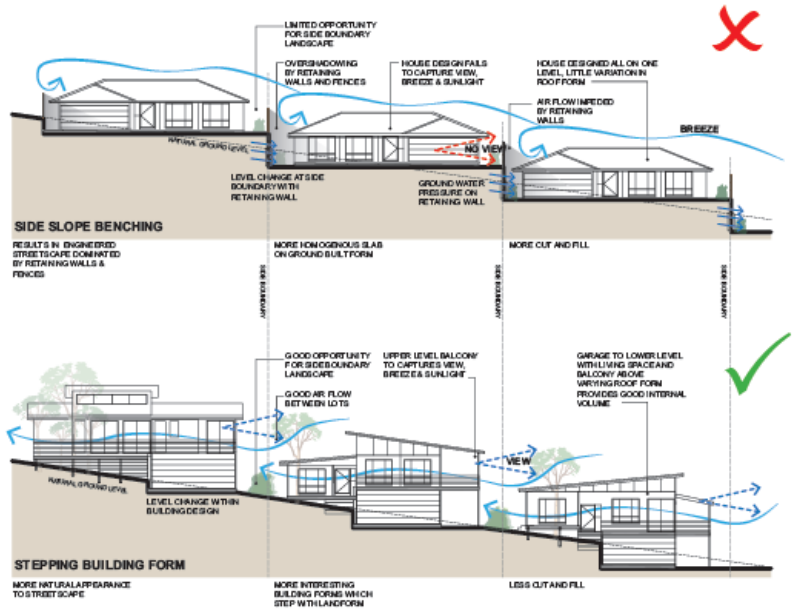
The above table tries to indicate future house design options dependant on the slope of the allotments. However Council is concerned that it does not clearly reflect the intent of Tweed DCP Section B24.

The use of retaining walls through stages 1, 2, 8 and 9 to create terraced lots is very concerning. These stages possess predominate side slopes of >14% within Stages 1 and 2 and >12% for Stages 8 and 9, which, void of retaining walls, effectively prohibits single slab on ground construction. In this regard, Council is not opposed to exploring methods to accommodate a minor variation however these investigations need to be highly integrated with site works, lot dimensions, relationship with surrounding lots etc. and assessed on a lot-by-lot basis. The extensive use of retaining walls to terrace lots and promote an inappropriate structural system to the extent proposed is not supported.

It appears that a significant amount of secondary cut and fill would be required for individual dwellings to achieve the applicants preferred housing type and this is on the flatter 0%-7% sloping lots as depicted on plan SK.0002(B).

The table does not indicate what level of step is required on the 7-10% blocks. Council believes that a significant step within the building envelop would be needed but this is not clear to potential purchasers.

Tweed DCP Section B24 specifies that subdivision design is to be sympathetic to the sloping site rather than bench the site to make flat allotments. Whilst the applicant acknowledge the site will not be totally flat Council is concerned that slab on ground designs on these sites is not suitable and potential buyers should not be given false hope that a compliant slab on ground design could be achieved.



2.7 - Subdivision design is to be sympathetic to the sloping site, rather than bench the site to make flat allotments

The applicant's structural system plan needs to be reviewed having regard to the below figure from the DCP.

Appropriate Structure Type	Housing Example	Cut and Fill Implications
• Broad residential housing type • Single slab on ground • No level changes required within building design		0-2° • Limited site disturbance and good access off street and limited cut and fill or retaining walls required, less than 1.0m 4-6° • Over an elevation length of 14m a single slab would exceed the 1.0m cut and fill maximum identified within DCP A1. Consider stepping slab, taking up level change within building design or limiting cut area within the building envelope.
• May be considered for all slope types • No Single slab on ground • Stepping slab system • Split slab system • Part slab part platform system • Platform system (suspended post & beam) • Pole House • Level changes within building design • Garage set under protruding decks on up slope sites reduces visual impact • On down slopes garage under house may result in steep driveway grades • On down slopes a detached garage reduces bulk building form	 	8-12° (14-21%) • Moderate fall of approximately 5m over a 30m site (on an 10° site) • Moderate graded access of 1:5.6 up or down from street • A single slab (approximately 14.0m width) would exceed the cut and fill requirements. Need to design building with a narrower width (building running along contours rather than perpendicular), or step slab / structure. • Often results in half lower storey or undercroft. • Often need for battered landscaped beds and/or small retaining walls 12-14° (21-25%) • Steep fall across site of approximately 7.4m over a 30m site (on a 14° site) • Steep graded access up or down from street of approximately 1:4 • Take up level change within building design with stepping or largely suspended structure, and confine cut exceeding 1.0m within building footprint. • May require full level change within building envelope • Results in need for battered beds and/or retaining walls
• May be considered for all slope types • No single slab on ground • Split level design • Part slab part platform system • Platform system • Level changes within building design • Garage set under protruding decks on up slope sites reduces visual impact • On down slopes garage under house may result in steep driveway grades • On down slopes a detached garage reduces bulk building form	 	14-18° (1:3.5 - 1:3.0) • Extremely steep fall across the site of approximately 8.6m over a 30m site • Steep graded access up or down from the street of approximately 1:3.5 • Limited cut and fill appropriate given the resulting retaining walls and extremely limited 'level' areas which could be achieved. • Take up level change within building design with stepping or largely suspended structure, and confine cut exceeding 1.0m within building footprint. • Use balcony areas fto supplement private open space areas. • Results in battered landscaped beds and/or retaining walls
• Appropriate for down slope sites only • Pole design • Platform system • Split level		over 18° • Extremely steep fall across the site of approximately 9.7m over 30m • Steep graded access up or down from the street of approximately 1:2.7 • Not suited to cut and fill which would require large engineered retaining elements.

By way of example, Lots 122 - 128, 201 - 207 and 302 are annotated for Pole Construction, whilst concept design previously canvassed with Council officers and embodied within Annexure 5 (Section 14) display a split slab system. Whilst it is acknowledged that the structural systems are indicative, potentially reconciling this conflict, the table and plan fails

to provide any genuine merit for assessment, or demonstration of an understanding of the design relationship of slope to appropriate construction types.

A Structural Systems Plan should provide an interface whereby the site conditions (i.e. slope, solar aspect etc) correlate with lot size, shape, orientation, land use and structural type to provide a clear context to future development. The submitted Structural Systems Plan is not considered to possess this level of understanding of the site and evidence of that knowledge into subdivision design.

Were Council the determining authority for this application, Council staff would be recommending that all the internal retaining walls between allotments 1.2m in height within Stage 1 and 2 be removed. Council would also be recommending that a restriction as to user be imposed to ensure potential buyers are aware of design controls affecting the site which effectively require level changes across the site to be taken up within the building envelope and not at the boundaries of the properties.

Council understands that this severely impacts the applicant's intended display village. However, Council staff are of the view that a display village should showcase the type of homes available within the rest of the estate and not promote a slab on ground type construction when the remainder of the estate cannot facilitate this design type due to topographical constraints.

Geotechnical stability (landslip / poor soils)

The existing undeveloped landform indicates the existence of various areas of landslip. A geotechnical investigation was previously undertaken with the Environmental Assessment Report, which concluded the proposed subdivision is a feasible land use in terms of geotechnical conditions. Since that time the extent of bulk earthworks over the site has been revised and reduced.

Morrison Geotechnic (2010) also identified that some 'unsuitable' soils are likely to be encountered in the low lying areas of the site, as well as extensive areas of high plasticity soils in the higher areas.

Any construction certificate involving bulk earthworks should require specific geotechnical assessment and recommendations for the most appropriate method(s) of undertaking the intended earthworks in such areas of landslip or poor soils.

Broadwater Parkway Alignment

The alignment of the Broadwater Parkway has been amended to be generally located within the urban zoned land, and outside of the wetland buffer and environmental zone. This is consistent with previous requests, primarily from an ecology perspective.

Minor incursions at the Altitude Aspire entry roundabout and at the eastern end of the subdivision where the road starts to traverse steep land are acceptable from an engineering perspective and are consistent with the latest Council concept designs for the road.

The applicant has provided a lengthy history of this issue in the preferred project report and maintains that the road should be able to be located wholly within the wetland buffer, in accordance with previous Council undertakings. However the necessary changes to the subdivision design have been made and this matter now seems to be resolved.

Broadwater Parkway Staging

In the original Environmental Assessment Report and in the initial negotiations relating to the Voluntary Planning Agreement (VPA) for Altitude Aspire, the applicant proposed to

construct the first stage of Broadwater Parkway from Fraser Drive to the subdivision entry roundabout. The current Preferred Project Report takes an alternate view, and demonstrates via the Revised Transport Assessment (Annexure 15) that the entire development of 263 lots can be adequately serviced by a "temporary" road connection to Fraser Drive. This issue is assessed in traffic comments below.

That being the case, the applicant needs only to dedicate the Broadwater Parkway road reserve as part of the subdivision process. Construction of the entry roundabout (at least in part) is required in order to provide a turning area at the termination of Road 2, but no further construction of the Broadwater Parkway will be required. The applicant will need to pay contributions toward the future acquisition and construction of Broadwater Parkway under the Voluntary Planning Agreement, and under the Tweed Road Contribution Plan (for the Fraser Drive intersection).

Traffic Assessment (Overview)

(Note: There are inconsistencies in road numbering between the subdivision survey plans and the engineering plans. Road numbering in this assessment is based on the engineering plans, to remain consistent with the Preferred Project Report Annexured reports.)

The road connection to Fraser Drive will be the initial road access to the subdivision. Further connections to Market Parade and Parkes Lane will only occur at Stage 5 and 8 respectively, and construction of Broadwater Parkway is no longer proposed as part of the Altitude Aspire development.

The Revised Transport Assessment contains an assessment of the operation of major intersections in the vicinity of the development, under scenarios with and without Broadwater Parkway. Council's Traffic Engineer is satisfied that this assessment satisfactorily demonstrates that with the Fraser Drive connection (Road 1) and without Broadwater Parkway, all intersections operate at acceptable levels of service (Level C or better at ultimate development), and any increases in traffic on the local network are within capacity.

As such, the design of the Fraser Drive connection (Road 1) must be for a permanent public road, in accordance with Council specifications.

The applicant proposes to close this road should the Broadwater Parkway connection be achieved in the future, to the design of the road network must be compatible with both schemes. The current Preferred Project Report now proposes a temporary road reserve over Road 1, rather than an easement as proposed in the original Environmental Assessment, which provides Council with the necessary tenure as roads authority. Amended geometry of the proposed connection road has also been provided as requested, to reduce the likelihood of collisions, giving priority to Road 1 at the intersection with Road 3.

The road hierarchy plans include road cross sections that are inconsistent with Council's Design Specification D1 Road Design, and provide unnecessary variations in road design throughout the subdivision.

The road network is improved from the original Environmental Assessment in its consideration of public transport, pedestrian and cycleway routes through the site for the various staging. The Revised Transport Assessment identifies a potential bus route for the ultimate subdivision that conforms to Council's DCP Section A5 Design Specification D1-17 specifications in relation to road pavement widths (refer Figure 6.2 of the Traffic Assessment). Four bus stops are proposed on Road 2, and these should be formalised by

the construction of widened bus bays. However these will not be available in the initial stages of the development.

It is important that bus transport capability is maintained through all stages of the development, not just its final phases. Unfortunately the Revised Transport Assessment states that exact staging of the development has not been confirmed. Stage 5 is critical to bus movements, as it completes a link between Market Parade and Fraser Drive. Until this link is constructed, a continuous bus route is not feasible through the stages of the subdivision. As mentioned in the bulk earthworks discussion above, Stage 5 is not included in the Phase 1 earthworks (Stages 1-4), despite the recommendations of the Revised Transport Assessment. Conditions will therefore be recommended requiring completion of this public transport link.

Until the Stage 5 road link is constructed, all bus servicing to the Estate will be provided externally. As shown in the Traffic Assessment, the nearest commercial bus routes are Terranora Road to the south, and Glen Ayr Drive / Kintyre Crescent to the east. Fraser Drive is not currently serviced by commercial buses adjacent to the subdivision. School bus services currently use Fraser Drive, Market Parade and Parkes Lane. As such, the Revised Transport Assessment states that pedestrian linkages are required to access school services on Fraser Drive and commercial service routes, which are shown to be within a 400m walking radius, which is in accordance with Tweed DCP Section A5 Subdivision Manual. To achieve this, a consent condition will be recommended requiring an extension of the footpath link between lots 128 and 129 (or a suitable alternate location if required) along the western side of Fraser Drive to a suitable crossing point on Fraser Drive, and then continue along Glen Ayr Drive to the Kintyre Crescent intersection. An existing bus shelter is located nearby. Given the expected increased demand for School Bus services on Fraser Drive, indented bus bays should also be provided on both sides of Fraser Drive, linked to the pedestrian network.

The final traffic matter regarding the connectivity of the road network to future development areas to the west has been resolved in the current Preferred Project Report by the realignment the Parkes Lane extension (Road 10 and 12) to run along the perimeter of the subdivision, therefore allowing unconstrained road connection to future development. This includes owner's consent (Annexure 20) to build half of the road cross section on the adjoining property.

Specific Comments on Roads

Road gradients are acceptable, with maximum allowable gradients for Access Streets of 16% being necessarily utilised for six of the thirteen roads in the subdivision. However gradients in excess of 12% will necessitate requirements for pedestrians, cyclists, waste collection vehicles and transverse access to be explicitly addressed in the detailed design, as required by Road Design specification D1.10.1. This will be ‘flagged’ by a condition of consent.

The steep gradients could also create a minor problem for bus accessibility as they will need to traverse one of these steep roads.

The termination treatment of Road 13 is not considered acceptable. Although this road is only 40m long it will provide access for numerous dwellings and motorists could still unintentionally enter this road. It has a gradient of 16% and a turn-around provision is considered necessary, Acceptable options in this scenario include a cul-de-sac bulb, ‘Y’ or ‘T’ road head formations or similar options as approved by Council. This will be a condition of consent.

Note that the prior request for this road to be 7.5m wide has been reconsidered and will not be pursued, however the request for 3.5m wide footpath areas has been implemented.

Several roads have horizontal curves with small radii that warrant widening around the bends. An appropriate condition of consent will be imposed to address this.

The kerb returns as depicted on the 'Earthworks Layout' plans appear to generally be overly large, but this level of detail (i.e. kerb return radii) is not expected to be provided at this stage. Access Streets generally only require 6m radius kerb returns with larger radii for bus routes and intersections with higher category roads. This refinement of design will be included as a condition of consent, referencing D1.17.8(c), D1.17.9 and D1.17.15.

Note that a late modification has been made per RMS advice received 31 May .2013. The above references include inherent conflicts within Council's own standards and a minimum kerb return radius of 11m is likely to eventuate.

Several instances of long steep roads occur throughout the subdivision that can easily induce excessive vehicle speed. Roads 2 and 5 in particular, but also Roads 1, 3, 6, 7, 8 and 10 are borderline cases for implementation of traffic calming devices or measures.

The applicant will be required to assess the need for traffic calming against the requirements of D1.08 with particular reference to Table D1.1.

Access for Garbage Trucks

Council has no major obvious issues from a waste collection perspective.

The applicant commits to providing a waste management plan prior to Construction Certificate, which Council believes will be sufficient, however it would be beneficial to get a commitment from Council's Waste Collections Contractor that they can maintain suitable access within the proposed road layout. Suitable conditions are recommended.

Broadwater Parkway - Hierarchy / Cross-sections

Broadwater Parkway is shown as having a 13.4m carriageway (at least for the section within 'Altitude Aspire') which is compliant with Council's 'Neighbourhood Connector' cross-section. A reduced footpath width for the northern side has previously been discussed with and accepted by Council – primarily to reduce the effect on the adjacent Endangered Ecological Community.

The construction of that section of Broadwater Parkway within this development site will not be constructed immediately but rather a contribution collected under the Voluntary Planning Agreement.

Road Hierarchy Plan

The Road Hierarchy Plan SK 3628(D) inappropriately categorises 9m carriageway roads as "Collector Streets" – whereas Council's Road Design Specification D1 nominates a 9m carriageway as an Access Street with bus route. TSC definitions include Neighbourhood Connector roads having a carriageway width of 11m – which would be the equivalent term for the applicant's 'Collector Street' – as Council does not even have this term in our urban street type descriptions.

Road 1 is nominated as a 'Collector Street' but this classification is disregarded due to the 16% gradient for part of that road, precluding it from that classification. Neighbourhood Connectors have a maximum allowable gradient of 12%.

The Road Hierarchy Plan will need to be amended to address this, as well as the following matters:

1. Road 10 is to be altered from 'Neighbourhood Connector' status to 'Access Street' status with bus route. In lieu of an 18m wide road with a carriageway width of 11m and 3.5m wide footpaths it is required to be a 17m wide road with a 9m carriageway and 4m wide footpaths.

   Although Council previously accepted the applicant's 11m carriageway proposal (per letter dated 20.7.2012), the 9m carriageway will be compatible and merge smoothly with the existing width of Parkes Lane, be consistent with the 9m carriageway bus route provision from Fraser Drive, and also consistent with the Market Parade road extension. Further to this, in consideration of the expected level of traffic intensity and the limited potential for future roads to branch off to the west, the proposed 11m carriageway is considered to be excessive and unnecessary. This will reduce the extent and cost of roadworks, provide for more land area for residential use, and assist in reducing the severity of the batter slope on the western side of that road.

   Note: the 11m carriageway width for Road 2 – from Broadwater Parkway to the roundabout intersection with Road 10 – is still considered to be appropriate.

2. The section of Road 1 with a 9m carriageway is to be provided with 4m wide footpath areas (in lieu of the proposed 3.5m footpaths) to comply with Council's standard cross section for bus routes on Access Streets, and be compatible with Roads 2 and 10.

3. All roads with 4.25m wide footpath areas are to be amended to 3.5m footpath areas – as previously requested per Council letter of 20.7.2012 (Item 4k(ii)). Apart from complying with Council standards, there are benefits for the applicant by increasing lot sizes (potential for extra lots to be created due to extra land available) and improvement in landforming to closer match existing land levels – reducing overall bulk earthworks.

<u>Road Cross-Sections</u>

Road width modifications have been addressed above, however road batters and individual lot accessibility concerns are still prevalent. Access to lots wherever gradients exceed 25% (equivalent to 1:4 batters or approx.15^0) coming from the road, has been previously raised for attention by the applicant, but has been inadequately addressed in the Engineering Preferred Project Report (p.25) by deferring to individual dwelling construction stage via the applicant's architectural consultants (MPS Architects P/L). This is not considered appropriate. The applicant will need to specifically address this issue and demonstrate how satisfactory lot access will be achieved as part of the construction certificate submissions.

Locations of concern, where batters are steeper than 1:4 are: Road 1 in the vicinity of Lot 402; Road 2 near Broadwater Parkway; Road 3 in the vicinity of Lots 506 to 511; Road 5 for the entire eastern side; Road 10 in the vicinity of Lots 804, 805, 823, 824, and adjoining property Lot 1 DP 175234 – although the latter can be significantly improved once the road carriageway width is narrowed as per Item 8.2.1; Road 11 in the vicinity of Lots 921 and 922; Road 12 in the vicinity of Lots 835, 925, and adjoining property Lot 1 DP 175234 – where 1:1 batters (at least) will be recommended for landscaping attention; Road 13 at the northern frontage of Lot 925.

It is noted the steep batters on the western side of Road 8, down to the basins, will be densely planted, as addressed in the Landscaping plans.

An option with road cross-sections that has not been explored, but which has the potential to have a marked effect on bulk earthworks, is the footpath crossfall variation allowance, for that section of footpath area within 1.1m of the property boundary. See TSC standard drawings SD001 and SD002 that state: *"Tweed Shire Council may consider steeper crossfalls in this zone where topographical constraints exist"*. This will be raised as an 'advisory' condition.

Intersections

A new road intersection with Fraser Drive will be constructed to provide immediate access to the site, via 'Road 1'. This is intended to be a temporary connection, until the construction of 'Broadwater Parkway' – along the northern residentially zoned portion of the site – is built and extended to Fraser Drive. This temporary connection is capable of adequately servicing the proposed development.

It would be Council's preference to have the temporary access as a permanent (secondary) point of access for the eastern portion of the 'Area E' release area.

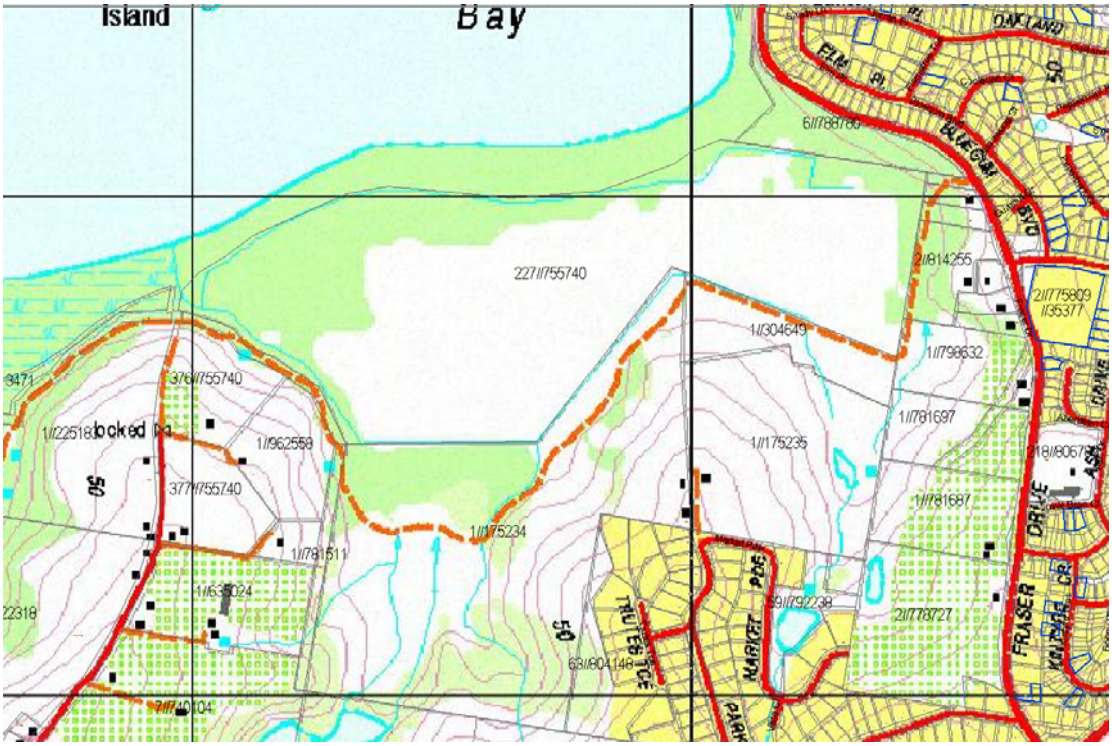
This amended submission now also provides an acceptable depiction of the new intersection of Road 9 with Market Parade.

Internally within the development site, the steep roads will create design compliance problems regarding road intersection gradients. As per TSC Road Design specification D1.10.2: *"longitudinal grade through intersections should not exceed 4%*". Compliance is unlikely to be able to be reasonably achieved, and some leniency is expected to be requested in the detailed design phase. The applicant will be required to attempt design compliance, and provided that bona fide design options are explored, some flexibility with this requirement will be entertained. This issue will be 'flagged' via a consent condition so that the applicant has ample opportunity to address this issue.

Lawful Point of Discharge

The Hydraulic and Hydrological Assessment (Annexure 19) seeks to demonstrate that the development has a lawful point of discharge for stormwater. It does so by identifying existing watercourses through the subject land and onto the receiving private lands (Lot 227 DP 755740 and Lot 1 DP 798632), and by implementing measures within the development to mitigate the impacts of the development on the downstream land (stormwater treatment and stormwater detention facilities). The applicant's planning consultant has also provided legal advice supplementary to the current Preferred Project Report (Gadens Lawyers, 8 May 2013) that supports the lawful point of discharge on the basis of case law. Based on this, the applicant considers that the requirement to obtain easements over the downstream land is unreasonable, as was proposed in Tweed DCP B24 for Area E and the draft Voluntary Planning Agreement.

On review there are no grounds for Council to dispute the case that there is a lawful point of discharge, however this will need to be reviewed by the consent authority. It is likely that the owner of the adjoining Lot 227 will strongly object to this position.



Topographical Map showing the historical watercourses across Lot 227 which are now relied upon as the lawful point of discharge

Stormwater Quality

The stormwater quality management approach is addressed in the applicants Annexure 8 - Stormwater Assessment and Management Plan. Plans provided show a central drainage channel through the site (Stage 6) to convey runoff from the upstream external catchment (approximately 33ha urban development) and to accept discharge from the internal urbanised catchments. Four bio-retention basins are proposed in the central drainage area, having been relocated from the environmental buffer area north of the Broadwater Parkway as proposed in the original Environmental Assessment. Limited detail is provided on the operation or design of these basins, and there are a number of design issues that will need to be addressed in a future construction certificate application, including:

- Basin A - no outlet details shown;
- Basin B - Staging details of outlet works given bulk earthworks phasing;
- Basin C - appears to be a combined wetland and bio-retention basin? Only treats a small catchment from the future Broadwater Parkway, and open space within the drainage precinct.

  This does not appear warranted and could be deleted from the subdivision works. Ornamental ponds as part of an entry statement are not supported in drainage reserves, if that is the intent;
- No details of high flow bypasses for each basin A, B, C and D - will only be provided "where possible";
- Require details of maintenance access;
- Parks and open space facilities in drainage areas (this is discussed in detail later in this report).

- The close proximity of inlet and outlet structures for Basin D, and to a lesser extent Basin B, will need to be either justified or revised to ensure appropriate dispersion of inflows will occur.

The 'Stormwater Assessment & Management Plan 'includes a typical detail for these basins, which is generally as per the 'Water by Design' Technical Design Guidelines for SE Queensland. The construction of each individual basin will need to be undertaken via an iterative approach, as they will originally function as sediment basins until 80% of the catchment is developed. This includes dwelling construction. They are comprised of layers of differing media and specific plant species. As a consequence of initial use as sediment basins, it is fruitless to construct them in their final form immediately.

It would be Council's intention to not accept maintenance responsibility for these basins until they are fully constructed, and should remain the developer's responsibility until they are fully constructed and have satisfactorily passed a (minimum) 6 month Maintenance and Establishment Period. This is only a minimum guideline, as depending on the plant species used, the maintenance period is also an establishment period and some plant species may take longer than 6 months to become acceptably established.

These time frames go well beyond the actual moment of issuing a subdivision certificate, and therefore an appropriate bond security will need to be submitted by the developer, prior to issue of any associated subdivision certificate, to ensure the basins are fully constructed and functional upon 80% of the catchment being fully developed. This will need to be addressed by a Stormwater Management Plan.

Stormwater modelling (MUSIC) results are provided, demonstrating compliance with Council's interim stormwater quality parameters. From an ecology perspective Council needs to determine whether there are issues with the residual pollutant loads that will be directed to the receiving SEPP14 wetlands / Trutes Bay (this is discussed later in this report).

The stormwater treatment system is contingent on each single dwelling allotment having a 5kL rainwater tank, and this requirement should be included on land titles.

Generally the stormwater quality approach is satisfactory, subject to consent conditions requiring additional detail with a future Construction Certificate application.

Stormwater Quantity

Flow attenuation is addressed in the Hydrologic and Hydraulic Assessment (Annexure 19). It acknowledges that the design of flow attenuation structures is critical to the determination of the lawful point of discharge, as the development will result in increases in peak stormwater runoff volumes and velocities, with potential adverse impacts on downstream land.

The applicant proposes to construct an earth bund as part of the Phase 1 bulk earthworks to create a detention area in the environmental buffer area north of the future Broadwater Parkway. The bund will raise and extend an existing low level agricultural bund / spoil area to a crest level of RL 2.2m AHD. The detention basin will accept discharge from the central open drain (via future Broadwater Parkway culverts), and discharge at three points:

- A reinforced concrete box culvert at invert level RL 0.5m AHD discharging to Lot 1 DP 798632 to the east;
- A reinforced concrete box culvert at invert level RL 0.8m AHD discharging to Lot 227 DP 755740 to the north;

- A weir at RL 1.5m AHD discharging to Lot 227 to the north.

The bund will encompass a mapped area of freshwater wetland Endangered Ecological Communities, so the hydraulic design of the structure is important not only for minimising engineering impacts, but also for ecological objectives. The report describes these discharge points as "corresponding with depressions in the natural topography to ensure the hydraulic regime within the EEC can be maintained". There are no details provided whether regrading of land within the basin is required to assist in draining the area to these discharge points.

The consultants have modelled the resultant structure, demonstrating that for a range of storm event intensities from 1 year to 100 year ARI, the basin generally limits peak discharge to existing flow conditions. (A small increase of 0.4m^3/s is predicted for the 1 year ARI event, however all other events show a decrease from the base case). Importantly for the Endangered Ecological Community, the time of extended inundation within the bund is only around 9 hours in the worst case, so should not be significant.

Flood Hazard

The stormwater modelling also examines the resultant depths, velocities and flows in the central open drain. This confirms that it is sized appropriately to contain storm events up to the 100 year ARI, including scenarios with coincident flooding of the Broadwater. However given the steep nature of the site and size of contributing catchment, velocities in the channel are high, and pose a safety risk to the public, and potentially a maintenance burden to Council (1 year ARI maximum velocity 3.5m/s, increasing to 4.6m/s in the 100 year ARI). While the preliminary design shows rock check dams and drop structures at intervals along the channel, further detailed design will be required with a future construction certificate application. This can be addressed via consent conditions.

All residential lots are well elevated above the design flood event (being the climate change affected 100 year ARI design flood, peak RL 2.9m AHD). High level access for evacuation is readily available on this steep site.

Stormwater Staging

The application fails to properly describe how the stormwater management system will be staged to accommodate the initial eastern stages of development nor later stages in terms of erosion control for the bulk earthworks and house building phases, stormwater quality control in the use phase, and stormwater detention. This can be conditioned.

Voluntary Planning Agreement

In December 2011 Council considered a Draft Section 94 Plan for Terranora Area E. The report noted that in addition to shire wide developer contributions, the charges proposed by the Area E Plan would exceed the State Government imposed $30,000 (for Greenfield Developments) per allotment cap.

Accordingly Council resolved as follows:

RESOLVED *that:*

1. *In accordance with Clause 31 of the Environmental Planning and Assessment Regulation 2000*

   (a) Council not proceeds with S94 Plan No.31 – Terranora Area E Version 1.0.

(b) *The reason for not proceeding with the plan is that there are legislative obstacles to approving the plan.*

(c) *Notice be given within 28 days of Council's decision in the Tweed Link.*

2. *The works program and estimates in Draft S94 Plan No.31 – Terranora Area E be used as the basis of negotiations with the proponents of "Altitude Aspire" Part 3A Application and other Area E landowners for the purpose of reaching agreement on a Voluntary Planning Agreement to fund necessary infrastructure for Area E.*

Drafting of the Voluntary Planning Agreement commenced accordingly in consultation with the applicant, and including legal advice from Voluntary Planning Agreement experts. However Council and the applicant have failed to reach agreement on all matters relating to infrastructure provision, specifically in the water and sewerage areas.

As such the draft Voluntary Planning Agreement provided by the applicant as Annexure 31 of the current Preferred Project Report, is not accepted by Council.

Council considered a report at the 16 May 2013 meeting concerning the VPA negotiations and resolved that:

Subject to:

a. *the Preferred Project Report (PPR) satisfactorily demonstrating the subdivision can be serviced via the direct connection to Fraser Drive, and*

b. *the consent authority determining that no stormwater drainage easements are necessary over Lot 227*

Remove water and sewerage provisions from the VPA, with these aspects to be determined via

i. *recommended conditions of consent to the Planning Assessment Commission for the Part 3A Preferred Project Report, and*

ii. *by assessment of separate applications to Council as the Water Authority to access the public water and sewerage networks.*

Considering the above assessment, items (a) and (b) have been resolved satisfactorily, subject to final determination of the current Preferred Project Report by the NSW Department of Planning & Infrastructure. Given the drawn out negotiations, the Voluntary Planning Agreement has not been able to be determined concurrently with the current Preferred Project Report, and is yet to be publicly exhibited as required by planning legislation.

In regards to Lot 227 and the Management Plan the following comments should be noted and may require Council and the applicant to negotiate suitable terms for Lot 227:

Previous comments identified the need for saltmarsh mosquito control and wetland restoration, in accordance with an approved Wetland Restoration Plan proportionally funded by all developers of Area E. This approach is included in the Council adopted Area E Urban Release Development Code (2011) via the following controls:

4. *Demonstrate the works identified within the Council approved Wetland Restoration Plan and Habitat Restoration Plan that the development will be responsible for and the intended method of addressing the works required;*

5. *Demonstrate that any wetland on the land will be restored and managed to the consent authority's satisfaction to restore freshwater wetland values and minimise breeding habitat for saltwater mosquitoes and biting midges.*

The Code also notes the following:

> *It is acknowledged that land requiring restoration is in fragmented ownership. To this extent, Council is open to discussion with applicants regarding delivery methods for the restoration work identified to ensure equitable distribution across the landholders and development of Area E. Should environmental areas be dedicated to Council in any subdivision or other development, Council may enter into an agreement for a maintenance period and contribution prior to handover and all restoration works must be completed to Council's satisfaction.*

The Draft VPA included at Annexure 31 provides for monetary contributions for the acquisition and management of Lot 227 DP 755740 viz:

> *20.1 The monetary Development contributions paid by the Developer to the Council in accordance with Item 4 in Schedule 1 Table are to be applied towards rehabilitation and restoration Works on land comprising Lot 227 DP755740 in accordance with the vegetation management plan approved in relation to the Project Application after:*
>
> *20.1.1 That land has been acquired by the Council, and*
>
> *20.1.2 The Council has accumulated sufficient funds to undertake the Works.*

While the general intent of this clause is supported the following comments are made:

- The vegetation management plan referred to in the clause above appears to relate to Annexure 10 Preferred Project Report Revised Vegetation Management and Rehabilitation Plan (JWA, 2013) however this plan is confined to the Preferred Project Report site and does not extend to Lot 227 DP755740.
- A draft "Wetland Restoration Plan" for Lot 227 DP755740 was prepared by James Warren and Associates in December 2008 pursuant to an earlier draft DCP for the Area E however this Plan has not yet been approved as required by the Council-adopted Area E Urban Release Development Code (see point 4 above). It is recommended that the VPA should refer to a Council approved version of this plan.
- The draft VPA makes no reference to monetary contributions toward works identified under a "Habitat Restoration Plan" as required by the Council-adopted Area E Urban Release Development Code (see point 4 above and associated note referring to an equitable distribution of the restoration burden across the entire Area E Study Area). As for the "Wetland Restoration Plan", a draft "Habitat Restoration Plan" was prepared by James Warren and Associates in December 2008 however this Plan has not yet been approved by Council. It is recommended that the VPA should refer to a Council approved version of the Habitat Restoration Plan.
- The draft VPA refers to the monetary contribution listed in *Item 4 in Schedule 1 Table* of the VPA. This table simply refers to a "Per lot contribution as per schedule" and it is not clear what this will amount to, nor how it will be calculated.

It is recommended that the monetary contribution is calculated to proportionally reflect the costs of: (1) acquiring Lot 227 DP755740; (2) rehabilitation and management of lands included in a Council-approved Wetland Restoration Plan; and (3) rehabilitation and management of lands included in a Council-approved Habitat Restoration Plan.

Please note that area of land to be restored (in accordance with Tweed DCP Section B24) is substantially larger than that shown on the applicants restoration plans, Any amended restoration plans will need to reference the DCP and should include all areas outside of the urban footprint. Appropriate conditions are recommended.

Were the Department wanting to approve this application the negotiations between Council and the applicant would need to continue and advance the Voluntary Planning Agreement to the public exhibition phase.

Statement of Commitments

Item 18 of the Revised Statement of Commitments references the Voluntary Planning Agreement and states this will be finalised "prior to the issue of a subdivision certificate for the first residential lot." It is recommended that the Voluntary Planning Agreement should instead be finalised prior to the issue of the first Construction Certificate.

This timing may not suit the applicant, however it would be beneficial for all parties to have this finalised prior to construction commencing, ensuring the applicant is fully aware of their financial liability and able to budget accordingly. This would also avoid the possible scenario that works could be completed without a Voluntary Planning Agreement in place, thus placing undue pressure on either party to finalise the Agreement, to enable issuing of a subdivision certificate.

Infrastructure Servicing

The proposed water supply and sewerage servicing of Altitude Aspire is not acceptable and places considerable obligations and financial risks onto Council, with the developer only accepting payment of mandatory monetary contributions towards the works necessary for their development.

In regards to Water Connection the applicant makes many claims within the current Preferred Project Report which are not supported by Council staff. These are detailed as follows:

a) *Developers Quote: "The proposed strategy for supply of water to Area E follows extensive studies completed by others (including Parson Brinckerhoff, (2004)) and extensive consultation between the proponent and TSC, details of which are provided in Section 3, DGR 4.2.*

The preferred (LES) strategy for water supply within the TSC DCP B24, which involves construction of a 3ML reservoir adjoining Mahers Lane, is not considered practical or feasible for the development of Altitude Aspire primarily due to distances between the sites, but also due to the current availability of an appropriate site.

Therefore, the alternative strategy identified within DCP B24 is proposed, being construction of a new reservoir adjacent the existing Chambers Flat reservoir. The appropriate storage capacity for this reservoir still requires further investigation. Some areas of Altitude Aspire fed from this reservoir may require pressure boosting to achieve TSC service standards and fire flows.

It should be noted that this strategy would also benefit Council in providing additional supply to areas west of Altitude Aspire as well as areas adjoining Area E to the east of Fraser Drive." (Annexure 11 - Engineering Report Part 1, pg 22)"

Council Response: Council does not agree with the statement that the "construction of a new reservoir adjacent the existing Chambers reservoir is an alternative strategy identified within DCP B24". This is an alternate strategy to the DCP B24 (i.e.: it is not *within* the DCP B24) which was proposed by Council in order to facilitate negotiations with the developer. The developer however rejected the alternative strategy proposed by Council, as defined in Section 3.1, and has proposed their own preferred strategy, which is not acceptable to Council.

Council does not agree that the proposed strategy would "benefit Council" as it does not avoid the need for a further reservoir in Area E and therefore provides no benefit to Council in providing additional supply to areas west of Altitude Aspire. Additional capacity for the existing developed areas adjoining to the east of Fraser Drive is not required in the short to medium term and the proposal by the developer brings forward unnecessarily expenditure by Council.

b) *Developers Quote: "An extract from DCP B24 has also been included in Appendix 8 that identifies the location of the Chambers Flat reservoir site and water main running along Fraser Drive. Appendix 8 also includes preliminary internal Water Layout Plans for the development that shows connections to this existing water reticulation system along Fraser Drive."*

Council Response: The extract included within Appendix 8 is an unapproved alteration by the developer from the DCP B24 that is not acceptable to Council.

c) *Developers Quote: "No water reservoir sites are designated on Altitude Aspire. (PPR Report April 2013, Pg 34)*

Council Response: Council disagrees that there *could* not be water reservoir site/sites located on Altitude Aspire. In order to provide Peak Hourly Demand, the developer must construct a reservoir on the site or other site they obtain, if they choose not to be a part of the overall Area E development.

d) *Developers Quote: "An extensive period of consultation has already occurred with TSC. The proposed strategy is based on this consultation and the strategies outlined within DCP B24. (Annexure 11 - Engineering Report Part 1, pg 12)"*

Council Response: Council does not agree that the strategy proposed by the developer is outlined within DCP B24 and negotiations have not yielded an acceptable alternative.

e) *Developers Quote: "The construction of the LES (Parsons Brinkerhoff) service reservoir, pump station and distribution mains is not proposed for the development of Altitude Aspire. (Annexure 11 - Engineering Report Part 1, pg 12)"*

Council Response: As part of Voluntary Planning Agreement negotiations, Council has proposed two alternatives to Altitude Aspire departing from the Local Environmental Study (LES) (for a reservoir, pump station and distribution mains to service all of Area E), which were rejected by the developer.

f) *Developers Quote:* "Revised strategy includes new service reservoir adjacent existing Chambers Reservoir (Annexure 11 - Engineering Report Part 1, pg 12)"

Council Response: The proposal by the developer of a new service reservoir adjacent to the existing Chambers Reservoir including upfront funding by Council is not acceptable to Council and it also does not preclude the need for a further Reservoir to service the remainder of Area E.

Council does not agree with the applicant that the key unresolved issue is the apportionment of funding between the applicant and Council. In the previous versions of the draft Voluntary Planning Agreement the developer would be required to construct a 3ML reservoir and Council would contribute the marginal increase in cost for the additional 1.5ML capacity to be utilised for other than Area E. Council's position is that a reservoir constructed should be as large as possible so as to optimise the use of the site. A small reservoir servicing only part of Area E only wastes the potential of this site. Under the draft Voluntary Planning Agreement spare reservoir capacity provided upfront by the developer for the remaining part of Area E which could be serviced from this site would be paid for by future developers and reimbursed to Newland. Newland has rejected this approach. It should also be noted that there is significant uncertainty in gaining the necessary approvals under the EP&A Act to construct an additional reservoir on this site and accordingly there is no guarantee that this option is feasible

Tweed Shire Council's Development Design Specification D11 specifies that a developer is to provide a water supply system, sourced from Council's preferred connection point that will deliver design peak hourly demand at a minimum 20m head to each allotment.

Therefore in order for Altitude Aspire to proceed with their development the following water design conditions are required to be met by the developer:

a) Provide adequate reservoir storage and mains of adequate size to deliver the flow at peak hour rate.

b) Provide a 0.8ML reservoir in the highest location (90m AHD) on this site to provide peak hour demand to the total area.

c) Provide a booster pump for high level zones above 55m AHD including a gravity bypass for fire flows.

d) Maximum pressure in the reticulation mains should not exceed 78m head.

e) Provide PRV's for low areas less than 20m AHD.

f) All reticulation areas to be serviced by PRV installations are to be designed to minimise the number of PRV installations across the area.

g) All lots must receive gravity flow from the Reservoir to ensure a fire fighting appliance can extract water from the adjacent mains.

In regards to Sewer Connection the applicant makes many claims within the current Preferred Project Report which are not supported by Council staff. These are detailed as follows:

a) Developer Quote: *"A number of submissions from residents of Parkes Lane and Market Parade raise issues relating to stormwater and sewer infrastructure to service their properties."*

"The subdivision design also provides sewer reticulation connection points to service the existing properties. The design and funding of a scheme for Parkes Lane and Market Parade is clearly the responsibility of Tweed Shire Council and landowners.

There is an opportunity for Tweed Shire Council to contribute to the cost of providing increased capacity in the proposed regional sewer pump station and rising main to the Banora Point Wastewater Treatment Plant to efficiently facilitate the future connection of Parkes Lane and Market Parade properties.

It is proposed that the Voluntary Planning Agreement contain appropriate provisions to address this issue." (PPR Report April 2013, Pg 8)

Council Response: Council has agreed to:

i. pay the marginal increase in cost for increasing the size of the proposed pump station to convert it to a regional sewer pumping station (SPS 3027).

ii. pay the marginal cost of increasing any gravity sewers within Altitude aspire to serve the existing un-sewered areas of Parkes Lane and Market Parade.

iii. pay the full cost of any additional extensions of gravity sewer within Altitude aspire which are required to connect the existing un-sewered areas of Parkes Lane and Market Parade.

iv. pay for changes required at SPS 3033 Henry Lawson Drive to allow it to pump to the proposed regional SPS 3027 within the Altitude Aspire development.

v. fund and arrange to construct a 375mm SRM (stage 1) from SPS 3018 Fraser Drive to the Banora Point WWTP from s64 contributions.

b) Developer Quote: "*Upgrades to infrastructure to be via s64 contributions. (Annexure 11 - Engineering Report Part 1, pg 12)"*

Council Response: S64 contributions will be applied to components of trunk infrastructure which are sized and constructed for the ultimate conditions which is the basis that these contributions are collected.

However the developer is required to contribute to the costs of staging of the infrastructure prior to the ultimate configuration being implemented. Therefore the developer is required to fund the following items:

i. The developer will need to pay for any alterations to the existing SRM 3033 to allow appropriate connections to and from the proposed regional SPS 3027 within the Altitude Aspire Development.

ii. The developer will need to pay for pumps at proposed regional SPS 3027 within the Altitude Aspire development to cater for its own load and the load from SPS 3033 Henry Lawson Drive, estimated to be approximately 70L/s.

iii. The developer will need to pay for the pumping, electrical and telemetry control system upgrades and provide backup power generation at the downstream SPS 3018 Fraser Drive to accept the additional flows from the proposed regional SPS 3027 within the Altitude Aspire development. The estimated upgraded flow for this station is approximately 140 L/s, up from the existing 112 L/s.

c) Developer Quote: "*The proposed strategy is based on previous extensive consultation with TSC and the strategies outlined within DCP B24. (Annexure 11 - Engineering Report Part 1, pg 13)"*

Council Response: Council agrees with this statement provided it accords to the Area E strategy in Tweed Development Control Plan Section B24 Area E.

d) Strategy considers broader Area E. (Annexure 11 - Engineering Report Part 1, pg 13)

Council Response: Council agrees with this statement provided it accords to the Area E strategy in Tweed Development Control Plan Section B24 Area E.

e) Indicative location of the Regional Sewerage Pump Station is shown on Sewer Layout Plan. The exact location of this pump station and creation of appropriate separate lot can occur subsequent to detailed sewer design. (Annexure 11 - Engineering Report Part 1, pg 13)

Council Response: Council agrees with this statement provided it accords to the Area E strategy in Tweed Development Control Plan Section B24 Area E.

f) A single 'regional' pump station is proposed. (Annexure 11 - Engineering Report Part 1, pg 13)

Council Response: Council agrees with this statement provided it accords to the Area E strategy in Tweed Development Control Plan Section B24 Area E.

g) The proposed interim sewerage strategy to service Altitude Aspire follows advice provided by TSC on 19 October 2011 (refer to Appendix 10) and the TSC DCP B24 (December 2011). (Annexure 11 - Engineering Report Part 1, pg 23)

Council Response: Council agrees with this statement provided it accords to the Area E strategy in Tweed Development Control Plan Section B24 Area E.

h) Appendix 10 includes the above mentioned email with attached sketch showing the location of relevant pump stations (SPS3018, SPS 3033 and Area E Regional Sewer Pump Station) and proposed rising mains relative to the Altitude Aspire site. (Annexure 11 - Engineering Report Part 1, pg 23)

Council Response: Council agrees with this statement provided it accords to the Area E strategy in Tweed Development Control Plan Section B24 Area E.

i) TSC is required to amend their DSP to include these sewer infrastructure works, OR such works be included in a VPA subject to endorsement by Council. (Annexure 11 - Engineering Report Part 1, pg 23)

Council Response: No changes to the DSP are required to accommodate the works proposed by Council to be funded from S64 Contributions.

j) Appendix 8 includes internal preliminary Sewer Layout Plans for the development that show gravity reticulation connected to an indicative location for the RSPS within the Altitude Aspire development site. A separate lot can be created for this infrastructure and transferred to TSC in Fee Simple once the exact location has been determined through detailed design. (Annexure 11 - Engineering Report Part 1, pg 23)

Council Response: Council agrees with this statement provided it accords to the Area E strategy in Tweed Development Control Plan Section B24 Area E.

Council does not anticipate the need to construct stage 2 of a new 375mm SRM from the proposed regional SPS 3027 within the Altitude Aspire to SPS 3018 Fraser Drive for the foreseeable future. The sewering of the Parkes Lane and Market Parade areas are not proposed in the short to medium term. Also the likelihood of the remaining portions of Area E being developed in this same time frame appears very low. As a result the existing SRM 3033 and receiving sections of gravity sewer to SPS 3018 Fraser Drive will be adequate to

convey the Altitude Aspire flows as proposed. To bring the construction of this SRM (stage 2) forward has the following disadvantages:

i. Velocities in this main will not achieve minimum design standards until Altitude aspire is fully developed.

ii. This results in significant septicity and associated odour and corrosions impacts on downstream infrastructure and amenity.

iii. The existing infrastructure is underutilised.

It brings forward significant Council expenditure unnecessarily

Therefore in order for Altitude Aspire to proceed with their development the following sewer provisions are required to be met by the developer:

a) The developer will provide a Regional SPS 3027 as per Councils' requirements to accept flows from the remaining portions of Area E, SPS 3033 Henry Lawson Drive (Terranora Village) and future flows from the existing un-sewered areas of Parkes Lane and Market Parade.

b) Council agrees to pay the marginal cost of increasing the capacity of the proposed Regional SPS 3027 within the Altitude Aspire development to accept flows from the remaining portions of Area E, SPS 3033 Henry Lawson Drive and future flows from the existing un-sewered areas of Parkes Lane and Market Parade.

c) Council will arrange to construct a 375mm SRM (Stage 1) from SPS 3018 Fraser Drive to Banora Point WWTP funded from s64 Developer Contributions.

d) Council agrees to pay the marginal cost of increasing any gravity sewers within Altitude aspire to serve the existing un-sewered areas of Parkes Lane and Market Parade.

e) Council agrees to pay the full cost of any additional extension of gravity sewer within Altitude Aspire which is required to connect the existing un-sewered areas of Parkes Lane and Market Parade.

f) Council agrees to pay for changes required at SPS 3033 Henry Lawson Drive to allow it to pump to the proposed regional SPS 3027 within the Altitude Aspire development.

g) The developer will pay for any alterations to the existing SRM 3033 to allow appropriate connections to and from the proposed regional SPS 3027 within the Altitude Aspire development.

h) The developer will pay for pumps at proposed regional SPS 3027 within the Altitude Aspire development cater for its own load, plus the load from SPS 3033 Henry Lawson Drive estimated to be approximately 70L/s.

i) The developer will pay for the pumping, electrical and telemetry control system upgrades and provide backup power generation at the downstream SPS 3018 Fraser Drive to accept the additional flows from the proposed regional SPS 3027 within the Altitude Aspire development. The estimated upgraded flow of this station is approximately 140 L/s.

Should the Department of Planning & Infrastructure wish to approve this subdivision, appropriate conditions of consent have been recommended to cover these infrastructure issues.

Electricity

Electricity services are currently provided to the area via Country Energy infrastructure. Recommended conditions of consent shall require the applicant to provide services in accordance with the standards of the supply authority.

Telecommunication

Telecommunication services are currently provided to the area via Telstra infrastructure. Recommended conditions of consent shall require the applicant to provide services in accordance with the standards of the supply authority.

Existing Title Restrictions

The only noted encumbrance is an Easement for Transmission Line 15m wide and variable, that extends along part of the northern and western boundaries of Lot 1 DP 304649.

This affects land that is primarily zoned 7(a), but the easement will affect medium density Lot 926 – with the indicative development pattern for that lot conflicting with the easement. However as development of the medium density lots is not part of this application, no immediate concerns are raised regarding this possible future conflict.

There is also an existing 250mm diameter sewer rising main encumbering the site that traverses across the northern portion of the site, just within the boundary. This does not appear to be covered by an easement which would need to be rectified should any approval be given. Appropriate conditions of consent are recommended in this regard.

General Subdivision Issues & Layout

The current submission is a significant reduction of the original proposal for a 321 lot subdivision. Multiple issues have previously been raised regarding lot sizes and layouts, and the current application has generally addressed most of previously raised issues in that regard.

Recently, concerns were raised regarding the awkward shape and insufficient street frontage for several lots – namely Lots 703, 810, 811, 812, 827 and 828. The current submission has not perceptibly altered the shapes of these lots, however the most awkward of these - Lots 810, 811, 827 and 828 are now shown as having a designated off-street parking space being required via a Restriction on Title. It is not necessary to have these car spaces constructed at the subdivision stage, as there is ample room on the lots for varying locations, however this intent will be reinforced by an appropriately worded Restriction that requires such a designated parking space to be constructed in conjunction with any dwelling constructed on the site. If the subdivision design needs to be altered to accommodate a larger park at Lot 820 this would be an opportunity to amend the lot layouts of these unusual shaped allotments.

In regards to Corner Splays Council prefers to have standardised 3m x 3m corner truncations as nominated in Tweed DCP Section A5 Subdivision Manual and its associated Design Specification D1 – Road Design – Section D1.17.14 & 15, instead of the rounded corners as depicted in this application. While it may be rather late in the assessment process to raise this issue, recent subdivision design problems due to rounded lot corners (Casuarina: sewer location excessive infrastructure issues and services location limitations in the footpath area) have re-focussed attention on to this design aspect. Appropriate conditions of consent have been drafted to rectify this matter.

In regards to the proposed Community Title Scheme this is not a standard 'Community Title' development but as the applicant has stated, a 'hybrid' scheme where all roads, public reserves and drainage reserves will be dedicated to Council.

The only reason this type of scheme is nominated is due to the applicant's intention to provide a 'community association' facility on Lot 713 for the sole use of all residents of 'Altitude Aspire', which includes a recreation facility building, BBQ area, swimming pool and tennis court. This facility is not intended for construction until Stage 7.

Due to the staging of this proposal, it is possible that purchasers will become part of a complex community scheme arrangement that may need to be revisited upon creation of each stage of the development.

A draft Community Management Statement (CMS) has been provided with this PPR and while it nominates staging, no time frame is mentioned.

Prospective purchasers will need to be wary of consequences if the development does not proceed to completion.

The draft Community Management Scheme does not clearly state that all roads will be dedicated as public roads, and only provides a definition of "Public Road" as *"the area designated roadways on the Concept Plan".* A copy of the Concept Plan is not provided. This lack of clarity is not helped by the definition for 'Community Property' in the Community Management Scheme which could be deemed as including the roads. Nevertheless, the Preferred Project Report clearly states that all roads will be dedicated to the public (p.11 etc) and this is considered satisfactory.

It is also noted that the Community Management Scheme has a peculiar inclusion of 'Pathways' – whereby "*The Community Association is responsible for the control, operation, maintenance and repair of the Pathways"*. This is unlikely to refer to all the concrete footpaths to be constructed throughout the development, however there is some measure of ambiguity here. The Community Management Scheme also imposes pet keeping restrictions. Prospective purchasers will need to be fully aware of their obligations and responsibilities when considering buying into this Community Title Scheme.

It is assumed that Restrictions on Title can be created over individual lots within this Community Title scheme, as would normally be created under Section 88B of the Conveyancing Act. Otherwise the Restrictions on Title as imposed via consent conditions (eg: noise attenuation and rainwater tanks) will need to be specifically addressed in the Community Management Statement.

Community Liaison Officer

Recent DA approvals for significant subdivisions in Tweed Shire Council area have imposed a requirement for a Community Liaison Officer to be the primary point of contact for local residents once construction work commences. This has proven to be a worthwhile requirement as experienced during recent subdivisional works at Casuarina and will be included as a recommended condition of consent – to be addressed 'Prior to Construction Work Commencing.'

Removal of Dams and Surrounding Native Vegetation including Lowland Rainforest Endangered Ecological Communities

The Preferred Project Report proposes removal of all remnants of Lowland Rainforest as well as existing dams across the site, stating that

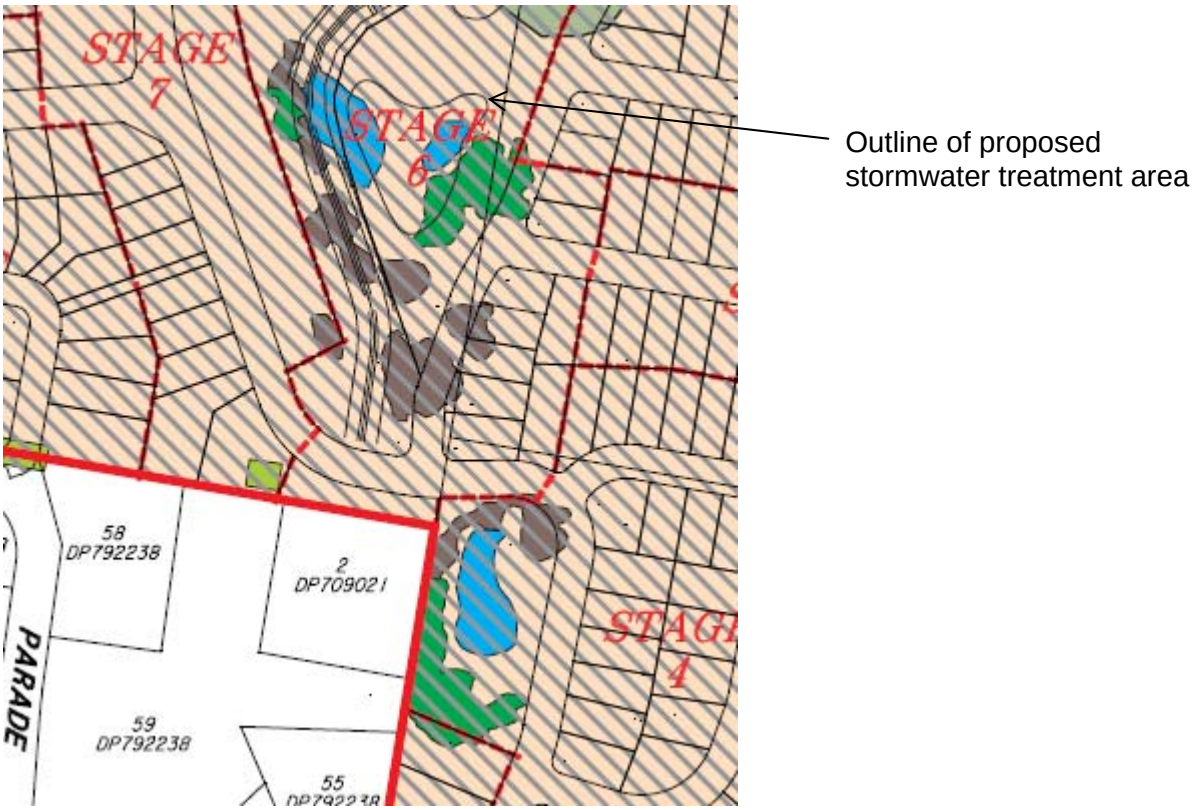
Due to a combination of steep topography, compliance with TSC subdivision requirements in terms of landform, retaining wall heights etc., and the requirement to treat all stormwater within the central gully on the site to reduce impact on the adjacent SEPP 14 wetland, the entire development footprint will be subject to some form of earthworks.

The removal of remnant Lowland Rainforest EEC patches and the filling of existing waterbodies in order to fulfil development open space requirements adjacent to proposed Stage 4 is not supported.

Council, in its review of the draft PPR, expressed a preference for these habitat elements to be incorporated into the central stormwater drainage system. This position was supported by DP&I, stating that the Department was:

...generally not supportive of this approach where there is sufficient space to avoid these areas with a more suitable subdivision design and layout.

The majority of remnant vegetation and dams occur within or closely adjacent to the proposed central drainage system and open space, and the proponent's justification for their removal remains unconvincing, as it appears that the majority of these elements could be incorporated into the subdivision design. For example, at least one of the existing dams coincides closely with the location of a proposed detention basin. Additionally, substantial revegetation/landscaping works are proposed within these areas, including areas where existing native vegetation is to be removed, where its retention would be more appropriate than clearing and subsequent reinstating of vegetation.



Detail of central drainage corridor (Figure 13, Revised Ecological Assessment (JWA April 2013)). Hatching shows area subject to bulk earthworks. Blue indicates existing waterbodies, green indicates Lowland rainforest EEC.

Further, this aspect of the proposal is largely inconsistent with the *Environment* and *Landscape Character and Views* design principles of Council-adopted Area E Urban Release Development Code (2011) which requires development applications to:

> *...identify the presence of land of high environmental quality, suitable buffering and ongoing management.*

and also that:

> *Existing significant landscape features including topography, overland flow paths, dams, native vegetation and other significant stands of vegetation will be retained.*

It is considered that the Preferred Project Report does not adequately address or provide adequate justification for deviation from the above principles.

The Preferred Project Report proposes removal of all areas of Lowland Rainforest EEC on the site (a total of 0.36ha). Offsets of 1.57ha are proposed via planting of Lowland Rainforest in the northwest corner of the site, to achieve an offset ratio of 1:4.4 offset for the loss of these Endangered Ecological Community patches. Council's comment on the Draft Preferred Project Report recognised that the NSW Office of Environment & Heritage is the appropriate authority to assess the adequacy of proposed offsets if EEC removal is to occur, with previous OEH comments stating that:

> *In the event that the removal of any EEC is permitted, DECC recommends that an appropriate offset (for example of 1:10 ratio) be required either within the site or in close proximity to the site.*

Whilst it is recognised that negotiations may have occurred between the proponent and the NSW Office of Environment & Heritage regarding the magnitude of offset ratios since previous comment was provided, it is noted that the above recommended offset ratios have not been achieved by the Preferred Project Report.

However, Council staff acknowledge that there is a conflict within the Tweed DCP Section B24 – Area E as the indicative yields in the DCP necessitate significant earthworks which necessitates removal of native vegetation which is contrary to the DCP.

If the Department of Planning & Infrastructure are of a mind to approve the application in its current layout it is strongly recommended that detailed consultations occur with NSW Office of Environment & Heritage.

Council staff are concerned that the subject site does not have enough land area to accommodate suitable offsets. However there are potential offset areas within the broader Area E site that could be investigated.

<u>Loss of Freshwater Wetland Endangered Ecological Community</u>

The Preferred Project Report's Response to Submissions states that all infrastructure has been removed from the wetland buffer, with the exception of a small section of the proposed Broadwater Parkway, which is considered acceptable and is consistent with previous comments provided by Council.

As requested in Council's comments on the draft Preferred Project Report, the direct loss of 0.11ha of Freshwater Wetland Endangered Ecological Community through bund construction at the northern boundary is now acknowledged in the Preferred Project Report. Provided that vegetation removal is restricted to the area identified as subject to bund installation, and suitable restoration of Freshwater Wetland EEC is achieved in the areas

identified within the Revised Vegetation Management & Rehabilitation Plan, this is considered acceptable.

Vegetation removal and associated works within the identified Freshwater Wetland Endangered Ecological Community are restricted to an area of 0.11ha being that area identified as Detention Bund at Fig 17 of the Revised Ecological Assessment (JWA April 2013). Appropriate conditions have been recommended.

Amended Landscape Masterplan

Section 4 of the Revised Vegetation Management & Rehabilitation Plan (JWA April 2013) states that:

> *All landscaping within the proposed development should utilise locally endemic species of proven local provenance and be completed in accordance with the Amended Landscape Master Plan (Form Landscape Architects 2013).*

As such, some inappropriate species remain on the Planting Palette in the Amended Landscape Masterplan (Form Landscape Architects March 2013). These are: *Acmena*/*Syzygium* cultivars, *Westringia* cultivars, Spotted Gum *Corymbia citriodora, Phyllanthus minutiflorus* and *Pultenaea spinosa*. These species should be removed from the planting palette and replaced with locally native species in order to correctly inform planting in accord with the provisions of the Revised Vegetation Management and Rehabilitation Plan.

The areas covered by the Landscape Masterplan (From Landscape Architects 2013) and the Vegetation Management and Rehabilitation Plan (VMRP) (JWA 2013) overlap somewhat, in that the VMRP indicates the revegetation intent for *Stormwater Treatment Areas*, *Passive Open Space* and the *Conservation Area*. The planting palette within the Landscape Masterplan provides species lists for use within various areas including *"Streetscape"*, *"Playground Park"*, *"Entry"*, *"Bioretention"*, "*Wetland", "Buffer", "Revegetation"* and *"Vegetated banks for batters greater than 1:4"*, however planting lists in the VMRP are provided only for *"Revegetation"* and *"Aquatic Revegetation".* A lack of detail and consistency in terminology for various areas subject to planting and inconsistent species lists may hinder implementation of these plans. It is suggested that these plans are revised for clarity and consistency between documents, and in particular, the *"Buffer"* column should be removed from the Landscape Masterplan's Planting Palette.

The following condition is recommended: Species selection for revegetation works within the Conservation Area is to be guided by the Revised Vegetation Management & Restoration Plan (JWA 2013) planting list rather than the Landscape Plan.

Transmission line and sewer main easements in 7(a) (SEPP 14 buffer) zone

A transmission line easement and sewer main occur within the buffer to the SEPP 14 wetland at the northern boundary of the Preferred Project Report site, and extends through the Freshwater Wetland Endangered Ecological Community. Previous Council comments identified that potential impacts on the EEC and wetland associated with the operation and maintenance of this easement and existing and future infrastructure had not been considered.

The Revised Ecological Assessment (EA) (JWA April 2013) states that the buffer to SEPP14 will be fully revegetated, with the exception of the existing transmission line easement at the northern boundary of the property. The existing sewer main is also within the transmission line easement. The Preferred Project Report however still does not discuss issues

associated with operation and maintenance of this easement in its current location, and its current and potential future infrastructure. Should the easement remain, vehicle access (at least significantly reduced vegetation cover) will need to be maintained to this area, effectively separating it from the adjacent SEPP 14 wetland, reducing the width of the buffer and the available area for revegetation, reducing the buffer's overall effectiveness. The extent of such disturbance has not been identified and mitigation measures to address impact have not been provided in the Preferred Project Report. The proponent has however provided the following discussion in regard to the easement in the PPR Response to Submissions:

> *In relation to the existing transmission line easement, Essential Energy has advised that it is not prepared to extinguish the easement (see **Annexure 27**) however, Essential Energy is prepared to consider relocating the easement to the Broadwater Parkway corridor.*
>
> *Within Altitude Aspire, Broadwater Parkway road reserve is proposed at 20m wide which would provide sufficient space to locate future underground power lines if required by Essential Energy. It should be noted that the transmission line easement is existing and Newland has no power to require extinguishment, relocation or otherwise.*

This approach is supported, and it is recommended that the proponent pursue options for the relocation of the transmission line easement out of the SEPP 14 buffer. Should this occur, the area currently under easement should be subject to appropriate rehabilitation works consistent with those proposed for the remainder of the buffer and included in a revised Vegetation Management and Rehabilitation Plan. Should the relocation not occur, the Preferred Project Report should recognise the maintenance of the easement as a risk to the success of rehabilitation works and propose mitigation measures accordingly.

The following conditions are recommended:

Prior to the issuing of a Construction Certificate, the proponent is to secure an agreement with Essential Energy for the relocation of the transmission line easement from the conservation area to the Broadwater Parkway corridor.

Upon securing of the above agreement, the Vegetation Management & Rehabilitation Plan is to be revised to incorporate the rehabilitation of the area currently subject to the easement.

<u>Biting Insect Management Plan (BIMP)</u>

The Amended Biting Insect Management Plan (HMC April 2012) reads as outdated and refers to old versions of other management plans. The Plan consists largely of general information pertaining to biting insect control and reference to other plans for actions that should be contained in this Plan.

For example, one of the management strategies proposed in the BIMP is the provision of breaks in vegetation to reduce biting insect corridor to dwelling sites. The Plan however does not provide information on appropriate distances or locations of these breaks, nor is it apparent that the development has incorporated this consideration into its design. In general, the control measures contained in the Plan are unclear, and are unable to be costed or measured. There are no provisions in the Plan relating to maintenance of stormwater treatment devices, no monitoring schedule and there are no performance criteria upon which to judge the efficacy of the Plan. It is considered that the Biting Insect Management Plan requires significant revision in order to adequately address and inform the management of biting insects at the PPR site.

Management and rehabilitation of the adjacent SEPP 14 wetland will also be an essential component of biting insect control for the development. The plan refers to the as yet incomplete Wetland Restoration Plan for this, however the completion and implementation of this plan is dependent on a Voluntary Planning Agreement that is yet to be finalised. The Wetland Restoration Plan does not currently address mosquito management and requires considerable review in order to satisfy this requirement.

The BIMP does not identify the considerable lag time that may occur between development of the site and the securing and management of the wetland such that mosquito problems are likely to impact significantly on new residents of the development. It also fails to identify the considerable additional cost to Council of the increased management requirements that will arise during this time and will be ongoing as a result of development, in order to manage biting insects to a reasonable level.

The following condition is recommended: Prior to issue of a construction certificate the Biting Insect Management Plan is to be revised in consultation with the Council Pest Management Unit and to the satisfaction of Council to (1) include clear and measurable actions and targets for management of biting insects within the PPR site and (2) identify and address the required management of the SEPP 14 wetland such that commitment to and funding for biting insect management is made until such time as lands are under the control of Council.

Potential impact on hydrology of SEPP 14 wetland and Freshwater Wetland Endangered Ecological Community

Council previously raised concern regarding the potential alteration of hydrology within the SEPP 14 wetland and its impacts on the communities within. Previous Council comments requested consideration of the impact of increased discharge to the EEC during high-flow periods as well as the potential for the Freshwater Wetland EEC on site to dry out too much during times of low flow due to the barrier effect of the Broadwater Parkway. It was also requested that the PPR provide consideration of the potential impacts of a change from the current diffuse overland discharge to the proposed point discharge of the stormwater treatment channel.

These considerations have been partially addressed in the PPR. The Revised Ecological Assessment states (based on the modelling of Gilbert & Sutherland (2013)) that

> *"The time taken for surface water levels to return to existing levels is approximately 9 hours for both the current and developed situation, although the water surface level would obviously be initially higher (i.e. during first 3 hours approx.) in the bunded condition."*

The Preferred Project Report considers that the increased depth is not likely to influence vegetation communities within the discharge area. While this may be acceptable, the issues of adequate inundation during drier periods and the potential ecological implications of point discharge and higher volume of water input during storm events have not been adequately explored. It is considered that further consideration of these issues is required prior to approval of the project.

Prior to issue of a Construction Certificate the applicant is to submit revised details of the likely impact on the Freshwater Wetland EEC and SEPP 14 Wetland as a result of (A) the proposed point discharge (as opposed to the current diffuse discharge) and higher volume of water input during storm events; and (B) drying during times of low flow due to the barrier effect of the Broadwater Parkway. This information is to be submitted to the Council for approval.

Vegetation Management Plan

The Revised Vegetation Management Plan would benefit from clarification or amendment in a number of areas in order to improve its implementation and monitoring:

The Vegetation Management & Rehabilitation Plan should state when the Plan is to commence. Commencement is expected upon project approval in order to maximise lead time for restoration and rehabilitation works.

The Plan appears to assume a 5-year implementation period. It is considered that vegetation management and rehabilitation should be maintained by the proponent until an agreement for dedication of the lands to Council has been reached.

The Plan should be revised to include performance standards and management actions relating to the two stages of rehabilitation, i.e. an initial establishment phase and the ongoing maintenance period.

Monitoring programs are provided for "Revegetation Areas" and "Natural Regeneration Areas." Whilst the plan states that the restoration contractor is to be responsible for planting of wetland areas, it is unclear who is to be responsible for the maintenance of these areas throughout the duration of the plan and whether monitoring is also to be carried out in the planted areas within the open space and stormwater detention areas.

Monitoring reports should be forwarded to Council on an annual basis.

Monitoring should include a parameter with which to record the survival of planted stock.

Planting out of bio-retention basins and surrounding open space areas should be undertaken immediately following disturbance.

The following conditions are recommended:

- The Vegetation Management & Rehabilitation Plan is to commence upon Project Approval and continue to be implemented by the proponent until the Performance Targets are met and until such time that an agreement has been reached with Council for the dedication of the lands to which the plan applies.
- Prior to issue of a Construction Certificate the Vegetation Management and Rehabilitation Plan is to be revised to incorporate the above comments.
- *Habitat restoration works are* required to be undertaken by a person qualified in Bushland Regeneration or Ecological Restoration and with knowledge and experience in local vegetation community (eg. wetlands, rainforest, sclerophyll forest) for areas of environmental rehabilitation works and for proposed planting areas.
- An appropriately qualified Environmental Officer must be engaged by the Proponent for the duration of works. Their role shall be to oversee environmental compliance of the project until conditions have been satisfied.

Open Space

The indicated population for Altitude Aspire is 692 people (PPR, section 3.4). This is based on a specified mix of standard and medium density lots and a change to this mix would result in altered population estimates. The open space requirements for this population is:

- 11,764m2 Structured Open Space - sportsfields ($17m^2$ x 692 persons)
- 7,820m2 Casual Open Space (11.3m2 x 692 persons)

In regards to Local Structured Open Space – Sportsfields it is considered appropriate that structured open space be provided off site (in other parts of the Area E site in accordance with Tweed DCP Section B24), and for the developer to make the appropriate financial contribution. Appropriate conditions of consent have been recommended.

In regards to Local Casual Open Space the following report details compliance with Council subdivision requirements in accordance with the Tweed DCP: (Section A5 Subdivision Manual) which specifically describes criteria for casual open space including acceptable size and slope for casual open space. The application (Preferred Project Report Section 3.4) analyses part of each parcel proposed for dedication, and identifies which lots meet the criteria.

Lot	Description	Area	Area claimed to comply	TSC comment on compliance
712	Neighbourhood playground park	4695m^2	2,356m^2	Size, designed slope and land form of entire area is acceptable given the design concept and site limitation
610	Drainage, wetland and bio-infiltration area with landscaping	Area 1.9ha	1,954m^2	None of the area complies with guidelines in terms of access and size. Consider turfed areas as part of negotiations. This parcel to be designated as drainage reserve.
451	Pocket Park 1	6,032m^2	2,786m^2	Over 50% of area exceeds Council slope requirements. The flat area meets minimum size requirements. Sloping areas and plantings inhibit visibility and accessibility. Consider accepting the complying parts as part of negotiations.
820	Pocket Park 2	2549m^2	610m^2	Over 75% of area exceeds Council slope requirements hence does not comply. Very small park with minimal buffers. Not suitable with current design
927	Widened roadside reserve	911m^2	Nil	A narrow strip that provides amenity benefits but no value as a park. This will be maintained as road reserve, not as a park.
1001	Land for environmental protection	4.29ham2	Nil	Dedicated for environmental protection
Total		7.61ha	7,706m^2	

The developer thus states that 7.61ha of land will be dedicated as public reserve (including casual open space, widened road reserve, environmental protection and the Lot 610 drainage area). This should be amended to exclude Lot 610, which Council recommends to be drainage reserve.

The developer also states that 7,706m^2 (or around 115m^2 short to the required 7,820m^2) of local casual open space complies with Council specifications, and requests a concession for the small remaining area after consideration of other public land dedicated.

The submitted calculation for casual open space is not consistent with the Subdivision Manual, which makes no allowance for casual open space to selectively comply with some of the development standards (Tables A5-8.2.1, A5-8.2.2 and A5-8.2.3).

For example, the applicant claims the small flat areas of separate parks can be cumulatively added to arrive at a complying area. This is not consistent with the intent of the Subdivision Manual.

There should however be some negotiation for this site. There are 2 relevant points:

- The guidelines were established to ensure that functional land is dedicated to Council for public open space, rather than land that is too steep, too small or otherwise unsuitable for development.
- Much of the area covered by this development is sloping land. Where possible, it is preferable to work within the constraints of the topography rather than engineering unnaturally flat or level parks. The best outcome for Council and the community is to interpret the Subdivision Manual guidelines in the light of its intent and the topography of the area.

In summary, after considering Councils assessment of complying casual open space, the following local casual open space calculations should apply:

- Lot 712: 4,695m^2 or 100% of the park
- Lot 451: 2,786m^2 or 46% of the park
- Complying area: 7,481m^2 which is around 340m^2 short of the required area.
- An additional concession to be granted for the open space benefits from turfed and embellished areas in Lot 610, and after considering the amount of public reserve dedicated along with the sloping nature of the overall development site.
- This concession allows the local casual open space requirements to have been met.
- Lot 610 to be dedicated as drainage reserve rather than public reserve.
- Negotiation to be undertaken on the size, location and reason for the Lot 820 park

In regards to other <u>general matters of open space</u> the following is provided:

<u>The Area E Urban Release Development Code</u> (Section 2.7) describes design principles for open space. Suggestions are made such as linking key destination and open space areas, and providing for alternate forms of recreation suitable to the slopes of the site (mountain bike trails, running trails and environmental interpretive walks are some suggestions). These however are difficult to provide for when only a small part of Area E is developed. While not all open space suggestions in the Development Code need be included in this

plan, it would be helpful to identify how the suggestions have been considered, and which can be addressed.

The developer should consider the open space recommendations of the Area E Urban Release Development Code in revising the open space proposals for this site. Advice should be provided on which recommendations have been addressed, which cannot be addressed, and how the Altitude Aspire development can integrate with the remainder of the Area E site to achieve the Development Code recommendations.

Amendments to the Landscape Masterplan will be required at the detailed design stage. These will be as described in this report, and could also include minor matters such as:

- Plant selection and location may vary where agreed depending on site requirements
- Council does not want fences constructed on the boundary of public and private land, unless there is a safety reason, or other reason agreed to by Council. Any fences not supported by Council would be the responsibility of the private landowner to maintain.
- Public art and stylised or other special treatments indicated in the concept plan must be considered at the detailed landscape stage.

These comments will be considered when preparing and reviewing the detailed landscape plans

There has been a recent direction within Council to seek further activation of local and regional parks where appropriate, with specific reference to a 'Youth Precinct'. This could be as simple as some infrastructure to cater for young people of an age that is no longer attracted to play equipment. An example is a modified half court basketball area with skate and seating elements, or similar.

These comments will be considered when preparing and reviewing the detailed landscape plans

In regards to Lot 712 – Neighbourhood Playground Park - the submitted earthworks layout for the park on Lot 712 (eg Earthworks Layout, Bradlees Consulting SK3527 revision D) don't reflect the formed slopes indicated in the Landscape Plan. As the slopes will only be modified in a minor way, this is not a matter of great concern but should be noted for engineering reference. There may be an opportunity to provide a youth precinct as described above in this park

The landscape plans for Lot 712 should consider incorporating a 'youth precinct' or similar into the design. Such an area could be similar to a 'modified half court basketball area with skate and seating elements'.

In regards to Lot 451: Pocket Park 1 - this park has just over 50% of its slopes exceeding Council's criteria, and much of the sloping area inhibits visibility and access to the flatter areas. There is an opportunity to integrate this park with the existing community land and dams adjoining the park. It is not suitable for a 'youth precinct' due to lack of visibility.

There may be an opportunity to consider some alternative use of this park and adjoining areas, as envisioned in the Area E Urban Release Development Code: Section 2.7 Design Principle 5: Open Space.

Council would like the applicant to consider options for linking this park through design with the adjoining public land, and to address the vision and objectives of the Area E Urban Release Development Code: Section 2.7 Design Principle 5: Open Space.

In regards to Lot 820: Pocket Park 2 – this is a very small park of 2,549m^2 which has been added to the previous concept plan. It just meets the minimum requirement of 2,500m^2. The small size is accentuated by a portion being a narrow access area between houses, while over 75% of the park's slopes exceed Council's maximum slope requirements.

The park appears to offer little recreation value. Play equipment cannot be installed, it will be difficult to install park shelters with a reasonable buffer to residential boundaries, and there is no opportunity to activate the park by providing a 'youth precinct' or similar. The applicant has not indicated the view benefits.

The park does address the 'Area E Urban Release Development Code 2011', which indicates a park at this location. However it also indicates a larger park with "landscaped entry statement including landscape areas, BBQ area, viewing area and community garden" (figure 2.10 Open Space). While the specific elements need not be exactly as described, figure 2.10 does suggest a more substantial park than that submitted in this proposal.

The earthworks layouts show a consistent slope across the whole park. The landscape plan shows a possible flat pad in part of the park but there is no section provided to show how this will be achieved.

This park needs to be revised to improve its functionality (particularly in terms of size, buffer areas, slope and potential view opportunities).

In regards to Lot 610 Drainage Area this area is a drainage area with wetlands, biofiltration plantings, plantings, turf and park furniture. The adjoining Lot 611 is the same. Lot 610 is described as a Public Reserve while Lot 611 is a Drainage Reserve. As the primary function of both parcels is drainage, both should be dedicated as drainage reserves.

Council has previously advised that some walking paths are acceptable through the drainage reserve, and there are benefits to dual use of this land. The proposed embellishment includes paths, a boardwalk, 2 shelter sheds including a 'public picnic node and viewing area', turfed areas and extensive planting. The size of the timber bridge/boardwalk is not shown, and it's not clear what the viewing area offers. It is essential that the design and construction of the embellishments minimise maintenance costs – for example the embellishments to be constructed out of recycled plastic wherever possible, and any timber that is unavoidable is to be painted rather than stained.

The turf area and shelter shed is quite remote from the street and will raise some safety and social issues. Advice is sort from the landscape designers about how this can be minimised.

Council must be aware that this area will require extensive maintenance for both the extensive planted areas and the 'park' embellishments. Maintenance will need negotiation between Councils Works Unit and Recreational Services Unit. This area is not considered casual open space, and maintenance of such areas should not be Council's Works Unit responsibility.

Council will be considering these comments when preparing and reviewing the detailed landscape plans. In addition Lot 610 will need to be dedicated to Council as a Drainage Reserve, not Public Reserve and Council's Works Unit and Recreational Services Unit to

negotiate maintenance arrangements for the Lot 610 and 611 plantings and park embellishment areas.

In regards to Lot 927 – this is a very narrow (5m wide) strip along part of the Broadwater Parkway. There is some amenity benefit but no recreation value in this area. It is simply a widened road reserve and will be managed as with other road reserves in the shire. Negotiation will need to occur within Council as to how this area is to be maintained. Further negotiation will be required with the developers regarding plantings and embellishment of this strip of land. These comments will be considered when preparing and reviewing the detailed landscape plans. In addition Council's Works Unit and Recreational Services Unit are to negotiate maintenance arrangements for the Lot 610 and 611 plantings and park embellishment areas.

In regards to the general streetscape - the landscape plan for the roundabout at the intersection of Broadwater Parkway and Road 2 will require clarification and revision at the detailed landscape stage. A concrete safety buffer is needed.

There is an 'entry signage blade' at the same intersection. The detailed landscape stage must show this is not on the road reserve.

The plantings indicated along Fraser Dive will need further consideration in terms of maintenance requirements at the detailed landscape stage.

These comments will be considered when preparing and reviewing the detailed landscape plans.

Should the Department of Planning & Infrastructure wish to approve this subdivision appropriate conditions of consent have been recommended to cover these open space issues.

Fraser Drive Road Traffic Noise

An Acoustic Report, Altitude Aspire Residential Subdivision Fraser Drive Terranora, Road Traffic Noise Impact Assessment, TTM Consulting (8 April 2013, 11GCA0048 RO1 7) has been submitted for consideration.

Previous submissions made for the subdivision included a similar assessment which suggested the placement of an acoustic fence along the frontage to Fraser Drive to ameliorate the potential impacts from road noise on the proposed allotments. This fence was the subject of major objections on a number of grounds, resulting in the submission of the above revised Report.

The report adopts the following noise criteria for the future dwellings:

Table 1 'Road traffic noise criteria for proposed road or residential land use developments' of Environmental Criteria for Road Traffic Noise, NSW EPA 1999 states new residential developments affected by traffic noise from collector roads be assessed to the following levels:

- 60 dB(A) Leq (1 hour) (7am – 10pm); and
- 55 dB(A) Leq (1 hour) (10pm – 7am).

And

The SEPP (Infrastructure) 2007 specifies internal noise levels for dwellings as follows:

1. Bedrooms - 35 dB(A) during the night period (10pm – 7am);

2. Other Habitable rooms - 40 dB(A) for other habitable rooms at all times.

Site monitoring was undertaken for 5 days and subsequent modelling indicates that some 31 proposed allotments will receive noise exceeding the identified criteria (in the first floor, and in some cases in both the ground and first floor). The Report states:

> *To minimise adverse impacts on the landscape and scenic quality of the locality, it is not proposed to erect an acoustic fence on the Fraser Drive frontage of the site. Future road traffic noise levels are predicted to be above the criteria in some instances, for lots fronting Fraser Drive. Given that full noise compliance cannot be achieved using practical barrier heights, it is recommended that the required noise attenuation is achieved through individual building design and treatment. Recommendations have been specified to undertake individual assessment of noise affected lots once building plans are available to ensure dwellings are designed in accordance with the internal noise levels outlined in the Infrastructure SEPP.*

The report recommends the placement of an 88B notation on the title of the affected lots and accordingly an appropriate condition has been drafted and included in the recommendation to this report.

Acid Sulfate Soil and Dewatering

It is noted that the site is immediately above sensitive SEPP 14 wetlands and the Terranora Broadwater. The lower northern parts of the site are identified as Class 2 ASS areas with the remainder of the site being class 5.

An Acid Sulfate Soil Assessment and Management Plan Altitude Aspire, Terranora, Gilbert & Sutherland, April 2012 (10849-ASSA&MP) has been submitted for consideration. The following points are noted from the MP.

The site contains actual acid sulfate soil (at shallow depths around BHs 1 – 3) and potential acid sulfate soil (at depth in the lower parts of the site around BHs 4 - 7). Sampling and testing appears to have been carried out in accordance with the NSW ASSMAC Acid Sulfate Soil Manual. Liming rates for the shallow actual ASS is in the order of 7.1kg/tonne and importantly, 104.5kg/tonne for potential ASS at depth. Alternatively the Management Plan proposed 'batch' testing at 1 sample per 500 cubic metres of disturbed material to determine an actual batch liming rate during works.

The investigation also included assessment of near-surface groundwater (0.03 – 0.44m depth) in the lower sections of the site. This groundwater is likely to be intercepted during bulk earthworks and directed to the on-site stormwater treatment basins within the future central park lands (along with any stormwater or surface runoff from ASS treatment areas). A comprehensive analysis of background groundwater quality is proposed under Table 5.4 of the Management Plan prior to commencement of site works.

Soils will be treated in bunded treatment pads and tested to validate lime treatment rates are effective. Any groundwater will be monitored and treated as per the adopted management plan (refer Tables 5.8 and 5.9 of the MP).

It is noted that the 'groundwater contingency plan' nominated under Table 5.9 of the Management Plan in the case of failure has not been provided. It is noted under Table 5.6 that excavated soils are to be limes at 104.5 or 7.1 kg/tonne in accordance with Drawing 1.4. It is considered unlikely that an earthworks contractor will be able to delineate between the respective ASS zones and a condition will be applied requiring the respective works to be overseen by an appropriately qualified environmental consultant.

The overall assessment is considered satisfactory with proposed measures for identification, neutralisation and validation of ASS and waters considered appropriate. This is particularly true given the opportunity to treat runoff in on-site treatment ponds prior to discharge form site.

Appropriate conditions of consent have been recommended to manage acid sulfate soils, soil contamination, and water quality.

Amenity During Construction

Project Component No 1, 2, 4, 5, 6 & 10 under Annexure 30 Revised Statements of Commitments is noted. These relate to sediment, dust, site management and the like. In relation to amenity impacts and adjacent land uses component 10 proposes that construction activities be limited to 7am to 6pm Monday to Saturday. This is consistent with Council's standard conditions.

The construction management and project phasing details nominated under the Annexure 11 Civil Engineering Report Parts 1- 7 are also noted.

Standard conditions have been recommended within this report.

Contaminated Land

The land parcels have been subject to historical agricultural practices, including application of chemicals and heavy metals. Historical chemical usage suggests potential site contaminants to include organochlorins, organophosphates, arsenic, cadmium, lead, mercury and zinc.

The report, Soil Contamination Assessment for Area E Properties Terranora, Gilbert and Sutherland October 2003 (GJ0128.RB1.2) is the main historical contaminated land investigation report for the site. That report concludes 'In relation to soil contamination issues, the subject properties are therefore suitable for residential use'.

During site sampling to date (1323 total, 328 composite) some exceedances for composite sampling were detected, however subsequent re-analysis results for individual samples complied with adopted health investigation levels.

In 2004 a review by Parsons Brinckerhoff Australia Pty Ltd and the accredited contaminated land site auditor Marc Salmon indicated - that no information has been revealed during the review of documents or site inspection which would preclude the rezoning of the site to a residential with accessible soil land use, provided measures are put in place to ensure that the potential for contamination and the suitability of the land for any proposed use are assessed once detailed proposals are made.

An 'enabling clause', being Clause 53D exists under the Tweed LEP 2000 whereby the land was rezoned. Clause 53D contains certain requirements which are to be satisfied prior to Council consenting to development on the subject land, including requirements relating to contaminated land.

Under the current Major Projects Application, Darryl Anderson Consulting suggests that 'a site auditor statement is not required'.

Council has maintained since as early as 2003 that given the site history and the intended high yield residential use proposed for the site, a NSW Accredited Site Auditor must be engaged to oversee the contamination investigation and any necessary remediation of Area E and to provide Council with a formal contaminated land Site Audit Statement certifying that the land is suitable for the proposed use. Such an approach is consistent with the

provisions of the Contaminated Land Management Act 1997 and SEPP 55. It is also considered the prudent approach given the very high number of residential allotments proposed to be created under the 'Area E' development.

Accordingly the Major Project is not supported without a Site Audit Statement having being provided to Council for the site.

However this application is to be determined by the Department of Planning. Should the Department wish to determine the application subject to conditions, the following conditions are applicable:

i. A site audit statement (SAS) completed by a NSW EPA / (DECC) accredited site auditor in accordance with the Contaminated Land Management Act 1997, is to be submitted prior to the release of the construction certificate. The SAS is to certify that the land is suitable for the proposed land use. Conditions imposed on the SAS shall form part of this consent. Where the SAS conditions, if applicable, are not consistent with this consent, a Section 96 application pursuant to the Environmental Planning & Assessment Act 1979 will be required to ensure the conditions form part of the consent conditions.

ii. Should any further site investigation or remediation works be required prior to the issue of the site auditor statement validating the site then all such works shall be completed prior to the issue of the construction certificate to the satisfaction of the Site Auditor. Where remediation works are undertaken a detailed report outlining these works shall be provided to Council prior to issue of the construction certificate.

Disposal of Soil Off Site

Option 4 under Table 2.4 Post Landforming, of the Soil Preservation Management Plan Altitude Aspire Terranora NSW Gilbert & Sutherland April 2013 (10849-SPMP-RMF1F.DOC) proposes that:

4. Preserved krasnozems in excess of the requirements for Option 3 would be made available to landscaping suppliers to ensure to the soils are actively used in the future.

This option basically means that excess high value agricultural soils may be exported off site where they are not required for construction of the subdivision.

In accordance with the Tweed DCP Section B24 – Area E these soils should ideally be used on the site for community gardens, deep soil zones etc.

If soil must removed from the site this is only appropriate where the soils have been reasonably demonstrated to be suitable for use at the receiving site.

Suitable conditions of consent have been recommended as part of this report.

Landscape Character and Views

The subject application predominately addresses this design principle by way of Annexure 5 (Landscaping Masterplan) and 12 (Response to Visual Issues). Generally, the contents of these reports are endorsed, particularly the landscape masterplan, which appears to result in a high quality public domain that maintains the landscape integrity of the site through a contemporary form.

It is anticipated that further detailed design work will be submitted throughout the later stages of any development, within which the following matters should be considered:

- the proposed density of street tree plantings is supported and encouraged,
- explore opportunities to utilise stone found onsite where possible,
- further explore the layering of materials, colours, textures and scale of plantings along the Fraser Drive frontage,
- co-ordinate bus shelters with the thematic approach embodied within the landscape masterplan,
- improve pedestrian connections through and across lots 610 and 611,

The following objectives and development controls warrant further discussion at this stage:

> *'The identification and retention of green breaks, important feature trees/strands of trees and important view fields'*
>
> *'Provide visualisations of subdivision pattern and indicative built form by way of 3D photo montage….'*
>
> *'Identification and retention of significant vegetation (including non-native species) that contribute significantly to the landscape character of the locality.'*
>
> *'Significant landscape features including overland flow paths, dams, native vegetation and other significant strands of vegetation are to be identified and retained in any development application.'*

The submitted documentation is not considered to comprehensively address the abovementioned objectives and development controls. In this regard, the proposal does not provide a 3D photo montage or any visualisation beyond a coloured render of the Fraser Drive landscaping treatment. The proposal details *'Substantially complies – significant vegetation has been retained where possible in Lots 1001, 439 and 610'* in response to controls requiring the identification and retention of significant vegetation and landscape features. This level of detail and documentation makes a holistic assessment of the items difficult.

Subdivision Layout – Roads, Traffic & Open Space

The Tweed DCP Section B24 Design Principal 4 includes the following.

> *'Ensure that a road forms the edge to the natural and environmental protection areas providing a public interface to the buffers and areas of environmental protection and avoid the rear of properties to directly back onto buffer areas and areas of environmental protection.'*

In this regard, Council has required throughout the assessment of this application that Lot 701 should be removed from inside the drainage/open space area, enabling the road to form the edge of this public space. This longstanding view is maintained.

This view is reinforced by Design Principal 5 – Open Space which requires “open spaces areas to be surrounded by a public interface (predominantly roadways)”.

Lot 701 should be removed from inside the drainage/open space area, enabling the road to form the edge of this public space.

In regards to bus shelters the DCP states:

> *'Suitable locations and attractive bus shelter designs should be determined to further encourage this sustainable mode of transport.'*

In response to this control the application details *'Complies – bus stop locations are shown on Figure 6.2 of Annexure 15. Final locations and designs will be determined as part of the Construction Certificate for each stage.'* In this regard, the proposed timing is considered reasonable, however the design of bus shelters should be:

- Subject to Council approval and sign-off,
- Integrate with landscape intent and themes portrayed within the landscape masterplan,
- Support this method of transport through the co-location/provision of water bubblers, bathroom facilities, bike parking facilities, ability to provide free wifi etc.

Dwelling & Allotment Mix

The proposed subdivision pattern does not provide many opportunities for multi-dwelling housing outside of the allocated 'medium density' lots (i.e. Lots are generally less then 750m^2). In this regard, concern is not raised in relation to the proposed medium density sites; however the Code encourages the peppering of density/housing types throughout. Accordingly it would be advantageous to facilitate additional opportunities for multi-dwelling housing by making minor amendments to lot sizes throughout various stages. Greater variety and placement of this housing type is likely to result in an improved outcome by enhancing the integration of housing types into an overall urban fabric and offering a varied streetscape.

Draft Conditions of Consent Should the Department wish to approve the application

Please find attached Draft Conditions of Consent to assist you in your determination.

Conclusion

Council is prepared to work with the applicant and the Department of Planning & Infrastructure to resolve the matters raised in this report.

For further information regarding this matter please contact Council's Denise Galle on (02) 6670 2459.

Yours faithfully

Vincent Connell

Vince Connell
DIRECTOR PLANNING AND REGULATION

Enc – Separate Conditions Document