



Issues

Flora

State Environmental Planning Policy No.14- Wetlands

Wetland No16 lies in the northern portion of the site and is identified in our proposed lot layout plan. The wetland contains a variety of ecosystems and has the potential to provide habitat to rare and threatened species. The wetland is associated with the Terranora Broadwater and is connected to this ecological system via a drainage channel under James Drive. However, the wetland does not provide any corridor values to nearby vegetated areas. The wetland also provides habitat for biting midges and mosquitos.

The proposed concept seeks to retain the wetland in its natural estate and seeks the provision of a 50m buffer in which water quality treatment and public recreational facilities may be co-located. The buffer provides the opportunity to incorporate water quality treatment measures to enhance stormwater runoff entering the system. The improved stormwater runoff potentially reduces the habitat value for biting midges and mosquitos and improves conservation values of the wetland.

The provision of public recreation facilities such as boardwalks and footpaths within the buffer provides an opportunity for future residents to connect with the values of the wetland. Recreational facilities will need to be designed to ensure that conservation values are retained and protected.

Significant pockets of vegetation exist within the SEPP 14 area and on the southern boundary of the site within the area bounded by the Champagne Road reserve. The vegetation provides an opportunity to protect and conserve environmental values of the site.

Threatened Species and Significant Species

One specimen of the Rough-shelled Queensland Nut (*Macadamia tetraphylla*) has been identified along the western boundary of the site. This species is listed as vulnerable under the New South Wales *Threatened Species Conservation Act 1995*.

Two specimens of Stinking cryptocaryas (*Cryptocarya foetida*) were recorded within the small patch of Broad-leaved paperbark to the immediate west of the site. This species is listed as vulnerable under the New South Wales *Threatened Species Conservation Act 1995*.



LEGEND

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|--------------------------------|-----------------------------------|--|--|
| POTENTIAL ACCESS POINT | POTENTIAL SLIP AREA | YEAR 2010 AUSTRALIAN NOISE EXPOSURE FORECAST | YEAR 2020 AUSTRALIAN NOISE EXPOSURE FORECAST |
| HIGH POINT | EXISTING ROAD RESERVE | SCHOOL SITE UNDER CONSTRUCTION | VIEWS |
| SEPP 14 WETLAND | EXISTING DRAIN | SITE BOUNDARY | POTENTIAL PEDESTRIAN LINK |
| 50M BUFFER | POTENTIAL NOISE FROM FRASER DRIVE | | |
| EXISTING TREES TO BE PRESERVED | | | |

Site Constraints & Opportunities



Fauna

Four species listed under the New South Wales *Threatened Species Conservation Act 1995* have been identified or recorded on the site. They include:

- Osprey (*Pandion haliaetus*);
- Collared Kingfisher (*Todiramphus chloris*)
- Grey Headed Flying Fox (*Pteropus policephalus*)
- Eastern Long-eared Bat (*Nyctophilus bifax*)
- Little bent-wing bat (*Miniopterus australis*)
- Southern myotis (*Myotis adversus*)

The assessment undertaken by James Warren and Associates in 2002 concludes that the site predominately provides values associated with foraging rather than nesting or roosting. Notwithstanding, the areas of conservation values such as the wetland area and associated fringe vegetation as well as the southern tract of vegetation along the southern boundary are being retained and conserved as open space.

Bushfire Management

The site is identified on Tweed Council's Bushfire Hazard Maps. A bushfire hazard assessment is being undertaken to determine the extent and width of asset protection zones. None the less 50 metre buffer widths have been incorporated around the SEPP 14 Wetland and perimeter roads have been included.

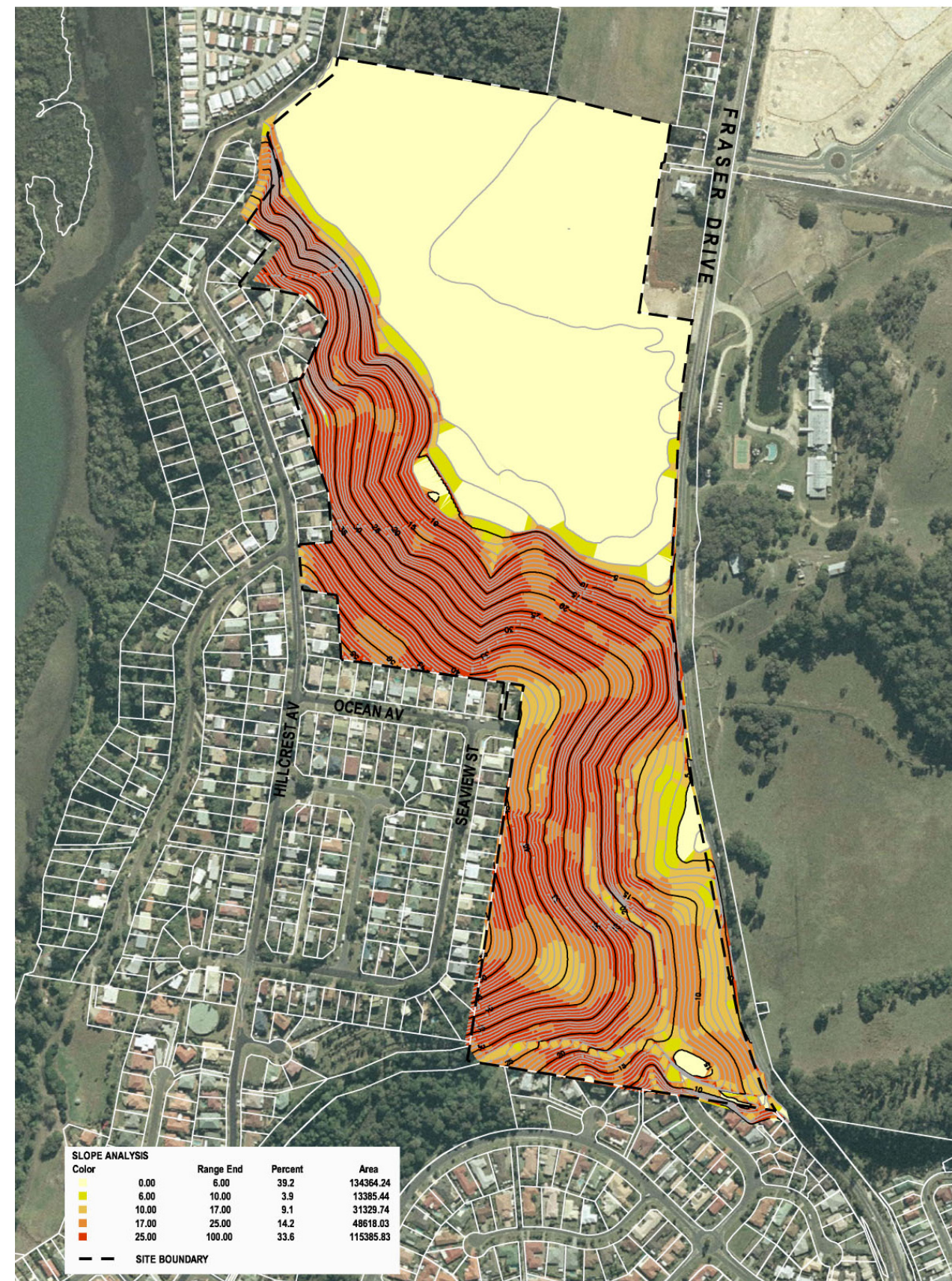
Geotechnical

Development Control Plan No 3 – Banora Point West and South Tweed identifies land on the north western boundary of the site has being at risk to land slip. The Plan states that Council cannot approve any development on the identified area unless it is supported by geotechnical information. The proposed subdivision plan seeks to minimise the amount of cut and fill proposed in this area, by seeking to provide for a more sympathetic and modern building form (i.e multilevel homes). Further geotechnical investigations will demonstrate that developable lots can be provided for in this area. A small area of slope instability is also identified on the southern boundary. No development is proposed in this area.

A review of the current geotechnical information is being undertaken to determine the requirements future residential development will need to address. Notwithstanding, further consultation with Tweed Shire Council will provide guidance to address this issue.

Air/Noise

Fraser Drive has the potential to create a noise nuisance to future residents as a consequence of traffic, including buses. The proposed concept will seek to provide a landscaped noise attenuation mound along the eastern site boundary.



Slope Analysis



Water Quality

Currently the site contains rudimentary stormwater management measures as a consequence filling. Measures include sediment bunds, detention basins and table drains. However current measures are only temporary. The proposed concept has the potential to significantly improve water quality entering the SEPP 14 wetland. At this stage, detailed stormwater engineering investigations are being undertaken to determine treatment methodologies that will support water sensitive urban design and enhance water quality. Proposed treatment areas will also contribute to open space requirements.

Flooding

The lower portion of the site is subject to flooding, however, the extent to which the site is flood prone needs to be reassessed in light of the previous consent granted by Council to fill the lower portions. Detailed survey work is being undertaken to determine current site levels for the portion. Notwithstanding Development Control Plan No5 – Development on Flood Liable land indicates that any developable floor area will need to be above 3.15 metres AHD.

Coastal Management

The site lies within the coastal zone but is not affected by coastal processes, nor has frontage to any coastal water bodies. There is no direct foreshore access from this site. The nearest public foreshore access lies to the north at Terranora Creek, approximately 800 metres at Dry Dock Road Bridge.

High points of the site provide vistas of the ocean, however, the site does not contain any visually prominent features and is not visible from the beach. There are no coastal management issues.

Infrastructure – Sewerage, Electricity, Telephone, Gas

Council have previously provided advice that indicates the water and gravity sewer mains are available for future residential development. Further power and telephone services are also available.

Traffic and Access

Fraser Drive provides the main access point to the site. Consultation with Tweed Council's traffic engineers have indicated that site can be accessed via single T-intersection. Minor access points exist along the western boundary at Ocean Street and Hillcrest Ave. Further it is proposed to provide access through Merlot Street at the southern boundary.

Heritage

Adrian Piper prepared an archaeological assessment in 2000. The assessment analysed the site for potential value as a culturally significant site and archaeological significant site for indigenous peoples. Further an analysis was undertaken to determine if the site retained any European heritage values.

The analysis indicated that no evidence or record exists that indicates the site contains any significant heritage values.

Urban Design

The proposed concept plan seeks to subdivide the site for a range of dwellings and low to medium density housing types. In order to limit the anticipated levels of cut and filling the proposed lot layout seeks to encourage a modern architectural vernacular that is sensitive to landscape and encourages a built form that capitalises on coastal values and features.

Public Access/Right of Way

Vistas and Views

The site has excellent views to Tweed and Fingal. Unfortunately due to slope constraints areas with significant views are unable to be retained in functional open space or pocket parks. The proposed concept plan however has sought to ensure that areas with significant views are retained in road reserves and form part of pedestrian networks.

Contamination

The report, 'Preliminary Soil Contamination Report', December 2002, prepared by Martin Findlater and Associates concludes that despite the site's previous use for banana farming in the early 1970's there is no residual contamination and the site is suitable for residential development.



Key Issues

Significant issues associated with the future development of this site are identified as:

- Geotechnical issues;
- Access;
- Protection of conservation values;
- Conservation and maintenance of Wetland No.16; and
- Urban design outcomes.

From our analysis of the information prepared to support previous development applications across this site, a subdivision pattern has been developed to address each of these key issues. The merits of the proposal seeks to ensure that future residential across this site can be undertaken in a manner that results in high quality development outcomes while conserving the identified environmental and conservation values.

The proposed development is consistent with Tweed Council's planning instruments. By maintaining consistency with Council's Subdivision Manual and requirements for development on steep land and following the principles of the Coastal Design Guidelines for NSW we are able to proposed a subdivision design that is consistent in delivering high quality residential outcomes as well as addressing local and state government policy.

Major Project Justification

Clause 6 of State Environmental Planning Policy (Major Projects) 2005 states that a project is a Part 3A Major Project if, in the Minister's opinion, it is development that is:

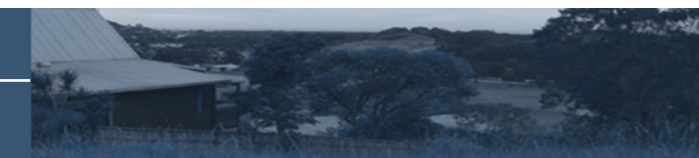
- (a) that is described in Schedule 1 or 2, or
- (b) that is described in Schedule 3 as a project to which Part 3A of the Act applies, or
- (c) to the extent that it is not otherwise described in Schedules 1–3, that is described in Schedule 5.

Schedule 2 (1)(i) lists subdivision in a residential zone, within the coastal zone, of 25 lots or more is a Major Project.

The proposed development is seeking approval to subdivide land into approximately 159 lots on land that is within the Coastal Zone. The proposal satisfies the provisions of being a Major Project.

Concurrence and Prohibitions

The proposal does not seek the concurrence of any statutory authority. Notwithstanding, our analysis indicates that an objection under State Environmental Planning Policy No.1 is not required.



Design Philosophy

The Fraser Drive site cannot be considered in the same context as other infill development sites. The site condenses a range of natural habitats and development constraints not experienced by other nearby developments. The combination of steep slopes and wetlands requires a imaginative and focused philosophy to underpin the approach to development.

The Planning framework identifies two significant documents that are to inform the design philosophy. Development Control Plan No 3 –Banora Point West and South Tweed and the Coastal Design Guidelines of NSW.

Development Control Plan No 3 – Banora Point West and South Tweed states that the design of the area has taken into account the following five (5) broad considerations:

- The need to retain the current identities of both Banora Point West (living area) and Tweed Heads South (township/holiday area);
- The need to integrate the development whilst providing neighbourhoods of residential development and buffering possible incompatible land uses;
- The need to ensure that development is in harmony with the natural environment;
- The need to take into account constraints inhibiting development; and
- To ensure that urban subdivision design has regard to slope, drainage patterns, geological hazards, landscape features; road hierarchy; open space networks and the provision of public facilities and services.

Further the Coastal Design Guidelines propose five key principles:

- Defining the footprint and boundary of the settlement;
- Connecting open spaces;
- Protecting the natural edges;

- Reinforcing the street plan;
- Appropriate buildings in a coastal context.

In analysing these principles, common elements can be recognised. Essentially three broad principles can be distilled from our analysis. That is it is important that development:

- seek to retain existing character;
- protects and conserves natural features; and
- be sensitive to site constraints.

Our proposed concept seeks to adopt a more sensitive approach to the development of the site. The site is divided into two distinct areas, the flat portions to the north and north east and the steeper slopes to the west and south. In this regard we recognise that unique approach to development must be realised. A uniform approach to development across the site cannot be contemplated.

In this regard we have attempted to provide a future building pattern that reflects the residential character of the surrounding land uses, but provides the framework to establish distinct character for future users. Development is set away from areas of conservation value. On-site vegetation is retained, natural drainage patterns have been retained, water sensitive urban design principles have been implemented in the early stage by providing for greater road reserve widths to accommodate grass swales and variety of built forms have been accommodated for.

Three concept plans have been developed to address the above points. Each plan varies slightly in levels of connectivity proposed and subdivision layout on the northern portion of the site.

Features of the proposed concept plans include retention of vegetation along ridgelines, providing greater opportunities for future residents to access open space areas, minimising cut and fill operations, and maximising views and vista.

Three preferred subdivision lot layout is number 3. At this stage a proposed subdivision layout for the medium density housing lot is yet to be finalised. The final subdivision layout for this part of the site will be informed by the issues detailed in the Director General Environmental Assessment Requirements.

CONCEPT PLAN - OPTION 1





CONCEPT PLAN - OPTION 2



PREFERRED CONCEPT PLAN





Conclusion

The proposed residential subdivision of Fraser Drive, South Tweed is permissible and can be undertaken in a manner that achieves the aims and objectives of all the relevant planning instruments and policies that apply to the future development of this site. The proposed subdivision is consistent with the current land use zone and the future regional strategies that promote urban residential development in the Far North Coast region.

The site is adequately serviced by water and sewerage infrastructure and can be supplied by telecommunication and electrical services. Future residential development can utilise existing transport infrastructure.

None the less, the site possess a range of unique environmental and conservation values, despite a history of agricultural uses and filling approvals issued by Council. These values include:

- The occurrence of threatened and significant species;
- The presence of wetland No.16; and
- Geotechnical issues and slip hazard.

Further future residential development of this site will need to address issues such as:

- Access; and
- Urban Design.

Where possible the most up to date relevant information regarding the above issues have informed the development the concept plans. Notwithstanding further guidance from the Department of Planning is required to determine the relevant matters that require further investigation. By detailing our comprehensive knowledge of this site it is hoped that any further information requirements are minimised and can be addressed in a concise and effective manner.



► Indicative Development Outcome



Appendix A - Reference List

The following information and reports has been used to develop the proposed concept subdivision.

Jim Glazebrook & Associates, 2002, 'Socio-Economic Impact Statement - Proposed Residential Subdivision at Fraser Drive, Tweed Heads South, "Homesteads"'.

Martin Findlater and Associates, 2002, 'Greenview Development Pty Ltd, Engineering Report Homesteads West Proposed Residential Subdivision Lot 2 DP 1000385 & Lot 9 DP 1039569 Fraser Drive Tweed Head South NSW Shire of Tweed'.

WBM Oceanics Australia, 2000, Correspondence RE: Flood Impact of Filling Sullivans Land.

Gilbert & Sutherland, 2002, 'Acid Sulfate Management Plan, Fraser Drive, Tweed Heads South.'

James Warren and Associates, 2002, 'Flora and Fauna Assessment for land at Fraser Drive South Tweed Heads NSW.'

Martin Findlater and Associates, 2002, 'Homesteads, Greenview Pty Ltd, Preliminary Soil Contamination Report, Homestead West Proposed Residential Subdivision Lot 2 DP 1000385 and Lot 9 DP 1039569 Fraser Drive Tweed Heads South.'

Coffey Geosciences Pty Ltd, 2002, 'Martin Findlater and Associates, Greenview Developments Subdivision, Tweed Heads South, B17439/1-B.'

Coffey Geosciences Pty Ltd, 2002, 'Martin Findlater and Associates, Greenview Developments Subdivision, Geotechnical Engineering Assessment, Tweed Heads South, B17439/1-F Revision 1.'

Coffey Geosciences Pty Ltd, 2002, 'Martin Findlater and Associates, Geotechnical Investigations, Low Lying Area Fraser Drive Tweed Heads South, B17439/1-I'.

Adrian Piper, 2000, 'An Archaeological Assessment at Fraser Drive Tweed Heads South.'

Locon N Wall and Associates, 2002, Groundwater Impact Assessment for proposed pollution control pond at Lot 2 DP 1000385 and Lot 9 DP 1039569 Fraser Drive, Tweed Heads South.';