



# Plan B Information Meeting

Monday July 16  
2018

# Why are we here?

- This is an information meeting about next steps on Plan B.
- Plan B is the investigation into Altair's **power supply** relative to allowing **air-conditioning**.
- The presentation follows the newsletter format.
- Please ask questions at any time.
- There will be no voting.
- We will have an EGM next month to make any decisions.

# Background

- Altair was designed by Engelen Moore, Architects as a 'cross-flow' ventilation residential building. The original design was for no air-conditioning.
- In part, this contributed to Altair being voted 'best residential scheme in the world' in 2002.

# Background

- The developers installed ducted air-conditioning in two penthouses; and partial ducted air-conditioning (lounge only) in eight sub-penthouses.
- Altair has 129 apartments with no air-conditioning.
- Long-standing by-laws prohibit (more) A/C.

# Background

- Following resolution of the ‘defects issue’ in 2010 the EC consulted the real estate agents who sold the most properties in Altair to find if there were major remaining deterrents for potential buyers (2011).
- The lack of air-conditioning was a common issue for potential buyers.

# Background

- Our Building Managers advised that it was unlikely we had sufficient power to allow universal A/C.
- We commissioned international electrical engineering consultants, Northrop, to investigate.
- Northrop (2012) confirmed that Altair did not have enough power to allow universal A/C and that resolving the issue would be a major project.
- There was no owner interest in pursuing the issue.

# Background

- At the 2017 AGM an owner proposed a motion to allow A/C in Altair.
- This was the first time that any formal request to review A/C had been tabled in at least 12 years.
- The motion was withdrawn but the SC agreed to review the issue.

# Background

- Electrical engineering consultants, Shelmerdines, were commissioned to investigate.
- Shelmerdines confirmed that Northrop (and our Building Managers) were correct.
- Altair does not have sufficient power supply to allow universal A/C.



# Background

- At the 2018 AGM the owners voted to require the SC to advance the research into Plan B regarding:
  - Practicality.
  - Logistics.
  - Costs.

# Research

- Electrical Engineers – Shelmerdines.
- Grace Lawyers.
- City of Sydney Planning.
- Independent certified Town Planner.
- Architectural practice.
- Electrical Contractors – CESA.
- Real estate agents.
- Strata Management – Strata Choice.
- Building Management – Francis Management.

# Research

18 months (and all up - \$35k).

Not totally definitive and probably won't be until after any decision to proceed...

but close enough to make a decision.

# Research – Plan C

- At the 2017 AGM the SC was also asked to investigate ways of cooling Altair without A/C.
- At the recommendation of Sustainability Now, who did our Energy Audit, we approached a specialist ‘green’ architect, Graham Hunt.

# Research – Plan C

The architect advised that

- It was not practical to ‘re-engineer’ Altair as a climate sensitive building.
- There were measures that could be adopted.
- Mainly glass tinting, awnings and ceiling fans.
- There are “no miracle cures”.
- If all the measures were employed he estimated that the temperature could be reduced by one or two degrees on a mild day.
- BUT if the temperature got into the 30’s then nothing but A/C will make much difference.

This is not just about  
Air-Conditioning

It is about Altair's  
Power Supply

# Power Supply

- Monitoring by consultants Northrop (2012) and Shelmerdines (2017) shows that currently the entire Altair building has a peak usage of between 325A and **345A**.
- Altair currently has access to **400A, only**.
- Altair currently has infrastructure.....service mains, main switchboard and service risers in each tower, to carry **400A, only**.

# Power Supply

- Both Shelmerdines and Northrop calculate that to allow unrestricted, universal air-conditioning in Altair, the building would require a total supply of approximately **845A.**



# Power Supply

- Northrop and Shelmerdines have advised that we don't have enough power to allow universal A/C.
- We could put in a sub-station (in the car park). This would give enough power (1600A in three phases) for normally 'unlimited' A/C.
  - Cost approx. \$1.5m.
  - Eliminate 2, maybe 4, car spaces.
  - Loss of power to Altair and Elan for a few days.
  - Legal issues
  - **Abandoned**...at this stage.

# Power Supply

AUSGRID advise that we can access a maximum of **780A – an extra 380A** - from the existing sub-station (in the Elan basement).

- This will require up-grading our wiring, mains etc. – approx. \$300k.
- This wiring will also be required if we ultimately install our own sub-station – so there would be no double-costing.

# Power Supply

- The extra 380A will not be enough to allow universal A/C.
- Apartments would have to be allocated an extra limited supply of Amps for A/C.
- Shelmerdines advise that this supply will be adequate for 'meaningful' A/C but not universal A/C.

# Power Supply

- This would make **no allowance** for any further major draw on electricity such as Electric Vehicle Charging.

# Electric Vehicle Charging(EVC)

- This is potentially a major issue  
– for Altair...and Australia.
- The technology is rapidly evolving and it is simply too soon to say what the solutions are.
- Currently each EVC station requires 32A at start-up. 148 car spaces x 32A = 4735A.
- About 1600A in three phases.
- Four times our current power supply!
- **All** the power that a dedicated Altair sub-station could provide.

# Electric Vehicle Charging(EVC)

- Australia is, currently, very slow in adopting electric cars.
- We are not aware of any electric cars in Altair to date.
- We might 'future-proof' against a future that doesn't arrive...
- or maybe not in the form we expect.

# Electric Vehicle Charging(EVC)

- We are very conscious of the potential impact that EVC might have.
- It is too early to make plans.
- Any upgrades to wiring etc. that are part of Plan B would likely also be required for EVC.
- We retain a watching brief.

# Air-Conditioning

- Altair was designed as a 'non-air-conditioned' building.
- There is no ducting in 90% of apartments.
- Most apartments have no, or very limited, ceiling space and no underfloor space.
- The apartment walls have very narrow cavities.
- It is not practical to retro-fit Altair with A/C ducting.



# Air-Conditioning

- Any new A/C would be individual apartment, wall-mounted, split systems with condensers on the balcony.
- The size of A/C units in each apartment would be strictly limited by allocated amps – and by-laws.
- Even if we had enough power for unlimited air-conditioning it would still be via wall-mounted, split systems.

# Electrical

- Re-wiring, mains up-grades etc. have been quoted by CESA - at about \$300k.
- Shelmerdines have examined the estimate and advise that it is appropriate in specifications and broad price.
- If we proceed we will get competitive quotes.
- The work would take about 12 weeks with minor interruptions to power.

# Amperage Allocation

- We have commissioned Shelmerdines to determine a fair and effective distribution of the extra (380) amps – in three phases.

# Amperage Allocation

- Shelmerdines have considered:
  - Apartment footprint. Altair has 27 floorplans.
  - Measured exposure to exterior walls and wall construction.
  - Apartment aspect – mainly north-east and north-west.
  - Heating and cooling coefficients.
  - Size of apartment by air-condition-able areas. Bathrooms, laundries, hallways have been discounted.
  - Entitlements of existing A/C apartments which are a mix of three- and single-phase.
- Applied to an industry standard model.

# Amperage Allocation

- All owners have a copy of the allocation – back page of newsletter sent June 29.
- The rationale from Shelmerdines has been posted on our website for over two weeks.
- Shelmerdines believe that all apartments will get a meaningful result but some apartments will have A/C ‘zones’ rather than total cover.
- Broadly, the bigger the apartment the harder the job.

# Amperage Allocation

- Owners are responsible for any further research into the A/C effects likely from their amp allocation.
- Shelmerdines will offer a service (at owner cost) to advise on your individual apartment.
- **Highly recommended**...and we may mandate this via by-law as a guarantee of correct installation, best result and required CoSC certification.

# Installation

- Actual A/C installation would be an owner cost.
- A rough guesstimate of actual A/C installation costs is
  - One Bed                      \$5k-10k
  - Two Bed                      \$10k-20k
  - Three Bed                    \$20k-30k
  - **Additional to any Special Levy.**

# City of Sydney Council

- CoSC will require a DA.
- Statement of Environmental Effects by a certified Town Planner.
- Appropriate, agreed processes covering
  - Location
  - Noise
  - Vibration
  - Aesthetics
  - Maybe drainage
  - Each apartment will require qualified certification



# City of Sydney Council

- Approval is not certain.
- It is possible that we will be required to 'offset' the environmental impact of A/C by installing solar panels – irrespective of whether they make financial sense.
- Depends which planner you get... "bit of a raffle".

# City of Sydney Council

- We may be able to obtain an 'umbrella' DA for Altair but...
- **Every apartment** wanting to install A/C will require an **individual DA**...but maybe under the Altair 'umbrella'.
- All apartments will require specific endorsement by the Altair OC to obtain a DA.



# Energy Savings

- We have limited power supply and are very conscious of using and saving energy.
- Our peak electricity rate went up 54% from 2017 to 2018.
- Our gas rate has increased about 25% in two years.

# Energy Savings

- Altair has joined an electricity buying group sponsored by Strata Choice.
- Our peak rate went from about 8c in 2017 to 13c in 2018 but...
- Our peer group in Smart Green Apartments registered peak rates of between 18 and 20c for 2018.
- And our contract peak rate will go down
  - 2019 12c
  - 2020 11c

# Energy Savings

- We are prepared to invest where we are confident of real savings and realistic payback periods.
- We installed pool covers to save heat loss and gas in 2012.

# Energy Savings

- We learned some valuable lessons.
- The payback period must be less than the warranty period.
- Installers sometimes present the best possible scenario and maybe leave some stuff out.
- Theoretical savings are NOT the same as actual savings.
- Measure and monitor.

# Energy Savings

- We commissioned an Energy Audit in 2017.
- Sustainability Now advised that we
  1. Change our fluorescent bulbs to LED
  2. Change our pool heaters from gas to electric.
  3. Install solar panels.



# LED

- We converted all the fluorescent bulbs (400+) in the stairwells, storage areas and car parks to LED in April and May.
- Our June power bill suggests that we have reduced Altair common area total power usage by 30% and
- will achieve payback by the end of 2019.

# Pool Heating

- We are currently reviewing pool heating with a consultant.
- In theory electric heating should be significantly more cost-efficient than gas.
- We have provided detailed data re pool surface areas, volumes, required temperatures, wind and sun exposure etc. to a UNSW research programme.

# Pool Heating

- This analysis suggests that, in **theory**, we could save gas bills of **\$75k** annually.
- Our **actual** annual gas bill to May 2018 is **\$37k**.
- We need to be sure that any savings are real before we invest.
- We may also have to substantially re-model and maybe enlarge our pool room to install electric heaters.
- This project has some possibilities but is a work-in-progress.

# Solar

- We have reviewed solar three times in the last nine years.
- It has never made **financial** sense.
- We commissioned Shelmerdines to re-review solar in 2018.
- Solar would generate up to 110A (in perfect conditions) but reliably maybe 50A (on dull days).
- This is not enough to change the equation for A/C.

# Solar

- Solar panels have various warranties of between 5 and 10 years.
- Solar panels rust. Altair is about 1k from the sea.
- Solar on the roof at Altair has a payback of about 10 years.
- The business case for solar is weak.

# Solar

- The energy companies don't want any excess power we generate.
- We have investigated solar in tandem with pool heating but it doesn't (currently) 'stack up'.

# Solar

- We have investigated adding batteries.
- Batteries are expensive (approx. \$75k);
  - reduce in performance over time and die after 10 years;
  - do not solve any of our issues and
  - never achieve ‘payback’.

# Solar

- Solar does not deliver either
  - Cost-efficiency or
  - Enough extra power to make a real difference.
- We continue to review solar.
- The technology and government and energy company policies are constantly evolving.
- ...but it doesn't (currently) help with A/C.



# Architectural Drawings

- Ian Moore, the original Altair architect, has declined to be involved.
- He is strongly opposed to additional A/C.
- He recommends ceiling fans.

# Architectural Drawings

- Our Town Planner strongly recommends that we retain a 'name' architectural practice as we may need advocacy with CoSC.
- We would need detailed drawings of every affected site (every balcony).
- We may also need 'mechanical' drawings?
- Big job - \$45k-\$55k – maybe more.

# Legal Requirements

- Grace Lawyers confirm that we will need
- A Special Resolution for any change in by-law to allow A/C ...and a Special Levy.
- In simple terms this requires 75% approval by the Owners at a General Meeting.
- A new by-law (or set of by-laws) detailing the conditions under which A/C might be installed.

# Sales Impact

- Eight apartments have sold since November.
- We have consulted the real estate agents who made the sales and asked.
- *Was (lack of) A/C a factor in the sales process?*
- *Could you speculate on what difference A/C might have had?*
- This is NOT a scientific survey but responses were very consistent.

# Sales Impact - Feedback

- Market is down and difficult. Less, 'picky' buyers.
- No buyers seeking non-A/C apartments.
- A/C always a positive
- but not always critical.
- But there is a market that will NOT buy without A/C.
- Buyers assume (a modern building like) Altair will have A/C.
- Noise an issue at 'Opens' (esp. east side).

# Sales Impact - Feedback

- Lack of A/C varies in importance but...
- if is an issue it is a huge issue and...
- Impossible to counter.
- Hard to value but A/C may be worth \$50k-\$100k to the right buyer.
- Lack of A/C narrows market and reduces price tension.
- Installation of A/C ideal - but right to install A/C would be an important sales aid.

# Sales Impact - Summary

- Lack of A/C may not be the defining issue but
  - **If it is an issue, it is a huge issue**
  - Eliminates buyers
  - Narrows the market and
  - Reduces pricing tension.
- Lack of A/C is seen as a negative in a **buyers market.**

# Costs

All costs from consultants but not final quotes.

Costs do not include GST.

Electrical Up-grade	\$290k
Project design and management	\$ 25k
Architectural drawings	\$ 55k
Town Planner	\$ 10k
Legal Costs	\$ 10k
Solar Installation (if required)	\$ 63k
Costs incurred	\$ <u>35k</u>
	<b>\$488k +GST</b>



# Funding - \$400k-\$500k?

Two options.

Special Levy – plus GST.

Amortization

# Special Levy

Tranche A.

1. Known costs – maybe \$375k – similar to the total of all owner's quarterly levies.

2. Maybe October, in line with normal levy.

3. Average owner pays \$2750 per quarter in normal levies – plus Special Levy of \$2750 plus **GST**.

# Special Levy

Tranche B.

1. Maybe April after all costs are finalized.
2. Probably between \$25k and \$125k plus GST.

# Amortization

1. Pay for costs (\$500k) out of Lift Fund.

2. Our 20-year plan projects annual levy increases of **3%**.

(Average annual levy increase from 2010 to 2018 was **1.5%**).

3. To maintain all funds and restore the Lift Fund would require increasing the levies to **4% (maybe 5%) from 2019 to 2025...**barring any surprises (EVC, Aluminium Louvres?).

# Amortization

- This method would not require a Special Levy and ...
- May have tax advantages for investors.
- But it would remove any 'margin' or buffer.
- Would require adjustments each year and approval by the owners at the AGM.
- Amortization may increase levies to uncompetitive levels for new buyers.

# Plan B

Your SC has no position on Plan B

Your SC believes, however, that the reduction in cost and achievement of 'meaningful' A/C results means that

**Plan B is now a reasonable scheme and a viable option.**

But it is your decision.

# Plan B – Key Questions

- Will Plan B make Altair a nicer place to live?
- Will Plan B increase the value of apartments...
- ...more than the extra cost in levies?
- ...and cost of installation?
- Will Plan B make apartments easier to sell in a buyers market?
- NB. The right to install A/C may be as powerful as actually installing A/C.
- Are there environmental issues with Plan B?

# Next Steps

- We will have an EGM in August (tbc) to allow owners to vote on this issue.
- There will be an over-arching but binding Special Resolution committing the owners to Plan B.
- There will be a motion on whether Plan B should be funded by a Special Levy or Amortization.
- If we decide to proceed detailed by-laws will be drafted for approval by the Owners at a subsequent General Meeting (2019 AGM?).



Any questions?

Thank you and good night