

Civil Aviation Safety Authority (CASA)

Report on comparison of the cost of flying training between Australia, USA, New Zealand and the UK.

1 General

1.1 Introduction

The Aviation Regulation Review Task Force sought advice from CASA as to the relative regulatory costs of flying training in Australia compared to other States. To assist with the research, CASA engaged Apis Consulting to provide a comparison of the cost of flying training across Australia, United States, New Zealand and United Kingdom. APIS were engaged for a period of ten days and undertook a desktop analysis of the key issues involved in the delivery of flying training across these four States.

This paper describes two components related to the research into the cost of flying training. The first is a comparison of the cost of flying training from ab-initio to CPL/Command Instrument Rating (ME) in Australia as against the USA, United Kingdom and New Zealand. The second describes the identification of differences between these jurisdictions in regards to flight crew licensing systems and in particular, the regulation of flying training instructors and flying training providers.

The time constraints limited the scope, nature and integrity on information collected, particularly as the data could not always be validated directly with the service providers. This is reflected in the relatively high standard deviation across the data.

1.2 Methodology

Telephone interviews were conducted by two researchers with a range of organisations in Australia and overseas. Conducting operations by telephone required that a limited set of standard questions be developed being cognizant that some organisations may not be willing to supply company specific information.

Information collected has been from organisations that have a profile on the Internet. They have been selected because of their availability and the time constraints. The sample size was limited and may not reflect a statistically significant sample.

1.3 Organisations consulted

Australian organisations

7 Flying Training Organisations were interviewed across Australia

US organisations

6 Flying Training Organisations were interviewed across the USA

New Zealand organisations

5 Flying Training Organisations were interviewed across New Zealand

UK organisations

8 Flying Training Organisations were interviewed across the United Kingdom

1.4 Assumptions

All costing figures in this report are expressed as Australian Dollars (AUD \$), and the exchange rate utilised was the standard banking exchange rate applicable as at 12 August 2007.

2 Cost Comparisons

2.1 Cost of flying training

2.1.1 Summary

In general terms, the cost of obtaining a commercial pilot licence and instrument rating in Australia, New Zealand and the USA were similar. Key findings included:

- In almost every aspect of flying training, the UK was significantly more expensive than Australia, New Zealand and the USA reflecting a higher cost of fuel, labour and the Civil Aviation Authority (CAA) service costs. Costs to students through license and exam fees were significantly greater in the UK compared with the other three countries.
- Organisations in the USA indicated that the administrative overheads by the Federal Aviation Administration (FAA) were negligible.
- There were significant differences in the cost structures between the USA and the other three countries.

The organisations contacted provided the prices they charge for flying training. Some organisations pointed out that the prices they supplied were the absolute minimum, while others freely acknowledged that not all pilots attain the qualification in the minimum time as set out in regulations. Where organisations acknowledged that typically pilots took longer than the minimum time to complete their commercial licence and instrument rating, the cost of obtaining a licence was used as distinct from the price for meeting the minimum hour requirements.

The information from each country was averaged to provide an indicative cost for flying training in that country. There were wide variations in prices between organisations within each country. With this in mind, standard deviation is used to represent the variation across the sample groups listed below.

The following details a comparison of the cost of flying training between the States:

2.1.2 Australia

Prices for flying training in Australia for a commercial licence and instrument rating varied from \$44,295 to \$65,000 with an average of \$56,596 and a standard deviation of \$7,797. Organisations indicated that their cost of compliance with CASA requirements was estimated at \$5,800 annually with a standard deviation of \$1,095.

- All organisations reported that they faced significant costs in landing fees, en route charges and airport tenancy costs. Typically, flying training organisations “passed on” costs of between \$1200 and \$1500 for landing fees and en route charges for the completion of a commercial pilot licence. Approximately \$1000 of a \$12,000 instrument rating was levied for landing and en route charges.
- The private ownership of airports appears to be causing significant angst amongst flying training providers. One operator indicated that under the Federal Airports Corporation (FAC) ownership plan prior for the privatisation of airports, the tenancy costs were \$6-\$8 per square metre annually for their leasehold area. Currently they are paying \$18 per square metre as a lease and expect this to be raised to about \$30 within 18 months.

2.1.3 USA

The cost of flying training in the USA for a commercial pilot licence and instrument rating varied from \$41,295 to \$76,771 with an average of \$53,378 and a standard deviation of \$16,778. Organisations indicated that their cost of compliance with FAA requirements was negligible.

- No organisation indicated that they paid significant landing fees or any en route charges. Tenancy costs seemed to be relatively low when compared with Australia and the UK.
- Two of the five organisations interviewed indicated that the cost of flying training to the FAA minimum standard was an unrealistic figure to use. They claimed that typically individuals required about 15% more than the minimum requirement to reach an acceptable standard for issue of a commercial pilot licence and instrument rating.
- For the purposes of this study, where organisations indicated that typically individuals take 15% longer than the minimum to complete their licences, those figures have been incorporated into the

study in the form of a standard deviation, Information from other organisations is based on the minimum aeronautical experience requirements to complete a licence. There is a relatively high standard deviation in the USA data.

- Without exception every organisation consulted in the US considered that cost recovery by government would be a significant economic burden to their organisation, and many were apprehensive that this is a potential direction in which the FAA may choose to move.

2.1.4 New Zealand

The cost of flying training in New Zealand for a commercial pilot's licence and instrument rating varied from \$53,131 to \$ 80,000 with an average of \$58,697 and a standard deviation of \$9,512. Organisations indicated that their cost of compliance with CAA requirements was \$3,920 annually with a standard deviation of \$3,097. Given the high standard deviation here, it is reasonable to conclude that there is significant uncertainty about the cost of regulatory activity in New Zealand.

- Landing fees in New Zealand were generally less than Australia but most training organisations interviewed trained from municipal aerodromes and paid a monthly fee per aircraft for landings. En route charges were only paid while in controlled airspace and most of the training activities took place outside of controlled airspace. As a result, en route charges were not a significant part of the cost of flying training in New Zealand.
- Aerodromes in New Zealand are generally not privatised. Information about tenancy costs was difficult to verify, however per square meter values of between \$3-\$7 dollars were indicated.

2.1.5 UK

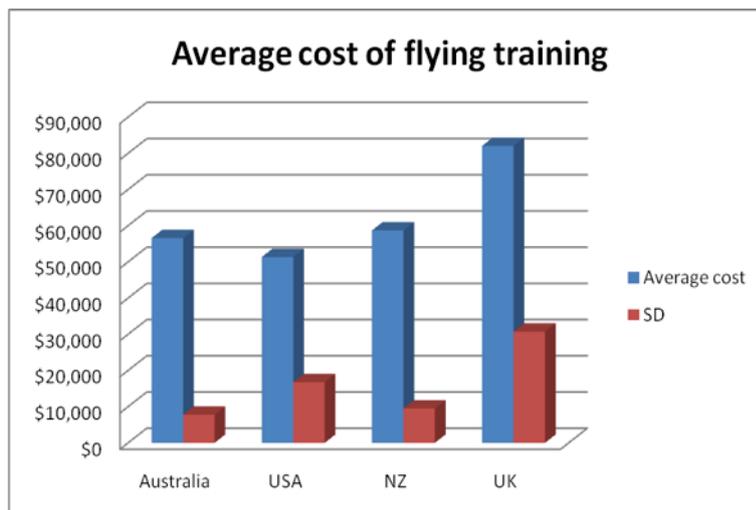
The cost of flying training in the UK for a commercial pilot's licence and instrument rating varied from \$56,071 to \$116,865 with an average of \$82,049 and a standard deviation of \$30,753. Organisations indicated that their cost of compliance with CAA requirements was \$10,169 annually with a standard deviation of \$6,055.

- For aircraft under 2000 kg, en route charges are not applicable but landing charges are payable. Airways charges seem to be an area where the UK is cheaper than Australia. Landing fees were generally in the order of \$15-\$20 per landing paid for every landing. In New Zealand and Australia a session of circuits would generally only attract one landing fee but in the UK each landing was paid for.
- The UK CAA levy what can be regarded as extraordinarily high charges for a range of fees. For example an instrument rating exam costs almost \$1800 with a \$210 processing fee. The CAA fees payable during the course of obtaining a commercial pilot licence and instrument rating is a significant cost.
- As a result of the high cost of flying training in the UK, there is an industry of US and New Zealand flying training organisations who train to a JAA or a UK CAA syllabus and standard. Pilots graduate from a foreign training organisation and return to the UK to complete their CAA licences.

2.1.6 Cost comparison between countries

Figure 1 compares the cost of flying training between the four States in the study.

Figure 1



The data in this figure were derived from interviews with the various training organisations and the four countries in the study.

2.2 NAA Fees and Charges

The charges paid by flying training organisations can be divided between National Aviation Authority (NAA) charges and other government charges. En route and airways charges are often separated from the in NAA charges.

The US does not charge en route or airways charges. The various fees charged by the three NAAs of Australia, New Zealand and the UK can be found at the following websites:

- http://www.casa.gov.au/corporat/fees/fees.htm#hourly_rate
- <http://www.caa.co.uk/docs/850/PLS%20Enclosure%200708.pdf>
- http://www.caa.govt.nz/fulltext/misc/CAA_Fees_and_Charges.pdf

There is limited information about the way in which the value of fees and charges is derived. NAAs are sometimes subject to public scrutiny and allegations that the level of fees and charges is set at what the market will stand. Given the comparison between UK charges and those of Australia and New Zealand, it appears reasonable to conclude that in the UK the Government charges are likely to be a strong disincentive for the delivery of flying training.

2.2.1 Non cash costs imposed by NAAs

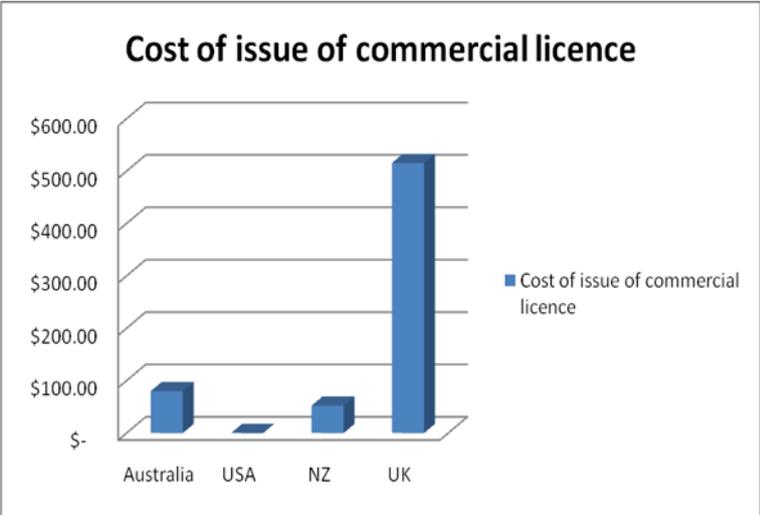
Significant anecdotal evidence from organisations in Australia suggested that CASA and other government bodies had imposed requirements that, although don't attract a cash cost, take substantial time and effort to comply with. Examples include the demonstration of compliance activities and security plans and requirements for organisations operating aircraft over 5700 kilograms.

2.2.2 Cost for issue of commercial licence

Quantitative information about the various charges levied by NAAs is useful in a general context. Two examples have been selected to demonstrate that there is variation between the different NAAs as to their methodology of applying the level of fees and charges. Figure 2 shows the cost of the issue of a commercial licence. This cost is the fee levied for processing the paperwork following a flight test. In this process the documentation of the flight test is examined and if it is consistent with the regulatory

requirements, the licence is issued to the individual. Australia and New Zealand have very similar charges in this instance. The US has no charge whilst in the UK it costs approximately AUD\$500.

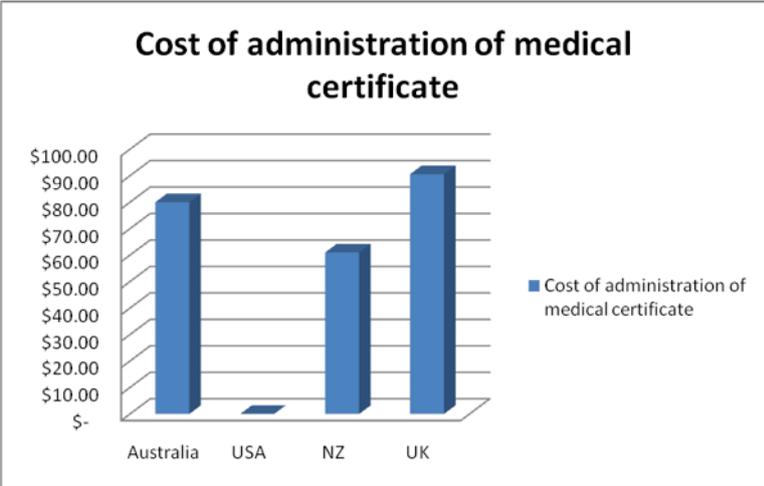
Figure 2



2.2.3 Cost for administration of medical certificate

Figure 3 shows the cost of administration of a medical certificate. This is the cost associated with the NAA issuing a certificate. Some certificates are issued routinely because the documentation from the medical examination indicates that no further assessment from the NAA medical section is required. Others require some assessment from the NAA.

Figure 3



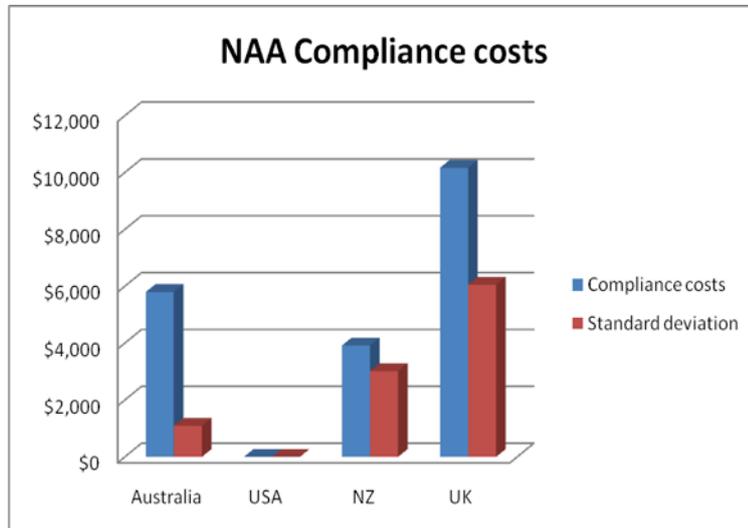
The FAA does not levy a charge for a medical certificate. In the USA a medical certificate is issued by the examining doctor unless there is a significant medical problem which requires further investigation.

2.2.4 Cost for compliance and audit activities

In those States where NAA cost-recover some of their expenses from the industry, fees are charged for compliance or audit activities or both. In New Zealand, an annual compliance audit is conducted. Some organisations were reporting low charges for the last round of audits. The larger organisations reported higher costs. This is reflected in the standard deviation for the average cost of New Zealand

compliance activities. The UK appears to have inordinately high charges for CAA activities. The average cost to organisations in each country is illustrated graphically in Figure 4.

Figure 4



Note the lower cost for CAA compliance activities in New Zealand but the high standard deviation.

2.3 Government fees and charges

Government fees and charges vary for each State. During the course of the research for this paper, there was anecdotal evidence that suggested that there were pilot shortages in all States but where the cost of flying training was highest, the shortage of pilots was most acute (Note – there are many factors that impact upon this – career, salary, strength of economy, etc).

The UK training organisations advised that they are having great difficulty sourcing instructors because an airline career is potentially attainable for anyone who has a commercial licence and instrument rating. It may be concluded from the research that where there are very high government charges, the supply of pilots is restricted and demand bids up the cost structure for flying training organisations. This, in turn, further restricts the supply of pilots.

The USA has very limited costs in terms of landing fees, en route charges and FAA costs. New Zealand, Australia and the UK all have costs associated with landing fees, en route charges and NAA fees. All three States have a government policy of cost recovery.

2.4 Regulatory charges

Regulatory charges levied by the NAAs were substantially similar between Australia and New Zealand. There is no particular cost advantage between each these countries. The USA has a cost advantage because the FAA does not levy compliance costs on to training organisations. At the other end of the spectrum, the UK levies significant fees and pays the price in terms of competitive disadvantage.

2.5 Landing fees and airways/enroute fees and charges

Organisations in Australia, New Zealand and the UK did not rate landing and en route charges as a major cost burden. These fees constitute approximately 4% of the total cost of a commercial pilot licence and instrument rating. A possible reason is that these costs can be passed on as an additional margin to students. Other costs such as NAA fees are less visible to organisations and harder to quantify on a per student basis. The USA does not levy for airways charges, landing fees and the NAA charges are minimal. Tenancy costs in the US seem to be significantly smaller than Australia, New Zealand and the UK. This is probably because airports are municipality owned and funded from general tax revenue.

Private ownership of airports in Australia has had an impact on the tenancy cost of Australian organisations. Australian organisations also indicated that the privatisation of airports is expected to have a larger impact on future tenancy costs.

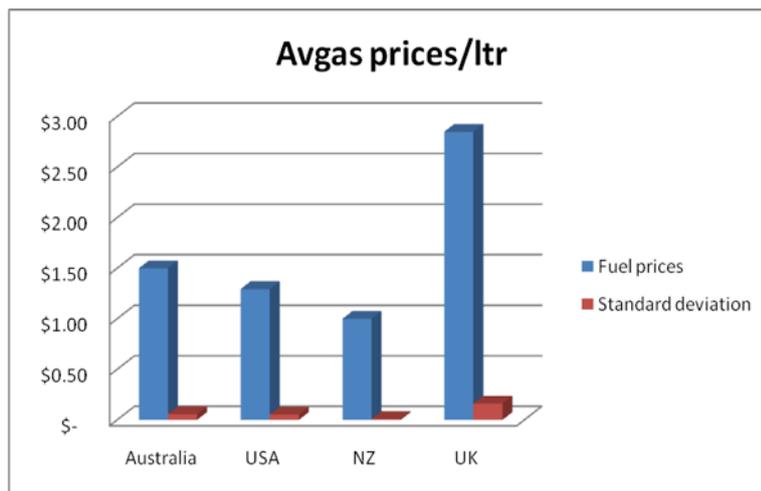
In the course of the research tenancy costs in New Zealand were indicated to be less than Australia without the upward pressure on prices that exists here currently. Landing fees are paid in New Zealand but tend to be occupancy rather than usage-based. That is landing fees are paid per aircraft per month however many landings are made on a particular airport. This probably makes the fee collection significantly less expensive and converts the cost to a fixed cost as distinct from a variable cost.

Landing fees in the UK were the most expensive and tightly focused on the amount of activity. These fees are passed on to students. This may be reflected by the fact that UK training organisations routinely train pilots in New Zealand, Southern Europe and the USA.

2.5.1 Fuel Prices

The cost of fuel constitutes up to 30% of the cost of operating training aircraft. The variations in fuel price between the States in the study are considerable. These are illustrated graphically at Figure 4. There seems to be considerable scope for negotiation on the fuel price in Australia with anecdotal evidence of \$0.10 per litre negotiating range for the price of AVGAS. The standard deviation of prices from the UK was \$0.16 per litre.

Figure 5



2.5.2 Instructor salaries

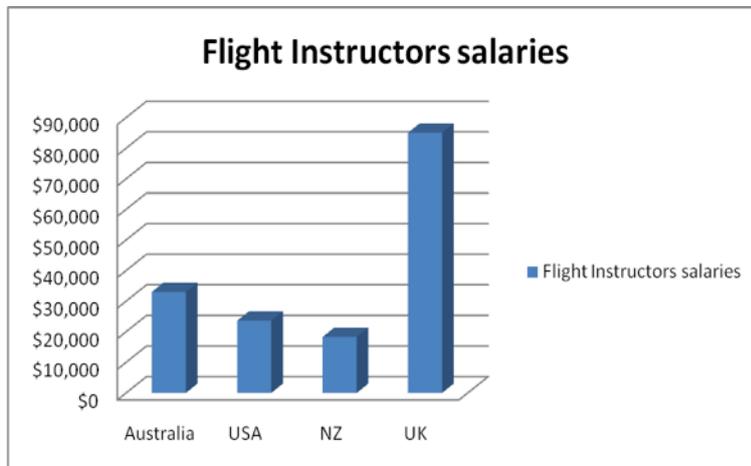
Instructor salaries are a significant cost for flying training organisations. The USA mainly utilises instructors who are “hour-building” to move on to regional or airline flying jobs. New Zealand reported a similar situation, although there does not appear to be an alternative route to regional and airline jobs through tourist flying activities.

Australia has two distinct groups of flying instructors. The first are those who work with integrated schools and instruct military and airline applicants from overseas. The second group consists of graduate commercial pilots who are hour building to find jobs with regional or airline employers. Currently, regional airlines are employing pilots with as little as 700 hours total time which can sometimes result in junior instructors leaving the training business for career progression.

The UK is critically short of instructors – the reasons are many and varied but appear to be related to salaries being less than those offered by airlines. Individuals can buy a type rating and gain an offer of employment with little or no flying experience beyond training.

Instructor salary levels are illustrated in Figure 6.

Figure 6



Employment law varies significantly between Australia, New Zealand, the US and the UK. There is limited regulation in the US as to how much a flight instructor must be paid or the conditions under which they are offered employment. As a result, most are paid on a flight hour basis with a lesser rate paid for ground instruction.

Australian employment costs are based on award wages. There is anecdotal evidence that “work choice” has played a part in raising the wages for flying instructors for integrated flying schools. That is, through an AWA agreement, substantially more salary is paid to some flying instructions. In New Zealand there is limited regulation and flying instruction is used as a method to build hours prior to employment elsewhere.

Demand for flying instructors in the UK is high and salaries up to AUD \$85,000 were reported. Again, this reflects in the cost of flying training in the UK compared with other countries in the study.

2.6 Insurance costs

Insurance costs vary widely between the countries under consideration.

The litigation climate in each State and the way in which insurance is sold seems to affect the price of insurance. For example, in the USA, hull insurance is packaged with public liability and as a result insurance costs reflect from 20 - 30% of the value of the insured aircraft. Typically hull coverage in Australia and New Zealand runs from 2.7% to around 7% of the hull value insured. Organisations in these two countries are able to buy public liability insurance as a separate package. Prices for small organisations were as low as \$1500.

Insurance costs in the UK were extremely difficult to ascertain, again because of the way they are packaged.

The cost of public liability insurance in the US seems to be significantly more expensive than in Australia and New Zealand.

2.7 Security

In Australia there is a significant cost associated with the compliance with the Aviation Transport Security Act 2004. Apart from the dollar cost of compliance with the Act, there is also a substantial time and inconvenience imposed as a result of the regulation. This includes the cost of security devices fitted to aircraft, Aviation Security Identification Cards (ASIC), and aviation identity checks prior to the issue of a student pilot licence.

In the USA, there is a limited cost associated with security. On some airports, flying instructors are required to have a “line badge” which is a security tag for them to be on the apron of major airports. The cost of this line badge is \$119 and is issued by the flying school. The only other security requirement for pilots working in flying training organisations is to carry a photographic ID in the form of a driver’s licence or similar.

Organisations consulted in the UK reported that the cost of security to their flying training operation was negligible. New Zealand operators reported similarly.

In Australia the cost of security to flying training organisations is considerably more than the other three countries covered in the study. Most organisations consulted during the study indicated that they felt very little was being achieved in terms of national security from the imposition of security requirements

on flying training organisations. Some indicated that the cost in terms of time and effort required to meet the requirements of the Act were disproportionate to any possible or perceived threat.

As result of the consultation, it is concluded that the cost of security in both dollar terms and time is significantly more in Australia than any of the other countries covered in the study.

3 ICAO compliance differences

3.1 Background

Australia, New Zealand, the US and the UK have filed compliance differences with ICAO to the Standards and Recommended Practices (SARPs) as contained in Annex 1.

When conducting a comparison between the flight crew licensing systems of the various NAAs, it was concluded that, although Australia and NZ have filed differences, these do not significantly affect the training content or cost of a PPL or CPL when all requirements and training options are considered.

The comparison indicated that when examining compliance with ICAO:

- Generally States complied closely with the ICAO Annex 1 requirements with some minor local variations;
- Australia is the only country which calls its approval to conduct flying training an AOC. New Zealand and the US use a legislative instrument known as a Part 141 approval;
- The UK also has an approval system. There are minor differences between AOC and a Part 141 approval - there is nothing preventing Australia from using a simple AOC which has the same administrative overhead as a Part 141 approval.

3.1.1 Australia

Australia recognizes that some flying experience gained in ultra-light aircraft may be recognized for the issue of either a PPL, or CPL (unless as part of an integrated course) or instrument rating¹. However, many aspiring professional pilots undertake an integrated CPL course which does recognize ultra light flying experience. Often the instrument rating is undertaken in conjunction with the integrated CPL course. In practice, this concession is not used for professional pilot training.

In Australia, the approved integrated CPL consists of 150 hours. The requirements of a CAA First Class Medical Certificate do not fully comply with ICAO. These differences may reduce the overall cost of flying training.

3.1.2 USA

The US has filed a number of differences which may provide more training and experience flexibility, and lower cost.

There appears to be greater recognition of flight time gained in flight simulation devices for some licenses or ratings. Flying training organizations may seek separate approval to reduce the minimum aeronautical experience requirements². Additionally, some requirements are lower than those in the other countries examined.

An example is where training has been conducted in accordance with an approved course of training the minimum aeronautical experience for an application for a CPL (A), is 120 hours.

3.1.3 New Zealand

New Zealand has filed differences which exceed the ICAO minimum requirements. For example, NZ require the applicant for a PPL to have at least 50 hours aeronautical experience, compared with the ICAO requirement of 40 hours³.

3.1.4 UK

The UK most closely meets the requirements of the Annex if the full JAA-FCL integrated training course is considered⁴.

¹ CASA Website www.casa.gov.au/fcl/icao -

² ICAO Annex 1 10th Edition 2006 – Supplement - USA

³ CAA NZ website. Letter to Secretary General dated 23 November 2006.

⁴ ICAO Annex 1 10th Edition 2006 – Supplement – United Kingdom.

3.2 Compliance matrix

**TABLE OF DIFFERENCES TO ICAO ANNEX 1
Chapters 2 & 6 (Relevant to aeroplane Flight training)**

Annex Provision	Australia	New Zealand	United Kingdom	USA
2.1 (General rules about licenses and ratings)				
2.1.3.2	✓	✓	✓	X
2.1.3.3	X	✓	✓	✓
2.1.4.1	✓	✓	✓	X
2.1.5.2(a)	X	✓	✓	✓
2.1.5.2(c)	X	✓	✓	X
2.1.7	✓	✓	X	✓
2.1.9	✓	✓	X	✓
2.1.9.2	✓	✓	✓	✓
2.1.10.1	X	X	✓	✓
2.1.10			X	✓
2.1.10.2	X	X	✓	✓
2.2 (Student Pilot)				
2.2.2	X	✓	✓	✓
2.3 (Private Pilot License)				
2.3.1.3	✓	✓	X	✓
2.3.1.3.1	✓	✓	✓	X
2.3.1.3.2	X	✓	✓	✓
2.3.2.1	✓	✓	X	✓
2.3.3.1.1	X	Exceeds	✓	✓
2.3.3.1.2	✓	Exceeds	✓	✓
2.3.1.6	✓	✓	✓	X
2.3.4.1.1	✓	Exceeds	✓	
2.3.4.1.2	✓	Exceeds	✓	
2.3.4.2.1.1	✓	X	✓	
2.4 (Commercial Pilot License)				
2.4.1.3	✓	✓	✓	X
2.4.1.3.1.1.1	✓	Exceeds	✓	✓
2.4.1.3.1.1.1(d)	✓	Exceeds	✓	✓

Annex Provision	Australia	New Zealand	United Kingdom	USA
2.4.1.6	✓	✓	✓	X
2.4.4.1.1.1	✓	X	✓	✓
2.4.4.2.1(j)	✓	X	✓	✓
2.6 (Airline Transport Pilot)				
2.6	X	✓	✓	✓
2.6.1.2.2(a)	X	✓	X	✓
2.6.1.2.2(b)	✓	✓	✓	X
2.6.1.3.1	X	✓	✓	✓
2.6.3.1.1	✓	Exceeds	✓	✓
2.7 (Instrument Rating)				
2.7.1.3.1	✓	✓	✓	X
2.7.1.3.2	✓	✓	X	X
2.7.1.4.1.1	✓	✓	✓	X
2.7.1.6	✓	✓	✓	X
2.7.2.1	✓	✓	X	✓
2.7.3.2(a)	X	✓	✓	✓
2.7.3.2(b)	✓	Exceeds	✓	✓

4 Conclusions

4.1 Are NAA costs impinging on the viability of training organisations?

One of the outcomes required of this research was to determine whether the policies of NAAs were impinging on the viability of flying training. Australia and New Zealand have a relatively small cost impost placed on them when compared with the UK.

Since the early 1990s a general policy of recovering costs from the aviation sector has been in place. As a result there is a long-term adjustment by aviation organisations to the cost structures which they face. Cost recovery in the form of landing fees and en route charges are easily identifiable and are passed on to student pilots as part of the cost of flying training. The costs imposed by NAAs are less identifiable. This results in these charges becoming a general overhead and more difficult to identify to pass on to student pilots. However, according to operators, they are not considered to be a sufficiently large portion of total costs of flying training in Australia and New Zealand to be a major impost on flying training viability.

It is likely that the profitability between flying training organisations in Australia varies significantly. Anecdotal evidence suggests that very small organisations (e.g. less than three flying instructors in an owner operator configuration) are profitable. Very large organisations also show evidence of profitability. Organisations in between, (e.g. with three to six flying instructors) show less evidence of profitability.

In conclusion, it is reasonable to conclude that costs imposed by the NAAs in Australia and New Zealand are not having an identifiable, marked effect on the viability of the flying training industry. However, should those costs increase, there will be some organisations that are not in a position to pass on those costs to students and remain price competitive. That is, the price elasticity of demand for flying training is approximately 1 for many of the small and medium-sized flying training organisations. Those organisations who are training for foreign airlines may have a more flexible price structure available to them.