**PART 1 OPENING SESSION**

**Presentation on ‘Teaching Engineering and Technology at NBHS’ by Mr Peter Davis, TAS Head Teacher**

Applied Maths, Science, Engineering, Programming and Technology are prominent interests for many NBHS students with approximately 40% of our HSC cohort going on to study Engineering and Mechatronics at university. Our focus is on making abstract concepts concrete or real. Our students do very well at uni, many of them have done Robotics.

Significant technological advances have re-shaped society as we know it and the World Economic Forum termed it ‘The Fourth Economic Revolution’, transforming labour markets and pronounced that this will lead to a net loss of over 5 million jobs worldwide. Klaus Schwarb, Forum Founder/Exec Chair, warned that technological changes indicate a worsening situation with interesting times ahead.

Educators and teachers have to ask the question, ‘What will the future jobs be?’ and consider future-proofing skills.

Information systems increase efficiency in society and the use of artificial intelligence is making many jobs unnecessary. The technology teaching at NBHS is at the cutting edge:

**Stage 4** offers subjects areas including working with Timber, Metals, Electronics, Textiles, Food Technology and Information & Communication Technologies (ICT) and the International Competitions and Assessments for Schools (computing) (ICAS) test.

This year a trial is being conducted to exchange teachers, leading to further depth of subjects.

**Stage 5** offers Programming, Information and Software Technologies (IST) (the Grok Challenge) and Robotics, Engineering Technology, Information Processing Technology (accelerated), Rocketry (in the metalwork shop, tools area).


**Monday Afternoons at NBHS Extra Curricular Clubs and Competitions:**

**FRC & FTC Robotics** (the NBHS Team was the third established FRC Team in Australia in 2011, there are now more than 50). The culture has burgeoned to currently recognising schools as ‘good’ by their interest in robotics. The NBHS Team are regular finalists at the UNSW Robocup Junior Competition, won it in 2014 and came 3rd in 2015.

In the **Australian Informatics Olympiad** NBHS students were Australian Team representatives in 2010, 2013, 2015 and 2016 in the A10 and 101 Sections and our 2016 team of four represented Australia in the international event. Declan from Year 12 is attending a meeting in August 2016 in Russia.

In the **Zero Robotics** the NBHS Team represented Australia earlier in 2016 coding on the International Space Station, as reported on ABC TV.

However, the NBHS competition philosophy is very different to that of other schools. Our students do the work themselves, with some mentor support only. Many of the other schools, such as Barker, invest heavily in marketing and resourcing and have considerable parent participation in the activities. Despite this, NBHS continues to excel!
NBHS P & C Association
Meeting Minutes

It is remarkable that NBHS is represented on the Macquarie University Team, with Barker and Ulladulla (sponsored by Google).

An array of programming languages is used, from C to Python, giving very good experience in algorithmic thinking from interpreting the task through to the Input Processing Output (IPO).

NBHS Alumni are active at the highest levels in this field:

Thomas Tsang – Atlassian in Sydney
Lachlan Ford, Andrew Semlar and Luke Alderman – Microsoft in Seattle USA
Aaron Balsam – Facebook USA
Luke Harrison – Google in Sydney
Dr Ken Harrison designed the Driver Survivor program.

The Year 11 Group meets Tuesdays at lunch time.

Competitions are held at the sports stadium where ‘geeky’ kids can be seen loving what they are doing with technology and where some very high level interest has been attracted.

On 4 January each year an outline of the New Year’s Project is made available in animated format. Teams then have 6 weeks to finalise their robot.

The Cost of High Level Competitive Involvement

Two annual events at Homebush Bay and Macquarie University: $6,000.

Team Thunderbolts 4739 has previously engaged sponsors and actively participated in fund-raising giving demonstrations at local primary schools, spring fairs, at Hornsby Girls Multi-cultural Day, Geocache Week and Hornsby Library Symposium. Wrigleys, Sentral and Hornsby RSL have been past parent and old boy contacts / sponsors.

Re-thinking this existing fundraising model would free up team members from time spent away from essential team activity and ensure more reliable funds.

Proposal

To formulate a Long Term Plan (for 3 years).

There is an $18,000 cost for kits and competition registration fees over 3 years.

The TAS Faculty has provided $2,000 previously toward the $6,000 events amount.

The P&C has contributed $3,000 and $1,000 has been fund-raised by the team.

Engaging a major corporate sponsorship would enable us to revisit this.

P&C Discussion

A question was asked re the possibility of linking P&C funds to a particular event.

Stem skills are being integrated across the school.

Highly advantageous program benefits students: Life Skills, Teamwork, Problem Solving, Commerce Connection, Addressing the community audience as school representatives at Hornsby Library (also promotes NBHS), Entrepreneurial Skills, Junior Students gain experience joining small teams, UNSW familiarises with technology (JAVA programming).

Sponsorship - look at possibly showing what $500 buys, space for acknowledgments.

Further investigate Alumni involvement as mentors / periodic visitors and Corporate interest.
PART 2: BUSINESS SESSION

PRINCIPAL’S REPORT: Mr Frank Abas, Deputy Principal

Parent Teacher Nights for Years 9 & 10 next week, then Year 11, Years 7 & 8 in Term 3

School Photo Days Monday & Tuesday with sports uniforms required for groups on the Tuesday.

The School Prefect Nominations Process: This year the Year 11 is a strong team with videos of Captain Nominees. Letters have been issued to discuss with and inform parents. The special assembly will be held on 23 June.

RSSP Building Upgrade: The project has been approved for up to $2 million and will be a significant upgrade for the school with a very positive outcome, commence work next term.

The Canteen is to have multiple upgrades including all power distribution boards, the main one in the school holidays when power will be off for one week (no freezers).

A Workplace Health and Safety Audit is required, being done.

The recent heavy rain and winds caused significant damage in multiple buildings requiring insurance work. An 8 metre 150-200 year old tree sadly was damaged and had to come down.

All teachers and service providers will require a Working With Children Check from 2017 requiring formal application and number checking with a new model and implementation schedule for teachers to follow and includes Volunteers (similar process). Available on-line via Roads & Maritime Services Website, the cost $80 for 5 years, tax deductible for teachers, free for volunteers.

Third Class Proposal for A Team (the autism unit)

The unit was started four years ago with one class, currently there are two classes. A third class would enable allocation of a Head Teacher and galvanise the unit within the school executive. The autism students are currently placed within years 7-10 and would benefit significantly by extending this to incorporate years 10-12 and ensure a years 7-12 continuum. It is important to assist the students and their families with transitioning to their next environment with good connection and support and provide certainty for the parents. To make this change at NBHS there has to be a formal request to the community and consultation.

It is expected that a dedicated Head Teacher could run the portfolio with little burden to the school. One additional teacher would be required. There is a clear benefit of gravitas for the faculty to develop and grow as a unit which actually fits in and is well accepted in the NBHS selective school setting.

Questions & Answers (P&C cohort):

There are 7 students per class, with a ratio of 1:6 and 1:5.

The regional multicap system comprises complex units with up to 12 students. The NBHS Unit is ideal for students with low functioning autism (predominant) and some higher functioning students in the unit are integrated as appropriate in mainstream classes. In the Selective School environment there are also students with high functioning Autism Spectrum Disorder.

The unit provides instruction in life skills, in addition to TAFE and industry connection. The Head Teacher has specialised skills and experience for the role and provides most of the learning with a 0.6 teaching load.

The additional class would cover years 7-12. There is already partial integration in History, Commerce, Visual Arts, TAS and PARS (similar to PDHPE). Core subjects are kept in the unit.

If we go ahead there would be a larger number of Year 7 students next year (2017).

The only negative is in finding a balance between suitable integration with external providers such as TAFE.
MINUTES OF LAST MEETING

- **Motion 2016-06A** to accept the minutes of the last meeting.
  proposed: Praveen, seconded: Ross.  **Motion Carried**

Correspondence

Letter from Local Member (Ku-ring-gai): Community Partnerships

We can’t apply as a school but the P&C is a Not For Profit eligible for funding up to $200k which may be used for infrastructure such as buildings and covered areas. Applications opened 13 June, close 22 July.

REPORTS

- **President’s Report** (Sade Kalasabail)

- **Motion (on notice) 2016-06B**: To fund 5 school projects to the combined value of up to $36,000. Approximate breakdown as follows:
  - $15.5K Cricket net refurbishment (joint funding from P&C, school and PHDCC)
  - $9K Goal post replacement
  - $2K Framing of student work for permanent display
  - $5K Art/CAPA display screens
  - $4.5K HDMI cabling for classroom projectors

  Proposed: Praveen. Seconded: Denis, **Motion Carried**

- **Treasurer’s Report** (Helmut Hiebl)

  Financial statement presented for period 1st to 31st May 2016.

  The trading account had an opening balance of $724.59. The main items of income were canteen and grounds contributions of $590. The main expenditure was $35K for the annual school programs and $700 donation for harmony day expenses. $35,700 was transferred from the ING account to cover these expenses. There was also a transfer of $4,755 from the canteen to cover the cost of the roller shutters which the P&C will reimburse the school in June. Leaving a closing balance of $6,134.60. The closing balance on ING account was $145,564.40.

  Motion 2016-06C: To approve the Financial Statements for May

  Proposed: Helmut, seconded: Julie. **Motion Carried.**

  Motion 2016-06D: To reimburse the school for the annual online parent/teacher interview booking portal license of $268.18

  Proposed: Helmut, seconded: Julie. **Motion Carried**.

- **Fundraising Committee Report**

  The Entertainment Books have been received.

- **Function Committee Report**

  No events organised in June or July.

- **Canteen Report**

  Nil new items. Noted it will be very busy for the Canteen staff to empty and re-stock the freezers around the electrical work planned.
- Grounds Report

  The next Grounds Day is planned for Sunday 21 August, discussed expense anticipated: plants, buckets.

NEW BUSINESS

  The NBHS Facebook App is now up and running.
  The Parent Teacher Nights are coming up.
  The Selection Panel for new students has been working well. The full number of students will attend next year (2017). Noted the Year 7 selection process was balanced and fair with the Principal and P&C Representative involved at the Board of Studies selection day.
  Ross discussed the potential for a Careers Fair and possible directions. To be listed on the Agenda for next P&C Meeting as new business (August 2016).
  There will be no P&C meeting in July over the school holidays.

Next meeting: Tuesday 9 August 2016

  7.30 pm in the School Library