



STAFF REPORT

TO: Environment & Planning Subcommittee

FROM: Leif Pigott – Consent Planner Natural Resources

REFERENCES: RM080481– Land Use Earthworks

SUBJECT: **M and B WRATT – REPORT EP09/01/03** Report prepared for hearing of 19 January 2009

This short report discusses the resource consent application made to authorise land disturbance associated with the development proposed by M and B Wratt at Stephens Bay. The site is in the Coastal Environment Area, Land Disturbance Area 2 and it is zoned Residential.

Two of resource consent applications relating to the replacement of a dwelling have been lodged. Both are land use consents, the first is a district landuse consent that deals with site coverage, setbacks from boundaries and daylight angles of the dwelling. The second consent seeks to authorise the associated earthworks.

1. DESCRIPTION OF THE PROPOSED ACTIVITY

The applicants propose to remove their existing dwelling and some vegetation and replace it with a new dwelling that is entirely on their own land. The site is in shared ownership and currently $\frac{2}{3}$ of the dwelling sits outside of the property boundary.

The applicant has submitted a new design on the 3 October 2008 in response to submissions. This design reduces the excavation required and the size of the uphill retaining wall.

The site is north facing and is formed of separation point granites. Geotechnical testing has shown that the soils are loose to very loose with no “good ground” found on the site. The updated design for the building propose cuts of up to 3.2 metres and will require the removal of about 170 cubic metres of earth from site (down from 200+ cubic metres in the initial design). A geotechnical report prepared by Terra Firma Engineering states that it is feasible to build on site but the work will require the input and management from a Chartered Professional Engineer practicing in geotechnical engineering and familiar with the local geology.

2. PROPOSED TASMAN RESOURCE MANAGEMENT PLAN (PTRMP) ZONING, AREAS AND RULES AFFECTED

The land is zoned Residential and within the Land Disturbance Area 2 and the Coastal Environment Area as it is less than 200 metres from coast. The relevant permitted activity rule is 18.5.3.1 but the proposed activity does not meet the permitted activity rule 18.5.3.1(c) as the cuts are greater than 0.5 metres. The controlled activity rule is also breached 18.5.3.2 as the proposed cuts are greater than 2.0 metres. The activity therefore becomes restricted discretionary activity with the relevant rule being 18.5.3.3. This rule restricts discretion to the following items:

1. Extent, timing and duration of bare ground.
2. Location, timing of construction, design and density of earthworks, including roads, tracks or landings.
3. Re-establishment of vegetation cover.
4. Disposal and stabilisation of waste material or fill.
5. Loss of or damage to soil.
6. Damage to riparian vegetation or soil.
7. Damage to animal or plant communities in water bodies or coastal water.
8. Effects of the activity on river or stream flows.
9. The potential for slope instability.
10. The visual effects of the activity, including the effects and screening of the locality from excavations, heaps, dumps, spoil, materials, buildings and machinery.
11. Potential damage to any cultural heritage site or area, including any archaeological site or site of significance to Māori.
12. Damage to any natural habitat or feature.
13. The duration of the consent (Section 123 of the Act) and the timing of reviews of conditions and purpose of reviews (Section 128).
14. Financial contributions, bonds and covenants in respect of the performance of conditions, and administrative charges (Section 108).

Additional Matters for Earthworks within 200 metres of the Coastal Marine Area

29. Effects on the landscape character, natural character and amenity value of the locality, having regard to:
 - a) natural features and distinctive natural landforms;
 - b) landscape and seascape values;
 - c) significant natural values;
 - d) the nature of any existing development.

3. SUBMISSIONS

None of the submitters raised issues relating the earthworks at the site.

4. PRINCIPAL ISSUES

The principal issues associated with the applications are:

- a) Slope stability
- b) Erosion and sedimentation in run off.

5. STATUTORY PROVISIONS

The application is a restricted discretionary activity. The Council must consider the application pursuant to Section 104 of the Resource Management Act 1991.

The matters for the Council to address in Section 104 are:

- Part II matters;
- the actual and potential effects on the environment of allowing the activity (Section 104 (1)(a));
- relevant objectives and policies in the Tasman Regional Policy Statement, and the Proposed Tasman Resource Management Plan (Section 104 (1) (b));
- any other matter the Council considers relevant and reasonably necessary to determine the application (Section 104 (1)(c));

5.1 Resource Management Act Part II Matters

In considering an application for resource consent, Council must ensure that if granted, the proposal is consistent with the purpose and principles set out in Part II of the Act.

Section 5 sets out the **purpose** of the Act which is to promote the sustainable management of natural and physical resources. "Sustainable management" means:

"Managing the use, development and protection of natural and physical resources in a way, or at a rate, which enables people and communities to provide for their social, economic, and cultural well-being and for their health and safety while -

- *sustaining the potential of natural and physical resources (excluding minerals) to meet the reasonably foreseeable needs of future generations; and*
- *safeguarding the life-supporting capacity of air, water, soil, and ecosystems; and*
- *avoiding, remedying, or mitigating any adverse effects of activities on the environment.*

Sections 6, 7 and 8 set out the **principles** of the Act:

Section 6 of the Act refers to matters of national importance that the Council shall recognise and provide for in achieving the purpose of the Act. The matters relevant to this application are:

- The preservation of the natural character of the coastal environment (including the coastal marine area), wetlands, and lakes and rivers and their margins, and the protection of them from inappropriate subdivision, use and development.
- The protection of areas of significant indigenous vegetation and significant habitats of indigenous fauna

Section 7 of the Act identifies other matters that the Council shall have particular regard to in achieving the purpose of the Act. Relevant matters to this application are:

- 7(d) intrinsic values of ecosystems
- 7(f) maintenance and enhancement of the quality of the environment, and
- 7(g) any finite characteristics of natural and physical resources

Section 8 of the Act shall take into account the principles of the Treaty of Waitangi (Te Tiriti o Waitangi). I understand that the applicant has consulted with iwi and have accepted an iwi monitor on site. I do not anticipate that there are any relevant issues for this application in respect of Section 8.

If consent is granted, the proposed activity must be deemed to represent the sustainable use and development of a physical resource and any adverse effects of the activity on the environment are avoided, remedied or mitigated. *The critical issue of this consent is whether the earthworks can be undertaken so the adverse effects of the earthworks are no more than minor.*

These principles underpin all relevant Plans and Policy Statements, which provide more specific guidance for assessing this application.

5.2 Tasman Regional Policy Statement

The Regional Policy Statement seeks to achieve the sustainable management of land, water and coastal environment resources. Objectives and policies of the Policy Statement clearly articulate the importance of protecting land resources from inappropriate land use and development.

Because the Proposed Tasman Resource Management Plan was developed to be consistent with the Regional Policy Statement, it is considered that an assessment under the Proposed Plan will satisfy an assessment against Policy Statement principles.

5.3 Tasman Resource Management Plan (TRMP)

The most relevant Objectives and Policies to this application are contained in:

- Chapters 12 and 13

The most relevant Rules which follow from these imperatives are contained in Chapters 12.

Details of the assessment of the proposed activity in terms of these matters are addressed through the assessment of actual and potential effects in paragraph 6.1 below and analysis and discussion on the relevant policies and objectives in paragraph 6.2 of this report.

6. ASSESSMENT

Pursuant to Section 104(1)(a) of the Resource Management Act, the following effects assessment has been set out:

6.1 Actual and Potential Environmental Effects

6.1.1 Proposal Summary

The applicants propose to remove their existing dwelling and some vegetation and replace it with a new dwelling that is entirely on their own land. The site is in shared ownership and currently $\frac{2}{3}$ of the dwelling sits outside of the property boundary.

The site is north facing and is formed of separation point granites. Geotechnical testing has shown that the soils are loose to very loose with no "good ground" found on the site. The revised earthworks propose cuts of up to 3.2 metres and will require the removal of about 170 cubic metres of earth from site. A geotechnical report prepared by Terra Firma Engineering states that it is feasible to build on site but the work will require the input and management from a Chartered Professional Engineer practicing in geotechnical engineering and familiar with the local geology.

The applicant has provided a geotechnical report stating that it is possible to undertake the earthworks without adversely affecting the stability of the property provided several recommendations are followed. These are discussed in the assessment below.

6.1.2 Earthworks Assessment

Earthworks in Separation Point Granite have a risk of sediment contamination of water and the land disturbance can accelerate and initiated slope instability and other erosion processes.

Slope Instability

The earthworks proposed will involve deep cuts of up to 3.2 metres in depth that have the potential to seriously affect the stability of the site and compromise the structural integrity of adjoining buildings. The report by Terra Firma Engineering Ltd states that it should be possible to carry out the proposed earthworks with a low risk of damage to the adjacent dwellings. It is vital that these works be carried out with a higher level of construction supervision than normal, to enable the appropriate management of encountered site conditions.

The report recommends several conditions to minimise the risk of soil instability:

- The final earthworks proposed shall be reviewed by a Chartered Professional Engineer practising in geotechnical engineering and familiar with the behaviour and characteristics of the deeply weathered Separation Point Granite – derived soils;

- The temporary cut slopes shall be designed by a Chartered Professional Engineer practicing in geotechnical engineering. Appropriate allowance shall be made in the design for the proximity of the two adjacent dwellings upslope, and the requirement to temporarily remove the toe of the overall slope;
- The contractor's earthworks program shall be reviewed and approved in advance in writing by a Chartered Professional Engineer Practicing in Geotechnical engineering;
- The earthworks shall be appropriately staged and temporary face support shall be provided to ensure that the slope above the excavation remains stable at all times; and
- It is not recommended that fill be placed on this site. All excavated fill should be removed off site

Sedimentation in Run Off

The soils in this area are at risk to significant erosion when water flows over bare earth. This erosion then produces large volumes of suspended sediment in the runoff and can cause problems when it enters waterways or the sea.

The geotechnical report recommends that sedimentation control and erosion minimisation measures shall be designed by a Chartered Professional Engineer and these measures shall be implemented before the earthworks start.

Additionally all the stormwater from roofs, hardstands or impermeable areas, retaining wall drainage, surface drains, and subsurface drains shall be collected and discharged in a controlled manner.

Overall, it is considered that the development can be undertaken in such a way that the adverse affects are no more than minor.

6.1.3 Summary of Assessment of Effects

In summary, potential adverse effects on the environment from the earthworks in terms of slope instability, and sediment generation at the proposed site, are in my opinion minor if they are carried out as per the geotechnical report and the proposal is generally consistent with the objectives and policies in the Tasman Resource Management Plan.

6.2 Relevant Objectives and Policies of the TRMP

The following Policies and Objectives have been considered relevant for this proposal:

12.1.2 Objective

The avoidance, remedying, or mitigation of adverse effects of land disturbance, including:

- a) damage to soil;

- b) acceleration of the loss of soil;
- c) sediment contamination of water and deposition of debris into rivers, streams, lakes, wetlands, karst systems, and the coast;
- d) damage to river beds, karst features, land, fisheries or wildlife habitats, or structures through deposition, erosion or inundation;
- e) adverse visual effects;
- f) damage or destruction of indigenous animal, plant, and trout and salmon habitats, including cave habitats, or of sites or areas of cultural heritage significance.
- g) adverse effects on indigenous biodiversity or other intrinsic values of ecosystems.

Policies

12.1.3.1 To promote land use practices that avoid, remedy, or mitigate the adverse effects of land disturbance on the environment, including avoidance of sediment movement through sinkholes into karst systems.

12.1.3.2 To avoid, remedy, or mitigate the actual or potential soil erosion or damage, sedimentation, and other adverse effects of land disturbance activities consistent with their risks on different terrains in the District, including consideration of:

- a) natural erosion risk, and erosion risk upon disturbance;
- b) scale, type, and likelihood of land disturbance;
- c) sensitivity and significance of water bodies and other natural features in relation to sedimentation or movement of debris

12.1.3.3 To investigate and monitor the actual or potential adverse effects of soil erosion, other soil damage, sedimentation and damage to river beds, subsurface water bodies and caves in karst, aquatic and other natural habitats, arising from land disturbances.

12.1.3.4 To avoid, remedy, or mitigate the adverse effects of earthworks for the purpose of mineral extraction, on the actual or potential productive values of soil, particularly on land of high productive value.

13.1.2 Objective

Management of areas subject to natural hazard, particularly flooding, instability, coastal and river erosion, inundation and earthquake hazard, to ensure that development is avoided or mitigated, depending on the degree of risk.

Policies

- 13.1.3.1** To avoid the effects of natural hazards on land use activities in areas or on sites that have a significant risk of instability, earthquake shaking, flooding, erosion or inundation, or in areas with high groundwater levels.
- 13.1.3.2** To assess the likely need for coastal protection works when determining appropriate subdivision, use or development in the coastal environment and, where practicable, avoid those for which protection works are likely to be required.
- 13.1.3.3** To avoid developments or other activities that are likely to interfere with natural coastal processes including erosion, accretion, inundation, except as provided for in Policy 13.1.5.
- 13.1.3.4** To avoid or mitigate adverse effects of the interactions between natural hazards and the subdivision, use and development of land.
- 13.1.3.5** To avoid, unless there is effective mitigation, the expansion of flood-prone settlements onto those parts of the surrounding flood plains where they might be subject to flood hazard.
- 13.1.3.6** To prevent damage or interference with the functioning of the major overland flood flow paths of rivers in the District, except as provided for in Policy 13.1.5.
- 13.1.3.7** To maintain or consider the need for protection works to mitigate natural hazard risk where:
- a) there are substantial capital works or infrastructure at risk; or
 - b) it is impracticable to relocate assets; or
 - c) it is an inefficient use of resources to allow natural processes to take their course; or
 - d) protection works will be effective and economic; or
 - e) protection works will not generate further adverse effects on the environment, or transfer effects to another location.
- 13.1.3.8** To promote the maintenance and enhancement of coastal vegetation in areas at risk from coastal erosion.
- 13.1.3.9** To provide warnings and emergency response systems for areas at risk from or affected by natural hazards.
- 13.1.3.10** To regulate land disturbance so that slope instability and other erosion processes are not initiated or accelerated.
- 13.1.3.11** To avoid damage by land use activities to flood control structures or works for flood or erosion control.

13.1.3.12 To prepare a hazard management strategy identifying hazards and hazardous areas, and management options for these areas.

13.1.3.13 To avoid new subdivision, use or development that would hinder the ability of natural systems and features (such as beaches, dunes, wetlands or barrier islands) to protect existing subdivision, use or development from natural hazards (such as erosion, inundation, storm surge, or sea level rise).

7. SUMMARY

7.1 Principal Issues

The principal issue of whether the earthworks can be undertaken without causing adverse effects on the environment that are more than minor. The key components are land stability and erosion / sediment in runoff.

7.2 Statutory Provisions

The application is a discretionary activity under the provisions of Chapter 18 of the TRMP at the time the application was lodged.

- Part II matters
- Objectives and Policies of the Proposed Tasman Resource Management Plan
- Actual and Potential Environmental Effects
- Other Matters

7.3 Overall Conclusion

Overall the writer's assessment is that the actual adverse effects on the environment are minor and the proposal is generally consistent with the objectives and policies, and matters of discretion in the Proposed Tasman Resource Management Plan.

8. RECOMMENDATION

The recommendation to grant or decline these applications for the earthworks is dependent upon the Committee's decision whether or not to grant the landuse consent.

Having considered the application in detail, having visited the site, and drawing on the Council's staff experiences of earthworks, it is the writer's view that the adverse environmental effects of the proposed activity will be no more than minor, and that there is no reason why resource consent for the earthworks should not be granted subject to the following recommended conditions.

9. RECOMMENDED CONDITIONS

1. The Consent Holder shall ensure that all works are carried out in general accordance with the application received 3 June 2008, the geotechnical assessment undertaken by Terrafirma Engineering dated 27 October 2007 and further information received on

the 3 October 2008, unless inconsistent with the conditions of this consent, in which case the conditions shall prevail.

2. All the proposed earthworks shall be reviewed by a Chartered Professional Engineer practising in geotechnical engineering and familiar with the behaviour and characteristics of the deeply weathered Separation Point Granite – derived soils;
3. The temporary cut slopes and retaining walls shall be designed by a Chartered Professional Engineer and reviewed by a geotechnical engineer.

Advice Note:

Appropriate allowance shall be made in the design for the proximity of the two adjacent dwellings upslope, and the requirement to temporarily remove the toe of the overall slope;

4. The earthworks shall be appropriately staged and temporary face support shall be provided to ensure that the slope above the excavation remains stable at all times. The contractor's earthworks program shall be reviewed and approved in advance in writing by a Chartered Professional Engineer practicing in geotechnical engineering.
5. All the excavated fill shall be removed off site and disposed of legally by the end of the construction period (see Condition 7).
6. The Consent Holder shall ensure that the construction period does not last longer than four months.
7. The Consent Holder shall take all practical measures to avoid the discharge of sediment with stormwater run-off to water or land where it may enter water during the construction period.
8. Any material stockpiled on site shall have an appropriately sized cut-off drain or bund on the uphill side to minimise the risk of erosion of the stockpile.
9. All exposed ground, excluding the accessway and water table, shall be revegetated within six months of the excavation so that erosion/downhill movement of soil is avoided as much as is practical.
10. The Consent Holder shall contact Council's Co-ordinator Compliance Monitoring at least 24 hours prior to commencing works for monitoring purposes.
11. The Consent Holder shall take all practicable measures to limit the discharge of sediment with stormwater run-off to water or land where it may enter water during and after the earthworks. In particular, the earthworks should be carried out during fine weather periods when the likelihood of erosion and sedimentation will be least.

Advice Note:

The use of debris fences, straw bales, cut-off drains or other such methods should be used to ensure that run-off is controlled.

12. A sedimentation control and erosion minimisation plan shall be developed and implemented on site before the earthworks commence.

13. The Consent Holder shall stop construction in heavy rain when the activity shows sedimentation that is more than minor in the view of the Council Co-ordinator, Compliance Monitoring.
14. All machinery on the work site shall be refuelled, and any maintenance works undertaken, in such a manner as to prevent contamination of land and surface water. Spillage of contaminants into any watercourse or onto land shall be adequately cleaned up so that there is no residual potential for contamination of land and surface water. If a spill of more than 20 litres of fuel or other hazardous substance occurs, the Consent Holder shall immediately inform Council's Co-ordinator Compliance Monitoring.

Review of Consent Conditions

15. The Council may, during the month of April each year, review any or all of the conditions of the consent pursuant to Section 128 of the Resource Management Act 1991 for all or any of the following purposes:
 - a) to deal with any adverse effect on the environment which may arise from the exercise of the consent that was not foreseen at the time of granting of the consent, and which is therefore more appropriate to deal with at a later stage; and/or
 - b) to require the Consent Holder to adopt the best practical option to remove or reduce any adverse effects on the environment resulting from the discharge; and/or
 - c) to review the contaminant limits, loading rates and/or discharge volumes and flow rates of this consent if it is appropriate to do so; and/or
 - d) to review the frequency of sampling and/or number of determinands analysed if the results indicate that this is required and/or appropriate;
 - e) to require consistency with any relevant Regional Plan, District Plan, National Environmental Standard or Act of Parliament.

Expiry

16. This resource consent expires on 31 January 2014.

ADVICE NOTES

1. Officers of the Council may also carry out site visits to monitor compliance with resource consent conditions.
2. The Consent Holder should meet the requirements of the Council with regard to all Building and Health Bylaws, Regulations and Acts.
3. Access by the Council or its officers or agents to the property is reserved pursuant to Section 332 of the Resource Management Act.
4. All reporting required by this consent should be made in the first instance to the Council's Co-ordinator Compliance Monitoring.

5. Council draws your attention to the provisions of the Historic Places Act 1993 that require you in the event of discovering an archaeological find (eg, shell, midden, hangi or ovens, garden soils, pit, depressions, occupation evidence, burials, taonga) to cease works immediately, and tangata whenua, the Tasman District Council and the New Zealand Historic Places Trust should be notified within 24 hours. Works may recommence with the written approval of the Council's Environment & Planning Manager, and the New Zealand Historic Places Trust.
6. This resource consent only authorises the activity described above. Any matters or activities not referred to in this consent or covered by the conditions must either:
 - a) comply with all the criteria of a relevant permitted activity rule in the Proposed Tasman Resource Management Plan (PTRMP);
 - b) be allowed by the Resource Management Act; or
 - c) be authorised by a separate resource consent.
7. Plans attached to this consent are (reduced) copies and therefore will not be to scale and may be difficult to read. Originals of the plans referred to are available for viewing at the Richmond office of the Council. Copies of the Council Standards and documents referred to in this consent are available for viewing at the Richmond office of the Council.

Leif Pigott
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