



**Outcomes from the
2005 NZ-INTIMATE Meeting (informal)**
Geological Society of New Zealand 50th Annual Conference, Kaikoura:
December 1st, 2005
Convener – Brent Alloway

BACKGROUND: Outcomes from The National Meeting in July, 05

6. Each working group to identify the zones and transitions in each record – both high resolution and fragmentary.

Assigned tasks & timeline:

- **Brent:** to e-mail Poster record templates (as CorelDraw files) to all record coordinators.
- **Record Coordinators:** Consult with record contributors to identify the events in their data and estimate how well/precisely the events, or transitions/zones, are defined.
- **Jamie:** to receive event identification schemes from each group by the end of August.

7. Possible get-together at the Kaikoura GSNZ Meeting - Lionel Carter suggested that we could possibly get together at the Kaikoura GSNZ Meeting (28th November to 1st December) to discuss assigned zones/transitions and hopefully attain some 'event' consensus before the Australasian Meeting in Feb., 06.

OBJECTIVE OF THIS MEETING:

To discuss assigned zones/transitions and hopefully attain some 'event' consensus before the Australasian Meeting in February, 06.

Apologies received: Jamie Shulmeister, Matt McGlone, David Lowe, Rewi Newnham, Paul Williams, Helen Neil, Peter Almond

Present: Cam Nelson, David Nobes, Penny Cooke, Lionel Carter, David Barrell, Phil Shane, Phil Tonkin, Peter Barrett, Bob Stewart, Bruce Hayward, Bob Carter, Erica Crouch, Pam Chester

AGENDA:

1. Event Definition
2. Antarctic Reference Section(s)
3. Revision of NZ-INTIMATE Poster version 1

1. EVENT DEFINITION

- **Event records received:** Auckland (R. Newnham); Kaipo (R. Newnham & D. Lowe); Okarito (R. Newnham, M. Vandergoes & C. Hendy); NZ-Glacial (D. Barrell).
- Speleothem event record from Williams et al. (2005)
- MD97-2121 event record from L. Carter (pers. comm.) [**Lionel to completed**]

Event records outstanding: Otamangakau & Campbell Island (**Matt McGlone**)

Event records to be included: MD97-2120 (**Penny Cooke**)

NZ-Compilation vers. 1 (01-12-05)

Agreed NZ-Event Terminology	Auckland	Kaipo	Okarito	Speleothem	MD97-2121	EPICA
LGM Onset	27-28		28-29		c. 27	28
LGM Complex #	27-21 ¹		27-21 ^{1,##}		-	-
Termination 1 Onset	18-19 ²	18 ²	18	Need to add	18	17
ACR-equivalent	14-11 ³	13.8-12.4 ³	15-11	13.21-11.69 (NZLGR, Williams et al. 2005)	14.1-12.5 (bot) 13.7-11.5 (sur)	13.8-12.2
Early Holocene Warming Optimum	10-11	11	12-11	11.1-10.8	7.0-9.0 SST-Alkenone	11.5-9.2

¹ Encapsulating Kawakawa Tephra

² Prior to Rerewhakaaitu Tephra

³ Post Waiohau Tephra

Variable signature across NZ - depends on interaction between Sub-tropical and Sub-Antarctic influences

Supported by Quartz flux in Taranaki

- There was some healthy discussion regarding whether we should be referring or defining our own regional (NZ) events. It was pointed out that the acronym NZLGR for instance has now been introduced into the international literature (e.g. Williams et al. 2005). Most participants felt that associating NZ-events to internationally recognised events (e.g. ACR) should take precedence over new and/or local names of similar time equivalence. Thus, there was consensus that usage of international event terminology in the New Zealand context is preferred at this stage and might assist international researchers in comparing their records with ours.
- ‘Last Termination’ was changed to ‘Termination 1’ (defined as the glacial to interglacial transition). The usage of ‘Termination’ for other things (e.g. glacial records) should be avoided to minimise confusion.

2. ANTARCTIC REFERENCE SECTION NZ-INTIMATE

- There was discussion regarding NZ's position with respect to Antarctic reference records. Peter Barrett (VuW) briefly outlined the relative strengths and weaknesses of the Vostok, EPICA Dome C and Law Dome records. Peter suggested that we perhaps stack our Antarctic ice core records to form a single composite reference section. As already outlined by Nancy Bertler and Tim Naish at the July 05 NZ-Meeting – Law Dome has an exceptional Holocene record but poorer LGM resolution while Vostok and EPICA Dome C records have a better resolution LGM record. It was therefore decided that for the time being we should perhaps stack both the EPICA Dome C and Law Dome records to form a 'composite' Antarctic reference section [**Unanimous**].
- This stance will be investigated by the NZ-ice core coordinators (Nancy Bertler and Tim Naish) and if deemed satisfactory, can be carried forward to the Australasian-INTIMATE Meeting for wider discussion.

3. REVISION OF NZ-INTIMATE POSTER VERSION 1

Kelvin Berryman (GNS Science) suggested the inclusion of the NZ sea-level curve (modified from Jeremy Gibb). [**Unanimous**]. *Brent to get in contact with Ursula Cochran (GNS Science) – who apparently has this data.*

***Outcome** - The curve with radiocarbon age data points with associated errors has now been received from Ursula.*

Penny Cooke (Waikato Univ.) and Lionel Carter (NIWA) mentioned that the planktic curve for MD97-2120 be included to give a NZ-South Ocean flavour and since the ACR is prominently featured [**Unanimous**]. *Penny Cooke to send data to Brent or David Barrell for poster inclusion v. 2.*

Lionel Carter (NIWA) recommended that the MD97-2121 record should remain as is (on Poster v. 1).

David Barrell (GNS Science) questioned the continued inclusion of the Otamangakau record on the NZ-INTIMATE Poster v. 1 and queried the status of the Campbell Island record. *Brent to check with Matt McGlone, Landcare Research, Lincoln.*

***Outcome** - Matt was contacted on Tuesday 6th December and promised that scrub, grass, forbs and temperature curves (in calendar years) for Campbell Island would be sent early in the New Year. Also Matt considered it important that the Otamangakau record be retained. Temperature curves would be provided to accompany the pollen proxy data already identified on the Otamangakau poster record [**Matt to send data to Brent or David Barrell for poster inclusion**]*

Brent Alloway – Convener
7th December, 2005

Acknowledgment:

I would like to acknowledge Penny Cooke (Waikato University) and Lionel Carter (NIWA) for previewing earlier drafts of this document to ensure that its content is an accurate reflection of what was actually discussed by attending NZ-INTIMATE participants.