



15 March 2024

[Redacted]

Ref: OIA-2023/24-0294

Dear [Redacted]

Information Released: Official Information Act request relating to information, correspondence, records, meeting minutes and advice relating to KuangChi

Thank you for your Official Information Act 1982 (the Act) request received by the Department of the Prime Minister and Cabinet (DPMC) on 15 November 2023 relating to KuangChi.

I wrote to you on 16 February 2024 advising you of the decisions I had made on your request, and that I would write to you again shortly providing you with the information to be released.

Please find **attached** documents held by DPMC that are relevant to your request. At the front of the release document is a table setting out the details of the documents we have released to you. Some information in the documents has been withheld under the following sections of the Act (as marked in the documents):

- section 6(a), to protect the security or defence of New Zealand or the international relations of the Government of New Zealand
- section 6(b)(i), to protect the entrusting of information to the Government of New Zealand on a basis of confidence by the Government of any other country or any agency of such a Government
- section 9(2)(a), to protect the privacy of individuals
- section 9(2)(ba)(i), to protect the supply of similar information in the future
- section 9(2)(b)(ii), to protect the commercial position of the person who supplied the information, or who is the subject of the information
- section 9(2)(g)(i), to maintain the effective conduct of public affairs through the free and frank expression of opinion
- section 18(d), where the information is already publicly available.

In addition, as some documents cover a range of different matters, information that is not relevant to your request has been redacted and marked as "Not in Scope". Additional pages from documents not released to you, either not in scope or withheld in full have been removed to make the release document more manageable.

Finally, as advised previously, there were some additional documents identified as relevant to your request that are being withheld in full, under the following sections of the Act:

- section 6(a), to protect the security or defence of New Zealand or the international relations of the Government of New Zealand
- section 6(b)(i), to protect the entrusting of information to the Government of New Zealand on a basis of confidence by the Government of any other country or any agency of such a Government

- section 9(2)(g)(i), to maintain the effective conduct of public affairs through the free and frank expression of opinion.

For information withheld under section 9 of the Act, in making my decision, I have considered the public interest considerations in section 9(1) of the Act. No public interest has been identified that would be sufficient to override the reasons for withholding that information.

You have the right to ask the Ombudsman to investigate and review my decision under section 28(3) of the Act.

This response will be published on the Department of the Prime Minister and Cabinet's website during our regular publication cycle. Typically, information is released monthly, or as otherwise determined. Your personal information including name and contact details will be removed for publication.

Yours sincerely



Bridget White
Executive Director
National Security Group

Enc: Documents relevant to your request

Table of Documents

Doc Number	Doc Date or Create Date	Title or Description	OIA Approach
Document 01	18/03/2015	Signed Agreement for the provision of launch services between Airways NZ and Kuangchi Science.	Release in Part: 9(2)(a) 9(2)(ba)(i)
Document 02	26/03/2015	Daily Intelligence Brief 26 March 2015	Release in Part: 6(a) 6(b)(i) Not in scope
Document 03	30/03/2015	Prime Minister's Weekly Brief 30 Mar 2015	Release in Part: 6(a) 6(b)(i) Not in scope
Document 04	4/05/2015	Kuang-Chi Science Tests Balloon for a Wireless High, Caixin Online, 30 April 2015	Release in Part: 6(a) 18(d)
Document 05	17/05/2015	KuangChi Science Press Release: Voluntary Announcement; Business Update; Co-operation Agreements Signed in the Paris International Air Show	Release in Full.
Document 06	26/05/2015	Fw: Kuang-chi Science CTO's visit to New Zealand: investor meetings	Release in Part: 6(a) 9(2)(a) 9(2)(b)(ii) 9(2)(g)(i) Not in scope
Document 07	27/05/2015	Formal Message: New Zealand Commercial Interests in Guandong	Release in Part: Not in scope
Document 088	16/06/2015	Daily Intelligence Brief 16 June 2015	Release in Part: 6(a) Not in scope
Document 09	19/06/2015	Jetpack makes headway with co-operation agreements with two Chinese companies	Release in Full.
Document 10	22/06/2015	Prime Minister's Weekly Brief 22 June 2015	Release in Part: 6(a) 9(2)(g)(i) Not in scope
Document 11	3/07/2015	PLA Air Force Engineering University Authors on China's Interests in 'Near Space'	Release in Full.
Document 12	31/07/2015	[Letter from CAA to Kuang-Chi]	Release in Part: 9(2)(a)
Document 13	7/08/2015	FW Chinese Balloon Launches	Release in Part: 6(a) 9(2)(a)
Document 14	13/10/2015	FW: Kuang-Chi	Release in Part: 6(a) 9(2)(g)(i) Not in scope.
Document 15	17/11/2015	Meeting with [Redacted], Head of Policy, Standards and Safety Improvement, Airways Corporation	Release in Part: 6(a) 9(2)(a) Not in scope.
Document 16	1/12/2015	[KuangChi Science 2016 Balloon Draft Launch agreement with KuangChi Science Feedback 2015121]	Release in Part: 9(2)(a) 9(2)(b)(ii) 9(2)(ba)(i)
Document 17	10/12/2015	FW Balloons	Release in Part: 6(a) 9(2)(a) Not in scope.

Doc Number	Doc Date or Create Date	Title or Description	OIA Approach
Document 18	11/12/2015	Kuang Chi balloon launch: draft note for [Redacted] DCE NSG	Release in Part: 6(a) 9(2)(g)(i)
Document 19	14/12/2015	Kuang Chi balloon launch: national security issues for New Zealand	Release in Part: 6(a)
Document 20	21/12/2015	Kuang Chi Science Ltd – Balloon Launch – Meeting Notes 151221	Release in Part: 6(a).
Document 21	21/12/2015	Meeting to assess implications of proposed second Kuang Chi launch	Release in Part: 6(a)
Document 22	22/12/2015	Draft Agreement for the provision of launch services 2016	Release in Part: 9(2)(a) 9(2)(ba)(i)
Document 23	27/01/2016	Meeting no.2 to assess implications of proposed second Kuang Chi launch	Release in Part: 6(a)
Document 24	29/12/2015	[Letter from Airways NZ to KuangChi Science]	Release in Part: 6(a) 9(2)(a).
Document 25	12/01/2016	[Letter from KuangChi Science to Airways NZ]	Release in Part: 6(a) 9(2)(a)
Document 26	29/01/2016	FW: Balloon launch assessment	Release in Part: 6(a) 6(b)(i) Not in scope.
Document 27	4/02/2016	Kuang Chi Science (KC) balloon launch	Release in Part: 6(a)
Document 28	8/03/2016	Briefing Note: Space Developments in New Zealand [...] Balloons	Release in Part: 6(a) 6(b)(i) Not in scope.
Document 29	11/04/2016	Briefing Note: Mitigating Security Concerns of Near Space Vehicles	Release in Part: 6(a).
Document 30	18/04/2016	Briefing Note: Proposed Launch of Near Space Balloon by Kuang-Chi Institute of Advanced Technology (KCIAT)	Release in Part: 6(a) 6(b)(i) Not in scope.
Document 31	4/05/2016	Wednesday 4 May: balloons discussion – draft record and action outcomes	Release in Part: 6(a)
Document 32	26/05/2016	Discussion with John Kay, GM Policy and System Interventions, CAA	Release in Part: 6(a) Not in scope.
Document 33	30/05/2016	[NAB Report]	Release in Part: 6(a).
Document 34	31/05/2016	NZ Herald article: Kuang Chi's LIU Ruopeng	Release in Part: 6(a) 9(2)(g)(i).
Document 35	3/08/2016	Proposed Agenda: meeting on High Altitude and other matters	Release in Part: 6(a) Not in scope.
Document 36	10/08/2016	Balloons: Notes of the meeting on 10 August 2016	Release in Part: 6(a) Not in scope.
Document 37	6/09/2016	Kuang-Chi Near Space Test Flight Set For 2016, R&D Center Open In Haikou	Release in Full.
Document 38	12/09/2016	Current activity caught by the HAV definition (2)	Release relevant part in full
Document 39	12/10/2016	NZSIS Draft Briefing	Release in Part: 6(a)

Doc Number	Doc Date or Create Date	Title or Description	OIA Approach
			Not in scope.
Document 40	10/11/2016	Media clippings	Release relevant part in full.
Document 41	2/03/2017	National Security Committee Paper	Release in Part: 6(a)
Document 42	16/09/2017	Paper by Professor Anne-Marie Brady	Release relevant part in full.
Document 43	11/10/2017	[Report to ODESC Security and Intelligence Board (SIB) 11/10/2017]	Release in Part: 6(a) Not in scope.
Document 44	13/02/2018	MBIE Report 2018/1598 Withholding genuine purpose of travel or adverse information.	Release in Part: 6(a) Not in scope.
Document 45	14/02/2018	14 Feb 2018 - Extract from Report to the Security and Intelligence Board (SIB)	Release in Part: 6(a) Not in scope.
Document 46	9/04/2018	Extract from Report to the Security and Intelligence Board (SIB)	Release in Part: 6(a) Not in scope.
Document 47	8/08/2018	SIB 8 August 2018 – Paper 2: Progress report...	Release in Part: 6(a) Not in scope.

Airways Corporation of New Zealand Limited

AND

Kuangchi Science Limited.

Agreement for the Provision of Launch Services

Released under the Official Information Act 1982

SERVICES CONTRACT

This Agreement is dated the 18th day of March 2015

PARTIES:

1. AIRWAYS CORPORATION OF NEW ZEALAND LIMITED with its registered office at Level 2G, 100 Willis Street, Wellington, New Zealand (Airways)
2. KUANGCHI SCIENCE LIMITED., a company duly incorporated in Bermuda and listed on The Stock Exchange of Hong Kong Limited (with stock code 00439), with its registered office at Unit 906, 9/F, Wings Building, 110-116 Queen's Road Central, Central, Hong Kong (Customer)

BACKGROUND

- A. Airways is certificated by the New Zealand Civil Aviation Authority to provide air traffic control and navigation services in New Zealand and Airways provides these services in accordance with the Standard Terms.
- B. The Parties are party to the Pre-Launch Services Agreement under which Airways provided to the Customer various airspace related services in order to prepare for a launch of balloons.
- C. The Customer now wishes to undertake a one-off launch of the Balloon from 1847 Grahams Rd, Ashburton, New Zealand.
- D. Airways is willing to provide to the Customer and the Customer wishes to receive from Airways launch services in order to enable the Customer to undertake such launch.
- E. This Agreement sets out the terms and conditions under which Airways will provide and the Customer will receive the launch services.

THE PARTIES AGREE:

1. Definitions & Interpretation

1.1. Definitions: Unless the context otherwise requires, words and expressions used in this Agreement have the following meanings:

- (a) Agreement means this agreement, including its schedules.
- (b) ATC means air traffic control.

- (c) Balloon means the Customer's s9(2)(ba)(i) balloon, with a payload of up to s9(2)(ba)(i) as described by the Customer to Airways as part of the Pre-Launch Services Agreement.
- (d) Business Day means any day excluding Saturdays, Sundays and statutory holidays in New Zealand.
- (e) Commencement Date is the date specified in Item 1, Schedule 2.
- (f) Conditions of Service means the conditions on which the Services will be provided by Airways as set out in Part 2, Schedule 1.
- (g) Contract Price is the amount the Customer will pay Airways for the Services calculated in accordance with the pricing specified in Schedule 3.
- (h) Controlled Airspace means all ICAO designated and gazetted class A, C, D airspace under the direct authority or delegation of Airways, including domestic and oceanic airspace.
- (i) FIR means flight information region.
- (j) GST has the meaning given in the Goods and Services Tax Act 1985 (NZ).
- (k) Intellectual Property Rights means all intellectual property rights and interests subsisting anywhere in the universe, including copyright, designs, patents, inventions, know how, trade and service marks (including goodwill in those marks), domain names and trade names.
- (l) Launch means the take-off of the Balloon.
- (m) Launch Day means the day on which a Launch is to be undertaken (whether or not the Launch actually occurs) and commences at 000 hours of such day.
- (n) Launch Period means the 7.5 hour ATC shift during which the Balloon may be launched by the Customer.
- (o) Launch Site(s) means the site specified in Schedule 2, Item 3.
- (p) Met Observer means a person with a MET observer qualification.
- (q) MOU means the operational Memorandum of Understanding between the parties which was created by Airways under the Pre-Launch Services Agreement that documents processes relating to the Launch and ATC.
- (r) Month means a calendar month.
- (s) Pre-Launch Services Agreement means the agreement for provision of pre-launch services between the Parties dated 16th January 2015.

- (l) Procedures mean documented processes stipulated by Airways relating to the control of air traffic in NZ and Oceanic airspace.
- (u) Services means the services Airways will provide to the Customer as specified in Part 1, Schedule 1.
- (v) Standard Terms means Airways' Standard Terms and Conditions for the Provision of Airways Services published on its website at http://www.airways.co.nz/airways_services/terms.asp as updated from time to time.
- (w) Term means the term of this Agreement as described in Item 2, Schedule 2.
- (x) Terminate means bringing the Balloon to earth either as a controlled or emergency descent and Termination and Terminated shall have a corresponding meaning.

1.2. Interpretation: Unless the context otherwise requires, in this Agreement:

- (a) headings are for convenience only and do not affect the interpretation of this Agreement;
- (b) a word or expression in the singular includes the plural, and vice versa;
- (c) a reference to a document includes an amendment or supplement to, or replacement or novation of, that document;
- (d) a reference to a party to this or any other agreement includes that party's authorised representatives, successors and permitted assigns;
- (e) a reference to a person or words denoting a person includes a company, statutory corporation, partnership, joint venture, association, board, government or semi government agency or authority and that person's successors and legal personal representative;
- (f) if an act under this Agreement to be done by a party on or by a given day is done after 5:00 p.m. on that day, it is taken to be done on the next day;
- (g) references to time are references to New Zealand time and references to currency are references to New Zealand currency;
- (h) the principle of contractual interpretation known as the *contra proferentem* rule does not apply to this Agreement;
- (i) a reference to any statute, ordinance or other law includes regulations and other instruments under any of them and includes all consolidations, amendments, re-enactments and replacements of any of them;
- (j) any provision of this Agreement to be performed or observed by two or more persons binds those persons jointly and severally.

2. Services

2.1. Airways agrees to provide the Services to the Customer for the duration of the Term on the terms and conditions set out in this Agreement.

3. Customer Obligations

3.1. The Customer shall pay Airways the Contract Price in accordance with Schedule 3 and otherwise comply with all its other obligations under this Agreement.

3.2. The Customer shall at all times be responsible for the following:

- (a) complying with all applicable New Zealand Civil Aviation Rules;
- (b) obtaining all necessary approvals required for any launch and flight of the Balloon, including without limitation, the approvals of any local authority, the New Zealand Fire Service and/or the New Zealand Police;
- (c) complying with all obligations related to the Services as set out in Schedule 1;
- (d) pre-coordinating its Balloon operations with foreign air navigation service providers as required;
- (e) obtaining any diplomatic clearances for over flight and permission to cross into any Flight Information Region adjacent with the Auckland Oceanic Flight Information Region (NZZO) or New Zealand FIR (NZZC). The Customer acknowledges and agrees that a failure to obtain diplomatic clearances and permission requires the Customer to Terminate the Balloon before it reaches 50NM from the NZZO or NZZC common boundary;
- (f) liaising with and agreeing all its Balloon operations with the relevant airport companies or aerodrome operators; and
- (g) ensuring that it complies with all relevant laws including but not limited to all applicable statutes, regulations and bylaws, and all mandatory codes, rules and orders promulgated under such statutes, regulations or bylaws of any State that the balloon operates over.

3.3. The Customer warrants that its operation of the Balloon has no military or surveillance purpose and/or association. In the event that it transpires that the Balloon does have any such purpose and/or association, then such purpose and/or association will be deemed a "material breach" which is not capable of remedy for the purpose of clause 4.2 (a) of this Agreement.

4. Term and Termination

4.1. This Agreement commences on the Commencement Date and shall continue for the Term unless terminated earlier in accordance with this Agreement.

4.2. This Agreement may be immediately terminated by either party upon written notice if the other party:

- (a) commits a material breach of this Agreement and such breach:
 - i. has not been remedied within 7 days of written notice; or
 - ii. is not capable of remedy; or
- (b) goes into liquidation, receivership or statutory management or enters into a compromise with creditors.

4.3. Airways may terminate this Agreement immediately by advising the Customer (whether in writing or orally) of such termination if it considers that the integrity of airspace is compromised or any aircraft(s) are at risk, or potentially at risk, without the reasonable mitigation of Airways (as determined by Airways). Whether this right may be exercised will be determined at the sole discretion of Airways' GM System Operator. Examples of situations where termination in accordance with this clause may be invoked include (without limitation):

- (a) Airways' identification of unmitigated risks;
- (b) significant, major or catastrophic safety incident; and/or
- (c) material risk factors that were unanticipated at the date of this Agreement.

For clarity, if Airways wishes to exercise its right in this clause 4.3, the notice provisions of clause 9 of this Agreement shall not apply.

4.4. In the event that this Agreement is terminated prior to expiry of the Term (except where this Agreement is terminated by the Customer in accordance with clause 4.2), the Customer will be liable to pay Airways for all Services provided up to the date of termination.

5. Intellectual Property

5.1. Subject to clause 5.2, unless otherwise agreed by the parties in writing all Intellectual Property Rights of a party:

- (a) existing prior to the date of the Agreement; or
- (b) that are not developed, commissioned or created under or in connection with the Services,

(together, Existing IP), and any modification, improvement, adaptation or addition to any Existing IP, will be owned by that party.

5.2. All Intellectual Property Rights, knowledge, systems and equipment used by Airways in the performance of the Services is and will remain the property of Airways. In addition Airways shall own all new intellectual property created in the course of providing the Services.

5.3. Clauses 5.1 and 5.2 shall remain in full force and effect notwithstanding the termination or expiry of this Agreement.

6. Confidentiality

6.1. Airways and the Customer each acknowledge that, during the course of this Agreement, each party may become aware of proprietary or confidential information of or about the other party. For the purposes of this Agreement, "confidential information" shall include:

- (a) all information Airways provides to the Customer under or in connection with this Agreement and/or the Services; and
- (b) all information the Customer provides to Airways pertaining to the design features of the Balloon.

6.2. Airways and the Customer each undertake not to reveal any proprietary or confidential information about the other party to any third party unless:

- (a) required to do so by law;
- (b) in the case of Airways, it is necessary to do so in order to provide the Services;
- (c) the information is already in the public domain through no breach of this Agreement; or
- (d) with the prior written consent of the other party.

6.3. Both parties shall ensure that all of its personnel that receive any proprietary or confidential information as described in this clause 6 are aware of each party's confidentiality obligations under this Agreement and that they comply with them.

6.4. The foregoing obligations as to confidentiality shall remain in full force and effect notwithstanding the termination or expiry of this Agreement.

7. Insurance

7.1. The Customer shall maintain the following insurance with a reputable insurer at its own expense during the Term and for so long as any obligations remain in connection with this Agreement:

- Public liability insurance of no less than \$20,000,000 extending to the Customer's operations under this Agreement, containing a cross liability clause and naming Airways as an additional insured.

7.2. The Customer shall, upon Airways' request, provide copies of brokers or insurers' certificates evidencing compliance with its obligations under this clause 7.

8. Language

8.1. The parties agree that all communications between them under or in relation to this Agreement (notices or otherwise) and all documentation and any other written material provided by either party to the other party under or in connection with this Agreement shall be in the English language.

9. Notices

9.1. No notice given under this Agreement shall be effective unless given in writing and delivered by hand or sent by prepaid post or email to the relevant address set out in Schedule 2.

9.2. Any notice given in accordance with clause 9.1 shall be deemed to have been received:

- (a) at the time of delivery, if delivered by hand;
- (b) on the 10th Business Day after the date of mailing, if sent by prepaid post;
or
- (c) no later than one (1) Business Day after the email is dispatched from the sender's email server unless within that time the sender receives notification that the email has not been delivered, if sent by email.

However, if the notice is not received on a Business Day, then the notice will be deemed given on the next Business Day after that day.

10. Force Majeure

10.1. Neither party will be liable for any failure to meet its obligations under this Agreement if that failure is caused by any event reasonably beyond the control of either party provided that nothing in this clause shall relieve a party of its payment obligations under this Agreement.

11. Disputes

11.1. In the event of a dispute the following procedure will apply:

- (a) the aggrieved party will serve written notice of a dispute (Dispute Notice) on the other party;
- (b) the parties must meet within 14 days of receipt of the Dispute Notice and act in good faith to resolve the dispute;
- (c) if the parties are unable to resolve the dispute then they may agree on an independent mediator to resolve the dispute, and failing such agreement, either party can apply to the President of the New Zealand Law Society to appoint an independent mediator for the purpose of resolving the dispute (Mediator);
- (d) the Mediator must deliver written notice of his or her decision to both parties no later than 30 days from the date of his or her appointment unless it is impractical or unreasonable to do so in which case a decision must be made as soon as practicable thereafter; and
- (e) the decision of the Mediator will be non-binding on the parties.

11.2. Subject to any decision of the Mediator, each party must bear its own costs of complying with clause 11.1 and the parties must bear equally the costs of the Mediator.

12. Entire Agreement

12.1. Subject to clause 12.2, this Agreement constitutes the entire agreement between the parties in relation to its subject matter (the Services). It supersedes and replaces any existing agreements between the parties in relation to its subject matter.

12.2. For clarity, nothing in clause 12.1 shall affect the validity of the MOU and its application to the Services.

13. Confirmation of Standard Terms & Precedence

13.1. Where the context allows, the Standard Terms shall apply in respect of the provision of the Services. For the avoidance of doubt, the Customer will be deemed to be an 'operator', the Balloon will be deemed to be an 'aircraft' and the Services will be deemed to be an 'Airways service' for the purposes of the Standard Terms.

13.2. In the event of any inconsistency between any terms of:

- (a) the Standard Terms and this Agreement; and
- (b) the MOU and this Agreement,

the terms of this Agreement will prevail.

14. Assignment

- 14.1. A party may not assign or transfer its rights or obligations under this Agreement without the prior written consent of the other party which may not be unreasonably withheld.

15. Survival

- 15.1. The parties agree that the provisions of clauses 5, 6, 7, 8, 11 and 13 shall survive termination of this Agreement.

16. Relationship

- 16.1. Nothing in this Agreement constitutes:

- (a) creates or evidences any partnership, joint venture, agency, trust or employer/employee relationship between the parties; and
- (b) the parties as partners or as agents for each other.

17. Counterparts

- 17.1. This Agreement may be executed in any number of counterparts and all counterparts taken together shall constitute one and the same instrument. A party may enter into this Agreement by signing a counterpart copy and sending it to the other party, including by facsimile or email.

Released under the Official Information Act 1982

SIGNED BY THE PARTIES:

SIGNED by s9(2)(a))
for and on behalf of)
KUANGCHI SCIENCE LTD.)
in the presence of:)

s9(2)(a)

s9(2)(a)

Witness

s9(2)(a)

Name

Investment Manager

Occupation

SIGNED by s9(2)(a))
for and on behalf of)
AIRWAYS CORPORATION OF)
NEW ZEALAND LIMITED)
in the presence of:)

s9(2)(a)

s9(2)(a)

Witness

s9(2)(a)

Name

FINANCIAL ACCOUNTING MANAGER

Occupation

Released under the Official Information Act 1982

SCHEDULE 1
PART 1 - THE SERVICES

Airways will provide to the Customer the services outlined below in conjunction with the MOU and any operational Procedures.

Pre-Launch

The Customer is required to provide Airways with as much notice as possible by email of its desire to undertake a Launch but in any event, such notice shall be no less than 10 days before its intended Launch Day. This date will be treated as the first Launch Period.

Once a Notice to Airmen (NOTAM) request is received from the Customer (in line with the MOU), Airways will issue the NOTAM on the Customer's behalf.

Launch

At least 24 hours before the Launch Day, the Customer will initiate via email a Launch request to the "Airways Balloon Co-ordinator" (or an Airways person fulfilling an equivalent function) (ABC). If approved, and if all conditions in this Agreement and MOU are met, the ABC will provide authorisation for the Launch on Launch Day via the phone prior to the Launch. The Customer acknowledges that there may be times when Launch approval is delayed or withheld due to traffic, contingency, or other conditions, such as weather.

Where Launch authorisation is given, Airways' ATC will advise the Airways' Flight Information Office (FIO) and the FIO will initiate a radio broadcast. Airways will, when necessary (depending on the Launch requirements) safe guard Controlled Airspace above and around the Launch Site. Airways will provide ATC separation services while the Balloon is in Controlled Airspace using its surveillance infrastructure and validate with the Customer's tracking website (altitude and airborne). The ABC will also liaise with the Customer's launch control team.

Post-Launch / Monitoring

Airways will monitor the Balloon's trajectory, altitude, and position while in NZ Flight Information Region and Auckland Oceanic FIR Controlled Airspace (up to 60,000 feet) using Airways' surveillance and the Customer's tracking system i.e. the Customer's website. Airways will also provide internal coordination services between all Airways operated domestic and oceanic sectors and if required, pass flight information to other traffic around the float area of the Balloon.

The Customer will advise other international FIRs when the Balloon is approaching their boundary.

The Balloon may not operate below 60,000 feet and within Controlled Airspace without prior approval from Airways.

PART 2 -- CONDITIONS OF SERVICE

Provision of the Services by Airways is subject to the following conditions:

1. General Requirements

- a) Access to Airways' staff will be during NZ hours of 9am-5pm Monday-Friday (excluding the Launch Day.)

- b) Launch authorisation is subject at all times to the terms and conditions of the MOU and this Agreement. Airways will need to be satisfied all requirements in Schedule 1 Part 2 and 3 are met at least 10 business days prior to the Launch Day.
- c) Descent or landing services are excluded (unless Airways determines that there is a balloon emergency situation dictating this action) and cannot be undertaken without Airways' approval and a separate contract being agreed and signed by the parties.
- d) If the Customer wishes to descend or attempt a descent in airspace New Zealand is responsible for, then at least 10 days' notice must be provided. Any descent will need to be on terms acceptable to Airways in its sole discretion.
- e) Airways' resources are not dedicated solely to this project during the Term.
- f) Airways' responsibility is limited to the New Zealand Flight Information Region (NZZC) and Auckland Oceanic Flight Information Region (NZZO). Accordingly, Airways cannot assume responsibility for another State's airspace or ATC requirements.
- g) The Customer will comply with the provisions of the MOU agreed under the Pre-Launch Services Agreement.
- h) The Customer will ensure that the Balloon will ascend and be maintained above a minimum altitude of 60,000 feet.
- i) The Customer will ensure that Airways can directly (without using intermediaries) reach the Customer's launch team staff via phone at key points prior to Launch. These key points will be defined in the MOU, but at a minimum the Customer's launch team must be available 5 hours prior to the launch, during the Launch and up to 2 hours post the Launch.
- j) A Launch Period will be for up to a maximum of 7.5 continuous hours commencing at an agreed time to coincide with key launch decision points or the rescheduled time notified by the Customer in accordance with paragraph 2 (f) below.

2. Customer's Responsibilities

In order for Airways to provide the Services, the Customer agrees to the following:

- a) The Customer must advise Airways via email of the planned Launch Day at least 10 days prior to its intended Launch (Launch Notice). For the purposes of this Agreement, the Customer's advice under this paragraph will be treated as the first Launch Notice and Launch Period to be used even if cancelled under paragraph (f) below.
- b) The Customer must request that a NOTAM is issued and provide necessary information for a NOTAM at least 24 hours prior to the estimated Launch time.
- c) The Customer must advise Airways of its intention to launch at least 24 hours prior to Launch Day.
- d) The Customer shall be entitled to a maximum of five (5) Launch Periods to attempt a Launch during the Term.
- e) The Customer may only Launch once under this Agreement.
- f) If the Customer is forced to cancel a Launch after the issue of the Launch Notice, the cancellation will be treated as one used Launch Period. The Customer can request another Launch Period by providing at least 24 hours' notice to Airways. Once all 5

Launch Periods are used, then rescheduling of any additional Launch Period(s) will incur a rescheduling charge payable by the Customer as specified in Schedule 3.

- g) The Customer may schedule a maximum of 1 Launch Period per day and 5 Launch Periods per calendar week.
- h) The Customer must obtain Airways ATC's approval prior to the Launch.
- i) The Customer will equip the Balloon with a Mode A/C TSO certified equivalent transponder prior to Launch.
- j) On request, and within 24 hours, the Customer will provide Airways with files providing full Balloon parameters to be used for safety investigation purposes, should the Balloon be involved or connected to an air safety event or incident within Controlled Airspace or during the Launch and/or ascent phase.
- k) Launches can only occur between 2.00am and 6.00am on a Launch Day (Launch Window). The Customer may only Launch at the Launch Site.
- l) The Balloon launch action must be Terminated if the Customer is not able to achieve the Launch between the Launch Window of 2.00am -6.00am.
- m) The Customer must supply proposed trajectory models for the Balloon to Airways in accordance with the MOU. The trajectory models will inform a Go/No Go decision by Airways. The trajectory modelling must use weather data from the Meteorological Service of New Zealand Limited (MetService).
- n) The Customer has the responsibility for relaying Balloon position information to other Air Navigation Service Providers (ANSP) when the Balloon is approaching any Flight Information Region boundary outside those controlled by Airways. In an emergency descent situation the Customer must provide Airways with as much notice as possible via phone and email.
- o) The Customer must meet the following outstanding requirements from the Pre-Launch Services Agreement at least 10 Business Days prior to the Launch:
 - a. The Customer will be required to provide evidence of appropriate aviation insurance (which for the avoidance of doubt shall be no less than that set out in clause 7 of this Agreement).
 - b. The Customer will supply Airways with access to their tracking website(s), but also provide evidence of a redundancy/backup to be available and live within a reasonable and agreed time, should the system fail.
 - c. The Customer's tracking website(s) will be in English with imperial (height in feet, distance in nautical miles and velocity in knots) measurement values. Velocity is not mandatory, all other components are mandatory.
 - d. The Customer will provide evidence that all information from its tracking website(s) is "recorded" and confirm it is not overwritten, and make this available to Airways
 - e. The Customer will provide the name and contact details of who has performed the transponder testing, when this was tested, and the results of the testing. The testing shall be performed by an aviation engineer certified under Civil Aviation Rule Part 43 and Part 145 certified for ground transponder testing.

- f. The Customer's transponder testing shall prove it is accurate and operational and sending out correct information.
- g. The Customer's key decision making members of the launch team will be required to be in New Zealand at least 10 days' prior to any agreed Launch Day.

3. *Operational Requirements*

The Customer must comply with the following:

- a) the MOU and any variations to the MOU agreed by the parties;
- b) any relevant Procedures and the terms of any variations to the Procedures issued by Airways from time to time;
- c) any other directions or instructions reasonably issued by Airways from time to time in the interests of safety;
- d) no entry into Controlled Airspace in NZCO in the Tasman area;
- e) advise Airways of Termination at least 24 hours before performing the Termination if permission to over fly a country or enter another FIR on Airways boundary has not been obtained;
- f) have a Met Observer at the Launch Site prior to the Launch to give the Customer MET advice of the amount of cloud present;
- g) ensure the Balloon follows the predicted trajectory. If the weather data obtained for the Launch suggests the trajectory will move from the predicted trajectory, then the Balloon cannot Launch. The Balloon's trajectory must match the Customer's predicted trajectory provided in accordance with this Agreement (and the MOU) and be East or South of East from the Launch Site until above FL600 provided that Airways understands there will be minor variations in the actual trajectory of the Balloon e.g. 3-5km per hour.

4. *Priorities*

- a) In accordance with Civil Aviation Rules, commercial passenger aircraft will be considered higher priority airspace traffic than the Balloon.
- b) In the event Airways is required to implement a contingency plan (e.g. due to staff shortages or surveillance or other equipment failure) priority will be given to commercial airlines (i.e. one of the first services to be halted will be Balloon launching as per the requirements of the AIPNZ – Priorities section, relating to provision of ATC services). If the Launch is halted in accordance with this paragraph, then this would not constitute a Launch Period having been used.
- c) The Customer must advise Airways prior to commencing Balloon inflation and Airways must agree to such inflation commencing.

SCHEDULE 2
AGREEMENT DETAILS

Item 1.	Commencement Date	14 March 2015
Item 2.	Term	From the Commencement Date until 5 June 2015
Item 3.	Launch Site	1847 Grahams Rd (private land) Ashburton, New Zealand
Item 4.	Descent site	None
Item 5.	Airways' Contact Details and Address for Notices:	s9(2)(a) Manager Product Development s9(2)(a) Airways Limited P O Box 14131 26 Sir William Pickering Drive Christchurch New Zealand +64 3 357 2808
Item 6.	The Customer's Contact Details and Address for Notices:	Kuangchi Science Ltd. s9(2)(a) Investment Business Development s9(2)(a) Phone: s9(2)(a) Address: Unit 906, 9/F, Wings Building, 110-116 Queen's Road Central, Central, Hong Kong
Item 7.	Launch date	The Customer's Launch shall occur between the 30 th April 2015 and 30 May 2015

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SCHEDULE 3
CONTRACT PRICE

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Daily Intelligence Brief

Intelligence ■ Operations ■ Assessment

26 March 2015 Issue 32/2015

[Not in Scope]

At a glance...

[Not in Scope]

- Near space balloon launch s6(a)

s6(a) Chinese Near Space Balloon Launch near Ashburton Set for Mid-April

s6(a) The Kuang-Chi Institute of Advanced Technology (KCIT) is scheduled to conduct the first launch of a near space balloon project on 15 April from farmland near Ashburton owned by Shanghai Penaxin.

s6(a), s6(b)(i)

Separately, KCIT agreed in late 2014 to become a major stakeholder in Martin Aircraft Company, makers of the Martin Jetpack, which is a company of strategic importance.

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Prime Minister's Weekly Brief

Intelligence ■ Operations ■ Assessment

30 March 2015 ■ Prime Minister's Weekly Brief 8/2015

[Not in Scope]

In depth...

[Not in Scope]

■ Balloon launch s6(a)

[Not in Scope]

[Not in Scope]

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National Assessments Bureau

s9(2)(a)

@dpmc.govt.nz

s6(a)

s6(a)

s6(a)

[Not in Scope]

s6(a)

Chinese Near Space Balloon Launch near Ashburton Set for Mid-April

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[Remainder of document Not in Scope]

s6(a)

s6(a)

s6(a)

Hi s6(a)

Another one to feed into the system at your end.

s6(a)

Unit Manager, North Asia Division
Ministry of Foreign Affairs & Trade | Manatū Aorere

From: Ivan Kinsella -BJS s9(2)(a)

Sent: Monday, 4 May 2015 6:09 a.m.

To: s6(a): MFAT

Cc: s6(a): MFAT

Subject: Kuang-Chi Science Tests Balloon for a Wireless High, Caixin Online, 30 April 2015

Thanks. Interesting.
Ivan

From: Parley Reynolds -BJS

Sent: Sunday, 3 May 2015 6:37 p.m.

To: **China Capital team

Subject: Kuang-Chi Science Tests Balloon for a Wireless High, Caixin Online, 30 April 2015

FYI

An interesting update on the helium balloons to be used for Wi-Fi transmission in remote areas that Kuangchi Science will be testing in NZ.
Parley

Chinese Firm Tests Balloon for a Wireless High

An experiment with a stratospheric balloon could be a first step toward wireless Internet for remote corners of the planet

By staff reporter Yu Dawei

<http://english.caixin.com/2015-04-30/100805442.html>



A balloon launched by Google in New Zealand in June 2013

[Remainder of document withheld under s18(d) as publicly available. Annotations withheld under s6(a)]

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KUANGCHI SCIENCE LIMITED

光啟科學有限公司

(Incorporated in Bermuda with limited liability)

(Stock Code: 439)

VOLUNTARY ANNOUNCEMENT BUSINESS UPDATE CO-OPERATION AGREEMENTS SIGNED IN THE PARIS INTERNATIONAL AIR SHOW

This is a voluntary announcement made by KuangChi Science Limited (the “**Company**”).

The board (“**Board**”) of directors of the Company is pleased to announce that Martin Aircraft Company Limited (“**MACL**”), an associate company of the Company, is currently exhibiting at the 51st Paris Air Show and located in Hall 5 G249 for the world’s first practical jetpack invented by MACL, with potential search and rescue, recreational and commercial applications and with both manned and unmanned versions. The jetpack is characterized by its ability to take off and land vertically (VTOL) and because of its small dimensions, it can operate in confined spaces such as close to or between buildings, near trees or in confined areas that other VTOL aircraft such as helicopters cannot access.

The Board of the Company is also pleased to announce that, on 16 June 2015 of Paris time, MACL has entered into two alliance agreements with New Delhi based M2K Group Limited (“**M2K Group**”) and Czech Republic based Martin Aircraft Company s.r.o (“**MACSRO**”), respectively. Furthermore, KuangChi Martin Jetpack Limited (“**KCMJ**”), a joint venture company established by the Company with MACL, signed two strategic co-operation framework agreements with Beijing Flying Man Science & Technology Limited (“**Beijing Flying Man**”) and Beijing Voyage Investment Limited (“**Beijing Voyage**”), respectively, at the air show.

The alliance agreements signed by MACL with M2K Group and MACSRO, respectively, put in place a framework for the provision of sales and marketing, operational and after market support for both the first responder and personal jetpack sectors in both Indian and European markets.

Beijing Flying Man is a leisure and tourism company headquartered in Beijing, for the intended future delivery of manned and unmanned jetpacks, simulators, and static models. The agreement signed by KCMJ with Beijing Flying Man involves the parties working towards the future delivery of a package with an initial tranche of 100 manned jetpacks, 50 unmanned jetpacks, 25 static models and 25 simulators. It will also include initial training services and after sales support which will be provided through KCMJ. It is noted that at this stage the agreement is a strategic co-operation agreement and any sale is subject to agreeing a supply contract.

On the other hand, Beijing Voyage is a subsidiary company of AVIC International Holdings Limited (“AVIC”) which shares are listed on the main board of The Stock Exchange of Hong Kong Limited. The agreement signed by KCMJ with Beijing Voyage will enable the parties to develop their commercial relationship, with an objective to promote the jetpacks and generate exhibition sales and after sales services of the jetpacks in the PRC, in co-operation with AVIC and the aviation industry.

The management considers the abovementioned 4 agreements enable KCMJ to promote and establish the markets of the jetpacks globally and have accelerated the commercialisation of the jetpacks from the research and development stage.

Shareholders and potential investors of the Company are reminded to exercise caution when dealing in the securities of the Company.

By order of the Board
KuangChi Science Limited
Dr. Liu Ruopeng
Chairman and Executive Director

Hong Kong, 17 June 2015

As at the date of this announcement, the Board comprises four executive Directors, namely Dr. Liu Ruopeng, Dr. Luan Lin, Dr. Zhang Yangyang and Mr. Ko Chun Shun, Johnson; and three independent non-executive Directors, namely Dr. Liu Jun, Dr. Wong Kai Kit and Mr. Lau Man Tak.

s6(a)

s9(2)(g)(i)

s6(a)

Senior Policy Officer
North Asia Division
New Zealand Ministry of Foreign Affairs & Trade | Manatū Aorere

T s6(a)

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Wellington 5045
New Zealand

www.mfat.govt.nz | www.nzembassy.com | www.aid.govt.nz | www.safetravel.govt.nz | www.nzunsc.govt.nz



From: s6(a): MFAT
Sent: Tuesday, 26 May 2015 9:02 a.m.
To: s6(a): MFAT
Subject: Fw: Kuang-chi Science CTO's visit to New Zealand: investor meetings s6(a)
Importance: High

s6(a)

MFAT Device Tag s6(a)

Fyi too

From: Ivan Kinsella -BJS s9(2)(a)
Sent: Tuesday, May 26, 2015 01:15 AM
To: s6(a): MFAT and MBIE
Cc: s6(a): MFAT
Subject: Kuang-chi Science CTO's visit to New Zealand: investor meetings

FYI

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From: s9(2)(a)
Sent: Monday, 25 May 2015 11:10 p.m.
To: s9(2)(a)
Cc:

Subject: Kuang-chi Science CTO's visit to New Zealand: investor meetings
Importance: High

Thanks s9(2)(a)

Good news and a very positive outcome from our visit to the KuangChi Science HQ last week in Shenzhen. It is not often that we get the CTO of a \$5 billion high-tech company in NZ to talk about what we have to offer in the technology space. s9(2)(g)(i)

s9(2)(b)(ii)

By the way, I appreciate your working to bring this together on public holiday in HK.

Thanks
s9(2)(a)

From: s9(2)(a)
Sent: Monday, 25 May 2015 10:33 p.m.
To: s9(2)(a) Veronica Chan -CAN
Cc: s9(2)(a) Ken Aitcheson -DUD
Subject: Kuang-chi CTO's visit to New Zealand

Dear both,

Further to our meeting with KuangChi Science (KCS) in Shenzhen on May 18, its Henry Zhang today confirmed to us that their CTO, Dr Luan, will be available to meet with NZTE in **Christchurch** on either May 28 or 29. s9(2)(b)(ii)

When we first talked about organising this meeting with NZTE, KCS thought that it should take place next week following a trial launch of their "Traveller" helium balloons for near space wifi services, in Ashburton. Though the meeting date has been put forward, I hope we will be able to get this organised.

KCS's other request is to have Dr Luan visit s9(2)(b)(ii) in Dunedin. I just heard about this good news this afternoon. Given that her colleagues have already met with s9(2)(b)(ii) in April (and an NDA has been signed), it will be timely if we can arrange a site visit this time.

Specific next steps are as follows:

1. Could we set up a meeting between NZTE and Dr Luan in Christchurch for either the 28th or 29th of May? s9(2)(a) if you are available, could I ask you to help with the co-ordination from

the NZ side? John, I understand that you are now in New Zealand. Would you be able to join this meeting in Christchurch?

2. Following this meeting in Christchurch, Dr Luan will fly to s9(2)(b)(ii) [REDACTED] [REDACTED] ean, could you please help with this? Let us chat further on Tuesday.
3. Veronica, further to our earlier discussion, I will give you a call on Tuesday.

Here is a bio for Dr Luan:

Dr Luan Lin is Chief Technology Officer, Executive Director of KuangChi Science Limited with effect from 26 August 2014. Dr. Luan has been VP of the KuangChi Institute of Advanced Technology since 2010. She obtained a master's degree from Peking University in 2004 and a doctorate from Duke University in the USA in 2010. Dr Luan has extensive experience in research and development of advanced technologies and business network in relation to the near space and other innovative technology industry.

Notes about what KCS are looking for are available in CRM.

Thanks for your help.

Cheers,

s9(2)(a) [REDACTED]

<http://www.scoop.co.nz/stories/SC1411/S00067/kuangchi-science-is-going-to-launch-the-traveller-in-nz.htm>

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No Classification in Message Body

From: s6(a): MFAT
Sent: Wednesday, 27 May 2015 4:54 p.m.
To: s6(a): MFAT
Cc: TND; DS AAG; DS TEG; CEO; AUCKLAND; FM.EducationNZ (Seemail); FM.MBIE Formal Messages (Seemail); FM.MBIE Science & Innovation (Seemail); FM.MPI (Seemail); FM.NZTE (Seemail); FM.P/S MFA; FM.P/S Trade; FM.P/S Economic Development; FM.DPMC (FPA); ...CHINA POSTS; FM.Tourism NZ (Seemail)
Subject: FORMAL MESSAGE: NEW ZEALAND COMMERCIAL INTERESTS IN GUANGDONG

s6(a)

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[Not in Scope]



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More recent technology connections include the investment into **Martin Jetpack** by Shenzhen-based aerospace company **Kuang-Chi Science**, which has also been working with **Airways NZ** on Kuang-Chi's planned launch of a high-altitude balloon from an Ashburton farm in the coming weeks.

[Not in Scope]





Daily Intelligence Brief

Intelligence ■ Operations ■ Assessment

16 June 2015 Issue 74/2015

[Not in Scope]

At a glance...

- Near space balloon launched by Chinese company lands s6(a)

[Not in Scope]

Chinese near space balloon testing near Ashburton appears to fail

[Not in Scope]

s6(a) After a number of delays, a near space balloon was launched by Chinese firm Kuang-Chi Science from a site near Ashburton on 6 June. The following day the company announced that the launch was successful: the balloon had reached its target altitude of 21km and had successfully completed a number of tests.

s6(a), s9(2)(g)(i)

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s9(2)(a)

@dpmc.govt.nz

s6(a)

s6(a)

Jetpack makes headway with co-operation agreements with two Chinese companies

The company behind a jetpack flying machine has signed co-operation agreements with two Chinese companies to work towards selling them scores of manned and unmanned flying machines.

Martin Aircraft announced the two agreements today at the 51st Paris International Airshow as well as two other agreements which establish sales and marketing in India and the Czech Republic.

The company, founded by Christchurch inventor Glenn Martin, listed earlier this year on the Australian Stock Exchange after offering shares to the public.

Martin parted ways with the company a couple of weeks ago quitting his directorship because he was unhappy with the direction of the company.

Martin Aircraft's new cornerstone shareholder is Chinese entrepreneurial company KuangChi Science.

The joint venture company KuangChi Science Martin Jetpack has signed a "strategic co-operation framework agreement" with Beijing Flying Man Science and Technology, a leisure and tourism company headquartered in Beijing with the intention of delivering them manned and unmanned jetpack, simulators and static models, the company said.

They were working towards an initial tranche of 100 manned jetpacks, 50 unmanned jetpacks, 25 static models and 25 simulators.

But the company warned that any sales were still subject to agreeing a supply contract.

Martin Aircraft chief executive Peter Coker said the company was well on its way from being a research and development company to a commercial entity and the agreement reflected that.

[Ad Feedback](#)

The joint venture company has also signed an agreement with Beijing Voyage Investment, a subsidiary of AVIC International Holdings, for the intended future delivery of jetpacks, manned, unmanned, simulators and static models. AVIC was an aircraft provider in China.

- [Stuff.co.nz](#)



Prime Minister's Weekly Brief

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22 June 2015 ■ Prime Minister's Weekly Brief 17/2015

[Not in Scope]

In depth...

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Not in Scope

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[Remainder of document Not in Scope] s6(a)

s6(a)

PLA Air Force Engineering University Authors on China's Interests in 'Near Space'

CHN2015070856634118 Beijing [Zhongguo Qingnian Bao Online](#) in Chinese 03 Jul 15 p 9

[Article by Wang Peng, Cheng Jian, and Zhang Meng of the PLA Air Force Engineering University: "Near Space Becomes New Strategic High Ground Under Careful Management by Various Countries"]

[Source date: 03 July 2015]

"Traveller" -- China's first near space commercial aircraft -- was launched from New Zealand on 6 June. According to reports, this aerostat is made from China's domestically-produced, high-performance skin material, and it is able to reach a flight altitude as high as 20,000 meters. It will be used primarily for convenient and economical communications coverage, and it will also provide services such as big data collection, data push, and WiFi coverage.

In fact, near space has not only been widely developed and utilized for commercial purposes, but it is also becoming a new strategic high ground in the field of military applications that various countries have been devoting attention to in recent years.

Near Space has Unique Military Application Value and Strategic Position

Near space, also known as "subspace," "ultra-high altitude," "near-space," and "suborbit," refers to the region between 20-100 kilometers from the surface of the earth. It is the conjunction between the traditional area of aviation and the area of aerospace. In this sense, it is also vividly called the "sky-space transition zone." Because of the influence of physical altitude and air density; neither traditional aircraft nor spacecraft are able to fly within this space zone. Therefore, near space has become a unique area between the maximum flight altitude for general aviation aircraft and the minimum orbital height for space-based satellites.

Physically, near space covers three types of atmospheric layers -- namely, the stratosphere, the mesosphere, and the thermosphere -- where the air is relatively thin with less vapor and atmospheric impurities; where clouds and rain are hardly seen; and where the temperature remains constant and the humidity is near zero. Therefore, it is suitable for the stabilized flights of aerostats and air-breathing powered aircraft. This space zone is also particularly appropriate for supersonic and hypersonic flights. More importantly, because of its unique location, near space functions as a bridge connecting sky and space, and it is even an indispensable link to achieve sky and space integration. In a strategic sense, near space can be used to obtain special outcomes in terms of air, space, land, and sea supremacy. Considered a new high ground that is independent from the area of aviation and the area of aerospace, near space offers unique military application values and strategic position.

Near space vehicles are the main force to occupy such a new position. Compared with the traditional aerospace vehicles, the near space vehicles have unique advantages in terms of activity range, operational time, functions, and the cost effectiveness of applications. Based on the current science and technology development level, near space vehicles consist of two types. The first type includes those with a low speed of less than Mach-1, such as high altitude balloons, stratospheric airships, and solar energy drones. This type of near space vehicle features long dwell time in the air, great payloads, high flight altitudes, and strong survivability. They can carry multiple payloads, to include visible light, infrared, and multi-spectral equipment and radar. The second type includes those with speed exceeding Mach-1, such as supersonic and hypersonic cruise aircraft as well as suborbital aircraft. Characterized by high speed, long flight distance, and strong maneuverability, they are able to carry either ordnance in the form of destructive weapons or sensors in the form of a platform for intelligence reconnaissance and surveillance.

Various Countries are Competing for Near Space Vehicle Development to Occupy the New High Ground

To seize near space as a new strategic pinnacle, the developed nations, with the United States in the lead, have long engaged in the research and development of related technology and equipment in attempts to take the initiative and upper-hand.

In 2005, the US Department of Defense included near space vehicles in its unmanned flight system development program for the first time. Afterwards, it introduced the concept of near space vehicles into the "Schriever-III" space military exercises by applying them to reconnaissance, surveillance, and communication missions. This implies that the US military regards near space as a region of the battlefield, for which it has made great efforts to develop its strategic management. In addition, the US Department of Defense and its military services each have their own near space vehicles development programs, thereby establishing the most complete system for near space technical equipment research in the world to date. Among these programs, high-speed near space vehicles are under development in the US Air Force "Hypersonic Technology" program for the development of Mach-8 speed cruise missiles; the US Navy "High-Speed Strike Missiles (HiSSM)" program for the development of Mach-6 to Mach-8 cruise missiles; and the US Department of Defense "Rapid Response Missile Demonstrator" program as well as its X-51 hypersonic test aircraft program. The development of near space low-speed aircraft includes the US Air Force "Combat Stars" program to achieve communication and early warning based on aerostat balloons; the "Near Space Maneuver Vehicle" program to conduct high altitude reconnaissance and detection based on airships; the US Air Force "Integrated Sensor Is Structure (ISIS)" airship program based on airship carriage of active phased array radar; and the US Department of Defense airship program for high altitude aerial surveillance.

Russia trails only the US in the development of near space vehicles with relatively complete systems. Regarding low-speed near space vehicles development, the large scale airship developed by the Russian Augar Airlines is a reconnaissance and surveillance system that uses near space vehicles as a platform

exclusively in support of naval operations. Regarding high-speed near space vehicle development, Russia is in the world's leading position in terms of hypersonic technology, which was developed on the basis of the former Soviet Union. Products include Kholod ["cold plan"] missiles, which are improved from C-200 model anti-aircraft missiles; the Igla-31 ["Needle-31"] program based on the improved C-300A anti-aircraft missile system and the modified model of 48H6 missiles; and the RADUGA-D2 ["Rainbow-D2"] program, based on improved AS-4 long-range strategic cruise missiles.

In addition, other developed nations have also undertaken the research and development of related programs for near space vehicles. For instance, France is currently developing a hypersonic near space vehicle project that focuses on the Promethee missile program and the LEA program, and it is able to reach a speed of Mach-7.5. The "StratSat" stabilized unmanned airship development program that France proposes will make it possible for airships to carry a payload as heavy as 1,000 kilograms and execute surveillance tasks for as long as five years. The United Kingdom also developed two types of transportation airships, named "Skycat 100" and "Skycat 200," respectively, with a load capacity as high as 200 tons. Israel began to develop stratospheric reconnaissance airships to replace expensive spy satellites. These airships are intended to conduct reconnaissance, early warning, and communication missions over peripheral Arabic nations.

Near Space Becomes a New Position of Battlefield Reconnaissance, Offense, and Defense

At present, equipment and various near space vehicles under development around the world are mainly used to accomplish operations such as reconnaissance and surveillance, long-range strikes, and anti-missile early warning; in addition, they are also employed to conduct communications relay, force projection, and other support tasks.

In reconnaissance and surveillance, the most outstanding advantage of near space reconnaissance platforms is the long dwell time in the air, very applicable for a long-term continuous surveillance of fixed targets or specified areas. Additionally, because near space platforms operate in the area between aviation and aerospace, they can execute dual land and sky surveillance tasks. They can be used in the reconnaissance and surveillance of ground targets as well as in sustained observations of spacecraft. For instance, the US military "ISIS" airship program employs on-board active phased array radar to track opponent ground forces at long ranges and cruise missiles at low altitudes. The radar detection range extends as far as 600 kilometers.

Regarding long-range strike, near space hypersonic strike weapons are able to launch attacks on any target in the world in a very short time. The US military near space hypersonic strike weapons constitute an important part of its conventional rapid global strike plan, which includes both near space cruise strike weapons and near space boost-glide strike weapons. In particular, the successful test of the X-51A hypersonic aircraft under development implies that the US military is able to strike anywhere globally in one

hour. This type of weapon not only can strike fixed targets, but it can also strike time-sensitive targets of opportunity, making it possible to achieve outcomes of instantaneous global strikes.

Regarding anti-missile early warning, near space early warning platforms are claimed to have the advantages of broad vision, anti-stealth capability, and ultra-low altitude target detection. They are able to effectively overcome drawbacks such as the limited sustained flight of early warning aircraft, the insufficient maneuverability of early warning satellites, and the short operational range of ground early warning radars. The high altitude airship program the US is undertaking aims to provide early warning functions exclusively for missile defense systems. According to plans, the US will deploy at least 10 such airships along its Pacific and Atlantic coasts; each airship will be installed with surveillance radar covering a circle of 1,200 kilometers in diameter and other sensors to monitor any ballistic and cruise missile targets flying towards the North American continent.

Regarding communications relay, near space communication platforms can be used as high altitude communications relay platforms for the battlefield because they can receive stronger communication signals than satellites and wider band communication signals that are free of ionospheric reflection impacts. In this respect, they can achieve over-the-horizon communications with large capacity and wide range without limitations, thus effectively supplementing sky-based, space-based, and land-based communication means. In particular, near space vehicles -- with the aerostat as a representative -- have the advantage of extra-long dwell time in the air, which makes them very useful in wide area communication relay tasks at theater-level. For example, the "High Altitude Relay and Router (HARR)" that the US Navy is developing is a near space balloon platform for battlefield communication relays. It has a communication range of 322 kilometers at an altitude of 20,000 meters.

In force projection, near space vehicles -- with the airship as a representative -- can be used on a large scale and with high maneuverability to deliver heavy equipment and materials, and even operational forces. In August 2014, the US House of Representative Appropriations Committee requested that the Department of Defense resume the demonstration and validation project of heavy-duty hybrid airships. The ultimate objective of this project is to develop cargo airships that can reach anywhere globally. This type of airship is considered one of the world's largest transportation airships, with a total volume of 17,000 cubic meters. On 16 June 2015, US-based Lockheed Martin announced a program for a new model of hybrid heavy-duty transportation airships during the Paris Air Show. With a load-carrying capacity as much as 20 tons, this new model of airship will meet dual civil-military transportation requirements.

In the future, with the continued development of near space related technologies, near space vehicles may undertake more battlefield tasks and play a greater strategic role; they may even breed new operational patterns and military theory. Various nations will attach greater importance to the strategic management of this new military high ground.

[Description of Source: Beijing Zhongguo Qingnian Bao Online in Chinese -- Website of the daily newspaper sponsored by the Communist Youth League of the Chinese Communist Party Central

Committee, publishing articles on political, economic, and social issues and carrying surveys of public attitudes; URL: <http://www.cyd.com.cn>]

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CIVIL AVIATION AUTHORITY
OF NEW ZEALAND
Te Mana Rererangi Tūmatanui o Aotearoa

S-S180-02 (DW1316298-0)

31 July 2015

s9(2)(a)

Project Management Engineer
Department of Product Configuration
C/- Kuang-Chi Institute of Advanced Technology
Software Building, No. 9 Gaoxin Zhong 1st Road, High-Tech Industrial Estate
Nanshan District, Shenzhen, Guangdong
PEOPLES REPUBLIC OF CHINA 518000

email: s9(2)(a)

Dear s9(2)(a)

I am writing in regard to the Kuang-Chi Institute's launch of a large experimental balloon on 6 June 2015 from South Canterbury in New Zealand. I understand that the operation was terminated 200 nautical miles off the east coast of New Zealand due to the failure of the balloon to maintain altitude.

If any further balloon launches are planned to be conducted from New Zealand it is a requirement for the Institute to contact the New Zealand Civil Aviation Authority beforehand. This is because the Director of Civil Aviation has a responsibility under the Civil Aviation Act (1990) to ensure the safety of such events on behalf of the public of New Zealand.

Given that the original launch appears not to have been successful, the CAA will be seeking assurance that any further operations conducted by the Institute will not create a hazard to people and property in New Zealand. Assurance measures would include access for CAA staff to inspect and observe the operation prior to and at the next launch, and then at future launches until the Director is satisfied that operations are being conducted safely. The surveillance of an aviation activity is in accordance with the Director of Civil Aviation's powers under sections 15 and 21 of the Civil Aviation Act.

Please contact Rex Kenny, Manager of Special Flight Operations and Recreational Aviation s9(2)(a) if there are any questions and to facilitate the required CAA surveillance.

Yours faithfully

Steve Moore
General Manager General Aviation

From: s6(a): MFAT
Sent: Friday, 7 August 2015 4:07 p.m.
To: s6(a) [DPMC]
Subject: FW: Chinese Balloon Launches
Attachments: Kuang-Chi Institute Balloon Launch.pdf

s6(a)

From: s6(a): MFAT
Sent: Friday, 7 August 2015 1:50 p.m.
To: s6(a): MFAT
Subject: FW: Chinese Balloon Launches

s6(a)

From: Lisa Sheppard s9(2)(a)
Sent: Friday, 7 August 2015 10:57 a.m.
To: s6(a): MFAT
Subject: Chinese Balloon Launches

Hi all

I've got your details from s6(a) in DPMC who suggested that you might be interested in this letter we have sent to the Chinese organisation who launched an experimental 'near space' balloon from Ashburton a month ago.

The CAA was not directly approached by the operator for the launch, although we were aware of it through our Airways contacts who had a contract with the Company for the provision of air traffic services during the launch. You may recall that this agreement was witnessed by the Prime Minister and the President of China when he visited New Zealand earlier this year.

The mission was not successful s6(a)
 We do not know why. As a result the CAA would like to ensure that it has a greater safety oversight over any future balloon launches. At this stage we dont know if there will be any, but if they are we are making it clear that we expect the operator to contact us prior. The Civil Aviation Director has quite extensive powers to address safety issues if he has a concern.

If you have any queries, or if you want to be kept in the loop on this issue, please let me know.

Regards
 Lisa Sheppard
 Principal Policy Advisor
 Civil Aviation Authority

This e-mail (and its accompanying attachments) is intended for the named recipient only and may contain information that is confidential and subject to legal privilege. If you are not the intended recipient please inform the sender and destroy the

s6(a)

From: s6(a) @nzsis.govt.nz
Sent: Tuesday, 13 October 2015 11:37 a.m.
To: s6(a)
Subject: FW: Kuang-Chi s6(a)
Attachments: s6(a) Briefing note - Kuang-Chi balloons s6(a)
 s6(a)

s6(a)

[Not in Scope]

[Redacted content]

From: SIM s6(a)
Sent: Monday, 5 October 2015 11:45 a.m.
To: DDI s6(a)
Subject: Kuang-Chi s6(a)

s6(a)

s6(a)

Last week you asked for relevant information about Kuang-Chi. I've reviewed the contract signed between Kuangi-Chi and NZ Airways, and confirm that any test launches are within the scope of the existing contract.

s6(a), s9(2)(g)(i)

s6(a)

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s6(a)

- Initial assessment s6(a)

- Our assessment s6(a)

s6(a)

s6(a)

This information is the property of the New Zealand Security Intelligence Service. It is provided to your agency in confidence and must not be disseminated further without the prior written consent of the Director of Security. It is to be used for intelligence purposes only. It must not be used or disclosed in any legal, administrative, or review proceedings, nor reclassified, declassified or disclosed under any freedom of information law, without the prior written consent of the Director of Security.

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s6(a)

Meeting with s9(2)(a) Head of Policy, Standards and Safety Improvement, Airways Corporation

17 November 2015

Another Kuang-Chi (KC) balloon launch is planned for the North Island, in April or May 2016. Initial discussions between Airways and KC have not produced any solid information about the likely size of the balloon, or the payload, or where in the North Island it will be launched from.

[Not in Scope]

1 Review of problems with the 2015 KC launch

- What went wrong: KC told Airways that the protection from icing didn't work, they lost tracking, and the balloon "collapsed" and dropped.
- KC did not seem too concerned about recovering the payload. They said it was a scientific payload.
- Asked how KC/Airways could give reassurance that this result would not happen again, s9(2)(a) said that there could be no reassurance. Tracking had to be maintained, but once contact was lost then it was an out of control descent. For the previous balloon, tracking was lost over Oceania (?) space.
- Asked what role NZ Maritime agencies would play (in the event another balloon was lost in Oceania/ocean around NZ), s9(2)(a) said he didn't know. Airways was not aware of anything they needed to do, and his view was that Airways did not need to be aware. Maybe there is a maritime centre?
- s9(2)(a) said that they advised KC that for future launches, they should have a temporary or permanent cell tower nearby, to overcome the coverage problems experienced in Ashburton.
- Language and communications problems arose when the balloon started to go wrong. Airways have one Air Traffic Controller who is fluent in Chinese language, so that person will be on duty for the next launch.
- For launch sites, s9(2)(a) said it is KC's responsibility to deal with landowners in the event of the balloon coming down.
- s9(2)(a) said that the KC people seemed genuinely disappointed at the failure.

2 Compliance and regulation situation

s6(a)

s6(a)

- Airways have themselves developed a check-sheet template for balloon launchers to certify that they comply with the rules set.
- KC did comply with the check sheet template for the previous launch. The only issue was a non-standard uncertified transponder, which Airways/KC had checked against performance requirements, and which Airways then approved.

3 Payload

- s9(2)(a) said there is no reason for Airways to look at the payload. KC said that last time there were “border issues”- perhaps some delay? – at getting gear into New Zealand.

4 Current status of KC launches

- The KC Ashburton balloon launch was a one-time contract. There are two parts to each contract:
 - a) Prelaunch activities – to get to launch approval
 - b) The launch itself
- The pre-launch contract for the next KC balloon launch in the North Island is not yet signed.

[Not in Scope]

5 Contacts and information from KC going forward

- Airways’ main contact is an Auckland based KC representative, s6(a)
- s9(2)(a) said Airways would expect more information from KC in January/February 2016, about balloon size and payload size.
- s9(2)(a) said that KC is happy for Airways staff to go to the launch site. s9(2)(a) said he hadn’t gone personally, but Airways’ customer management people went to the site.

s6(a)

DPMC NSP

24 November 2015

s6(a)

**Airways Corporation of New Zealand
Limited**

AND

Kuang Chi Science Ltd.

**Agreement for the Provision of
Launch Services 2016**

Released under the Official Information Act 1982

SERVICES CONTRACT

This Agreement is dated the day of 2015

PARTIES:

1. **AIRWAYS CORPORATION OF NEW ZEALAND LIMITED** a company duly incorporated in New Zealand and registered as number 331446, with its registered office at Level 7,100 Willis Street, Wellington, New Zealand (**Airways**)
2. **KUANGCHI SCIENCE LTD.** a listed company duly incorporated in Hong Kong and registered as number 00439, with its registered office at Unit 906, 9/F, Wings Building, 110-116 Queen's Road Central, Central, Hong Kong (KCS) (**Customer**)

BACKGROUND:

- A. Airways is certificated by the New Zealand Civil Aviation Authority to provide air traffic control and navigation services in New Zealand and Airways provides these services in accordance with the Standard Terms.
- B. In June 2015, the Customer undertook a one-off launch of a super pressure balloon from private land, owned by a partner company (Shanghai Pengxin), in Ashburton, New Zealand. The Customer now wishes to undertake a further one-off launch of an approximately s9(2)(ba)(i) balloon from one yet to be agreed site in New Zealand between April-June 2016.
- C. Airways is willing to provide to the Customer and the Customer wishes to receive from Airways, launch services in order to enable the Customer to prepare for and undertake this further launch.
- D. This Agreement sets out the terms and conditions under which Airways will provide and the Customer will receive the pre-launch services.

THE PARTIES AGREE:

1. Definitions & Interpretation

1.1. **Definitions:** Unless the context otherwise requires, words and expressions used in this Agreement have the following meanings:

- a) **Agreement** means this agreement, including its schedules.
- b) **ATC** means air traffic control.
- c) **Balloon** means the Customer's s9(2)(ba)(i)

s9(2)(ba)(i)

- d) **Business Day** means any day excluding Saturdays, Sundays and statutory holidays in New Zealand.
- e) **CAA** means the Civil Aviation Authority of New Zealand.
- f) **Commencement Date** is the date specified in Item 1, Schedule 4.
- g) **Conditions of Service** means the conditions on which the Services will be provided by Airways as set out in Schedule 2.
- h) **Contract Price** is the amount the Customer will pay Airways for the Services calculated in accordance with the pricing specified in Schedule 5.
- i) **Controlled Airspace** means an airspace of defined dimensions within which an air traffic control service is provided to Instrument Flight Rules (IFR) flights, and to Visual Flight Rules (VFR) flights, in accordance with the airspace classification, including domestic and oceanic airspace.
- j) **FIR** means flight information region.
- k) **GST** has the meaning given in the Goods and Services Tax Act 1985 (NZ).
- l) **Intellectual Property Rights** means all intellectual property rights and interests subsisting anywhere in the universe, including copyright, designs, patents, inventions, know how, trade and service marks (including goodwill in those marks), domain names and trade names.
- m) **Launch** means the take-off or an attempt to take-off of the Balloon.
- n) **Launch Advice** has the meaning set out in the Conditions of Service, paragraph **Error! Reference source not found.2a).**
- o) **Launch Day** means the day on which a Launch is to be undertaken (whether or not the Launch actually occurs) and comprises a maximum of a 5 hour ATC shift during which the Balloon may be inflated and launched by the Customer.
- p) **Launch Time Window** means the time period specified by Airways that the Customer can Launch within on Launch Day.
- q) **Launch Notice** has the meaning set out in the Conditions of Service, paragraph **Error! Reference source not found.2c).**
- r) **Launch Site** means the site to be determined under this Agreement as the single site for the Launch of the Balloon.
- s) **Launch Window** has the meaning set out in Section 3, Schedule 1.

- t) **MOU** means the Memorandum of Understanding between the parties which will be created by Airways under this Agreement and documents processes relating to the Launch and ATC.
- u) **Month** means a calendar month.
- v) **NOTAM** means a notice to airmen.
- w) **Procedures** mean documented processes stipulated by Airways relating to the control of air traffic in New Zealand FIR and Auckland Oceanic FIR airspace.
- x) **Services** means the services Airways will provide to the Customer as specified in Schedule 1.
- y) **Standard Terms** means Airways' Standard Terms and Conditions for the Provision of Airways Services published on its website at http://www.airways.co.nz/airways_Services/terms.asp as updated from time to time.
- z) **Target Launch Date** means 20 April 2016 being the date the Customer anticipates the Launch will occur, which may or may not be the Launch Day.
- aa) **Term** means the term of this Agreement as described in Item 2, Schedule 4.
- bb) **Terminate** means bringing the Balloon to earth either as a controlled or emergency descent and Termination and Terminated shall have a corresponding meaning.

Comment s9(2)(a) We would like to change to Target Launch Date to **30 April 2016**.

1.2. **Interpretation:** Unless the context otherwise requires, in this Agreement:

- a) headings are for convenience only and do not affect the interpretation of this Agreement;
- b) a word or expression in the singular includes the plural, and vice versa;
- c) a reference to a document includes an amendment or supplement to, or replacement or novation of, that document;
- d) a reference to a party to this or any other agreement includes that party's authorised representatives, success or sand permitted assigns;
- e) a reference to a person or words denoting a person includes a company, statutory corporation, partnership, joint venture, association, board, government or semi-government agency or authority and that person's successors and legal personal representative;
- f) if an act under this Agreement to be done by a party on or by a given day is done after 5:00p.m.on that day, it is taken to be done on the next day;
- g) references to time are references to New Zealand time and references to

currency are references to New Zealand currency;

- h) the principle of contractual interpretation known as the *contra proferentem* rule does not apply to this Agreement;
- i) a reference to any statute, ordinance or other law includes regulations and other instruments under any of them and includes all consolidations, amendments, re-enactments and replacements of any of them;
- j) any provision of this Agreement to be performed or observed by two or more persons binds those persons jointly and severally.
- k) a reference to "including" shall imply "including without limitation".

2. Services

- 2.1. Airways agrees to provide the Services to the Customer for the duration of the Term on the terms and conditions set out in this Agreement.
- 2.2. Provisional Launch approval is dependent upon Airways being satisfied (in its absolute discretion) that any identified Launch safety and risk levels are mitigated as Airways considers appropriate.

3. Customer Obligations

- 3.1. The Customer shall pay Airways the Contract Price in accordance with Schedule 5 and otherwise comply with all its other obligations under this Agreement.
- 3.2. The Customer shall at all times:
 - a) comply with all its obligations related to the Services as set out in the Conditions of Service, including providing notification to Airways prior to any Launch as required under the Conditions of Service;
 - b) comply with all relevant laws including but not limited to all applicable statutes, regulations and by laws, and all mandatory codes, rules and orders promulgated under such statutes, regulations or by laws;
 - c) comply with all applicable New Zealand Civil Aviation Rules designations or conditions;
 - d) liaise with all affected or otherwise necessary persons in relation to the Launch including any local authority, the New Zealand Fire Service, the New Zealand Police, and government agencies and/or obtain all necessary approvals required for any Launch from such persons;
 - e) liaise with and agree all its Balloon operations with the relevant airport authority;
 - f) coordinate its operation with any other country's air navigation service provider, if necessary;
 - g) comply with the MOU; and
 - h) otherwise comply with all reasonable directions of Airways.

- 3.3. The Customer warrants that its operation of the Balloon has no military purpose and/or affiliation. In the event that it transpires that the Balloon does have any such purpose and/or association, then such purpose and/or association will be deemed a “material breach” which is not capable of remedy for the purpose of clause 4.2 (a) of this Agreement.

4. Term and Termination

- 4.1. This Agreement commences on the Commencement Date and shall continue for the Term unless terminated earlier in accordance with this Agreement.

- 4.2. This Agreement may be immediately terminated by either party upon written notice if the other party:
- a) commits a material breach of this Agreement and such breach:
 - i. has not been remedied within 7 days of written notice; or
 - ii. is not capable of remedy; or
 - b) goes into liquidation, receivership or statutory management or enters into a compromise with creditors.

- 4.3. Airways may terminate this Agreement immediately by advising the Customer of such termination if it considers that the integrity of airspace is or may be compromised or any aircraft(s) are at risk, or potentially at risk, without the reasonable mitigation of Airways (as determined by Airways). Whether this right may be exercised will be determined at the sole discretion of Airways’ General Manager System Operator. Examples of situations where termination in accordance with this clause may be invoked include:

- a) provisional Launch approval is not provided by Airways;
- b) a significant, major or catastrophic safety incident occurs; and/or
- c) material risk factors that were unanticipated at the date of this Agreement are identified.

For clarity, if Airways wishes to exercise its right in this clause 4.3, the notice provisions of clause 10 of this Agreement shall not apply.

- 4.4. In the event that this Agreement is terminated prior to expiry of the Term, the Customer will be liable to pay Airways for all Services provided up to the date of termination as determined by Airways (acting reasonably).

5. Intellectual Property

- 5.1. Subject to clause **Error! Reference source not found.**, unless otherwise agreed by the parties in writing all Intellectual Property Rights of a party:
- a) existing prior to the date of the Agreement; or

b) that are not developed, commissioned or created under or in connection with the Services, (together, Existing IP), and any modification, improvement, adaptation or addition to any Existing IP, will be owned by that party.

5.2. All knowledge, systems, equipment and know-how used by Airways in the performance of the Services is and will remain the property of Airways. In addition Airways shall own all new intellectual property created in the course of providing the Services.

5.3. Clause 5.1 and 5.2 shall remain in full force and effect notwithstanding the termination or expiry of this Agreement.

6. Confidentiality

6.1. Airways and the Customer each acknowledge that during the course of this Agreement each party may become aware of proprietary or confidential information of or about the other party. For the purposes of this Agreement, "confidential information" shall include all:

- a) information Airways provides to the Customer under or in connection with this Agreement and/or the Services; and
- b) all information the Customer provides to Airways pertaining to the design features of the Balloon.

6.2. Airways and the Customer each undertake not to reveal any proprietary or confidential information about the other party to any third party unless:

- a) required to do so by law;
- b) in the case of Airways, it is necessary to do so in order to provide the Services;
- c) the information is already in the public domain through no breach of this Agreement; or
- d) with the prior written consent of the other party.

6.3. Both parties shall ensure that all of its personnel that receive any proprietary or confidential information as described in this clause 6 are aware of each party's confidentiality obligations under this Agreement and that they comply with them.

6.4. The foregoing obligations as to confidentiality shall remain in full force and effect notwithstanding the termination or expiry of this Agreement.

7. Insurance

7.1. The Customer shall maintain the following insurance with a reputable insurer at its own expense by no later than 30 Business Days prior to the Target Launch Date and for so long as any obligations remain in connection with this Agreement:

Comment s9(2)(a): It is quite hard for us to get a insurance certificate so early. We would suggest 5 Business Days.

- a) Public liability insurance of no less than \$20,000,000 extending to the Customer's operations under this Agreement, containing a cross liability clause and naming Airways as an additional insured.

7.2. The Customer shall provide Airways with an insurance certificate evidencing compliance with clause 7.1 by no later than 30 Business Days before the Target Launch Date. Any failure by the Customer to provide such evidence shall be deemed a "material breach" for the purposes of clause 4.2.

Comment 59(2)(a): It is quite hard for us to get a insurance certificate so early. We would suggest 5 Business Days.

7.3. In addition to its obligations under clause 7.2, the Customer shall, upon Airways' request, provide copies of brokers or insurers' certificates evidencing compliance with its obligations under this clause 7Error! Reference source not found..

8. Governing law

8.1. This Agreement is governed by the laws of New Zealand, and is subject to the non-exclusive jurisdiction of the courts of New Zealand.

9. Language

9.1. The parties agree that all communications between them under or in relation to this Agreement (notices or otherwise) and all documentation and any other written material provided by either party to the other party under or in connection with this Agreement shall be in English.

10. Notices

10.1. No notice given under this Agreement shall be effective unless given in writing and delivered by hand or sent by prepaid post or email to the relevant address set out in Schedule 4.

10.2. Any notice given in accordance with clause 10.1 shall be deemed to have been received:

- a) at the time of delivery, if delivered by hand;
- b) on the 10th Business Day after the date of mailing, if sent by prepaid post; or
- c) no later than one (1) Business Day after the email is dispatched from the sender's email server unless within that time the sender receives notification that the email has not been delivered, if sent by email.

However, if the notice is not received on a Business Day, then the notice will be deemed given on the next Business Day after that day.

11. Force Majeure

11.1. Neither party will be liable for any failure to meet its obligations under this Agreement if that failure is caused by any event reasonably beyond the control of

either party provided that nothing in this clause shall relieve a party of its payment obligations under this Agreement.

12. Disputes

12.1. In the event of a dispute the following procedure will apply:

- a) the aggrieved party will serve written notice of a dispute (Dispute Notice) on the other party;
- b) the parties must meet within 14 days of receipt of the Dispute Notice and act in good faith to resolve the dispute;
- c) if the parties are unable to resolve the dispute then they may agree on an independent mediator to resolve the dispute, and failing such agreement, either party can apply to the President of the New Zealand Law Society to appoint an independent mediator for the purpose of resolving the dispute (Mediator);
- d) the Mediator must deliver written notice of his or her decision to both parties no later than 30 days from the date of his or her appointment unless it is impractical or unreasonable to do so in which case a decision must be made as soon as practicable thereafter; and
- e) the decision of the Mediator will be non-binding on the parties.

12.2. Subject to any decision of the Mediator, each party must bear its own costs of complying with clause 12.1 and the parties must bear equally the costs of the Mediator.

13. Entire Agreement

13.1. This Agreement constitutes the entire agreement between the parties in relation to its subject matter. It supersedes and replaces any existing agreements between the parties in relation to its subject matter.

13.2. For clarity, nothing in 13.1 shall affect the validity of the MOU and its application to the Services.

14. Confirmation of Standard Terms

14.1. Where the context allows, the Standard Terms shall apply in respect of the provision of the Services. For the avoidance of doubt, the Customer will be deemed to be an 'operator', a Balloon will be deemed to be an 'aircraft' and the Services will be deemed to be an 'Airways service' for the purposes of the Standard Terms.

14.2. In the event of any inconsistency between any terms of:

- (a) the Standard Terms and this Agreement; and
- (b) the MOU and this Agreement,

the terms of this Agreement will prevail.

SCHEDULE 1 THE SERVICES

Notwithstanding clause 1414, the MOU and any Procedures developed pursuant to this Agreement will take precedence over this Schedule.

Airways will provide to the Customer the Services outlined below.

1. *Provisional Authorisation Services*

Airways will undertake those services it considers necessary to prepare for the Launch such as:

- a) Assist the Customer to determine an appropriate Launch Site for the Balloon – a maximum of 3 sites will be considered. Airways will model the balloon trajectory provided by the Customer and assess impacts on:
 - controlled airspace
 - special use airspace
 - flight paths around Launch site
 - airports
 - Launch timing

The parties acknowledge that at the date of this Agreement, this has been completed for two launch sites: Mahia and Birdlings Flats which have not been selected.

- b) Prepare balloon trajectory airspace arc to be used by Airways operational team (arc of least airspace impact) based on the Balloon trajectory provided by the Customer
- c) Understand the Customer's emergency procedures e.g. what happens if contact is lost with Balloon
- d) Undertake an Airways risk assessment
- e) Complete an Airways safety case
 - The CAA may review Airways' process to ensure regulatory compliance and for aviation safety purposes
- f) Create specific Airways operational procedures/notices for the Launch
- g) Manage staff rosters to ensure coverage for the 5 day Launch Window
- h) Establish the MOU for Launch processes and conditions in relation to interacting with ATC for the New Zealand FIR (NZZC) and the Auckland Oceanic FIR (NZZO) e.g. Launch Notice format, timings on Launch Day, contact points, appropriate contact processes (phone and email)
- i) Assess possibility of float in Auckland Oceanic FIR airspace and the impact of such float
- j) Work in good faith with the Customer to agree a proposed Launch Day and Launch Time Window that does not conflict with any other form of launch or significant airspace activity (such conflict being as determined by Airways)
- k) Introduce the Customer's proposed launch to other airspace users e.g. airlines, airport representative(s) within the vicinity of the proposed Launch Site
- l) Notify Airways' shareholder, the New Zealand Government, of this research and development operation (please note: this is a standard process)
- m) Advise the Customer of notice to airmen (NOTAM) format and processes
- n) At least 15 Business Days before the Target Launch Date Airways will participate in rehearsals of 2 possible launch scenarios with the Customer: 1) the rehearsal of a successful launch scenario, 2) the rehearsal of an issue occurs scenario (to test contingency procedures). Successful rehearsals demonstrating Launch readiness of the Customer's operational systems and procedures is an important part of provisional launch approval.

Comment s9(2)(a) Now we can confirm that the Launch Site is in Ashburton.

Comment s9(2)(a) We would suggest to participate the rehearsal with Airways 5 to 10 Business Days before the Target Launch Date. The reason is that the launch team members will arrive in NZ 3 or 4 weeks before the Target Launch Date, so it is quite pressing for us to do the rehearsal 15 Business Days before the Target Launch Date.

2. Pre-Launch

- a) After the Customer provides the Launch Advice as set out in Schedule 2 paragraph 2a) of the Conditions of Service, and at least 3 days before the Launch Day, Airways will:
- Issue the NOTAM for 1) the Balloon and 2) any other objects that are required to be notified for aviation safety as advised to Airways by the Customer. The Launch Window timeframe will be used in the NOTAM. Please note: details of the NOTAMs will be defined in the MOU.

The Launch Advice will include the expected Balloon trajectory. Please note: requirements for the trajectory information will be defined in the MOU.

- b) Once the Customer has given the Launch Notice as set out in Schedule 2 paragraph 2c) of the Conditions of Service, Airways will either:
- Cancel the NOTAM if the Launch is cancelled
 - If the Launch is going ahead
 - confirm the NOTAM and update trajectory details and flight path, and
 - issue the Float NOTAM

3. Launch

Airways shall undertake the following activities:

- Provide a five day Launch window being an option to Launch once in a five consecutive day period (**Launch Window**). Should additional days be required beyond the Launch Window, an additional cost shall apply for all additional days requested at the rate set out in Schedule 5.
- Provide air traffic management services by separating other airspace users from the Balloon while the Balloon is in Controlled Airspace by using surveillance infrastructure and validating this with the Customer's tracking website (altitude and airborne). Airways ATC will also liaise with the Customer's launch mission control team.
- Provide ATC authorisation via phone prior to inflation and prior to Launch.
- Where Launch authorisation is given, Airways' ATC will advise the Airways' Flight Information Office (FIO) and the FIO will initiate a radio broadcast.

The Customer acknowledges that there may be times when Launch or Balloon inflation approval is delayed or withheld due to air traffic, contingency, or other conditions, such as weather that exist prior to inflation.

4. Post-Launch / Monitoring

Airways will monitor the Balloon's trajectory, altitude, and position while in NZ FIR (NZZC) and up to 60,000 feet using Airways' surveillance or the Customer's tracking website. Airways will monitor the Balloon's trajectory, altitude, and position while in Auckland Oceanic FIR (NZZO) using the Customer's tracking website and/or written or verbal reports from the Customer's launch mission control team. Airways will also provide internal coordination services between all Airways operated domestic and oceanic sectors and if required, and pass flight information to other traffic around the float area of the Balloon.

The Balloon may not operate below 60,000ft and within Controlled Airspace in NZZC and NZZO without prior approval from Airways.

**SCHEDULE 2
CONDITIONS OF SERVICE**

Provision of the Services by Airways is subject to the following conditions:

1. General Requirements

- a) Access to Airways' staff will be during the hours of 9am-5pm Monday-Friday (excluding the Launch Day).
- b) Airways' staff will be unavailable over the Christmas period from 21 December 2015 to 18 January 2016 inclusive and Services will not be available during such period.
- c) The Launch is subject at all times to the terms and conditions of the MOU and this Agreement.
- d) The Customer and Airways have agreed the Launch Site and Launch Time Window by 15 February 2016.
- e) Airways will need to be satisfied all the following requirements are met at least 30 Business Days prior to the Target Launch Date:
 - i. The MOU has been signed by both parties.
 - ii. The Customer will have supplied Airways with access to its website tracking system and provided evidence of the process that will be implemented should the tracking system fail.
 - iii. The Customer will have provided evidence that all information from its tracking system is "recorded" and confirm it is not overwritten.
 - iv. The Customer will have provided a Launch timeline with key milestones and communication points, which will be used in the Rehearsal (as defined in schedule 1, section 1 n)).
 - v. The Customer will have provided confirmation that it will meet the Civil Aviation Rule Part 101 in a similar format to the table "Balloon Pre-Launch Civil Aviation Rule Part 101 Information" used for the 2015 Launch.
 - vi. The Customer will have provided evidence of appropriate aviation insurance in accordance with clause 7 of this Agreement (which for the avoidance of doubt shall be no less than that set out in clause 7).
 - vii. Provide evidence of a redundancy/backup for the Customer's tracking website to be available and live within a reasonable and agreed time, should the system fail
- f) Provisional authorisation is not guaranteed as Airways will need to undertake appropriate risk assessments and/or prepare a safety case and be satisfied (in its absolute and sole discretion) with such assessments and/or safety cases prior to issuing any approval.
- g) Descent or landing services are excluded (unless Airways determines that there is a balloon emergency situation dictating this action) and cannot be undertaken without Airways' approval and a separate contract being agreed and signed by the parties.
- h) Airways' resources are not dedicated solely to this project during the Term.
- i) Airways' responsibility is limited to the New Zealand Flight Information Region (NZCC)

Comment s9(2)(a) We found that 30 Business Days is so pressing for us that we would suggest to change it to 20 Business Days.

Comment s9(2)(a) 5 Business Days prior to the Target Launch Date

and Auckland Oceanic Flight Information Region (NZZO). Accordingly, Airways cannot assume responsibility for another State's airspace or ATC requirements.

- j) Upon review and acceptance of the MOU, the Customer will comply with the provisions of the MOU.
- k) The Services will only be provided for one Launch Site before 30 June 2016.
- l) The Customer will ensure that the Balloon will ascend and be maintained above a minimum altitude of 60,000 feet.
- m) The Customer will ensure that the Balloon will not enter into Controlled Airspace in NZZO in the Tasman area.
- n) The Customer will ensure that Airways can directly (without using intermediaries) reach the Customer's launch team staff via phone at key points prior to Launch and post Launch. These key points will be defined in the MOU.
- o) A Launch Day may be for a maximum of 5 continuous hours.
- p) A Launch can only take place within the Launch Time Window on Launch Day.

2. Customer's Responsibilities

In order for Airways to provide the Services, the Customer agrees to the following:

- a) The Customer must advise Airways via email of the planned Launch Day at least 5 Business Days prior to its intended Launch (**Launch Advice**). For the purposes of this Agreement, the Launch Day notified in the Launch Advice will be treated as the first day of the Launch Window even if the Launch is cancelled.
- b) The Customer acknowledges that by providing the Launch Advice they provide permission for Airways to issue a NOTAM for 1) the Balloon and 2) any other objects that are required to be notified for aviation safety based on Launch Advice information.
- c) The Customer must advise Airways its intention to launch (**Launch Notice**) immediately after their go/no go meeting the day prior to Launch Day (approximately 16 hours prior to Launch Day), in the format specified in the MOU.
- d) The Customer must advise required trajectory information as specified in the MOU as part of the Launch Advice and Launch Notice, and acknowledges this will be used to issue, update or cancel the NOTAM; and if the Launch is confirmed post the Customer's go/no go meeting, issue the Balloon float NOTAM.
- e) The Customer shall be entitled to a maximum of five (5) consecutive days to attempt a Launch during the Launch Window.
- f) If the Customer cancels a Launch after the issue of the Launch Notice, the Customer can request another Launch Day by providing at least 12 hours notice to Airways, provided it is within the Launch Window. Once the Launch Window is used, then scheduling any additional Launch Day(s) will incur a Launch Window Extension Charge payable by the Customer as specified in Schedule 5.
- g) The Customer may only Launch once under this Agreement.
- h) The Customer may schedule a maximum of 1 Launch Day in 24 hours.

- i) The Customer must obtain Airways ATC approval prior to Balloon inflation.
- j) The Customer must obtain Airways ATC approval prior to the Launch.
- k) The Customer will equip the Balloon with a Mode S (1090ES) TSO certified transponder prior to Launch.
- l) Launches can only occur during the Launch Time Window agreed by Airways on a Launch Day, such as 2am-6am. The Customer may only undertake a Launch at the Launch Site.
- m) The Customer must advise Airways of Termination at least 24 hours before performing the Termination.
- n) The Customer must ensure the Balloon follows the predicted trajectory. If the weather data obtained for the Launch suggests the trajectory will move from the predicted trajectory, then the Balloon cannot Launch. The Balloon's trajectory must match the Customer's predicted trajectory provided in accordance with this Agreement (and the MOU) and be East or South of East from the Launch Site until above FL600 provided that Airways understands there will be minor variations in the actual trajectory of the Balloon e.g. 3-5km per hour.
- o) On request, and within 24 hours, the Customer will provide Airways with telemetry files (in Microsoft Excel format or similar) providing Balloon parameters to be used for safety investigation purposes, should the Balloon be connected to or in the vicinity of an air safety event or incident within Controlled Airspace or during the Launch.
- p) The Customer will advise trajectory information as specified in the MOU, which is expected to be at the following periods prior to the Launch Day: Launch Advice, 48 hours, 24 hours, post the Customer's go/no go meeting, and once at float above 60,000 feet, then at least once every 24 hours thereafter commencing from entry to the Auckland Oceanic FIR (NZZO) until exit from that airspace.
- q) It is the Customer's responsibility to relay Balloon position information to other Air Navigation Service Providers (ANSPs) when the Balloon is approaching any FIR boundary outside those controlled by Airways.
- r) In an emergency Balloon descent or termination situation the Customer must provide Airways with as much notice as possible via phone and email as to be specified in the MOU.
- s) The Customer will provide all information reasonably requested by Airways within 7 days in order to facilitate Airways' provision of the Services.
- t) The Customer will provide Airways with its Balloon performance data including expected trajectory information and rate of ascent and descent as described in the MOU.

Comment [redacted] We understand the importance of the accurate trajectory prediction. We will try our best to minimize the variations, However, "3-5km per hour" is quite hard for us. We would suggest to reconsider this requirement.

For the purposes of providing an example and visual aid only, Schedule 3 sets out diagrams representing the process described in Schedules 1 and 2.

3. Additional Customer Requirements

To address learnings from the Balloon's 2015 launch, the Customer agrees to the following:

- a) At least 30 Business Days prior to the Target Launch Date, the Customer will provide an

Comment [redacted] 20 Business Days

explanation to Airways of how the Balloon's trajectory modelling has been tested and weather data incorporated to demonstrate more reliable predictability.

- b) The Customer will have a launch team member, the ATC Liaison, dedicated to a) monitoring the balloon and conformance to its trajectory and b) speaking to ATC, from 30 minutes prior to inflation until the Balloon is above 60,000 feet and in any emergency descent situation.
- c) The Customer's ATC Liaison will be capable of providing verbal position reports to ATC in feet (not metres), including predicted balloon positional data in both an unexpected and usual situation.
- d) The Customer will provide the balloon trajectory latitude and longitude ddd/mmm/sss (degrees/ minutes/ seconds) verbally as required by Airways (not degrees and decimals of degrees and not metres instead of feet).
- e) The Customer will re-forecast the Balloon's trajectory while in-flight to provide Airways with the Customer's prediction of where the Balloon might be in the future at intervals agreed in the MOU such as, 30 mins, 1 hour, 3 hours' from current time.
- f) At least 30 Business Days prior to the Target Launch Date, the Customer will ensure there is a reliable voice communication mechanism with Airways, this may involve installing a temporary cell tower if relying on mobile communications.
- g) At least 30 Business Days prior to the Target Launch Date, the Customer will provide Airways with access to their tracking website that meets the following requirements:
 - i. The website (s) is in English with imperial (height in feet, distance in nautical miles and velocity in knots) measurement values;
 - ii. The website has automated (not manually entered data) balloon positional data updates every 5 minutes;
 - iii. The website dynamically refreshes and does not require an action such as, the website user to refresh/F5, to force an update onto the screen;
 - iv. The website's Balloon positional data is available on screen without having to click the balloon icon;
 - v. The website has a zoomable map;
 - vi. The website includes a prediction line of Balloon's first 6 hours of flight;
 - vii. The website has been tested by the Customer, and evidence provided to Airways of the above mentioned requirements.

Comment s9(2)(a) 20 Business Days

Comment s9(2)(a) 20 Business Days

Comment s9(2)(a) Every 30 minutes. We wish the auto-data update time is the same as last time.

4. Operational Requirements

The Customer must comply with:

- a) the MOU and any variations to the MOU agreed by the parties;
- b) any relevant Procedures and the terms of any variations to the Procedures issued by Airways from time to time; and
- c) any other directions or instructions reasonably issued by Airways from time to time in the interests of safety.

5. Priorities

- d) In accordance with the Aeronautical Information Publication New Zealand (AIPNZ), commercial passenger aircraft will be considered higher priority airspace traffic than the Balloon.

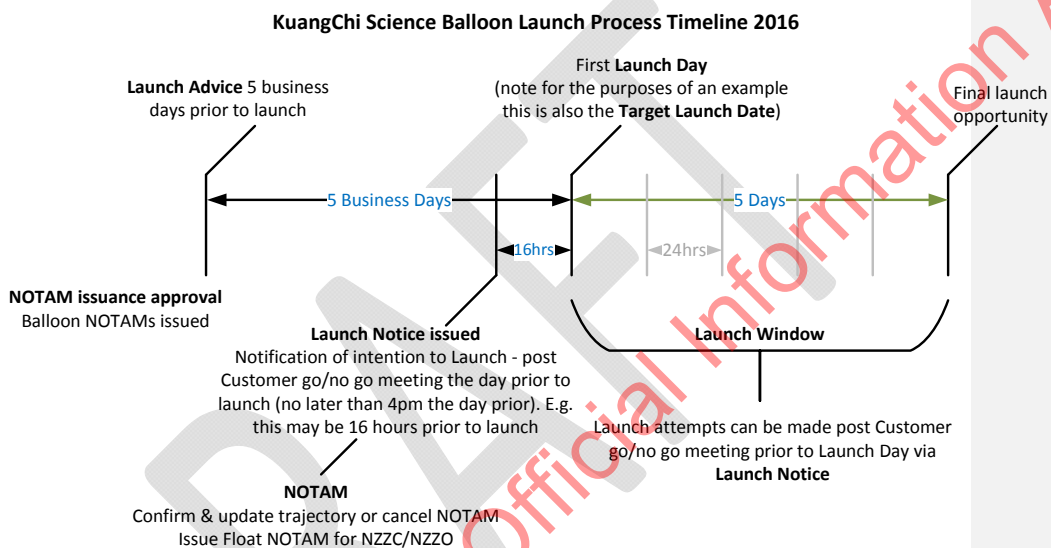
DRAFT
Released under the Official Information Act 1982

**SCHEDULE 3
SAMPLE LAUNCH PROCESS**

For the purposes of an example and visual aid only, a sample Launch process is summarised below in diagrams 1, 2 and 3 (refer Schedules 1 and 2). To the extent there is an inconsistency between the sample Launch process diagrams below and any other part of this Agreement (“operational provision”), then the operational provision shall prevail.

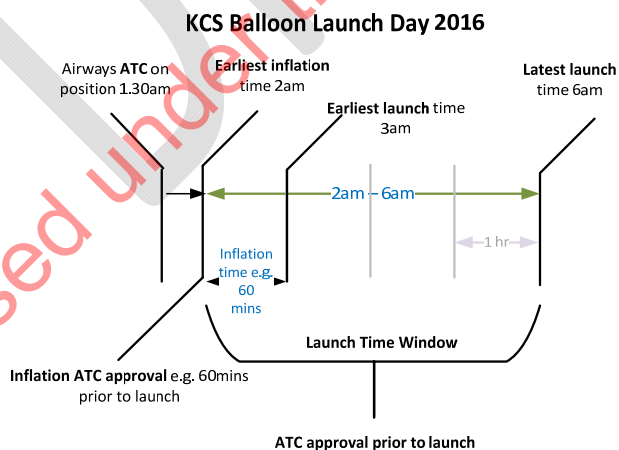
A sample Launch process represented as a timeline is summarised below in diagram 1.

Diagram 1: Sample Launch process timeline



A sample Launch Day process represented as a timeline is summarised below in diagram 2.

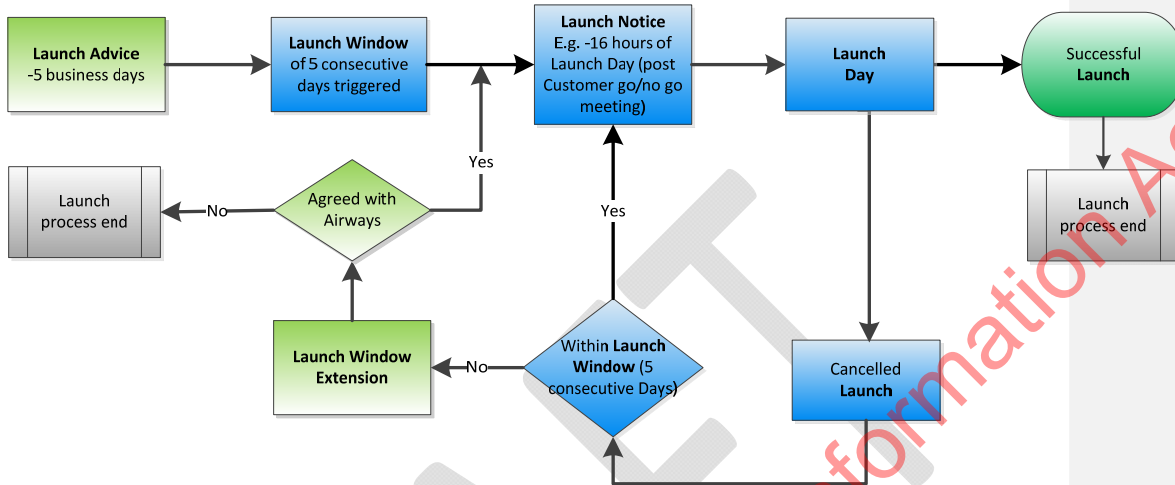
Diagram 2: Sample Launch Day process timeline if agreed launch time window is 2-6am.



A sample **Launch process** represented as a flow chart is summarised below in diagram 3.

Diagram 3: Sample Launch process flow chart

Balloon Launch Process Flow Chart - 2016



For the purposes of an example and visual aid only, a table of timing requirements for the Customer’s key obligations is summarised below in diagram 4 (refer Schedules 1 and 2). To the extent there is an inconsistency between Diagram 4 below and any other part of this Agreement (“operational provision”), then the operational provision shall prevail.

Timing requirements for the Customer’s key obligations is summarised below in diagram 4.

Diagram 4: Timing requirements for the Customer’s key obligations

Contract item	Due date
Schedule 2 – section 1 General Requirements	
The Customer and Airways have agreed the Launch Site and Launch Time Window	15 Feb 2016
Schedule 2 – section 1 General Requirements	
MOU has been signed by both parties.	7 March 2016 30 Business Days prior
The Customer will have supplied Airways with access to its website tracking system and provided evidence of the process that will be implemented should the tracking system fail.	
The Customer will have provided evidence that all information from its tracking system is “recorded” and confirm it is not overwritten.	
The Customer will have provided a Launch timeline with key milestones and communication points, which will be used in the Rehearsal (as defined in schedule 1, section 1).	
The Customer will have provided confirmation that it will meet the Civil Aviation Rule Part 101 in a similar format to the table “Balloon Pre-Launch Civil Aviation Rule Part 101 Information” used for the 2015 Launch.	

Comment S9(2)(a) 20 Business Days

The Customer will have provided evidence of appropriate aviation insurance (which for the avoidance of doubt shall be no less than that set out in clause 7 of this Agreement).	
The Customer will have provided evidence of a redundancy/backup for the Customer's tracking website to be available and live within a reasonable and agreed time, should the system fail	
Schedule 2 – section 3 Additional Customer Requirements	
The Customer will provide an explanation to Airways of how the Balloon's trajectory modelling has been tested and weather data incorporated to demonstrate more reliable predictability	
The Customer will ensure there is a reliable voice communication mechanism with Airways, this may involve installing a temporary cell tower if relying on mobile communications	
The Customer will provide Airways with access to their tracking website that meets the following requirements: <ul style="list-style-type: none"> i. The website(s) is in English with imperial (height in feet, distance in nautical miles and velocity in knots) measurement values ii. The website has automated (not manually entered data) balloon positional data updates every 5 minutes iii. The website dynamically refreshes and does not require an action such as, the website user to refresh/ F5, to force an update onto the screen iv. The website's Balloon positional data is available on screen without having to click the balloon icon v. The website has a zoomable map vi. The website includes a prediction line of Balloon's first 6 hours of flight vii. The website has been tested by the Customer, and evidence provided to Airways of the above mentioned requirements 	
Schedule 1 – provisional authorisation services	
Customer and Airways to undertake Launch rehearsal 1	30 March 2016
Customer and Airways to undertake Launch rehearsal 2	15 Business Days prior
<i>Note: Successful rehearsals demonstrating Launch readiness of the Customer's operational systems and procedures is an important part of Provisional launch approval.</i>	
Schedule 2 – section 2 Customer Responsibilities	13 April 2016
The customer must provide a valid Launch Advice (as defined in paragraph 2a) of Schedule 2)	5 Business Days prior
Target Launch Date	
Stated in contract as the date the Customer and Airways is working towards. Note: The actual Launch Day may differ to the Target Launch Date.	20 April 2016

**SCHEDULE 4
AGREEMENT DETAILS**

Item1.	Commencement Date	1 December2015
Item2.	Term	From the Commencement Date until 30 June 2016
Item3.	Airways' Contact Details and Address for Notices:	s9(2)(a) Manager Product Development s9(2)(a) @airways.co.nz Airways Limited POBox14131 26 Sir William Pickering Drive Christchurch New Zealand s9(2)(a)
Item4.	The Customer's Contact Details and Address for Notices:	Kuang Chi Science Ltd s9(2)(a) M: s9(2)(a) W: www.kuang-chi.org Kuang-Chi R&D Headquarter A: Software Building, No.9 Gaoxinzhong 1st Road, High-Tech Industrial Estate, Nanshan District, Shenzhen, Guangdong, P.R.China s9(2)(a)
Item5.	Launch Day	The Customer intends the Launch will occur between 20 April-30 June 2016
Item 6.	Target Launch Date	20 April 2016

**SCHEDULE 5
CONTRACT PRICE**

The Contract Price is s9(2)(b)(ii) plus GST (if any) payable in 2 equal instalments invoiced in February 2016 and March 2016.

Launch Window Extension Charge

In the event the Customer requests and Airways agrees to provide any additional Launch Day(s), Airways shall be entitled to charge the Customer s9(2)(b)(ii) plus GST (if any) for each additional Launch Day requested.

Launch Day Extension Charge

If the Customer requests and Airways agrees to extend the Launch Day, Airways shall be entitled to charge the Customer s9(2)(b)(ii) plus GST (if any) for the extension. An extension would be for a maximum of 2 hours and will not extend past a time to be agreed once the Launch Site is determined.

General Conditions

- Pricing is in New Zealand dollars.
- All pricing presented is GST exclusive.
- Invoices will be payable in accordance with the Standard Terms.
- Any required travel, accommodation and related costs are excluded from the Contract Price and will be reimbursable by the Customer.

Comment s9(2)(a): We wish the Airways could offer us a better price this time, since:

1. We have accumulated a lot of experience, and the overall balloon project has been modified and improved after last time's launch activity. We are fully confident that we will have a great successful balloon launching this time. We will also try our best to facilitate and support the work of the Airways.
2. Our balloon launching this time is not in the peak season and flights will be relatively less than the vacation. In this case, we believe that Airways should be easier to manage the airspace access.
3. KCS will have a large amount of balloon launching in the near future, and we will consider New Zealand as our first choice for the balloon launching.

From: s6(a) [DPMC]
Sent: Thursday, 10 December 2015 1:59 p.m.
To: Wint Lib [DPMC]
Subject: FW: Balloons
Attachments: FW: KuangChi Science Balloon Launch - 2016

s6(a)

[Not in Scope]

From: John Kay s9(2)(a)
Sent: Thursday, 10 December 2015 10:26 a.m.
To: s6(a) [DPMC]
Cc: Steve Moore; Glen-Marie Burns; s6(a) [DPMC]; s6(a) [DPMC]
Subject: RE: Balloons

Hi

The information we have is attached.

Regards

John

John Kay
General Manager, Policy and System Interventions
Civil Aviation Authority of New Zealand
Level 15, Asteron Centre
55 Featherston Street
Wellington 6140

No Classification in Message Body

New Zealand

DDI: s9(2)(a)
Fax: 64 4 569 2024
Cell: s9(2)(a)

 Please consider the environment before printing this e-mail

From: s6(a) [DPMC] [[mailto:s6\(a\)@dPMC.govt.nz](mailto:s6(a)@dPMC.govt.nz)]
Sent: Thursday, 10 December 2015 10:00 a.m.
To: John Kay
Cc: Steve Moore; Glen-Marie Burns; s6(a) [DPMC]; s6(a) [DPMC]
Subject: RE: Balloons

[UNCLASSIFIED]

Thank you John. Do you have any information about the launch date, place, payload content, etc?

Regards,
s6(a)

From: John Kay [<mailto:John.Kay@caa.govt.nz>]
Sent: Thursday, 10 December 2015 9:11 a.m.
To: s6(a) [DPMC]
Cc: Steve Moore; Glen-Marie Burns
Subject: Balloons

Hi s6(a)

I have been advised that CAA has now (late yesterday) been approached by Kuang Chi in relation to a possible balloon launch. We'll keep you advised of any further engagement.

Regards

John

John Kay
General Manager, Policy and System Interventions
Civil Aviation Authority of New Zealand
Level 15, Asteron Centre
55 Featherston Street
Wellington 6140
New Zealand

DDI: s9(2)(a)
Fax: 64 4 569 2024
Cell: s9(2)(a)

 Please consider the environment before printing this e-mail

This e-mail (and its accompanying attachments) is intended for the named recipient only and may contain information that

No Classification in Message Body

No Classification in Message Body

From: Steve Moore s9(2)(a)
Sent: Thursday, 10 December 2015 10:12 a.m.
To: John Kay
Subject: FW: KuangChi Science Balloon Launch - 2016
Attachments: Kuang-Chi Institute Balloon Launch.pdf

Steve Moore
General Manager General Aviation
Civil Aviation Authority of New Zealand
Level 15 | Asteron Centre | 55 Featherston Street | PO Box 3555 | Wellington | 6011
(DDI) s9(2)(a) | (Cell) s9(2)(a)

From: Steve Moore
Sent: Thursday, 10 December 2015 8:59 a.m.
To: s9(2)(a) @kuang-chi.com'
Cc: s9(2)(a) s9(2)(a)'; Rex Kenny
Subject: RE: KuangChi Science Balloon Launch - 2016

Hello s9(2)(a)

Thank you for emailing me and for the details of your launch plan, and thank you to s9(2)(a) for the introduction. As explained in a letter sent to the Kuang-Chi Institute earlier this year (which I have attached) the Director of Civil Aviation for New Zealand has an interest to ensure aviation activities are conducted safely. As such, the CAA will wish to have staff observe the preparation and the launch of your next balloon to ensure it meets the requirements of Civil Aviation Rules (CARs) particularly those contained in Part 101

http://www.caa.govt.nz/rules/Rule_Consolidations/Part_101_Consolidation.pdf

I have included Rex Kenny, Manager Special Flight Operations and Recreational Aviation as an email address as it is Rex's team who will conduct the safety surveillance activity. Could I please ask you to keep Rex informed of the launch timetable so that he can facilitate CAA's requirements.

Kind regards

Steve Moore
General Manager General Aviation
Civil Aviation Authority of New Zealand
Level 15 | Asteron Centre | 55 Featherston Street | PO Box 3555 | Wellington | 6011
(DDI) s9(2)(a) | (Cell) s9(2)(a)

From: s6(a) @kuang-chi.com s6(a) @kuang-chi.com]
Sent: Thursday, 10 December 2015 3:55 a.m.
To: Steve Moore
Cc: s9(2)(a) ; s9(2)(a)
Subject: 答复: KuangChi Science Balloon Launch - 2016

Good morning Steve,

No Classification in Message Body

No Classification in Message Body

Thanks to s9(2)(a) introduction, you may just call me s9(2)(a) I am a R&D engineer from Kuang-Chi Science (KSC) "Traveler" near space exploration project group. Now, I am the balloon launch coordinator for our next launch in New Zealand.

Here is our basic information for our next launch plan:

The estimated launch date: From April 1 to May 30, 2016

The precise launch date: To Be Determined (TBD)

Launch site: Ashburton

Number of people in the launch team: s9(2)(ba)(i) people

Number of balloon launch: One balloon

Balloon size: s9(2)(ba)(i)

Payload mass: ≈ s9(2)(ba)(i)

Altitude: s9(2)(ba)(i)

If there are any questions or further information is required, please don't hesitate to contact me.

Best Regards,

s9(2)(a) (光启科学项目部)

s9(2)(a)

M: s9(2)(a)

W: www.kuang-chi.org

Kuang-Chi R&D Headquarter

A: Software Building, No.9 Gaoxinhong 1st Road, High-Tech Industrial Estate, Nanshan District, Shenzhen, Guangdong, P.R.China

No Classification in Message Body

光启研发总部：深圳市南山区高新区中区高新中一道9号 软件大厦



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微博：@深圳光启高等理工研究院

s9(2)(a) @airways.co.nz > 撰写: -----
 收件人: s9(2)(a) @caa.govt.nz >
 发件人: s9(2)(a) @airways.co.nz >
 日期: 2015/12/09 上午06:57
 抄送: s9(2)(a) @kuang-chi.com " s9(2)(a) @kuang-chi.com >, s9(2)(a) @airways.co.nz >
 主题: KuangChi Science Balloon Launch - 2016

Hi Steve

I'd like to introduce you to s9(2)(a) who is KuangChi Science's (KCS) balloon launch coordinator.

We have spoken to s9(2)(a) about KCS' intention to launch from New Zealand early next year in approx. April 2016, and we are currently preparing a contract to work together.

s9(2)(a) will get in contact with you about their planned launch.

KCS haven't finalised their launch site yet but it may be the same site (Ashburton) as their first NZ launch.

I've copied s9(2)(a) into this email and his contact details are below if you need to contact him:

M: s9(2)(a)

W: www.kuang-chi.org

Kuang-Chi R&D Headquarter

A: Software Building, No.9 Gaoxinzhong 1st Road, High-Tech Industrial Estate, Nanshan District, Shenzhen, Guangdong, P.R.China

No Classification in Message Body

Please let s9(2)(a) and I know if you have any questions.

Thanks

s9(2)(a)

s9(2)(a) | *Manager Product Development*

Airways New Zealand

26 Sir William Pickering Drive, Russley, Christchurch

PO Box 14131, Russley, Christchurch 8053

t. s9(2)(a) | m. s9(2)(a) | ext. s9(2)(a)

s9(2)(a) @airways.co.nz | w. www.airways.co.nz



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Kuang Chi balloon launch: draft note for Howard

1 What we know

Kuang Chi intends to launch another large experimental balloon in New Zealand, between 1 April and 30 May, likely again from Shanghai Pengxin owned farms near Ashburton. This balloon is likely capable of reaching heights of 23,500 – 25,400 metres.

s6(a)

2 What's happening?

Airways is already negotiating the launch contract with Kuang Chi. Currently, Airways expects to finalise and sign the contract before the end of January 2016.

Because Kuang Chi's previous launch on 6 June 2015 failed (instrumentation froze, the balloon didn't maintain altitude and had to be terminated 200 nautical miles out to sea), the Civil Aviation Authority notified Kuang Chi that it wants assurances that further operations will not create safety hazards to people and property. CAA has notified Kuang Chi that CAA staff will observe preparations for the launch, and the launch itself.

On Friday 11 December, officials from DPMC NSP, DPMC NAB, MFAT (ISED and North Asia Division), Ministry of Transport, and NZSIS met to assess the situation. It was agreed that as an urgent initial step, a meeting would be convened at CE/DCE level to request that Airways slows down contract negotiations with Kuang Chi, to allow more time to assess the risks to New Zealand if this launch proceeds; and to decide on a course of action, i.e. whether New Zealand should seek to halt the launch entirely, or allow it to proceed.

As DPMC DCE for security and intelligence, you would be DPMC's nominee to attend this meeting. Other expected attendees are would be CE Transport Martin Matthews, CE CAA Graeme Harris, CE Airways Ed Sims, and Deputy Director NZSIS. We are trying to co-ordinate availability for a meeting before the Christmas break.

To prepare for the possibility that a decision is made to halt the launch entirely, legal officials from relevant departments will assess what legal options, if any, are available to halt the launch. Ministry of Transport is convening this meeting.

In the meantime, MFAT is assessing what the likely international relationship issues are from their perspective.

s6(a)

3 Briefing the Prime Minister

The Prime Minister will also be briefed verbally on this issue by officials on Tuesday 15 December, in the final meeting with the PM of the year. This is necessary to avoid a repeat of earlier mishandling of issues surrounding the first launch, which has set an undesirable precedent. (The first launch was preceded by the Prime Minister's witnessing of an MOU of co-operation between Airways, Kuang Chi and Shanghai Pengxin. s9(2)(g)(i)

I have drafted a note for officials to talk to (on the high side) and will refine it on Monday 14 December.

4 What a launch means

s6(a)

A launch would also be counter to Cabinet's recently endorsed principles of establishing a New Zealand space policy that promotes the responsible uses of space.

This early assessment of what a launch means will be developed in the coming days.

s6(a) NSP

11 December 2015

Released under the Official Information Act 1982

To: Howard Broad

From: s6(a) [DPMC]

Date: 14 December 2015

Subject: Kuang Chi balloon launch: national security issues for New Zealand

Summary and recommendations

- 1 Kuang Chi, a large Chinese company s6(a) intends to launch another large experimental balloon in New Zealand, between 1 April and 30 May, likely again from Shanghai Pengxin owned farms near Ashburton. This balloon is likely capable of reaching heights of 23,500 – 25,400 metres – part of the region from about 20 – 100km that is called near space. A number of countries, including China, are beginning to explore the uses of near space for both civilian and military purposes.
- 2 Airways is already negotiating the launch contract with Kuang Chi. Currently, Airways expects to finalise and sign the contract before the end of January 2016.
- 3 According to Airways, technically there may be no need for Kuang Chi to enter into a contract with Airways before the launch takes place. Once that contract is entered into, Kuang Chi may consider that it has *carte blanche* from the New Zealand government. This view would be supported by the Prime Minister's witnessing of the MOU signature for co-operation between Kuang Chi, Airways and Shanghai Pengxin. Kuang Chi may feel that the New Zealand government in some ways supports and has endorsed the launch, due to the Prime Minister's involvement, and the precedent set by the first launch.
- 4 In the short term, therefore, we recommend that senior officials from DPMC, New Zealand SIS, MFAT and MoT meet with the CAA and Airways and provide those last two agencies with greater context around the launch and potential repercussions for New Zealand's broader security relationships and national interests. We recommend that you lead this discussion; we envisage other attendees being CE Transport Martin Matthews, CE CAA Graeme Harris, CE Airways Ed Sims, Deputy Director New Zealand SIS, and MFAT. We are trying to co-ordinate availability for a meeting before the Christmas break.
- 5 We recommend also that you brief the Prime Minister on this matter tomorrow, Tuesday 15 December. Doing so will reduce the chances of New Zealand sending mixed signals, which occurred around the time of the first launch, when the Prime Minister witnessed an MOU of co-operation between Airways, Kuang Chi and Shanghai Pengxin; and that the first launch proceeded with no conditions or oversight other than the launch services provided by Airways.

- 6 Officials are looking at other policy and operational options, as well as considering the repercussions of a successful launch. Further detail is contained in this note.

Background

Officials' work streams

- 7 In light of the negotiations between Kuang Chi and Airways, we convened a meeting on Friday 11 December, with officials from DPMC NSP, DPMC NAB, MFAT (ISED and North Asia Division), Ministry of Transport, and New Zealand SIS.

- 8 It was agreed that as an urgent initial step, a meeting would be convened at CE/DCE level to request that Airways slows down contract negotiations with Kuang Chi, to allow more time to assess the risks to New Zealand if this second launch proceeds. That is the proposed meeting referred to in paragraph 4.

- 9 Three other streams of work are underway. These will inform our view on whether the New Zealand government should allow the launch to proceed, or attempt to stop it entirely:


- a. A classified assessment of Kuang Chi and the significance of near space balloon launches from New Zealand is provided separately. Following this assessment, further queries were submitted. If replies are received (we are following up) further assessment may follow;

- b. 

and

- c. Officials are considering whether there are any steps the New Zealand government can take to prevent the launch from occurring, should we wish to.

- 10 We will also seek to have the policy questions underlying this matter dealt with as part of the policy work surrounding Rocket Lab, as the issues are almost identical. That work is well underway and will have legislation in place by the end of 2016. We have already raised this with MBIE; officials have not indicated any difficulties with adding this to their work.

- 11 Near space is a region within which balloons can operate for long periods, potentially carrying out a range of communications, remote sensing, and surveillance functions. 

s6(a)

12

Kuang Chi

13

s6(a)

- 14 Kuang Chi launched a balloon in New Zealand on 6 June 2015. That launch failed: the instrumentation froze due to inadequate heating; the balloon didn't maintain altitude and had to be terminated 200 nautical miles out to sea. As a result, the Civil Aviation Authority notified Kuang Chi that it wants assurances that further operations will not create safety hazards to people and property. CAA has notified Kuang Chi that CAA staff will observe preparations for the launch, and the launch itself.
- 15 New Zealand knows very little about the balloon itself, or its payload. For the first launch, Kuang Chi did not say what was in the payload (Airways noted that information from Kuang Chi kept changing about the purpose of the payload). For the second launch, no payload details have been disclosed so far, other than that it may weigh about 300kg. The lack of any knowledge about the payload is concerning, and is a matter officials are considering further.

s6(a)

Kuang Chi Science Ltd – Balloon Launch – Meeting Notes 151221

Facts

- 2014 KC Science Ltd (KCS) s6(a) and in the stable of KC (KC Institute of Advanced Technology is a subsidiary)
- 8/14 KC entered approached Airways; MOU signed 21/11/14 NZG, KCS, Shanghai Pengxin (SP). MOU did not guarantee a launch; these are otherwise required.
- An earlier launch from Shanghai Pengxin (Ashburton) on 6/6/15 failed – it had to be terminated 200k out to sea
- It is working to get approval for another launch 3/4 -30/5 16
- China has publicly reported an intent to gain strategic dominance in near space

s6(a)

Questions

- What is New Zealand's policy on the "responsible use of of space"?
- What is the status of the agreements we have made with KC? Do we or do we not need an agreement in place before the launch, and what are we agreeing to?

s6(a)

- What has been the engagement with Ministers on the issue?
- What interest is there from the media – is anyone following the issue?

s6(a)

Meeting to assess implications of proposed second Kuang Chi launch

Monday 21 December 9:30am at DPMC

1 Attending

DPMC: s6(a)

Ministry of Transport: Nick Brown

Civil Aviation Authority: Graeme Harris

Airways: Ed Sims

MFAT: s6(a)

NZSIS: x 2

2 Agreed actions

- a) NZSIS to work with CAA/Airways and DPMC NSP to develop questions for Airways to transmit to Kuang Chi as soon as possible, to test the company's links to China's military establishment. **Timing: as soon as possible**
- b) Work streams, already underway, to deliver two products

s6(a)

- Ministry of Transport is also co-ordinating among legal colleagues in other departments to see whether there are any steps that the New Zealand government can take to prevent the launch occurring, should we wish to (noting input from Immigration New Zealand, already passed on by MOT). **Timing: by 14 January 2016**
- c) A briefing for the Prime Minister, copied to other Ministers, as soon as practicable after 14 January. This briefing outlines the situation, any options, and will advise the Prime Minister about proposed courses of action. **Timing: as soon as practicable after 14 January**
 - d) Continue work already underway, led by MBIE and involving DPMC NSP, Transport, MFAT, and colleagues from other Departments to align New Zealand's developing space policy and proposed legislation to accommodate concerns about the use of near space. **Timing: ongoing**
 - e) DPMC NSP to co-ordinate work on balloons issue. **Timing: ongoing**
 - f) Reconvene group. **Timing: to be confirmed**

3 Discussion points

Ed Sims said that Kuang Chi may seek to have the launch early in the New Year, as close to Christchurch Airport as possible (Kuang Chi's ownership of Martin Jetpack, including facilities at Christchurch Airport, may be a factor). Technically, however, no New Zealand approvals are required, except for the requirement to manage clear airspace for launching. There is only a marginal commercial gain for Airways from this arrangement with Kuang Chi.

s6(a)

Nick Brown confirmed that it will still be possible to take national security matters into account in the current CAA Act review, as final advice is not yet before Ministers. Graeme Harris said that CAA would welcome a single, consistent policy.

Nick Brown also raised whether Customs should be engaged at this point.

s6(a) summarized that now New Zealand is now at the point where we will seek to interrogate security issues a little further. Nothing more emphatic will be done at this stage, though nascent risks to telecommunications are noted. No-one is saying "stop" at this stage to the progression of New Zealand's own processes. At some point, there may also need to be a question asked about why the PM witnessed the signature of the MOU.

s6(a) clarified further actions would depend on replied received, and the outcome of work streams (noted above).

s6(a)

National Security Policy, DPMC

Released under the Official Information Act 1982

Airways Corporation of New Zealand Limited

AND

KuangChi Science Ltd.

**Agreement for the Provision of
Launch Services 2016**

Released under the Official Information Act 1982

SERVICES CONTRACT

This Agreement is dated the _____ day of _____ 2015

PARTIES:

1. **AIRWAYS CORPORATION OF NEW ZEALAND LIMITED** a company duly incorporated in New Zealand and registered as number 331446, with its registered office at Level 7, 100 Willis Street, Wellington, New Zealand (**Airways**)
2. **KUANGCHI SCIENCE LTD.** a listed company duly incorporated in Hong Kong and registered as number 00439, with its registered office at Unit 906, 9/F, Wings Building, 110-116 Queen's Road Central, Central, Hong Kong (KCS) (**Customer**)

BACKGROUND:

- A. Airways is certificated by the New Zealand Civil Aviation Authority to provide air traffic control and navigation services in New Zealand and Airways provides these services in accordance with the Standard Terms.
- B. In June 2015, the Customer undertook a one-off launch of a super pressure balloon from private land, owned by a partner company (Shanghai Pengxin), in Ashburton, New Zealand. The Customer now wishes to undertake a further one-off launch of an approximately s9(2)(ba)(i) [REDACTED] balloon from one yet to be agreed site in New Zealand between April-June 2016.
- C. Airways is willing to provide to the Customer and the Customer wishes to receive from Airways, launch services in order to enable the Customer to prepare for and undertake this further launch.
- D. This Agreement sets out the terms and conditions under which Airways will provide and the Customer will receive the pre-launch services.

THE PARTIES AGREE:

1. Definitions & Interpretation

1.1. **Definitions:** Unless the context otherwise requires, words and expressions used in this Agreement have the following meanings:

- a) **Agreement** means this agreement, including its schedules.
- b) **ATC** means air traffic control.

- c) **Balloon** means the Customer's s9(2)(ba)(i) [REDACTED].
- d) **Business Day** means any day excluding Saturdays, Sundays and statutory holidays in New Zealand.
- e) **CAA** means the Civil Aviation Authority of New Zealand.
- f) **Commencement Date** is the date specified in Item 1, Schedule 4.
- g) **Conditions of Service** means the conditions on which the Services will be provided by Airways as set out in Schedule 2.
- h) **Contract Price** is the amount the Customer will pay Airways for the Services calculated in accordance with the pricing specified in Schedule 5.
- i) **Controlled Airspace** means an airspace of defined dimensions within which an air traffic control service is provided to Instrument Flight Rules (IFR) flights, and to Visual Flight Rules (VFR) flights, in accordance with the airspace classification, including domestic and oceanic airspace.
- j) **FIR** means flight information region.
- k) **GST** has the meaning given in the Goods and Services Tax Act 1985 (NZ).
- l) **Intellectual Property Rights** means all intellectual property rights and interests subsisting anywhere in the universe, including copyright, designs, patents, inventions, know how, trade and service marks (including goodwill in those marks), domain names and trade names.
- m) **Launch** means the take-off or an attempt to take-off of the Balloon.
- n) **Launch Advice** has the meaning set out in the Conditions of Service, paragraph **Error! Reference source not found.2a**).
- o) **Launch Day** means the day on which a Launch is to be undertaken (whether or not the Launch actually occurs) and comprises a maximum of a 5 hour ATC shift during which the Balloon may be inflated and launched by the Customer.
- p) **Launch Time Window** means the time period specified by Airways that the Customer can Launch within on Launch Day.
- q) **Launch Notice** has the meaning set out in the Conditions of Service, paragraph **Error! Reference source not found.2c**).
- r) **Launch Site** means the site to be determined under this Agreement as the single site for the Launch of the Balloon.
- s) **Launch Window** has the meaning set out in Section 3, Schedule 1.

- t) **MOU** means the Memorandum of Understanding between the parties which will be created by Airways under this Agreement and documents processes relating to the Launch and ATC.
- u) **Month** means a calendar month.
- v) **NOTAM** means a notice to airmen.
- w) **Procedures** mean documented processes stipulated by Airways relating to the control of air traffic in New Zealand FIR and Auckland Oceanic FIR airspace.
- x) **Services** means the services Airways will provide to the Customer as specified in Schedule 1.
- y) **Standard Terms** means Airways' Standard Terms and Conditions for the Provision of Airways Services published on its website at http://www.airways.co.nz/airways_Services/terms.asp as updated from time to time.
- z) **Target Launch Date** means 20 April 2016 being the date the Customer anticipates the Launch will occur, which may or may not be the Launch Day.
- aa) **Term** means the term of this Agreement as described in Item 2, Schedule 4.
- bb) **Terminate** means bringing the Balloon to earth either as a controlled or emergency descent and Termination and Terminated shall have a corresponding meaning.

1.2. **Interpretation:** Unless the context otherwise requires, in this Agreement:

- a) headings are for convenience only and do not affect the interpretation of this Agreement;
- b) a word or expression in the singular includes the plural, and vice versa;
- c) a reference to a document includes an amendment or supplement to, or replacement or novation of, that document;
- d) a reference to a party to this or any other agreement includes that party's authorised representatives, successors and permitted assigns;
- e) a reference to a person or words denoting a person includes a company, statutory corporation, partnership, joint venture, association, board, government or semi-government agency or authority and that person's successors and legal personal representative;
- f) if an act under this Agreement to be done by a party on or by a given day is done after 5:00 p.m. on that day, it is taken to be done on the next day;

- g) references to time are references to New Zealand time and references to currency are references to New Zealand currency;
- h) the principle of contractual interpretation known as the *contra proferentem* rule does not apply to this Agreement;
- i) a reference to any statute, ordinance or other law includes regulations and other instruments under any of them and includes all consolidations, amendments, re-enactments and replacements of any of them;
- j) any provision of this Agreement to be performed or observed by two or more persons binds those persons jointly and severally.
- k) a reference to "including" shall imply "including without limitation".

2. Services

- 2.1. Airways agrees to provide the Services to the Customer for the duration of the Term on the terms and conditions set out in this Agreement.
- 2.2. Provisional Launch approval is dependent upon Airways being satisfied (in its absolute discretion) that any identified Launch safety and risk levels are mitigated as Airways considers appropriate.

3. Customer Obligations

- 3.1. The Customer shall pay Airways the Contract Price in accordance with Schedule 5 and otherwise comply with all its other obligations under this Agreement.
- 3.2. The Customer shall at all times:
 - a) comply with all its obligations related to the Services as set out in the Conditions of Service, including providing notification to Airways prior to any Launch as required under the Conditions of Service;
 - b) comply with all relevant laws including but not limited to all applicable statutes, regulations and bylaws, and all mandatory codes, rules and orders promulgated under such statutes, regulations or bylaws;
 - c) comply with all applicable New Zealand Civil Aviation Rules designations or conditions;
 - d) liaise with all affected or otherwise necessary persons in relation to the Launch including any local authority, the New Zealand Fire Service, the New Zealand Police, and government agencies and/or obtain all necessary approvals required for any Launch from such persons;
 - e) liaise with and agree all its Balloon operations with the relevant airport authority;
 - f) coordinate its operation with any other country's air navigation service provider, if necessary;
 - g) comply with the MOU; and

h) otherwise comply with all reasonable directions of Airways.

3.3. The Customer warrants that its operation of the Balloon has no military purpose and/or affiliation. In the event that it transpires that the Balloon does have any such purpose and/or association, then such purpose and/or association will be deemed a "material breach" which is not capable of remedy for the purpose of clause 4.2 (a) of this Agreement.

4. Term and Termination

4.1. This Agreement commences on the Commencement Date and shall continue for the Term unless terminated earlier in accordance with this Agreement.

4.2. This Agreement may be immediately terminated by either party upon written notice if the other party:

- a) commits a material breach of this Agreement and such breach:
 - i. has not been remedied within 7 days of written notice; or
 - ii. is not capable of remedy; or
- b) goes into liquidation, receivership or statutory management or enters into a compromise with creditors.

4.3. Airways may terminate this Agreement immediately by advising the Customer of such termination if it considers that the integrity of airspace is or may be compromised or any aircraft(s) are at risk, or potentially at risk, without the reasonable mitigation of Airways (as determined by Airways). Whether this right may be exercised will be determined at the sole discretion of Airways' General Manager System Operator. Examples of situations where termination in accordance with this clause may be invoked include:

- a) provisional Launch approval is not provided by Airways;
- b) a significant, major or catastrophic safety incident occurs; and/or
- c) material risk factors that were unanticipated at the date of this Agreement are identified.

For clarity, if Airways wishes to exercise its right in this clause 4.3, the notice provisions of clause 10 of this Agreement shall not apply.

4.4. In the event that this Agreement is terminated prior to expiry of the Term, the Customer will be liable to pay Airways for all Services provided up to the date of termination as determined by Airways (acting reasonably).

5. Intellectual Property

5.1. Subject to clause **Error! Reference source not found.**, unless otherwise agreed by the parties in writing all Intellectual Property Rights of a party:

- a) existing prior to the date of the Agreement; or
 - b) that are not developed, commissioned or created under or in connection with the Services,
- (together, Existing IP), and any modification, improvement, adaptation or addition to any Existing IP, will be owned by that party.

5.2. All knowledge, systems, equipment and know-how used by Airways in the performance of the Services is and will remain the property of Airways. In addition Airways shall own all new intellectual property created in the course of providing the Services.

5.3. Clause 5.1 and 5.2 shall remain in full force and effect notwithstanding the termination or expiry of this Agreement.

6. Confidentiality

6.1. Airways and the Customer each acknowledge that during the course of this Agreement each party may become aware of proprietary or confidential information of or about the other party. For the purposes of this Agreement, "confidential information" shall include all:

- a) information Airways provides to the Customer under or in connection with this Agreement and/or the Services; and
- b) all information the Customer provides to Airways pertaining to the design features of the Balloon.

6.2. Airways and the Customer each undertake not to reveal any proprietary or confidential information about the other party to any third party unless:

- a) required to do so by law;
- b) in the case of Airways, it is necessary to do so in order to provide the Services;
- c) the information is already in the public domain through no breach of this Agreement; or
- d) with the prior written consent of the other party.

6.3. Both parties shall ensure that all of its personnel that receive any proprietary or confidential information as described in this clause 6 are aware of each party's confidentiality obligations under this Agreement and that they comply with them.

6.4. The foregoing obligations as to confidentiality shall remain in full force and effect notwithstanding the termination or expiry of this Agreement.

7. Insurance

7.1. The Customer shall maintain the following insurance with a reputable insurer at its own expense by no later than 30 Business Days prior to the Target Launch Date and for so long as any obligations remain in connection with this Agreement:

- a) Public liability insurance of no less than \$20,000,000 extending to the Customer's operations under this Agreement, containing a cross liability clause and naming Airways as an additional insured.

7.2. The Customer shall provide Airways with an insurance certificate evidencing compliance with clause 7.1 by no later than 30 Business Days before the Target Launch Date. Any failure by the Customer to provide such evidence shall be deemed a "material breach" for the purposes of clause 4.2.

7.3. In addition to its obligations under clause 7.2, the Customer shall, upon Airways' request, provide copies of brokers or insurers' certificates evidencing compliance with its obligations under this clause **Error! Reference source not found.**

8. Governing law

8.1. This Agreement is governed by the laws of New Zealand, and is subject to the non-exclusive jurisdiction of the courts of New Zealand.

9. Language

9.1. The parties agree that all communications between them under or in relation to this Agreement (notices or otherwise) and all documentation and any other written material provided by either party to the other party under or in connection with this Agreement shall be in English.

10. Notices

10.1. No notice given under this Agreement shall be effective unless given in writing and delivered by hand or sent by prepaid post or email to the relevant address set out in Schedule 4.

10.2. Any notice given in accordance with clause 10.1 shall be deemed to have been received:

- a) at the time of delivery, if delivered by hand;
- b) on the 10th Business Day after the date of mailing, if sent by prepaid post; or
- c) no later than one (1) Business Day after the email is dispatched from the sender's email server unless within that time the sender receives notification that the email has not been delivered, if sent by email.

However, if the notice is not received on a Business Day, then the notice will be deemed given on the next Business Day after that day.

11. Force Majeure

11.1. Neither party will be liable for any failure to meet its obligations under this Agreement if that failure is caused by any event reasonably beyond the control of

either party provided that nothing in this clause shall relieve a party of its payment obligations under this Agreement.

12. Disputes

12.1. In the event of a dispute the following procedure will apply:

- a) the aggrieved party will serve written notice of a dispute (Dispute Notice) on the other party;
- b) the parties must meet within 14 days of receipt of the Dispute Notice and act in good faith to resolve the dispute;
- c) if the parties are unable to resolve the dispute then they may agree on an independent mediator to resolve the dispute, and failing such agreement either party can apply to the President of the New Zealand Law Society to appoint an independent mediator for the purpose of resolving the dispute (Mediator);
- d) the Mediator must deliver written notice of his or her decision to both parties no later than 30 days from the date of his or her appointment unless it is impractical or unreasonable to do so in which case a decision must be made as soon as practicable thereafter; and
- e) the decision of the Mediator will be non-binding on the parties.

12.2. Subject to any decision of the Mediator, each party must bear its own costs of complying with clause 12.1 and the parties must bear equally the costs of the Mediator.

13. Entire Agreement

13.1. This Agreement constitutes the entire agreement between the parties in relation to its subject matter. It supersedes and replaces any existing agreements between the parties in relation to its subject matter.

13.2. For clarity, nothing in 13.1 shall affect the validity of the MOU and its application to the Services.

14. Confirmation of Standard Terms

14.1. Where the context allows, the Standard Terms shall apply in respect of the provision of the Services. For the avoidance of doubt, the Customer will be deemed to be an 'operator', a Balloon will be deemed to be an 'aircraft' and the Services will be deemed to be an 'Airways service' for the purposes of the Standard Terms.

14.2. In the event of any inconsistency between any terms of:

- (a) the Standard Terms and this Agreement; and
- (b) the MOU and this Agreement,

the terms of this Agreement will prevail.

15. Assignment

15.1. Neither party may assign or transfer its rights or obligations under this Agreement without the prior written consent of the other party which may not be unreasonably withheld.

16. Survival

16.1. The parties agree that the provisions of clauses 5, 6, 7, 8, 9, and 12, 14 shall survive termination of this Agreement.

17. Relationship

17.1. Nothing in this Agreement constitutes:
a) creates or evidences any partnership, joint venture, agency, trust or employer/employee relationship between the parties; and
b) the parties as partners or as agents for each other.

18. Counterparts

18.1. This Agreement may be executed in any number of counterparts and all counterparts taken together shall constitute one and the same instrument. A party may enter into this Agreement by signing a counterpart copy and sending it to the other party, including by facsimile or email.

SIGNED BY THE PARTIES:

SIGNED by [])
for and on behalf of)
KUANGCHI SCIENCE LTD.)
in the presence of:) _____

.....
Witness

.....
Name

.....
Occupation

SIGNED by [])
for and on behalf of)
AIRWAYS CORPORATION OF)
NEW ZEALAND LIMITED)
in the presence of:)

.....
Witness

.....
Name

.....
Occupation

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SCHEDULE 1 THE SERVICES

Notwithstanding clause 1414, the MOU and any Procedures developed pursuant to this Agreement will take precedence over this Schedule.

Airways will provide to the Customer the Services outlined below.

1. Provisional Authorisation Services

Airways will undertake those services it considers necessary to prepare for the Launch such as:

- a) Assist the Customer to determine an appropriate Launch Site for the Balloon – a maximum of 3 sites will be considered. Airways will model the balloon trajectory provided by the Customer and assess impacts on:
 - controlled airspace
 - special use airspace
 - flight paths around Launch site
 - airports
 - Launch timing

The parties acknowledge that at the date of this Agreement, this has been completed for two launch sites: Mahia and Birdlings Flats which have not been selected.

- b) Prepare balloon trajectory airspace arc to be used by Airways operational team (arc of least airspace impact) based on the Balloon trajectory provided by the Customer
- c) Understand the Customer's emergency procedures e.g. what happens if contact is lost with Balloon
- d) Undertake an Airways risk assessment
- e) Complete an Airways safety case
 - The CAA may review Airways' process to ensure regulatory compliance and for aviation safety purposes
- f) Create specific Airways operational procedures/notices for the Launch
- g) Manage staff rosters to ensure coverage for the 5 day Launch Window
- h) Establish the MOU for Launch processes and conditions in relation to interacting with ATC for the New Zealand FIR (NZZC) and the Auckland Oceanic FIR (NZZO) e.g. Launch Notice format, timings on Launch Day, contact points, appropriate contact processes (phone and email)
- i) Assess possibility of float in Auckland Oceanic FIR airspace and the impact of such float
- j) Work in good faith with the Customer to agree a proposed Launch Day and Launch Time Window that does not conflict with any other form of launch or significant airspace activity (such conflict being as determined by Airways)
- k) Introduce the Customer's proposed launch to other airspace users e.g. airlines , airport representative(s) within the vicinity of the proposed Launch Site
- l) Notify Airways' shareholder, the New Zealand Government, of this research and development operation (please note: this is a standard process)
- m) Advise the Customer of notice to airmen (NOTAM) format and processes
- n) At least 15 Business Days before the Target Launch Date Airways will participate in rehearsals of 2 possible launch scenarios with the Customer: 1) the rehearsal of a successful launch scenario, 2) the rehearsal of an issue occurs scenario (to test contingency procedures). Successful rehearsals demonstrating Launch readiness of the Customer's operational systems and procedures is an important part of provisional launch approval.

2. Pre-Launch

- a) After the Customer provides the Launch Advice as set out in Schedule 2 paragraph 2a) of the Conditions of Service, and at least 3 days before the Launch Day, Airways will:
- Issue the NOTAM for 1) the Balloon and 2) any other objects that are required to be notified for aviation safety as advised to Airways by the Customer. The Launch Window timeframe will be used in the NOTAM. Please note: details of the NOTAMs will be defined in the MOU.

The Launch Advice will include the expected Balloon trajectory. Please note: requirements for the trajectory information will be defined in the MOU.

- b) Once the Customer has given the Launch Notice as set out in Schedule 2 paragraph 2c) of the Conditions of Service, Airways will either:
- Cancel the NOTAM if the Launch is cancelled
 - If the Launch is going ahead
 - confirm the NOTAM and update trajectory details and flight path, and
 - issue the Float NOTAM

3. Launch

Airways shall undertake the following activities:

- Provide a five day Launch window being an option to Launch once in a five consecutive day period (**Launch Window**). Should additional days be required beyond the Launch Window, an additional cost shall apply for all additional days requested at the rate set out in Schedule 5.
- Provide air traffic management services by separating other airspace users from the Balloon while the Balloon is in Controlled Airspace by using surveillance infrastructure and validating this with the Customer's tracking website (altitude and airborne). Airways ATC will also liaise with the Customer's launch mission control team.
- Provide ATC authorisation via phone prior to inflation and prior to Launch.
- Where Launch authorisation is given, Airways' ATC will advise the Airways' Flight Information Office (FIO) and the FIO will initiate a radio broadcast.

The Customer acknowledges that there may be times when Launch or Balloon inflation approval is delayed or withheld due to air traffic, contingency, or other conditions, such as weather that exist prior to inflation.

4. Post-Launch / Monitoring

Airways will monitor the Balloon's trajectory, altitude, and position while in NZ FIR (NZZC) and up to 60,000 feet using Airways' surveillance or the Customer's tracking website. Airways will monitor the Balloon's trajectory, altitude, and position while in Auckland Oceanic FIR (NZZO) using the Customer's tracking website and/or written or verbal reports from the Customer's launch mission control team. Airways will also provide internal coordination services between all Airways operated domestic and oceanic sectors and if required, and pass flight information to other traffic around the float area of the Balloon.

The Balloon may not operate below 60,000ft and within Controlled Airspace in NZZC and NZZO without prior approval from Airways.

**SCHEDULE 2
CONDITIONS OF SERVICE**

Provision of the Services by Airways is subject to the following conditions:

1. General Requirements

- a) Access to Airways' staff will be during the hours of 9am-5pm Monday-Friday (excluding the Launch Day).
- b) Airways' staff will be unavailable over the Christmas period from 21 December 2015 to 18 January 2016 inclusive and Services will not be available during such period.
- c) The Launch is subject at all times to the terms and conditions of the MOU and this Agreement.
- d) The Customer and Airways have agreed the Launch Site and Launch Time Window by 15 February 2016.
- e) Airways will need to be satisfied all the following requirements are met at least 30 Business Days prior to the Target Launch Date:
 - i. The MOU has been signed by both parties.
 - ii. The Customer will have supplied Airways with access to its website tracking system and provided evidence of the process that will be implemented should the tracking system fail.
 - iii. The Customer will have provided evidence that all information from its tracking system is "recorded" and confirm it is not overwritten.
 - iv. The Customer will have provided a Launch timeline with key milestones and communication points, which will be used in the Rehearsal (as defined in schedule 1, section 1 n)).
 - v. The Customer will have provided confirmation that it will meet the Civil Aviation Rule Part 101 in a similar format to the table "Balloon Pre-Launch Civil Aviation Rule Part 101 Information" used for the 2015 Launch.
 - vi. The Customer will have provided evidence of appropriate aviation insurance in accordance with clause 7 of this Agreement (which for the avoidance of doubt shall be no less than that set out in clause 7).
 - vii. Provide evidence of a redundancy/backup for the Customer's tracking website to be available and live within a reasonable and agreed time, should the system fail
- f) Provisional authorisation is not guaranteed as Airways will need to undertake appropriate risk assessments and/or prepare a safety case and be satisfied (in its absolute and sole discretion) with such assessments and/or safety cases prior to issuing any approval.
- g) Descent or landing services are excluded (unless Airways determines that there is a balloon emergency situation dictating this action) and cannot be undertaken without Airways' approval and a separate contract being agreed and signed by the parties.
- h) Airways' resources are not dedicated solely to this project during the Term.

- i) Airways' responsibility is limited to the New Zealand Flight Information Region (NZZC) and Auckland Oceanic Flight Information Region (NZZO). Accordingly, Airways cannot assume responsibility for another State's airspace or ATC requirements.
- j) Upon review and acceptance of the MOU, the Customer will comply with the provisions of the MOU.
- k) The Services will only be provided for one Launch Site before 30 June 2016.
- l) The Customer will ensure that the Balloon will ascend and be maintained above a minimum altitude of 60,000 feet.
- m) The Customer will ensure that the Balloon will not enter into Controlled Airspace in NZZO in the Tasman area.
- n) The Customer will ensure that Airways can directly (without using intermediaries) reach the Customer's launch team staff via phone at key points prior to Launch and post Launch. These key points will be defined in the MOU.
- o) A Launch Day may be for a maximum of 5 continuous hours.
- p) A Launch can only take place within the Launch Time Window on Launch Day.

2. Customer's Responsibilities

In order for Airways to provide the Services, the Customer agrees to the following:

- a) The Customer must advise Airways via email of the planned Launch Day at least 5 Business Days prior to its intended Launch (**Launch Advice**). For the purposes of this Agreement, the Launch Day notified in the Launch Advice will be treated as the first day of the Launch Window even if the Launch is cancelled.
- b) The Customer acknowledges that by providing the Launch Advice they provide permission for Airways to issue a NOTAM for 1) the Balloon and 2) any other objects that are required to be notified for aviation safety based on Launch Advice information.
- c) The Customer must advise Airways its intention to launch (**Launch Notice**) immediately after their go/no go meeting the day prior to Launch Day (approximately 16 hours prior to Launch Day), in the format specified in the MOU.
- d) The Customer must advise required trajectory information as specified in the MOU as part of the Launch Advice and Launch Notice, and acknowledges this will be used to issue, update or cancel the NOTAM; and if the Launch is confirmed post the Customer's go/no go meeting, issue the Balloon float NOTAM.
- e) The Customer shall be entitled to a maximum of five (5) consecutive days to attempt a Launch during the Launch Window.
- f) If the Customer cancels a Launch after the issue of the Launch Notice, the Customer can request another Launch Day by providing at least 12 hours notice to Airways, provided it is within the Launch Window. Once the Launch Window is used, then scheduling any additional Launch Day(s) will incur a Launch Window Extension Charge payable by the Customer as specified in Schedule 5.
- g) The Customer may only Launch once under this Agreement.

- h) The Customer may schedule a maximum of 1 Launch Day in 24 hours.
- i) The Customer must obtain Airways ATC approval prior to Balloon inflation.
- j) The Customer must obtain Airways ATC approval prior to the Launch.
- k) The Customer will equip the Balloon with a Mode S (1090ES) TSO certified transponder prior to Launch.
- l) Launches can only occur during the Launch Time Window agreed by Airways on a Launch Day, such as 2am-6am. The Customer may only undertake a Launch at the Launch Site.
- m) The Customer must advise Airways of Termination at least 24 hours before performing the Termination.
- n) The Customer must ensure the Balloon follows the predicted trajectory. If the weather data obtained for the Launch suggests the trajectory will move from the predicted trajectory, then the Balloon cannot Launch. The Balloon's trajectory must match the Customer's predicted trajectory provided in accordance with this Agreement (and the MOU) and be East or South of East from the Launch Site until above FL600 provided that Airways understands there will be minor variations in the actual trajectory of the Balloon e.g. 3-5km per hour.
- o) On request, and within 24 hours, the Customer will provide Airways with telemetry files (in Microsoft Excel format or similar) providing Balloon parameters to be used for safety investigation purposes, should the Balloon be connected to or in the vicinity of an air safety event or incident within Controlled Airspace or during the Launch.
- p) The Customer will advise trajectory information as specified in the MOU, which is expected to be at the following periods prior to the Launch Day: Launch Advice, 48 hours, 24 hours, post the Customer's go/no go meeting, and once at float above 60,000 feet, then at least once every 24 hours thereafter commencing from entry to the Auckland Oceanic FIR (NZZO) until exit from that airspace.
- q) It is the Customer's responsibility to relay Balloon position information to other Air Navigation Service Providers (**ANSPs**) when the Balloon is approaching any FIR boundary outside those controlled by Airways.
- r) In an emergency Balloon descent or termination situation the Customer must provide Airways with as much notice as possible via phone and email as to be specified in the MOU.
- s) The Customer will provide all information reasonably requested by Airways within 7 days in order to facilitate Airways' provision of the Services.
- t) The Customer will provide Airways with its Balloon performance data including expected trajectory information and rate of ascent and descent as described in the MOU.

For the purposes of providing an example and visual aid only, Schedule 3 sets out diagrams representing the process described in Schedules 1 and 2.

3. Additional Customer Requirements

To address learnings from the Balloon's 2015 launch, the Customer agrees to the following:

- a) At least 30 Business Days prior to the Target Launch Date, the Customer will provide an explanation to Airways of how the Balloon's trajectory modelling has been tested and weather data incorporated to demonstrate more reliable predictability.
- b) The Customer will have a launch team member, the ATC Liaison, dedicated to a) monitoring the balloon and conformance to its trajectory and b) speaking to ATC, from 30 minutes prior to inflation until the Balloon is above 60,000 feet and in any emergency descent situation.
- c) The Customer's ATC Liaison will be capable of providing verbal position reports to ATC in feet (not metres), including predicted balloon positional data in both an unexpected and usual situation.
- d) The Customer will provide the balloon trajectory latitude and longitude ddd/mmm/sss (degrees/ minutes/ seconds) verbally as required by Airways (not degrees and decimals of degrees and not metres instead of feet).
- e) The Customer will re-forecast the Balloon's trajectory while in-flight to provide Airways with the Customer's prediction of where the Balloon might be in the future at intervals agreed in the MOU such as, 30 mins, 1 hour, 3 hours' from current time.
- f) At least 30 Business Days prior to the Target Launch Date, the Customer will ensure there is a reliable voice communication mechanism with Airways, this may involve installing a temporary cell tower if relying on mobile communications.
- g) At least 30 Business Days prior to the Target Launch Date, the Customer will provide Airways with access to their tracking website that meets the following requirements:
- i. The website(s) is in English with imperial (height in feet, distance in nautical miles and velocity in knots) measurement values;
 - ii. The website has automated (not manually entered data) balloon positional data updates every 5 minutes;
 - iii. The website dynamically refreshes and does not require an action such as, the website user to refresh/F5, to force an update onto the screen;
 - iv. The website's Balloon positional data is available on screen without having to click the balloon icon;
 - v. The website has a zoomable map;
 - vi. The website includes a prediction line of Balloon's first 6 hours of flight;
 - vii. The website has been tested by the Customer, and evidence provided to Airways of the above mentioned requirements.

4. Operational Requirements

The Customer must comply with:

- a) the MOU and any variations to the MOU agreed by the parties;
- b) any relevant Procedures and the terms of any variations to the Procedures issued by Airways from time to time; and
- c) any other directions or instructions reasonably issued by Airways from time to time in the interests of safety.

5. Priorities

- a) In accordance with the Aeronautical Information Publication New Zealand (AIPNZ), commercial passenger aircraft will be considered higher priority airspace traffic than the Balloon.

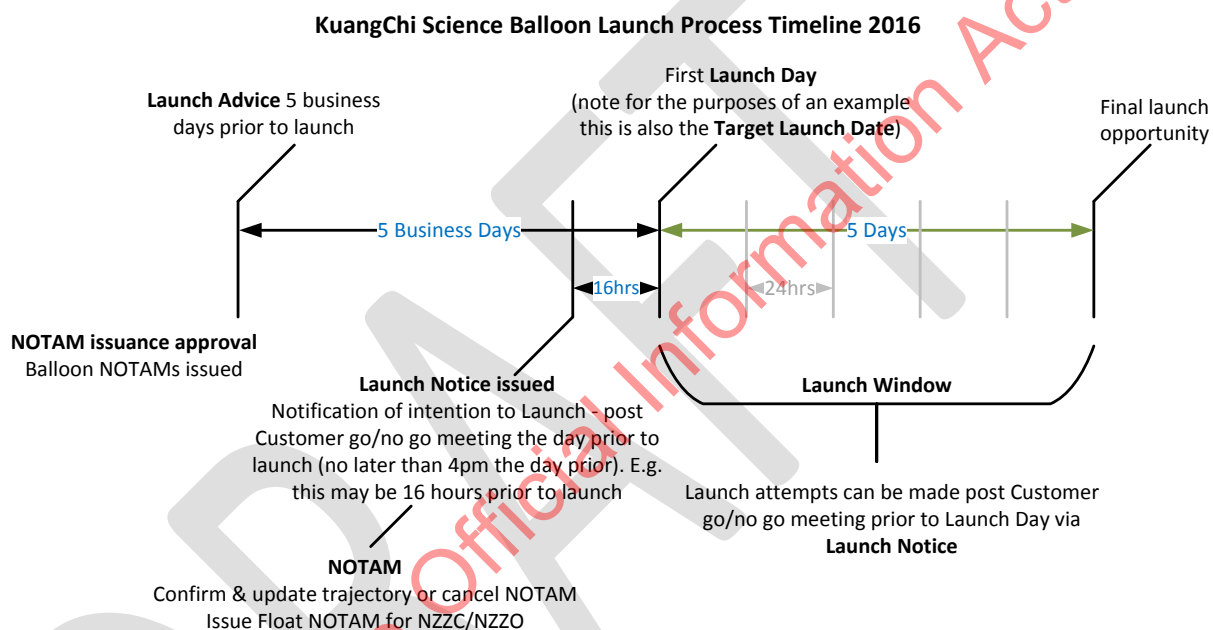
DRAFT
Released under the Official Information Act 1982

SCHEDULE 3 SAMPLE LAUNCH PROCESS

For the purposes of an example and visual aid only, a sample Launch process is summarised below in diagrams 1, 2 and 3 (refer Schedules 1 and 2). To the extent there is an inconsistency between the sample Launch process diagrams below and any other part of this Agreement (“operational provision”), then the operational provision shall prevail.

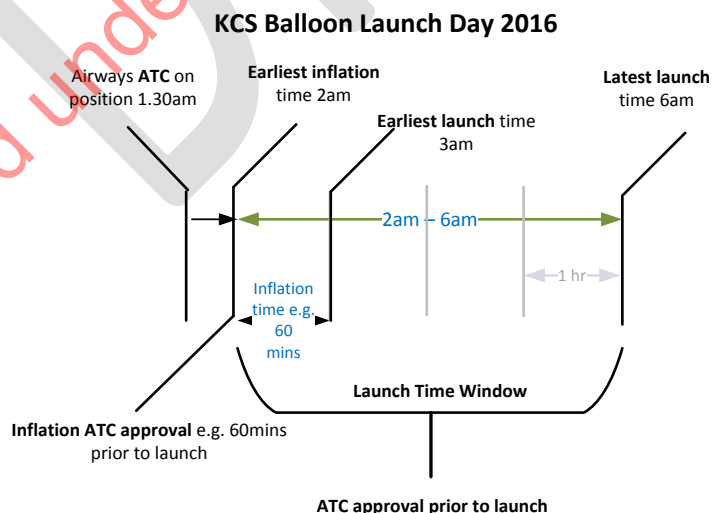
A sample **Launch process** represented as a timeline is summarised below in diagram 1.

Diagram 1: Sample Launch process timeline



A sample **Launch Day process** represented as a timeline is summarised below in diagram 2.

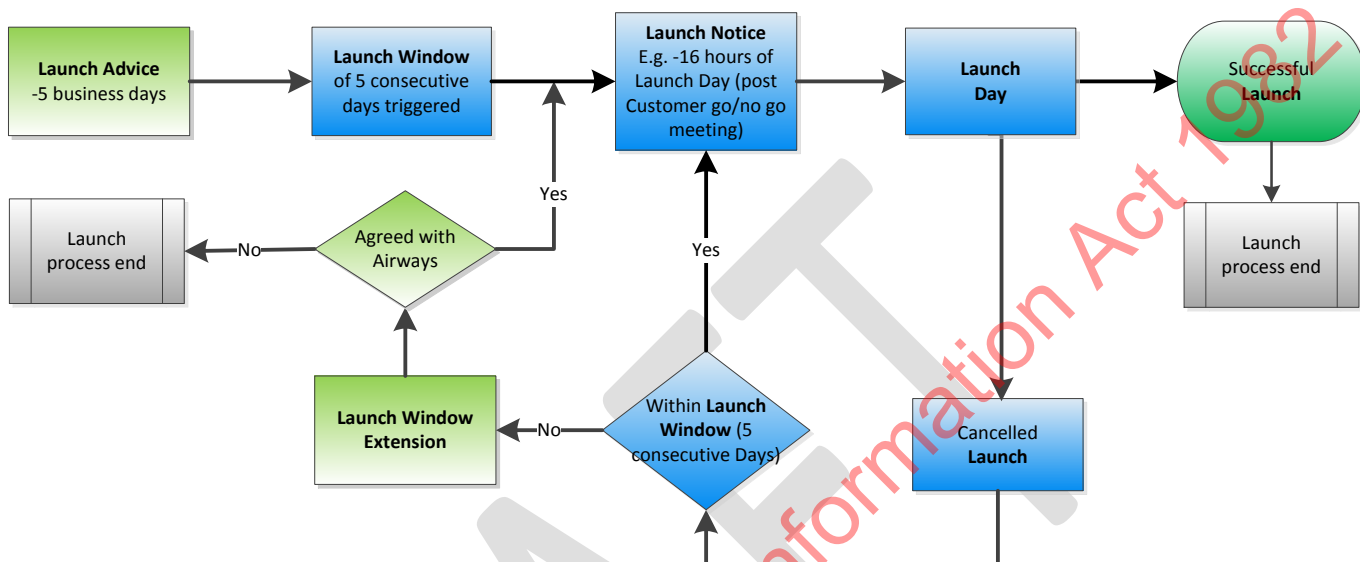
Diagram 2: Sample Launch Day process timeline if agreed launch time window is 2-6am.



A sample **Launch process** represented as a flow chart is summarised below in diagram 3.

Diagram 3: Sample Launch process flow chart

Balloon Launch Process Flow Chart - 2016



For the purposes of an example and visual aid only, a table of timing requirements for the Customer’s key obligations is summarised below in diagram 4 (refer Schedules 1 and 2). To the extent there is an inconsistency between Diagram 4 below and any other part of this Agreement (“operational provision”), then the operational provision shall prevail.

Timing requirements for the Customer’s key obligations is summarised below in diagram 4.

Diagram 4: Timing requirements for the Customer’s key obligations

Contract item	Due date
Schedule 2 – section 1 General Requirements	
The Customer and Airways have agreed the Launch Site and Launch Time Window	15 Feb 2016
Schedule 2 – section 1 General Requirements	
MOU has been signed by both parties.	7 March 2016
The Customer will have supplied Airways with access to its website tracking system and provided evidence of the process that will be implemented should the tracking system fail.	30 Business Days prior
The Customer will have provided evidence that all information from its tracking system is “recorded” and confirm it is not overwritten.	
The Customer will have provided a Launch timeline with key milestones and communication points, which will be used in the Rehearsal (as defined in schedule 1, section 1).	
The Customer will have provided confirmation that it will meet the Civil Aviation Rule Part 101 in a similar format to the table “Balloon Pre-Launch Civil Aviation	

Rule Part 101 Information” used for the 2015 Launch.	
The Customer will have provided evidence of appropriate aviation insurance (which for the avoidance of doubt shall be no less than that set out in clause 7 of this Agreement).	
The Customer will have provided evidence of a redundancy/backup for the Customer’s tracking website to be available and live within a reasonable and agreed time, should the system fail	
Schedule 2 – section 3 Additional Customer Requirements	
The Customer will provide an explanation to Airways of how the Balloon’s trajectory modelling has been tested and weather data incorporated to demonstrate more reliable predictability	
The Customer will ensure there is a reliable voice communication mechanism with Airways, this may involve installing a temporary cell tower if relying on mobile communications	
The Customer will provide Airways with access to their tracking website that meets the following requirements: <ul style="list-style-type: none"> i. The website(s) is in English with imperial (height in feet, distance in nautical miles and velocity in knots) measurement values ii. The website has automated (not manually entered data) balloon positional data updates every 5 minutes iii. The website dynamically refreshes and does not require an action such as, the website user to refresh/ F5, to force an update onto the screen iv. The website’s Balloon positional data is available on screen without having to click the balloon icon v. The website has a zoomable map vi. The website includes a prediction line of Balloon’s first 6 hours of flight vii. The website has been tested by the Customer, and evidence provided to Airways of the above mentioned requirements 	
Schedule 1 – provisional authorisation services	
Customer and Airways to undertake Launch rehearsal 1	30 March 2016
Customer and Airways to undertake Launch rehearsal 2	15 Business Days prior
<i>Note:</i> Successful rehearsals demonstrating Launch readiness of the Customer’s operational systems and procedures is an important part of Provisional launch approval.	
Schedule 2 – section 2 Customer Responsibilities	13 April 2016
The customer must provide a valid Launch Advice (as defined in paragraph 2a) of Schedule 2)	5 Business Days prior
Target Launch Date	
Stated in contract as the date the Customer and Airways is working towards. Note: The actual Launch Day may differ to the Target Launch Date.	20 April 2016

**SCHEDULE 4
AGREEMENT DETAILS**

Item 1.	Commencement Date	1 December 2015
Item 2.	Term	From the Commencement Date until 30 June 2016
Item 3.	Airways' Contact Details and Address for Notices:	s9(2)(a) [redacted] Manager Product Development s9(2)(a) [redacted] @airways.co.nz Airways Limited P O Box 14131 26 Sir William Pickering Drive Christchurch New Zealand s9(2)(a) [redacted]
Item 4.	The Customer's Contact Details and Address for Notices:	KuangChi Science Ltd s9(2)(a) [redacted] M: s9(2)(a) [redacted] W: www.kuang-chi.org Kuang-Chi R&D Headquarter A: Software Building, No.9 Gaoxinzhong 1st Road, High-Tech Industrial Estate, Nanshan District, Shenzhen, Guangdong, P.R.China s9(2)(a) [redacted] @kuang-chi.com
Item 5.	Launch Day	The Customer intends the Launch will occur between 20 April-30 June 2016
Item 6.	Target Launch Date	20 April 2016

3.128.035

Meeting no.2 to assess implications of proposed second Kuang Chi launch

Thursday 27 January 2016, 11:00am – 12:00 pm, Pipitea House

1 Attending

DPMC: s6(a) Ministry of Transport: Nick Brown; Civil Aviation Authority: Graeme Harris; Airways: Helen Cruse; MFAT: s6(a) NZSIS: x 3

2 Agreed actions

- a) NZSIS to check with Customs. What can Customs do, if anything? **22 February update:** from NZSIS: Customs' interim advice is that they are unlikely to be able to stop the shipment for inspection under their own powers, given they have determined risk to the border is minimal based on their first search. **Formal written advice is still required from Customs.**

s6(a)

- c) DPMC to confirm timing and coverage of space legislation. Currently introduction is planned for May 2016, with passage by end of year. What does "end of year" mean? **22 February update:** DPMC and other security agencies currently working to ensure that very high altitudes (near space) are included in the Space Activities regime. MBIE advises timing depends on Leader of the House and Ministers' prioritisation decisions. All going well the legislation should be enacted sometime in December.
- d) NZSIS to write a case to their Minister, to test:
 - This situation has arisen
 - If it arises once space legislation has been passed, this would be the proposed threshold
 - Test with the Minister whether KC balloon launches would meet this threshold.**Timing: 25 March**
- e) Airways now understand that the launch date is likely to be October, and subsequently advised that they will notify Kuang Chi that further contractual discussions will be put on hold until closer to the new proposed launch date.
- f) Transport has also advised of further work to assess whether large unmanned balloons fall within the scope of a new aviation rule (Part 102 – aimed at managing the safety of remotely piloted aerial systems). Transport will advise when the legal position is clarified. CAA is contacting the company concerned to confirm whether it falls under part 102, and if so, whether it intends to apply to authorisation. **Transport/CAA to confirm outcome.**
- g) DPMC to draft briefing to Prime Minister, Minister Finlayson (copied to other relevant Ministers). **29 February update:** Minister Finlayson has requested a background briefing on space and rockets, which will include some information on balloons, which NSP will provide. The separate briefing for the PM: **Timing: once inputs noted above are received.**

s6(a) National Security Policy, DPMC, 29 February 2015

Kuang-Chi R&D Headquarter
Software Building,
No.9 Gaoxinhong 1st Road,
High-Tech Industrial Estate,
Nanshan District, Shenzhen, Guangdong,
PR China

29th December 2015

Dear s9(2)(a)

I write regarding the draft Agreement currently under consideration between Kuang Chi and Airways Corporation of New Zealand Limited about the proposed second launch of your super pressure balloon from New Zealand airspace. s6(a)

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5. The proposed purposes of a second launch from New Zealand, details of the payloads the balloon would be carrying and the purposes for which each of them is included.

I have attached a copy of the most recent version of the proposed contract that you have been discussing with s9(2)(a) and would appreciate your consideration and response to the questions above. Thank you for your consideration of these questions. I look forward to your response as soon as possible.

Yours sincerely,

s9(2)(a)

s9(2)(a) | *Chief Operating Officer*

Airways New Zealand

26 Sir William Pickering Drive, Russley, Christchurch

PO Box 14131, Russley, Christchurch 8053

t. s9(2)(a) m. s9(2)(a) | ext. s9(2)(a)

e. s9(2)(a) @airways.co.nz | w. www.airways.co.nz



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26 Sir William Pickering Drive, Russley, Christchurch
PO Box 14131, Russley, Christchurch 8053,
New Zealand

12th January 2016

Dear s9(2)(a)

Thanks a lot for the inquiry letter. s6(a) Balloon is a near space scientific balloon, and it is a part of near space exploration project being developed by Kuang-Chi Space Technology Co., Ltd. The balloon and near space exploration project has been developed and operated by and only by KuangChi Science Limited and its subsidiary, Kuang-Chi Space Technology Co., Ltd.

KuangChi Science Limited (00439.HK) (the Group) is a global disruptive technological innovation company listed on the main board of SEHK. And Kuang-Chi Space Technology Co., Ltd, registered in Shenzhen, P.R. China, is a wholly owned subsidiary of KuangChi Science Limited. The Group aims to extend survival and living space of human beings, and provide a better life with future technologies. The Group endeavors to create a disruptive full-product chain of space services and a global alliance of disruptive space technologies.

s6(a)



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s6(a)

A5. The proposed purposes of a second launch from New Zealand is to verify some payload and the payload configuration is electronic equipment for scientific research and experiments (including meteorological sensor, satellite communication equipment, high-speed wireless network, solar panels, battery and thermal control material).

We look forward to launching the s6(a) Balloon in New Zealand this year and developing a long and mutually beneficial business relationship with Airways New Zealand.

Yours sincerely,

s9(2)(a)

s9(2)(a) Research & Development Engineer

KuangChi Science Limited (00439.HK)

Software Building, No.9 Gaoxinzhong 1st Road, High-Tech Industrial Estate, Nanshan District, Shenzhen, Guangdong, P.R.China

T: s9(2)(a)

E: s9(2)(a)@kuang-chi.com

W: www.kuang-chi.org

光启科学
KUANGCHI SCIENCE
(00439 HK)

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s6(a)

From: s6(a) [DPMC]
Sent: Friday, 29 January 2016 11:51 a.m.
To: s6(a) [DPMC and NZSIS]
Subject: FW: Balloon launch assessment
Attachments: Chinese balloons foreign policy.docx

s6(a)

Hi s6(a)

As discussed this morning. Note that the hopeful plan for starting the briefing piece has been delayed, as discussed.

Regards,

s6(a)

From: s6(a) [DPMC]
Sent: Tuesday, 19 January 2016 7:45 p.m.
To: s6(a) [DPMC]
Cc: s6(a) [DPMC]
Subject: FW: Balloon launch assessment

Classification: s6(a)

Hi s6(a) [DPMC]

This is the MFAT assessment.

[Not in Scope]

s6(a)

The question now is about process and taking a decision.

Do you want to reconvene the group (i.e. CEs of Transport, CAA, Airways, someone from MFAT, s6(a) and us)? If so, when?

[Not in Scope]

s6(a)

s6(a)

Mark, Erin, for information.

s6(a)

From: s6(a): MFAT s6(a)
Sent: Tuesday, 19 January 2016 4:28 p.m.
To: s6(a) [DPMC]
Cc: s6(a): MFAT Richard Kay; s6(a): MFAT
Subject: Balloon launch assessment

Classification: s9(2)(a), s6(a)

Hello s6(a)

Please see attached our assessment on this issue.

We look forward to seeing the draft of the paper that this is feeding into.

Regards,

s6(a)

Policy Officer, Cyber Security and Space
International Security and Disarmament Division
Ministry of Foreign Affairs and Trade
PH: 04 439 8560

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s6(a)

s6(a)

Foreign policy implications of planned high-altitude balloon launch by Chinese company Kuang Chi

Summary

1. Chinese company Kuang Chi intends to launch a high-altitude balloon from New Zealand in early 2016.

s6(a), s6(b)(i)

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s6(a)

s6(a)

China relationship implications

10. We note that Chinese balloon launches in New Zealand have been the subject of high-level attention. This balloon launch was the subject of the Airways-Kuang Chi-Pengxin MoU that was witnessed by PM Key and President Xi during the latter's visit to New Zealand in November 2014.

s6(a)

12. Prior to the signing of the MoU, there were some communications between relevant government agencies, including MFAT, on the commercial, scientific, safety and security issues associated with the MoU.

s6(a), s6(b)(i)

*Americas, North Asia, and International Security and Disarmament Divisions
Ministry of Foreign Affairs and Trade
January 2016*

s6(a)

Kuang Chi Science (KC) balloon launch

- (U) Chinese company Kuang Chi Science (KC) intends to launch another large, high-altitude experimental balloon, capable of reaching near space in New Zealand between 1 April 2016 and 30 May 2016. This launch follows an earlier launch in 2015.

s6(a)

This launch causes both national security and international relationship concerns.

s6(a)

It is proposed that in New Zealand's wider national interests, in particular national security interests, that the launch be stopped.

s6(a)

New Zealand has currently few formal mechanisms to stop this launch. In legislation, the earliest possibility would be the new Space Activities Bill, currently being drafted, and scheduled for introduction in May, with passage by the end of 2016.

- (U) There are some however other actions that could be taken, among them, Airways ceasing to progress contract negotiations with KC for this or future launches of this type.

DEPARTMENT
of the PRIME MINISTER
and CABINET



Briefing Note

8 March 2016

To Hon Christopher Finlayson: Minister Responsible for GCSB; Minister in Charge of NZSIS

From s6(a) Director National Security Policy

For your Information

Subject SPACE DEVELOPMENTS IN NEW ZEALAND: [Not in Scope] BALLOONS

Purpose

- (C) This note briefs you on issues arising from two developments:

[Not in Scope]

- other countries' programmes to use New Zealand for the testing of very high altitude balloons.

s6(a) and both raise national security, economic and foreign policy issues for New Zealand. Planned legislation on space activities could, subject to decisions by Cabinet, enable New Zealand to address issues s6(a). For that reason, it is critical that the scope of the proposed Space Activities Bill is extended to cover high-altitude activities. This appears to be in hand; we will brief you if there is any shift away.

Recommendations

- I recommend that you:

[Not in Scope]

Note the national security and foreign policy risks to New Zealand arising from proposed launches of very high altitude craft, particularly balloons, from New Zealand;

Note the importance of having a basis in legislation for regulating very high-altitude activities and officials' preference for doing so by extending the scope of the proposed Space Activities Bill; and

Note that officials will brief you further as papers are prepared for Cabinet consideration through EGI.

Summary

[Not in Scope]

4. s6(a) Separately, there is increasing interest in many countries in the use of very high altitude balloons carrying payloads. These balloons are able to replicate for both civil and military purposes many of the functions carried out in recent decades by satellites. NASA, Google, and a Chinese company s6(a) have carried out trial launches from New Zealand territory over the past two years.

s6(a) concerns for New Zealand which are not sufficiently addressed

5. s6(a) Legislation is required to regulate the emerging space industry in New Zealand, to protect sensitive technology, to address national security and foreign policy issues arising from this industry and to manage the government's liability under international treaties. Because the issues raised by balloons [Not in Scope] operating at very high altitudes are similar, we are working closely with MBIE, which has carriage of the policy on proposals for the planned space activities legislation also to cover these very high altitude activities.

[Not in Scope]

[Not in Scope]

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Near Space: Very High Altitude Balloons and Other High-Altitude Craft

- 12. (U) The region known as “near space” is normally defined as extending from 20 to 100 km in altitude above the Earth. (These limits are arbitrary; in practice, craft that can operate

in near space can also operate effectively at lower altitudes.) 'Near space' is above the normal operating altitudes of commercial aircraft (up to about 15 km) but below the minimum altitudes at which satellites can orbit (well above 100 km if their orbits are to be stable for extended periods). Various types of craft, including balloons, unmanned aerial vehicles, specialised aircraft and hypersonic cruise missiles, are designed to operate in this region. Some are weapons; others serve a variety of military and civil reconnaissance, surveillance, communications and transport purposes. This note focuses on balloons rather than the other types of near space craft such as unmanned aerial vehicles (UAVs or drones), which may more effectively be regulated under an extended Civil Aviation Act.

13. (U) Research and development of technology and materials for very large balloons designed to operate for extended periods at very high altitudes (tens of kilometres) has been undertaken for more than 50 years. The work has reached the stage where it is becoming practicable to use balloons to carry large payloads able to replicate many of the functions satellites have performed in recent decades. Those functions include remote sensing, communications, navigation, national defence and research, most of which have a very wide and increasing range of applications.

s6(a)

14. (U) Both research and commercial entities have become involved in the work and have contributed to its development. Some trials have involved New Zealand.

[Not in Scope]

15. s6(a)

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Proposed Legislation on Space Activities

20. s6(a) Rocket Lab's proposed satellite launch activities have made it necessary for New Zealand to develop legislation to enable such launches from our territory, to meet our obligations under international treaties as a launch state and the proposed technology safeguards agreement with the US and to manage associated safety and security risks. Cabinet agreed to legislation for these purposes in December 2015. As currently proposed, the legislation would give the Minister responsible for the intelligence agencies, acting on advice from the agencies, the power to veto a planned launch on national security grounds.
21. s6(a) Officials have subsequently concluded that there is a need also for legislation to regulate the activities of balloons and other aircraft that operate at very high altitude. They recommend that the scope of the proposed space legislation be extended for this purpose, noting that an alternative is for the activities of very high altitude craft to be covered under the proposed extensions to the Civil Aviation Act. The basis for recommending extending the scope of the space legislation is twofold: the similarities between the functions of satellites and payloads carried by balloons and other craft in near space, and the fact that both satellite and balloon launches may create national security and foreign policy risks. Cabinet will be asked to take decisions on this extension of scope and its implications next month.
22. s6(a) Should the proposed extension of scope of the space activities legislation be agreed by Cabinet, the legislation, once enacted, would provide a basis for decisions, informed by risk assessments, on whether to approve very high altitude balloon launches such as those proposed by KuangChi. National security and foreign policy interests would then be factored into such decisions. At present, there is no formal basis for doing so.
23. s6(a) The Civil Aviation Act is also about to be amended, and there are plans to seek Cabinet approval to make national security and national interests additional factors to be taken into account where relevant in deciding whether proposed flights should be approved. Should Cabinet approve this approach, the Civil Aviation Amendment Bill would likely contain similar mechanisms to the proposed space activities legislation for factoring national security and national interests considerations into approval processes. This could ensure that activities covered by the different Acts but nevertheless posing similar risks would be assessed and licenced in similar manners. From a national security perspective, this seems an appropriate and sensible step to take.

s6(a)

Director, National Security Policy
Department of the Prime Minister & Cabinet

8 March 2016

DEPARTMENT
of the PRIME MINISTER
and CABINET



Briefing Note

11 April 2016

To Rt Hon Bill English, Prime Minister, Minister for National Security and Intelligence
 Hon Paula Bennett, Deputy Prime Minister, Minister of Police
 Hon Steven Joyce, Minister of Finance
 Hon Gerry Brownlee, Minister of Defence
 Hon Simon Bridges, Minister of Transport, Minister of Economic Development
 Hon Amy Adams, Minister of Justice
 Hon Christopher Finlayson QC, Minister in Charge of the NZ Security Intelligence Service, Minister Responsible for the GCSB
 Hon Michael Woodhouse, Minister of Immigration
 Hon Murray McCully, Minister of Foreign Affairs

From s6(a) National Security Policy

For your Information

Subject MITIGATING SECURITY CONCERNS OF NEAR SPACE VEHICLES

Purpose

s6(a)
 near space technology tests
 conducted in New Zealand by a Chinese company, Kuang Chi Science (Kuang Chi).

Executive summary

2. s6(a) Kuang Chi launched a near space balloon from New Zealand on 6 June 2015, and officials understand that Kuang Chi intends to undertake further launches. s6(a)

Currently, if a near space balloon is unmanned, not remotely piloted, and complies with relevant safety

s6(a)

s6(a)

requirements, it may be operated without any authorisation from the Civil Aviation Authority, and without a launch services contract with Airways Corporation of New Zealand (Airways).

4. s6(a) Officials plan to engage proactively with Kuang Chi, supported by engagement with the Chinese government authorities, to discuss expected changes in New Zealand's space, near space and civil aviation regimes and the likely implications for Kuang Chi's future near space technology tests conducted in New Zealand.

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Background

Capabilities of near space vehicles

s6(a)

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9. s6(a) Kuang Chi has also pursued a near space technology testing programme in New Zealand. On 6 June 2015, Kuang Chi tested a near space vehicle – a near space balloon - in New Zealand.

s6(a)

11. (R) Officials understand that Kuang Chi intends to conduct an ongoing programme of near space testing in New Zealand, likely to be from Shanghai Pengxin's Ashburton farms (which Kuang Chi describes on its website as the "Kuang Chi Science Near Space Base").

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s6(a)

Consultation

28. (U) The following agencies were consulted on the preparation of this paper: the Ministries of Defence, Transport, Foreign Affairs and Trade, and Business, Innovation and Employment, the New Zealand Defence Force, s6(a) and the Civil Aviation Authority. The Airways Corporation of New Zealand has been informed.

Recommendations

Officials recommend that Ministers:

1. (U) **Note** that the Outer Space and High Altitude Activities Bill (OSHAA Bill) and the Civil Aviation Reform Bill are both expected to provide a formal basis for New Zealand to consider national security interests alongside other national interests in space, near space, and civil aviation matters
2. (U) **Note** that until both laws are enacted, the OSHAA Bill likely by mid-2017, and the Civil Aviation Reform Bill by the end of 2017, New Zealand lacks a legislative basis to regulate space, near space and civil aviation activities on national security grounds

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s6(a)

s6(a)

s6(a)

ational Security Policy

DPMC

11 April 2017

Rt Hon Bill English
Prime Minister
Minister for National Security and
Intelligence
Date:

Hon Paula Bennett
Deputy Prime Minister
Minister of Police
Date:

Hon Steven Joyce
Minister of Finance
Date:

Hon Gerry Brownlee
Minister of Defence
Date:

Hon Simon Bridges
Minister of Transport
Minister of Economic Development
Date:

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s6(a)

Hon Amy Adams
Minister of Justice
Date:

Hon Christopher Finlayson QC
Minister in Charge of the NZ Security
Intelligence Service
Minister Responsible for the GCSB
Date:

Hon Michael Woodhouse
Minister of Immigration
Date:

Hon Murray McCully
Minister of Foreign Affairs
Date:

s6(a)

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DEPARTMENT
of the PRIME MINISTER
and CABINET



Briefing Note

18 April 2016

To Hon Christopher Finlayson: Minister Responsible for GCSB; Minister in Charge of NZSIS

From s6(a), Director National Security Policy

For your Decision

Subject **PROPOSED LAUNCH OF NEAR SPACE BALLOON BY KUANG-CHI INSTITUTE OF ADVANCED TECHNOLOGY (KCIAT):** s6(a)

Purpose

- s6(a) This note covers an assessment s6(a) for your consideration:
 - Proposed launch of Kuang-Chi Institute of Advanced Technology's near space balloons from New Zealand land.* s6(a)

Recommendations

- s6(a) I recommend that you:
 - Note** that you are asked to decide whether you agree s6(a)

s6(a)

 - Agree** to meet with officials s6(a) to discuss these papers.

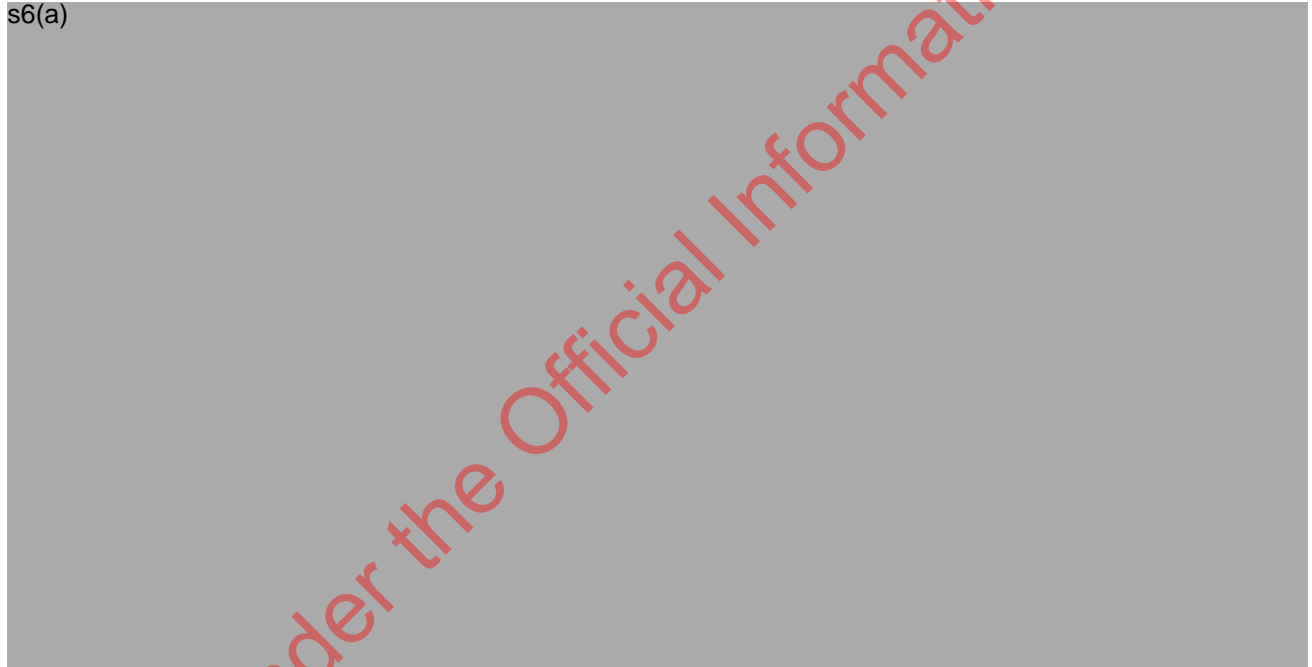
Summary

- s6(a) You recently received a DPMC briefing *Space Developments in New Zealand: [Not in Scope] and Balloons*, which outlined [Not in Scope] and other similar issues raised by other countries' testing of very high altitude craft, particularly balloons, in New Zealand. This briefing noted the national security and foreign policy risks to New Zealand from the launches of very high altitude craft, and New Zealand's inability to decline launches of either rockets or high altitude balloons on national security grounds.

s6(a)

4. s6(a) Officials are seeking inclusion of an ability to regulate very high-altitude activities in the proposed Space Activities Bill. Officials are also considering the interplay of the Bill with proposed changes to the Civil Aviation Act. Those changes are likely to include a new ability to consider national security as relevant criteria for regulation of civil aviation activities.
5. s6(a) Neither law is yet in place. The Space Activities Bill is expected to become law by December 2016, and an amended Civil Aviation Act is expected to become law some months afterwards (more exact estimates are not possible at this stage).
6. s6(a) KCIAT plans another test launch in October 2016, before the commencement of the Space Activities Bill. At present, New Zealand's aviation regulations treat experimental heavy balloon launches as a self-regulated category. Essentially, if safety requirements are met, and a clear flight path is secured with New Zealand air traffic controllers, no New Zealand government approvals are required.

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s6(a)

s6(a)

National Security Policy

Department of the Prime Minister and Cabinet

18 April 2016

s6(a)

s6(a)

Wednesday 4 May: balloons discussion – draft record and action outcomes**Attending:**

DPMC: s6(a) Defence/NZDF: Stu
 s6(a) Transport: s6(a) ; CAA: s6(a) ; MFAT: s6(a)
 Airways: s6(a) ; NZSIS x 3.

1 Reportbacks and key points:

NZSIS: NZSIS outlined the process of presenting the case to the Minister to determine whether the harm of this activity presented a threat to New Zealand's national security. The Minister's feedback confirmed that it does, and that the activity needs to be stopped.

NZSIS reported that they have been working with Customs. Customs will have shipments on alert for certain people and companies, and if shipments to these people and companies meet a certain profile, will look to examine them.

s6(a)

Transport: Transport confirmed that Rule 102 only applies to safety matters.

Second action was to introduce national security considerations into civil aviation legislation, which is proceeding. With a category 3 rating this legislation is likely to be passed early in 2017.

Transport now understood that KC's planned balloon launch is now meant for November.

DPMC: confirmed that at this stage, the MBIE Space and High Altitude legislation is still expected to pass in December 2016, despite a delay in introduction to early July.

CAA: reported that a CAA staff member had recently visited Kuang Chi's base in Christchurch, and learned that the new balloon looks now to be a powered balloon, manoeuvred by propeller. KC is aiming to achieve a Geostationary orbit - at a minimum a height between 50 and 100km above New Zealand.

There could be some wireless internet experimental activity, but as yet no firm reason given at this stage about the purpose of the balloon. (Defence confirmed that from 100km, the balloon would cover most of New Zealand.)

A powered balloon is categorised as an aircraft.

CAA/Transport: There would be a possibility of delaying the launch by application of Rule 102 (though on safety grounds only), which might require further checks, and would open the company up for further scrutiny (but not on national security matters). CAA and Transport are currently planning to initiate contact with KC on this issue after NASA has launched its balloon from Wanaka.

Airways: said that Kuang Chi had signalled they would be back in touch in May to progress arrangements for the next launch. NASA had also signalled that if their current balloon launch was successful, then they could potentially be launching twice a year from a dedicated New Zealand base, on an ongoing basis.

DDI: noted that general practice in intelligence matters was a) if concerned that it is a threat, to stop the activity; or b) if concerned that it is a threat, but still want to know how it works, let it proceed.

MFAT: confirmed that relationship management issues with international partners are not viewed by MFAT as the key factor in New Zealand making a decision about this launch. However, if measures to delay or stop the launch are considered, it would be helpful if measures could be assessed against a) effectiveness; b) transparency; and c) public defensibility. s6(a)

The "how" is therefore significant.

CAA: added that given the current pressure to encourage aviation innovation and a light handed regulatory touch, it was important that the Minister of Transport would also be on board.

2 Outcomes: Following discussion of these factors, including possibilities for delaying KC's launch until relevant legislation passed, and the following was decided

National Security Committee: An officials' paper will be taken by Andrew Kibblewhite (as Chair of ODESC) to **14 June** NSC (NSC to include Minister of Transport). Action: DPMC

Find out if Google or NASA had any payloads checked. Update from 4 May: both Google and NASA advised Customs about their payloads, so that New Zealand authorities could determine any relevance to the strategic goods list. Note that these were voluntary declarations from Google and NASA, there is no compulsion in NZ law to declare payloads. Action: NZSIS talk further to Customs.

Find out if there are any RMA or environmental resource consents required for KC, and if so, have they secured these. Action: Transport to confirm whether follow up is assigned to CAA or Airways, and task accordingly.

Find out from MBIE if there are any problems with frequency usage and licencing. Action: Transport to determine whether follow up is assigned to CAA or Airways, and task accordingly.

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Visas: no action at present. KC staff have already been granted visas for the earlier launch; some have multi-entry visas already. Action: NZSIS to follow up with Immigration, about background checks for visas for new KC staff wanting to visit NZ in future.

s6(a)

Competence: are there issues of competence to be investigated, especially if a powered balloon (now regarded as an aircraft) is being launched? Action.....? To be decided after checking with Transport/CAA/Airways.

s6(a)

s6(a) DPMC NSP, 11 May 2016


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Discussion with John Kay, GM Policy and System Interventions, CAA**Thursday 26 May 2016****1 Space legislation and Kuang Chi**

CAA expects that once New Zealand's space legislation is announced, Kuang Chi will significantly advance their balloon launch plans in New Zealand, perhaps to June or July. KC has significant technical depth – 198 PhD employees versus CAA's one. So CAA expects that even if this balloon is now a powered balloon, and will require a Part 102 certificate, any questions CAA wants to ask about safety assurance and any other technical questions will likely be able to be answered within a very short timeframe, making an early launch more likely.

CAA's understanding is that the Airways contract with Kuang Chi is still draft. **(31 May update: Airways confirm that the contract is still in draft form.)**

[Not in Scope]

**3 Martin Jetpack**

Sean Johnson had also visited KC's Martin Jetpack in Christchurch. He noted that Martin Jetpack remained firm in their intention to move manufacturing to China. There is huge commercial pressure to get to market, but Martin Jetpack is a long way from satisfying CAA standards as an aircraft. CAA is in touch with CAAC (China CAA equivalent) and FAA about what regulatory framework might apply. There needs to be a very robust framework. The FAA wants to "shadow-certify", i.e. be alongside the CAA, as this is developed.

CAA's earlier judgement was that Martin Jetpack was not in good shape to satisfy either CAAC or FAA regulatory requirements, but CAA's view may change depending on Sean Johnson's recent visit.

[Not in Scope]



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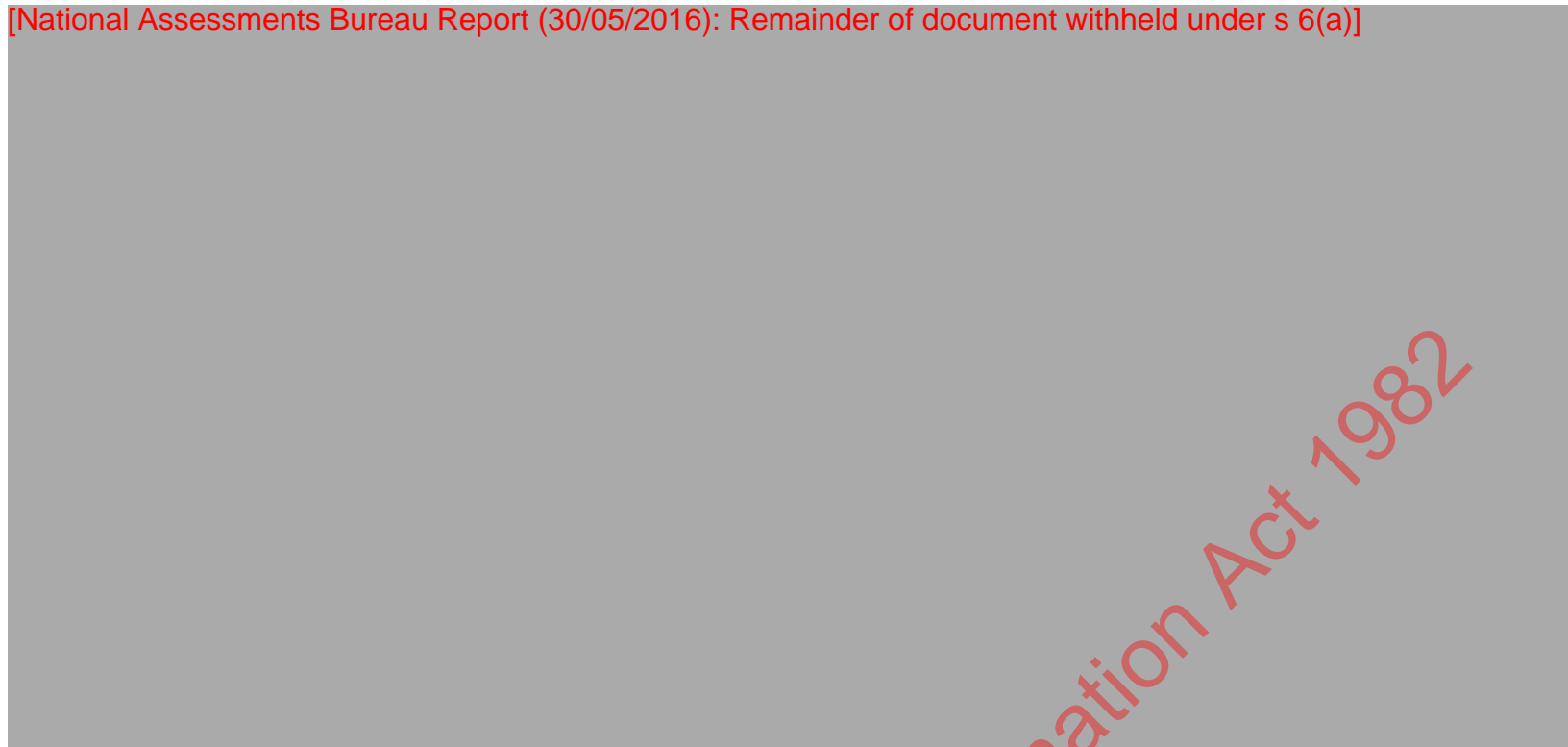
[Not in Scope]

s6(a)

DPMC NSP

31 May 2016

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5. On 12 January this year Kuang Chi replied to an inquiry from the Airways Corporation.

DOCUMENT 33

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6. In 2015, an article s6(a) noted the launch of Kuang Chi's "Traveller" balloon from New Zealand in June 2015. The balloon was called China's first near space commercial aircraft.

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From: s6(a)@nzsis.govt.nz
Sent: Tuesday, 31 May 2016 9:28 a.m.
To: s6(a)@nzsis.govt.nz; s6(a) [DPMC]
Cc: s6(a)@nzsis.govt.nz; s6(a)@nzsis.govt.nz; s6(a)@nzsis.govt.nz; s6(a) [DPMC]
Subject: NZ Herald article: Kuang Chi's LIU Ruopeng s6(a)
Attachments: img-531091028-0001.pdf

s6(a)

Hi all,

Not sure if anyone else noticed, but on Sunday there was an article in the NZ Herald re LIU Ruopeng, the founder of Kuang Chi.

No reference to balloons, and instead talks about the company's majority shareholding in Martin Aircraft, and of course the jetpack itself. Also brief mention of a Cloud surveillance airship which reportedly helped locate a survivor of a massive landslide (that killed many others).

s9(2)(g)(i)

Here is the article in question:

Cheers,
s6(a)

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s6(a)

The New Zealand Herald

Liu Ruopeng – Jetpack backer ready for liftoff

By [Christopher Adams](#) @chrisadamsNZ

5:00 AM Saturday May 28, 2016

Anyone who approaches Liu Ruopeng's office is delivered a blunt message: "No disturbing", says a sign on the door.

Given that introduction, you could be forgiven for expecting a cantankerous character – something like Mr Burns from The Simpsons – to be waiting inside.

Instead, I find an affable 32-year-old with some pretty out-there ideas about how technologies of the future will shape our lives.

The Kuang-Chi Science founder doesn't seem miffed that I'm more than an hour late for the interview at the firm's Shenzhen headquarters, following a flight delay out of Beijing, and sweating profusely from the stress and humid heat of southern China.

Our conversation over the next hour covers everything from jetpacks to flying cars, invisibility cloaks and space travel.

Kuang-Chi's vision, he says, is to turn science fiction into reality. Its motto: "the future is now".

No wonder, then, that he has been dubbed the "Elon Musk of China" by the Chinese media, a reference to the US-based visionary who founded both the electric car maker Tesla and rocket developer SpaceX.

Kuang-Chi has deep links with New Zealand, having invested A\$44 million in Christchurch-based jetpack maker the Martin Aircraft Company over the past couple of years, giving it a 52 per cent shareholding.

The company was introduced to the jetpack when Liu accompanied Chinese President Xi Jinping on his visit to this country in 2014.

Hong Kong-listed Kuang-Chi is also developing airships and balloons for near-space flight, surveillance and big data collection.

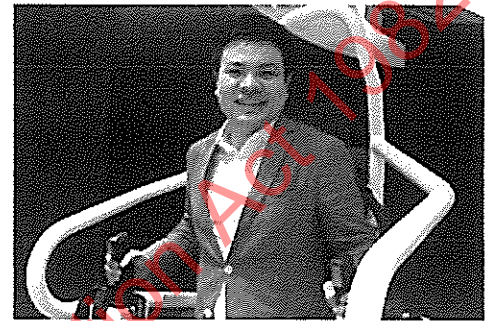
The company was founded in 2010 by Liu and a group of friends with whom he studied at Duke University in the United States, where he earned a PhD in electrical and computer engineering.

While at Duke he helped develop a prototype invisibility cloak, using "metamaterials" which bend electromagnetic radiation, such as light, around objects.

"We think the driving force for innovation over the next 10 years will be imagination," Liu says.

He says the start-up capital for Kuang-Chi came in the form of a US\$50,000 loan from his mother.

Since then the company has reportedly raised around US\$200 million from investors and has been a driving force behind the push to turn the Martin Jetpack – conceived 35 years ago in Kiwi founder Glenn



Liu Ruopeng's plans sound like science fiction, but he's convinced they'll soon be a practical reality. Photo / Christopher Adams

Martin's garage, before Liu was even born – into a commercial reality.

ASX-listed Martin Aircraft is targeting the second half of this year for the first commercial deliveries of the jetpack, which can fly as high as 1000m and reach speeds of more than 70km/h.

Set to be priced at up to US\$250,000, the machine was shown off during a demonstration flight in front of a large crowd in Shenzhen late last year.

A Chinese joint venture between Kuang-Chi and Martin Aircraft has signed agreements for the delivery of 100 jetpacks and 20 simulators in China.

And there are plans to establish a factory in China to manufacture the flying machines, which Liu says could open within a year-and-a-half and have the capacity to build more than 1000 jetpacks annually.

He's convinced that wealthy Chinese commuters will soon be using Martin Jetpacks to get to and from work, zooming from building to building and leaving behind the congested streets below.

"If you really look at those big cities, they are extremely crowded," Liu says.

"The jetpack is a great machine that allows you to take off and land in most places. It's much easier to operate this machine compared with helicopters because they need a particular area to take off and land."

Liu sees the jetpack as part of a new wave of technologies that will revolutionise air transport, including flying cars. "The jetpack is just part of the story, not the whole story," he says.

If I don't fly I will not allow the jetpack to go to the market ... at the end of the year I will fly.

Liu insists this isn't pie-in-the-sky dreaming – nor will this bright, shiny future be reserved for another generation.

"Come on, technology is developing very fast," he says, waving his smartphone in the air. "We believe that in five years most of the technology and products [being developed by Kuang-Chi] can go into a very mature and commercial status and be in a real service to save lives, help people and make cities better."

The company's Cloud surveillance airship was used in December to help locate Tian Zeming, a survivor of a devastating construction waste landslide in Shenzhen which killed 69 people.

While great strides have been made in the jetpack's development, a difference in opinion over the company's path to commercialisation led Glenn Martin to resign from the board in June last year, three months after its initial public offering and stock exchange listing.

At the time, Martin told the Business Herald it had been his dream to develop a jetpack for personal use, but the company had been increasingly focused on developing an aircraft for professional applications such as police and search and rescue.

"It's become clear since the IPO that the company is going in a different direction to my vision," he said. "I haven't left the company – the company has left me."

So was Liu disappointed to see Martin go?

"I think it's fine," he says, tapping his hands on the table to make the point. "We invested in the company not because of the board of the company. We invested in the company because of its dream and spirit."

It would appear, however, that Martin's vision for the jetpack has gone out the window. Liu says reality had to set in and the jetpack couldn't go on being just a dream for another 35 years.

"Everything happened after our investment," he says of the recent development spurt. "New engineers came in, new aviation technology – all the stuff."

Liu says training people to fly the jetpack will now become a major focus.

"It's a great product," he says. "The issue now is how can you fly it? It's a completely new industry."

Liu says he has committed to flying the jetpack himself before any aircraft are sold.

"If I don't fly I will not allow the jetpack to go to the market," he says. "At the end of the year I will fly."

Liu Ruopeng

Role: Chairman and founder of Shenzhen-based Kuang-Chi Science

Age: 32

Born: Xi'an, the capital of China's Shaanxi province

Grew up in: Shenzhen, a major city and technology hub in Guangdong province, near Hong Kong

Education: PhD in electrical and computer engineering from Duke University in the United States

Christopher Adams travelled to China as a recipient of the New Zealand China Council Media Award.

By [Christopher Adams](#) @chrisadamsNZ

– [NZ Herald](#)

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Proposed Agenda: meeting on High Altitude and other matters

Wednesday 3 August 2016, 1:00pm

[Not in Scope]



Background discussion:

What is DPMC's own position? There are some specific points for each agenda item below. Before this meeting however, DPMC would need to establish its own position on the paper. Are DPMC managers comfortable with the recommendations, as drafted?

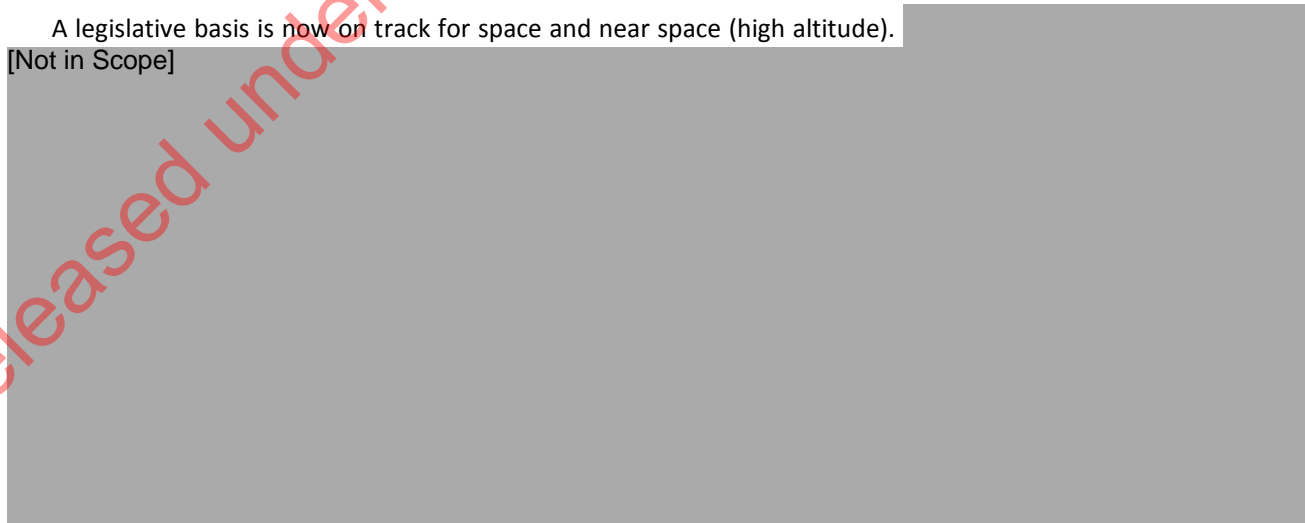
[Not in Scope]

this grouping of officials and agencies was originally convened to work out how to respond to a second Kuang Chi balloon launch. That was the genesis, but the draft now deals with additional issues

[Not in Scope]

A legislative basis is now on track for space and near space (high altitude).

[Not in Scope]



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s6(a)

[Not in Scope]

For the specific agenda items:

- 1) **Receiving feedback:** I am already receiving feedback on the paper, all constructive so far. Ideally at the start of the meeting we would acknowledge this and go through a few key points verbally. There are some re-phrasings I will need to draw attention to,

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sb(a)

[Not in Scope]

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1 August 2016

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Balloons

Notes of the meeting on 10 August 2016

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While a launch is possible in November this is not certain

- The risks from a launch are low

s6(a)

- The legislation won't pass until mid 2017 (space)

[Not in Scope]

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SPACEREF

(<http://spaceref.com>)

Kuang-Chi Near Space Test Flight Set For 2016, R&D Center Open In Haikou

Press Release From: Kuang-Chi Group (<http://www.kuang-chi.com/>)

Posted: Tuesday, September 6, 2016

Kuang-Chi Group, a Shenzhen-based technology conglomerate, has announced that Traveler II Beta will carry animals into near space during a test flight this year. The announcement came during the opening ceremony of the company's research center for near space technologies in Haikou, Hainan, China's southernmost province.

Traveler II Beta is a flying device used for data collection and analysis, and traveling in the near space region, which is between 20 and 100km above sea level - more than twice the altitude flown by commercial airlines. In June 2015, Traveler completed its first test flight in New Zealand, reaching the designated flight altitude of 21km and successfully transmitting data back to the ground.

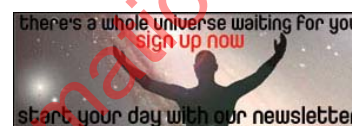
Located in the Haikou Hi-tech Zone, the only one of its kind in the province, Kuang-Chi's Haikou Institute of Future Technology signed an agreement on the development and exploration of near space technologies in December 2015. According to Haikou Mayor Ni Qiang, more than 40 projects have been introduced to the hi-tech zone since 2015 and more than 80% of those are high-tech companies. The mayor noted that the area is a good fit for Kuang-Chi, as it is heavily focused on innovation.

"Haikou has the best research resources for space exploration. Wenchang Satellite Launch Center is located in Hainan and most of its scientific workers are living in Haikou, which will help our near space exploration," according to Dr. Liu Ruopeng, president of Kuang-Chi. Additionally, the rich sea resources around Hainan provide much space for future applications of environmental analysis and monitoring.

Traveler II Beta's main subsystems have been completed and are in the final stage of assembly and testing. The manned Traveler II is also in the final stage of assembly and cabin tests are expected to be completed by the end of 2016 with flight tests beginning in 2017.

Founded in 2010 and headquartered in Shenzhen, China, Kuang-Chi is a company focused on the development of future technologies. Originating as a five-person team, the company has created a Global Community of Innovation of more than 2,400 employees in 18 countries and regions.

Kuang-Chi's subsidiary company KuangChi Science Limited (00439.HK) is concentrated on the development of future technology and conducts R&D of



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/company/spaceref-rss-xml-news-feeds.html)

different disruptive technologies such as future space exploration and artificial intelligence. On August 31, the company announced the interim results for the six months ended June 30, 2016, with a turnover of approximately HKD 312 million, representing a significant increase of 461.77% over the same period last year and a profit of approximately HKD 105.53 million. Of the revenue, the Cloud, a space platform that provides integrated services, including internet access, data collection, and data analysis, as well as other communication services and is the group's first commercialized product, accounted for HKD 284.73 million. The company's market value grew to nearly HKD 17.3 billion these days.

Inquiries:

Kuang-Chi:

xiaokelan@kuang-chi.com

+86-181-2625-4673



Traveler II Beta's main subsystems have been completed and are in the final stage of assembly and testing. (PRNewsFoto/Kuang-Chi Group)

// end //

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CALENDAR

Events

Launches

Your Event

8 Sep: Space Transportation Association Luncheon with JSC Director Ellen Ochoa
(<http://spaceref.com/calendar/calendar.html?pid=9256>)

8 Sep: NASA Vascular Tissue Challenge Webinar
(<http://spaceref.com/calendar/calendar.html?pid=9288>)

12 Sep: NASA Small Business Innovation Research (SBIR)/ Small Business Technology Transfer (STTR) Program Subtopic Workshop
(<http://spaceref.com/calendar/calendar.html?pid=9260>)

12 Sep: Summit for Satellite Financing (<http://spaceref.com/calendar/calendar.html?pid=9225>)

12 Sep: Linking Exoplanet and Disk Compositions Workshop
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13 Sep: AIAA SPACE Forum
(<http://spaceref.com/calendar/calendar.html?pid=9227>)

13 Sep: Meet the Canadians behind NASA's OSIRIS-REX sample return mission
(<http://spaceref.com/calendar/calendar.html?pid=9273>)

14 Sep: SmartPlane
(<http://spaceref.com/calendar/calendar.html?pid=9223>)

14 Sep: NAS SSB Committee on Astrobiology and Planetary Science (<http://spaceref.com/calendar/calendar.html?pid=9276>)

14 Sep: Space for Inspiration
(<http://spaceref.com/calendar/calendar.html?pid=9290>)

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Current activity caught by the HAV definition (2)

User	Type of HAV	Nature of use or payload	Frequency
KuangChi	<ul style="list-style-type: none">Balloons – planning 100km height	<ul style="list-style-type: none">Unknown	Once already, with a desire to repeat

[Not in Scope]

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[26/10/2016 - NZSIS Draft Briefing - Remainder of Document is Not in Scope]

New Zealand's Space Industry

[Not in Scope]

- Chinese technology company Kuang Chi Science (KCS) also tested a high altitude balloon, named the 'Traveller' from New Zealand in 2015. The balloon was deemed unsuccessful due to its icing up at altitude and subsequent uncontrolled descent into the ocean east of Ashburton. KCS has proposed to test a second, similar balloon in New Zealand in 2016, with the aspiration of an ongoing near space balloon launch programme.

s6(a)

[Not in Scope]

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10 Nov 2016

The Star (Christchurch), Christchurch

DOCUMENT 40

Section: General News • Article type : News Item • Classification : Suburban
Audience : 64,300 • Page: 29 • Printed Size: 865.00cm² • Market: NZ
Country: New Zealand • ASR: NZD 3,394 • Words: 1631 • Item ID: 684034325
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Page 1 of 3

 back

China's Investment in the South Island

[Not in Scope]

[Not in Scope]

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2. Technology and research development industry.

[Not in Scope]

In 2014, KuangChi Science based in Shenzhen acquired about 52% of the total share of Martin Aircraft Company, and has been engaged in becoming the first enterprise to market jetpacks as means of emergency rescue in the world.

[Not in Scope]

Office of the Minister of National Security & Intelligence

Chair, Cabinet National Security Committee

Mitigating security concerns of near-space vehicles

Proposal

1. s6(a) A Chinese company, Kuang Chi Science (Kuang Chi) is conducting near space technology tests from New Zealand, s6(a)
2. s6(a) This paper seeks Cabinet agreement s6(a) before the passage of the Outer Space and High Altitude Activities Bill is passed (at which point other more concrete tools will become available).

Executive summary

3. s6(a) Kuang Chi launched a near space balloon from New Zealand on 6 June 2015, and officials understand that Kuang Chi intends to undertake further launches.

s6(a)

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s6(a)

Background

Capabilities of near space vehicles

7. s6(a) Near space vehicles and their payloads can have dual military and civilian uses. Civilian applications include disaster prevention and management, and urban planning. Military applications include real-time battlefield surveillance, target reconnaissance and acquisition, missile flight test support, attack damage assessment, signal jamming, electronic signals surveillance, and enhanced navigation and guidance.

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10. s6(a) Kuang Chi has also pursued a near space technology testing programme in New Zealand. On 6 June 2015, Kuang Chi tested a near space vehicle – a near space balloon - in New Zealand.

s6(a)

12. s6(a) Officials understand that Kuang Chi intends to conduct an ongoing programme of near space testing in New Zealand, likely to be from Shanghai

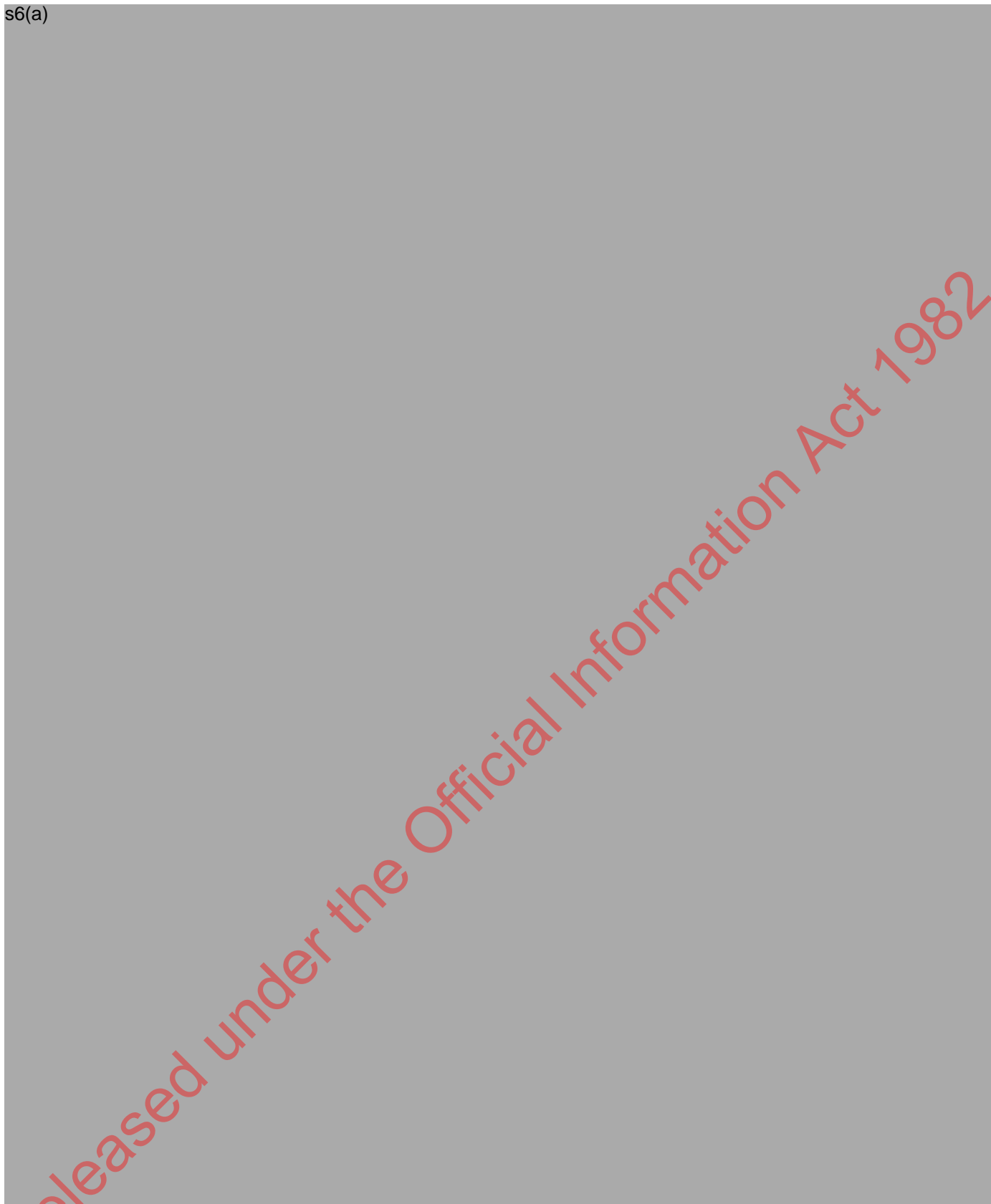
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Pengxin's Ashburton farms (which Kuang Chi describes on its website as the "Kuang Chi Science Near Space Base"). In late 2016, CAA sought an update from Kuang Chi about possible New Zealand launch timing for its second planned launch, but to date has received no response (Kuang Chi also conducts test launches in China, the most recent being in early November 2016).

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Economic benefits of Kuang Chi's near space balloon launches are minimal

22. s6(a) Kuang Chi's balloon launch activities generate very little revenue. Airways advised that its launch services contract provides for only a slight margin above cost recovery. When passed, the OSHAA Bill will underpin a stronger regime enabling officials to formally assess the impact of the recommended course of action on the development of New Zealand's space industry, including both direct and indirect benefits, alongside consideration of the risks of Kuang Chi's proposed launches.

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Consultation

29. (U) The following agencies were consulted on the preparation of this paper: the Ministries of Defence, Transport, Foreign Affairs and Trade, and Business, Innovation

and Employment, the New Zealand Defence Force, the New Zealand Security Intelligence Service, the Government Communications Security Bureau, and the Civil Aviation Authority. The Airways Corporation of New Zealand has been informed.

Recommendations

The Minister for National Security and Intelligence recommends that the Committee:

1. **(U)** **Note** that the Outer Space and High Altitude Activities Bill (OSHAA Bill) and the Civil Aviation Reform Bill are both expected to provide a formal basis for New Zealand to consider national security interests alongside other national interests in space, near space, and civil aviation matters
2. **(U)** **Note** that until both laws are enacted, the OSHAA Bill likely by mid-2017, and the Civil Aviation Reform Bill by the end of 2017. New Zealand lacks a legislative basis to regulate space, near space and civil aviation activities on national security grounds

s6(a)

Authorised for lodgement

Rt Hon Bill English

Minister for National Security & Intelligence

Publicly available:

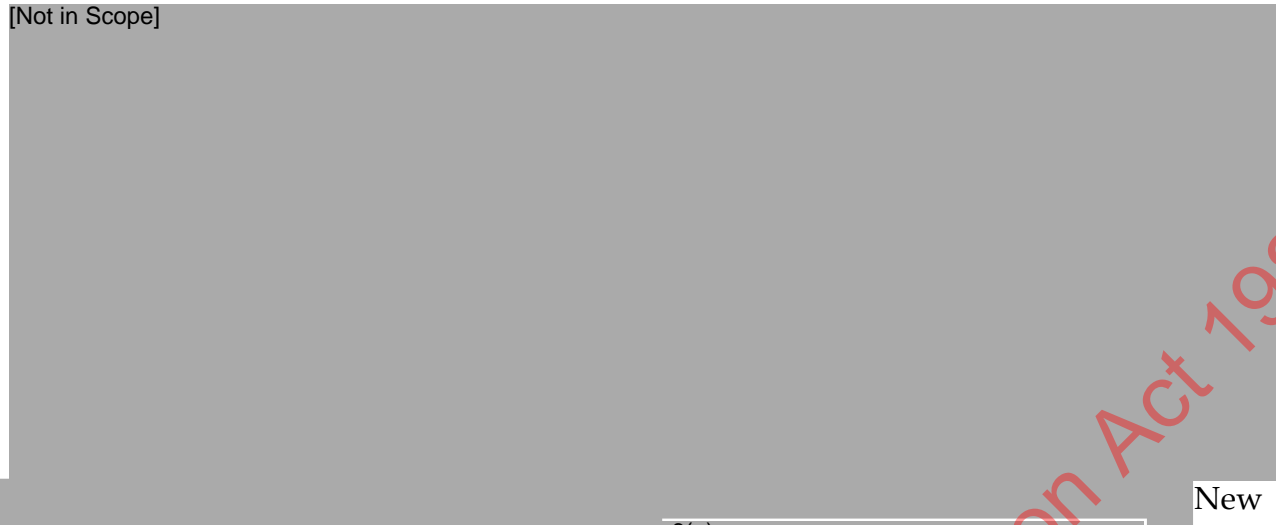
https://www.wilsoncenter.org/sites/default/files/media/documents/article/magic_weapons.pdf

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Why New Zealand is of interest to China

[Not in Scope]



New

Zealand is useful for near-space research; ^{s6(a)}



Chinese companies Shanghai Pengxin and KuangChi Science have used Shanghai Pengxin's New Zealand dairy farms for near-space launches.⁶¹

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[Not in Scope]

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In 2015 Kuangchi Science signed an agreement with Airways New Zealand and Shanghai Pengxin International to launch a near-space balloon on one of their dairy farms in New Zealand for data transmission.²¹³ In 2016, Kuangchi Science became the main shareholder of innovative New Zealand near-space company Martin Jackpaks.

[Not in Scope]

Examples of activity (not complete – further development and information required)

[Not in Scope]

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s6(a)

2015 KuangChi launches Traveller from Ashburton (Shanghai Pengxin's Ashburton farm) after MOU signed between NZ Govt and Chinese Govt.

[Not in Scope]

• KuangChi Science invests in Martin Aircraft Ltd and gets two board directorships - Chairman of KuangChi is one.
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**MINISTRY OF BUSINESS,
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HĪKINA WHAKATUTUKI



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Withholding genuine purpose of travel or adverse information

Kuang Chi Science

In November 2014, the director of Kuang Chi Science (KCS) applied for a business visitor visa for the stated purpose of meeting with Milk New Zealand to discuss business opportunities. He was granted a multiple entry business visa. After arriving in New Zealand, the director undertook a space balloon launch. He did not disclose his space launch plans or that the company had signed a space services agreement with Chinese company Pengxin Global Resource in September 2014.²¹

Additional KCS staff were granted visitor visas for the stated purpose of tourism. On arrival at the New Zealand border, INZ border officers identified risk factors indicating information inconsistencies. Upon questioning, the KCS staff advised they had travelled to launch a space balloon. Border decided to issue them work visas on arrival, accepting that the staff had applied for the incorrect visas by mistake. Providing the incorrect information to INZ meant that INZ and NZSIS did not have all relevant information to assess the applicants against the correct criteria for visa and national security risk, respectively.

s6(a)

KCS has invested in New Zealand company Martin Jetpack and more recently UK company Gilo Industries. KCS intends to focus more on artificial intelligence, which has national security implications.

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[14/02/2018]

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- Kuang Chi Science invested in New Zealand firm Martin Aircraft Ltd and received two board directorships. The chairman of Kuang Chi is one of these directors.

s6(a)

In 2015 Kuang Chi launched Traveller from Ashburton (Shanghai Pengxin's Ashburton farm) after MOU signed between NZ Govt and Chinese Govt.

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New Zealand

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- s6(a) Kuang Chi Science invests in Martin Aircraft Ltd and gets two board directorships - Chairman of Kuang Chi is one.
- s6(a) 2015 Kuang Chi launches Traveller from Ashburton (Shanghai Pengxin's Ashburton farm) after MOU signed between NZ Govt and Chinese Govt.

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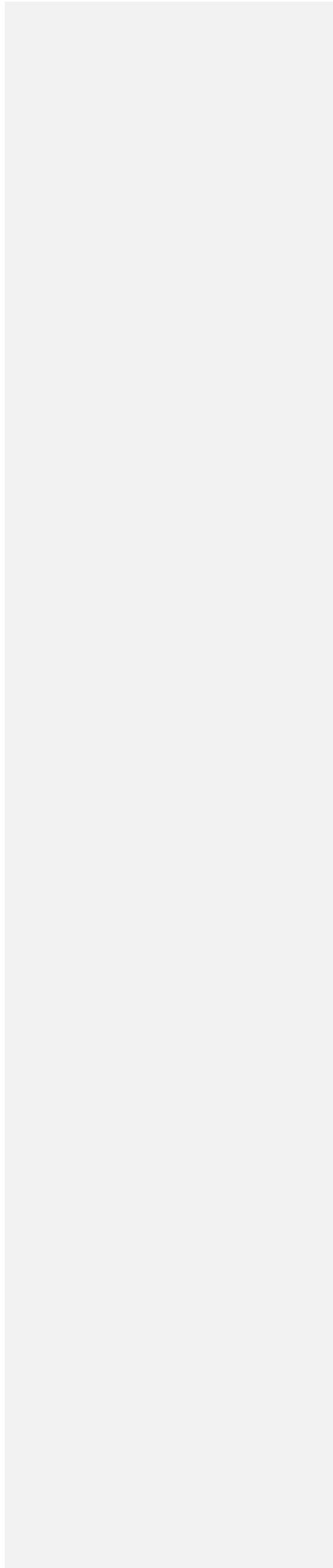
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SIB 8 August 2018 – Paper 2**Progress report on working relating to foreign interference
in our economy**

To:	ODESC Security and Intelligence Board (SIB) Members
Date:	8 August 2018
Security classification:	s6(a)
Prepared by:	Foreign Interference Working Group

[Not in Scope]

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Example: Martin Jetpack

Martin Jetpack currently has a joint venture with KuangChi Science (KCS), which is now its majority shareholder. KCS funding has enabled the technology to move from concept to proven prototype. Martin Jetpack, with KCS support, is now seeking further Chinese investment to will enable the full certification and commercialisation of the Jetpack.

The Jetpack is not a controlled item as it is not specifically designed or modified for military use, but it has identified military use cases. New Zealand's current catch-all controls would not apply to exports of this kind of technology s6(a)

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