STAFF REPORT

TO: Environment & Planning Subcommittee - Commissioner Hearing

FROM: Neil Tyson, Consent Planner

REFERENCE: RM081100, RM081077 & RM081078

SUBJECT: **MINVEST SECURITIES LTD - REPORT EP09/11/04 -** Report prepared for hearing of 13 November 2009

APPLICATION PROCESS AND BACKGROUND

Various resource consent applications relating to the construction of two dwellings, a dam and the taking of water for irrigation, on a property near Brightwater, were lodged in late 2008.

Resource consent (landuse) application RM081064 relating to the construction of two dwellings in the Rural 1 zone was granted separately on a non-notified basis and as a controlled activity under Rule 17.5.3.2 of the Tasman Resource Management Plan (TRMP) on 5 December 2008. A copy of RM081064 is Appendix 1 of this report.

The resource consent applications RM081100, RM081077 & RM081078 relating to the construction of a dam, associated use of a riverbed and the taking from the dam for irrigation were deemed complete (ie Section 88 of the Resource Management Act 1991)(hereafter referred to as the "Act")) and formally received on 16 December 2008. Since then, the applications have been either subject to a further information request (under Section 92 of the Act), or "on hold" (Section 37 of the Act) with the applicant's approval including for the period 3 February to 13 July 2009. Further information was first requested on 5 January 2009 to resolve a mistake in the original application in that the proposed dam unintentionally encroached on the (Hannah) property located immediately downstream of the dam. It also requested additional information regarding potential dambreak including identification of who were likely to be affected parties given such an event, the estimated flow rate and water depth relating to some dwellings etc.

This (5 January 2009) letter also advised that Council staff's initial assessment was that the applications may be able to be processed without public notification provided the written approval of all persons who the Council determines to be adversely affected are provided.

An amended application and a report supplying the dambreak information was received by Council in July 2009 and, on 30 July 2009, the Council's Manager of Resource Consents (Phill Doole) determined that the affects of the proposal on the environment were no more than minor (Section 93 of the Act) but that there were affected parties and it would be processed on a limited notified basis (Section 94 of the Act). The affected parties were determined to be those landowners, identified in Fig 5 of the Tonkin & Taylor report (10 July 2009), as being incrementally affected by a dam break scenario i.e. to a greater extent than naturally occurring flooding. It is expected that the applicant will fully cover this evidence at the hearing and this report does not repeat it.

Note: In this report, the "inundation zone" refers to the "incrementally affected inundation zone".

The amended application (which included a reduced dam storage volume of 30,000 cubic metres) was limited notified to the affected parties with submissions closing on 28 August 2009. However, during this initial submission period, the applicant's agent (Jerram Tocker Barron Architects) and consultant engineers (Tonkin & Taylor), and the writer, attended a meeting of landowners downstream of the proposed dam. That meeting raised an additional issue as to whether the dam break report had accounted for eroded sediment deposition potentially altering the hydraulic profile ie where water will flow, including out on the floodplain. As a result, there may be additional affected parties in a dambreak scenario. This concern was therefore the focus of Council's second further information letter (14 August 2009) and lead to the submission period being extended by the writer (Section 37 of the Act) until 25 September 2009.

The subsequent further information was contained in the Tonkin & Taylor report (21 September 2009)(see Appendix 2) although, prior to this date, the writer had been briefed as to report's content. This information was accepted by Council staff as not identifying any additionally affected parties, or any reasons to revisit the original decision to process the application on a limited notified basis. Furthermore, the content of the report was not considered sufficiently important to warrant any further extension of the submission period and copies were provided only to those parties who had expressed an interest.

It is relevant that the application has been notified to additional parties than five considered affected by the applicant (Pg 6, T&T report (10 July 2009)). However, various landowners below the dam (including Mr and Mrs Gorman and Mr J D Edmonds) considered unaffected by Council staff have made it clear they "object" to this decision.

It is relevant therefore, that the notification decision is delegated to the Council's Consent Manager and Commissioners cannot change this or consider effects on persons not deemed to be adversely affected. If people consider they are affected, then the only remedy available to them is a judicial review of the notification decision by the High Court. In Mr J D Edmonds case, he is submitting as deputy chair of the Spring Grove Recreation Reserve (Drill Hall) Committee, which is quite proper if his submission relates to the Drill Hall.

If however Commissioners consider the application should have been publicly notified, they can refuse to approve the application as the Act states a consent authority cannot grant an application if it should have been notified and was not.

Staff consider we have properly and correctly considered both the notification decision and the persons adversely affected by the proposal, and the further information from the applicant during the consent process has not changed the parties affected.

REPORTING OFFICERS

This technical report includes input from Council's Eric Verstappen, Resource Scientist River and Coastal Hazards and he will be available for the hearing.

SUBMISSIONS

The applications were limited notified to ten parties including the Community Services and Engineering divisions of TDC. TDC is the owner of land and various assets downstream of the dam but it has not submitted on the application. Six submissions were received, all in opposition and all wishing to be heard. These included submissions from both the Brightwater Playcentre and the Spring Grove Drill Hall Committee where Brightwater Playcentre are occupiers of the historic school building located on TDC owned land. The full list of submitters are Brightwater Playcentre C/- Mandy Thomas, Jack & Carol Pike, Mark & Tania Culverwell, Nick Appelman, Spring Grove Drill Hall C/- (Deputy Chair) Julian Edmonds & C Pike (Chairperson), Laurence Staig and W A & R J O'Neill.

Submitters raise the following main issues:

- The "Low" dam PIC is not accepted by at least two submitters
- Loss of life, and property damage if the dam failed, including during construction
    - Adverse effects on land use(s) below the dam including the Staig property including (reverse sensitivity) issues relating to future uses of their land
    - Concern/frustration that the dam is for aesthetic reasons and is not needed yet it has the potential to fail and threaten life and property
    - Unwanted construction effects including dust, noise and vehicle movement and that it is worsened because of the proposed infilling ie to reduce storage depth
    - One submitter states that the catchment is notorious for flash floods and is concerned about the capacity of the proposed box culvert spillway.
    - Concern about the diversion of flood water by the applicant's recent access road and culvert towards and into the Staig house.
    - Concern regarding adverse effects on property values and the future cost to landowners of insurance and questions re liability and if this would transfer to future owners of the dam and questions re responsibility for clean up following a dam failure event particularly in the Culverwell submission
    - That the AEE is incomplete as it fails to assess the full risk of dam failure

    These issues are addressed in this report, or the reader is referred to the relevant evidence from the applicant.

Various submitters including the Appelmans (see submission #4) suggest conditions in the event the application is granted. These include:

- reducing further the height and storage volume of the dam
- requiring ongoing insurance to cover downstream damage if the dam failed
- the need for a dam failure warning siren located at the Drill Hall
- conditions requiring Council to monitor compliance by the dam owner including during construction

1. STATUTORY FRAMEWORK

1.1 Resource Management Act 1991

In making a decision, the Committee is required to first consider the matters set out in Section 104(1) of the Act, in addition to the matters set out in Section 7. Primacy is given to Part II of the Act, "the purpose and principles of sustainable management of natural and physical resources."

Any decision should therefore be based, subject to Part II of the Act, on:

- The actual and potential effects on the environment of allowing the activity;
- Any relevant provisions of national or regional policy statements;
- Relevant objectives, policies, rules or other provisions of a plan or proposed plan; and
- Any other matters the Committee considers relevant and reasonably necessary to determine the application.

For this application involving construction of a large dam, the definition of "effect" in Part 3 of the Act is particularly relevant as it is defined to include *"any potential effect of low probability which has a high potential impact."*

In addition, Section 104(1)(a) *"any actual and potential effects on the environment of allowing the activity"* can be qualified by the permitted baseline concept in Section 104(2) which states:

> *"When forming an opinion for the purposes of subsection (1)(a), a consent authority may disregard an adverse effect of the activity on the environment if the plan permits an activity with that effect."*

A comparison between the proposed activity and what other activities could take place on the subject site as of right is relevant and included in this staff report.

No written approvals have been provided in support of the application.

1.1.1 Purpose and Principles of the Act (Part II Matters)

The purpose and principle of the Act 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:

a) Sustaining the potential of natural and physical resources (excluding minerals) to meet the reasonably foreseeable needs of future generations;

b) Safeguarding the life-supporting capacity of air, water, soil and ecosystems;

c) Avoiding, remedying, or mitigating any adverse effects of activities on the environment".

The "Section 104 matters" are to be considered subject to Part II of the Act. This includes the purpose and principles in Section 5 of the Act, and other matters to be recognised and provided for in Section 6, or had regard to in Section 7, or taken into account in Section 8 of the Act.

1.1.2 Matters of National Importance – Section 6 of RMA

There are no Section 6 matters of National Importance considered to be relevant.

1.1.3 Other Matters – Section 7 of RMA

No Section 7 matters were considered to be relevant.

1.2 Relevant Plans and Status of Applications

1.2.1 Tasman Regional Policy Statement (TRPS)

Council has prepared a RPS in accordance with the provisions of the Resource Management Act and this became fully operative in July 2001. The RPS takes national policies and refines and reflects them through to the local area, making them appropriate to the Tasman District. Council is required to have regard to the RPS as an overview of resource management issues.

TRPS Objectives and Policies relevant to an assessment of the application are outlined in Table 1 below:

Table 1 – Provisions of the TRPS

Section	Objectives	Policies
Land Resources	6.3, 6.4	6.2, 6.4, 6.5
Fresh Water Resources	7.2, 7.3	7.3
Resource Management Processes	13.2	13.7

The above policies and objectives are set out in Appendix 2 to this report.

1.2.2 Tasman Resource Management Plan (TRMP)

The TRMP has been prepared and has progressed to the point that it is fully operational or effectively operational. The TRMP was developed to be consistent with the TRPS.

Key TRMP Objectives and Policies relevant to this application are outlined in Table 2 below:

Table 2 – Summary of TRMP Objectives and Policies

Chapter	Objectives	Policies
5 Site Amenity Effects	5.1.2	5.1.3.1 5.1.3.8 5.1.3.9 5.1.3.11
7 Rural Environment	7.4.2	
12 Land Disturbance Effects	12.1.2	12.1.3.1 12.1.3.2
13 Natural Hazards	13.1.2	13.1.3.1
30 Fresh Water Resources		30.1.17, 30.3.2
33 Discharges to Land and Freshwater	33.3.0,	33.3.4
34 Discharges to Air	34.2.0	34.2.1, 34.2.1A, 34.2.2, 34.2.4, 34.2.5A

The above policies and objectives are set out in Appendix 3 to this report.

Because the TRMP was developed to be consistent with the RPS, it is considered that an assessment under the TRMP will, in a general way, also be part of the assessment against the RPS. The exception is (Section 13) activities in the bed of rivers and lakes, which are still to be developed in the TRMP.

The relevant policies and objectives and issues will be assessed in this report.

1.2.3 Transitional Regional Plan (TRP)

Council currently regulates the construction of dams pursuant to the Water & Soil Bylaw 1990 under the Council's Transitional Regional Plan. This bylaw and its provisions will be replaced by Part IV TRMP but until such time as Part IV is publicly notified the bylaw provisions are currently the relevant rules for the purposes of Section 13 activities in the bed of rivers and lakes.

2. ASSESSMENT AND REASONS FOR DECISION

2.1 Status of Activities

The writer agrees with the applicant's assessment of the statutory setting (see 2.0 AEE) for the proposed activities with two exceptions. The first relates to the omission of the Section 13 consent (see 2.1.1 below) in the AEE and the second is that taking and use of water from a dam is a restricted discretionary activity under the regional plan rather than a controlled activity (see 2.1.3 below). This assessment is complicated by changes to TRMP rules as a result of update 32 (26 September 2009). According to the TRMP the following apply to the applicant's property:

Land Zoning:	Rural 1
Area(s):	Land Disturbance Area 1
	Surface Water Yield Protection Area
Water Zone:	Wai-iti

The application is to dam where the catchment area (ie the land area) above the dam is less than 20 hectares. The (Section 14) activity of damming water is therefore a permitted activity (Rule 31.2.1(a) TRMP) and does not require consent.

2.1.1 Land Use (River Bed) Consent (Application RM081100)

Section 13(1) RMA restricts certain uses of beds of lakes and rivers including the *"...Use, erection, reconstruction, placement, alteration, extension, removal or demolishment of a structure or part of a structure in, on, under or over the bed"*.

Currently, with regard to the applicant's proposed dam, the dam dimensions exceed those for permitted dams under the TRP and the applicant requires consent for a discretionary activity under the Resource Management Act 1991 (Act). The applicant's dam is allocated dam number 301 and resource consent number RM081100.

The proposed dam with dimensions of crest height 11 metres and storage of 30,000 cubic metres is deemed to be a *large* dam under the Building Act 2004. The application assesses the dam to have a *low* PIC (Potential Impact Classification).

2.1.2 Land Use Consent (Application RM081077)

Section 9(1) of the Act restricts the use of land, including excavation and land disturbance, where it contravenes a rule in a plan or proposed plan. As identified by the applicant, the proposal to construct a dam falls outside what the TRMP provides for as a permitted activity under Rule 18.6.2(b)(i) and Rule 18.5.2.1(p). The latter requires any re-contouring of land to be no more than 1 metre in height or depth and no more than 1 hectare within any 12 month period and dam construction will clearly exceed this.

2.1.3 Water Permit (Application RM081078)

Section 14 of the Act states that no person may take, use, dam, or divert water unless expressly allowed by a rule in a regional plan, any relevant proposed regional plan or a resource consent. Council's operative regional plan covering all Tasman District is the operative Tasman Resource Management Plan (TRMP).

Regarding the taking and use of dam storage, this is at rates above five cubic metres per day and exceeds the permitted activity Rule 31.1.2 (see Figure 31.1A) in the TRMP and requires consent. The application RM081078 is considered as a *restricted discretionary* activity as the dam is not an existing constructed dam (Rule 31.1.5) and it complies with the standards and terms under Rule 31.1.6.

2.1.4 Other Consents

In addition to the above, the applicant acknowledges they require a building consent application under the Building Act for the dam and that it will be applied for once the RMA consents are approved. Under the Building Act (2004) a building consent is required for "large" dams, which are dams with greater than the 20,000 cubic metres of storage and greater than 3 metres of water depth.

The proposed storage behind the dam is now 30,000 cubic metres (reduced from 56,000) and the dam embankment while 11 metres, is to be infilled to result in a water depth of approximately 5 metres.

3. ASSESSMENT OF EFFECTS

Principal Issues (Actual and Potential Effects on the Environment)

The principal issue associated with the proposed activity involves:

(a) the actual and potential effects of dam failure, particularly on people and property downstream of the dam; and

(b) whether the applicant has demonstrated that the dam can be constructed so that it is safe such that it poses no real risk to downstream property or persons.

Other issues include:

(c) any adverse effects on water availability downstream of the dam; and

(d) any adverse effects of dam construction and/or management of those effects; and

(e) any means of avoiding, remedying or mitigating any adverse effects.

This report assesses and discusses these issues but first it is relevant to consider the permitted baseline.

3.1 Permitted Baseline

For the applicant's property, construction of a dam(s) is permitted (TRP Water & Soil Bylaw 1990) provided each structure is two metres or less in height and the stored volume in each dam is 5000 cubic metres or less. The catchment area above each dam must also be less than 20 hectares and this is the case for both gullies on the applicant's property. Any dam must also be setback five metres from an internal boundary and 10 metres from a Council road or a separate (landuse) consent is required.

The applicant can therefore construct as of right a series of non-engineered two metre high dams in each gully, and a rough calculation indicates a series of dams would collectively store 20-30,000 cubic metres of water ie around the same volume storage as proposed. Instead, the applicant has chosen a single large engineered dam of 11 metres crest height to create a large surface area of water.

Regarding the taking and use of water, a person can take from a dam as a permitted activity five cubic metres per property per day in the Wai-iti Zone while stock water and fire-fighting use is additional to this amount.

The permitted baseline concept is also relevant insofar as landuse development below the dam, as discussed later in this report.

3.2 Irrigation Demand

The application estimates an annual demand for irrigation of 1,900 cubic metres for their 1.5 hectares of grapes and estimates that 14,000 cubic metres will be required annually to replace irrigation demand and evaporation losses from the dam.

The estimate of evaporation losses is probably high but irrigation is likely to be higher given it is based on just eight weeks. The writer considers 12 weeks to be more realistic and I have adopted 3,000 cubic metres as the annual irrigation demand. No instantaneous rate is stated in the application and a rate of 12 cubic metres has been assumed. Importantly, Envirolink estimate that the dam will readily refill each year except possibly in an extremely dry year.

One submitter considers the volume of irrigation water is available from a bore. Council's information is that a bore would need to be deep ie probably greater than 300 metres. Likely yield is dependant on the depth of gravels at this location and it is not certain that a 300 metre bore would yield/sustain the proposed irrigation demand. However, it is certain that the 1,900 (and/or 3,000) cubic metres required for irrigation can be sourced from a smaller dam than the applicant proposes.

As identified by various submitters, the applicant has chosen this option largely for amenity and landscape reasons not irrigation reasons.

3.3 Water Availability Effects Below the Dam

Submitters have raised the following issues relating to effects on natural water availability below the proposed dam:

- That the dam will capture summer runoff, depriving downstream aquifers of summer recharge and this will adversely affect "within zone" irrigation; and
- The dam does not alleviate any water short falls on the plains nor provide any other benefit.

From the rainfall and other data in Envirolink's report, it is clear that most years the proposed dam will readily refill as a result of catchment runoff. Therefore, until irrigation commences say in December-January, runoff and stream flows will be unchanged below the dam except for a positive dampening effect common to dams resulting in a reduction in the natural flood peak. In winter, there are few if any water users and typically there is too much water for the local drainage systems to cope with.

Regarding the summer situation, Council's policies acknowledge that the natural summer water resource (both surface and groundwater) is fully or over-allocated in the Wai-iti Zone and no new (water take) consents have been granted for use during summer months since the early 1980s. For this reason, new consents can only be granted for deep bores penetrating into the Moutere Gravels as these gravel aquifers are considered to be independent of the Wai-iti Zone.

Council's summer water management objective in the Wai-iti Zone is to maintain and (if possible) improve existing user's security of supply to an acceptable level. In other words, Council acknowledges that water is critically important for landowners and water users in the Wai-iti Zone.

In the neighbouring Wai-iti Dam Service Zone, security of supply has been significantly improved by the construction by TDC of a water augmentation dam in the upper catchment in 2006. In contrast, in the Wai-iti Zone there are numerous privately owned and operated irrigation dams including dams larger than the applicant's proposed dam e.g. Parkes, Eden and Weingut Seifried.

The Council's water allocation policies (ie Chapter 30 TRMP) encourage dams and dam storage in water short catchments while seeking to protect any natural surface flows for existing water users and instream values. Where a catchment is smaller than 20 hectares, damming is permitted as the stream bed will typically be dry or reduced to seepage in a dry summer. A dry stream bed significantly restricts the habitat available for instream life but residual pools can sustain a surprising variety of life including eels and possibly other native fish. Dams in such small (Moutere Gravel) catchments can have positive benefits insofar as attracting and providing permanent habitat for eels and birdlife.

Only where there is natural summer flow at a dam site will the dam owner be required to provide a residual flow and then, only equivalent to the natural "low flow" inflow in summer. Natural flows that would otherwise be unused, can legitimately be captured and retained by a dam. In other words, dam owners are not required to alleviate an existing water shortage further down the system, just not aggravate it further.

Where a residual flow is required, a discharge pipe will typically be installed through the dam with a valve and water meter to regulate and monitor the flow release. Envirolink on Page 17 indicate that a flow release valve is proposed for this dam but no flow rate is volunteered. Envirolink state that the stream is ephemeral and goes dry for extended periods. This suggests that a variable rate of release may be

appropriate with a proviso that the release can be zero at times when the natural inflow to the dam is zero. Incidentally, the Parkes' dam has a catchment area of 50 hectares and two different residual flows are required of 1 and 2 litres per second. At Eden's dam (catchment area 32 hectares) in Bridge Valley and at Weingut Seifried's dam (catchment area 7 hectares) behind Brightwater, residual flows are not required.

With regard to any effects on downstream water users, Council's information is that the applicant's unnamed stream, and other local streams such as the Pitfure, are regularly dry in summer and are too unreliable to be a source of stock water. Regarding stock and household water, according to Council's records all except O'Neill's (a submitter) have connections to TDC scheme water, which is the main source of stock and household water in the area.

The O'Neills advise that their source is a shallow (6 metre) well, which they advise has been reliable during the eight years they have owned the property. While not stated in their submission, Mrs O'Neill advises she is concerned their well supply may be adversely affected by the dam.

The closest consented downstream irrigator is H A den Boon, a groundwater user located 530 metres in a northeast direction from the discharge point ie where the applicant's stream emerges onto the flood plain. The O'Neill's shallow well is about 260 metres in the same north-easterly direction as H A den Boon. Both H A den Boon and O'Neill's groundwater supplies could potentially be directly affected by reduced summer aquifer recharge. However, this is very unlikely as a result of this dam as the natural summer recharge from the applicant's catchment are small or zero, and they are some distance away. It is also relevant that both bores are located downstream of a separate 50 hectare catchment which drains land immediately to the north of the applicant.

Note: J D Edmonds groundwater source is located 460 metres from this same discharge point but in a northwest direction and at right angles to the general valley groundwater flow direction. Because of J D Edmonds' location, his water source cannot be adversely affected by the proposed dam.

The writer's assessment is that no water user downstream of the proposed dam will be adversely affected by either its existence or operation to more than a minor extent. Furthermore, providing a residual flow release from the dam, equivalent to the natural summer low flow, will address any effect of the capture of summer runoff and, at the same time, provide for instream values that may exist. As mentioned, the application does not volunteer an actual residual flow rate and it is proposed to adopt 0.2 litres per second as a continuous rate of summer month discharge from the dam based on catchment area and location. The rationale for this flow is discussed next.

Fish passage is not considered an issue for this dam as eels will find their own way into the reservoir.

3.5 Residual Flow Setting

The most recent residual flow adopted for a dam is Old Coach Road Development Partnership (see RM080919) in Mahana. This flow itself is based on the flow adopted for the Zamick dam in Wills Road. Re-calculating the adopted flow for the

applicant's catchment of 16.9 hectares on a catchment area basis results in a residual flow of 0.186 litres per second. This is 0.186 litres per second = 112 cubic metres per week which equals 2,928 cubic metres if required to maintain a residual flow for the six summer months.

Our experience of Moutere Hills small catchments is they will not continue running all summer during a drought and there is an argument that it is realistic for the residual flow to cease if there is no visible inflow above the dam. This can also be written into a consent condition.

Any lowering of the dam level by evaporation, would be considered a function of the dam itself, so the residual flow requirement would be applied whenever there are natural inflows to the dam.

3.6 Natural Flooding

The basis for the determination of adversely affected parties was the land subject to an incremental increase in flooding effects (eg depth, duration, velocity) in a dambreak scenario compared to natural flooding. Submitters and Council staff acknowledge that the area is subject to flooding and some submitters argue that Council should be attending to this existing flooding issue (not adding to it).

There are two issues to consider here. Firstly, constructing a dam in this small catchment will not exacerbate flood hazard risk or peak flows from the catchment compared to the catchment in its natural state. The dam will in virtually all circumstances attenuate rainfall runoff and peak flows from the catchment compared to natural runoff patterns.

Secondly, the construction of the dam will not add to the actual flooding frequency or risk of flooding on the Pitfure floodplain at the outlet from the dam catchment. There appears to be a misunderstanding between actual flood hazard and runoff arising due to dam construction and prospective flood flows from the catchment (and resultant flooding hazards on the plain downstream) arising from a theoretical dam failure.

In reality, the probability of severe flooding in the Pitfure and the resultant effects of that flooding on various inhabitants is much more likely to arise from natural rainfall events (as has occurred on several occasions since 1980) than from a dam break scenario having a much smaller probability of occurrence than rainfall events having similar spatial effect.

The fact that the Pitfure floodplain is subject to flooding is an entirely separate issue from the possibility for (and mitigation of the effects of) flooding arising from dam failure. To address flooding issues on the Pitfure floodplain may well be something that the local community aspires to, but is not a factor relevant to the consideration of this proposal. There is a much wider community of interest affected and involved in the resolution of the Pitfure plains flooding issue, than there is for this dam construction proposal.

Natural flooding is one restriction to landuse development on the floodplain below the dam. However, this proposed dam will have a positive effect on natural flooding in reducing peak runoff from this small catchment. This is not a deliberate action by the

applicant, and it is possible to include greater flood detention as part of the dam's design if this was deemed appropriate e.g to mitigate any actual adverse effect of the dam. Having said that, greater flood detention in the dam would have little effect on the majority of flood events affecting submitters's land, as floodwaters arise in the significantly larger Pitfure catchment.

3.7 Inundation Hazard

Submitters cite the following issues relating to the inundation hazard resulting from dam failure:

- That the applicant understates the threat to life
- Adverse effects on downstream land use enforced by the Council; and
- Adverse effects on property values
- That the proposal threatens an historic school building (i.e. the current Playcentre) and thereby contradicts Council's responsibilities under the RMA

The stated purpose of the RMA is to promote sustainable management and to avoid, remedy or mitigate any adverse effects of activities. The purpose of the Act is not to avoid risk at all cost but rather to manage development and resource use. Therefore, in this application the applicant needs to demonstrate that the dam can be constructed so that it is sufficiently well designed to be safe, such that it poses no real risk to downstream property or persons.

Council policies in the TRMP regarding dam construction and inundation hazard are currently being drafted but are expected to be notified shortly within Part IV of the TRMP. Currently, the TRMP rules (see Rule 31.2.2-3) requiring dam construction to comply with the current New Zealand Society of Large Dams (NZSOLD) guidelines does not apply to the applicant's dam as it is permitted under Rule 31.2.1. Dam construction conditions and conditions relating to works in the watercourse are therefore pursuant to the TRP.

The new policies relating to dam construction and inundation hazard will need to recognise new national dam safety legislation now adopted under the Building Act 2004. The key aspects of the Building Act apply to "large" dams which are those that contain a water depth of 3 metres or more and impound 20,000 cubic metres or more of water.

Under the Building Act, the applicant or dam owner is required to classify a large dam as high, medium or low. Council's role is then to accept or reject the potential impact classification but, it is understood, Council can only reject the classification if the certificate is not from a recognised engineer.

In this application, the applicant's assessment is of a "low" impact dam. It is understood, that the assessment accounted for existing houses and property and also any dwellings that could be constructed below the dam as of right. The writer understands that the applicant concluded that no future new dwelling could be developed "as of right" within the inundation zone.

The “permitted baseline” for dwellings in Rural 1 is however complicated. It is possible that the applicant has overlooked a scenario where the Staig house, which is assessed by the applicant as unaffected by a dam break, could be moved to a location on the floodplain exposed to significant flood hazard risk e.g. adjacent to the Pike dwelling. Such a scenario, while unlikely, appears to be within the “permitted baseline”, as the application for these old (pre 1996) titles is a controlled activity under Rule 17.5.3.2 TRMP. Furthermore, there are no matters reserved to Council allowing control of the location of the dwelling to avoid the inundation zone.

As a result, there can be one additional dwelling within the inundation zone, albeit with a raised floor level. This would be required under the Building Act for a new dwelling located in the already existing flood-prone area on the Pitfure floodplain. It is uncertain whether there would be any more stringent requirements on house foundation elevation or design for a greater flooding hazard arising from a dam break scenario compared to mitigation required for the existing flooding hazard risk. This is on account of the much lower probability of an albeit greater flooding hazard at a new house site arising from potential failure of the dam, as opposed to the likely probability of the house being affected by existing flooding hazards on the floodplain, over the lifetime of a building. This possible additional-house-on-the-floodplain scenario may increase the “low” PIC for this dam to “medium” and will need to be confirmed at the hearing.

In future, large dam owners are likely to have an interest where development below their dam will increase their dam’s risk classification e.g. by placing buildings and structures within the possible inundation zone. Increasing the risk classification for a dam increases the cost of compliance for the dam owner. The Council will presumably need to consult a dam owner where a hazard classification for an existing dam could change as a result of Council land rezoning or development below a dam. Correspondingly, the construction standard of a dam is likely to influence landuse decisions by the Council particularly if it is impossible or impractical to upgrade the dam and resolving who pays for this work.

The Council recognises that flood and inundation hazard management is important to enable people and communities to provide for their social, economic and cultural wellbeing and for their health and safety. Council’s likely TRMP objective will be to protect communities from the hazard risk of dam failure. Furthermore, policies are likely to promote identifying, managing and reducing risk of hazards from failure of dams in river beds. Future Council policies are not likely to aim to avoid all risk but to minimise it.

Regarding the above submitter issues:

- we accept the applicant’s evidence and assessment of a “low” PIC for the existing environment below the dam but note, as discussed above, the potential for an additional dwelling within the inundation zone area on the Staig property that requires this classification to be reviewed. An additional dwelling (when coupled with a borderline low/medium PIC) would lead to an upgraded PIC to “medium”.
- there is no evidence of property values being negatively affected below other dams in Tasman and we reject adverse effects on property values in this case. If they did occur, it will be very short term only. It is contended that existing land

use issues, including flooding hazards, will continue to potentially influence and dominate land value considerations in the longer term.

- we accept the applicant's evidence that the historic school (Playcentre) building is unaffected
- we accept there is potential for minor adverse effects on downstream land use including subdivision that would result in additional housing within the affected area.

It is expected that the applicant will explain the PIC classification at the hearing however Commissioners are also referred to *http://www.dbh.govt.nz/dam-safety* for fuller information on the Dam Safety Scheme. The conditions attached to this report relate to a "low" PIC dam and different conditions are likely to be appropriate for higher PIC classifications.

Having said that, Commissioners are not restricted in the conditions that are imposed relating to dam safety and additional monitoring conditions may well be considered appropriate for a "low" PIC dam.

3.7 Dam Safety Legislation

Regarding the dam safety legislation under the Building Act 2004 and ongoing compliance responsibilities, it is relevant that the owners of "low" PIC dams are required to review their dam classification 5 yearly but otherwise, any monitoring requirements need to be specified as resource consent conditions. In contrast, owners of "medium" and "high" PIC dams are required under the legislation to submit a Dam Safety Assurance Programme (DSAP) for approval by the Council and submit annual Dam Compliance Certficates (DCC). The purpose of the DCC is to confirm ongoing surveillance and monitoring of the dam in accordance with the DSAP. It is clear that compliance costs increase with the PIC rating for large dams.

3.8 Public Liability

Submitters cite the following issues relating to liability insurance and a warning system for dam failure:

- Lack of clarity re the public liability insurance including whether it will transfer to new owners and whether downstream landowners would face increased insurance costs

- The need for a dam failure warning siren

Submitters are concerned about the lack of clarity re the public liability insurance including whether it will transfer automatically to new owners, and whether downstream landowners are likely to face increased insurance costs.

For some years, large dam owners in Tasman have been required to hold public liability insurance and to maintain this cover for the life of the dam. The requirement is a condition of resource consent and the consent will be ongoing with a maximum (RMA) term of 35 years. At the end of that term, the consent will need to be "renewed" and it can be assumed it would be subject to the same condition. Regional consents do not transfer automatically with land ownership but must be

transferred in writing and this is typically a condition of the sale and purchase agreement.

Under Common Law, it is the responsibility of dam owners to not be negligent when undertaking activities and not cause nuisance to others. The requirement to obtain public liability insurance recognises the significant cost in the event of dam failure. In many countries, liability insurance is a compulsory form of insurance for those at risk of being sued by third parties for negligence. The reason for such laws is that the classes of insured are deliberately engaging in activities that put others at risk of injury or loss. Public policy therefore requires that such individuals should carry insurance so that, if their activities do cause loss or damage to another, money will be available to pay compensation.

It is unlikely that downstream landowners would face increased insurance costs as a result of the dam provided it was designed and constructed in accordance with the standards required by the Council.

Note: In the case *Alexandra District Flood Action Society V Otago RC*, Contact Energy had increased the flood risk to properties in Alexandra from the operation and existence of their dams including at Roxborough. In that case, the court deemed it appropriate that Contact Energy volunteer to compensate landowners by paying their increased premiums but also providing them with cover from all flood events with no need to prove liability. The Contact Energy situation does not apply in this case as there is no return period or occurrence probability and this note is for completeness.

3.9 Design Issues

Submitters are also concerned about aspects of the proposed dam design including:

- the adequacy of a single dam box culvert spillway
- that the applicant's access road crossing the stream will divert flood waters into the Staig house (Mr Staig)

Note: One submitter (Mr Edmonds, Spring Grove Drill Hall Committee) was clearly unaware that the applicant had reduced dam storage to 30,000 cubic metres.

Regarding the above matters, Eric Verstappen considers they have been addressed professionally and competently by the applicant's engineers (Tonkin & Taylor), that there were no grounds for the proposed design to be independently reviewed and that a high level of design competence and cautious review will continue through the building consent process.

3.10 Property Boundary

As discussed under the permitted baseline section of the report, any dam must also be setback five metres from an internal boundary and 10 metres from a Council road or consent is required. An important issue is to ensure clear ownership and liability for a dam and to achieve this it is particularly important that the entire dam embankment and any appurtenant structure shall be contained within a single legal title. This is adopted as a condition of this consent. Notwithstanding this, the existing property boundary which is shown to pass through the water body formed by the dam can be authorised in this case as applicant owns both properties. Otherwise, this

would be a trespass by the lake onto another property and an easement would be appropriate.

3.11 Construction Management

Various submitters are concerned about adverse environmental effects during the construction period particularly the risk of dam failure and the Opuha dam failure is cited by some. Issues include:

- Adverse noise, dust, vibration – including as a result of the additional cut and filling to reduce storage to 30,000 cubic metres
- Increased traffic movements
- Exposure of the catchment to intense rainfall events
- Concern as to the carbon footprint of dam construction

Little information was provided with the original application relating to dam construction methodology, and was not updated relating to the proposed reduced storage ie 30,000 cubic metres.

Various of the above are relevant matters for a Construction Plan and a Sediment Control Plan. These plans would be a requirement of consent with the aim to control erosion and sedimentation onsite sufficient to avoid downstream sedimentation. Possible conditions have been drafted.

Regarding the risk of dam failure during construction, my assessment is that the submitters are considerably overstating the potential for adverse environmental effects during this period. This dam is not Opuha in dam size or catchment area and the critical construction stages are likely to be achievable within predictable "windows" of settled summer weather.

TDC's engineering standards are not relevant to this application relating to activities on private land.

4. CONCLUSION

In our opinion, the application is in general accordance with the objectives and policies of the TRMP. The objectives and polices envisage development and state that the effects from this development need to be avoided, remedied and mitigated. The temporary effects can be adequately addressed with management plans and the long term effects through the detailed design phase of the project.

The application is considered consistent with the land disturbance objectives and policies provided a Construction Plan with a Sediment Control Plan to control erosion and sedimentation is developed and onsite control is sufficient to avoid downstream sedimentation.

The application is consistent with the natural hazard objectives and policies as the applicant proposes to protect the dam from flood flows and the dam will reduce rather than increase downstream flooding. The applicant has assessed the geological stability of the area and it has been found to be stable for their purposes.

The application is also consistent with the TRP rules for dams.

With regard to the RMA and its purpose and principle to promote the sustainable management of natural and physical resources it has previously been stated that the application is not inconsistent with it. However, Commissioner's must be satisfied that the applicant has demonstrated that the dam can be constructed so that it is safe such that it poses no real risk to downstream property or persons.

Regarding the applications (i.e. RM081100, RM081077 & RM081078) if the Commissioner's are of a mind to grant consent, draft consents and conditions are attached to this report.

Both myself and Eric Verstappen are happy to answer any questions.

4.1 Duration of the Consent

The applicant has not specified a consent term and 15 years is considered appropriate for the water permit (take and use) while the maximum 35 year term under the Act is appropriate for the two (landuse and riverbed) consents.

An appropriate term for the exercising (and lapsing) of consents is considered to be five years.

Neil Tyson
Consent Planner

Eric Verstappen
Resource Scientist

(DRAFT) RESOURCE CONSENT DECISION

Resource consent numbers: RM081100

Pursuant to Section 104B of the Resource Management Act 1991 ("the Act"), the Tasman District Council ("the Council") hereby grants resource consent to:

Minvest Securities Ltd
(hereinafter referred to as "the Consent Holder")

Activity authorised by this consent:
Landuse (river bed) consent relating to the construction of a dam and use of a river bed.

Location details:

Address of property:	3 Higgins Road, Brightwater
Legal description:	Lot 2 and Lot 3 DP 380879
Certificate of title:	CT 355932 and 355933
Valuation number:	1937044802 and 1937044803

Pursuant to Section 108 of the Act, consent is issued subject to the following conditions and an expiry date of 31 May 2044:

CONDITIONS

Site and Dam

1. **River or Stream bed:** **Unnamed stream**
   Zone & Catchment: Wai-iti, Waimea Catchment
   Dam Dimensions
   Dam Height (m): 11.00
   Crest length (m): 130 approx
   Storage (m^3): 30,000
   Dam Location
   NZ Map Grid Datum: Easting: 2512271 Northing: 5969445

Building Act 2004

2. The Consent Holder shall obtain from the Council a building consent for a dam with a hazard classification of "Low" and the Consent Holder shall in all respects comply with all other requirements under the Building Act 2004.

3. The dam shall be in accordance with the revised application (including a reduced dam storage of 30,000 cubic metres), according to NZSOLD Dam Safety Guidelines and prudent dam engineering practice, in accordance with all relevant requirements under the Building Act 2004 and in accordance with the site directions from the supervising engineer.

4. No part of the dam embankment or any appurtenant structure shall be closer than 5 metres from an internal boundary such that the entire dam and appurtenant structures are contained in a single legal title. Notwithstanding this, the existing property boundary passing through the water body formed by the dam is allowed to the extent shown in the application.

   Advice Notice:

   Condition 4 recognises the existing legal boundary while ensuring that the entire dam structure, spillway etc is contained in a single title ensuring clear liability and ownership of the structure. Trespass by the lake onto another property is a civil matter which is not relevant in this case at this time as the Consent Holder owns both properties.

Notice of Construction

5. The Consent Holder shall advise the Council's Co-ordinator Compliance Monitoring when site works are about to commence and, in addition, when the core trench is fully exposed prior to infilling.

Rock Protection Required

6. Appropriate rock protection (or similar) shall be provided and maintained sufficient to avoid any adverse erosion or scouring of the gully watercourse downstream of the spillway discharge such that there is no adverse effect as a result of the dam beyond the Consent Holder's boundary.

Dam Construction Period and Sediment Control

7. Dam construction earthworks shall occur during the summer months 1 October to 31 May inclusive and appropriate coffer dams, sediment traps and such other practical measures shall be undertaken so as to avoid introducing silt and other contaminants to the stream below the dam.

Vegetation

8. The Consent Holder shall not plant, or allow to grow, any trees or shrubs on the dam embankment or within 3 metres of the dam toe and shall ensure that the dam embankment and any unplanted land is grassed down as soon as practical after dam completion.

Maintenance

9. The Consent Holder shall regularly inspect the dam and maintain its embankment, rock protection, low flow system and spillway in good condition. In particular, the spillway and low flow pipe shall not be obstructed and any damage to the spillway shall be repaired promptly and to the satisfaction of the Consent Holder's registered civil engineer.

Slumping and Seepage

10. Should any slumping or significant seepage be observed of or from the dam embankment, the Consent Holder shall immediately inform the Council's Co-ordinator Compliance Monitoring and shall employ a suitably experienced Chartered Professional Engineer to advise on appropriate remediation measures.

Borrow Cut Restriction

11. There shall be no excavation of in situ Moutere Gravels within 25 metres of the southernmost (upstream) end of the lake formed by the dam.

Review of Conditions

12. The Council may within three months following the anniversary of the granting of the consent 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 unexpected adverse effect on the environment that may arise from the exercise of the consent; and/or

    b) to require the adoption of the best practical option to remedy or reduce any unexpected adverse effects on the environment; and/or

    c) to comply with requirements of an operative regional plan; and/or

    d) for the purposes of implementing a dam safety monitoring programme or such other conditions required pursuant to any building consent granted for this dam or to take account of any new statutory requirements that may come into effect.

Contractor

13. The Consent Holder shall provide a copy of this consent and any other relevant consents to the contractor and their supervising engineer.

Insurance Cover

14. The Consent Holder shall provide evidence of a minimum $1 million public liability insurance cover to Council before commencing work and shall maintain this cover through the life of the dam and produce evidence of cover on request.

OTHER ADVICE NOTES

1. Access by the Council or its officers or agents to the land subject to this consent is reserved pursuant to Section 332 of the Resource Management Act 1991.

2. The Consent Holder shall pay the reasonable costs associated with the monitoring of this consent.

3. This consent to construct a dam is valid for a period of five years from the date of issue and shall lapse at the end of that period unless the holder of this consent has substantially exercised the consent.

4. Unless specifically authorised, no part of the dam or any dammed water shall be closer than five metres from any internal boundary.

(DRAFT) RESOURCE CONSENT DECISION

Resource consent numbers: RM081078

Pursuant to Section 104B of the Resource Management Act 1991 ("the Act"), the Tasman District Council ("the Council") hereby grants resource consent to:

Minvest Securities Ltd
(hereinafter referred to as "the Consent Holder")

Activity authorised by this consent: To take and use storage for irrigation

Location details:

Address of property:	3 Higgins Road, Brightwater
Legal description:	Lot 2 and Lot 3 DP 380879
Certificate of title:	CT 355932 and 355933
Valuation number:	1937044802 and 1937044803

Pursuant to Section 108 of the Act, consent is issued subject to the following conditions and an expiry date of 31 May 2024:

CONDITIONS

Dam Storage, Take and Use Details

1. Category of Source: Storage
   River or Stream being dammed: Unnamed Stream
   Zone: Wai-iti
   Catchment: Waimea Catchment
   Maximum rates of take authorised: 3.3 litres per second
   12 cubic metres per hour
   36.00 cubic metres per day
   250.00 cubic metres per week
   3,000.00 cubic metres per annum

   Dam Details
   Dam Number: 301
   Dam Storage (m^3): 30,000
   Location: Easting: 2517383 Northing: 5979461
   Meter Required: Yes

Residual Flow System

2. The Consent Holder shall install and operate a residual flow system in their dam, which shall be capable of discharging to the watercourse below the dam a residual flow of a minimum of two litres per second and the discharge pipe intake shall be screened and/or constructed to avoid the entrapment of fish.

The residual flow system shall include a water meter as specified in Condition 4 and an adjustable valve to record and monitor the residual flow release from the dam.

The Consent Holder shall advise the Council's Co-ordinator, Compliance Monitoring when the residual flow system is completed and functioning.

3. The Consent Holder shall discharge to below their dam (Council number 301) a continuous residual flow of a minimum of 0.186 litres per second (112 cubic metres per week) during the months November to April inclusive.

Advice Note:
The requirement to release 0.186 litres per second equates to 112 cubic metres per week and equates to 2,928 cubic metres if operational for the entire six summer months.

Water Meter Specifications, Maintenance and Readings

4. The Consent Holder or their agent shall, at their own expense, install, operate and maintain a water meter that complies with the Council's Water Meter Specifications as stated in the Tasman Resource Management Plan on the discharge pipe from their dam.

5. The Consent Holder shall as a minimum record their water meter reading on the same day each week and, throughout every November to April inclusive, shall return their weekly meter readings to the Council's Co-ordinator, Compliance Monitoring at the end of each two week period by the dates specified each year by Council, provided that Council reserves the right to require returns on a weekly basis during periods of water rationing in the zone.

The Consent Holder is required to supply a complete and accurate record of the water discharged from the dam which shall not be less than the weekly rate specified in Condition 3.

6. The Consent Holder shall pay the reasonable costs associated with the monitoring of this consent including, if and when requested by Council, the full costs associated with water meter calibration to confirm their meter's accuracy is within the range of ±5% provided that meter calibration is not more frequent than five yearly and the full cost of monitoring compliance with the conditions of this consent, including the reasonable costs associated with maintaining a water meter-usage database.

7. The Council may within three months following the anniversary of the granting of the consent 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 unexpected adverse effect on the environment that may arise from the exercise of the consent; and/or

   b) to require the adoption of the best practical option to remedy or reduce any unexpected adverse effects on the environment; and/or

c) to comply with relevant national environmental standards made under Section 43 of the Resource Management Act 1991; and/or

d) to reduce the quantities of water authorised to be taken if the consent is not fully exercised: and

e) to change the residual flow required to be discharged from the dam if it is shown there are unexpected adverse effects on the environment including, but not limited to, adverse effects on existing used wells.

8. The Consent Holder shall keep such other records as may be reasonably required by the Council and shall, if so requested, supply this information to the Council. If it is necessary to install measuring devices to enable satisfactory records to be kept, the Consent Holder shall, at his or her own expense, install, operate and maintain suitable devices.

Adverse Effects on Aquatic Life

9. This consent may not be exercised to the extent that there is any significant adverse effect on resident eels in the dam and a minimum of 1000 cubic metres of storage shall be retained within dam (Council number 301) at all times to provide for their survival and all pipe intakes and discharge pipes shall be screened sufficient to avoid the entrapment of fish and eels.

OTHER ADVICE NOTES

1. Access by the Council or its officers or agents to the land subject to this consent is reserved pursuant to Section 332 of the Resource Management Act 1991.

2. The Consent Holder shall pay the reasonable costs associated with the monitoring of this consent.

3. This consent is valid for a period of five years from the date of issue and shall lapse at the end of that period unless the holder of this consent has substantially exercised the consent.

(DRAFT) RESOURCE CONSENT DECISION

Resource consent numbers: RM081077

Pursuant to Section 104B of the Resource Management Act 1991 ("the Act"), the Tasman District Council ("the Council") hereby grants resource consent to:

Minvest Securities Ltd
(hereinafter referred to as "the Consent Holder")

Activity authorised by this consent: Land disturbance and recontouring

Location details:

Address of property:	3 Higgins Road, Brightwater
Legal description:	Lot 2 and Lot 3 DP 380879
Certificate of title:	CT 355932 and 355933
Valuation number:	1937044802 and 1937044803

Pursuant to Section 108 of the Act, consent is issued subject to the following conditions and an expiry date of 31 May 2044:

CONDITIONS

1. At least 20 working days prior to undertaking any activities authorised under this consent, the Consent Holder shall submit to the Council's Co-ordinator Compliance Monitoring a Construction, Erosion and Sediment Management Plan (CESMP) which, as a minimum, shall contain the following:

    a) description and engineering design details of the works;

    b) description of temporary activities and equipment storage in specified areas;

    c) description of proposed construction programme including timetable, sequence of events and duration including any final land restoration;

    d) description of construction methods and equipment to be used;

    e) description of methods proposed for minimising generation of sediment and limiting erosion;

    f) description of methods proposed for dust suppression during construction activities;

    g) identification of the location, design, operation and maintenance of stormwater runoff controls and sediment control facilities;

h) description of steps taken to inform staff and contractors about the conditions of consent and the management plans;

i) description of traffic management and property access management;

j) contingency plans for flooding and any other potentially foreseeable event;

k) complaints and reporting procedures.

2. Works shall not commence until the CESMP is certified by the Council's Co-ordinator Compliance Monitoring. The CESMP will be certified by the Council's Co-ordinator Compliance Monitoring if he is satisfied it will meet the following outcomes:

a) minimise the disturbance to land;

b) construction is appropriately staged;

c) protect steep slopes from erosion;

d) protect watercourses from sediment discharge;

e) minimise run off from exposed areas and steep slopes;

f) trap and remove run off sediment; and

g) topsoil is retained wherever possible.

3. The CESMP shall include sufficient plans and/or cross-sections etc to identify the proposed sources of the fill to be used both for the dam embankment and to infill the reservoir and shall demonstrate how all slopes will be stable at the completion of the works.

4. All sedimentation mitigation or control measures shall be maintained by the Consent Holder for as long as there is a potential for sediment movement to adversely affect off-site areas or natural water.

5. All excavations over one metre depth and the construction of any stormwater detention structures shall be planned and supervised under the direction of a geotechnical engineer experienced in earthworks and soils engineering.

6. All exposed ground outside the reservoir shall be reinstated with vegetation as soon as is practicable and at least within six months of the completion of the earthworks to limit erosion and reduce adverse visual effects. This condition shall be considered to be complied with when 100% vegetative cover has been established.

7. The Consent Holder shall avoid excavation of in situ Moutere Gravels within 25 metres of the southernmost (upstream) end of the lake formed by the dam.

8. The Council may within three months following the anniversary of the granting of the consent 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 unexpected adverse effect on the environment that may arise from the exercise of the consent; and/or

b) to require the adoption of the best practical option to remedy or reduce any unexpected adverse effects on the environment; and/or

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

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. 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 Tasman Resource Management Plan (TRMP);
   b) be allowed by the Resource Management Act; or
   c) be authorised by a separate resource consent.

6 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.

Tasman District Council

COPY
RESOURCE CONSENT DECISION

Resource consent numbers: RM081064

Pursuant to Section 104A of the Resource Management Act 1991 ("the Act"), the Tasman District Council ("the Council") hereby grants resource consent to:

Minvest Securities Ltd
(hereinafter referred to as "the Consent Holder")

Activity authorised by this consent: Land use consent for the construction of two dwellings (one on each of Lots 1 and 2).

Location details:

Address of property:	3 Higgins Road, Brightwater
Legal description:	Lot 2 and Lot 3 DP 380879
Certificate of title:	CT 355932 and 355933
Valuation number:	1937044802 and 1937044803

Pursuant to Section 108 of the Act, this consent is issued subject to the following conditions:

CONDITIONS

1. The construction of the dwellings on Lots 2 and 3 shall be restricted to the respective building platforms indicated on Plan A attached and dated 3 December 2008.

2. The dwellings built on both Lots 2 and 3 shall comply with the following standards:

   a) each of the dwellings shall be used for a single residential activity;

   b) the height above natural ground level shall be no more than 7.5 metres;

   c) the dwelling shall be set back at least 30 metres from any horticultural plantings, viticultural plantings or plantation forest, on any adjoining properties;

   d) each of the dwellings shall comply with all other the bulk and location standards of the Rural 1 Zone.

3. The exterior of the dwellings shall be finished in colours that are recessive and blend in with the immediate environment. The Consent Holder shall submit to the Council's Consent Planner for approval prior to applying for building consent the following details of the colours proposed to be used on the walls and roof of the building:

a) the material to be used (eg, paint, Colorsteel);

b) the name and manufacturer of the product or paint;

c) the reflectance value of the colour;

d) the proposed finish (eg, matt, low-gloss, gloss); and

e) either the BS5252:1976 (British Standard Framework for Colour Co-ordination for Building Purposes) descriptor code, or if this is not available, a sample colour chip.

The building shall be finished in colours that have been approved by the Council.

Advice Note:
The Consent Holder should engage the services of a professional to ensure the exterior cladding and colour selection are compatible with the long-term durability of the building material in the subject environment and in accordance with the requirements under the Building Act 2004.

4. That on-site stormwater management is provided via soakage to ground or by use of natural drainage channels directed away from any building foundation and effluent disposal fields.

Advice Note:

Please note that any wastewater disposal system will need to comply with the standards in Rule 36.1.4 of the Tasman Resource Management Plan unless authorised by a resource consent.

ADVICE NOTES

Council Regulations

1. This resource consent is not a building consent and the Consent Holder shall meet the requirements of Council with regard to all Building and Health Bylaws, Regulations and Acts.

Other Tasman Resource Management Plan (TRMP) Provisions

2. Any activity not covered in this consent shall either comply with: 1) the provisions of a relevant permitted activity rule in the TRMP; or 2) the conditions of separate resource consent for such an activity.

   In respect of stormwater discharges on Lots 1 and 2, the criteria of TRMP Permitted Activity Rule 36.4.2 must be complied with or, alternatively, resource consent (discharge permit) will be obtained for the stormwater discharge.

3. Access by the Council's officers or its agents to the property is reserved pursuant to Section 332 of the Resource Management Act 1991.

4. Pursuant to Section 127 of the Resource Management Act 1991, the Consent Holder may apply to the Consent Authority for the change or cancellation of any condition of this consent.

LAND RESOURCES

Objective 6.3 - Avoidance, remedying, or mitigation of adverse cross-boundary effects of rural land uses on adjacent activities.

REASONS:
Some rural land uses may generate adverse effects for adjacent properties, including contaminant discharges, emissions of noise or odour, and shading. Such effects need to be managed to an appropriate degree.

Objective 6.4 - Avoidance, remedying, or mitigation of soil loss or damage, sedimentation and other adverse effects of land uses.

REASONS:
Soil damage or loss, sediment contamination of water bodies and other adverse effects of soil or vegetation disturbance and other land use activities are significant risks to key natural resources that need to be managed through a variety of measures.insert

Policy 6.2 - The Council will ensure that subdivision and uses of land in the rural areas of the District avoid, remedy or mitigate adverse effects on:

(i) productivity and versatility of land, particularly in areas of high productive value; and

(ii) provision of services, including roading, access, water availability, wastewater treatment or disposal; and

(iii) amenity, natural and heritage values of sites, places or areas including landscape features such as karst terrain; and

(iv) accessibility of mineral resources; and

(v) socioeconomic viability of adjacent areas;

and that are not unnecessarily exposed to adverse effects from:

(a) adjacent land uses across property boundaries; and

(b) natural hazards.

EXPLANATION AND REASONS:
Council wishes to protect and maintain rural land for soil-based production activities. However, it recognises that a high demand exists for large-site residential development in rural areas, generally in close proximity to urban services, and with sufficient space and character for lifestyle choices. There is also a need for Council to ensure that other land uses including buildings, structures, plantings and land disturbance activities in the rural areas of the District avoid, remedy or mitigate adverse effects on visual amenity and heritage values. There are areas in the District where climate, soil type or topography may limit production options, but which may be desirable or appropriate for activities such as

rural residential development provided the adverse effects of such development may be managed.

Policy 6.4

The Council will avoid, remedy or mitigate adverse effects of adjacent rural land use activities across property boundaries including effects of:

(i) noise;

(ii) odour;

(iii) contaminant discharges;

(iv) shelter belts;

(v) fire risk.

EXPLANATION AND REASONS:
A number of predominantly intensive rural land use activities may create adverse effects for other adjacent rural uses. Examples of these conflicts are shading from shelterbelts, agrichemical spray drift, offensive odours and noise from various devices. The Council seeks to manage the adverse effects where neighbour or community conflicts are likely.

Policy 6.5

The Council will avoid, remedy or mitigate soil damage or loss, sedimentation and other adverse effects of land use activities.

Explanation and Reasons:
A variety of soil or vegetation disturbance and other land use activities carried out for farming, plantation forestry, mineral extraction or other purposes may cause soil damage or loss, sedimentation in water bodies and associated risks for water and river resources. Management of erosion, damage and sedimentation effects of land use activities is important to sustain the quality and life-supporting capacity of soil, water and river resources.

FRESH WATER RESOURCES

Objective 7.2

Fair and efficient allocation of available water to abstractive users on a sustainable basis.

Reasons:
While water fluctuates in availability, allocation requires maintenance of life-support or instream needs before water is available for abstractive allocation. Available water needs to be made accessible to abstractive users on a continuing basis in ways that are both fair and efficient. Except where there is sufficient evidence of future public need for water, Council will allocate water on a first come, first served basis, within sustainable limits of allocation.

Objective 7.3

Avoidance, remedying or mitigation of reductions in water availability for sustainable water uses, and the efficient use of such available water, arising from water or land uses.

Reasons:
Land and water use activities can affect water resources for a variety of values and uses. Vegetation changes, particularly the establishment of tall vegetation can intercept and remove rainfall that would otherwise contribute to stream flows or aquifer recharge. Reduction in available water by abstractive users can further adversely affect instream values, other water users and aquifer viability. There is a need to ensure that all abstracted water is used efficiently and avoids, remedies or mitigates such adverse effects on water resources. There is also a need to address the reduction in available water which may be caused by land use changes, particularly through establishment of tall vegetation by ensuring that such effects be avoided, remedied or mitigated to an appropriate degree.

Policy 7.3

The Council will promote efficiency in water use.

EXPLANATION AND REASONS:
Water is a limited resource in the District of absolute economic and ecological significance. Enhancing its availability by measures to achieve efficient uses is an important way of sustaining the water resource.

RESOURCE MANAGEMENT PROCESS

Objective 13.2

Use of effective methods in the development and implementation of resource management plans in fulfilment of duties under the Resource Management Act.

REASONS:
Sound resource management practice demands adoption of good process methods in order to develop and deliver good resource management results. Such methods should be open to the public and Council clients, understandable and fair to all interests, flexible in their response to situations, and efficient in their use of effort. Effective process methods should result in sound decisions on policies, consents and other actions to implement plans. Good process includes adequate environmental investigations, monitoring and enforcement to ensure that good resource management decisions are made and complied with, and to enable progress in achieving resource management results to be established.

Policy 13.7

The Council will adopt a cautious approach to making decisions on plans and consent applications that:

seeks and utilises all relevant available information; and

acknowledges uncertainty or inadequacy in the information available about any potential adverse effect (or risk) of activities, including information about the type and level of risk; and

establishes whether any risk is able to be remedied or mitigated to an acceptable degree or is of a type that must be avoided; and

ensures that the need for further information about any risk is considered when making judgements under (c) above; and

results in decisions that are responsive to new information about effects and risks.

EXPLANATION AND REASONS:
The Council may have to make decisions on plans or consents where there is inadequate information about the likely effects of proposals or activities, or where the information suggests that there are potential adverse effects (or risks). The Council will acknowledge whenever these uncertainties are present. It will consider whether it can obtain further information, or whether any potential adverse effect can be avoided or reduced to an acceptable degree. The Council recognises the role of further information when making its decisions.

CHAPTER 5 - SITE AMENITY EFFECTS

5.1.2 Objective

Avoidance, remedying or mitigation of adverse effects from the use of land on the use and enjoyment of other land and on the qualities of natural and physical resources.

5.1.3 Policies

5.1.3.1 To ensure that any adverse effects of subdivision and development on site amenity, natural and built heritage and landscape values, and contamination and natural hazard risks are avoided, remedied, or mitigated.

5.1.3.8 (Proposed) Development must ensure that the effects of land use or subdivision activities on stormwater flows and contamination risks are appropriately managed so that the adverse environmental effects are no more than minor

5.1.3.9 To avoid, remedy, or mitigate effects of:

(a) noise and vibration;
(b) dust and other particulate emissions;
(c) contaminant discharges;
(d) odour and fumes;
(e) glare;
(f) electrical interference;
(g) vehicles;
(h) buildings and structures;
(i) temporary activities;
beyond the boundaries of the site generating the effect.

5.1.3.11 To avoid, remedy, or mitigate the likelihood and adverse effect of the discharge of any contaminant beyond the property on which it is generated, stored, or used.

CHAPTER 7 - RURAL ENVIRONMENT

7.4.2 Objective

Avoidance, remedying or mitigation of the adverse effects of a wide range of existing and potential future activities, including effects on rural character and amenity values.

CHAPTER 12 - LAND DISTURBANCE EFFECTS

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.

12.1.3 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.

CHAPTER 13 NATURAL HAZARDS

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.

13.1.3 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.

CHAPTER 30 - FRESH WATER RESOURCES

Policies
30.1.17 To avoid, remedy or mitigate the adverse effects of water damming either by itself or cumulatively with other dams, including adverse effects on:

(a) the flow regime or water levels in rivers, lakes and wetlands;
(b) passage of fish and eels
(c) other water users;
(d) aquatic ecosystems and riparian habitat;
(e) water quality;
(f) groundwater recharge; and
(g) adverse effects of dam failure on (a) to (f) above

30.3.2 To recognise the beneficial effects of water augmentation, including harvesting in dams and reservoirs when considering water permit applications, including beneficial effects on:

(a) aquatic habitat and ecosystems;

(b) increased water availability;

(c) downstream water bodies;

(d) other water users.

CHAPTER 33 DISCHARGES TO LAND AND FRESHWATER

33.3.0 Objective

Stormwater discharges that avoid, remedy or mitigate the actual and potential adverse effects of downstream stormwater inundation, erosion and water contamination.

Policies 33.3

33.3.4 To avoid, remedy or mitigate the potential for flooding, erosion and sedimentation arising from stormwater run off.

CHAPTER 34 DISCHARGES TO AIR

34.2.0 Objective

The discharge of contaminants to air in such a way that avoids, remedies or mitigates adverse effects while:

(a) maintaining existing air quality; and

(b) enhancing air quality where existing quality is degraded for natural or human uses or values.

Policies 34.2

34.2.1 To ensure that any discharges of contaminants to air are undertaken in a way that avoids, remedies, or mitigates any adverse effects on the receiving environment or surrounding activities.

34.2.1A To allow or regulate contaminant discharges to air in relation to their actual or potential contamination effects, including:

(a) Adverse effects on human health.

(b) Adverse effects on amenity values.

(c) Contamination of adjacent sites.

(d) Degradation of water quality.

(e) The production of objectionable, noxious or offensive odours.

34.2.2 To provide for contaminant discharges to air while maintaining or enhancing the ambient air quality.

34.2.4 To provide for management of some actual and potential adverse effects of discharges to air - particularly odour and dust effects - as ancillary to landuse activities, and to take them into account when resource consent applications are being considered.

34.2.5A To adopt the best practicable option for discharge of contaminants to air associated with activities which are temporary or informal in nature.

APPENDIX 4
Liability insurance

From Wikipedia, the free encyclopedia

Liability insurance is a part of the general insurance system of risk financing. Originally, individuals or companies that faced a common *peril*, formed a group and created a self-help fund out of which to pay compensation should any member incur loss. The modern system relies on dedicated carriers to offer protection against specified perils in consideration of a premium. Liability insurance is designed to offer specific protection against third party claims, i.e., payment is not typically made to the insured, but rather to someone suffering loss who is not a party to the insurance contract. In general, damage caused intentionally and contractual liability are not covered under liability insurance policies. When a claim is made, the insurance carrier has the right to defend the insured. The legal costs of a defense are not always affected by any policy limits, which is useful because they can be significant where long trials are held to determine either fault or the amount of damages.

Overview of liability insurance

In many countries, liability insurance is a compulsory form of insurance for those at risk of being sued by third parties for negligence. The most usual classes of mandatory policy cover the drivers of vehicles, those who offer professional services to the public, those who manufacture products that may be harmful, constructors and those who offer employment. The reason for such laws is that the classes of insured are deliberately engaging in activities that put others at risk of injury or loss. Public policy therefore requires that such individuals should carry insurance so that, if their activities do cause loss or damage to another, money will be available to pay compensation. In addition, there are a further range of perils that people insure against and, consequently, the number and range of liability policies has increased in line with the rise of contingency fee litigation offered by lawyers (sometimes on a class action basis). Such policies fall into three main classes:

Public liability

Industry and commerce are based on a range of processes and activities that have the potential to affect third parties (members of the public, visitors, trespassers, sub-contractors, etc. who may be physically injured or whose property may be damaged or both). It varies from state to state as to whether either or both employer's liability insurance and public liability insurance have been made compulsory by law. Regardless of compulsion, however, most organizations include public liability insurance in their insurance portfolio even though the conditions, exclusions, and warranties included within the standard policies can be a burden. A company owning an industrial facility, for instance, may buy pollution insurance to cover lawsuits resulting from environmental accidents.

Many small businesses do not secure general or professional liability insurance due to the high cost of premiums. However, in the event of a claim, out-of-pocket costs for a legal defense or settlement can far exceed premium costs In some cases, the costs of a claim could be enough to shut down a small business.

Businesses must consider all potential risk exposures when deciding whether liability insurance is needed, and, if so, how much coverage is appropriate and cost-effective. Those with the greatest public liability risk exposure are occupiers of premises where large numbers of third parties frequent at leisure including shopping centers, pubs, clubs, theaters, sporting venues, markets, hotels and resorts. The risk increases dramatically when consumption of alcohol and sporting events are included. Certain industries such as security and cleaning are considered high risk by underwriters. In some cases underwriters even refuse to insure the liability of these industries or choose to apply a large deductible in order to minimize the potential compensations. Private individuals also occupy land and engage in potentially dangerous activities. For example, a rotten branch may fall from an old tree and injure a pedestrian, and many ride bicycles and skateboards in public places. The majority of states requires motorists to carry insurance and criminalise those who drive without a valid policy. Many also require insurance companies to provide a default fund to offer compensation to those physically injured in accidents where the driver did not have a valid policy.

In many countries claims are dealt with under common law principles established through a long history of case law and, if litigated, are made by way of civil actions in the relevant jurisdiction.