STAFF REPORT

TO: Environment & Planning Subcommittee

FROM: Mike Mackiggan, Consent Planner - Natural Resources

REFERENCE: RM090748

SUBJECT: **MARAHAU ESTATES LTD - REPORT REP11-03-02A. -** Report prepared for hearing of 8 and 9 March 2011

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1. INTRODUCTION

Section 1.1 of the principal planner's report outlines the background to the application.

The purpose of this report is to provide an assessment and recommendation for the stopbank construction application RM090748.

2. APPLICATION BRIEF

2.1 Proposal

The applicant -Marahau Estates Limited have lodged a suite of resource consent applications including to:

Formally increase overall maximum campground numbers to from 140 to 500 campers (reflective of the peak season of 22 December - 31 January, but to lower levels for the remainder of the year (RM090280);

The other components of the bundled suite of applications have been described in detail in the reports by Paul Gibson (RM090280 and RM090273), Pauline Webby (RM090272), and Neil Tyson (RM090747), to which the reader is directed for further information on those other matters. I have also reported upon RM090271 which relates to the discharges of campground wastewater.

This application (RM090748) is to "protect the campground with two stop banks along the Marahau River and minor works on Barons Creek."

2.2 Site Location and Description

The 32 hectare property is located in the Rural 1 and 2 Zones at 54 Harvey Road, Marahau, and has been the location of Old MacDonalds Farm and Holiday Park campground since 1993/94.

The property is fully described in detail in the Planscapes application "Assessment of Effects on the Environment", and can be summarised as two components, the campground and the farm, set in the rural surroundings of the Marahau River Valley, and bordering left bank of the Marahau River. Barons Creek runs through the property flowing north to south.

The Old MacDonalds Farm Campground and Holiday Park is proposed to occupy Lot 1 should subdivision RM090272 be approved. Lot 1 is that land entirely within the Rural 1 zone, and Land Disturbance Area 1.

The balance of the site is in generally level / gently rolling pasture and amenity plantings, with the applicant's residence situated on proposed Lot 4, in land that is zoned Rural 2.

2.3 Legal Description

Address of property: 54 Harvey Road, Marahau
Legal description: Proposed Lot 1 after subdivision of Pt Sec 115 Motueka District
Certificate of title: NL12A/618
Valuation number: 1931007601

2.4 Zoning and Consent Requirements

The site is located within a Rural 1 Zone, and Land Disturbance Area 1 in the Tasman Resource Management Plan (TRMP).

Council has flood pattern records of the property being inundated during the April 1976 flood event. Other floods have occurred for which Council has no records. It is acknowledged by the applicants and their consultants that the campground is prone to inundation during heavy rain events when the steep catchment area quickly collects rainwater, channels it into the Marahau River, where it can break out or overtop the existing private stopbanks already constructed on site following their approval in 1994 (NN940104). Flooding has also occured in the campground from Barons Creek.

Under Rule 18.5.2.5 the land disturbance activity/earthworks are deemed to be a Restricted Discretionary Activity, Council's discretion is limited to the following:

(1) The extent, timing, and duration of bare ground.

(2) The location, timing of construction, design and density of earthworks including roads, tracks or landings.

(3) The re-establishment of vegetation cover.

(4) The 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 or habitats in water bodies or coastal water.

(8) Effects of the activity on river or stream flows.

(9) Sedimentation effects on subsurface streams or caves in karst.

(10) The potential for slope instability.

(11) The visual effects of the activity, including the effects and screening of the locality from excavations, heaps, dumps, spoil, materials, buildings and machinery.

(12) Potential damage to any cultural heritage site or area, including any archaeological site or site of significance to Māori.

(13) Damage to any natural habitat or feature.

(14) The duration of the consent (Section 123 of the Act) and the timing of reviews of conditions and purpose of reviews (Section 128).

(15) Financial contributions, bonds and covenants in respect of the performance of conditions, and administrative charges (Section 108).

Additional Matters for Destruction or Removal of Indigenous Vegetation

(27) The setting aside or creation of an esplanade reserve or esplanade strip as appropriate.

(28) The significance of the indigenous vegetation, including its representativeness, and significance as a habitat for indigenous fauna.

(29) The contribution of the indigenous vegetation to the protection of other natural values.

(30) The practicality of providing protection to the indigenous vegetation by setting aside or creating an esplanade reserve or esplanade strip.

The land disturbance does not comply with Permitted Activity Rule 16.10.2.1 which relates to land uses in relation to stopbanks and berm lands where flood hazards may occur and is deemed to be a Restricted Discretionary Activity in accordance with Rule 16.10.2.2. Council's discretion is restricted to the following:

(1) The severity and probability of the flood hazard to which the activity is or may be subject, in the light of any available or calculated flooding information.

(2) The effects on other property owners of the activity, including damage resulting from the damming or diversion of flood waters by structures or plantings.

(3) The effects on road structures, including the need for larger culverts or bridge clearances.

(4) The effects of any structure by itself or in combination with other structures on aquatic ecosystems, plant or animal habitat, flow regime or erosion of the river.

(5) The design, location, construction and maintenance of any structure.

(6) The health and safety of potential property owners.

(7) The effects on the community, including physical, economic and cumulative effects.

(8) The extent to which future owners of the site are likely to be aware of any flood risk before they purchase a property.

(9) The need for a reference to flood risks to be recorded on the title of the land.

(10) The extent to which the productivity and versatility of the land may be affected, positively and adversely.

(11) Whether or not buildings are relocatable.

(12) The duration of the consent (Section 123 of the Act) and the timing of reviews of conditions and purpose of reviews (Section 128).

(13) Financial contributions, bonds and covenants in respect of the performance of conditions, and administrative charges (Section 108).

This consent is bundled with the above land use and subdivision applications which are deemed to be Discretionary Activities, and so must also be assessed as a **Discretionary Activity** and be considered under s104 (B) of the Act.

3. CONSULTATION, APPROVALS AND SUBMISSIONS

3.1 Consultation

The application was Publicly Notified on 27 November 2010.

3.2 Submissions

Twenty–two submissions in total were received.

Six submissions in opposition to the overall proposals were received.

Ten submission were received in support of the overall proposals.

Six submissions were neutral.

A total of seven submissions included comments in relation to the Earthworks/Stopbanks required in able to facilitate the proposals.

Those submissions containing reference to the stopbanks and their potential impacts were numbered:

Nos: 3, 5, 9, 17, 19, 21 and 22

There was a limited range of issues raised by submitters, with the common theme recurring in whicht the principal issue raised was regarding the likelihood of new stopbanks increasing the flood risk for neighbouring and downstream properties, especially if the Marahau River is not subject to some clearance works to remove existing accumulated previous flood debris.

4. ASSESSMENT

The stopbank works resulting in neighbouring or downstream flooding effects

The applicants' consultant engineers report prepared by Land and River Limited (Richard Stocker) entitled "River Works -Old McDonald's Farm -Marahau" and dated 19 November 2010 considers the issue of enhanced stopbank works and the subsequent increased downstream flooding threat to neighbours/property owners.

The Land and River Limited November 2010 report was an update on two previous versions, and all three Land and River reports referred to further/previous reports provided by Envirolink Ltd. (Tony Hewitt) Hydrology Consultants which were dated 7 September 2009, and April 2003, and titled "Marahau River Flooding: A Report for Old MacDonald's Farm relating to Campground Extension Application (Updated)."

I quote specific sections of the Land and River November 2010 Report:

"details the proposed stop banks (including height and location), security that the stopbanks would provide the camp ground, the effect on flood levels of the construction of the stop banks on other properties, and an assessment on the flood risk from Barons Creek....

Old MacDonald's Farm is effectively divided into two areas: the upper area call the "Bull Paddock" which is upstream of Barns Creek and the lower area called "Cowman". The two areas are separated by ground high enough as to be well above flooding from the Marahau River. This high ground is a bund raised after the 1995 flood. Some stop banking has already been constructed at the upstream end of both areas...

The right bank of the Marahau River opposite Cowmans (the land owned by Submitter 17 - KS Goodman) *between river chainages 120m -290m rises to a terrace approximately 1.5m above the level of the camp ground. This terrace on the bank opposite to Cowmans is sufficiently elevated that it would be above the calculated 2% AEP flood level* (the Q50) *even with the proposed stop bank in place. The proposed Cowman stopbank would not increase flooding on the opposite terrace....* (My emphasis.)

However, because the land across the Marahau River from the Bull paddock stop bank is relatively lower and the increase in flood levels due to the stop bank is greater, the Bull Paddock stop bank would result in extra flooding on the land across the river. The typical increase in flood level due to the stopbank would be approximately 400mm (though with considerable variability) which, with a 10^{o} *slope on the terrace , would result in flood water encroaching a metre further up the terrace....* (My emphasis.)

Note:

1. *It is important to recognise that the use of the stop bank levels provided in this report does not guarantee that the camp will never be flooded. The implication of using a* $Q_{2\%}$ (sic) *AEP* (annual exceedance probability) *flow as a design flow is that there is a 2% chance in any year that the stopbank will be overtopped. It is appropriate to assume that the stopbank will be breached if it is overtopped.*

2. *An appropriate cross section for the stopbanks is a 3.5m top width and 2hz:1vt batters.*

3. *The flood levels and resultant predictions of security are based on the existing channel and berm configurations. Reduction in channel or berm capacity as a result of aggradation, revegetation, earth works, road works or building is likely to result in security of less than 2% AEP....* (My emphasis.)

Conclusions

- *Stop banking the Marahau River is an option that can provide security against a 2% AEP flood in the Marahau River with only minor increase in flooding on the right bank,*

- *Cowmans currently has security against a 2% AEP flood in Barons Creek,*

- *Relatively minor bank work is required to provide partial protection to the Bull Paddock from a 2% AEP flood in Baron Creek,*

- *Future maintenance of the watercourses is essential to maintain security against flooding."* (My emphasis.)

My colleague Mr Eric Verstappen (Resource Scientist - Rivers & Coast) is one of Council's Rivers Engineers, and he has carefully and critically considered all of the current information, in conjunction with the anecdotal evidence contained within the submissions, and from two site visits in which detailed and frank discussions were held with Mr Craig MacDonald regarding previous floods, and the most recent flood

event from the 28 December 2010 downpour (which has been estimated by Mr Verstappen in consultation with Richard Stocker as a 1 in 40 year flood event).

Mr Verstappen's most recent site visit and inspection occurred on 16 February 2011. Mr Verstappen visited the Wagner's property (submitter 19) being the one immediately downstream, and most potentially at risk from any increased flooding effects .

Having fully considered all of the above Mr Verstappen advises ***"overall that flood hazard risk to land beside and beyond the proposed stopbank alignment will increase marginally, but with effects considered to be no more than minor."*** (My emphasis.)

I concur with Mr Verstappen's comments.

Regarding the issue of maintenance of the Marahau River to ensure that flood flow capacity is not diminished, my colleague Philip Drummond (Roading /Rivers Asset Engineer) has advised as follows:

"The Marahau River is not a (X or Y) Classified river. Therefore it falls into the Z subsidised programme where land owners would have to approach TDC for assistance. Not easy to arrange if the applicant is not a river-side land owner. Also there are very limited funds available in this category on an average year. This year we had spent the whole budget on the 1st of July. The claims for damage from the 25 May 2010 event (at Tapawera) *have totalled up to >$300k. Unless additional funding is provided no further funding, subsidised or not, is likely to be granted before 1 July 2011. I don't remember doing any River Z jobs that were not on the boundary of the applicant. In fact the rules require a participating land owner to take ownership of any works and to "maintain in perpetuity". How does one enforce or even encourage this commitment if the works are across someone else's land?*

I am happy to recommend solutions for a particular land owner."

There is therefore an opportunity for those landowners with titles on either side of the Marahau River to liaise with each other, and meet with Mr Drummond to organise clearance works and access agreements to facilitate these. Such work is outside of the parameters of this current resource consent application, and may require additional consents.

Tasman Resource Management Plan (TRMP)

Chapters 12, 13, 16, and 18, are considered to be most relevant to this application RM090748 which relates to the extended stopbanks applied for.

Chapter 12 outlines Council's Objectives and Policies with respect to Land Disturbance effects.

Objective 12.1.2 requires the avoidance, remedying, or mitigation of adverse effects of land disturbance, including:

(d) damage to river beds, karst features, land, fisheries or wildlife habitats, or structures through deposition, erosion or inundation;

Policy 12.1.3.1 seeks to promote land use practices that avoid, remedy, or mitigate the adverse effects of land disturbance on the environment,

Chapter 13 outlines Council's Objective and Policies with respect to Natural Hazards.

Objective 13.1.2 requires 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.

Policy 13.1.3.4 seeks to avoid or mitigate adverse effects of the interactions between natural hazards and the subdivision, use and development of land.

Policy 13.1.3.7 seeks 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.

Policy 13.1.3.9 seeks to provide warnings and emergency response systems for areas at risk from or affected by natural hazards.

4.1 Assessment of activity against the Objectives and Policies in the TRMP

As stated above the applicants' consultant engineers reports considers the issues of enhanced stopbank works and the subsequent increased downstream flooding threat to neighbours/property owners.

Council's Rivers Engineer Mr Eric Verstappen advises *"overall that flood hazard risk to land beside and beyond the proposed stopbank alignment will increase marginally, but with effects considered to be no more than minor."*

I concur with Mr Verstappen's comments. This being the case the proposed stopbanks can be judged to be in accord with the above Objectives and Policies.

5. CONCLUSION

As a consequence of the bundling principle the proposed stopbank activities are required to be considered as Discretionary Activities under section 104 (B) as the principle land use and subdivision applications are Discretionary Activities.

Having considered each component of the stopbank activity I consider that the adverse effects resulting from the formation of new extended stopbanks are able to

be avoided, remedied or mitigated by conditions of consent should the overall proposal be recommended for approval. I have attached suggested conditions accordingly.

6. RECOMMENDATION

If pursuant to Pursuant to Section 104 (B) of the Resource Management Act 1991 Council determines to approve RM090280 et al, I recommend the following:

- Council **APPROVES** under RM090748 the earthworks to provide for extended stopbanks.

Mike Mackiggan
Consent Planer, Natural Resource Consents

Earthworks to provide for extended stopbanks for Old MacDonalds Farm

1. The Consent Holder shall ensure that all works are carried out in general accordance with the information received on 19th November 2010 in support of the application for resource consent RM090748. If there are any inconsistencies between this information and the conditions of consent, the conditions of consent shall prevail.

2. The Consent Holder shall inform Council's Co-ordinator Compliance Monitoring at least five working days prior to commencing the works and five working days following their completion so monitoring of conditions can be programmed.

3. The Consent Holder shall be responsible for all contracted operations relating to the exercise of this resource consent, and shall ensure that all personnel working on the site are made aware of the conditions of this resource consent and with the Management Plans required by Condition 27 of this consent, and shall ensure compliance with consent conditions.

4. A copy of this resource consent shall be available to the contractors undertaking the works, and shall be produced without unreasonable delay upon request from a servant or agent of the Council.

Flood Early Warning System

5. The Consent Holder shall provide an advance warning and emergency response system which requires to be put in place to the satisfaction of Council's Co-ordinator Compliance Monitoring. This system shall include monitoring of weather patterns for forecast heavy rain-falls and provide appropriate advance warning and emergency response procedures for the occupants of the campground and adjoining and downstream landowners/occupiers.

   Advice Note :

   This system is to ensure that campers' safety from flood events is not reliant upon the ongoing presence of staff familiar with the flood potential of the catchment and should allow a degree of automated flood warning for campers/occupants, in conjunction with warning signage.

Earthworks

6. The work shall be carried out during normal work hours (i.e., 07.30 to 17.30) to limit the nuisance of noise and access of vehicles.

7. The Consent Holder shall undertake all practicable steps to minimise the effect of any contaminant discharges to the receiving environment.

8. The Consent Holder shall ensure that any discharge of contaminants onto or into land or water from any activity is avoided, remedied or mitigated to ensure no contaminants are present at a concentration that is, or is likely to have, a more then minor effect on the environment.

9. No petrochemical or synthetic contaminants (including but not limited to oil, petrol, diesel, hydraulic fluid) shall be released into water from equipment being used for the activity and no machinery shall be cleaned, stored, or refuelled within 5 metres of any watercourse.

10. Fuels, oils and hydraulic fluids associated with the operation shall be stored in a secure and contained manner in order to prevent the contamination of adjacent land and/or water bodies.

11. The Consent Holder shall notify the Council's Co-ordinator Compliance Monitoring as soon as is practicable, and as a minimum requirement within 12 hours, of the Consent Holder becoming aware of a spill of hazardous materials, fuel, oil, hydraulic fluid or other similar contaminants. The Consent Holder shall, within 7 days of the incident occurring, provide a written report to the Council, identifying the causes, steps undertaken to remedy the effects of the incident and any additional measures that will be undertaken to avoid future spills.

12. All practical measures shall be taken to ensure that any dust created by operations at the site and vehicle manoeuvring (in accessing the site and driving within it) shall not, in the opinion of Council's Co-ordinator Compliance Monitoring, become a nuisance to the public or adjacent property owners or occupiers. The measures employed shall include, but are not limited to, the watering of unsealed traffic movement areas, roadways and stockpiles as may be required.

13. All disturbed vegetation, excess soil or debris shall be disposed of off-site or stabilised to minimise the risk of erosion.

Stormwater

14. All stockpiled material shall be protected from stormwater by appropriate measures, eg, bunding.

15. The Consent Holder shall take all practical 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.

16. The discharge of stormwater shall not cause in the receiving water any of the following:

    (a) the production of any visible oil or grease films, scums or foams, or conspicuous floatable or suspended material;
    (b) any emission of objectionable odour;
    (c) the rendering of freshwater unsuitable for bathing;
    (d) the rendering of freshwater unsuitable for consumption by farm animals; and
    (e) any adverse effect on aquatic life.

17. The Consent Holder shall monitor weather patterns during the construction phase and works shall be discontinued and appropriate protection and mitigation measures put in place prior to forecast heavy rainfalls and where resulting floods reaching the site works.

18. The Consent Holder shall stop construction in heavy rain when the activity shows sedimentation in run-off that may enter water that is more than minor in the opinion of the Council's Compliance Officer.

Revegetation

19. All exposed ground shall be revegetated as soon as practical and shall be within six months of completion of the works so that erosion both from wind and rain is minimised.

Review

20. Council may, for the duration of this consent, review the conditions of the consent pursuant to Section 128 of the Resource Management Act 1991 to:

    (a) deal with any adverse effect on the environment that may arise from the exercise of the consent and which it is appropriate to deal with at a later stage; or

    (b) to require compliance with operative rules in the Tasman Resource Management Plan or its successor; or

    (c) when relevant national environmental standards have been made under Section 43 of the Resource Management Act 1991.

21. This consent will lapse after five years from the date of issue.

22. This resource consent expires one year from the time that this consent is given effect to.

Advice Note:
The consent is given effect to once any earthworks commence