# Information Memorandum

Australian Strategic Materials Limited

ACN 168 368 401

## 1. PURPOSE OF INFORMATION MEMORANDUM

This Information Memorandum has been prepared by Australian Strategic Materials Limited ACN 168 368 401 (**ASM**) in connection with its application for:

(a) admission to the official list of the Australian Securities Exchange (**ASX**); and

(b) fully paid ordinary shares in the capital of ASM (**ASM Shares**) to be granted official quotation on the securities exchange operated by ASX.

This Information Memorandum will apply in relation to ASM's application to be granted official quotation on the securities exchange operated by ASX if the demerger of the critical materials business from Alkane Resources Limited ACN 000 689 216 (**Alkane**) is approved by Alkane Shareholders and implemented. Therefore, this document should be read alongside the Demerger Booklet prepared by Alkane dated 17 June 2020, which is attached as Schedule 1 (**Demerger Booklet**). The Demerger Booklet contains information material to Alkane Shareholders' decision to vote on the resolutions proposed in relation to the Demerger and provides information in relation to ASM (see Section 3 below for further information).

This document is not a disclosure document lodged with the Australia Securities and Investments Commission (**ASIC**) under the *Corporations Act 2001* (Cth) (**Corporations Act**).

This document does not constitute or contain any offer of ASM Shares for issue or sale, or any invitation to apply for the issue of or to sell, ASM Shares.

Neither ASX nor any of its officers takes any responsibility for the contents of this Information Memorandum.

## 2. INFORMATION ABOUT ASM

The Demerger is to be carried out via an in specie distribution of all of the shares in ASM by Alkane to Alkane Shareholders. Further information on the Implementation of the Demerger, see Section 8.2 of the Demerger Booklet attached at Schedule 1.

As a result of the Demerger, Alkane Shareholders will have a direct ownership in ASM, a critical materials company. Details of the ASM business are set out in Section 6 of the Demerger Booklet. In addition to the information provided in the Demerger Booklet, attached at Schedule 2 is a copy of the detailed engineering, financial and market update on the Dubbo Project as released to ASX by Alkane on 4 June 2018. This announcement included an assessment of potential financial outcomes for the Dubbo Project under different development scenarios, based on cost estimates and macroeconomic assumptions.

## 3. INCORPORATION OF DEMERGER BOOKLET

The following Sections of the Demerger Booklet dated 17 June 2020, issued by Alkane in connection with the proposed demerger of ASM, a copy of which is included as Schedule 1 to this Information Memorandum, are taken to be included in this Information Memorandum:

- Important information (to the extent it relates to ASM);
- Chairman's Letter (to the extent it relates to ASM);
- Section 1 (Summary of Demerger Proposal) (to the extent it relates to ASM);

- Section 2 (Frequently Asked Questions) (to the extent it relates to ASM);
- Section 3 (Advantages, disadvantages and risks of the Demerger) (to the extent it relates to ASM);
- Section 6 (Overview of ASM);
- Section 7 (Financial information for ASM);
- Section 8 (Details of the Demerger) (to the extent it relates to ASM);
- Section 9 (Australian taxation consequences for Australian tax resident Alkane Shareholders and Alkane) ((to the extent it relates to ASM), in particular Section 9.11 (Taxation implications for ASM Shareholders after the Demerger));
- Section 10 (Risk Factors – Investing in ASM);
- Section 11.1 (Interests of Directors) (to the extent it relates to ASM directors), Section 11.2 (Benefits and agreements with Alkane directors and executives) (to the extent it relates to ASM directors), Section 11.3 (Rights attaching to ASM Shares and ASM Constitution), Section 11.4 (Trading ASM Shares), Section 11.5 (Regulatory relief, confirmations and waivers) (to the extent it relates to ASM) and Section 11.6 (Consents and disclaimers);
- Section 12 (Definitions and Glossary of Technical Terms);
- Annexure 2 (Mineral resources and ore reserves information) (to the extent it relates to the business of ASM);
- Annexure 3 (Independent Expert's Report) (to the extent it relates to ASM); and
- Annexure 4 (Investigating Accountant's Report) (to the extent it relates to ASM).

Words and expressions defined in the Demerger Booklet have the same meaning where used in this Information Memorandum, unless the context otherwise requires.

## 4. ASX LISTING

ASM believes that this Information Memorandum contains all the information which would have been required under section 710 of the Corporations Act if the Information Memorandum were a prospectus in respect of an offering by ASM of the same number of ASM Shares as will be issued pursuant to the Demerger and for which quotation on ASX will be sought.

An application has been made to ASX on or about the date of this Information Memorandum for ASM to be admitted to the official list of ASX and for ASM Shares to be granted official quotation on the securities exchange operated by ASX.

Neither ASIC nor ASX accepts responsibility for any statement in this Information Memorandum. The fact that ASX may admit ASM to the official list of ASX is not to be taken in any way as indication of the merits of ASM.

## 5. ADDITIONAL ASM HISTORICAL FINANCIAL INFORMATION

ASM's audited financial statements for the years ended 30 June 2018 and 30 June 2019, as well as reviewed financial statements for the half-year ended 31 December 2019 have been made available on ASM's website at https://asm-au.com/company/company-reports/. Where applicable, each financial statement is accompanied by an audit or review report.

## 6. CAPITAL RAISINGS

Other than in connection with the restructure referred to in Section 8 of the Demerger Booklet, ASM has not raised any capital for the three months before the date of this Information Memorandum and the board of ASM does not anticipate the need to raise any capital for three months after the date of this Information Memorandum.

## 7. ASX WAIVERS

As part of the Demerger and listing application, ASM and Alkane is seeking the following waivers and confirmations from ASX:

(a) Listing Rule 1.1 Condition 3 (*No prospectus*) – confirmation that for the purposes of ASX Listing Rule 1, ASM may provide an information memorandum in lieu of a formal prospectus, as long as that information memorandum satisfies the requirements of Listing Rule 1.4;

(b) Listing Rule 1.3 (*Asset Test*) – confirmation that ASM will satisfy the assets test (on the base that ASM is not considered an investment entity for the purposes of the Listing Rules);

(c) Listing Rule 2.1 Condition 2 (*20 cents issue price*) – confirmation that ASM will satisfy the condition that the issue price of its securities must be at least 20 cents in cash (having regard to the nature of the Demerger);

(d) Listing Rule 7.17 (*pro rata distribution*) – confirmation that the distribution of ASM shares will be on a pro rata basis despite the Ineligible Overseas Shareholders;

(e) Listing Rule 10.1 (*distribution of ASM Shares to Alkane Shareholders*) – confirmation that the distribution of ASM Shares to Alkane's substantial shareholder does not require separate shareholder approval;

(f) Listing Rule 10.14 (*Grant of Performance Rights to Managing Director*) – confirmation that the grant of ASM performance rights to the Managing Director of ASM (David Woodall) will not require separate shareholder approval; and

(g) Chapter 11 (*Significant Changes to Activities*) – confirmation that the Demerger does not require shareholder approval under Chapter 11 of the Listing Rules.

## 8. CORPORATE GOVERNANCE

Mr Dennis Wilkins is the Company Secretary of ASM and, subject to confirmation from ASX for ASM to be admitted to the official list of ASX and for ASM Shares to be granted official quotation on the securities exchange operated by ASX, will be responsible for communicating with ASX in relation to ASX Listing Rule matters in accordance with ASX Listing Rule 1.1, Condition 13.

Details of the Corporate Governance of ASM are set out in Section 6.7 of the Demerger Booklet. Further, relevant charters and policies will be adopted by ASM prior to implementation of the Demerger and made available on ASM's website at www.asm-au.com.

## 9. SUPPLEMENTARY INFORMATION

As foreshadowed in Section 8.7 of the Demerger Booklet, the Alkane Post-Demerger Group has put in place a deed of cross guarantee in accordance with ASIC Corporations (Wholly-owned Companies) Instrument 2016/785. ASM and its subsidiaries are not a party to this deed of cross guarantee but intend to enter into a separate deed of cross guarantee in accordance with ASIC Corporations (Wholly-owned Companies) Instrument 2016/785 following implementation of the Demerger.

## 10. SUPPLEMENTARY INFORMATION MEMORANDUM

ASM will issue a supplementary information memorandum (**Supplementary Information Memorandum**) if it becomes aware of any of the following between the date of this Information Memorandum and the date on which ASM Shares are quoted:

- a material statement in this Information Memorandum is misleading or deceptive;
- there is a material omission from this Information Memorandum;
- there has been a significant change affecting a matter included in this Information Memorandum; or
- a significant new circumstance has arisen and it would have been required to be included in this Information Memorandum if it had arisen prior to the date of this Information Memorandum.

## 11. DISCLOSURE OF INTERESTS

### 11.1 Directors

Other than as set out in the Demerger Booklet or this document, no director or proposed director of ASM or any entity in which any such director or proposed director is a member or partner has at the date of this Information Memorandum, or within two years before the date of this Information Memorandum had, any interests in the promotion of ASM or in any property acquired or proposed to be acquired by ASM and no amounts, whether in cash or securities or otherwise, have been paid or agreed to be paid by any person to any director or proposed director or to any entity in which a director or proposed director is a member or partner, either to induce them to become, or to qualify them as, a director, or otherwise for services rendered by them or by the entity in connection with the promotion or formation of ASM.

### 11.2 Experts

Other than as set out in the Demerger Booklet or this document, no expert named in the Demerger Booklet or entity in which any such expert is a member or partner has any interest in the promotion of ASM or in any property acquired or proposed to be acquired by ASM and no amounts, whether in cash or securities or otherwise, have been paid or agreed to be paid by any person to any such expert or to any entity in which any such expert is a member or partner for services rendered by him or her or the entity in connection with the promotion or formation of ASM.

## 12. COMPETENT PERSON'S STATEMENT

The information in the Demerger Booklet and this document that relates to mineral exploration, mineral resources and ore reserves is based on, and fairly represents, information and supporting documentation prepared by Mr D I Chalmers, FAusIMM, FAIG, a director of Alkane and ASM who has sufficient experience relevant to the style of mineralisation and type of deposit under consideration and to the activity which he is undertaking to qualify as a Competent Person as defined in the 2012 Edition of the Australasian Code for Reporting of Exploration Results, Mineral Resources and Ore Reserves. Mr Chalmers has provided his prior written consent to the inclusion in this document of the matters based on his information in the form and context in which it appears. Mr Chalmers is a shareholder of Alkane and a participant in Alkane's short and long term incentive scheme. By virtue of his shareholding in Alkane, Mr Chalmers will receive ASM shares.

## 13. STATEMENT FROM DIRECTORS

Each director of ASM believes that ASM has enough working capital to carry out its stated objectives.

## 14. CONSENTS

Each person named in the table below as a consenting party:

- has given and has not, before the date of this Information Memorandum, withdrawn its consent to be named in this Information Memorandum in the form and context in which it is named;
- has given and has not, before the date of this Information Memorandum, withdrawn its written consent to the inclusion of the statements and reports (where applicable) noted next to its name below, and the references to those statements and reports in the form and context in which they are included in this Information Memorandum;
- does not make, or purport to make, any statement in this Information Memorandum other than those statements referred to below in respect of that person's name (and as consented to by that person);
- has not caused or authorised the issue of this Information Memorandum; and
- to the extent permitted by law, expressly disclaims and takes no responsibility for any statements in or omissions from this Information Memorandum.

| Role | Consenting parties | Relevant statement or report |
|---|---|---|
| Auditor | PricewaterhouseCoopers | Audit and review reports |
| Competent Person | Mr D I Chalmers, FAusIMM, FAIG | Annexure 2 (Mineral resources and ore reserves information) of the Demerger Booklet to the extent it relates to ASM |
| Independent Expert | BDO Australia | Annexure 3 (Independent Expert's Report) of the Demerger Booklet to the extent it relates to ASM |
| Investigating Accountant | PricewaterhouseCoopers Securities Ltd | Annexure 4 (Investigating Accountant's Report) of the Demerger Booklet to the extent it relates to ASM |

## 15. DATE OF INFORMATION MEMORANDUM

This Information Memorandum is dated 24 June 2020.

## AUTHORISATION

This Information Memorandum is signed by each director of ASM, or by a person authorised by them in writing to sign this Information Memorandum on their behalf, on the date of this Information Memorandum:

David Graham Woodall

Ian Jeffrey Gandel

David Ian Chalmers

Gavin Murray Smith

Nicholas Paul Earner

Anthony Dean Lethlean

# SCHEDULE 1

## DEMERGER BOOKLET

ALKANE
RESOURCES LTD
ACN 000 689 216

# PROPOSAL TO DEMERGE

AUSTRALIAN STRATEGIC MATERIALS LTD

ACN 168 368 401

## DEMERGER BOOKLET

**INCLUDING**

Notice of Extraordinary General Meeting
Explanatory Statement
And Proxy Form

**EXTRAORDINARY GENERAL MEETING**

Due to the continuing COVID-19 situation, a virtual meeting will be held as well as a webcast of the proceedings on 16 July 2020 at 10:00 am (AWST)

**THIS DOCUMENT IS IMPORTANT**

If you do not understand this document or are in doubt as to how you should vote, you should consult your stockbroker, solicitor, accountant or other professional adviser.

# CONTENTS

## IMPORTANT INFORMATION

### 1. PURPOSE OF DOCUMENT

This document sets out information in relation to the Demerger, the effects of the Demerger and other information known to the Alkane Directors that is material to the decision of Alkane Shareholders in relation to voting on the Resolutions. This document includes the explanatory statement in relation to the Demerger, and forms part of the Notice of Meeting.

This document does not in any way constitute an offer to issue or sell securities or a solicitation of an offer to subscribe for or buy securities.

This document is not a prospectus or any other disclosure document under chapter 6D of the Corporations Act. This document does not include all information material to a decision to buy, sell or otherwise trade in ASM Shares.

### 2. ASX LISTING OF ASM

ASM intends to apply for admission of its ordinary shares to the ASX Official List. It is expected that ASM Shares will commence trading on a normal settlement basis on the ASX on or about 30 July, if the Demerger is approved by Alkane Shareholders and implemented as described in this document. It is the responsibility of Eligible Shareholders to determine their entitlement to ASM Shares before trading in ASM Shares.

### 3. RESPONSIBILITY STATEMENTS

(i) Alkane has prepared and is responsible for the content of this Demerger Booklet (other than Annexures 2, 3 and 4 of this document).

(ii) BDO Australia has prepared the Independent Expert's Report and takes responsibility for that report. A copy of that report is set out in Annexure 3 of this document.

(iii) PricewaterhouseCoopers Securities Limited has prepared the Investigating Accountant's Report and takes responsibility for that report. A copy of that report is set out in Annexure 4 of this document.

### 4. NOTICE TO ALKANE SHAREHOLDERS OUTSIDE AUSTRALIA AND NEW ZEALAND

Alkane Shareholders who are Ineligible Foreign Shareholders will not receive ASM Shares under the Demerger. ASM Shares that would otherwise be transferred to these Alkane Shareholders under the Demerger will be transferred to the Sale Agent to be sold, with the net proceeds of such sale to be paid to Ineligible Foreign Shareholders. See Section 8.4 for more information.

### 5. FORWARD LOOKING STATEMENTS

Certain statements in this document relate to the future, including forward looking statements relating to Alkane and ASM's financial position and strategy. Forward looking statements can be identified by use of terminology such as 'intend', 'aim', 'project', 'anticipate', 'estimate', 'plan', 'believe', 'expect', 'may', 'should', 'will', 'continue' or other similar words. These statements discuss future expectations concerning the results of operations or financial condition, or provide other forward looking statements.

These forward looking statements are not guarantees or predictions of future performance, and involve known and unknown risks, uncertainties and other factors, including the risk factors set out in Section 3.4, many of which are beyond the control of Alkane and ASM, and which may cause the actual results to differ materially from those expressed in the statements contained in this document. Shareholders are cautioned not to put undue reliance on forward looking statements.

Other than as required by law, none of Alkane or ASM, their officers or their advisers or any other person gives any representation, assurance or guarantee that the occurrence of the events expressed or implied in any forward looking statement in this document will actually occur, in part or in whole.

Additionally, statements of the intentions of the Alkane Board or the ASM Board reflect the present intentions of the Alkane Directors and ASM Directors respectively as at the date of this document and may be subject to change as the composition of the Alkane Board and ASM Board alters, or as circumstances require. Except as required by law, Alkane and ASM disclaim any obligation or undertaking to update or revise any forward looking statement in this Demerger Booklet.

## 6. PRESENTATION OF FINANCIAL INFORMATION

Financial information contained in this document has been prepared in accordance with the recognition and measurement principles prescribed in the Australian Accounting Standards (**AAS**) as issued by the Australian Accounting Standards Board (**AASB**), which is consistent with the International Financial Reporting Standards (**IFRS**) and interpretations as issued by the International Accounting Standards Board (**IASB**).

## 7. COMPETENT PERSON'S STATEMENT

The information in this document that relates to mineral exploration, mineral resources and ore reserves is based on, and fairly represents, information and supporting documentation prepared by Mr D I Chalmers, FAusIMM, FAIG, a director of Alkane and ASM who has sufficient experience relevant to the style of mineralisation and type of deposit under consideration and to the activity which he is undertaking to qualify as a Competent Person as defined in the 2012 Edition of the Australasian Code for Reporting of Exploration Results, Mineral Resources and Ore Reserves. Mr Chalmers has provided his prior written consent to the inclusion in this document of the matters based on his information in the form and context in which it appears. Mr Chalmers is a shareholder of Alkane and a participant in Alkane's short and long term incentive scheme. By virtue of his shareholding in Alkane, Mr Chalmers will receive ASM shares.

## 8. INVESTMENT DECISIONS

This document does not take into account the investment objectives, financial situation or particular needs of any Alkane Shareholder, ASM Shareholder or any other person. This document should not be relied upon as the sole basis for any investment decision in relation to ASM Shares or any other securities, and you should consult your financial, legal, tax or other professional adviser before making any such investment decision.

## 9. ESTIMATES

All references to, and derivations of, estimates are references to estimates and derivations by Alkane and ASM management, unless otherwise indicated. Management estimates and derivations are based on views at the date of this Demerger Booklet, and actual facts or outcomes may be materially different from those estimates.

## 10. INTERPRETATION

For the purpose of this Demerger Booklet, capitalised terms used in this Demerger Booklet have the meaning set out in Section 12, unless the context otherwise requires.

Figures, amounts, percentages, prices, estimates, calculation of values and fractions in this document are subject to the effect of rounding. Accordingly, the actual calculation of these figures may differ from the figures set out in this document.

## 11. PRIVACY AND PERSONAL INFORMATION

The collection of certain personal information is required or authorised by the Corporations Act in Australia.

Alkane, ASM and their respective share registries (**Registries**), may collect personal information in the process of implementing the Demerger. The personal information may include the names, addresses, other contact details and the details of the shareholdings of Alkane Shareholders and ASM Shareholders, and the names of individuals appointed by Alkane Shareholders and ASM Shareholders as their respective proxies, corporate representatives or attorneys at relevant shareholder meetings.

Under the *Privacy Act 1988* (Cth), you may request access to your personal information that is held by, or on behalf of, Alkane or ASM. You can request access to your personal information or obtain further information about Alkane's or ASM's privacy practices by contacting Alkane, ASM or the Registries, details of which are set out elsewhere in this Demerger Booklet.

Alkane and ASM aim to ensure that the personal information it retains about you is accurate, complete and up-to-date. To assist with this, please contact Alkane, ASM or the Registries if any of the details you have provided change.

The main consequence of not collecting the personal information referred to above would be that Alkane may be hindered in, or prevented from, conducting the Extraordinary General Meeting and implementing the Demerger.

Shareholders who appoint an individual as their proxy, corporate representative or attorney to vote at the Extraordinary General Meeting, should inform such individuals of the matters outlined above.

## 12. DATE OF THIS DOCUMENT

This document is dated 17 June 2020.

# Chairman's Letter

17 June 2020

## *Dear Alkane Shareholder*

The Alkane Directors are pleased to present this document, which contains important information about the proposed separation and demerger of Alkane's critical materials business and assets (the **ASM Business**) from the remainder of Alkane's  business.

If the proposed demerger is approved and implemented, your investment in Alkane will be divided into separate investments, both of which will be listed on the ASX, namely:

1. Australian Strategic Materials Ltd (**ASM**) is proposed to be listed on the ASX and operate the ASM Business; and

2. Alkane, which will continue to own and operate the remainder of Alkane's  business being, principally, its Australian gold business.

As an Alkane Shareholder, you would retain your existing shareholding in Alkane and Eligible Shareholders would also receive one share in ASM for every five Alkane Shares held (rounded down to the nearest whole number).

### Demerger rationale and impact

Following the Demerger, Alkane will be an Australian focussed gold company, with existing production from its Tomingley Operations and the opportunity to grow its production base through organic exploration and discovery (including the Boda discovery) and through further strategic acquisitions. Corporately, Alkane will continue to have an experienced board and management team,  the remainder of its cash position (after it provided additional funding to ASM to bring ASM's existing cash balance to $20,000,000 on 1 April 2020) and no bank debt (other than equipment financing obligations).

ASM will be demerged with its cash reserves and no bank debt. All interests in the Dubbo Project and associated assets (including land and water rights), together with ASM's investment in South Korean metals technology company RMR Tech Corporation, will be 100% owned by ASM following the Demerger. ASM will have a focussed board and management team, a strategy to pursue the advancement of the "Clean Metal" metallisation technology, potential value-enhancing opportunities in relation to the Dubbo Project and will continue to be involved in off-take and financing discussions, including those already underway in relation to the Dubbo Project.

The Directors of Alkane are of the view that the Demerger has the potential to unlock shareholder value, streamlining Alkane's Australian gold business while creating a newly listed critical materials company, ASM. ASM will own the Dubbo Project (including the land and water rights required for production) together with its existing interest in RMR Tech Corporation and certain exclusive commercialisation rights associated with ASM.

After considering the advantages, disadvantages and risks of the proposed demerger, the Alkane Board believes that separating ASM from Alkane has the potential to create more shareholder value than if the ASM Business were to remain with Alkane, and believes the proposed demerger is in the best interests of Alkane Shareholders as a whole. The Alkane Board has commissioned an Independent Expert, BDO Australia, who has concluded that the position of Alkane Shareholders if the Demerger is approved is more advantageous than the position if the Demerger is not approved and as such is in the best interest of Alkane Shareholders.

### Extraordinary General Meeting

For the proposed demerger to be able to proceed, Alkane Shareholder approval is required for the capital reduction needed to implement the demerger. As a result of the potential health risks from the Coronavirus (COVID-19) pandemic and in line with the Australian Government's restrictions on travel and social gatherings, it is not currently advisable to host shareholders and members of the public in person at the Extraordinary General Meeting (EGM). The Company will therefore be holding a virtual only meeting via a live webcast of proceedings. The Extraordinary General Meeting is to be held on **16 July 2020** at **10:00am** (AWST).

The EGM will be held through an online webcast powered by "Lumi", where Shareholders will be able to watch, listen, submit written questions and vote online. Instructions on how to join the meeting and vote on the resolutions through the Lumi webcast are set out in the Online Meeting Guide, which is enclosed with the Notice of EGM provided in Annexure A of the Demerger Booklet and can also be found on the Company's website at www.alkane.com.au/demerger.

### Provision of Extraordinary Meeting materials

In accordance with the Australian Government's temporary modifications provided under the Corporations (Coronavirus Economic Response) Determination (No. 1) 2020, the Notice of Extraordinary General Meeting, the accompanying explanatory statement (the Demerger Booklet) and Proxy Form are being made available to shareholders electronically.

All Alkane Shareholders will be able to access the Notice of Extraordinary General Meeting, the Demerger Booklet and all annexures (including the Proxy Form) online at: www.alkane.com.au/demerger. Alkane have also provided the meeting materials on the Company's ASX announcements page and are therefore available through the ASX Market Announcements Platform by inserting Alkane's ASX code (ALK) into the search function on https://www.asx.com.au/asx/statistics/announcements.

Any Alkane Shareholders that have nominated an email address and have elected to receive electronic communications from the Company, will receive an email to their nominated account with a link to an electronic copy of the Notice of Extraordinary General Meeting, Demerger Booklet and all annexures (including the Proxy Forms).

If you are unable to access the relevant meeting materials online, please contact the EGM help line on +61 8 9227 5677 between 9:00am and 5:00pm AWST Monday to Friday.

### Participation at the EGM

Alkane Shareholders who wish to participate in the EGM online may do so:

1. Online at https://web.lumiagm.com/350099625; or

2. Using the Lumi AGM App.

In order to access the Lumi online platform, Alkane Shareholders should use the Meeting ID 350099625. Your username is your SRN/HIN and your password is the postcode registered to your holding if you are an Australian shareholder. Overseas shareholders should refer to the Online Meeting Guide for their password details. Further instructions on how to participate in the EGM are set out in the Online Meeting Guide, enclosed in the Notice of Extraordinary General Meeting and can also be found on the Company's website at www.alkane.com.au/demerger.

### Voting on the resolutions

Your vote is important. You may vote virtually by either direct voting online during the meeting or by appointing a proxy, attorney or representative at the general meeting. Further information on how to participate and vote virtually is set out below and in the Online Meeting Guide provided in the Notice of Meeting and at www.alkane.com.au/demerger.

The Chairman will open the poll shortly after the EGM commences and you will be able vote at any time during the EGM and for 10 minutes afterwards. If you have lodged a direct vote and then vote online again during the EGM, your first direct vote lodged will be cancelled.

Voting on the resolutions at the Meeting is important and the Alkane Board encourages all Alkane Shareholders to either vote at the Meeting via the online platform, or nominate a proxy by providing the Proxy Form according to the instructions provided on the Proxy Form. Proxy Forms can be lodged online at www.advancedshare.com.au/investor-login or sent by mail to the Company's Share Registry, Advanced Share Registry Services, so that it is received by 10:00am (AWST) on 14 July 2020. We encourage you to read this Demerger Booklet in its entirety and to make your own decision on the merits of the demerger proposal. Your Board considers the Demerger to be in the best interests of Alkane Shareholders as a whole and, accordingly, unanimously recommends that you vote in favour of the resolutions set out in the notice of meeting included in this Demerger Booklet. Each of your Directors intends to vote all Alkane Shares that he owns or controls in favour of the resolutions.

### Next steps

If you have any questions about the Demerger, please contact the Alkane Shareholder Information Line on 08 9227 5677.

Yours sincerely

Ian Jeffrey Gandel
**Chairman**

# INDICATIVE TIMETABLE

If the conditions to the Demerger are satisfied, the Demerger is expected to take place in accordance with the following timetable:

| Event | Indicative Date |
|---|---|
| Extraordinary General Meeting to consider approving Capital Reduction and Demerger | 16 July 2020 |
| Demerger Effective Date | 17 July 2020 |
| If the Demerger is approved and the necessary conditions are satisfied; last day of trading in Alkane Shares on a "cum" basis | 20 July 2020 |
| Trading of Alkane Shares on an "ex" basis commences | 21 July 2020 |
| Record Date for Demerger | 22 July 2020 |
| In Specie Distribution of ASM Shares | 29 July 2020 |
| Anticipated commencement of normal trading in ASM Shares | 30 July 2020 |

All dates and times are indicative only and, among other things, are subject to change. The Indicative Timetable is subject to change as notified by Alkane to, or as required by, ASX from time to time.

# 1. SUMMARY OF DEMERGER PROPOSAL

## 1.1 Background

In late 2019 Alkane announced that it was contemplating the separation of its critical materials business held in ASM into a new listed entity by means of a Demerger, subject to shareholder approval. The Alkane Board believes that the separation of this business and the establishment of its own dedicated board and management team has the potential to unlock value for existing Alkane Shareholders.

The purpose of this document is to:

- outline the background to, and rationale for, the Demerger;
- outline the advantages, disadvantages and risks associated with the Demerger;
- explain the steps required to effect the Demerger;
- provide an overview of Alkane and ASM following the Demerger; and
- outline other factors relevant to the Demerger.

## 1.2 Rationale for Demerger

Alkane has existing gold mining and processing facilities at its Tomingley Operations as well as material gold and gold-copper exploration projects and investments in junior Australian gold companies. The gold division has strong stated growth aspirations with existing organic and inorganic potential to grow future gold production.

Alkane's critical materials business, held through ASM, is centred around the Dubbo Project, a multi-commodity development project that has been significantly progressed but requires off-take and funding in order to commence construction. Alkane has also invested in associated technology in relation to the Dubbo Project and potential downstream product activities that complement the Dubbo Project.

Alkane directors are of the opinion that the introduction of dedicated management teams to implement the agreed strategy for each of these businesses makes sense for Alkane Shareholders. This, together with significant feedback from many investors that they have interest in investing in one of the Alkane divisions but not the other, have led the Alkane Board to recommend that the businesses will be best progressed through the separation of the businesses into two separate listed entities. Eligible Shareholders will retain exposure to both businesses through the transaction.

## 1.3 Key advantages of the Demerger

Key advantages of the Demerger include:

(a) Eligible Shareholders have the flexibility either to maintain their existing exposure to both the ASM Business and Alkane's gold operations, or to focus on one or other of Alkane and ASM;

(b) each of Alkane and ASM may improve its financing flexibility; and

(c) each of the Alkane Board and the ASM Board will be able to focus on, and prioritise, the development of the respective businesses.

Further detail is provided in Section 3.2.

## 1.4 Key disadvantages and risks of the Demerger

Key disadvantages and risks of the Demerger include:

(a) increased costs for the ASM Business;

(b) Ineligible Foreign Shareholders will be unable to maintain their existing exposure to the ASM Business; and

(c) potential reduction in liquidity of Alkane Shares and ASM Shares.

Further detail is provided in Section 3.3.

## 1.5 If the Demerger does not proceed

If the Demerger does not proceed:

- ASM will continue to operate within the Alkane Group;
- Eligible Shareholders will not receive ASM Shares; and
- the advantages of the Demerger described in Sections 1.3 and 3.2 may not be realised and the disadvantages and risks of the Demerger described in Sections 1.4 and 3.3 may not arise (except for the incurrence of certain costs, as described in Section 3.3).

If the Demerger does not proceed, Alkane Directors and management may consider alternatives to the Demerger for the ASM Business.

## 1.6 How the Demerger will be implemented

Alkane Shareholders will retain their Alkane Shares and, if the Demerger Resolution is approved and other conditions to the Demerger are satisfied or waived, Eligible Shareholders will be entitled to receive one ASM Share for every five Alkane Shares held at the Demerger Record Date (rounded down to the nearest whole number).

Eligible Shareholders will not need to take any action or pay any cash to receive ASM Shares.

Ineligible Foreign Shareholders will not receive ASM Shares under the Demerger. ASM Shares that would otherwise be transferred to these Alkane Shareholders under the Demerger will be transferred to the Sale Agent to be sold, with the net proceeds of such sale to be paid to Ineligible Foreign Shareholders. See Section 8.4 for more information. Ineligible Foreign Shareholders will not need to take any action to receive the net proceeds of sale of the ASM Shares to which they would otherwise have been entitled.

## 1.7 Overview of Alkane after the Demerger

(a) Summary

Following the Demerger, Alkane will be a gold production and exploration company deriving revenue from its existing Tomingley Operations. The Tomingley Operations consists of a 1.0mtpa processing facility which is treating underground ore mined from the Wyoming One underground mine.

Alkane made several exploration discoveries on adjacent, 100%-owned exploration permits south of the Tomingley Operations in 2018. An initial 50,000m of infill drilling was announced in the March quarter of 2019 and subsequently expanded to 60,000m in the June quarter of 2019. An initial inferred resource over the Roswell discovery of 445,000oz was announced in January 2020 and an initial inferred resource over the San Antonio discovery of 453,000oz was announced in April 2020. These discoveries are anticipated to deliver additional gold ore which, once permitted, will be processed at the Tomingley Operations.

Alkane holds other tenements in New South Wales which it considers to be prospective for new gold and base metals discoveries. Alkane is also a material shareholder in two junior gold companies listed on the ASX, both with development projects in Western Australia.

(b) Selected pro forma financial information of Alkane excluding ASM

Selected pro forma financial information of Alkane excluding ASM is set out in Section 5 of this Demerger Booklet.

(c) Strategy

Alkane's stated strategy is to grow shareholder value by increasing production at its Tomingley Gold Operations by pursuing organic growth by way of exploration and development across its extensive tenement holding in New South Wales and through continued strategic acquisitions.

Alkane's medium term goal is to become a multi-mine Australian gold producer. This strategy is underpinned by its Tomingley Operations and includes the gold discoveries made south of the Tomingley Operations in 2018 where resource definition drilling and development planning continues in 2020. In addition to the Tomingley Operations, Alkane will have exploration assets (including the Boda discovery) as well as investments in junior Australian gold exploration companies. Alkane continues to actively consider strategic gold acquisition transactions that have the potential to meet Alkane's objectives and grow shareholder value.

Alkane will have a commodity focus on gold (but incorporating base metals such as copper where they geologically co-exist) and a geographical focus on Australia.

(d) Governance

Alkane's governance will remain unchanged following the Demerger.

(e) Dividends and capital management

Historically, Alkane has not paid any dividends. While Alkane is currently in a period of significant exploration and development expenditure, there is no short-term intention to declare dividends to shareholders from profits or otherwise. Nevertheless, Alkane's dividend policy will continue to be considered in the future as circumstances change.

## 1.8 Overview of ASM

(a) Key assets

In addition to the cash transferred to the new entity as part of the Demerger, ASM's main assets will include the following:

- 100% interest in the Dubbo Project, which includes certain associated land and water rights (and Toongi Pastoral Company);
- ownership and/or exclusive rights to technology in relation to the Dubbo Project (which has potential application beyond the Dubbo Project, particularly in relation to hafnium separation from zirconium); and
- ASM's existing minority investment in RMR Tech Corporation (**RMR Tech**) and agreed exclusive global commercialisation rights to use the "Clean Metal" metallisation technology.

(b) Selected pro forma historical financial information on ASM

ASM pro forma historical financial information is set out in Section 7 of this Demerger Booklet.

(c) Strategy

The strategy of ASM is to create value for ASM Shareholders through advancing an integrated business that includes the Dubbo Project and related technology that results in the production of critical material oxides and metals. Together with Korean joint venture partners, through its investment in RMR Tech, ASM is currently commissioning a "Clean Metal" metallisation pilot plant, with commencement of operations expected in Q3 of 2020.

ASM is progressing testwork and engineering focused improvements that integrate "Clean Metal" metallisation into the business strategy. The commissioning of a commercial metallisation pilot plant is nearing completion and the initial focus of producing zirconium, neodymium, praseodymium, niobium and titanium metal. This strategy incorporates the use of a 1 Mtpa flotation plant to improve the ore feed grade and a 0.5 Mtpa solvent extraction plant to process the higher-grade feed that is expected to deliver a lower capital cost and improved financial returns to the Dubbo Project. The results from the recoveries of the flotation work and the initial metallisation pilot plant commissioning will be delivered by Q3 of 2020.

ASM continues to progress financing, off-take and strategic partner initiatives with various parties. In March 2020, Alkane announced that Export Finance Australia (**EFA**) (Australia's Export Credit Agency) had confirmed its interest in participating in the financing consortium for the development of the Dubbo Project, subject to the finalisation of normal due diligence, acceptable financing structure and the Dubbo Project meeting the EFA's eligibility and credit requirements. ASM continues to liaise closely with the EFA and other Australian government departments in relation to financing and other support.

(d) Governance

On 10 February 2020, Alkane announced the appointment of David Woodall as Managing Director of ASM. Following the Demerger, Mr Woodall will remain as Managing Director of ASM.

The ASM Board will comprise the existing Alkane Board, with the exception of Anthony Lethlean who will remain with Alkane as a non-executive director, and will include David Woodall as Managing Director.

(e) Dividends and capital management

The ASM dividend policy will be determined by the ASM Board at its discretion, having regard to the status of ASM's operations and balance sheet and forward looking strategy. However, it is not anticipated that ASM will be in a position to pay any dividends in the near or medium term.

## 1.9 Risk factors

Alkane Shareholders should carefully consider the risk factors relating to the Demerger, Alkane and ASM as set out in Section 3.4 of this document along with all other information set out in this document. If any, or a combination, of these risks actually occur, the market price for Alkane Shares and/or ASM Shares may decline.

## 1.10 Taxation

A guide to the general tax consequences by the Demerger for Alkane Shareholders who are tax resident in Australia is set out in Section 9.

Alkane Shareholders should read Section 9 of this document. If they are in any doubt as to their tax position, they should contact their professional adviser immediately.

## 1.11 Eligibility of Alkane Shareholders

All Alkane Shareholders whose addresses are shown in the Alkane Share Register on the Demerger Record Date as being in Australia or New Zealand will receive ASM Shares (**Eligible Shareholders**) under the Demerger.

Alkane Shareholders with registered addresses outside of Australia and New Zealand will not be eligible to receive ASM Shares (**Ineligible Foreign Shareholders**). Those ASM Shares to which Ineligible Foreign Shareholders would otherwise be entitled will be transferred to the Sale Agent and sold on the ASX, with the net proceeds remitted to them. For further information, see Section 8.4.

## 1.12 Shareholder meeting

Annexure 1 of this document is a notice convening an Extraordinary General Meeting of Alkane Shareholders. As a result of the potential health risks from the Coronavirus (COVID-19) pandemic and Government restrictions on travel and social gatherings, it is not currently advisable to host shareholders and members of the public in person at the EGM. The Company will therefore be holding a virtual meeting and will also webcast the proceedings. The Extraordinary General Meeting is to be held on 16 July 2020 at 10:00am (AWST). Further detail on the Extraordinary General Meeting is provided in Annexure 1.

For the Demerger to proceed, the Demerger Resolution must be approved by an ordinary resolution of Alkane Shareholders.

A second Resolution, the Early Vesting Resolution, is also to be proposed at the Extraordinary General Meeting in connection with the Demerger. Information on this Resolution is set out in Section 4.7. The Alkane Directors also recommend that Alkane Shareholders vote in favour of this Resolution (with Mr Chalmers and Mr Earner abstaining due to their interest in the Resolution).

## 1.13 Trading in ASM Shares

If the Demerger is approved by Alkane Shareholders at the Extraordinary General Meeting, ASM is admitted to quotation by the ASX and the Demerger proceeds in accordance with the proposed timetable, Alkane Shares are expected to cease trading with an entitlement to ASM Shares from 20 July 2020 on the ASX.

It is expected that ASM Shares will then commence trading on a normal settlement basis on the ASX on 30 July 2020

## 1.14 Independent Expert's opinion

Alkane has engaged the Independent Expert to prepare a report on whether the position of Alkane Shareholders if the Demerger is approved is more advantageous than the position if the Demerger is not approved and therefore, whether the Demerger is in the best interests of Alkane Shareholders. The provision of such a report is customary for Australian demergers and the report is intended to assist Alkane Shareholders in making an informed voting decision on the Demerger Resolution. The Independent Expert is BDO Australia.

The Independent Expert has concluded that the position of Alkane Shareholders if the Demerger is approved is more advantageous than the position if the Demerger is not approved and as such is in the best interest of Alkane Shareholders.

A copy of the full version of the Independent Expert's Report is set out in Annexure 3.

### 1.15 Board recommendation

The Alkane Board has carefully considered the potential advantages and disadvantages identified by the Independent Expert and undertaken its own assessment of the Demerger. The Alkane Board considers the Demerger to be in the best interests of Alkane Shareholders as a whole and, accordingly, unanimously recommends that Alkane Shareholders vote in favour of the Resolutions. Each of the Alkane Directors intend to vote any Alkane Shares that they own or control in favour of the Resolutions.

### 1.16 What Alkane Shareholders need to do

The Alkane Board encourages Alkane Shareholders to vote by:

- attending the virtual Extraordinary General Meeting and voting online;
- appointing an attorney, or in the case of corporate shareholders, a corporate representative, to attend online and vote on their behalf; or
- appointing a proxy to vote on their behalf.

A Proxy Form accompanies the Notice of Extraordinary General Meeting. Alkane Shareholders are encouraged to read the instructions set out in the Proxy Form, and further details on how to vote on the Resolutions are set out in the Notice of Extraordinary General Meeting set out in Annexure 1 of this document.

## 2. FREQUENTLY ASKED QUESTIONS

| Question | Answer |
|---|---|
| **The Demerger** | |
| ***What is the Demerger?*** | If the Demerger is implemented, it will result in the formation of an independent listed company, ASM, which will own all of Alkane's critical materials assets including the Dubbo Project. ASM will apply to be admitted to the official list of the ASX, and for ASM Shares to be admitted to quotation under the code "ASM".<br><br>Alkane Shareholders will retain their Alkane Shares and, if the Demerger proceeds, Eligible Shareholders will be entitled to receive one ASM Share for every five Alkane Shares held at the Demerger Record Date (rounded down to the nearest whole number). Eligible Shareholders will not need to take any action or pay any cash to receive ASM Shares.<br><br>Ineligible Foreign Shareholders will not receive ASM Shares under the Demerger. ASM Shares that would otherwise be transferred to these Alkane Shareholders under the Demerger will be transferred to the Sale Agent to be sold, with the net proceeds of such sale to be paid to Ineligible Foreign Shareholders. Ineligible Foreign Shareholders will not need to take any action to receive the net proceeds of sale of the ASM Shares to which they would otherwise have been entitled. |
| ***Why has the Demerger been proposed by the Alkane Board?*** | The Alkane Board has proposed the Demerger after feedback from Alkane Shareholders and potential shareholders. The Alkane Board considers that the Demerger will potentially increase shareholder value for Alkane Shareholders. |
| ***What are the key advantages of the Demerger?*** | The key advantages of the Demerger are discussed in detail in Sections 1.3 and 3.2. |

| Question | Answer |
| --- | --- |
| ***What are the key disadvantages and risks of the Demerger?*** | The key disadvantages and risks of the Demerger are discussed in detail in Sections 1.4 and 3.3. |
| ***How does the Board recommend I vote?*** | The Alkane Board recommends that you vote in favour of the Demerger Resolution to be considered at the Extraordinary General Meeting.<br><br>Each Alkane Director intends to vote any Alkane Shares that he owns or controls in favour of the Demerger Resolution. |
| ***What is the Independent Expert's opinion on the Demerger?*** | The Independent Expert has concluded that the position of Alkane Shareholders if the Demerger is approved is more advantageous than the position if the Demerger is not approved and as such is in the best interest of Alkane Shareholders.<br><br>The Independent Expert's Report is set out in Annexure 3. |
| ***What are the key steps and conditions to implement the Demerger?*** | The key remaining steps to implement the Demerger are:<br><br>• approval of the Demerger Resolution by Alkane Shareholders by ordinary resolution at the Extraordinary General Meeting;<br><br>• approval of admission of ASM to the Official List of ASX and official quotation of ASM Shares by ASX, including ASX granting ASM a waiver in respect of ASX Listing Rule 10.14 and confirmations in respect of the application of ASX Listing Rules 1.1 (condition 3), 10.1 and Chapter 11;<br><br>• satisfaction or waiver of all other conditions to the Demerger; and<br><br>• in specie distribution and transfer of ASM Shares in satisfaction of the Distribution Amount. |
| ***What happens if the Demerger does not proceed?*** | If the Demerger does not proceed: |

| Question | Answer |
|---|---|
| | • ASM will continue to operate within the Alkane Group;<br>• Eligible Shareholders will not receive ASM Shares; and<br>• the advantages of the Demerger described in Sections 1.3 and 3.2 may not be realised and the disadvantages and risks of the Demerger described in Sections 1.4 and 3.3 may not arise (except for the incurrence of certain costs as described in Section 3.3).<br>If the Demerger does not proceed, Alkane Directors and management may consider alternatives to the Demerger for the ASM Business. |
| ***Which Alkane Shareholders are eligible to participate in the Demerger?*** | Alkane Shareholders whose registered address at the Demerger Record Date is in Australia or New Zealand are Eligible Shareholders and will receive ASM Shares. Alkane Shareholders with registered addresses outside of Australia and New Zealand will be Ineligible Foreign Shareholders and will not receive ASM Shares and should refer to Section 8.4 for further information. |
| ***What will Alkane Shareholders receive if the Demerger proceeds?*** | Eligible Shareholders will receive one ASM Share for every five Alkane Shares they hold at the applicable Demerger Record Date. See Section 1.6 for further information.<br>Ineligible Foreign Shareholders will not be eligible to receive ASM Shares. ASM Shares that would otherwise be transferred to these Alkane Shareholders under the Demerger will be transferred to the Sale Agent to be sold, with the net proceeds of such sale to be paid to Ineligible Foreign Shareholders. See Section 8.4 for further information. |
| ***Can I choose to receive cash instead of ASM Shares?*** | No, under the Demerger you may not elect to receive cash instead of ASM Shares.<br>If you are an Ineligible Foreign Shareholder, however, ASM Shares that would otherwise be |

| Question | Answer |
| --- | --- |
| | transferred to you under the Demerger will be transferred to the Sale Agent to be sold with the ASM Shares of all other Ineligible Foreign Shareholders. The net proceeds of such sales will be paid to Ineligible Foreign Shareholders. |
| ***Can I choose to keep or sell the ASM Shares I receive under the Demerger?*** | The ASM Shares you receive under the Demerger are expected to be quoted on the ASX and, generally, you should be able to trade them in the usual way if you do not wish to keep them. |
| **Alkane post-Demerger** | |
| ***What is the impact of the Demerger on my Alkane shareholding?*** | The number of Alkane Shares you hold will not change as a result of the Demerger. |
| ***What will be Alkane's strategy after the Demerger?*** | The strategy of Alkane will be to create shareholder value by increasing production at its Tomingley Operations and growing the gold business through exploration, development and strategic acquisition.<br>This is the existing strategy for Alkane's gold division. |
| ***Who will be on the Alkane Board after the Demerger?*** | The Demerger will not affect the composition of the Alkane Board. |
| ***Will there be changes to Alkane's senior management as a result of the Demerger?*** | No – other than employees who are solely focussed on ASM who will transition to the demerged company, the senior management of Alkane will be unchanged.<br>On 10 February 2020, Alkane announced the appointment of David Woodall as Managing Director of ASM. Following the Demerger, Mr Woodall will remain as Managing Director of ASM and cease to be part of the Alkane management team. |
| ***What will be the impact of the Demerger on Alkane's dividends?*** | Alkane has not paid dividends previously. While Alkane is currently in a period of significant exploration and development expenditure, there is no short-term intention to declare dividends to shareholders from profits or otherwise. |

| Question | Answer |
| --- | --- |
| | Nevertheless, Alkane's dividend policy will continue to be considered in the future as circumstances change. |
| ***What will be the Alkane share price after the Demerger?*** | There is no certainty as to the price of Alkane Shares after the Demerger. |
| **ASM** | |
| ***What is ASM?*** | ASM is currently a wholly-owned subsidiary of Alkane focused on the development of a vertically integrated business to produce critical material oxides and metals (including the Dubbo Project). |
| ***Where will ASM be listed?*** | ASM will apply for admission to the Official List of ASX and official quotation of ASM Shares, including applying to ASX for a waiver in respect of ASX Listing Rule 10.14 and confirmations in respect of the application of ASX Listing Rules 1.1 (condition 3), 10.1 and Chapter 11. The Demerger will not proceed unless admission to the Official List of ASX, official quotation of ASM Shares and the relevant waiver and confirmations are granted.<br><br>It is expected that ASM Shares would trade under the ASX code "ASM". |
| ***What will be the ASM share price?*** | There is no certainty as to the price of ASM Shares after the Demerger. |
| ***What will ASM's strategic priorities be after the Demerger?*** | ASM's strategic priorities are set out in Section 6.6. The ASM Board intends to focus on these strategic priorities following the Demerger however the future strategy of ASM will ultimately be a matter for the ASM Board and senior management to develop over time and is subject to change. |
| ***What will be ASM's dividend policy?*** | The ASM dividend policy will be determined by the ASM Board at its discretion, having regard to the status of ASM's operations and balance sheet and forward looking strategy. However, it is not |

| Question | Answer |
|---|---|
| | anticipated that ASM will be in a position to pay any dividends in the near or medium term. |
| ***What will be ASM's capital structure?*** | Eligible Shareholders will receive one ASM Share for every five Alkane Shares held. |
| ***Who will be on the ASM Board after the Demerger?*** | As from the Demerger Effective Date, the ASM Board will comprise all the existing Alkane Directors other than Anthony Lethlean, and will also include David Woodall as ASM's Managing Director. |
| ***What are the risks of holding ASM Shares?*** | ASM will be subject to a range of risks in respect of its activities and interests which may adversely affect the future operating or financial performance, prospects, investment returns or value of ASM. Relevantly, the Dubbo Project has not yet been fully funded, nor is it in production. Many of these risks are risks to which the assets that form the ASM Business are already exposed, while others arise out of, or increase, as a result of the Demerger.<br><br>These risks are summarised in Section 3.4. Alkane Shareholders should review these risks carefully before deciding how to vote in relation to the Demerger Resolution. |
| ***What will be ASM's relationship with Alkane after the Demerger?*** | Subject to the successful implementation of the Demerger, Alkane will not hold any shares in ASM.<br><br>Certain contractual arrangements between Alkane and ASM Group Members, including an intercompany services agreement, are in place or will be in place at the Demerger Implementation Date.<br><br>Alkane and ASM have also executed the Demerger Deed which is intended to govern the conduct of each company with respect to the Demerger. A summary of the Demerger Deed is included at Section 8.6. |

| Question | Answer |
|---|---|
| **Extraordinary General Meeting** | |
| ***Who can vote at the Extraordinary General Meeting?*** | All Alkane Shareholders who are registered on the Alkane Share Register at 5:00pm (AWST) on 14 July 2020 are entitled to vote on the Resolutions. |
| ***What is the voting threshold for the Demerger?*** | For the Demerger to proceed, the Demerger Resolution must be approved as an ordinary resolution of Alkane Shareholders. |
| ***When and where is the Extraordinary General Meeting?*** | The meeting of Alkane Shareholders will be held online and begin at 10:00 am (AWST) on 16 July 2020. |
| ***How will the Extraordinary General Meeting be held?*** | As a result of the potential health risks from the COVID-19 pandemic and restrictions on gatherings, the Company will be holding a virtual meeting.<br>Further details on the Extraordinary General Meeting, including how to attend and how to vote are provided in Annexure 1. |
| ***What are the Resolutions to be proposed at the Extraordinary General Meeting?*** | Alkane Shareholders are being asked to consider and vote on:<br>1. a resolution to approve a reduction of capital to effect the Demerger (the **Demerger Resolution**); and<br>2. a resolution to approve the proposed treatment of certain Alkane Performance Rights upon implementation of the Demerger (the **Early Vesting Resolution**). |
| ***What is the Demerger Resolution?*** | The Demerger Resolution is the ordinary resolution to be voted on by Alkane Shareholders to approve the Demerger, including the Capital Reduction required for the Demerger, as set out in the Notice of Extraordinary General Meeting in Annexure 1. |
| ***What is the Early Vesting Resolution?*** | The Early Vesting Resolution is the ordinary resolution to be voted on by Alkane Shareholders to approve the proposed treatment of certain |

| Question | Answer |
| --- | --- |
| | Alkane Performance Rights. The Early Vesting Resolution is set out in the Notice of Extraordinary General Meeting in Annexure 1. An overview of the Early Vesting Resolution is discussed in detail in Section 4.7. |
| ***What if I do not vote at the Extraordinary General Meeting or if I vote against the Demerger Resolution?*** | If Alkane Shareholders who support the Demerger do not vote, there is a risk that the Demerger will not be approved. If you do not vote or vote against the Demerger Resolution but the Demerger Resolution is approved by the requisite majority of Alkane Shareholders, then, subject to the other conditions to the Demerger being satisfied or waived, the Demerger will be implemented and binding on all Alkane Shareholders including those who did not vote or voted against the Demerger Resolution. |
| **Other** | |
| ***What are the tax implications of the Demerger for Alkane Shareholders?*** | The tax implications of the Demerger will depend on how you hold your Alkane Shares and in which jurisdiction you are a resident for tax purposes.<br><br>Section 9 sets out certain information on tax implications for Australian tax resident Alkane Shareholders.<br><br>The information is expressed in general terms and does not constitute tax advice in respect of the particular circumstances of any Alkane Shareholders.<br><br>It is recommended that you seek your own specific tax advice for your individual circumstances. |
| ***If you have further questions*** | If you have any further questions, it is recommended that you either:<br><br>i) contact your stockbroker, bank manager, solicitor, accountant and/or other independent professional adviser; or<br><br>ii) call the Alkane Shareholder Information Line on 08 9227 5677. |

# 3. ADVANTAGES, DISADVANTAGES AND RISKS OF THE DEMERGER

## 3.1 Background and alternatives considered

Alkane has operated with ASM as a wholly-owned subsidiary since it first acquired the Dubbo Project and began feasibility work on it in the 1990s. While significant geographical synergies exist (given that most of Alkane's tenement holdings are located in the same region of New South Wales) there is a recognition that from a commodity perspective, the Dubbo Project has distinct characteristics compared with the other exploration, development and operational activities which Alkane carries out. These include:

- a need to understand and develop relationships with potential global customers for the main products which the Dubbo Project would generate in production (as opposed to the gold business of Alkane which sells gold into a highly liquid and transparent market);
- greater focus on mineral processing and the need to develop a processing flow sheet specific to the unique ore characteristics of the Dubbo Project; and
- the need to develop international relationships for off-take and financing purposes, including potentially aligning the interests of a strategic partner through providing project or corporate equity interests as part of an agreed strategic partner transaction.

While these activities have been progressed, Alkane has recognised that there may be benefits for Alkane and Alkane Shareholders if ASM pursues its activities, including progressing the development of the Dubbo Project, as an independent separate listed entity. Alkane has previously generated shareholder value through spin-off and sale transactions, which include the IPO of BC Iron in 2006 and the sale of the McPhillamys Gold Project to Regis Resources in 2012.

Over Alkane's multi-decade existence as an ASX-listed company, it has made several significant gold discoveries in NSW which it has either developed itself or sold. These include Peak Hill, McPhillamys and Tomingley. Additionally, potentially significant projects were discovered in 2018 including the Tomingley corridor discoveries (San Antonio, Roswell and El Paso) and then, in 2019, the Boda discovery (the Northern Molong Porphyry Project).

Alkane has formed the view that, although there is geographical proximity between the Tomingley Operations, the new discoveries and the Dubbo Project, the strategic rationale for holding projects with different commodity focuses is limited.

With the activities and strategic goals of both business units clarified, over a period of several months in 2019 the Alkane Board commenced active consideration of a potential separation of the businesses. This included the investigation of several transaction structure alternatives to the Demerger and potential divestment scenarios were also considered. However, these were not progressed for various reasons including the strong view of the Alkane Board at the time that the market value of Alkane was materially below the intrinsic value of its assets and that continuing on a standalone path for both projects remained the best course of action for shareholders.

In Q3 of 2019, the Alkane Board approved management and advisers to undertake detailed legal and tax structuring due diligence and early engagement with key regulators to determine the feasibility of a demerger via an in specie distribution and listing of ASM. Structuring and consultation with regulators continued in Q4 of 2019 and Q1 of 2020 along with the internal preparation for a demerged ASM. Key areas of focus for the Alkane Board included ensuring that ASM had an experienced and focussed senior management team considered capable of progressing the Dubbo Project and ASM's investments in South Korea and ensuring that a business plan and associated budget was developed with a view to understanding and securing the working capital needs of the demerged entity to execute its short term and medium term business plans (but excluding development capital).

## 3.2 Advantages of the Demerger

(a) Eligible Shareholders will retain their existing exposure to ASM

Under the Demerger, Eligible Shareholders will receive ongoing exposure to the ASM, its assets and its business through a direct shareholding in ASM.

(b) Investor choice

Creating a separate listed entity will allow existing and prospective investors seeking exposure solely to Alkane's gold business to invest directly in that business without exposure to the critical materials business. Likewise, existing and prospective investors seeking exposure to the ASM critical materials business will be able to invest directly in ASM without having exposure to Alkane's gold business. These businesses have different funding requirements, different commodity exposures and risk factors and have projects that are at different phases in the development cycle. The establishment of simple and transparent separate businesses with specific commodity focus and strategies is considered likely to allow investors to better understand and manage these risks.

(c) Greater flexibility in financing

The Demerger will position each of Alkane and ASM to seek finance for its own operations and growth strategies in the future.

Alkane will be able to seek investment from financiers and investors including those with a specialist gold and precious metals focus who do not wish to have exposure to other metals, including both debt and equity investors, as well as be able to more effectively use its shares as consideration in potential mergers, takeovers and equity financing transactions.

The Alkane Directors believe that ASM will be in a position to more clearly articulate the merits of the ASM Business as a compelling critical materials business which could prove more attractive than when integrated with gold production and exploration assets.

(d) Management focus

The separation of Alkane and ASM will allow each entity to better pursue the targeted strategies of its business. The Alkane senior management team will be able to focus on realising the value of the gold business through the execution of the strategy for that business as articulated in recent investor presentations and shareholder announcements. Similarly, ASM's senior management team will focus on the continuation of off-take and financing discussions in relation to the Dubbo Project and the feasibility and marketing work in relation to ASM's Korean "Clean Metal" metallisation investment with RMR Tech.

(e) Reduced operating costs for Alkane

If the Demerger proceeds, Alkane will not have to bear the ongoing costs of the Dubbo Project and other ASM assets. Cash generated by Alkane's gold business will not need to fund the costs of running the ASM Business and instead could be fully applied to growing the gold business, paying down future debt, or returning to shareholders via dividends.

(f) Valuation of Alkane

The Alkane Board considers that the Demerger will reduce the likelihood that Alkane will trade at a price below the intrinsic value of its assets. Investors have indicated to Alkane that they would value Alkane differently if it was not a diversified minerals company.

(g) Working Capital

ASM will emerge from the Demerger with approximately $20,000,000 in cash and no bank debt. Alkane will hold the remainder of the Alkane Group's cash and have no interest bearing debt (other than equipment financing obligations for Alkane). Alkane will also benefit from the financial contribution of its 100% owned Tomingley Operations.

## 3.3 Disadvantages of the Demerger

(a) Increased costs

There will be additional costs relating to two separate listed entities. Each company will have to bear its own head office costs (e.g. board fees, listing fees, auditing fees, etc.).

There are also one-off transaction execution costs and costs associated with establishing ASM as a standalone company that is listed on the ASX.

ASM will no longer have the benefit of accessing cash flows associated with production from Alkane's projects which it can use to fund its activities and will need to seek out its own future funding sources without the backing of Alkane's gold assets and business.

(b) Liquidity of ASM Shares

The Alkane Board believes that, absent positive news flow or changes to the macroeconomic environment, there may be low liquidity of ASM Shares traded on the ASX compared with the level of liquidity of Alkane Shares. This may make it more difficult for shareholders to buy and sell shares in ASM than it currently is to trade Alkane Shares.

Some investors, particularly institutional investors, may not be attracted to holding ASM Shares, which will have reduced scale and liquidity compared to Alkane before the Demerger. This may trigger selling by some investors, potentially placing downward share price pressure in ASM.

(c) Diversification

Alkane will be less diversified in its commodity focus, having separated out its critical materials division into ASM.

(d) Disposal of Alkane Shares and ASM Shares

Alkane Shareholders and ASM Shareholders who dispose of their shares following the Demerger may incur brokerage and other transaction costs associated with the disposal of these shares.

Nevertheless, the Alkane Board believes that the initial and ongoing costs of the Demerger will be outweighed by the benefits (short term and long term) for Alkane Shareholders in having ASM as a separate company.

### 3.4 Risks relating to the Demerger

(a) Introduction

If the Demerger is implemented, Alkane Shareholders, who previously had an indirect interest in the ASM Business through their shareholding in Alkane, will have a direct interest in ASM and, accordingly, will be directly subject to a number of risks affecting ASM, the ASM Business, its operations and its financial condition.

Most of the risks currently faced by Alkane will continue to be faced by Alkane after the Demerger. Alkane Shareholders are already exposed to these risks through their shareholding in Alkane. However, Alkane's risk profile will change after implementation of the Demerger of the ASM business as Alkane's operations will be focussed on gold production and will be less diversified. Any Alkane Shareholders who do not retain their ASM Shares will have a similar reduction in diversification and concentration of their exposure to gold.

(b) Demerger may not complete

Completion of the Demerger is subject to the passing of the Demerger Resolution by Alkane Shareholders at the Extraordinary General Meeting as well as the satisfaction or waiver of a number of other conditions precedent as described in Section 8.5. If Alkane Shareholders do not approve the Demerger Resolution or any of the other conditions precedent are not satisfied or waived, the Demerger will not proceed.

If the Demerger is delayed or does not proceed, Alkane Shareholders may not receive all of the strategic benefits that will result from the Demerger.

(c) Uncertainty around the share prices of Alkane and ASM

While the Alkane Directors believe that the Demerger is in the best interests of Alkane Shareholders, it is not possible to predict the market value of Alkane Shares or ASM Shares following the Demerger.

There can be no assurance that an active market will develop in ASM Shares after the Demerger, or that ASM Shares will trade on ASX at any particular price subsequent to ASM's listing. Following the Demerger some shareholders may adjust their holdings in Alkane or ASM. There is a risk that the combined market value of Alkane and ASM after the Demerger will be less than the market value of Alkane immediately before the Demerger, particularly while the shareholder base of each company evolves. Recent volatility in equity markets may heighten uncertainty regarding the future combined value of Alkane and ASM.

The share prices of Alkane and ASM may be affected by a range of factors, including market sentiment, commodity prices and foreign exchange rates.

(d) The Demerger may fail to realise anticipated benefits

Alkane or ASM may fail to realise any or all of the anticipated benefits of the Demerger, either in a timely manner or at all. Some of the potential benefits of the Demerger may not be achieved as a result of circumstances outside the control of Alkane or ASM.

(e) Potential delays or unexpected costs in establishing ASM as a standalone entity

ASM's businesses are currently supported by Alkane's corporate services infrastructure, including group accounting, treasury, taxation, superannuation, legal, insurance administration, information management, certain group purchasing services, general human resources and other services. As part of the Demerger implementation, ASM will replace these support services with internal capability or with third party contracts and arrangements appropriate for it as a standalone entity. There is a risk that the performance of these functions will be negatively affected during ASM's period of transition to being a standalone entity as systems and processes are implemented. ASM may incur one-off costs to implement these processes and, although support will initially be provided by Alkane under a Intercompany Services Agreement (see Section 8.6(b) below), it may take some time to ensure that all processes are operating fully and efficiently. There is a risk that the establishment of these capabilities may take longer than expected or may involve greater costs than anticipated.

(f) Demerger taxation relief

Alkane has applied for a class ruling seeking confirmation from the Australian Commissioner of Taxation that the Demerger will qualify for demerger tax relief (as described in Section 9 of this Demerger Booklet). Alkane has received a draft class ruling from the Australian Commissioner of Taxation which is to the satisfaction of Alkane. It is not intended that the draft class ruling is relied upon as the Australian Commissioner of Taxation is not bound to this draft ruling, nor has it been formally approved by the Commissioner. Broadly, where demerger tax relief is available and Australian resident Alkane Shareholders, who hold their Alkane Shares on capital account, make the choice to apply such relief, they will not realise any capital gain or loss from the Demerger and the cost base in respect of their Alkane Shares will be allocated between their Alkane Shares and the ASM Shares. A further consequence is that the transfer of shares in ASM to Alkane Shareholders under the Demerger will not be regarded as an assessable dividend for Alkane Shareholders.

Alkane anticipates that the class ruling will confirm the above taxation treatment for Australian resident Alkane Shareholders who hold their Alkane Shares on capital account. However, if the Commissioner of Taxation concludes that demerger tax relief is not available or seeks to apply the anti-avoidance rules applicable to demergers, then Australian resident Alkane Shareholders may make a taxable capital gain on the demerger, and/or the transfer of ASM Shares to Alkane Shareholders may be taxable as an unfranked dividend in the hands of Alkane Shareholders.

Section 9 provides further information on the general income tax implications for Alkane Shareholders who are Australian resident individuals or companies, including information on the implications if the class ruling is not issued consistent with the above expectations.

This information is not applicable to all Alkane Shareholders , and in particular those Alkane Shareholders who are not residents of Australia for taxation purposes. This Demerger Booklet also does not take into account Alkane Shareholders' individual investment objectives, financial situation or needs. The information in this Demerger Booklet should not be relied upon as the sole basis for any investment decision. Alkane Shareholders should seek independent legal, financial, taxation and other professional advice before making any investment decision.

### 3.5 Risks specific to an investment in ASM

There are a number of risk factors specific to ASM and of a more general nature which may, either individually or in combination, affect the future operating and financial performance, or financial position of ASM or the value of ASM Shares.

Section 10 of this Demerger Booklet describes various risks and uncertainties which Alkane considers to be the most significant as at the date of this Demerger Booklet. The risks described in Section 10 should be read in conjunction with Sections 3.1, 3.2 and 3.3, which set out (among other things) the background to and rationale for, and the advantages and disadvantages of, the Demerger, and Section 3.4, which sets out the risks relating to the Demerger.

## 4. OVERVIEW OF ALKANE AFTER THE DEMERGER

### 4.1 Principal effect of the Demerger on Alkane

The principal impact of the Demerger will be to remove the activities relating to the businesses held by ASM, and its direct employees, from the Alkane Group. This, together with the cash held by ASM, will reduce the net assets of Alkane. Alkane Shareholders will no longer have exposure to the ASM Business through their Alkane Shares but Eligible Shareholders who do not subsequently dispose of their ASM Shares will instead have exposure to these businesses directly as both Alkane and ASM Shareholders.

This separation will be effected in accordance with certain principles as agreed between Alkane and ASM under the Demerger Deed (**Demerger Principle**). In particular, following the Demerger Implementation Date, Alkane and ASM intend, as a fundamental principle of the Demerger that, as between the Alkane Post-Demerger Group on the one hand and the ASM Group on the other:

(a) the Alkane Post-Demerger Group will have the entire economic and commercial benefit of the businesses conducted by the Alkane Post-Demerger Group together with the entire economic and commercial risks and liabilities of those businesses but none of the economic and commercial benefit of the businesses conducted by the ASM Group nor any of the economic and commercial risks and liabilities of those businesses;

(b) the ASM Group will have the entire economic and commercial benefit of the businesses conducted by the ASM Group together with the entire economic and commercial risks and liabilities of those businesses but none of the economic and commercial benefit of the businesses conducted by the Alkane Post-Demerger Group nor any of the economic and commercial risks and liabilities of those businesses;

(c) if there are any assets with the Alkane Post-Demerger Group which were owned by, or solely or primarily used by, the ASM Group (and not used in the conduct or operations of the businesses conducted by the Alkane Post-Demerger Group) in the

12 months prior to the Demerger Implementation Date, that the ASM Group is entitled to the ownership and/or use of those assets; and

(d) if there are any assets with the ASM Group which were owned by, or solely or primarily used by, the Alkane Post-Demerger Group (and not used in the conduct or operations of the businesses conducted by the ASM Group) in the 12 months prior to the Demerger Implementation Date, that the Alkane Post-Demerger Group is entitled to the ownership and/or use of those assets.

A summary of the Demerger Deed is included at Section 8.6 below.

## 4.2 Alkane Board structure following Demerger

The composition of the Alkane Board will not be altered because of the Demerger.

## 4.3 Impact of the Demerger on Alkane capital structure

As at the date of this Demerger Booklet, Alkane has 580,033,307 ordinary shares on issue. Assuming no Alkane Shares are issued prior to the Demerger Record Date other than Alkane Shares issued on the early vesting of the Alkane Performance Rights (if the Early Vesting Resolution is passed (see Section 4.7 below)), the number of ordinary shares on issue in Alkane will be 595,248,891, immediately following the Demerger, and Alkane will have a capital structure as follows:

| Capital Structure | Pre-Demerger Number | Post-Demerger Number |
|---|---|---|
| Alkane Shares on issue: | 580,033,307 | 595,248,891 |
| Alkane Performance Rights: | 22,329,762 | 3,173,638 |

## 4.4 Alkane post-Demerger strategy

Post-Demerger, the strategy for Alkane will be the continuation of the existing strategy for Alkane's gold business, that is to grow shareholder value by increasing production at its Tomingley Operations, pursuing organic growth through exploration and development and through strategic acquisition.

## 4.5 Assets and operation of Alkane post-Demerger

Following the Demerger, the principal assets and operations of Alkane will relate to Alkane's existing Australian gold business, including its only production asset at Tomingley.

Ore for the Tomingley Operations is currently sourced from an underground mine which was developed from the Wyoming One open pit – one of four open pits mined between 2014 and 2019 at Tomingley (now exhausted).

Exploration by Alkane on granted exploration permits to the south of the mining leases yielded discoveries at San Antonio, Roswell and El Paso in 2018. Further drilling of these discoveries was prioritised, which continued throughout 2019 and is continuing in 2020. Alkane announced in January 2020 that results from a resource definition drilling program indicated an initial inferred resource at Roswell of 445,000 oz. It is anticipated that any mineable ore that is delineated from these discoveries will be treated at Alkane's Tomingley Operations once the permitting process has been completed and mining operations initiated.

Alkane retains exploration permits in New South Wales and has conducted exploration activities in the region over many years.

Alkane has also made investments in two ASX-listed gold companies. As at the date of this Demerger Booklet, Alkane owns 13.0% of Calidus Resources (ASX:CAI) and 15.51% of Genesis Minerals (ASX:GMD).

## 4.6 Dividends and capital management

To date Alkane has not paid dividends. While Alkane is currently in a period of significant exploration and development expenditure, there is no short-term intention to declare dividends to shareholders from profits or otherwise. Nevertheless, Alkane's dividend policy will continue to be considered in the future as circumstances change.

## 4.7 Impact on Alkane Performance Rights of executives

In connection with the Demerger, the Alkane Board proposes certain changes to the Long-term Incentives (**Alkane Performance Rights**) of the Alkane executives named in the table below. The executives have confirmed their agreement with the proposed changes.

Subject to shareholder approval of the Demerger and of the treatment proposed below, upon implementation of the Demerger it is proposed that:

(a) all Alkane Performance Rights with a Dubbo Project (**DP**) performance condition will be cancelled with no consideration payable to the holders of those performance rights; and

(b) all FY18 and FY19 Alkane Performance Rights with a Total Shareholder Returns (**TSR**) performance condition will vest in full, thereby entitling the holder to one Alkane Share for each such Alkane Performance Right exercised by him or her.

Given that Alkane will cease to have an interest in the Dubbo Project if the Demerger is implemented, the Alkane Board considers it appropriate to cancel the Alkane Performance Rights that have a DP performance condition, and to vest the FY18 and FY19 Alkane Performance Rights with a TSR performance condition in lieu.

No change is proposed for the FY20 Alkane Performance Rights with a TSR performance condition. These LTIs will remain on foot in accordance with and subject to their original performance conditions.

Further details with respect to the TSR and DP performance conditions have previously been provided in each of Alkane's FY17-FY19 Notice of Meetings. A summary of the relevant vesting conditions and performance hurdles for each tranche of performance rights is provided below.

(a) The vesting conditions and performance hurdles for the TSR tranche across FY18-FY20 are as follows:

| Final Share Price vs Starting Share Price | % of Tranche to Vest |
|---|---|
| Final Share Price < 3 year growth at 10% cumulative annual growth rate (**CAGR**) (i.e. Final Share Price < Starting Share Price x 133%) | 0% |
| 3 year growth at 10% CAGR ≤ Final Share Price < 3 year growth at 15% CAGR (i.e. Starting Share Price x 133% ≤ Final Share Price < 152%) | Pro-rata from 0% to 50% |
| Final Share Price = 3 year growth at 15% CAGR<br>(ie, Final Share Price = 152%) | 50% |
| 3 year growth at 15% CAGR ≤ Final Share Price < 3 year growth at 30% CAGR (i.e. Starting Share Price x 133% ≤ Final Share Price < 220%) | Pro-rata from 50% to 100% |
| 3 year growth at 15% CAGR ≤ Final Share Price<br>(ie, Starting Share Price x 220% ≤ Final Price) | 100% |

(b) The vesting conditions and performance hurdles for the DP Condition tranche across FY18-FY20 are as follows:

| Milestone Target | % of Tranche to Vest |
|---|---|
| Financing obtained and development commenced by the DP by the end of the LTI period | 33.33% |
| Commissioning of the DP commenced by the end of the LTI period | 33.33% |
| Production of the DP at modelled rates of 65% capacity (which is the end of production year one target) | 33.33% |

The proposed treatment is summarised in the table below.

| Year | Individual | Metric | Number of LTIs | Treatment |
|---|---|---|---|---|
| **FY 2018** | | | | |
| | D. I. Chalmers | Tranche 1 (TSR)<br>Tranche 2 (DP) | 710,960<br>152,348 | Vesting<br>Cancelled |
| | N. Earner | Tranche 1 (TSR)<br>Tranche 2 (DP) | 5,965,251<br>1,278,268 | Vesting<br>Cancelled |
| | A. MacDonald | Tranche 1 (TSR)<br>Tranche 2 (DP) | 1,036,817<br>222,175 | Vesting<br>Cancelled |
| | M. Sutherland | Tranche 1 (TSR)<br>Tranche 2 (DP) | 350,703<br>75,150 | Vesting<br>Cancelled |
| | B. Ward | Tranche 1 (TSR)<br>Tranche 2 (DP) | 366,345<br>78,566 | Vesting<br>Cancelled |

| Year | Individual | Metric | Number of LTIs | Treatment |
|---|---|---|---|---|
| **FY 2019** | | | | |
| | J. Carter | Tranche 1 (TSR)<br>Tranche 2 (DP) | 1,841,591<br>394,626 | Vesting<br>Cancelled |
| | D. I. Chalmers | Tranche 1 (TSR)<br>Tranche 2 (DP) | 305,785<br>65,525 | Vesting<br>Cancelled |
| | N. Earner | Tranche 1 (TSR)<br>Tranche 2 (DP) | 2,497,245<br>535,124 | Vesting<br>Cancelled |
| | A. MacDonald | Tranche 1 (TSR)<br>Tranche 2 (DP) | 976,601<br>209,271 | Vesting<br>Cancelled |
| | S. Parsons | Tranche 1 (TSR)<br>Tranche 2 (DP) | 488,300<br>104,635 | Vesting<br>Cancelled |
| | M. Sutherland | Tranche 1 (TSR)<br>Tranche 2 (DP) | 330,335<br>70,786 | Vesting<br>Cancelled |
| | B. Ward | Tranche 1 (TSR)<br>Tranche 2 (DP) | 345,351<br>74,003 | Vesting<br>Cancelled |
| **FY 2020** | | | | |
| | J. Carter | Tranche 1 (TSR)<br>Tranche 2 (DP) | 604,146<br>129,460 | Ongoing<br>Cancelled |
| | D. I. Chalmers | Tranche 1 (TSR)<br>Tranche 2 (DP) | 198,624<br>42,562 | Ongoing<br>Cancelled |
| | N. Earner | Tranche 1 (TSR)<br>Tranche 2 (DP) | 1,622,252<br>347,625 | Ongoing<br>Cancelled |
| | S. Parsons | Tranche 1 (TSR)<br>Tranche 2 (DP) | 306,451<br>65,668 | Ongoing<br>Cancelled |
| | M. Sutherland | Tranche 1 (TSR)<br>Tranche 2 (DP) | 216,267<br>46,342 | Ongoing<br>Cancelled |
| | B. Ward | Tranche 1 (TSR)<br>Tranche 2 (DP) | 225,898<br>48,406 | Ongoing<br>Cancelled |
| | | | | |
| | **Total** | | 22,329,762 | |
| | **Total Vested (subject to Alkane Shareholder Approval)** | | 15,215,584 | 68.1% |
| | **Total Cancelled** | | 3,940,540 | 17.6% |
| | **Total Ongoing** | | 3,173,638 | 14.2% |

Alkane Shareholders are being asked to vote on the Early Vesting Resolution to approve the above treatment. This approval is sought for all purposes including, in particular, for the purposes of sections 200C and 200E of the Corporations Act and ASX Listing Rule 6.23. Relevantly, by virtue of:

- section 200C of the Corporations Act, Alkane is prohibited from giving any person who holds a managerial or executive office in Alkane a benefit in connection with the transfer of the whole or any part of the undertaking or property of Alkane, unless there is shareholder approval under section 200E. To the extent that a benefit is given to any of the above individuals by reason of the above treatment of Alkane Performance Rights in connection with the transfer of the ASM Shares under the Demerger, the Early Vesting Resolution (if passed) would approve the giving of it; and

- ASX Listing Rule 6.23, the above treatment of the Alkane Performance Rights requires the prior approval of shareholders, because the terms of the Alkane Performance Rights will be varied materially.

The implementation of the Demerger is not conditional on the approval of the Early Vesting Resolution.

Although the number of Alkane Performance Rights of the relevant individuals that may vest upon implementation of the Demerger is presently known (i.e. as set out in the table above), the value of the benefits that would be given to the above named individuals cannot be ascertained. Matters, events and circumstances that will or are likely to affect the calculation of the value of the performance rights on implementation of the Demerger are:

- the value of the Alkane Performance Rights of the relevant individual immediately before they vest as described above;

- the relevant individual continuing to be entitled to their Alkane Performance Rights;

- the number of Alkane Performance Rights that actually vest on implementation of the Demerger;

- the market price of Alkane Shares at the time of vesting of the Alkane Performance Rights; and

- the benefit from vesting FY18 and FY19 Alkane Performance Rights with a TSR performance condition will be offset by the cancellation of the Alkane Performance Rights with a DP performance condition and by the lack of adjustment to the FY20 Alkane Performance Rights with a TSR performance condition, and relevantly;

    - the benefit from early vesting of the FY18 and FY19 Alkane Performance Rights with a TSR performance condition is limited given that the current Alkane share price is significantly higher than the performance condition and the likelihood that the performance condition would have been met;

    - the detriment from cancelling Alkane Performance Rights with a DP performance condition is limited given the unlikelihood that the performance condition would have been met at least for the FY18 and FY19 Alkane Performance Rights; and

- the detriment from the lack of adjustment to the FY20 Alkane Performance Rights with a TSR performance condition arises as the Alkane share price hurdle has not been lowered to reflect that the post-Demerger Alkane share price will not include the value of the ASM business.

With respect to the Early Voting Resolution, the Alkane Board's intention is that holders of Alkane Performance Rights will not receive any material benefit, nor suffer any material detriment, post-Demerger compared to their position held pre-Demerger.

*Voting exclusion statement for Early Vesting Resolution*

None of the above individuals (or their associates) intend to vote on the Early Vesting Resolution (other than as proxy for a person entitled to vote, appointed by writing that specifies how the proxy is to vote on the resolution).

In accordance with the ASX Listing Rules, Alkane will disregard any votes cast in favour of the Early Vesting Resolution by or on behalf of any of the above named individuals or their associates.

The above voting exclusions will not apply in relation to a vote cast in favour of a person entitled to vote on the Early Vesting Resolution by:

- a person as proxy or attorney for a person who is entitled to vote on the resolution, in accordance with directions given to the proxy or attorney to vote on the resolution in that way; or
- the chair of the meeting as proxy or attorney for a person who is entitled to vote on the resolution, in accordance with a direction given to the chair to vote on the resolution as the chair decides; or
- a holder acting solely in a nominee, trustee, custodial or other fiduciary capacity on behalf of a beneficiary provided the following conditions are met:
  - the beneficiary provides written confirmation to the holder that the beneficiary is not excluded from voting, and is not an associate of a person excluded from voting, on the resolution; and
  - the holder votes on the resolution in accordance with directions given by the beneficiary to the holder to vote in that way.

In addition, in accordance with section 250BD of the Corporations Act, Alkane will disregard any votes cast on the resolution by members of the key management personnel of Alkane (which includes Alkane Directors), and their closely related parties, as proxy except where:

- the votes are cast on behalf of a person entitled to vote, in accordance with directions specifying the way the proxy is to vote on the Early Vesting Resolution; or

- the votes are cast by the chair of the Extraordinary General Meeting on behalf of a person entitled to vote and the appointment expressly authorises the chairman to exercise the proxy even though the Early Vesting Resolution is connected directly or indirectly with the remuneration of a member of the key management personnel of Alkane.

# 5. FINANCIAL INFORMATION OF ALKANE

## 5.1 Purpose

The financial information contained in this Section 5 has been prepared by Alkane in connection with the Demerger to assist Alkane Shareholders in understanding the potential effects of the Demerger on Alkane.

This section contains the following information:

(a) the historical financial information of Alkane (hereafter the **Alkane Historical Financial Information**), comprising:

(i) the historical income statements for the years ended 30 June 2018 and 30 June 2019 and the half years ended 31 December 2018 and 31 December 2019;

(ii) the historical balance sheet as at 31 December 2019; and

(iii) the historical cash flow statements for the years ended 30 June 2018 and 30 June 2019 and the half years ended 31 December 2018 and 31 December 2019; and

(b) the pro forma historical financial information of Alkane following the Demerger (hereafter the **Alkane (Post-Demerger) Pro Forma Historical Financial Information**), comprising:

(i) the pro forma historical income statements for the years ended 30 June 2018 and 30 June 2019 and the half years ended 31 December 2018 and 31 December 2019;

(ii) the pro forma historical balance sheet as at 31 December 2019; and

(iii) the pro forma historical cash flows statements for the years ended 30 June 2018 and 30 June 2019 and the half years ended 31 December 2018 and 31 December 2019.

The Alkane Historical Financial Information and the Alkane (Post-Demerger) Pro Forma Historical Financial Information together form the **Alkane Financial Information**.

The Alkane Financial Information presented in this Section 5 should be read in conjunction with the risk factors set out in Section 3.4 of this Demerger Booklet and other information in this Demerger Booklet. Investors should note that past results are not a guarantee of future performance.

All amounts disclosed in this section are presented in Australian dollars.

5.2 **Basis of preparation and presentation of the Alkane Financial Information**

(a) Overview

The Alkane Directors are responsible for the preparation and presentation of the Alkane Financial Information. The Alkane Financial Information included in this Demerger Booklet is intended to present potential investors with information to assist them in understanding the financial position of Alkane pre-Demerger and post-Demerger.

The Alkane Financial Information is presented in an abbreviated form and does not include all of the presentation, disclosures, statements and comparative information as required by the AAS applicable to general purpose financial reports prepared in accordance with the Corporations Act. The Investigating Accountant has prepared an Investigating Accountant's Report in respect of the Alkane historical balance sheet and Alkane (Post-Demerger) pro forma historical balance sheet, shown in Section 5.6 of this Demerger Booklet.

Figures, amounts, percentages, estimates and calculations are subject to the effect of rounding. Accordingly, totals in tables may not add due to rounding. The financial information in this section should be read in conjunction with the risk factors set out in Section 1.9 of this Demerger Booklet.

(b) Preparation of the Alkane Historical Financial Information

The Alkane Historical Financial Information has been derived from interim financial statements of Alkane for the half year ended 31 December 2018 and 31 December 2019 and the full year financial statements of Alkane for the financial years ended 30 June 2018 and 30 June 2019. The interim financial statements of Alkane were reviewed by PricewaterhouseCoopers in accordance with the Australian Auditing Standards. PricewaterhouseCoopers issued an unqualified review opinion on these interim financial statements. The full year financial statements of Alkane were audited by PricewaterhouseCoopers in accordance with the Australian Auditing Standards. PricewaterhouseCoopers issued an unqualified audit opinion on these full year financial statements. The financial statements are available from Alkane's website (www.alkane.com.au) or the ASX website (www.asx.com.au).

The Alkane Historical Financial Information has been prepared in accordance with the recognition and measurement principles prescribed in the AAS (including Australian Accounting Interpretations) adopted by the AASB, which comply with the recognition and measurement principles of the IASB and interpretations adopted by the IASB.

AAS are subject to amendments from time to time, and any such changes may impact the balance sheet of Alkane Post-Demerger. In addition, following the Demerger, Alkane may be impacted by accounting policies adopted which are different to existing policies, and differences in interpretations of AAS.

In preparing the Alkane Financial Information, the accounting policies of Alkane have been applied.

(c) Preparation of the Alkane (Post-Demerger) Pro Forma Historical Financial Information

The Alkane (Post-Demerger) Pro Forma Historical Financial Information has been prepared for illustrative purposes, to assist Alkane Shareholders to understand the impact of the Demerger and the financial performance, financial position and cash flows of Alkane post-Demerger. By its nature, pro forma historical financial information is illustrative only. Consequently, the Alkane (Post-Demerger) Pro Forma Historical Financial Information does not purport to reflect the actual or future financial performance or cash flows for the relevant period, nor does it reflect the actual financial position of Alkane Post-Demerger at the relevant time.

The Alkane (Post-Demerger) Pro Forma Historical Financial Information has been prepared in accordance with the AAS and has been prepared on a consistent basis to the accounting policies set out in Alkane's interim financial statements for the half year ended 31 December 2019.

The AAS are subject to amendments from time to time. During the historical periods presented, Alkane has adopted AASB 15 Revenue from Contracts with Customers effective from 1 January 2018 and AASB 16 Leases, effective from 1 January 2019. Alkane has assessed the impact of AASB 15 and AASB 16 on the periods prior to adoption and noted no material impact. As such, retrospective pro forma adjustments have not been reflected in the historical periods prior to adoption of these items.

The Alkane (Post-Demerger) Pro Forma Historical Financial Information includes pro forma adjustments to reflect the impact of certain transactions as if they occurred as at 31 December 2019 in the pro forma historical balance sheet and immediately prior to 1 July 2017 in the pro forma historical income statements and pro forma historical cash flows.

Pro forma adjustments have been made to the Alkane (Post-Demerger) Pro Forma Historical Financial Information:

(i) for the accounting for the Demerger including one-off demerger costs;

(ii) to derecognise deferred tax assets in Alkane post-Demerger;

(iii) to recognise the cash received in January 2020 for the share rights issued to Abbotsleigh Pty Ltd, approved by the general meeting held 7 January 2020;

(iv) to recognise the purchase of land as part of the Tomingley Operations project extension in January and April 2020;

(v) to reflect that in May 2020, Tomingley Holdings (a subsidiary of Alkane) financed equipment already owned, with National Australia Bank for

$6,115,000. The loan term is for a three year period with an interest rate of 4.3% per annum; and

(vi) to recognise the early vesting of selected performance rights, as described in Section 4.7.

The Alkane (Post-Demerger) pro forma historical cash flow statements set out in Section 5.8 are presented as cash flows after net capital expenditure, finance costs and tax.

Alkane uses certain measures to manage and report on its businesses that are not recognised under AAS or IFRS. These measures are collectively referred to in this section as non-IFRS financial measures pursuant to Regulatory Guide 230 *Disclosing non-IFRS financial information* published by ASIC. Management uses these non-IFRS financial measures to evaluate the performance and profitability of the overall business, and they are commonly used performance measures by the investor community. The principal non-IFRS measures referred to in this section are as follows:

(i) **EBIT** is the earnings of continuing operations before recognising:

(A) interest revenue, interest expense or financing costs; and

(B) income tax expense.

(ii) **EBITDA** is earnings of continuing operations before recognising:

(A) depreciation and amortisation expense;

(B) interest revenue, interest expense or financing costs; and

(C) income tax expense.

(iii) **NPAT** is the net profit after tax.

(iv) **Net capital expenditure** represents capital and investment expenditure less proceeds from the sale of property, plant and equipment and intangibles.

(v) **Net debt** represents total loans and borrowings and bank overdrafts, less cash and cash equivalents.

(vi) **Net free cash flows** is net operating cash flows after net capital expenditure, finance costs and taxation.

(vii) **Working capital** represents inventories, trade and other receivables and trade and other payables.

5.3 **Alkane historical income statement**

Set out below are Alkane's historical income statements for the financial years ended 30 June 2018, 30 June 2019 and the half years ended 31 December 2018 and 31 December 2019.

**Table 5.3: Alkane historical income statements**

| | Half-year ended 31 December 2018 | Half-year ended 31 December 2019 | Year ended 30 June 2018 | Year ended 30 June 2019 |
|---|---|---|---|---|
| Revenue | 52,352,327 | 34,097,863 | 129,973,610 | 93,994,872 |
| Cost of sales | (34,818,780) | (17,897,287) | (89,322,834) | (60,911,631) |
| **Gross Profit/(Loss)** | **17,533,547** | **16,200,576** | **40,650,776** | **33,083,241** |
| Other income | 1,758,472 | 844,053 | 1,547,992 | 1,855,783 |
| **Expenses** | | | | |
| Other expenses | (4,796,878) | (5,692,808) | (10,280,116) | (8,887,319) |
| Finance costs | (258,140) | (109,190) | (602,937) | (418,822) |
| Total expenses | (5,055,018) | (5,801,998) | (10,883,053) | (9,306,141) |
| **Profit/(loss) before income tax** | **14,237,001** | **11,242,631** | **31,315,715** | **25,632,883** |
| Income tax | (2,046,623) | (3,752,872) | (6,845,047) | (2,338,964) |
| **Profit/(loss) after income tax** | **12,190,378** | **7,489,759** | **24,470,668** | **23,293,919** |
| Other comprehensive loss | (260,030) | (1,602,012) | - | (628,893) |
| **Total comprehensive income** | **11,930,348** | **5,887,747** | **24,470,668** | **22,665,026** |
| **Other financial information** | | | | |
| Profit/(loss) before income tax | 14,237,001 | 11,242,631 | 31,315,715 | 25,632,883 |
| Reported EBIT | 13,765,397 | 10,830,565 | 30,743,558 | 24,570,838 |
| Depreciation & Amortisation | 6,057,167 | 1,467,551 | 38,282,269 | 7,327,428 |
| Reported EBITDA | 19,822,564 | 12,298,116 | 69,025,828 | 31,898,266 |

5.4 **Management commentary on historical results**

On 24 September 2018, the Alkane Board approved the commencement of underground mining at Tomingley Gold Operations and open cut mining subsequently finished in January 2019. During the transition from open cut mining to underground, low grade stockpiles were processed in the half-year ended 31 December 2019. The first underground stope material was processed in the half-year ended 31 December 2019 with grade and processing recovery performing as expected.

5.5 **Alkane (Post-Demerger) pro forma historical income statements**

Set out below are the Alkane (Post-Demerger) pro forma historical income statements for the years ended 30 June 2018 and 30 June 2019 and the half years ended 31 December 2018 and 31 December 2019.

## Table 5.5: Alkane (Post-Demerger) pro forma historical income statements

| Half-year ended 31 December 2019 | Historical Alkane[1] | Removal of ASM[2] | Alkane pro forma |
|---|---|---|---|
| Revenue | 34,097,863 | - | 34,097,863 |
| Cost of sales | (17,897,287) | - | (17,897,287) |
| **Gross Profit/(Loss)** | **16,200,576** | **-** | **16,200,576** |
| Other income | 844,053 | (733,283) | 110,770 |
| **Expenses** | | | |
| Other expenses | (5,692,808) | 699,697 | (4,993,111) |
| Finance costs | (109,190) | - | (109,190) |
| Total expenses | (5,801,998) | 699,697 | (5,102,301) |
| **Profit/(loss) before income tax** | **11,242,631** | **(33,586)** | **11,209,045** |
| Income tax | (3,752,872) | 10,076 | (3,742,796) |
| **Profit/(loss) after income tax** | **7,489,759** | **(23,510)** | **7,466,249** |
| Other comprehensive loss | (1,602,012) | - | (1,602,012) |
| **Total comprehensive income** | **5,887,747** | **(23,510)** | **5,864,237** |
| **Other financial information** | | | |
| Profit/(loss) before income tax | 11,242,631 | (33,586) | 11,209,045 |
| Reported EBIT | 10,830,565 | 181,335 | 11,011,900 |
| Depreciation & Amortisation | 1,467,551 | (38,590) | 1,428,961 |
| Reported EBITDA | 12,298,116 | 142,744 | 12,440,860 |

1. Represents the Alkane position prior to the Demerger as derived from the interim financial report for Alkane.

2. Represents the deconsolidation of the ASM Group's historical income statement for the half year ended 31 December 2019. ASM has been operating on a standalone basis and therefore no additional operating costs will be transferred from Alkane to ASM on implementation of the Demerger. This column can be reconciled to ASM's historical income statements disclosed in Section 7.3 (with the exception of the intercompany finance costs which are eliminated in the Alkane group consolidated figures presented above).

| Half-year ended 31 December 2018 | Historical Alkane[1] | Removal of ASM[2] | Alkane pro forma |
|---|---|---|---|
| Revenue | 52,352,327 | - | 52,352,327 |
| Cost of sales | (34,818,780) | - | (34,818,780) |
| **Gross Profit/(Loss)** | **17,533,547** | **-** | **17,533,547** |
| Other income | 1,758,472 | (818,367) | 940,105 |
| **Expenses** | | | |
| Other expenses | (4,796,878) | 1,091,531 | (3,705,347) |
| Finance costs | (258,140) | - | (258,140) |
| Total expenses | (5,055,018) | 1,091,531 | (3,963,487) |
| **Profit/(loss) before income tax** | **14,237,001** | **273,164** | **14,510,165** |
| Income tax | (2,046,623) | (82,436) | (2,129,059) |
| **Profit/(loss) after income tax** | **12,190,378** | **190,728** | **12,381,106** |
| Other comprehensive loss | (260,030) | - | (260,030) |
| **Total comprehensive income** | **11,930,348** | **190,728** | **12,121,076** |
| **Other financial information** | | | |
| Profit/(loss) before income tax | 14,237,001 | 273,164 | 14,510,165 |
| Reported EBIT | 13,765,397 | 599,296 | 14,364,693 |
| Depreciation & Amortisation | 6,057,167 | (20,685) | 6,036,482 |
| Reported EBITDA | 19,822,564 | 578,611 | 20,401,175 |

1. Represents the Alkane position prior to the Demerger as derived from the interim financial report for Alkane.

2. Represents the deconsolidation of the ASM Group's historical income statement for the half year ended 31 December 2018. ASM has been operating on a standalone basis and therefore no additional operating costs will be transferred from Alkane to ASM on implementation of the Demerger. This column can be reconciled to ASM's historical income statements disclosed in Section 7.3 (with the exception of the intercompany finance costs which are eliminated in the Alkane group consolidated figures presented above).

| Year ended 30 June 2019 | Historical Alkane[1] | Removal of ASM[2] | Alkane pro forma |
|---|---|---|---|
| Revenue | 93,994,872 | - | 93,994,872 |
| Cost of sales | (60,911,631) | - | (60,911,631) |
| **Gross Profit/(Loss)** | **33,083,241** | **-** | **33,083,241** |
| Other income | 1,855,783 | (1,763,484) | 92,299 |
| **Expenses** | | | |
| Other expenses | (8,887,319) | 1,520,587 | (7,366,732) |
| Finance costs | (418,822) | - | (418,822) |
| Total expenses | (9,306,141) | 1,520,587 | (7,785,554) |
| **Profit/(loss) before income tax** | **25,632,883** | **(242,897)** | **25,389,986** |
| Income tax | (2,338,964) | 72,869 | (2,266,095) |
| **Profit/(loss) after income tax** | **23,293,919** | **(170,028)** | **23,123,891** |
| Other comprehensive loss | (628,893) | - | (628,893) |
| **Total comprehensive income** | **22,665,026** | **(170,028)** | **22,494,998** |
| **Other financial information** | | | |
| Profit/(loss) before income tax | 25,632,883 | (242,897) | 25,389,986 |
| Reported EBIT | 24,570,838 | 400,676 | 24,971,514 |
| Depreciation & Amortisation | 7,327,428 | (72,219) | 7,255,209 |
| Reported EBITDA | 31,898,266 | 328,456 | 32,226,722 |

1. Represents the Alkane position prior to the Demerger as derived from the annual report for Alkane.

2. Represents the deconsolidation of the ASM Group's historical income statement for the half year ended 30 June 2019. ASM has been operating on a standalone basis and therefore no additional operating costs will be transferred from Alkane to ASM on implementation of the Demerger. This column can be reconciled to ASM's historical income statements disclosed in Section 7.3 (with the exception of the intercompany

finance costs which are eliminated in the Alkane group consolidated figures presented above).

| Year ended 30 June 2018 | Historical Alkane[1] | Removal of ASM[2] | Alkane pro forma |
|---|---|---|---|
| Revenue | 129,973,610 | - | 129,973,610 |
| Cost of sales | (89,322,834) | - | (89,322,834) |
| **Gross Profit/(Loss)** | **40,650,776** | **-** | **40,650,776** |
| Other income | 1,547,992 | (2,026,475) | (478,483) |
| **Expenses** | | | |
| Other expenses | (10,280,116) | 1,766,162 | (8,513,954) |
| Finance costs | (602,937) | 23,922 | (579,015) |
| Total expenses | (10,883,053) | 1,790,084 | (9,092,969) |
| **Profit/(loss) before income tax** | **31,315,715** | **(236,391)** | **31,079,324** |
| Income tax | (6,845,047) | (74,831) | (6,919,878) |
| **Profit/(loss) after income tax** | **24,470,668** | **(311,222)** | **24,159,446** |
| Other comprehensive loss | - | - | - |
| **Total comprehensive income** | **24,470,668** | **(311,222)** | **24,159,446** |
| **Other financial information** | | | |
| Profit/(loss) before income tax | 31,315,715 | (236,391) | 31,079,324 |
| Reported EBIT | 30,743,558 | 392,803 | 31,136,361 |
| Depreciation & Amortisation | 38,282,269 | (40,372) | 38,241,897 |
| Reported EBITDA | 69,025,828 | 352,431 | 69,378,258 |

1. Represents the Alkane position prior to the Demerger as derived from the annual report for Alkane.

2. Represents the deconsolidation of the ASM Group's historical income statement for the half year ended 30 June 2013. ASM has been operating on a standalone basis and therefore no additional operating costs will be transferred from Alkane to ASM on implementation of the Demerger. This column can be reconciled to ASM's historical income statements disclosed in Section 7.3 (with the exception of the intercompany finance costs which are eliminated in the Alkane group consolidated figures presented above).

## 5.6 Alkane historical balance sheet and Alkane pro forma historical balance sheet as at 31 December 2019

(a) Preparation of the Alkane pro forma historical balance sheet

The Alkane pro forma historical balance sheet as at 31 December 2019 set out below is provided for illustrative purposes only and is prepared on the assumption that the Demerger was implemented at 31 December 2019. If approved, the Demerger is expected to be implemented in July 2020. The Alkane Group comprises Alkane and each of its subsidiaries. The Alkane pro forma historical balance sheet does not illustrate the financial position that may be contained in future financial statements of Alkane following the Demerger.

In preparing the Alkane Pro Forma Historical Balance Sheet, no adjustments have been made for potential changes in cost or operating structure resulting from the Demerger or to reflect the trading of Alkane or ASM since 31 December 2019 or the fair value movements of financial assets post 31 December 2019, however adjustments have been made for capital restructures that will take place as a result of the Demerger.

## Table 5.6A: Alkane historical balance sheet and Alkane pro forma historical balance sheet as at 31 December 2019

| | Historical Balance Sheet | Pro Forma Adjustments | | | | Alkane Resources prior to Demerger | | | | Pro Forma Historical Balance Sheet |
|---|---|---|---|---|---|---|---|---|---|---|
| | Alkane Resources Group 31 December 2019 | Rights issue[1] | Land acquisitions[2] | Vesting of performance rights[3] | Equipment financing[4] | | Estimated transaction costs[5] | Deconsolidate ASM[6] | Derecognition of Deferred Tax Asset[7] | Alkane Resources Group 31 December 2019 |
| **CURRENT ASSETS** | | | | | | | | | | |
| Cash and cash equivalents | 78,420,356 | 4,731,250 | (5,440,000) | - | **6,115,000** | **83,826,606** | (1,615,000) | (20,000,000) | - | **62,211,606** |
| Receivables | 2,478,285 | - | (160,000) | - | **-** | **2,318,285** | - | (22,287) | - | **2,295,998** |
| Inventory | 5,588,763 | - | - | - | **-** | **5,588,763** | - | (3,662) | - | **5,585,101** |
| Biological assets | 37,402 | - | - | - | **-** | **37,402** | - | (37,402) | - | **-** |
| Derivative financial instruments | - | - | - | - | - | - | - | - | - | - |
| **Total current assets** | **86,524,806** | **4,731,250** | **(5,600,000)** | **-** | **6,115,000** | **91,771,056** | **(1,615,000)** | (20,063,351) | - | **70,092,705** |
| **NON-CURRENT ASSETS** | | | | | | | | | | |
| Exploration and evaluation | 112,056,073 | - | - | - | **-** | **112,056,073** | - | (89,541,515) | - | **22,514,558** |
| Property, plant & equipment | 70,330,727 | - | 5,600,000 | - | **-** | **75,930,727** | - | (27,519,685) | - | **48,411,042** |
| Derivative financial instruments | 246,930 | | - | - | **-** | **246,930** | | - | - | **246,930** |
| Biological assets | 267,758 | - | - | - | **-** | **267,758** | - | (267,758) | - | **-** |
| Investments* | 15,072,982 | - | - | - | **-** | **15,072,982** | - | (1,856,888) | - | **13,216,094** |
| Other financial assets | 8,388,180 | - | - | - | **-** | **8,388,180** | - | (20,000) | - | **8,368,180** |
| **Total non-current assets** | **206,362,650** | **-** | **5,600,000** | **-** | **-** | **211,962,650** | **-** | (119,205,846) | | **92,756,804** |
| **TOTAL ASSETS** | **292,887,456** | **4,731,250** | **-** | **-** | **6,115,000** | **303,733,706** | **(1,615,000)** | (139,269,197) | | **162,849,509** |
| **CURRENT LIABILITIES** | | | | | | | | | | |
| Trade and other payables | 7,855,482 | - | - | - | **-** | **7,855,482** | - | (227,378) | - | **7,628,104** |
| External financing | | | | | **2,118,000** | **2,118,000** | | | | **2,118,000** |
| Provisions | 2,241,255 | - | - | - | **-** | **2,241,255** | - | (11,882) | - | **2,229,373** |
| **Total current liabilities** | **10,096,737** | **-** | **-** | **-** | **2,118,000** | **12,214,737** | **-** | (239,260) | - | **11,975,477** |
| **NON-CURRENT LIABILITIES** | | | | | | | | | | |
| Deferred tax liability | 12,549,999 | - | - | - | **-** | **12,549,999** | - | (26,003,391) | 13,453,392 | **-** |
| Provisions | 14,259,270 | - | - | - | **-** | **14,259,270** | - | (7,609) | - | **14,251,661** |
| Other non-current liabilities | 131,793 | - | - | - | **3,997,000** | **4,128,793** | - | - | - | **4,128,793** |
| **Total non-current liabilities** | **26,941,062** | **-** | **-** | **-** | **3,997,000** | **30,938,062** | **-** | (26,011,000) | 13,453,392 | **18,380,454** |
| **TOTAL LIABILITIES** | **37,037,799** | **-** | **-** | **-** | **6,115,000** | **43,152,799** | **-** | (26,250,260) | 13,453,392 | **30,355,932** |
| **NET ASSETS/(LIABILITIES)** | **255,849,657** | **4,731,250** | **-** | **-** | **-** | **260,580,907** | **(1,615,000)** | (113,018,937) | (13,453,392) | **132,493,578** |
| **EQUITY** | | | | | | | | | | |
| Issued capital | **254,370,684** | **4,731,250** | **-** | **2,415,932** | **-** | **261,517,866** | **-** | (67,375,687) | - | **194,142,179** |
| Reserves | **1,653,380** | **-** | **-** | **(1,748,824)** | **-** | **(95,444)** | **-** | (45,624,314) | - | **(45,719,758)** |
| Accumulated losses | **(174,407)** | **-** | **-** | **(667,108)** | **-** | **(841,515)** | **(1,615,000)** | (18,936) | (13,453,392) | **(15,928,843)** |
| **TOTAL EQUITY** | **255,849,657** | **4,731,250** | **-** | **-** | **-** | **260,580,907** | **(1,615,000)** | (113,018,937) | (13,453,392) | **132,493,578** |

* Investments represent shareholdings in Calidus Resources Ltd, Genesis Minerals Ltd and RMR Tech.

(b) Pro forma adjustments

The pro forma adjustments are as follows:

(1) Rights issue

In December 2019, Alkane undertook a rights issue which included the issue of 8,602,273 shares to Abbotsleigh Pty Ltd at a price of $0.55 per share. The rights issue was required to be approved by Alkane Shareholders. The share issue was approved at a general meeting on 7 January 2020 and $4,731,250 was received post 31 December 2019 from Abbotsleigh Pty Ltd for these shares.

(2) Land acquisitions

Reflects the purchase of land as part of the Tomingley Operations project extension.

(3) Vesting of Alkane Performance Rights

Reflects the accounting treatment for the early vesting of Alkane Performance Rights which is subject to shareholder approval (refer to Section 4.7 of this Demerger Booklet for further information).

(4) Equipment financing

In May 2020, Tomingley Holdings (a subsidiary of Alkane) financed equipment already owned, with National Australia Bank for $6,115,000. The loan term is for a three year period with an interest rate of 4.3% per annum.

(5) Estimated transaction costs

Total estimated transaction costs for the Demerger amount to $1,615,000. These costs will be expensed on a post-tax basis by Alkane for the financial year ending 30 June 2020.

(6) ASM Demerger

In accordance with the Notice of Extraordinary General Meeting, accounting entries arising from the Demerger and associated Capital Reduction will be implemented on the Demerger Implementation Date. The Capital Reduction and Demerger Dividend will be recognised as part of the implementation of the Demerger. The principal assets to be distributed in accordance with the Notice of Extraordinary General Meeting include the Dubbo Project. The pro forma adjustment for the Demerger is based on the ASM Pro Forma Balance Sheet as at 31 December 2019 as set out in Section 7.6 of this Demerger Booklet. The actual measurement of the distribution payable will be based on the fair value as at the Demerger Implementation Date. The fair value of the assets of ASM will be determined by reference to the VWAP of ASM Shares as traded on the

ASX (on an ordinary settlement basis) over the first five trading days after the ASX Listing. As described further in Section 6.6, in order to not prejudice Alkane's core gold business, Alkane has provided additional cash to ASM such that ASM's cash balance was $20,000,000 on 1 April 2020 to provide funding for ASM’s ongoing operations. ASM's cash balance at 31 December 2019 was $17,311,735.

In accordance with the Demerger Deed and Restructure Deed, summarised in Section 8.6, all intercompany loans between Alkane and ASM will be capitalised and/or forgiven prior to implementation of the Demerger. As this restructure occurs prior to implementation of the Demerger, these intercompany transactions eliminate on Alkane group consolidation, and are therefore not shown in Table 5.6A. Further information on the Demerger accounting is included in Section 5.6(c).

(7) Derecognition of deferred tax asset

Following the Demerger, a deferred tax asset of $13,453,392 will not qualify for recognition as the San Antonio and Roswell projects have not yet been sufficiently drilled to the extent that they can be incorporated into mine planning and cash flow forecasts for the Tomingley Gold Operations. On the basis that further drilling and subsequent incorporation of these projects into mine planning takes place, Alkane may have the opportunity to utilise some or all of the de-recognised Deferred Tax Assets.

(c) Impact of the Demerger on accounting

Accounting for demerger transactions is addressed in the AASB Interpretation 17 '*Distributions of Non-cash Assets to Owners*'. That interpretation requires that any obligations for distributions made by a company to its shareholders should be recognised once declared and, where required, approved by the shareholders, and measured under AASB 137 *Provisions, Contingent Liabilities and Contingent Assets* and that all liabilities for the distribution payable must be measured in accordance with AASB 137 at the fair value of the assets to be distributed.

On the Demerger Record Date, Alkane will recognise a distribution payable based on the fair value of ASM Shares. At that time, the difference between the historic cost of the net assets distributed and the estimated fair value of the distribution payable will be recognised in Alkane’s income statement. The fair value of the assets of ASM will be determined by reference to the VWAP of ASM Shares as traded on the ASX (on an ordinary settlement basis) over the first five trading days after the ASX Listing. This liability will be settled through the transfer of the ASM Shares. For the purposes of preparing the pro forma information, it has been assumed the fair value is equal to book value and therefore no profit or loss has been recognised in Alkane’s financial statements.

The distribution payable will be charged to equity. In this regard, the fair value of the distribution payable will be allocated between share capital (Capital Reduction) and demerger reserve (Demerger Dividend). The value of the Capital Reduction will be determined by reference to the tax allocation which is expected to be supported by an ATO ruling. The amount recorded in the demerger reserve, the Demerger Dividend, will be the difference between the distribution payable (Distribution Amount) and the Capital Reduction Amount.

For illustrative purposes only, a range of fair values and the implied Dividend and profit/(loss) on demerger amounts are set out in Table below. These figures are neither a prediction nor a forecast of ASM's share price post-Demerger and the VWAP of ASM Shares over the first five trading days may vary substantially from the range set out in the Table below.

**Table 5.6CA: Implied dividend.**

| **Demerger Dividend**<br>**ASM fair value per the share price (A$)** | 0.66 | 0.76 | 0.95 | 1.09 |
|---|---|---|---|---|
| Implied market capitalisation of ASM (A$m) | 78 | 90 | 113 | 130 |
| Capital reduction (A$m) | 47 | 54 | 67 | 78 |
| Implied dividend (A$m) | 31 | 36 | 46 | 52 |
| # of ASM Shares (m) | 119 | 119 | 119 | 119 |

**Table 5.6CB**: Alkane profit / (loss) on Demerger.

| **Profit / (loss) on demerger**<br>**ASM fair value per the share price (A$)** | 0.66 | 0.76 | 0.95 | 1.09 |
|---|---|---|---|---|
| Implied market capitalisation of ASM (A$m) | 78 | 90 | 113 | 130 |
| ASM net assets | 113 | 113 | 113 | 113 |
| (Loss) / profit on demerger | (35) | (23) | 0 | 17 |

As noted above, for the purposes of preparing the pro forma information, it has been assumed the fair value of ASM is equal to ASM's net asset value and therefore no profit or loss has been recognised in Alkane's financial statements which is based on A$0.95 per share.

## 5.7 Alkane historical cash flows statements

Set out below are Alkane's historical cash flow statements for the years ended 30 June 2018 and 30 June 2019 and half years ended 31 December 2018 and 31 December 2019.

### Table 5.7: Alkane historical cash flow statements

| | Half-year ended 31 December 2018 | Half-year ended 31 December 2019 | Year ended 30 June 2018 | Year ended 30 June 2019 |
|---|---|---|---|---|
| **EBITDA**[1] | 19,822,564 | 12,298,116 | 69,025,828 | 31,898,266 |
| Other items[2] | 1,140,106 | 1,392,517 | 2,655,104 | 2,686,511 |
| Changes in working capital | (1,594,577) | (4,864,450) | (17,005,583) | 1,718,678 |
| **Operating cash flows before capital expenditure, financing costs and tax** | 19,368,092 | 8,826,183 | 54,675,348 | 36,303,456 |
| Capital expenditure | (18,214,764) | (35,568,416) | (24,509,598) | (38,636,064) |
| **Operating cash flows after net capital expenditure, before financing costs and tax** | 1,153,328 | (26,742,233) | 30,165,750 | (2,332,608) |
| Financing costs | (51,712) | (37,471) | (143,273) | (88,495) |
| **Net free cash flows**[3] | 1,101,616 | (26,779,704) | 30,022,477 | (2,421,103) |
| **Net proceeds/(repayments) of borrowings** | 595,292 | 597,082 | 11,788 | - |
| **Net proceeds from share issue** | - | 35,021,174 | - | - |
| **Net increase/(decrease) in cash and cash equivalents** | 1,696,908 | 8,838,552 | 30,034,265 | (2,421,103) |
| **Cash and cash equivalents at beginning of period** | 72,002,905 | 69,581,804 | 41,968,640 | 72,002,905 |
| **Cash and cash equivalents at end of period** | 73,699,813 | 78,420,356 | 72,002,905 | 69,581,802 |

1. Represents historical EBITDA from continuing operations, excluding other items listed below.

2. Includes the following non-cash items:

| | Half-year ended 31 December 2018 | Half-year ended 31 December 2019 | Year ended 30 June 2018 | Year ended 30 June 2019 |
|---|---|---|---|---|
| Share based payments | 408,522 | 627,472 | 1,086,710 | 864,965 |
| Lapse of put options | - | 316,636 | - | - |
| Interest received (cash) | 668,385 | 537,129 | 1,175,094 | 1,476,969 |
| Profit/(loss) equipment | 10,690 | (1,318) | 2,442 | 6,611 |
| Exploration provision or write off | - | | 187,558 | 581,673 |
| Change in value of biological assets | 52,508 | (87,402) | 203,300 | (243,706) |
| **Total other items** | 1,140,106 | 1,392,517 | 2,655,104 | 2,686,511 |

3. There are no cash income tax outflows.

## 5.8 Alkane (Post-Demerger) pro forma historical cash flow statements

Set out below are the Alkane (Post-Demerger) pro forma cash flows for the years ended 30 June 2018 and 30 June 2019 and half years ended 31 December 2018 and 31 December 2019.

The cash flows presented below are net cash flows from operating activities and investing activities.

**Table 5.8A: Alkane (Post-Demerger) pro forma cash flow statements**

| | Half-year ended 31 December 2018 | Half-year ended 31 December 2019 | Year ended 30 June 2018 | Year ended 30 June 2019 |
|---|---|---|---|---|
| **EBITDA**[1] | 20,401,175 | 12,440,860 | 69,378,258 | 32,226,722 |
| Other items[2] | 761,465 | 1,264,998 | 1,791,810 | 1,842,510 |
| Changes in working capital | (1,712,194) | (5,412,683) | (17,455,530) | 2,379,361 |
| **Operating cash flows before capital expenditure, financing costs and tax** | 19,450,445 | 8,293,175 | 53,714,538 | 36,448,593 |
| Capital expenditure | (13,090,338) | (32,331,225) | (14,950,000) | (32,424,910) |
| **Operating cash flows after net capital expenditure, before financing costs and tax** | 6,360,107 | (24,038,050) | 38,764,538 | 4,023,683 |
| Financing costs | (32,609) | (37,145) | (100,797) | (68,354) |
| **Net free cash flows**[3] | 6,327,498 | (24,075,195) | 38,663,741 | 3,955,329 |

1. Represents pro forma historical EBITDA from continuing operations, excluding other items listed below.

2. Includes the following non-cash items:

| | Half-year ended 31 December 2018 | Half-year ended 31 December 2019 | Year ended 30 June 2018 | Year ended 30 June 2019 |
|---|---|---|---|---|
| Share based payments | 408,522 | 627,472 | 1,086,710 | 864,965 |
| Lapse of put options | - | 316,636 | - | - |
| Interest received (cash) | 342,253 | 322,208 | 521,979 | 833,396 |
| Profit/(loss) equipment | 10,690 | (1,318) | 2,442 | 6,611 |
| Exploration provision or write off | - | | 180,679 | 137,538 |
| **Total other items** | 761,465 | 1,264,998 | 1,791,810 | 1,842,510 |

3. There are no cash income tax outflows.

**Reconciliation of Alkane historical cash flow statements to Alkane (Post-demerger) pro forma historical cash flow statements**

Reconciliations of the Alkane historical cash flows to the Alkane (Post-Demerger) pro forma historical cash flows for the years end 30 June 2018 and 30 June 2019 and half years ended 31 December 2018 and 31 December 2019 are shown in the following tables.

**Table 5.8B: Reconciliation of Alkane historical cash flows to Alkane (Post-Demerger) pro forma historical cash flows**

| | Half-year ended 31 December 2018 | Half-year ended 31 December 2019 | Year ended 30 June 2018 | Year ended 30 June 2019 |
|---|---|---|---|---|
| **Historical operating cash flows after net capital expenditure, before financing costs and tax** | 1,153,328 | (26,742,233) | 30,165,750 | (2,332,608) |
| **ASM historical operating cash flows after net capital expenditure, before financing costs and tax**[1] | 5,206,779 | 2,704,184 | 8,598,789 | 6,356,293 |
| **Pro forma historical operating cash flows after net capital expenditure, before financing costs and tax**[2] | **6,360,107** | **(24,038,049)** | **38,764,539** | **4,023,685** |

1. Represents the ASM historical operating cash flows after capital expenditure, before financing costs and tax prior to the Demerger occurring, as derived from the financial information directly related to ASM from the accounting records of Alkane.

2. ASM has been operating separately from the remainder of the group, therefore there are no operating costs that will transfer from Alkane to ASM on implementation of the Demerger.

## 5.9 Critical accounting judgements, estimates and assumptions

The preparation of the financial information requires management to make judgements, estimates and assumptions that affect the reported amounts in the financial statements. Management also needs to exercise judgement in applying the group's accounting policies. Management continually evaluates its judgements and estimates in relation to assets, liabilities, contingent liabilities, revenue and expenses. Management bases its judgements, estimates and assumptions on historical experience and on other various factors, including expectations of future events, management believes to be reasonable under the circumstances. The resulting accounting judgements and estimates will seldom equal the related actual results. The judgements, estimates and assumptions that have a significant risk of causing a material adjustment to the carrying amounts of assets and liabilities within the next financial year are discussed below.

(a) Carrying value of non-current assets

Non-current assets include capitalised exploration and evaluation expenditures and mine properties. The group has capitalised significant exploration and evaluation expenditure on the basis that, either;

(i) such expenditure is expected to be recouped through future successful development (or alternatively sale) of the areas of interest concerned; or

(ii) it is not yet possible to assess whether it will be recouped and activities are planned to enable that determination.

The future recoverability of capitalised exploration and evaluation expenditure is dependent on a number of factors, including whether the group decides to exploit the related lease itself, or, if not, whether it successfully recovers the related exploration asset through sale. The future recoverability of mine properties is dependent on the generation of sufficient future cash flows from operations (or alternately sale). Factors that could impact the future recoverability of exploration and evaluation and mine properties include the level of reserves and resources, future technological changes, costs of drilling and production, production rates, future legal changes (including changes to environmental restoration obligations) and changes to commodity prices and exchange rates.

Estimates of recoverable quantities of resources and reserves also include assumptions requiring significant judgement as detailed in the resource and reserve statements.

An impairment review is undertaken to determine whether any indicators of impairment are present.

(b) Depreciation of property, plant and equipment

Non-current assets include property, plant and equipment. The Alkane Group reviews the useful lives of depreciable asset at each reporting date or when there is a change in the pattern in which the asset's future economic benefits are expected to be consumed, based on the expected utilisation of the assets. Depreciation and amortisation are calculated using the units of production method based on ounces of gold produced.

(c) Rehabilitation and mine closure provisions

These provisions represent the discounted value of the present obligation to restore, dismantle and rehabilitate certain items of property, plant and equipment and to rehabilitate exploration and mining leases. The discounted value reflects a combination of management's assessment of the nature and extent of the work required, the future cost of performing the work required, the timing of cash flows and the discount rate. Changes to one or more of these assumptions is likely to result in a change to the carrying value of the provision and the related asset or a change to profit and loss in accordance with the Alkane Group's accounting policy.

(d) Net realisable value and classification of inventory

The Alkane Group's assessment of the net realisable value and classification of its inventory requires the use of estimates, including the estimation of the relevant future commodity or product price, future processing costs and the likely timing of sale.

(e) Share-based payments

The Alkane Group measures the cost of equity settled transactions with employees by reference to the fair value of the equity instruments at the date at which they are granted. The fair value for share appreciation rights and performance rights component tranche 1 is determined with the assistance of an external valuer. The number of performance rights issued under the long term incentive plan tranche 2 component are adjusted to reflect management’s assessment of the probability of meeting the targets and service condition. The accounting estimates and assumptions relating to equity settled share based payments would have no impact on the carrying amounts of assets and liabilities within the next annual reporting period but may impact expenses and equity.

(f) Provision for restructuring costs

Restructuring costs are payable when employment is terminated before the normal retirement date, or whenever an employee accepts voluntary redundancy in exchange for these benefits. The group recognises restructuring costs when it is demonstrably committed to either:

(i) terminating the employment of current employees according to a detailed formal plan without possibility of withdrawal; or

(ii) providing termination benefits as a result of an offer made to encourage voluntary redundancy.

Significant judgement is required in determining the probability of retention of employees.

## 5.10 Material changes in financial position since most recent balance date

Alkane held a general meeting on 7 January 2020 where Alkane Shareholders were asked to vote on the issue of 8,602,273 shares at an issue price of $0.55 per share to Abbotsleigh Pty Ltd. The share issue was approved and funds were received in January 2020.

The Alkane Group has also completed the purchase of land in the Tomingley region. The total purchase price of all land acquired was $5,600,000 and settlement took place across January 2020 and April 2020. As at the date of this Demerger Booklet, further attempts to purchase land in both the Tomingley and Boda project areas are being undertaken. The Alkane Group is in the process of negotiating and contracting for additional purchases of land to support the Tomingley Operations and its expansion. It is forecast that these associated land purchases will have a total collective purchase price of up to $10,000,000.

In May 2020, Tomingley Holdings (a subsidiary of Alkane) financed equipment already owned, with National Australia Bank for $6,115,000. The loan term is for a three year period with an interest rate of 4.3% per annum.

No other matter or circumstance has arisen since 31 December 2019 that has significantly affected, or may significantly affect the consolidated entity’s operations, the results of those operations, or the consolidated entity’s state of affairs in future financial years.

In early 2020, with the outbreak of the novel Coronavirus Disease (“COVID-19” or “the coronavirus”), unprecedented measures were put in place by both Australian and international governments to contain the coronavirus. Management continues to consider the potential implications of the coronavirus, which may include delays to the construction and commissioning of the "Clean Metal" metallisation pilot plant, and other optimisation work in progress that is focussed on further improving the economics of the Dubbo Project. However, the Alkane Board believes that certain statements by governments with respect to potential supply chain diversification (to avoid industrial exposure to potential similar events in the future) may provide opportunities for the Dubbo Project as a result of COVID-19. Management will continue to monitor government statements and operations but, as at the date of this Demerger Booklet, does not consider that COVID-19 has had a material detrimental impact on Alkane or its prospects.

## 5.11 Contingencies and commitments

The Alkane Group has contingent liabilities estimated up to the value of $3,670,000 for the potential acquisition of several parcels of land surrounding the Dubbo Project as at 31 December 2019. The amount to be paid is based upon a multiple of market values and is subject to variation. The landholders have the right to require ASM to acquire their property as provided for in the development consent conditions for the Dubbo Project or under agreement with ASM. These put options are summarised in Section 6.14(e) of this Demerger Booklet.

The Alkane Group has commitments estimated up to the value of $2,980,000 for the acquisition of several parcels of land surrounding the Dubbo Project as at 31 December 2019.

The Alkane Group has entered into an option agreement with landholders over a section of the Tomingley corridor as part of potential project life extension for the Tomingley Operations. The Alkane Group has contingent liabilities estimated up to the value of $2,750,000 for the potential acquisition of land as at 31 December 2019. The amount to be paid is based upon a multiple of market values and is subject to variation.

The Alkane Group has entered into forward gold sales contracts which are not accounted for on the balance sheet. A contingent liability of $8,199,000 existed at 31 December 2019 in the event the contracts are not settled by the physical delivery of gold.

The forward gold sales contracts disclosed below did not meet the criteria of financial instruments for accounting purposes on the basis that they met the normal purchase/sale exemption because physical gold would be delivered into the contract. Accordingly, the contracts were accounted for as sale contracts with revenue recognised in the period in which the gold commitment was met. The balances in the table below relate to the value of the contracts to be delivered into by transfer of physical gold.

| | Gold for physical delivery | Contracted gold sale price | Value of committed sales |
|---|---|---|---|
| | **Ounces** | **per ounce ($)** | **$'000** |
| **31 December 2019** | | | |
| Fixed forward contracts | | | |
| Within one year | 19,760 | 1,840 | 36,373 |
| One to five years | 5,000 | 1,890 | 9,450 |

## 5.12 Dividend policy

Historically, Alkane has not paid any dividends. While Alkane is currently in a period of significant exploration and development expenditure, there is no short-term intention to declare dividends to shareholders from profits or otherwise. Nevertheless, Alkane's dividend policy will continue to be considered in the future as circumstances change.

# 6. OVERVIEW OF ASM

## 6.1 Background

The ASM business will comprise the critical materials business and associated assets currently held by Alkane.

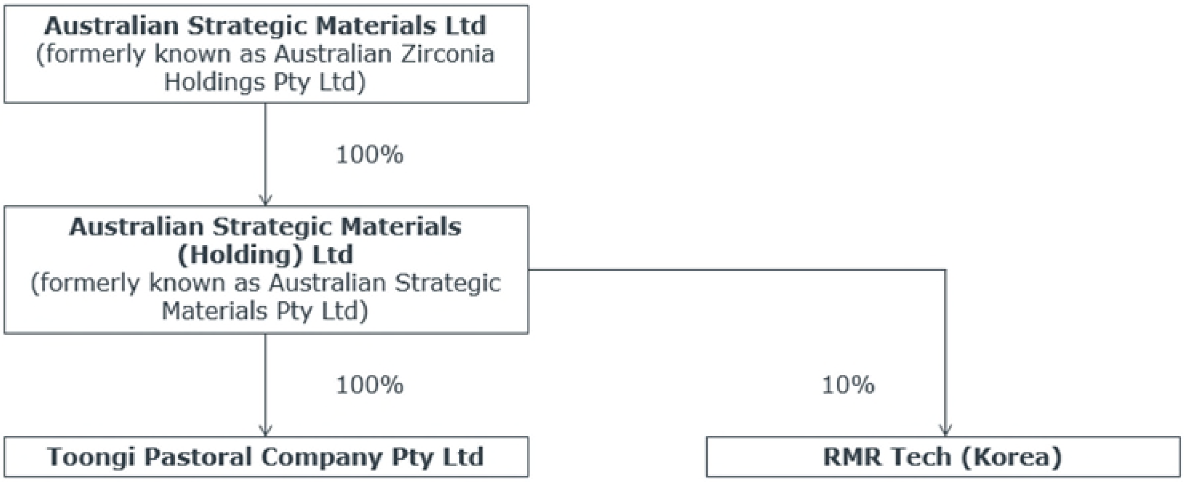
## 6.2 ASM capital structure

Immediately following the Demerger ASM will have a capital structure as follows:

| | |
|---|---|
| ASM Shares on issue: | 119,049,778 fully paid ordinary shares |
| ASM Performance Rights: | 3,000,000 |

## 6.3 Corporate structure of ASM Group

Below is a corporate structure diagram of ASM and its subsidiaries as proposed immediately after the Demerger is implemented:




## 6.4 ASM operations and assets

ASM currently owns the following major operations and assets:

(a) Dubbo Project

Wholly owned by ASM, the Dubbo Project is a large in-ground polymetallic resource of zirconium, hafnium, niobium, tantalum, yttrium and rare earth elements. It is located near the village of Toongi, 25 kilometres south of Dubbo in central western New South Wales, Australia.

Geology

The Toongi deposit is centred on a trachyte outcrop that forms one of several alkaline volcanic and intrusive bodies of Jurassic age in the region (formed approximately 205 to 190 million years ago). The elliptical-shaped body has approximate dimensions of 850m east–west by 550m north–south. The deposit forms a low irregular topographic rise and has a depth extent of 115m below surface.

The ore body is dominantly a massive, fine-grained microporphyritic trachyte comprising more than 80% feldspar, albite and aegirine in roughly equal amounts. The remainder of the rock is made up of opaque minerals. Extensive mineralogical studies indicate that the ore minerals contained in the deposit are extremely fine-grained, being less than 100µm in size (and generally less than 10µm), and uniformly distributed throughout the rock mass. The bulk of the ore metals are hosted in complex Na–Ca–Zr–Hf–HREE silicate phases (eudialyte like). The dominant Nb (and Ta) mineral is close to NaNbO3 (natroniobite) in composition. Separately bastnasite hosts the light rare earth metals.

The deposit contains elevated levels of the metals zirconium (Zr), hafnium (Hf), niobium (Nb), tantalum (Ta), yttrium (Y) and rare earth elements (REEs) – lanthanum (La), cerium (Ce), praseodymium (Pr), neodymium (Nd), samarium (Sm), europium (Eu), gadolinium (Gd), terbium (Tb), dysprosium (Dy), holmium (Ho), erbium (Er), thulium (Tm), ytterbium (Yb) and lutetium (Lu). The ore body also contains uranium and thorium and is classified as a weakly radioactive ore.

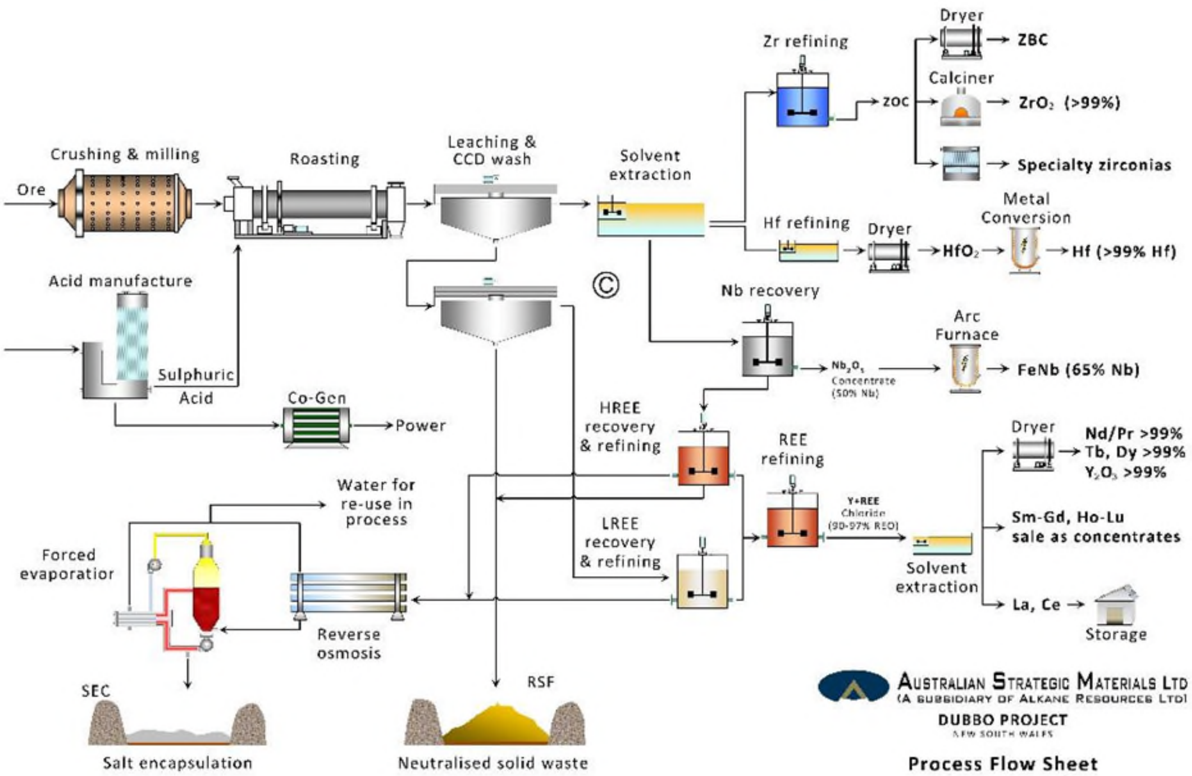
ASM intends to develop the Dubbo Project to supply globally significant quantities of zirconium and rare earth materials, as well as contribute to the niobium and emerging hafnium industries.

The Dubbo Project is ready for construction, subject to financing. ASM owns 3,456 hectares of land at Toongi, encompassing Mining Lease 1724 granted on 21 December 2015 (**ML 1724**). ML 1724 includes the ore resource as well as all of the land required for materials processing. All major state and federal approvals and licences are in place, along with an established process flow sheet and a solid business case.

Operations

The Engineering & Financials Update released by Alkane in June 2018 anticipated that, at full capacity and once developed, the Dubbo Project mineral processing plant will be capable of receiving 1,000,000 tonnes per annum (1Mtpa) of crushed ore, which will be processed using sulphuric acid leach and solvent extraction recovery to recover zirconium, hafnium, niobium and rare earth products. The process flow sheet has been extensively trialled and proven since 2008 at ASM's demonstration pilot plant (**DPP**), located at the facilities of the Australian Nuclear Science and Technology Organisation Minerals in Sydney. The DPP has provided data incorporated in the capital and operating cost estimates, as well as product samples for testing and customer certification.

Process Flow Sheet shown below:




Mining of the ore deposit will take place in a single open pit, then transported to the processing facility. Sulphuric acid used for leaching will be produced on site using a sulphur burning acid plant that also generates electricity and steam for the process plant. A small amount of waste rock will be extracted and transported to a small waste rock emplacement to the southwest of the open cut. The liquid and solid residues from the processing plant will be transported and stored in liquid residue storage facilities, solid residue storage facilities and salt encapsulation cells.

Site Layout shown below:


Engineering

A substantial body of engineering work and analysis has been undertaken on the Dubbo Project. Following the completion of two definitive feasibility studies in 2011 and 2013, the front end engineering design was completed by Hatch Pty Ltd in August 2015. ASM then sought to further identify opportunities to maximise value and reduce capital expenditure through a series of engineering reviews and options analyses, including assessment of the likely cost impacts of an aggressive modularisation strategy and a repeatable train execution methodology (that is, a staged approach to construction and development).

The results of all of these additional work streams, carried out from 2015 through to early 2018, were combined internally by ASM to prepare the results described and tabled in the Dubbo Project: Engineering & Financials Update – June 2018 (ASX 4 June 2018). This body of engineering and process development work gives ASM a high degree of confidence in its ability to execute and deliver the program described, with either a staged or full build feasible, depending on the level of off-take contracts obtained.

Products and marketing

ASM intends to produce a suite of zirconium, hafnium, rare earth and niobium materials in the form of chemicals, powders and metals. On the basis that the 1.0mtpa development proceeds, the Dubbo Project Front End Engineering Study (**FEED Study**) generated the following product quantities by commodity category at full production rates. Once commissioned, a modular development commencing at 0.5mtpa will have 50% of the production capacity shown below.

**DP Process Plant**

| | | |
|---|---|---|
| Rare earth chemical concentrate | 95% REO | 6,664 tpa (REO units) |
| Zirconium as ZBC (carbonate) & zirconia | 99% $ZrO_2$ | 16,374 tpa ($ZrO_2$ units) |
| Hafnium as $HfO_2$ concentrate | $HfO_2$ conc | 50 tpa * (Hf units) |
| Niobium as ferro-niobium | 65% Nb | 1,967 tpa (Nb units) |

**Total output approximately 25,200 tpa of all products**

Tonnage based upon recoveries developed from mass balances of the demonstration pilot plant.

* Start up output. 200tpa potential depending upon market demand

These products will be available in a range of standard and customised specifications, based on market requirements. The focus will be on high-value downstream products, used in a range of advanced technologies by leading companies worldwide. ASM's marketing strategy is based on securing long-term customer relationships, founded on a reliable and secure production base.

The initial product range will be complemented by the progressive development of further high-value products in response to customer and market demands.

The FEED Study had the Dubbo Project producing a mix of base zirconium products (including ZOC, zirconium basic carbonate and zirconium dioxide) and premium zirconium products (including yttria-stabilised zirconia and low-hafnium zirconium products). At the current time, ASM already has a global marketing and sales agreement in place with Minchem Limited (**Minchem**) for zirconium products and seven letters of intent for supply in respect of these products (see Section 6.14(d) for further information).

PrNd, Dy, Tb and Y oxide will be separated on site at the Dubbo Project. Other unseparated rare earths contained in the concentrates will be sold on the market.

ASM has a joint venture with Treibacher Industrie AG (**Treibacher**) for the production and marketing of ferro-niobium using all niobium concentrate produced by the Dubbo Project (see Section 6.14(c) for further information).

<u>Financials</u>

A detailed engineering, financial and market update on the Dubbo Project was released to the ASX by Alkane on 4 June 2018. This announcement included an assessment of potential financial outcomes for the Dubbo Project under a 1.0mtpa development scenario and a two-stage development scenario, based on cost estimates and macroeconomic assumptions. Further detail in relation to the Dubbo Project, including the June 2018 Optimised Feasibility Study, is available in the 4 June 2018 Alkane announcement released to the ASX.

As announced to the ASX on 5 March 2020, Export Finance Australia, the Australian government export credit agency (previously known as the Export Finance and Insurance Corporation) has confirmed its interest in forming part of the financing consortium for the proposed development of the Dubbo Project.

Further detail in relation to the Dubbo Project can be found on the ASM website.

(b) Toongi Pastoral Company

Wholly owned by ASM, Toongi Pastoral Company Pty Ltd (**TPC**) was established in 2016 to manage ASM's freehold and leasehold land and property assets surrounding the Dubbo Project. This comprises a 3,456-hectare aggregation of several properties located 25km south of Dubbo. TPC manages 1,021Ha of biodiversity offsets and 1,995Ha of agricultural land.

TPC operates as a standalone mixed agricultural enterprise (sheep and cattle) that demonstrates leading-practice sustainable farming technologies. The biodiversity offsets are protected in perpetuity under a Conservation Property Vegetation Plan.

(c) RMR Tech

In June 2019, ASM entered into a binding agreement with Zirconium Technology Corporation (**Ziron Tech**), a South Korean company, to fund the final stages of research and feasibility of a new "Clean Metal" metallisation technology developed by scientists at Chungnam National University (CNU) in Daejeon, South Korea (see Section 6.14(a) for further information). This established a new Korean entity, RMR Tech, jointly owned by Ziron Tech and ASM. Under the agreement, ASM initially invested US$1,200,000 towards a commercial-scale pilot plant located at CNU to develop the technology. The pilot plant is currently being commissioned, ahead of an anticipated commencement of operation in early Q3 of 2020.

One of the agreed outcomes of ASM's investment in RMR Tech is the completion of a feasibility study, to be undertaken by RMR Tech once the technology has been confirmed, for the construction and operation of a commercial-scale facility based on the "Clean Metal" metallisation technology being confirmed through the pilot plant. As part of the agreement with Ziron Tech, ASM has been granted the exclusive global rights on agreed terms to commercialise the technology in relation to hafnium and zirconium metal production. ASM has been granted rights in relation to other metals and has been provided with a general framework on the licence fees and royalties. Licence fees have been agreed per metal based upon the particular market for it. These licence fees sits within an overall 'pool' of USD7,800,000 which applies to the total licence fees payable for all other products. The royalties for each metal are agreed to be capped at the same rates for zirconium and hafnium, and will be agreed based upon the particular market and the viability of commercialising the particular metal.

(d) Metallisation Development

On the confirmation of the RMR Tech work, both technically and economically, ASM as part of the optimisation program, proposes the integration of the "Clean Metals" metallisation technology into the Dubbo Project. The OSP was developed in conjunction with ANSTO, and is the proprietary solvent extraction process for separating hafnium from zirconium, with potential applicability to other sources of intermediate zirconium products.

If a positive feasibility is demonstrated, the potential exists for ASM and potential investment partners to co-locate an OSP and metallisation facility (pending the outcome of the RMR Tech work). There also exists potential to commercialise the technology, with ASM purchasing available zirconium oxychloride (**ZOC**) on the market (which is the primary precursor for downstream zirconium products) and produce hafnium-free zirconium (suitable for use in the nuclear industry) and also high-purity hafnium metal. Given that ZOC will be a major intermediate product of the Dubbo Project, the Dubbo Project could become a long-term supplier, once in production.

ASM continues to meet with representatives of leading Korean industrial companies involved in relevant metal production, as well as potential hafnium consumers in Korea and elsewhere, and will look to progress marketing discussions in conjunction with the feasibility process.

(e) 2020 Dubbo Project Optimisation Work

ASM's 2018 FEED Study was based on the supply of metal oxides into the critical materials market. In 2019, ASM identified two potential additions that could deliver a positive outcome for shareholders involving the commercialisation of the Dubbo Project and the integration of the "Clean Metal" metallisation. These included enhancements of metallisation and the use of flotation. Together these enhancements aim to lower the development capital expenditure.

(i) Flotation: The flotation enhancement, if viable, would result in a 1 Mtpa flotation plant to improve the ore feed grade and a 0.5 Mtpa solvent extraction plant to process the higher grade feed with an opportunity to lower the capital cost.

(ii) Metallisation: ASM is in the late stages of construction of a pilot plant in Korea, with commissioning progressing well, and with production expected to commence in early Q3 of 2020.

The optimisation work expected to be undertaken in 2020 will incorporate the integration of the Dubbo Project with the RMR Tech "Clean Metal" metallisation technology into an integrated project, targeting the improvement of the project economics with potential reductions in the development capital expenditure and operating costs.

## 6.5 ASM mineral resources and ore reserves information

The mineral resources and ore reserves for the Toongi deposit, which is the basis of the Dubbo Project, are summarised in the tables below. Mineral resources are wholly inclusive of ore reserves, which are based on economic parameters applied to the mineral resources, reflecting an initial project horizon of 20 years.

Dubbo Project Mineral Resources

| Resource Category | Tonnes (Mt) | $ZrO_2$ (%) | $HfO_2$ (%) | $Nb_2O_5$ (%) | $Ta_2O_5$ (%) | $Y_2O_3$ (%) | TREO* (%) |
|---|---|---|---|---|---|---|---|
| Measured | 42.81 | 1.89 | 0.04 | 0.45 | 0.03 | 0.14 | 0.74 |
| Inferred (approximately) | 32.37 | 1.90 | 0.04 | 0.44 | 0.03 | 0.14 | 0.74 |
| **Total** | **75.18** | **1.89** | **0.04** | **0.44** | **0.03** | **0.14** | **0.74** |

**TREO% is the sum of all rare earth oxides excluding $ZrO_2$, $HfO_2$, $Nb_2O_3$, $Ta_2O_5$, $Y_2O_3$*

Dubbo Project Ore Reserves

| Reserve Category | Tonnes (Mt) | $ZrO_2$ (%) | $HfO_2$ (%) | $Nb_2O_5$ (%) | $Ta_2O_5$ (%) | $Y_2O_3$ (%) | TREO* (%) |
|---|---|---|---|---|---|---|---|
| Proved | 18.90 | 1.85 | 0.04 | 0.440 | 0.029 | 0.136 | 0.735 |
| Probable | 0 | | | | | | |
| **Total** | **18.90** | **1.85** | **0.04** | **0.440** | **0.029** | **0.136** | **0.735** |

**TREO% is the sum of all rare earth oxides excluding $ZrO_2$, $HfO_2$, $Nb_2O_3$, $Ta_2O_5$, $Y_2O_3$*

Further detailed information in relation to the Dubbo Project Ore Resources and Reserves is set out in Annexure 2 of this Demerger Booklet.

## 6.6 ASM's objectives, funding and strategy

The primary long-term objective of ASM is to grow shareholder value through an integrated oxide and "Clean Metals" business with the development of the Dubbo Project to supply globally significant quantities of zirconium and rare earth materials, as well as contribute to the niobium and emerging hafnium industries. These materials are in high demand for a range of existing and future technologies – in particular clean energy and transportation, where they are used in high volumes. In a global market where diversification of supply is becoming increasingly important, the Dubbo Project has the potential to provide an alternative, sustainable and reliable source of these critical materials.

As part of this objective ASM will complete an optimisation study that incorporates the Dubbo Project, the Oxide Separation Plant (OSP) and the "Clean Metal" metallisation facility, potentially to be located in South Korea, Australia or both, which is expected to complement progression of the Dubbo Project and improve its economics.

**ASM pro-forma three year budget (in A$ million)**

| | **Totals** | **Year 1** | **Year 2** | **Year 3** |
|---|---|---|---|---|
| Corporate & Technical Support | (11.5) | (2.4) | (4.3) | (4.8) |
| Dubbo & Korea Studies and Financing Initiatives | (3.0) | (2.0) | (0.5) | (0.5) |
| Toongi Pastoral Company | (1.4) | (2.2) | 0.6 | 0.1 |
| **Net cash outflows** | **(16.0)** | **(6.6)** | **(4.2)** | **(5.2)** |
| Opening Cash | 20.0 | 20.0 | 13.4 | 9.2 |
| Closing Cash Balance | 4.0 | 13.4 | 9.2 | 4.0 |

Alkane, as part of the demerger of ASM has provided additional cash to ASM such that ASM's cash balance was $20,000,000 on 1 April 2020. This date forms the starting date for the ASM pro-forma three year budget above. ASM's cash balance at 31 December 2019 was $17,311,735. As a result, since 1 April 2020, all relevant Dubbo Project expenditure and corporate overheads of ASM have been paid by ASM out of this amount. As a result, upon implementation of the Demerger, ASM will have cash reserves of approximately $20,000,000, which is expected to be sufficient to cover the intended work plan over the budgeted period.

Overview of budget items

(a) Corporate & Technical Support

The forecasted Corporate & Technical Support costs included in the budget include, among other items, salaries and directors fees, external consulting fees to deliver an updated FEED Study, travel and accommodation costs, listing and regulatory fees and costs under the Intercompany Services Agreement.

The timing and costs associated with the Corporate and Technical Support expenditure, may vary depending the progress of the development of the Dubbo Project and related financing and off-take agreements. Other variables include the decisions made around the activities of ASM and costs related to the Dubbo Project development.

Costs in the budget are forecast to increase in Years 2 and 3 due to assumptions around the appointment of independent technical experts and forecast advisory and legal costs associated with the financing process. The timing and cost of these assumptions may vary depending upon the speed at which ASM is able to progress with securing funding and securing off-take for the Dubbo Project. For example, if detailed strategic partner discussions and negotiations happen on an accelerated timetable then costs may be incurred more quickly than forecast.

(b) Dubbo & Korea Studies

The significant cost items included in the forecast of the Dubbo & Korea Studies line item relate to the cost of project optimisation and related engineering work in relation to the Dubbo Project. These significant cost are expected to be incurred largely in Year 1 of the forecast period. However, the timing and costs of these items may vary as a result of, among other things, the outcomes of the proposed studies.

(c) Toongi Pastoral Company

The forecast costs in Year 1 for the Toongi Pastoral Company include the purchase of two land parcels totalling $2.25m. The Toongi Pastoral Company cash flow, include the purchase and sale of livestock (cattle, sheep) as well as other costs associated with the farming operation (salaries, consumables etc). Livestock stocking rates are based on forecast monthly carrying capacity across livestock class (on a Dry Sheep Equivalent basis) and a 15 year historical average rainfall. Livestock price assumptions are based on prevailing market prices and Meat & Livestock Australia forecast reports for Dubbo sales market.

The ASM pro forma budget summarised above covers the following core areas of activities following the Demerger:

- funding of optimisation and feasibility work in relation to an OSP and "Clean Metal" metallisation facility to produce and sell relevant products;
- continuation of the marketing in relation to both the Dubbo Project and a potential OSP and "Clean Metal" metallisation facility;
- initiatives to obtain financing for the Dubbo Project, including progressing debt, equity and strategic partner investment;
- coverage of corporate overheads; and
- any remaining funding to be provided to RMR Tech to develop the "Clean Metal" metallisation technology.

As noted, the timing and amount of expenditure over the budgeted period is dependent on progress achieved in securing financing and off-take for the Dubbo Project.

This pro forma budget does not include payments that may be potentially triggered through the exercise of put options on select farmland properties over the Dubbo Project (further information is set out in Section 6.14). These potential payments have been historically disclosed as contingent liabilities in the notes to Alkane's financial statements.

Further, the objectives and budgets outlined above focus on positioning ASM to procure funding for the Dubbo Project development, with no allowance for expenditure to commercially develop either the Dubbo Project or the "Clean Metal" metallisation pilot plant included in this budget on the grounds that ASM does not yet have the financing in place to undertake this development.

## 6.7 Corporate governance

The ASX Corporate Governance Council has developed and released its ASX Corporate Governance Principles and Recommendations 4th Edition (**ASX Recommendations**) for Australian-listed entities in order to promote investor confidence and to assist companies in meeting stakeholder expectations. The ASX Recommendations are not prescriptions, but rather guidelines designed to produce an outcome that is of high quality and integrity. Under the ASX Listing Rules, ASM will be required to provide a statement in its annual report, or the URL of the page on its website where such a statement is located, disclosing the extent to which it has followed the ASX Recommendations during each reporting period. Where ASM does not follow a recommendation, it must identify the recommendation that has not been followed and give reasons for not following it.

This Section 6.7 sets out the approach that ASM will take to corporate governance following the implementation of the Demerger. Relevant charters and policies will be adopted by ASM prior to implementation of the Demerger and made available on ASM's website at www.asm-au.com. ASM's approach to corporate governance will be similar to that of Alkane, with appropriate adjustments made to account for the smaller scale and earlier stage of development of ASM compared with Alkane.

A summary of ASM's proposed approach to corporate governance is set out below:

(a) Composition of the ASM Board

Consistent with the size of ASM and its activities, immediately after implementation of the Demerger, ASM will comprise the five directors referred to in Section 6.9 of this Demerger Booklet. The ASM Board will initially comprise four non-executive directors, one of whom is also the Chairman (Mr Gandel), and one executive director (being Mr Woodall, who will be ASM's managing director). The ASX Corporate Governance Council recommends that a majority of the directors on a board should be independent. ASM will not follow that recommendation immediately following implementation of the Demerger. The composition of the ASM Board is considered appropriate at this time because it will ensure continuity in relation to ASM's business and affairs.

In particular, it is noted that the ASM Board will initially include Alkane's two executive directors, Mr Earner, Alkane's Managing Director, and Mr Chalmers, Alkane's Technical Director. As non-executive directors of ASM, Mr Earner and Mr Chalmers will be in a position to provide guidance and assistance to, and share their expertise and detailed technical knowledge of, ASM's business and affairs with Mr Woodall, who was appointed to the ASM Board in February 2020, and thereby assist with ASM's transition to a standalone entity following the Demerger. It is, however, proposed that Mr Earner will retire as a director of ASM within the first year following implementation of the Demerger. The appointment of additional non-executive Directors will also be considered.

Alkane and ASM are not expected to be competitors of each other, given the former conducts a gold mining operations and the latter's business is to conduct evaluative activities in relation to and seek to develop the Dubbo critical materials project. Because of this, matters in which the interests of Alkane and ASM will conflict or potentially conflict, and thereby give rise to conflicts for the directors who are common to both companies' boards ("**common directors**") are expected to be limited to matters and/or disputes arising under contracts between the Alkane Group and the ASM Group. Once the proposed restructure contemplated by the Restructure Deed has been implemented (which is proposed to occur before implementation of the Demerger, while ASM remains wholly-owned by Alkane), the only ongoing contracts between Alkane and ASM Group Members will then be the Demerger Deed and the Intercompany Services Agreement. Should matters or disputes arise under these contracts, it is expected that the Alkane Board and ASM Board will delegate where appropriate to the directors of their respective companies who are not common to both Boards (i.e., to the directors who do not have a conflict in relation to the matter), all powers, authorities and discretions in relation to such matters and disputes and resolving them. Each Board will have at least one director who is not a common director: at the outset it is proposed that Mr Lethlean will be a director of Alkane but not of ASM; and it is proposed that Mr Woodall will be a director of ASM, but not of Alkane.

As previously disclosed by Alkane, Mr Gandel has a relationship with Abbotsleigh Pty Ltd as set out in Section 6.9. Abbotsleigh Pty Ltd is a substantial shareholder in Alkane, and subject to the successful implementation of the Demerger will be a substantial shareholder of ASM. The ASM Board has concluded that Mr Gandel's relationship with Abbotsleigh Pty Ltd does not interfere with or compromise his ability to exercise objective or independent judgement in relation to the ASM Group. Similarly, the ASM Board has concluded that Mr Earner acting as a non-executive Director on the board of Genesis Minerals Ltd, does not interfere with or compromise his ability to exercise objective or independent judgement in relation to the ASM Group.

(b) Roles and responsibilities of the ASM Board

The ASM Board will be responsible for all matters relating to the running of ASM. The ASM Board's role is to govern ASM. In governing ASM, the ASM Board must act in the best interests of ASM as a whole. The primary role of the ASM Board will be the protection and enhancement of long-term shareholder value. The ASM Board will be accountable to shareholders for the performance of the company and will direct and monitor the business and affairs of ASM, and be responsible for ASM's overall corporate governance. Without putting a limit on the general role of the ASM Board, the principal functions and responsibilities will include:

(i) providing leadership to ASM by guiding the development of an appropriate culture and values and always acting in a manner consistent with ASM's culture and code of conduct;

(ii) overseeing the development and implementation of an appropriate strategy for ASM;

(iii) ensuring corporate accountability to ASM Shareholders primarily through adopting an effective shareholder communications strategy, encouraging effective participation at general meetings and with the Chairman being the key interface between ASM and ASM Shareholders;

(iv) overseeing the control and accountability systems that ensure ASM is progressing towards its goals in a manner that is in line with ASM's purpose, its agreed corporate strategy, legislative requirements and community expectations;

(v) ensuring robust and effective risk management, compliance and control systems (including legal compliance) are in place and operating effectively;

(vi) being responsible for ASM's senior management and personnel;

(vii) delegating appropriate powers to the Managing Director, CEO, management and committees to ensure the effective day-to-day management of the business and monitoring the exercise of these powers; and

(viii) making all decisions outside the scope of these delegated powers.

(c) ASM Board committees

From time to time, the ASM Board may establish committees as it considers necessary or appropriate to assist it in carrying out its responsibilities.

It is anticipated that specific committees will be established prior to ASM's admission to the Official List of the ASX, including Audit, Nomination, Remuneration and Risk committees. The composition of the committees will be detailed in ASM's Corporate Governance Statement which will be made available on ASM's website in due course. The ASM Board will review the composition of each committee on an ongoing basis.

(d) ASM Board processes

The ASM Board's meetings and proceedings will be governed by the ASM Constitution, which is summarised in Section 11.3 of this Demerger Booklet.

It is proposed that ASM Board will develop and adopt a formal board charter upon implementation of the Demerger, which it will publish in due course.

(e) Resources available to the ASM Board

In executing its role and responsibilities, it is expected that the ASM Board will have access to senior management. The ASM Board will also have the authority to seek information from employees and external parties, to obtain outside legal or other professional advice at the expense of ASM, and to ensure company officers attend ASM Board meetings as appropriate.

The chairperson of the ASM Board will be responsible for leadership of the ASM Board, for the efficient organisation and conduct of ASM's Board functions and for the briefing of all ASM Directors in relation to issues arising at ASM Board meetings. The chairperson of the ASM Board will also be responsible for shareholder communication and arrangement of ASM's Board performance evaluation.

Details of ASM's key policies and practices and the charters for the ASM Board and each of its committees will be made available on the ASM website in due course.

ASM's Corporate Governance Statement will be made available on ASM's website in due course.

(f) ASM non-executive director fees

In accordance with ASM's Constitution, the remuneration of the non-executive directors of ASM (**ASM NEDs**) in each financial year will not exceed the maximum aggregate amount determined by ASM Shareholders in general meeting from time to time. The maximum aggregate amount is currently $500,000, inclusive of superannuation and exclusive of reimbursement of expenses. This remuneration may be divided among the ASM NEDs in such proportions as they decide. The maximum aggregate remuneration amount has been set so as to enable the appointment of additional ASM NEDs if required. Executive directors of ASM (Mr Woodall will be the only executive director (as Managing Director) on implementation of the Demerger) will be remunerated outside of this maximum aggregate fee 'cap'. (Mr Woodall's employment terms are summarised in Section 6.11 below.)

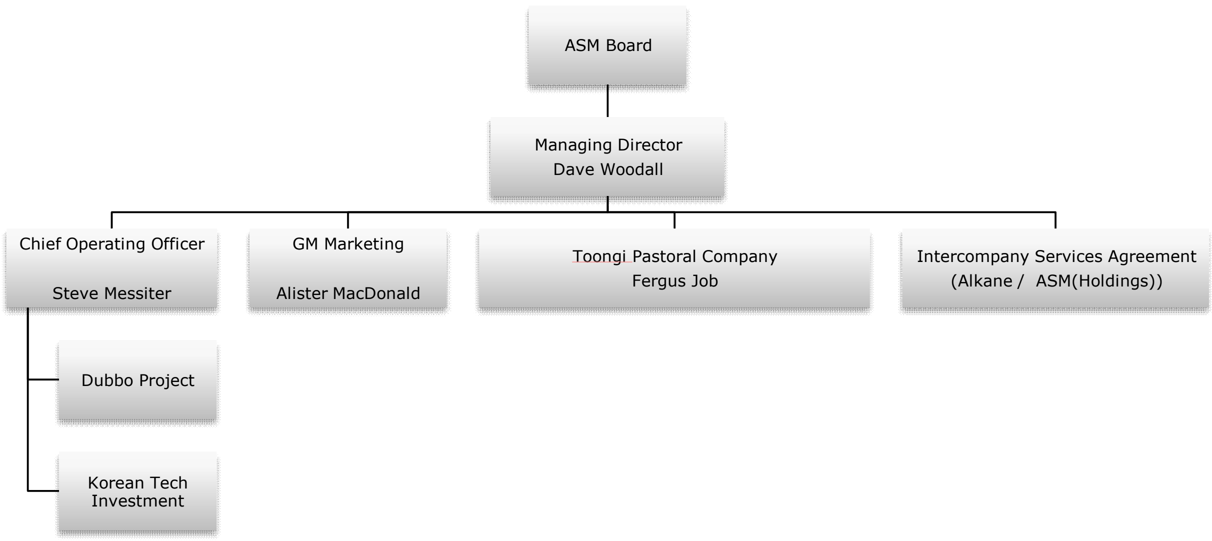
ASM NEDs will be paid a Board fee and additional fees for chairing. The ASM Board proposes the fees payable will initially be as follows:

| Position | Fees Payable (in AUD) |
|---|---|
| **Base Fees** | |
| Chairman | $60,000 per annum |
| Non-Executive Director | $30,000 per annum |

ASM NEDs will not be entitled to receive retirement allowances. Fees provided will inclusive of superannuation and the ASM NEDs will not receive performance-based pay. Once the listing process has concluded, ASM intends to seek external advice and benchmarking data and conduct a formal review of director remuneration. ASM anticipates that this review of director remuneration will be undertaken in or around Q4 of 2020.

In addition, in accordance with ASM's Constitution (refer Section 11.3 of this Demerger Booklet), ASM NEDs may be paid for travel and other expenses incurred in attending to ASM affairs, including attending and returning from meetings of ASM Directors or ASM Board committees or general meetings. Any ASM NED who devotes special attention to the business of ASM or who performs services which, in the opinion of the ASM Board, are outside the scope of ordinary duties of an ASM Director, may be remunerated for the services (as determined by the ASM Board) out of the funds of ASM.

## 6.8 ASM organisational chart



## 6.9 ASM Directors

The ASM Board consists of Ian Gandel (Director), David Woodall (Managing Director), Nicolas Earner (Director), David Ian Chalmers (Director), Anthony Lethlean (Director) and Gavin Smith (Director).

Anthony Lethlean is currently a director of ASM. Upon the Demerger being implemented, Mr Lethlean will resign from the ASM Board, such that the ASM Board will be constituted as follows with effect from the time when the Demerger is implemented:

**Ian Jeffrey Gandel – Non-Executive Chairman**

*LLB, BEc, FCPA, FAICD*

Mr Gandel is the chairman of the Alkane Board. He is a successful Melbourne-based businessman with extensive experience in retail management and retail property. He has been a director of the Gandel Retail Trust and has had an involvement in the construction and leasing of Gandel shopping centres. He has previously been involved in the Priceline retail chain and the CEO chain of serviced offices. Through his private investment vehicles (which includes Abbotsleigh Pty Ltd), Mr Gandel has been an investor in the mining industry since 1994. Mr Gandel is also a significant shareholder and a director of Abbotsleigh Pty Ltd, the largest holder of quoted ordinary shares of Alkane.

**David Graham Woodall – Managing Director**

Mr Woodall is a mining engineer with over 30 years' experience in senior and corporate and executive roles in operations, project development and evaluations in the mineral resources industry including gold, copper, iron ore, and nickel.

He has held senior positions in Australia, Fiji, Central Asia, Indonesia, China, PNG and North America.

Prior to joining ASM, he was the CEO of an ASX listed Canadian-focussed base metals development company. Prior to that, Mr Woodall ran his own consultancy company, was the Executive General Manager, International Operations for Newcrest Mining and was the Director of Operations for Fortescue Metals Group.

Mr Woodall is a Member of the Australian Institute on Mining and Metallurgy (AusIMM) and a member of the Australian Institute of Company Directors (AICD).

Mr Woodall was appointed Managing Director of the ASM Business in February 2020.

**David Ian Chalmers – Non-Executive Director**

*MSc, FAusIMM, FAIG, FIMM, FSEG, MSGA, MGSA, FAICD*

Mr Chalmers, Alkane's Technical Director, is a geologist and graduate of the Western Australia Institute of Technology (Curtin University) and has a Master of Science degree from the University of Leicester in the United Kingdom. He has worked in the mining and exploration industry for over 50 years, during which time he has had experience in all facets of exploration and mining through feasibility and development to the production phase. Mr Chalmers was Technical Director of Alkane until his appointment as Managing Director in 2006, overseeing the group's minerals exploration efforts across Australia and the development and operations of the Peak Hill Gold Mine (NSW). During his time as Chief Executive he steered Alkane through the discovery, feasibility, construction and development of the now fully operational Tomingley Gold Operations; the discovery and ultimate sale of the McPhillamys gold deposit; the recent discovery of the gold deposits immediately south of Tomingley and the porphyry gold-copper discovery at Boda. Mr Chalmers also managed the process development and global marketing effort for the Dubbo Project, advancing it to the threshold of development.

**Nicholas Paul Earner – Non-Executive Director**

*BEng (hons)*

Mr Earner, Alkane's current Managing Director, is a chemical engineer and graduate of University of Queensland with over 25 years' experience in technical and operational optimisation and management, and has held a number of executive roles in mining and processing. Mr Earner joined the Alkane Group as Chief Operations Officer in August 2013, with responsibility for the safe and efficient management of Alkane's operations at Tomingley and the Dubbo Project. Under his supervision, the successful development of Tomingley transitioned to profitable and efficient operations. His guidance also drives the engineering and metallurgical aspects of the Dubbo Project, overseeing optimisation of plant design and product and marketing development.

Prior to his appointment as Alkane's Chief Operations Officer in August 2013 he spent four years at Straits Resources Ltd including two years as Executive General Manager – Operations, supervising up to 1,000 employees in open cut and underground gold mines and an underground copper mine. During the eleven years before that he had various roles at Rio Tinto Coal Australia's Mount Thorley Warkworth coal mine and BHP/WMC Olympic Dam copper-uranium-gold operations. Mr Earner's eight years at Olympic Dam included roles managing the Concentrator and Hydromet functions which included substantial milling, leaching and solvent extraction circuits. His other positions included Production Superintendent – Smelting, and Senior Engineer – Process Control, Instrumentation and Communications.

Mr Earner sits on the board of Genesis Minerals Ltd as a non-executive Director. He has held this position since 24 October 2019, in his capacity as a representative of Alkane. As at the date of this Demerger Booklet, Alkane is the majority shareholder in Genesis Minerals Ltd.

As noted in Section 6.7(a) above, it is proposed that Mr Earner will resign as a director of ASM within the first year following the Demerger Implementation Date.

**Gavin Murray Smith – Non-Executive Director**

*BCom, MBA, MAICD*

Mr Smith is an accomplished senior executive and Non-Executive Director within multinational business environments. He has more than 35 years' experience in information technology, business development, and general management in a wide range of industries and sectors. As Chair and President of Robert Bosch Australia, Mr Smith has led the restructuring and transformation of the local Bosch subsidiary.

Mr Smith is a non-executive director of Alkane.

## 6.10 ASM's senior management

Following the Demerger, key management personnel and other executives of ASM will include:

**David Woodall – Managing Director**

Refer to Section 6.9 above for details.

**Steve Messiter – Chief Operating Officer**

Mr Messiter has extensive experience in senior corporate management and project development including early company development, feasibility studies, process design, technology selection, contractor management and site construction over a career covering in excess of 30 years. Mr Messiter is a qualified chemical engineer, having worked globally and throughout Australia for both mining and chemical industry development and production companies as well as managing and building teams as part of multi-discipline engineering companies.

**Alister MacDonald – General Manager, Marketing**

With a degree in Ceramic Engineering from the University of New South Wales, Mr MacDonald has been involved with critical metals and materials for over 30 years. He has worked in various technical and marketing capacities across the value chain in Australia and internationally, from minerals processing through to manufacturing of advanced ceramic components.

Mr MacDonald applies his specialist knowledge and analysis of supply chain risks for critical elements needed for a range of advanced technologies used in consumer products, clean energy, clean transportation, and important defence capabilities.

## 6.11 Summary of employment terms

(a) Mr Woodall

A summary of the key terms of the employment contract and remuneration arrangements for Mr Woodall in his capacity as Managing Director of ASM is as follows:

- Mr Woodall is employed under an annual salary employment contract which commenced on 10 February 2020. Under the terms of the employment contract:
  - Mr Woodall receives a fixed remuneration of A$375,000 (including superannuation) per annum;
  - Subject to the successful implementation of the Demerger and ASM's admission to the Official List of the ASX, Mr Woodall will be entitled to 3,000,000 ASM performance rights to be paid in two tranches. A summary of the ASM Long-term Incentive Plan is set out below.
  - Mr Woodall may resign from his position and thus terminate his contract by giving 3 months' written notice. On resignation any unvested ASM performance rights will be forfeited;
  - ASM may terminate Mr Woodall's employment contract by providing 3 months' notice or providing payment in lieu of notice. Mr Woodall will be entitled to any performance rights which have vested or will vest during the notice period; and
  - ASM may terminate the contract at any time without notice if serious misconduct has occurred.

| Key terms | Summary |
|---|---|
| Total fixed remuneration | A$375,000 (including superannuation) per annum |
| ASM Long-term Incentives (3 Year Vesting Period) | 3,000,000 Performance Rights, comprised of:<br>i) 1,800,000 Tranche 1 performance rights in relation to Total Shareholder Return; and<br>ii) 1,200,000 Tranche 2 performance rights subject to Milestone Targets. |
| Tranche 1 TSR Hurdles | See Tranche 1 table below |
| Tranche 2 Milestone Hurdles | See Tranche 2 table below |
| Cessation of employment | Three (3) months' notice |
| Post-employment restraints | N/A |

Tranche 1 TSR Hurdles

| Final Share Price vs Starting Share Price | % of Tranche to Vest | Target Share Price |
|---|---|---|
| Final Share Price < 150% of Starting Share Price | 0% | 150% of Starting Share Price |
| Final Share Price => 150% of Starting Share Price | 33.33% | 150% of Starting Share Price |
| Final Share Price => 200% of Starting Share Price | 33.33% | 200% of Starting Share Price |
| Final Share Price => 300% of Starting Share Price | 33.33% | 300% of Starting Share Price |

Tranche 2 Milestone Hurdles

| Milestone Target | % of Tranche to Vest |
|---|---|
| In the event a strategic partner organised by ASM buys >15% of ASM / Project | 25% |
| In the event off-take >40% of Project revenue is signed | 25% |
| In the event if debt >40% of Project capital cost is signed | 25% |
| In the event if a Korean metals plant is successfully commissioned on a positive cash flow business case | 25% |

(b) Mr Messiter

A summary of the key terms of the employment contract and remuneration arrangements for Mr Messiter in his capacity as Chief Operating Officer of ASM is as follows:

- Mr Messiter is employed under a casual employment contract. Under the terms of the employment contract:
  - Mr Messiter receives a fixed day rate of $2,000 a day; and
  - Mr Messiter's contract does not include a notice period, non-compete provisions or any entitlement to ASM Long-term Incentives.

(c) Summary of ASM Long-term Incentive Plan

Subject to the successful implementation of the Demerger and ASM's admission to the Official List of the ASX, the ASM Board proposes to create a Long-term Incentive plan (**ASM Long-term Incentive Plan**) to grant incentives (**ASM Long-term Incentives**) to eligible ASM executives. A summary of the key terms of the ASM Long-term Incentive Plan is set out below.

| | |
|---|---|
| **Purpose and term** | The ASM Long-term Incentive Plan was established to assist in the recruitment, reward, retention and motivation of Eligible Employees.<br><br>Under the ASM Long-term Incentives the ASM Board may grant ASM Long-term Incentives to Eligible Employees on terms fixed in accordance with the ASM Long-term Incentive Plan.<br><br>The ASM Long-term Incentive Plan continues in operation until the ASM Board decides to end it. |
| **Commencement** | The date of ASM's admission to the Official List of the ASX |
| **ASM Long-term Incentives** | Each ASM Long-term Incentives will represent a right to acquire one ASM Share, subject to the terms of the ASM Long-term Incentive Plan.<br><br>An ASM Long-term Incentive granted to a participant under the ASM Long-term Incentive Plan (**Participant**) is granted for no cash consideration. If ASM Long-term Incentives vest under the ASM Long-term Incentive Plan, no amount is payable by a Participant in respect of those ASM Long-term Incentives vesting, or the subsequent issue or transfer of ASM Shares in respect of them. |

| | |
|---|---|
| **Invitations to participate in the ASM Long-term Incentive Plan** | The ASM Board may from time to time in its absolute discretion decide that a full time or part time employee of ASM who holds salaried employment with ASM on a full time or part time basis (**Eligible Employee**) is eligible to participate in the ASM Long-term Incentive Plan and may invite them to apply for ASM Long-term Incentives.<br><br>An Eligible Employee who is invited to participate in the ASM Long-term Incentive Plan will receive a written invitation. The invitation will set out, amongst other things, the number of ASM Long-term Incentives the Eligible Employee is invited to apply for, the performance criteria to which those ASM Long-term Incentives will be subject (**Performance Criteria**), and the period of time over which the Performance Criteria must be satisfied (**Performance Period**), before the ASM Long-term Incentives can vest. |
| **Performance Criteria and Performance Period** | The ASM Board's discretion includes determining the number of ASM Long-term Incentives the Eligible Employee is invited to apply for, and the ASM Performance Criteria, and Performance Period over which Performance Criteria is assessed, applicable to those ASM Long-term Incentives. |
| **Vesting of ASM Long-term Incentives** | An ASM Long-term Incentive granted to a Participant will vest:<br>• at the end of the Performance Period upon the ASM Board giving written notice to the relevant Participant of the number of ASM Long-term Incentives in respect of which the Performance Criteria were satisfied over the Performance Period; or<br>• if the ASM Board allows early vesting as a result of an event such as a takeover bid or scheme of arrangement or the cessation of employment of the Participant for a "Qualifying Reason" (see below). |
| **Transfers** | An ASM Long-term Incentive granted under the ASM Long-term Incentive Plan is only transferable by force of law upon death to the Participant's legal personal representative or upon bankruptcy to the Participant's trustee in bankruptcy.<br><br>Subject to the above, Participants are not to grant any security interest in or over or otherwise dispose of or deal with any ASM Long-term Incentives or any interest in them until the relevant ASM Shares are issued or transferred to that |

| | |
|---|---|
| | Participant, and any such security interest or disposal or dealing will not be recognised in any manner by ASM. |
| **Exercise on vesting** | If an Invitation provides for:<br>• the deemed automatic exercise of an ASM Long-term Incentive, no further action is required from the Participant upon vesting of an ASM Long-term Incentive in order to exercise that ASM Long-term Incentive; or<br>• the manual exercise of a vested ASM Long-term Incentive, a Participant may exercise any vested ASM Long-term Incentive at any time from the date the ASM Board notifies the Participant of the vesting of the ASM Long-term Incentive until the date on which an ASM Long-term Incentive lapses, by giving the prescribed form of notice to the ASM Board. |
| **Lapse of ASM Long-term Incentives** | An unvested ASM Long-term Incentive, or (where applicable) a vested but unexercised ASM Long-term Incentive, will lapse on the earliest to occur of:<br>• the end of the Performance Period if the Performance Criteria relating to the ASM Long-term Incentive have not been satisfied;<br>• the Participant purporting to transfer an ASM Long-term Incentive or grant a security interest in or over, or otherwise purporting to dispose of or deal with, an ASM Long-term Incentive or interest in it (except where the ASM Long-term Incentive is transferred by force of law upon death to the Participant's legal personal representative or upon bankruptcy to the Participant's trustee in bankruptcy);<br>• the Participant ceasing employment with ASM, except in certain circumstances as explained below under the heading "Qualifying Reason and cessation of employment";<br>• if in the opinion of the ASM Board, the Participant has acted fraudulently or dishonestly or in breach of his or her obligations to ASM, and the ASM Board determining that the ASM Long-term Incentives held by the Participant should lapse;<br>• an event such as a takeover bid or scheme of arrangement occurring (in certain circumstances subject to the ASM Board's discretion); and<br>• the date that is fifteen years after the grant of the ASM Long-term Incentive.<br>*Qualifying Reason and cessation of employment* |

| | |
|---|---|
| | ASM Long-term Incentives of a Participant will automatically lapse if the Participant ceases to be employed by ASM, unless the Participant ceases to be employed because of a "Qualifying Reason" in which case that Participant's ASM Long-term Incentives will be treated as follows:<br>• if less than six months of the Performance Period relating to those ASM Long-term Incentives has elapsed at the date of cessation of employment, all of those ASM Long-term Incentives will lapse (unless the ASM Board, in its absolute discretion, determines otherwise); and<br>• if six months or more of the Performance Period relating to those ASM Long-term Incentives has elapsed at the date of cessation of employment, then (unless the ASM Board, in its absolute discretion, determines otherwise) a proportion of the Participant's ASM Long-term Incentives (calculated by reference to the number of days in the Performance Period which have elapsed as the date of cessation of employment) will be capable of vesting. Such ASM Long-term Incentives will only vest (unless the ASM Board, in its absolute discretion, determines otherwise) if over the Performance Period the Performance Criteria in respect of those ASM Long-term Incentives were satisfied and the ASM Board gives notice to the Participant of its determination to that effect. In such circumstances, the remaining ASM Long-term Incentives of the Participant which do not vest will lapse.<br>If a Participant ceases to be employed by ASM because of a Qualifying Reason, any vested but unexercised ASM Long-term Incentives held by that Participant will immediately be deemed to have been exercised.<br>A "Qualifying Reason" includes the death, total and permanent disablement or retirement of the Participant (as determined by the ASM Board in its absolute discretion), or where the Participant ceases to be employed by ASM by a Group Member as a result of the relevant body corporate ceasing to be a Group Member, or as a result of a Group Member selling a business it conducts to someone other than to another Group Member. The ASM Board may also determine, in its absolute discretion, that any other reason will constitute a "Qualifying Reason". |
| **Share limit** | The ASM Board must not issue an Invitation, or issue an ASM Share under the Plan, if the sum of:<br>a) the number of ASM Shares which would be issued were each outstanding offer with respect to ASM Shares, units of ASM Shares, and options to acquire unissued ASM |

| | |
|---|---|
| | Shares, under an employee share scheme to be accepted or exercised; and<br>b) the number of ASM Shares issued during the previous three years under the ASM Long-term Incentive Plan or any other employee share scheme extended to Eligible Employees,<br><br>but excluding any offer made, or option acquired, or ASM Shares issued by way of or as a result of Specified Excluded Offers, would exceed 5% of the total number of ASM Shares on issue at that time. |
| **Impact of takeover bid or scheme** | If:<br><br>a) a takeover bid (as defined in the Corporations Act) is made for Shares before the end of the Performance Period;<br><br>b) a Court orders a meeting to be held in relation to a proposed compromise or arrangement for the purposes of or in connection with a scheme for the reconstruction of the Company or its amalgamation with any other company or companies; or<br><br>c) any person becomes bound or entitled to acquire Shares under:<br>(i) section 414 of the Corporations Act; or<br>(ii) Chapter 6A of the Corporations Act,<br><br>the Board will make a determination as to how a Participant's unvested ASM Long-term Incentives and any vested but unexercised ASM Long-term Incentives will be dealt with, and, in doing so, may determine, in its absolute discretion that a Participant's unvested ASM Long-term Incentives vest (in whole or in part) and any vested but unexercised ASM Long-term Incentives are deemed to have been exercised and may impose any conditions on such vesting or exercising as it thinks fit.<br><br>In making its determination, the Board will have regard, without limitation, to the extent to which the Performance Criteria in respect of a Participant's ASM Long-term Incentives have been satisfied as at the relevant date. |
| **Adjustments upon alterations of capital** | Subject to the ASX Listing Rules, if ASM makes a new issue of securities or alterations to its capital by way of a rights issue, bonus issue or other distribution of capital, reduction of capital or reconstruction of capital, then the ASM Board may make adjustments to a Participant's ASM Long-term Incentives (including, without limitation, to the number of ASM Shares which may be acquired on vesting of the ASM Long-term Incentives) and/or the Performance Criteria on any basis its |

| | |
|---|---|
| | sees fit in its absolute discretion to ensure that no advantage or disadvantage accrues to the Participant as a result of such corporate actions.<br><br>Subject to the above adjustments, during the currency of any ASM Long-term Incentives and prior to vesting and the issue or transfer of ASM Shares in respect of those ASM Long-term Incentives, Participants are not entitled to participate in any new issue of securities of ASM as a result of their holding of ASM Long-term Incentives.<br><br>Notwithstanding any other provision of the rules of the ASM Long-term Incentive Plan dealing with adjustments, an adjustment must not be made under such adjustment rules unless it is consistent with the ASX Listing Rules. ASM may amend the terms of any ASM Long-term Incentive, or the rights of any Participant under the ASM Long-term Incentive Plan, to comply with the ASX Listing Rules applying at the time to any reorganisations of capital of ASM. |
| **Administration** | The ASM Board will manage and administer the ASM Long-term Incentive Plan, unless it decides to delegate the management and administration of the ASM Performances Right Plan, and any of its powers or discretions under the ASM Long-term Incentive Plan, to a committee. |
| **Amendment of the ASM Long-term Incentive Plan** | The ASM Board may by written instrument amend all or any of the provisions of the ASM Long-term Incentive Plan, with retrospective effect, provided that the amendment does not materially reduce the rights of any Participant as they existed before the date of amendment. The ASM Long-term Incentive Plan provisions do, however, provide that in limited circumstances (for example, for the purpose of complying with relevant legislation or the ASX Listing Rules) amendments may be made even if they materially reduce the rights of a Participant. |

## 6.12 Selected pro forma financial information

ASM pro forma financial information is set out in Section 7 of this Demerger Booklet.

## 6.13 Dividend policy

The ASM dividend policy will be determined by the ASM Board at its discretion, having regard to the status of ASM's operations and balance sheet and forward looking strategy. However, it is not anticipated that ASM will be in a position to pay any dividends in the near or medium term.

## 6.14 Material contracts

Set out below is a non-exhaustive summary of the key terms of the material contracts to ASM.

(a) RMR Technology Joint Venture Agreement

On 29 July 2019 ASM entered into an incorporated joint venture with Ziron Tech to jointly develop and commercialise patented metallisation technology for the process of zirconium and hafnium oxides into pure metals. The technology will be further developed and tested at a pilot plant in Daejon, Republic of Korea, with a view to preparing a feasibility study to assess the potential commercialisation and sale of zirconium and hafnium metals into world-wide markets.

The joint venture established a new Korean company, RMR Tech. ASM acquired a 10% interest in RMR Tech with Ziron Tech retaining a 90% interest. Funds from ASM's acquisition will be used for the construction and operation of the pilot plant.

There are three key agreements which govern the joint venture, summarised below. All three agreements are subject to the law of the Republic of Korea with disputes referred to arbitration in Singapore.

(i) RMR Shareholders' Agreement

Board composition and joint control

The RMR Shareholders' Agreement (**RMR SHA**) governs the conduct of the shareholders of RMR and provides certain minority shareholder protections for ASM. The RMR board is comprised of two ASM directors and two Ziron Tech directors (**RMR Board**). RMR Board meetings are conducted quarterly.

Sublicensing of technology

The technology may be sublicensed on terms agreed by the RMR Board with profits distributed according to the respective shareholdings.

Lending

ASM may provide lending of up to US$600,000 to RMR Tech, for on-lending to Ziron Tech to meet co-commitment requirements for Korean government funding, and for further working capital for RMR Tech. These loans may be converted to equity in RMR Tech where not repaid within three years at the original investment par value of US$600,000. This lending facility was provided due to third party creditors potentially holding rights to the technology in the event of Ziron Tech's insolvency. As at 30 April 2020, the total amount of lending facility provided to Ziron Tech was US$573,489.

Termination

The RMR SHA may be terminated in the following circumstances:

(A) material default where such default is capable of remedy and not remedied within 20 days;

(B) a party is insolvent;

(C) a change of control of a party occurs; or

(D) where for any reason a shareholder is prevented by law from being a shareholder.

Full written consent for the Demerger has been obtained from Ziron Tech.

(ii) Technology Commercialisation Licence

This licence provides for the commercialisation of the technology following the pilot plant testing phase. Upon the technology being proven feasible at the RMR Tech pilot plant as confirmed via the feasibility study, ASM may elect to construct a commercial scale plant for the production of zirconium and hafnium metals under an exclusive licence.

Licence Fees and Royalties

A one-off licence fee of US$2,275,000 is payable to Ziron Tech. Following establishment of a commercialisation plant and obtaining sales revenues, royalties of 7.5% of net revenue are payable to RMR Tech where gross margin exceeds 15%. Royalties are reduced to 5% of net revenue where gross margin is under 15%. Both royalty rates will reduce by 50% after total royalty payments of US$20,000,000 have been made.

Termination

There are provisions which govern the situation where the feasibility study fails to prove the technology is viable. Where this occurs, the following provisions are followed:

(A) the parties may agree on a further feasibility study to prove viability of the technology on terms including cost and duration as mutually agreed by the parties;

(B) where the parties cannot agree to a further feasibility study the licensor (RMR Tech) within a 24 month period may appoint an alternative licensee for the purposes of commercialising the technology;

(C) where the licensor elects to appoint a new licensee, ASM may match the terms of the new licensee and elect to continue as the exclusive licensee on those terms for the purposes of commercialising the technology; and

(D) where following a 24 month period lapsing and a new feasibility study is not agreed and no alternative licensee has been appointed, either party may terminate the licence.

Additionally, the licence includes standard terms providing for termination on grounds of unremedied material breach and insolvency.

Licence for all metal products

An amendment to the Technology Commercialisation Licence was agreed on 13 February 2020 extending the exclusive commercialisation licence to all other non-zirconium and hafnium metal products. This allows for the exclusive commercialisation of other metals including rare earth elements and other Dubbo Project products using the patented process. The parties have agreed to cap licence fees for the development of all metals (including zirconium and hafnium) to US$10,000,000. Royalty rates shall be agreed by the parties on a case by case basis but which in each case will be capped at the rates applicable to the zirconium and hafnium licence. Within these agreed limits, licence fees and royalties applicable to each product shall be determined based upon the particular market economics for each product.

(iii) Deed of Restated Technology Licence

This agreement confers an exclusive licence for the technology from the patent owners, Ziron Tech, to RMR. This secures joint control of the technology and all related intellectual property to ASM via its joint control of RMR. All new intellectual property related to the patented process developed as part of the joint venture will vest in RMR and new world-wide patent applications may be made by RMR for all patentable new intellectual property.

Termination

The licence includes standard terms providing for termination on grounds of unremedied material breach and insolvency.

(b) ANSTO – Intellectual Property Agreement

(i) Technology Agreement 2004

Since 2004 process technology required for the Dubbo Project and related intellectual property has been developed and tested at the Australian Nuclear Science and Technology Organisation (**ANSTO**) laboratories. An agreement has been in force since that time which reserves ownership of all intellectual property related to the Dubbo Project to ASM. Significant innovations to this technology contributed by ANSTO are the property of ANSTO. A licence is granted to ASM to apply such improvements for the purposes of the Dubbo Project.

(ii) Heads of Agreement 2020

Given the substantial development of the Dubbo Project and related technology since 2004 including the recent establishment of the Korean Joint Venture a heads of agreement was executed between ASM and ANSTO on 13 February 2020. The Heads of Agreement defines the project's intellectual property and designates ownership, licencing and respective rights of use between the parties with a view to settling the terms of a licence once project activities are further defined and scheduled. The two main categories of intellectual property related to ASM activities and respective rights are described below:

| Technology | Ownership | Licence |
|---|---|---|
| **Dubbo Project Zirconium solvent extraction Process** | Proprietary intellectual property and know-how jointly owned by ANSTO and ASM.<br><br>Patent(s) – to be jointly owned by ANSTO and ASM – equal undivided share. | ANSTO covenant not to commercially exploit its proprietary IP in Technology A – including rights under patent applications/patents granted.<br><br>ANSTO retain rights for internal (non-commercial) research.<br><br>Ownership of improvements to a party's background/existing IP vests in original owner of the background/existing IP.<br><br>Licence to ANSTO know-how required for use of Technology – ANSTO retain rights for use of ANSTO developed know-how including in providing services to third parties. |
| **Solvent extraction process to Produce High Purity Zirconia and Hafnia** | ANSTO proprietary intellectual property and know-how.<br><br>Patent(s) – to be owned by ANSTO. | ANSTO grants exclusive licence to ASM and covenants not to commercially exploit Technology B.<br><br>ANSTO retain rights for internal (non-commercial) research.<br><br>Ownership of improvements to ANSTO's background/existing IP vests in ANSTO.<br><br>Ownership of improvements/innovations/new patents derived from Technology A patent(s) vests in creator of such improvements. |

(iii) Reimbursement and commercial terms

Payments are as set out in accordance with two phases in accordance with the project stages of development.

(A) Phase 1 (years 1 – 3) addresses the first testing phase of the project prior to construction and commercialisation. Following payment of a A$100,000 up front fee, ASM may elect to either:

(aa) pay a further A$100,000 annual licence fee with ANSTO research and development provided on a time and materials basis; or

(bb) commit to A$300,000 per annum take or pay commitment for research and development services inclusive of the annual licence fee.

(B) Phase 2 (years 4 – 13) addresses the project commencement and commercialisation stage which provides for a ten year commercialisation licence. ASM may elect to either:

(aa) pay A$2,000,000 licence fee with a take or pay commitment of A$250,000 per annum on R & D services for 4 years; or

(bb) pay $2,500,000 licence fee with all R&D support on a time and materials basis.

A comprehensive licence drafted in accordance with the Heads of Agreement principles is to be entered into between the parties. This licence is currently under discussion and review.

(c) Treibacher Joint Venture

In July 2013 ASM entered into a joint venture framework agreement (**Framework Agreement**) with Austrian company Treibacher to develop and commercialise technologies related to the processing of niobium pentoxide concentrate into ferroniobium metal. Alkane provided a parent company guarantee to Treibacher as part of the contracting arrangements with ASM. However, Alkane has secured a release from Treibacher in relation to the parent company guarantee.

The Framework Agreement provides for the initial development of the technology, product feasibility studies and design of a process plant prior to Dubbo Project commencement. Following commercial and technical feasibility being proven and commencement of Dubbo Project construction, three agreements come into effect. These are:

(i) ASM – Treibacher Joint Venture Company

A joint venture company shall be incorporated in Australia for the purposes of owning, construction and operation the ferroniobium processing plant. Niobium pentoxide shall be provided by ASM and processed into Ferroniobium to be sold via the joint venture company. It is proposed that Treibacher and ASM will each hold a 50 per cent share with equal board representation and thereby joint control of the company.

(ii) Sales Agency agreement

The JV Company shall enter into a sale agency agreement which gives Treibacher exclusive marketing and sales agency for the sale of ferroniobium products for an indefinite term. Treibacher shall receive 5 per cent commission on all sales.

(iii) Off-take Agreement

ASM is proposing to supply niobium pentoxide concentrate at agreed quantities and prices to the joint venture company for processing into ferroniobium. The Off-take Agreement also provides an option for Treibacher to purchase up to 200 tonnes per year of yttrium oxide at prevailing prices determined by the average of ASM's other customers' prices.

These joint venture agreements do not come into effect where the ASM Board elects not to commence construction of the Dubbo Project. As of 30 June 2014, either party may elect to terminate the Framework Agreement in the absence of the condition precedent for project commencement being met. Both parties have currently elected to keep the Framework Agreement on foot. Whilst the condition precedent for project commencement remains unmet, in the event ASM wish to terminate it may be liable to pay €2,000,000 to Treibacher. Where Treibacher elects to terminate the agreement, ASM shall only be liable to pay €1,000,000 for intellectual property developed by the parties for the ferroniobium process. Where ASM elects not to take the intellectual property, it is not liable to make any payments to Treibacher.

(d) Zirconium Marketing Contract

In August 2016 ASM entered into a marketing and sales agreement with English company Minchem for a five year term. Minchem have considerable experience marketing zirconium oxides and related products and chemicals. The agreement appoints Minchem as sales agent to engage potential off-take partners for the purchase of zirconium oxide products for a quarterly fee of $A25,000. As part of their services Minchem must provide a marketing report as well as present standard off-take terms and conditions to potential long-term off-take partners and generally assist negotiation.

(e) Options for Dubbo land purchases

ASM has entered into agreements with five Dubbo landowners which provide options for the landowners to require that ASM purchases their property where certain project milestones are reached (**Put Options**). Each Put Option is described further below:

(i) Block A (estimated value A$1,000,000)

ASM has committed to purchase a block of land for an estimated price of A$1,000,000 from the landowner as part of an agreement where it purchased a property in 2014 that was required for the Dubbo Project. The landowners have exercised the put option and the settlement date for purchase of this property is 2 November 2020 when the purchase price will be payable. The actual price shall be determined as 1.8 times the average of two valuations current at August 2020 (valuation of Block A on 19 August 2015 was $582,000). It is currently estimated that when subject to the agreed 1.8 multiplier the valuations will set a purchase price of around $1,000,000.

(ii) Block B (estimated value A$3,670,000)

At any time during the period of ten years following the commissioning of the Dubbo Project (ie, following the completion of project construction), the landowner may require ASM to purchase the remaining portion of the property located on Block B. The final price shall be determined upon an agreed formula of 1.5 times current market value at the time of exercise.

(iii) Block C (estimated value A$660,000)

The landowner may require ASM to purchase the property at any time during a five year period following the grant of a mining lease on 17 December 2015. This option will expire 17 December 2020.

(iv) Block D (estimated value A$1,100,000)

The landowner may require ASM to purchase the property located at Block D at any time for the duration of the Dubbo Project mine life. The price shall be determined upon an agreed formula which is 1.8 times the average of two valuations at the time the option is exercised.

(v) Block E (estimated value A$220,000)

The landowner may require ASM to purchase the Block E parcel of land, as part of a particular project consent condition. Within three months of receiving a written request from the landowner ASM must make a binding written offer to purchase the land which must be based upon;

(A) prevailing market value of the property;

(B) all reasonable costs associated with the landowner relocating within the Dubbo region; and

(C) registration and regulatory costs, any legal and expert advice for determining the acquisition price.

A professional valuation shall be procured by both ASM and the landowner to determine price. Where the acquisition price cannot be agreed within the three month period, the matter is referred to the General Secretary of the Department of Planning, Industry and Environment for resolution.

(f) Demerger Deed, Intercompany Services Agreement and Restructure Deed

Summaries of the Demerger Deed, Intercompany Services Agreement and Restructure Deed are included in Section 8.6.

## 6.15 Health, safety, environment and community

ASM intends to retain and build on the corporate culture and ethos created at Alkane, namely, to optimise effectiveness and efficiency by maximising efforts going into commercialising the Dubbo Project and minimising overheads, and to shorten the time frame to success by staying focussed on this aim while at all times complying with environmental regulatory requirements.

ASM is committed to:

- ensuring a safe workplace for its employees and contractors, wherever it operates;
- complying with all environmental requirements and minimising the impact of its activities in the areas in which it operates; and
- engaging with the local communities to ensure its activities are compatible with expectations.

ASM will also build on Alkane's practices and adopt best practice work, health and safety policies as appropriate for ASM's operations as a development company comprised of a predominantly corporate workforce with minor farming and pilot plant operations. ASM management shall utilise its experience and involvement as an operational gold miner to proactively develop its policies as required for Dubbo Project development including construction and operations.

## 6.16 Litigation

As at the date of this Demerger Booklet, there is no material litigation involving ASM.

## 6.17 Property, plant and equipment

(a) Property

ASM currently owns 3,438 hectares of land which is required for the project site comprised of the properties listed below. Current use is predominantly dedicated to the Toongi Pastoral Company for primary production. Alkane's accounting policy is to record property at cost which totalled $22.1 million as at 31 December 2019.

| **Property** |
| --- |
| Grandale, 101R Benolong Road, Terrabella via Geurie NSW 2818 |
| Ugothery, 118R Benolong Rd, Benolong/Geurie NSW 2818 |
| 9 Dubbo Street, Toongi NSW (also 16R Toongi Rd) |
| Brassingtons, Toongi Road, Toongi NSW |
| 12R Toongi Road, Toongi |
| Wychitella, 4R The Springs Road, Toongi NSW |
| Pacific Hill, 13L The Springs Road, Toongi NSW |
| (Part) Glen Idol, Geurie NSW |
| Karingle, 65L Eulandool Road, Geurie NSW |
| Dowds Hill Trig Reserve |
| Toongi Valley, Toongi NSW |
| Adj to Glen Idol |

(b) Water Licences

Water licences are held by ASM to supply water for the Dubbo Project, including construction works and operations. ASM has access to an aggregate 2,076 mega litres. Accounting policy is to record these licences at cost and as at 31 December 2019, the total cost of water licences purchased to date was $4.6 million. The licences owned are summarised below:

| Water Access Licence ID | Mega litres |
|---|---|
| **High Macquarie / Cudgegong** | |
| 19994 | 22 |
| 9191 | 218 |
| 3396 | 282 |
| 36409 | 300 |
| 3412 | 34 |
| **General Macquarie / Cudgegong** | |
| 30259 | 750 |
| **Upper Macquarie Alluvial Groundwater source** | |
| 37691 | 470 |
| **Total:** | **2,076** |

# 7. FINANCIAL INFORMATION OF ASM

## 7.1 Purpose

The financial information contained in this Section 7 contains the financial information of ASM and has been prepared in connection with ASM's application to be admitted to the Official List of the ASX following the implementation of the Demerger.

This section contains the following financial information:

(a) the historical financial information of ASM (hereafter the **ASM Historical Financial Information**), comprising:

   (i) the historical income statements for the financial years ended 30 June 2018 and 30 June 2019 and for the half years ended 31 December 2018 and 31 December 2019;

   (ii) the historical balance sheet as at 31 December 2019; and

   (iii) the historical cash flow statements for the financial years ended 30 June 2018 and 30 June 2019 and for the half years ended 31 December 2018 and December 2019;

(b) the pro forma historical financial information of ASM (hereafter the **ASM (Post-Demerger) Pro Forma Historical Financial Information**), comprising:

   (i) the pro forma historical income statements for the financial years ended 30 June 2018 and 30 June 2019 and for the half years ended 31 December 2018 and 31 December 2019;

   (ii) the pro forma historical balance sheet as at 31 December 2019; and

   (iii) the pro forma historical cash flow statements for the financial years ended 30 June 2018 and 30 June 2019 and for the half years ended 31 December 2018 and 31 December 2019.

The ASM Historical Financial Information and the ASM (Post-Demerger) Pro Forma Historical Financial Information together form the **ASM Financial Information**.

The ASM Financial Information presented in this Section 7 should be read in conjunction with the risk factors incorporated under Section 3.4 of this Demerger Booklet and other information in this Demerger Booklet. Investors should note that past results are not a guarantee of future performance.

All amounts disclosed in this section are presented in Australian dollars.

## 7.2 Basis of preparation and presentation of the ASM Financial Information

(a) Overview

The ASM Board is responsible for the preparation and presentation of the ASM Financial Information. The ASM Financial Information included in this Demerger Booklet is intended to present potential investors with information to assist them in understanding the historical financial performance, financial position and cash flows of ASM.

The ASM Financial Information is presented in an abbreviated form and does not include all of the presentation, disclosures, statements and comparative information as required by the AAS applicable to general purpose financial reports prepared in accordance with the Corporations Act. The Investigating Accountant has prepared an Investigating Accountant's Report in respect of the ASM historical and pro forma historical balance sheets, a summary of which is included in Section 7.6 of this Demerger Booklet.

Figures, amounts, percentages, estimates and calculations are subject to the effect of rounding. Accordingly, totals in tables may not add due to rounding. The financial information in this section should be read in conjunction with the risk factors set out in Section 1.9 of this Demerger Booklet.

(b) Preparation of ASM Historical Financial Information

The ASM Historical Financial Information has been derived from the interim financial statements of ASM for the half year ended 31 December 2019 including comparatives for the half year ended 31 December 2018 and the full year financial statements of ASM for the financial years ended 30 June 2018 and 30 June 2019. The interim financial statements of ASM were reviewed by PricewaterhouseCoopers in accordance with the Australian Auditing Standards. PricewaterhouseCoopers issued an unqualified review opinion on these interim financial statements with an emphasis of matter – basis of accounting and restriction on use. The full year financial statements of ASM were audited by PricewaterhouseCoopers in accordance with the AAS. PricewaterhouseCoopers issued an unqualified audit opinion on these full year financial statements with an emphasis of matter – basis of accounting and restriction on use. The financial reports were prepared for the purposes of meeting the requirements of Australian Strategic Materials Ltd and its members in the preparation of the financial information in this Demerger Booklet. The ASM financial statements for these periods are available from ASM's website (www.asm-au.com).

The ASM Historical Financial Information has been prepared in accordance with the recognition and measurement principles prescribed in Australian Auditing Standards (including Australian Accounting Interpretations), adopted by the AASB, which comply with the recognition and measurement principles of the IFRS and interpretations adopted by the IASB.

Australian Auditing Standards are subject to amendments from time to time, and any such changes may impact the balance sheet of ASM Post-Demerger. In addition, following the Demerger, ASM may be impacted by accounting policies adopted which are different to existing policies, and differences in interpretations of AAS.

In preparing the ASM Financial Information, the accounting policies of ASM have been applied.

(c) Preparation of ASM Pro Forma Historical Financial Information

The ASM (Post-Demerger) Pro Forma Historical Financial Information has been prepared solely for the purpose of inclusion in this Demerger Booklet. By its nature, pro forma historical financial information is illustrative only. Consequently, the ASM (Post-Demerger) Pro Forma Historical Financial Information does not purport to reflect the actual or future financial performance or cash flows for the relevant period, nor does it reflect the actual financial position of ASM at the relevant time.

The ASM (Post-Demerger) Pro Forma Historical Financial Information has been prepared in accordance with AAS and has been prepared on a consistent basis with the accounting policies set out in ASM's interim financial statements for the half year ended 31 December 2019.

The ASM (Post-Demerger) Pro Forma Historical Financial Information has been derived from ASM Historical Financial Information and adjusted for the pro forma adjustments described below.

The ASM (Post-Demerger) Pro Forma Historical Information includes pro forma adjustments to reflect the impact of certain transactions as if they occurred at 31 December 2019 in the pro forma historical balance sheet and immediately prior to 1 July 2017 in the pro forma historical income statements and pro forma historical cash flows.

The AAS are subject to amendments from time to time. During the historical periods presented, ASM have adopted AASB 15 *Revenue from Contracts with Customers* effective from 1 January 2018 and AASB 16 *Leases,* effective from 1 January 2019. ASM have assessed the impact of AASB 15 and AASB 16 on periods prior to adoption and noted no material impact as such pro forma adjustments have not been reflected in the historical periods prior to adoption, for these items.

Pro forma adjustments have been made to ASM for:

(i) the internal restructure and forgiveness of the intercompany loan prior to the Demerger;

(ii) the accounting for the Demerger;

(iii) additional standalone corporate costs of ASM including corporate staff, company secretarial costs, ASX listing fees, share registry costs, audit fees, insurance and the costs of maintaining a separate board of directors; and

(iv) the expected tax effects of the pro forma adjustments outlined in the pro forma historical income statements.

The ASM pro forma historical cash flow statements set out in Section 7.7 are presented as cash flows after net capital expenditure, finance costs and tax.

## 7.3 ASM historical income statements

Set out below are ASM's historical income statements for the financial years ended 30 June 2018 and 30 June 2019 and the half years ended 31 December 2018 and 31 December 2019.

**Table 7.3: ASM historical income statements**

| | Half-year ended 31 December 2018 | Half-year ended 31 December 2019 | Year ended 30 June 2018 | Year ended 30 June 2019 |
|---|---|---|---|---|
| Other income | 818,367 | 733,283 | 2,026,475 | 1,763,484 |
| Pastoral company expenses | (601,433) | (456,087) | (894,449) | (1,184,711) |
| Other expenses | (490,098) | (243,610) | (864,835) | 108,259 |
| Exploration and evaluation expenditure written off | - | - | (6,878) | (444,135) |
| Finance charges[1] | (1,703,628) | (1,782,038) | (3,291,158) | (3,417,610) |
| **Profit before income tax** | **(1,976,792)** | **(1,748,452)** | **(3,030,845)** | **(3,174,713)** |
| | | | | |
| Income tax benefit/(expense) | 82,436 | (10,076) | 74,831 | (72,869) |
| **Net profit after income tax** | **(1,894,356)** | **(1,758,528)** | **(2,956,014)** | **(3,247,582)** |
| | | | | |
| **EBITDA[2]** | **(578,611)** | **(142,745)** | **(352,431)** | **(328,457)** |
| **Intercompany interest per AASB92** | **(1,703,628)** | **(1,782,038)** | **(3,267,236)** | **(3,417,610)** |
| **Profit after tax, excluding intercompany interest[3]** | **(190,728)** | **23,510** | **311,222** | **170,028** |

1. ASM's historical finance charges expense includes interest calculated per AASB 9 in relation to the intercompany loan between Alkane and ASM.

2. Represents historical EBITDA from continuing operations

3. ASM's historical profit after tax, excluding intercompany interest, reconciles to the ASM historical income statements deconsolidated from the Alkane Group, in the Alkane pro forma income statements shown in Section 5.5.

## 7.4 Management commentary on historical results

ASM continues to focus on product development and seeking financing, strategic partner (or partners) and off-take agreements for the Dubbo Project with the majority of the net asset position on the balance sheet comprising exploration and evaluation assets.

## 7.5 ASM (Post-Demerger) pro forma historical income statements

Set out below are the ASM (Post-Demerger) pro forma historical income statements for the years ended 30 June 2018 and 30 June 2019 and the half years ended 31 December 2018 and 31 December 2019.

**Table 7.5A: ASM (Post-Demerger) pro forma historical income statements**

| | HY18 | HY19 | FY18 | FY19 |
|---|---|---|---|---|
| Other income | 818,367 | 733,283 | 2,026,475 | 1,763,484 |
| Pastoral company expenses | (601,433) | (456,087) | (894,449) | (1,184,711) |
| Other expenses | (1,299,223) | (1,052,735) | (2,483,085) | (1,509,991) |
| Exploration and evaluation expenditure written off | - | - | (6,878) | (444,135) |
| Finance charges[1] | | | (23,922) | |
| **Profit before income tax** | **(1,082,289)** | **(775,539)** | **(1,381,859)** | **(1,375,353)** |
| Income tax benefit/(expense)[2] | 82,436 | (10,076) | 74,831 | (72,869) |
| **Net profit after income tax** | **(999,853)** | **(785,615)** | **(1,307,028)** | **(1,448,222)** |

1. Intercompany interest charges on intercompany loan per AASB 9 calculations have been removed from above pro forma. Intercompany finance charges recognised in the historical income statement were for accounting purposes only are detailed in the table below. The intercompany loan agreements do not charge interest on the intercompany loan and there has been no cash interest paid or payable.

2. ASM's income tax benefit / (expense) has not been adjusted on a pro forma basis as any adjustment will be trivial in nature to the figures presented.

| | HY18 | HY19 | FY18 | FY19 |
|---|---|---|---|---|
| Intercompany interest per AASB9 | 1,703,628 | 1,782,038 | 3,267,236 | 3,417,610 |

**Reconciliation of ASM historical income statements to ASM (Post-Demerger) pro forma historical income statements**

Reconciliations of the ASM historical income statements to the ASM (Post-Demerger) pro forma historical income statements for the years ended 30 June 2018 and 30 June 2019 and the half years ended 31 December 2018 and 31 December 2019 are shown in the following table.

**Table 7.5B: Reconciliation of ASM historical profit after tax to ASM (Post-Demerger) pro forma historical profit after tax**

| | HY18 | HY19 | FY18 | FY19 |
|---|---|---|---|---|
| Historical profit before tax[1] | (1,976,792) | (1,748,452) | (3,030,845) | (3,174,713) |
| Finance charges[1] | 1,703,628 | 1,782,038 | 3,267,236 | 3,417,610 |
| Pro forma net additional standalone operating costs[2] | (809,125) | (809,125) | (1,618,250) | (1,618,250) |
| **Pro forma profit before income tax** | **(1,082,289)** | **(775,539)** | **(1,381,859)** | **(1,375,353)** |

1. Historical profit before tax includes capitalised intercompany interest charges between Alkane and ASM that have been calculated in accordance with AASB 9.

2. Following implementation of the Demerger, ASM will be a standalone entity listed on the ASX. As a standalone entity, it is estimated that ASM's net additional operating costs will be in the order of $1,618,250 per annum. These costs include corporate staff, company secretarial costs, ASX fees, insurances, audit, information technology and board fees that have been previously provided for by Alkane.

## 7.6 ASM historical balance sheet and ASM (Post-Demerger) pro forma historical balance sheet as at 31 December 2019

(a) Basis of preparation

The ASM (Post-Demerger) pro forma historical balance sheet as at 31 December 2019 set out below is provided for illustrative purposes only and is prepared on the assumption that the Demerger was implemented at 31 December 2019. If approved, the Demerger is expected to be implemented in July 2020. The ASM Group comprises ASM and each of its subsidiaries. The ASM Pro Forma Historical Balance Sheet does not illustrate the financial position that may be contained in future financial statements of ASM following the Demerger.

In preparing the ASM Pro Forma Historical Balance Sheet, no adjustments have been made for potential changes in the cost or operating structure resulting from the Demerger or to reflect the trading of ASM since 31 December 2019 or the fair value movements of financial assets post 31 December 2019 however adjustments have been made for capital restructures that will take place as a result of the Demerger.

### Table 7.6: ASM historical balance sheet and ASM pro forma historical balance sheet as at 31 December 2019

| | Historical Balance Sheet | | | Pro Forma Historical Balance Sheet |
|---|---|---|---|---|
| | ASM Group 31 December 2019 | Cash & Working Capital [1] | Share capitalisation & Intercompany Loan[2] | ASM Group 31 December 2019 |
| **CURRENT ASSETS** | | | | |
| Cash and cash equivalents | 17,311,735 | 2,688,265 | - | **20,000,000** |
| Receivables | 22,287 | - | - | **22,287** |
| Consumables | 3,662 | - | - | **3,662** |
| Biological assets | 37,402 | - | - | **37,402** |
| **Total current assets** | **17,375,086** | **2,688,265** | **-** | **20,063,351** |
| | | | | |
| **NON-CURRENT ASSETS** | | | | |
| Exploration and evaluation* | 89,541,515 | - | - | **89,541,515** |
| Property, plant & equipment | 27,519,685 | - | - | **27,519,685** |
| Investments** | 1,856,886 | - | - | **1,856,886** |
| Biological assets | 267,758 | - | - | **267,758** |
| | | | | |
| Other financial assets | 20,000 | - | - | **20,000** |
| **Total non-current assets** | **119,205,844** | **-** | **-** | **119,205,844** |
| **TOTAL ASSETS** | **136,580,930** | **2,688,265** | **-** | **139,269,195** |
| **CURRENT LIABILITIES** | | | | |
| Trade and other payables | 227,378 | - | - | **227,378** |
| Loans from related party | 4,570,226 | 2,688,265 | (7,258,491) | - |
| Provisions | 11,882 | - | - | **11,882** |
| **Total current liabilities** | **4,809,486** | **2,688,265** | **(7,258,491)** | **239,260** |
| **NON-CURRENT LIABILITIES** | | | | |
| Loans from related party | 79,463,348 | - | (79,463,348) | **-** |
| Deferred tax liability | 26,003,391 | - | - | **26,003,391** |
| Provisions | 7,609 | - | - | **7,609** |
| **Total non-current liabilities** | **105,474,348** | **-** | **(79,463,348)** | **26,011,000** |
| **TOTAL LIABILITIES** | **110,283,834** | **2,688,265** | **(86,721,839)** | **26,250,260** |
| **NET ASSETS/(LIABILITIES)** | **26,297,096** | **-** | **86,721,839** | **113,018,935** |
| **EQUITY** | | | | |
| Issued capital | **1** | | 113,000,000 | **113,000,001** |
| Equity contribution | **39,873,309** | | (26,278,161) | **13,595,148** |
| Retained (losses)/profits | **(13,576,214)** | - | - | **(13,576,214)** |
| **TOTAL EQUITY** | **26,297,096** | **-** | **86,721,839** | **113,018,935** |

*Capitalised exploration and evaluation expenditure is supported by management's assessment that ultimately financing of the project is achieved at a rate that results in this amount be recoverable for the shareholders.
**Includes investment in RMR Tech.

(b) Pro forma adjustments

Details of the pro forma adjustments applied to the ASM historical balance sheet as at 31 December 2019 are as follows:

(1) Cash and Working Capital

As part of the Demerger, there is an agreement between Alkane and ASM pursuant to which has provided additional cash to ASM such that ASM's cash balance was $20,000,000 on 1 April 2020.

(2) Share capitalisation and Intercompany loan

In accordance with the Demerger Deed and Restructure Deed all intercompany loans between Alkane and ASM will be capitalised and/or forgiven as part of the Demerger.

As at 31 December 2019, the intercompany loans are AUD denominated and the current liability is repayable on demand and the non-current liability component repayable by 22 March 2027. The loan facility attracts no interest.

The total non-current liability loan repayable is $110,000,000, with the amount presented in the 31 December 2019 historical balance sheet of $79,463,348 representing the discounted value of the loan as at balance date. As part of the restructure the total ASM loans repayable to Alkane as at 31 December 2019 will be capitalised and/or forgiven. The total ASM intercompany loan consists of:

(A) $4,570,226 (current liability);

(B) $110,000,000 (face value of the non-current liability); and

(C) $2,688,265 (the additional cash provided to ASM to bring ASM's cash balance to $20,000,000 on 1 April 2020, which is provided in Adjustment 1 shown in the ASM pro forma balance sheet).

The amount capitalised to share capital ($113,000,000) represents the management's valuation of the ASM business with the remainder amount recognised in the equity contribution reserve. The Demerger Deed and Restructure Deed are summarised in Section 8.6.

## 7.7 ASM historical cash flow statements

Set out below are ASM's historical cash flow statements for the years ended 30 June 2018 and 30 June 2019 and half years ended 31 December 2018 and 31 December 2019.

**Table 7.7: ASM historical cash flow statements**

| | Half-year ended 31 December 2018 | Half-year ended 31 December 2019 | Year ended 30 June 2018 | Year ended 30 June 2019 |
|---|---|---|---|---|
| **EBITDA[1]** | **(578,611)** | **(142,745)** | **(352,431)** | **(328,457)** |
| Other items[2] | 378,642 | 127,519 | 863,294 | 844,001 |
| Changes in working capital | 117,617 | 548,233 | 449,947 | (660,683) |
| **Operating cash flows before capital expenditure, financing costs and tax** | **(82,352)** | **533,007** | **960,810** | **(145,139)** |
| Capital expenditure | (5,124,426) | (3,237,191) | (9,559,599) | (6,211,154) |
| **Operating cash flows after net capital expenditure, before financing costs and tax** | **(5,206,778)** | **(2,704,184)** | **(8,598,789)** | **(6,356,293)** |
| Financing costs | (19,103) | (325) | (42,475) | (20,141) |
| **Net free cash flows[3]** | **(5,225,881)** | **(2,704,509)** | **(8,641,264)** | **(6,376,434)** |
| **Net proceeds /(repayments) of borrowings** | **5,555,574** | **(6,952,043)** | **1,285,269** | **7,027,374** |
| **Net increase /(decrease) in cash and cash equivalents** | **329,693** | **(9,656,552)** | **(7,355,996)** | **650,940** |
| **Cash and cash equivalents at beginning of period** | **26,317,347** | **26,968,287** | **33,673,343** | **26,317,347** |
| **Cash and cash equivalents at end of period** | **26,647,040** | **17,311,735** | **26,317,347** | **26,968,287** |

1. Represents historical EBITDA from continuing operations.

2. Includes the following non-cash items:

| | Half-year ended 31 December 2018 | Half-year ended 31 December 2019 | Year ended 30 June 2018 | Year ended 30 June 2019 |
|---|---|---|---|---|
| Interest received (cash) | 326,133 | 214,921 | 653,116 | 643,572 |
| Exploration provision or write off | - | - | 6,878 | 444,135 |
| Change in value of biological assets | 52,509 | (87,402) | 203,300 | (243,706) |
| **Total other items** | 378,642 | 127,519 | 863,294 | 844,001 |

3. There are no cash income tax outflows.

## 7.8 ASM (Post-Demerger) pro forma historical cash flow statements

Set out below are the ASM (Post-Demerger) pro forma cash flows for the years ended 30 June 2018 and 30 June 2019 and half years ended 31 December 2018 and 31 December 2019. The cash flows presented below are net cash flows from operating activities and investing activities.

**Table 7.8A: ASM (Post-Demerger) pro forma cash flow statements**

| | Half-year ended 31 December 2018 | Half-year ended 31 December 2019 | Year ended 30 June 2018 | Year ended 30 June 2019 |
|---|---|---|---|---|
| **EBITDA**[1] | (1,387,735) | (951,870) | (1,970,681) | (1,946,706) |
| Other items[2] | 378,642 | 127,519 | 863,294 | 844,001 |
| Changes in working capital | 117,617 | 548,233 | 449,947 | (660,683) |
| **Operating cash flows before capital expenditure, financing costs and tax** | (891,476) | (276,118) | (657,440) | (1,763,388) |
| Capital expenditure | (5,124,426) | (3,237,191) | (9,559,599) | (6,211,155) |
| **Operating cash flows after net capital expenditure, before financing costs and tax** | (6,015,902) | (3,513,309) | (10,217,039) | (7,974,543) |
| Financing costs | (19,103) | (325) | (42,475) | (20,141) |
| **Net free cash flows**[3] | **(6,035,005)** | **(3,513,634)** | **(10,259,514)** | **(7,994,684)** |

1. Represents pro forma historical EBITDA from continuing operations as well as additional standalone costs for ASM as a listed entity.

2. Includes exploration expensed, movement in biological asset values and other minor non-cash items.

3. There are no cash income tax outflows.

As shown in ASM's historical pro forma balance sheet in Table 7.6 and disclosed elsewhere in this Demerger Booklet, Alkane has provided additional cash to ASM such that ASM's cash balance was $20,000,000 on 1 April 2020.

**Reconciliation of ASM historical cash flow statements to ASM (Post-Demerger) pro forma historical cash flow statements**

Reconciliations of the ASM historical cash flows to the ASM (Post-Demerger) pro forma historical cash flows for the years ended 30 June 2018 and 30 June 2019 and half years ended 31 December 2018 and 31 December 2019 are shown in the following tables.

**Table 7.8B: Reconciliation of ASM historical cash flows to ASM (Post-Demerger) pro forma historical cash flows**

| | Half-year ended 31 December 2018 | Half-year ended 31 December 2019 | Year ended 30 June 2018 | Year ended 30 June 2019 |
|---|---|---|---|---|
| **Historical net free cash flows** | (5,225,881) | (2,704,509) | (8,641,264) | (6,376,434) |
| Pro forma net additional standalone operating costs[1] | (809,125) | (809,125) | (1,618,250) | (1,618,250) |
| **Pro forma net free cash flows** | **(6,035,005)** | **(3,513,634)** | **(10,259,514)** | **(7,994,684)** |

1. Following implementation of the Demerger, ASM will be a standalone entity listed on the ASX. As a standalone entity, ASM will incur net additional operating costs of $1,618,250 per annum. These costs include corporate staff, company secretarial costs, ASX fees, insurances, audit, information technology and board fees that have been previously provided for by Alkane.

## 7.9 Critical accounting judgements, estimates and assumptions

The preparation of the financial information requires management to make judgements, estimates and assumptions that affect the reported amounts in the financial statements. Management also needs to exercise judgement in applying the ASM Group's accounting policies. Management continually evaluates its judgements and estimates in relation to assets, liabilities, contingent liabilities, revenue and expenses. Management bases its judgements, estimates and assumptions on historical experience and on other various factors, including expectations of future events, management believes to be reasonable under the circumstances. The resulting accounting judgements and estimates will seldom equal the related actual results. The judgements, estimates and assumptions that have a significant risk of causing a material adjustment to the carrying amounts of assets and liabilities within the next financial year are discussed below.

(a) Carrying value of non-current assets

Non-current assets included capitalised exploration and evaluation expenditures and mine properties. The consolidated entity has capitalised significant exploration and evaluation expenditure on the basis that, either;

(i) such expenditure is expected to be recouped through future successful development (or alternatively sale) of the areas of interest concerned; or

(ii) it is not yet possible to assess whether such expenditure will be recouped and activities planned to enable that determination.

## 7.10 Material changes in financial position since most recent balance sheet

No matters or circumstances have arisen since 31 December 2019 that has significantly affected, or may significantly affect ASM's operations, the results of those operations, or the consolidated entity's state of affairs in future financial years.

## 7.11 Contingencies and commitments

ASM has contingent liabilities estimated at up to a value of $3,670,000 for the potential acquisition of parcels of land surrounding the Dubbo Project as at 31 December 2019. The amount to be paid is based upon a multiple of market values and is subject to variation. The landholders have the right to require Australian Strategic Materials (Holdings) Pty Ltd to acquire their property as provided for in the development consent conditions for the Dubbo Project or under agreement with Australian Strategic Materials (Holdings) Pty Ltd.

ASM has commitments estimated up to a value of $2,980,000 for the acquisition of several parcels of land surrounding the Dubbo Project as at 31 December 2019.

## 7.12 Shareholder equity

ASM will have approximately 119 million of ordinary shares on issue as at the Demerger Record Date, with an additional 3,000,000 ASM performance rights on issue (refer to Section 6.11 for details).

## 7.13 Taxation

ASM currently pays income tax as part of Alkane's group taxation arrangements. At the Demerger Implementation Date, ASM will exit Alkane's Australian income tax consolidated group in a manner that achieves a "clear exit" for any past or future tax obligations that may arise in respect of periods that ASM was a member of the Alkane Australian income tax consolidated group. A decision will be made by ASM post-separation from the income tax consolidated group, as to whether to form its own Australian income tax consolidated group. As a standalone group, the effective tax rate of ASM may vary from what it would have been if it had remained part of Alkane.

## 7.14 Dividend policy

The ASM dividend policy will be determined by the ASM Board at its discretion, having regard to the status of ASM's operations and balance sheet and forward looking strategy. However, it is not anticipated that ASM will be in a position to pay any dividends in the near or medium term.

# 8. DETAILS OF THE DEMERGER

## 8.1 Background

As explained elsewhere in this Demerger Booklet, Alkane is an Australian based diversified mining company with a mixture of gold production and exploration and critical materials projects, technology and development assets. The Demerger and listing of ASM on the ASX will allow ASM to focus on its critical materials business units and for Alkane to focus purely on the gold business unit. The Demerger will result in:

- each business unit being able to be valued separately and appropriately as opposed to the value of Alkane as a whole;
- transparency for investors (as gold and specialty metals have different risk profiles, different funding requirements and are in different geographical locations);
- more efficient and focused operating and capital structures for each business unit;
- equity and debt financing able to be developed for each business unit without any impact from the other business unit; and
- investors being able to match their equity risk to the corresponding geography and commodity.

## 8.2 Implementation of the Demerger

In summary, subject to the satisfaction or waiver of all relevant conditions for implementation of the Demerger (see Section 8.5 below), the Demerger will be effected by means of an in specie distribution of ASM Shares by Alkane to Alkane Shareholders, as follows:

(a) an in specie distribution of ASM Shares by Alkane to Eligible Shareholders; and

(b) the ASM Shares that would have otherwise been distributed to Ineligible Foreign Shareholders being transferred to the Sale Agent. The Sale Agent will sell these ASM Shares on the ASX and the net proceeds of sale are to be paid to the Ineligible Foreign Shareholders in accordance with their respective entitlements.

The means by which this in specie distribution is to be achieved is through the Capital Reduction and Demerger Dividend. The Capital Reduction and Demerger Dividend will be satisfied by the distribution and transfer of ASM Shares to the Eligible Shareholders and, in the case of Ineligible Foreign Shareholders, to the Sale Agent in accordance with the Demerger. As a consequence of this, Demerger Participants will not be required to pay cash for ASM Shares they receive under the Demerger.

ASM Shares will be distributed on the basis of one ASM Share for every five Alkane Shares held by an Alkane Shareholder as at the Demerger Record Date (rounded down to the nearest whole number). Alkane Shareholders will not have fractional entitlements to ASM Shares, and fractional entitlements will not be distributed, under the Demerger. Following implementation of the Demerger, Alkane will donate the net proceeds of sale of any ASM Shares which are not so distributed to a charity to be determined by the Alkane Board. The number of ASM Shares (for which the net proceeds of sale will be donated) will necessarily be less than the number of Alkane Shareholders as at the Demerger Record Date.

ASM will apply for admission to quotation of its ordinary shares to trade on the ASX. Trading in ASM Shares is expected to commence on 30 July 2020 on the ASX.

### 8.3 Eligible Shareholders

Alkane Shareholders whose addresses are shown in the Alkane Share Register on the Demerger Record Date as being in Australia or New Zealand will be Eligible Shareholders and will be entitled to have ASM Shares distributed to them.

### 8.4 Ineligible Foreign Shareholders

Alkane Shareholders whose addresses are shown in the Alkane Share Register on the Demerger Record Date as not being in Australia or New Zealand are Ineligible Foreign Shareholders for the purpose of the Demerger. Distribution of ASM Shares to Ineligible Foreign Shareholders under the Demerger is subject to the legal and regulatory requirements in their relevant overseas jurisdictions. Alkane has decided that it is unreasonable to distribute ASM Shares to Ineligible Foreign Shareholders, due to the substantial costs of complying with the legal and regulatory requirements in the various overseas jurisdictions.

As such, ASM Shares to which Ineligible Foreign Shareholders would otherwise be entitled under the Demerger will initially be transferred to the Sale Agent appointed by Alkane and will sold by the Sale Agent on behalf of the Ineligible Foreign Shareholders as soon as practicable after the date that ASM becomes listed on the ASX. The Sale Agent will sell the relevant ASM Shares on the ASX at such price or prices and on such other terms as the Sale Agent determines in its discretion (and at the risk of the Ineligible Foreign Shareholders), acting in good faith. The share price of ASM Shares after it is listed may be subject to fluctuation (assuming a liquid market exists) and, consequently, the net proceeds of the sale of those ASM Shares to ASM Shareholders may be more or less than the notional dollar value of the Distribution Amount. Following ASX admission to quotation of the ASM Shares, up-to-date information on the share price of ASM Shares will be available on the ASX website (www.asx.com.au) or from your personal stockbroker.

The Sale Agent will account to those Ineligible Foreign Shareholders for their respective proportions of the net proceeds of sale (i.e. less costs or expenses in relation to the sale incurred by the Sale Agent, to the extent these costs or expenses are not paid for by Alkane). The amount of money received by each Ineligible Foreign Shareholder will be calculated on an averaged basis so that all Ineligible Foreign Shareholders receive the same price for each ASM Share sold on their behalf, subject to rounding down to the nearest whole Australian cent. Consequently, the amount received by a Ineligible Foreign Shareholder for each ASM Share may be more or less than the actual price that is received by the Sale Agent for that particular ASM Share.

Any interest earned on the net proceeds of the sale of ASM Shares by the Sale Agent will be retained by Alkane.

The net proceeds of sale will be remitted to the Ineligible Foreign Shareholders at their risk by cheque dispatched by prepaid post to their registered addresses (as at the Demerger Record Date), such cheques being drawn in the name of the respective Ineligible Foreign Shareholders. The net proceeds of sale will be remitted to the Ineligible Foreign Shareholders as soon as practicable and in any event will be sent within eight weeks from the date of the listing of ASM.

## 8.5 Conditions for Implementation

Implementation of the Demerger is subject to a number of conditions as follows:

(a) That the Demerger Resolution is duly passed by Alkane Shareholders at the Extraordinary General Meeting

The Demerger will involve Alkane reducing its issued share capital.

Under Alkane's constitution, Alkane may reduce its share capital by reduction of capital in accordance with the Corporations Act. Under section 256B(1) of the Corporations Act, a company may reduce its share capital if the reduction: (i) is fair and reasonable to the company's shareholders as a whole; (ii) does not materially prejudice the company's ability to pay its creditors; and (iii) is approved by shareholders under section 256C of the Corporations Act. Under section 256C(1), a reduction that is an "equal reduction" must be approved by a resolution passed at a general meeting. A reduction is an equal reduction if it relates to ordinary shares only and applies to each holder of ordinary shares in proportion to the number of ordinary shares they hold, and the terms of the reduction are the same for each holder of ordinary shares.

Alkane considers that the reduction involved in the Demerger will be an equal reduction as it will relate to Alkane ordinary shares only and apply to each holder of Alkane ordinary shares in proportion to the number of ordinary shares they hold, and the terms of the reduction are proposed to be the same for each holder of Alkane ordinary shares. Therefore, it is necessary for the Demerger to be approved by Alkane Shareholders by ordinary resolution in accordance with sections 256B(1) and 256C(1) before it can proceed.

The Demerger Resolution, if passed, will approve the proposed reduction of share capital required for the Demerger. The approval will cover the Capital Reduction and, if and to the extent that the Demerger otherwise involves a return of share capital for the purpose of Division 1 of Part 2J.1 of the Corporations Act, the amount of share capital that is to be so returned. The Demerger Dividend may itself involve a return of share capital to the extent there are not sufficient profits from which the entire Demerger Dividend Amount can be appropriated for the purposes of the Corporations

Act. Accordingly, it is thought prudent to ensure that the Demerger Resolution will approve any capital reduction involved in the Demerger.

The Alkane Board intends to determine the Demerger Dividend required for the Demerger. Section 254T(1) of the Corporations Act prohibits Alkane paying a dividend unless:

(i) Alkane's assets exceed its liabilities immediately before the dividend is declared and the excess is sufficient for the payment of the dividend;

(ii) the payment of the dividend is fair and reasonable to Alkane Shareholders as a whole; and

(iii) the payment of the dividend does not materially prejudice Alkane's ability to pay its creditors.

In this regard:

- the Alkane Board expects that Alkane's assets will exceed its liabilities immediately before the dividend is declared and the excess will be sufficient for the payment of the dividend, having regard to Alkane's assets and liabilities as at the date of this Demerger Booklet, and the Alkane Board's expectations in relation to Alkane's trading in the period up to the Demerger Implementation Date;
- in the opinion of the Alkane Board, the Demerger Dividend will be fair and reasonable to all Alkane Shareholders, as it applies to all Alkane Shareholders fairly as between them; and
- the Alkane Board believes Alkane will have sufficient reserves to satisfy the proposed Demerger Dividend (and, as noted above, Capital Reduction) without materially prejudicing Alkane's ability to pay its creditors.

As noted, the Demerger Dividend will be debited to a "demerger reserve" created in Alkane's equity account in its balance sheet on the Demerger Implementation Date (see Section 5.6(a) above for details).

(b) That ASX approves the admission of ASM to the Official List of ASX and quotation of ASM Shares on ASX is granted, including ASX granting ASM a waiver in respect of ASX Listing Rule 10.14 and confirmations in respect of the application of ASX Listing Rules 1.1 (condition 3), 10.1 and Chapter 11 (as discussed below), subject only to the Demerger becoming effective and such other conditions that may be acceptable to Alkane and ASM

ASM will apply to the ASX for admission to the Official List of ASX and for quotation of ASM Shares on ASX, including applying to ASX for a waiver in respect of ASX Listing Rule 10.14 and confirmations in respect of the application of ASX Listing Rules 1.1 (condition 3), 10.1 and Chapter 11. The Demerger is conditional on the ASX approving the admission of ASM to the Official List, granting permission for quotation of ASM

Shares and granting the relevant waiver and confirmations, subject to any conditions that ASX may reasonably require and which may be acceptable to Alkane and ASM. As noted above, the Demerger is conditional on the ASX:

(i) confirming that, for the purposes of ASX Listing Rule 1.1, condition 3, ASM may issue an information memorandum that complies with the requirements of ASX Listing Rule 1.4 on the condition that the information memorandum incorporates parts of the Demerger Booklet, rather than a prospectus for the purposes of its admission to the Official List;

(ii) confirming that the distribution of ASM Shares to Alkane's substantial shareholder does not require separate shareholder approval, or otherwise a waiver from the obligation to obtain shareholder approval pursuant to ASX Listing Rule 10.1;

(iii) granting a waiver of ASX Listing Rule 10.14 such that the grant of ASM performance rights to the Managing Director will not require separate shareholder approval; and

(iv) confirming the Demerger does not require shareholder approval under Chapter 11 of the ASX Listing Rules.

(c) That all regulatory approvals which are necessary or, in the opinion of Alkane or ASM, desirable in connection with the Demerger are obtained

Certain regulatory approvals have been sought from ASIC and ASX – see Section 11.5 of this Demerger Booklet for details.

(d) That the Alkane Board remains of the view that the Demerger is in the best interests of Alkane as a whole, is fair and reasonable to the Alkane Shareholders as a whole and does not materially prejudice the company's ability to pay its creditors

As at this date of this Demerger Booklet, the Alkane Board is of the view that the Demerger is in the best interests of Alkane as a whole, is fair and reasonable to the company's shareholders as a whole and does not materially prejudice the company's ability to pay its creditors. However, the Alkane Board reserves the right not to proceed with the Demerger should circumstances unexpectedly change.

## 8.6 Demerger Transaction Documents

The key transaction documents to give effect to the Demerger are summarised below.

(a) Demerger Deed

The Demerger Deed to be entered into between Alkane and ASM records the agreement of the two parties with respect to the Demerger including the transition and emergence of the Alkane Post-Demerger Group and the ASM Group as independently owned corporate groups, and the ongoing relationship between Alkane and ASM after the implementation of the Demerger. The Demerger Deed includes all terms and conditions necessary to separate the Alkane Post-Demerger Group and

ASM Group following the Demerger Implementation Date such that each party may carry forward the commercial benefits, risks and liabilities of the relevant business independently without shared liability.

The proposed key terms of the Demerger Deed are summarised below:

(i) Demerger Principle

The fundamental underlying principle of the separation of ASM from Alkane under the Demerger is the Demerger Principle, which is described in Section 4.1 above.

(ii) Mutual Indemnity and Claims

Consistent with the Demerger Principle, the Demerger Deed provides that to the extent permitted by law, on and from the Demerger Effective Date, neither party will have any right to make a claim against the other in respect of any liability arising in relation to the Demerger, the operation of the Alkane business (in the case of Alkane) or the operation of the ASM Business or the transfer or extinguishment of any assets or liabilities contemplated by the Demerger (in the case of ASM), unless expressly permitted by the Demerger Deed, the Restructure Deed, the Intercompany Services Agreement, or any other agreement between Alkane and ASM.

Further, each party will indemnify the other for any liability or loss relating directly or indirectly to any claim brought by the other party that is not expressly permitted in the Demerger Deed.

(iii) Rights and Obligations

To give effect to the Demerger Principle, the Demerger Deed provides that Alkane and ASM agree that once the Demerger is implemented, no Alkane Post-Demerger Group Member will have any rights or obligations to any ASM Group Member, and no ASM Group Member will have any rights against, or obligations to any Alkane Post-Demerger Group Member other than in respect of arrangements which the parties have agreed will continue after the implementation of the Demerger.

(iv) Assumption of Liabilities

Consistent with the Demerger Principle, the Demerger Deed provides that:

(A) Alkane will assume and be responsible for all liabilities relating to the businesses to be conducted by the Alkane Post-Demerger Group after the Demerger Implementation Date and all former Alkane Post-Demerger Group businesses and Alkane indemnifies the ASM Group against all claims and liabilities relating to those businesses; and

(B) ASM will assume and be responsible for all liabilities relating to the businesses to be conducted by the ASM Group after the Demerger Implementation Date and all former ASM Group businesses and ASM indemnifies the Alkane Post-Demerger Group against all claims and liabilities relating to those businesses,

other than in respect of arrangements which the parties have expressly agreed.

As an exception to the Demerger Principle, the Demerger Deed provides that:

(A) any Demerger tax liability will be shared by Alkane and ASM equally and each party indemnifies the other in relation to a Demerger tax liability in excess of its responsible share; and

(B) any Information Claim Liability will be borne by the party to which the Information Claim Liability is related to or connected with, and each party indemnifies the other for a period of 12 months in relation to an Information Claim Liability for which it is responsible, unless that party was aware that the disclosure document giving rise to the Information Claim Liability was misleading or deceptive in a material respect.

(v) Assets

In accordance with the Demerger Principle, Alkane and ASM agree to ensure that the assets (including intellectual property) rights, interests and corporate entities relating to businesses conducted by ASM are held by or transferred to the correct ASM Group Member, and that all assets (including intellectual property), rights, interests and corporate entities relating to businesses conducted by Alkane are held by or transferred to the correct Alkane Post-Demerger Group member.

The Demerger Deed also contains arrangements in relation to the transfer, grant or conveyance of assets required by ASM or Alkane, held by the other party and identified after the Demerger Implementation Date, in accordance with the Demerger Principle.

(vi) Contracts, Consents and Release

In accordance with the Demerger Principle, the Demerger Deed contains arrangements in relation to:

(A) Alkane using best endeavours to transfer, assign, novate or separate certain contracts to which an Alkane Post-Demerger Group Member is a party as at the Demerger Implementation Date which exclusively relate to businesses conducted by the ASM Group to the ASM Group. Reciprocal obligations apply to ASM for contracts which exclusively relate to businesses conducted by Alkane to which the ASM Group is a party;

(B) the separation of contracts which are shared by businesses conducted by both the Alkane Post-Demerger Group and the ASM Group and identified after the date of the Demerger Deed;

(C) certain consents under contracts that are required as a consequence of the Demerger but may not have been given as at the date of the of the Demerger Deed; and

(D) the release of certain guarantees given by Alkane or ASM in relation to an obligation to a Third Party that has not been obtained prior to the date of the Demerger Deed.

(vii) Litigation

In accordance with the Demerger Principle, on and from Implementation:

(A) an existing litigation matter that relates to the ASM Group is to remain the responsibility of ASM and be managed by ASM at its cost and Alkane must assign the benefit and novate the burden of any existing ASM litigation matter to ASM;

(B) an existing litigation matter that relates to the Alkane Post-Demerger Group is to remain the responsibility of Alkane and be managed by Alkane at its cost and ASM must assign the benefit and novate the burden of any existing Alkane litigation matter to Alkane;

(C) the Alkane Post-Demerger Group will be responsible for all separately agreed, excluded litigation matters where the allegation, claim or prosecution (as the case may be) is made against the Alkane Post-Demerger Group; and

(D) the ASM Group will be responsible for all separately agreed, excluded litigation matters where the allegation, claim or prosecution (as the case may be) is made against the ASM Group.

The Demerger Deed also contains an agreed regime in relation to:

(A) the ongoing management of existing Alkane litigation matters;

(B) the ongoing management of existing ASM litigation matters;

(C) the management of claims arising before or after the Demerger Implementation Date in connection with the ASM Group, the ASM Businesses, the Alkane Post-Demerger Group or the Alkane businesses, other than existing Alkane litigation matters, existing ASM litigation matters, exception liability claims or excluded litigation matters; and

(D) the management of excluded litigation matters.

(viii) Employees

The Demerger Deed provides that, from the Demerger Implementation date:

(A) Alkane will be responsible for, and indemnifies ASM against any liability incurred by ASM that arises out of, all aspects of the employment of Alkane Post-Demerger Group employees; and

(B) ASM will be responsible for, and indemnifies Alkane against, any liability incurred by Alkane that arises out of, all aspects of the employment of ASM employees.

Alkane and ASM have also agreed that employees transferring from Alkane to ASM will cease employment with Alkane and be directly engaged under employment contracts with ASM.

(ix) Insurance

On and from implementation of the Demerger, Alkane will be solely responsible for obtaining and maintaining insurance for the Alkane Post-Demerger Group and the Alkane business and ASM will be solely responsible for obtaining and maintaining insurance for the ASM Group and the ASM business.

Alkane acknowledges and will use its reasonable endeavours to ensure that, after Implementation, the ASM Group has access to the benefits attaching to those Alkane Post-Demerger Group insurance policies that impact the ASM business, in respect of which premiums have been paid for periods up to and including Implementation and periods beyond Implementation, as the case may be. Alkane will also use reasonable endeavours to ensure that all insurances required for ASM post-Demerger will be procured on behalf of ASM and ASM will be fully insured at the time of the Demerger.

(x) Confidential information

Alkane and ASM must not use the other's confidential information for any purposes other than for the purposes permitted under the Demerger Deed, must store the other's confidential information securely and must not allow any person access to the other's confidential information except to the extent that the disclosure is strictly necessary and is permitted under the Demerger Deed.

(xi) Demerger Costs

As an exception to the Demerger Principle, Alkane and ASM have acknowledged and agreed that Alkane is responsible for the Demerger Costs, and that Alkane indemnifies ASM, each other ASM Group Member and each beneficiary of ASM against all Demerger Costs, being certain costs or expenses incurred or committed by any Alkane Post-Demerger Group Member or ASM Group Member as a direct consequence of taking actions that are reasonably necessary to plan for, structure, document and implement the Demerger. The Demerger Deed provides that ASM will use all reasonable endeavours to mitigate the Demerger Costs incurred or committed to by an ASM Group Member.

(xii) Dispute resolution

As noted in Section 6.7(a) above, should any matter or dispute arise under the Demerger Deed following implementation of the Demerger, each of Alkane and ASM propose to delegate where appropriate the carriage of all necessary discussions or negotiations to the director(s) on its Board who is not on common to both companies. Immediately after the Demerger Implementation Date, these individuals will be, for Alkane, Mr Lethlean, and for ASM, Mr Woodall.

(b) Intercompany Services Agreement

With an effective date of 1 April 2020, Alkane and ASM (Holdings) entered into the Intercompany Services Agreement (**ISA**) for the provision of professional and IT support services, as well as access to certain office facilities. This agreement will continue to apply post-Demerger until terminated.

The professional services to be provided by Alkane under the ISA involve back office support with some executive assistance, including accounting and finance, commercial and project management services. Access to certain office facilities and IT support services will also be provided to ASM.

The services are required to be provided on a best endeavours basis to substantially the same standard to which those services were supplied in the 12 months prior to the Demerger.

All services provided under the ISA will be charged on a cost recovery basis. The fixed monthly fee for the services is A$48,500, that will be adjusted annually to account for any escalations to Alkane's costs due to inflation, salary increases, increase office rent or third party charges. Reasonable evidence of any such costs for the revised services fee will be provided to ASM to substantiate the fee. If there is a material change to the scope of the intercompany services requested by ASM, then an adjustment to the fees will need to be agreed by reference to the existing fees and the proportion of change required, substantiated by evidence provided by Alkane.

Either party may terminate the ISA for material breach and ASM may terminate the ISA for convenience (in whole or, for a service, or part of a service) by giving Alkane 30 days' written notice. Alkane may also terminate the ISA for convenience (in whole or, for a service, or part of a service) but must give ASM 365 day's written notice of the intention to terminate.

The ISA does not affect ownership of background intellectual property or vary the terms of the Demerger Deed in relation to intellectual property. Intellectual property in material developed by either party under the ISA is owned by ASM.

Neither party is liable for any loss of profits, indirect or consequential loss in relation to the provision of the services. ASM indemnifies Alkane for any liabilities incurred in relation to a claim against Alkane by a third party in connection with the ISA. Otherwise, each party's liability is capped.

As noted in Section 6.7(a) above, should any matter or dispute arise under the ISA following implementation of the Demerger, each of Alkane and ASM propose to delegate where appropriate the carriage of all necessary discussions or negotiations to the director(s) on its Board who is not on common to both companies. Immediately after the Demerger Implementation Date, these individuals will be, for Alkane, Mr Lethlean, and for ASM, Mr Woodall.

(c) Restructure Deed

The Restructure Deed to be entered into between Alkane and ASM deals with issues arising in connection with the implementation of the Demerger and the multiple intra group restructuring steps that must be implemented prior to the Demerger with respect to various existing intercompany loans within the Alkane Group.

As ASM is a borrower under a number of existing intercompany loans with Alkane, the Restructure Deed includes all terms and conditions necessary to capitalise a portion of the existing intercompany loans prior to ASM's exit from Alkane's Australian income tax consolidated group on the Demerger Implementation Date.

The Restructure Deed provides that Alkane will subscribe for, and be issued, new ASM Shares shortly before the Demerger is implemented. The ASM Shares issued to Alkane would be distributed to Alkane Shareholders as part of the Demerger. These new ASM Shares will rank pari passu with all other ASM Shares on issue at the time.

Subject to the completion of the Restructure Deed, it is contemplated in the Restructure Deed that Alkane and ASM would enter into a deed of forgiveness to forgive such portion of intercompany loans that will not be capitalised prior to implementation of the Demerger.

Before the Demerger is implemented, the ASM Shares on issue will be consolidated or subdivided as appropriate so as to ensure that all the ASM Shares on issue at the time of the Demerger can be distributed on the basis of the ratio of one ASM Share for every five Alkane Shares held by Demerger Participants, as described in this Demerger Booklet.

## 8.7 Deeds of Cross Guarantee

Alkane and certain members of the Alkane Post-Demerger Group intend to enter into a deed of cross guarantee (Alkane Cross Guarantee) in accordance with ASIC Corporations (Wholly-owned Companies) Instrument 2016/785, prior to 30 June 2020. ASM and its subsidiaries will not a party to the Alkane Cross Guarantee but also intend to enter into a separate deed of cross guarantee (ASM Cross Guarantee) in accordance with ASIC Corporations (Wholly-owned Companies) Instrument 2016/785, prior to 30 June 2020.

Relevantly, there is no cross guarantee between any member of the Alkane Post-Demerger Group and any member of the ASM Group and no intention to enter into such an arrangement. Therefore, the Alkane Cross Guarantee will only apply to members of the Alkane Post-Demerger Group and the ASM Cross Guarantee will only apply to members of the ASM Group.

# 9. AUSTRALIAN TAXATION CONSEQUENCES FOR AUSTRALIAN TAX RESIDENT ALKANE SHAREHOLDERS AND ALKANE

## 9.1 ATO draft class ruling

Whilst Alkane considers the proposed Demerger should qualify for capital gains tax (**CGT**) and dividend demerger tax relief, it has applied to the Commissioner of Taxation (**Commissioner**) for a class ruling to provide confirmation of this view, together with confirmation that the Commissioner will not make a determination under section 45B of the Income Tax Assessment Act 1936 (**ITAA 1936**).

As Alkane considers the Demerger would not be value-accretive for Alkane Shareholders in the absence of demerger tax relief or a determination being made applying section 45B of the ITAA 1936, receipt of a draft class ruling from the ATO was one of the conditions to the implementation of the Demerger.

Alkane has received a draft class ruling from the Australian Commissioner of Taxation which is to the satisfaction of Alkane. It is not intended that the draft class ruling is relied upon as the Australian Commissioner of Taxation is not bound to this draft ruling, nor has it been formally approved by the Commissioner.

The final class ruling will only be issued by the Commissioner after the Demerger Implementation Date. This Section 9 has been prepared on the basis that the class ruling from the Commissioner is received. The Australian income tax outcomes will be different if the final class ruling is contrary to the position outlined in the draft class ruling – refer to Section 9.9 below for further details if the Demerger tax relief is not available.

## 9.2 Scope of commentary and disclosure

The following is a general summary of the Australian taxation consequences for Eligible Shareholders who receive, as a Demerger Distribution, ASM Shares. The taxation commentary below is applicable to Australian residents who hold their Alkane Shares on capital account.

The comments do not apply to Eligible Shareholders who:

- are not a resident for Australian income tax purposes;
- are exempt from Australian income tax;
- are under a legal disability;
- hold their Alkane Shares as revenue assets or trading stock (which will generally be the case if you are a bank, insurance company or carry on a business of share trading with a view to make a profit);
- acquired their Alkane Shares for the purpose of resale at a profit;

- are subject to the 'TOFA provisions' in Division 230 of *the Income Tax Assessment Act 1997 (Cth)* (**ITAA 1997**) in relation to gains and losses on their Alkane Shares;
- hold their Alkane Shares as an asset in a business of the Eligible Shareholder that is carried on through a "permanent establishment" in Australia;
- are subject to the 'Investment Manager Regime' under Subdivision 842-I of the ITAA 1997 in respect of their Alkane Shares; or
- acquired their Alkane Shares under any employee share scheme.

The commentary below does not constitute tax advice and is not a complete analysis of all taxation implications relevant to the proposed Demerger. Alkane Shareholders should obtain independent tax advice regarding the income tax and capital gains tax implications specific to their circumstances.

Alkane Shareholders who hold their Alkane Shares on revenue account (for example, Alkane Shareholders who are share traders and certain institutional investors), and Alkane Shareholders who are not residents of Australia for income tax purposes, should seek independent taxation advice. Section 9.11 provides information relating to the taxation implications for ASM Shareholders after the Demerger.

The commentary below has been prepared based on the taxation laws, regulations, rulings and administrative guidance and judicial interpretations as at the date of this Demerger Booklet. It is important to note the ultimate interpretation of taxation law rests with the courts and that the law, and the way the revenue authorities seek to administer the law, may change over time. Accordingly, the commentary below represents considered views of existing law based upon generally accepted interpretations of that law.

**This does not constitute tax advice**.

## 9.3 Demerger tax relief overview

Broadly, demerger tax relief ensures that any CGT implications arising as a consequence of the Demerger Distribution may be disregarded, and that the dividend component (if any) of a Demerger Distribution is not taxed in the hands of Alkane Shareholders.

Alkane Shareholders can choose demerger tax relief in relation to the CGT aspects of the Demerger with such a decision being evidenced by way of how the shareholder prepares their income tax return.

## 9.4 CGT consequences where demerger tax relief is chosen

(a) Capital gain is disregarded

The receipt of the Capital Reduction component of the Demerger Distribution will give rise to a CGT event for Alkane Shareholders, occurring at the time Alkane completes the Capital Reduction.

Any capital gain arising from the CGT event on an Alkane Shareholder's shares under the Demerger will be disregarded.

(b) CGT cost base on Alkane Shares and ASM Shares

Alkane Shareholders will need to apportion the first element of the CGT cost base of their Alkane Shares between those Alkane Shares and the new ASM Shares on a basis which takes into account the market values of the Alkane Shares and the ASM Shares (or a reasonable approximation of these market values) just after the Demerger.

Further information in relation to the apportionment of costs bases will be provided by Alkane subsequent to the Demerger being implemented.

(c) Time of acquisition of ASM Shares

Whilst generally the ASM Shares are taken to have been acquired on the Demerger Date, for the purposes of determining future eligibility for the CGT discount on a subsequent sale of ASM Shares, the ASM Shares will be taken to have been acquired on the same date as the corresponding Alkane Shares.

## 9.5 CGT consequences where demerger roll-over relief is not chosen

(a) Capital gain is not disregarded

Any capital gain arising from the receipt of the Capital Reduction under the Demerger will not be disregarded.

Alkane Shareholders may be entitled to claim the CGT discount and should seek appropriate tax advice to determine such an entitlement in their specific circumstances.

If the capital component of the Demerger Distribution (the Capital Reduction) does not exceed the CGT cost base of their Alkane Shares, no capital gain will arise.

Alkane Shareholders will not make a capital loss as a result of the Capital Reduction under the Demerger.

(b) CGT cost base in Alkane Shares and ASM Shares

Alkane Shareholders will need to apportion the first element of the CGT cost base in their Alkane Shares between those Alkane Shares and ASM Shares received under the Demerger, adopting the method of apportionment being that applicable for Alkane Shareholders who choose to obtain demerger roll-over relief (as discussed in Section 9.4(b)).

(c) Time of acquisition of ASM Shares

Whilst generally, the ASM Shares are taken to have been acquired on the Demerger Date, for the purposes of determining eligibility to the CGT discount on a subsequent sale of ASM Shares, the ASM Shares will be taken to have been acquired on the same date as the corresponding Alkane Shares.

## 9.6 Taxation of Demerger Dividend

The Demerger Dividend will not be assessable income for Australian tax resident Alkane Shareholders (subject to commentary on section 45B in Section 9.7 below).

## 9.7 Application of section 45B tax integrity measures

Section 45B of the ITAA 1936 is an integrity measure which can be applied if the Commissioner considers the demerger not to be a genuine demerger or the capital reduction/dividend components of the Demerger Distribution do not reflect the circumstances of the Demerger.

Whilst having regard to the circumstances of the Demerger, Alkane does not consider the Commissioner should apply section 45B to the proposed Demerger, a class ruling has been sought to confirm the Commissioner will not make any Determination(s) pursuant to section 45B.

Should the Commissioner make a determination pursuant to section 45B in respect of the Demerger, all or part of the Capital Reduction will be treated as an unfranked dividend, or the Demerger Dividend will lose its exempt character.

It follows these amounts will be treated as assessable income for Australian tax resident Alkane Shareholders.

## 9.8 Taxation Implications for Alkane

The transfer of ASM Shares from Alkane to the Alkane Shareholders is not expected to have any material adverse tax implications for Alkane.

## 9.9 Tax consequences for Alkane Shareholders if Demerger tax relief is not available

If the Commissioner rules in the final class ruling that demerger tax relief is not available, contrary to the position outlined in the draft class ruling, the following broad tax consequences will arise for Alkane Shareholders;

(a) the Demerger Dividend will constitute assessable income;

(b) they will make a capital gain under CGT event G1 to the extent (if any) that the Capital Reduction Amount received by the Alkane Shareholder exceeds the cost base of their Alkane Shares. No capital loss will arise if their reduced cost base exceeds the Capital Reduction Amount;

(c) the first element tax cost base and reduced cost base of the ASM Shares they receive will be equal to the market value of ASM Shares on the Demerger Implementation Date; and

(d) the acquisition date of the ASM Shares will be the Demerger Implementation Date for the purposes of determining eligibility for the CGT discount.

## 9.10 GST implications

Being an input taxed supply, no GST is required to be imposed by Alkane on the in specie distribution of ASM Shares. It follows there should be no entitlement to input tax credit claims by Alkane Shareholders on ASM Shares acquired under the Demerger, as no GST is imposed by Alkane (subject to the Financial Acquisition Threshold).

## 9.11 Taxation implications for ASM Shareholders after the Demerger

(a) General

The comments in this Section 9.11 provide a general outline of Australian tax issues for Australian tax resident ASM Shareholders who hold their ASM Shares on capital account for Australian income tax purposes.

As above, this summary does not apply to certain ASM Shareholders, in particular those ASM Shareholders who hold ASM Shares on revenue account, carry on a business of trading in shares or are subject to the Taxation of Financial Arrangements provisions.

The commentary below does not constitute tax advice and is not a complete analysis of all taxation implications relevant to holding and disposing of ASM Shares. ASM Shareholders should obtain independent tax advice regarding the income tax and capital gains tax implications specific to their circumstances.

The commentary below has been prepared based on the taxation laws, regulations, rulings and administrative guidance and judicial interpretations as at the date of this Demerger Booklet. It is important to note the ultimate interpretation of taxation law rests with the courts and that the law, and the way the revenue authorities seek to administer the law, may change over time. Accordingly, the commentary below represents considered views of existing law based upon generally accepted interpretations of that law.

(b) Dividends

ASM Shareholders will be required to include dividends received on ASM Shares in their assessable income in the year the dividends are paid or credited.

To the extent the dividends are franked, ASM Shareholders should also include in their assessable income an amount equal to the franking credits attaching to the dividend.

ASM Shareholders (including individuals) should be entitled to a tax offset equal to the franking credits attached to the dividend so long as they are a 'qualified person' (broadly meaning they have held the ASM Shares 'at risk' for a period of more than 45 days within a period beginning on the day after the date on which the ASM

Shareholder acquired the ASM Shares and ending on the 45th day after the day on which the ASM Shares became 'ex-dividend'). Individuals can also be a 'qualified person' where their total franking credit entitlement in the relevant income year is below $5,000.

In some cases, an amount of a tax offset not applied against an ASM Shareholder's tax liability can be refunded to that shareholder. This depends on the particular circumstances of the ASM Shareholder, including their entity type.

ASM Shareholders who are companies (not holding ASM Shares in their capacity as a trustee) will not be entitled to a tax refund of excess credits; rather the excess may be converted to a tax loss which can be carried forward to future years (subject to the ASM Shareholder satisfying certain loss carry forward rules).

ASM Shareholders who are partnerships, complying superannuation funds or trusts should obtain their own advice on the tax treatment of dividends received from ASM and any franking credits attached.

(c) Capital gains tax

This section assumes that demerger tax relief is chosen by an ASM Shareholder.

ASM Shareholders who hold their ASM Shares on capital account will need to consider the Australian CGT implications arising from holding and disposing of the shares.

A capital gain will arise where the capital proceeds on disposal of ASM Shares exceed the cost base of the share. Broadly the cost base will comprise of the amount referred to in Section 9.4(b) above plus any non-deductible transaction costs incurred in relation to the acquisition or disposal of the ASM Shares.

A CGT discount may be applied against the net capital gain (after first deducting any available capital losses) where the ASM Shareholder is an individual, complying superannuation entity or trustee, and the corresponding Alkane Shares have been held for more than 12 months prior to the CGT event.

A capital loss will be realised where the reduced cost base exceeds the capital proceeds from disposal. Capital losses may only be offset against capital gains realised by the ASM Shareholder in the same or future income years, subject to certain loss recoupment tests being satisfied. Capital losses cannot be offset against other forms of assessable income.

(d) Tax File Number withholding tax

ASM Shareholders can choose to quote their tax file number (**TFN**), ABN or relevant exemption from withholding tax with respect to dividends.

In the event ASM is not so notified, tax may be required to be withheld by ASM at the maximum marginal rate plus the Medicare levy (currently 47%) from the cash amount of the unfranked portion (if any) of the dividends, and remit the withheld amount to the ATO. No amount is required to be withheld by ASM in respect of fully franked dividends.

ASM Shareholders will be able to claim a tax credit/rebate (as applicable) in respect of any tax withheld on the dividends in their individual income tax returns.

ASM Shareholders who hold ASM Shares as part of an enterprise may quote their ABN instead of their TFN.

**This does not constitute tax advice**.

### 9.12 State duty liabilities

There are no material state duty implications arising from the Demerger.

### 9.13 Australian taxation implications for Ineligible Foreign Shareholders

Ineligible Foreign Shareholders are strongly encouraged to obtain Australian taxation advice in relation to their disposal of ASM Shares by the Sale Agent, which takes into account their individual circumstances.

The following general comment may not apply where the Ineligible Foreign Shareholder holds a non-portfolio shareholding interest in ASM (in excess of 10% - taking into accounts shares held by associates) or the ASM shareholding is an asset of an Australian Permanent Establishment ('PE') conducted by the Ineligible Foreign Shareholder, that have been used at any time in a business carried on by that PE.

In general, Ineligible Foreign Shareholders will not be subject to Australian taxation on capital gains made on the disposal of ASM shares by the Sale Agent.

# 10.RISK FACTORS - INVESTING IN ASM

## 10.1 Overview

There are a number of risk factors specific to ASM and of a more general nature which may, either individually or in combination, affect the future operating and financial performance, or financial position of ASM or the value of ASM Shares. The risks and uncertainties described in this section of this Demerger Booklet represent those risks which the ASM Directors consider to be the most significant as at the date of this Demerger Booklet. However, these risks and uncertainties are not the only ones facing ASM and the ASM businesses or relevant to an investment in ASM Shares. Additional risks and uncertainties not presently known to the ASM Directors, or that the ASM Directors currently consider to be immaterial, could also materially and adversely affect any or all of the business, results of operations, financial position or prospects of ASM. In such cases, the market price of the ASM Shares could decline and investors may lose all or part of their investment. Prospective investors in ASM Shares should consider the risks and uncertainties carefully.

Many of the risks to which ASM will be exposed are similar to the risks to which Alkane is exposed to, while others arise or are increased as a result of the Demerger and the ability to take mitigating action may be more limited. Some of these risks may be mitigated by appropriate controls, systems and other actions as further described below, but others will be outside the control of ASM and may not be able to be mitigated. There is no guarantee or assurance that any mitigation measures that ASM takes will succeed.

Investors and prospective investors should satisfy themselves that they have a proper understanding of the risks of investing in ASM Shares and the information in this Demerger Booklet (including its Annexures), and whether an investment in ASM Shares is suitable having regard to their own respective investment objectives, financial situation and particular needs (including financial and tax issues). Potential investors should consider that an investment in ASM Shares is speculative and they should consult with their professional advisers. Anyone who is in any doubt as to whether to invest in ASM Shares or who does not understand the information in this Demerger Booklet should seek professional advice from their stockbroker, lawyer, accountant or other independent and qualified professional adviser.

## 10.2 Risks specific to ASM

(a) Liquidity

There may be relatively few buyers or sellers of ASM Shares on ASX at any given time. This may affect the volatility of the market price of the securities and the prevailing market price at which ASM Shareholders hold their ASM Shares. This may result in ASM Shareholders receiving a market price for their ASM Shares that is less or more than the value attributed to them on the Demerger Effective Date.

(b) Capital requirements

ASM activities, including the development of the Dubbo Project will require substantial expenditure. There can be no guarantees that the funds held by ASM will be sufficient to successfully achieve all of the objectives of ASM's business strategy. Any equity financing will dilute shareholdings and debt financing, if available, may involve restrictions on financing and operating activities. If ASM is unable to obtain additional financing as needed, it may be required to scale back its development and exploration programs. In addition, ASM's ability to continue as a going concern may be diminished. There is no guarantee that ASM will be able to secure any additional funding or be able to secure funding on terms favourable to ASM. Such circumstances would adversely affect ASM and its activities.

(c) Environment

ASM's projects are subject to laws and regulations in relation to environmental matters. As a result, there is the risk that ASM may incur liability under these laws and regulations. ASM proposes to comply with applicable laws and regulations and conduct its programs in a responsible manner with regard to the environment.

(d) Reliance on key personnel

ASM is a development company and will be dependent on its directors, managers and consultants to implement its business strategy. A number of factors, including the departure of senior management of ASM or a failure to attract or retain suitably qualified key employees, could adversely affect ASM's business strategy.

(e) Insurance

ASM intends to adequately insure its projects in accordance with industry practice and applicable laws in the jurisdictions where it operates. However, in certain circumstances ASM may not be able to obtain insurance or the insurance that it can obtain may not be of a sufficient nature or level to provide adequate insurance cover. As such, the occurrence of an event that is not covered by insurance could have a material adverse effect on ASM.

(f) Economic

Factors such as inflation, currency fluctuations, interest rates, supply and demand, industrial disruption, government policy and legislation have an impact on operating costs, commodity prices, and the parameters in which ASM operates.

(g) Government policy and legislative change

Capacity to explore and mine, as well as industry profitability generally, can be affected by changes in government policy that are beyond the control of ASM and which may materially adversely impact ASM and the value of ASM Shares. ASM's activities in the mining industry are subject to various legislation, regulations and governmental approvals. The introduction of any new legislation, be it amendments, the application of developments in existing common law or policies or the interpretation of those laws or policies could have a material adverse effect on ASM. Changes in government regulations may adversely affect the financial performance or the current and proposed operations generally of ASM and the value of ASM Shares.

In addition, ASM's projects may require various licences, regulatory renewals or approvals by government for their operations and accordingly must comply with those approvals, applicable laws, regulations, guidelines and policies.

Specifically, ASM may require licenses, renewals and approvals in relation to environmental matters, exploration, development and production. There is a risk that ASM may not obtain, or may be delayed in obtaining the necessary licenses, renewals and approvals in relation to their operations. This may affect the timing and scope of ASM's operations. The loss of granted tenements or the delay in obtaining lease renewals may have a material adverse effect on ASM.

(h) Taxation

In all places where ASM has operations, in addition to the normal level of income tax imposed on all industries, ASM may be required to pay government royalties, indirect taxes, goods and services tax and other imposts which generally relate to revenue or cash flows. Industry profitability can be affected by changes in government taxation policies.

(i) Foreign Exchange

Foreign exchange rates fluctuate over time. Fluctuating exchange rates have a direct effect on ASM operating costs and cash flows expressed in Australian dollars.

(j) Commodity price

ASM's future prospects and the ASM share price will be influenced by the prices obtained for the commodities produced and targeted in ASM's development and exploration programs. Commodity prices fluctuate and are impacted by factors including the relationship between global supply and demand for minerals, forward selling by producers, costs of production and general global economic conditions.

Commodity prices are also affected by the outlook for inflation, interest rates, currency exchange rates and supply and demand factors. These factors may have an adverse effect on ASM's production and exploration activities and any subsequent development and production activities, as well as its ability to fund its future activities.

(k) Joint venture partners

Financial failure or default by any participant in a joint venture to which ASM is a party may have a materially adverse impact on ASM insofar as it may have to bear that share of the joint venture costs which would otherwise have been borne by the relevant participant in the joint venture.

(l) Tenure, Native Title, Aboriginal Heritage and Land Claims Risks

Interests in exploration and mining tenements in Australia are governed by state legislation and are evidenced by the granting of leases or licences. Each lease or licence is for a specific term and carries with it annual expenditure and reporting conditions as well as other conditions requiring compliance. These conditions include the requirement, for exploration licences, for reduction in the area held under licence from time to time unless it is considered that special circumstances apply. Consequently, ASM could lose title to, or its interest in, its tenements if licence conditions are not met or if expenditure commitments are not met.

It is possible that, in relation to tenements in which ASM has an interest or may acquire such an interest, there may be areas over which legitimate native title rights exist or which are subject to native title claims made under the *Native Title Act 1993* (Cth) or Aboriginal land claims made under the *Aboriginal Land Rights Act 1983* (NSW). In such circumstances, the ability of ASM to progress from the exploration phase to the development and mining phases of the operation, may be adversely affected.

Further, it is possible that there will exist on ASM's mining tenements, areas containing sacred sites or sites of significance to Aboriginal people in accordance with their tradition that are protected under the *National Parks and Wildlife Act 1974* (NSW), NSW major projects legislation or the *Aboriginal and Torres Strait Islander Heritage Protection Act 1984* (Cth). As a result, land within the tenements may be subject to restrictions on exploration, mining or other uses and/or significant approval hurdles may apply.

(m) Exploration risks

Exploration is a high risk activity that requires large amounts of expenditure over extended periods of time. ASM's exploration activities will be subject to all the hazards and risks normally encountered in the exploration of minerals, including climatic conditions, hazards of operating vehicles and plant, risks associated with operating in remote areas and other similar considerations. Conclusions drawn during exploration and development are subject to the uncertainties associated with all sampling techniques and to the risk of incorrect interpretation of geological, geochemical, geophysical, drilling and other data.

(n) Resource estimates

Resource estimates are expressions of judgement based on knowledge, experience and industry practice. Estimates, which were valid when originally calculated, may alter when new information or techniques become available. In addition, by their very nature, resource estimates are imprecise and depend to some extent on interpretations, which may prove to be inaccurate. As further information becomes available through additional fieldwork and analysis, the estimates may change. Accordingly, the actual resources may materially differ from these estimates and assumptions and no assurances can be given that the resource estimates and the underlying assumptions will be realised. This could result in alterations to development and mining/extraction plans which may in turn affect ASM's operations and ultimately ASM's financial performance and the value of ASM Shares.

(o) Exchange rate fluctuations

International prices of most commodities are denominated in United States dollars, whereas the income and expenditure of ASM, whilst operating on Australian projects, will be in Australian currency, exposing ASM to the fluctuations and volatility of the rate of exchange between the United States dollar and the Australian dollar, subject to any currency hedging that might be undertaken. Exchange rate fluctuations may also impact the prices ASM may pay for goods and services required to develop its projects.

(p) Political risk

ASM's main project is the Dubbo Project located in Australia. ASM also operates in South Korea through its investment in RMR Tech. ASM is subject to the risk that it may not able to carry out its activities as it intends, including because of a change in government, legislation, regulation or policy.

(q) Competition

ASM's ability to enter into contracts for the supply of products at profitable prices may be adversely affected by the introduction of new suppliers and any increase in competition in the global critical materials market, either of which could increase the global supply of these products and thereby potentially lower the prices.

## 10.3 General risk factors

(a) General economic conditions

ASM’s operating performance and financial performance is influenced by a variety of general economic and business conditions including the level of inflation, interest rates, exchange rates and government fiscal, monetary and regulatory policies. Prolonged deterioration in general economic conditions, including an increase in interest rates or decrease in consumer and business demand, could have an adverse impact on the ASM business, the results of ASM's operations or ASM's financial conditions and performance.

(b) Changes in tax rules or their interpretation

Changes in tax law (including income tax, goods and services taxes and stamp duties), or changes in the way taxation laws are interpreted may impact the tax liabilities of ASM or the tax treatment of an ASM Shareholder’s investment. In particular, both the level and basis of taxation may change. In addition, an investment in ASM Shares involves tax considerations which may differ for each ASM Shareholder. Each prospective ASM Shareholder is encouraged to seek professional tax advice in connection with any investment in ASM.

(c) Accounting standards

Australian Accounting Standards are issued by the Australian Accounting Standards Board and are not within the control of ASM and the ASM Directors. Any changes to the accounting standards or to the interpretation of those standards may have an adverse effect on the reported financial performance or financial position of ASM.

(d) Force majeure events

Events may occur within or outside ASM's key markets that could impact upon the global economies and the operations of ASM. The events include, but are not limited, to acts of terrorism, an outbreak of international hostilities, fires, floods, earthquakes, labour strikes, civil wars, natural disasters, outbreaks of disease or other natural or man-made events or occurrences that can have an adverse effect on the demand for ASM's product offering and services and its ability to conduct business.

(e) Global health risks or pandemics

Global health risks or pandemics or the potential for these events could have a negative impact on ASM. Such events could adversely affect consumer behaviour and business activity levels, and precipitate sudden significant changes in regional and global economic conditions and cycles. They could also pose significant risks to the ASM's stores, distribution centres and supply chains, whether they are controlled by ASM or by third-party providers. By disrupting store operations, provision of services and logistics, these events could make it difficult or in some cases impossible for ASM to deliver products and services to its customers. As a result, the operations of ASM could be adversely affected by such events. ASM only has limited insurance coverage for losses and interruptions caused by global health risks or pandemics.

(f) Other risks

The above risks are not an exhaustive list of the risks. The risks outlined above and other risks may materially affect the future performance of ASM. Accordingly, no assurances or guarantees of future performance, profitability, distributions, or returns of capital are given by ASM.

# 11. ADDITIONAL INFORMATION

## 11.1 Interests of Directors

As at the date of this Demerger Booklet:

(a) no Alkane Director has any interest in any ASM Shares or other securities issued by ASM;

(b) except as disclosed in the table below no Alkane Director has any interest in any Alkane Shares, Alkane Performance Rights or other securities issued by Alkane; and

(c) the number of ASM Shares that each Alkane Director would be distributed under the Demerger (assuming no change in the number of Alkane Shares in which he has an interest before the Demerger Record Date) is as disclosed in the table below.

| Director | Number and percentage[1] of Alkane Shares in which the Director has an interest (as at the date of this Demerger Booklet) | Number and percentage of Alkane Performance Rights in which the Director has an interest (as the date of this Demerger Booklet) | Number and percentage of Alkane Shares in which the Director would have an interest if all his Alkane Performance Rights vested | Number and percentage of Alkane Shares in which the Director would have an interest assuming the treatment of the Alkane Performance Rights in accordance with Section 4.7 of this Demerger Booklet | Number and percentage of ASM Shares to be distributed to the Director under the Demerger | Number and percentage of ASM Shares to be distributed to the Director under the Demerger assuming the treatment of the Alkane Performance Rights in accordance with Section 4.7 of this Demerger Booklet |
|---|---|---|---|---|---|---|
| Ian Gandel[2] | 136,021,143 Alkane Shares (23.5%) | 0 Alkane Performance Rights | 136,021,143 Alkane Shares (22.6%) | 136,021,143 Alkane Shares (22.9%) | 27,204,228 ASM Shares (23.5%) | 27,204,228 ASM Shares (22.9%) |
| Nicholas Earner | 165,000 Alkane Shares (0.0%) | 12,245,765 Alkane Performance Rights | 12,410,765 Alkane Shares (2.1%) | 8,627,496 Alkane Shares (1.4%) | 33,000 ASM Shares (0.0%) | 1,725,499 ASM Shares (1.4%) |
| David Ian Chalmers | 4,671,140 Alkane Shares (0.8%) | 1,475,804 Alkane Performance Rights | 6,146,944 Alkane Shares (1.0%) | 5,687,885 Alkane Shares (1.0%) | 934,228 ASM Shares (0.8%) | 1,137,577 ASM Shares (1.0%) |
| Anthony Lethlean | 720,086 Alkane Shares (0.1%) | 0 Alkane Performance Rights | 720,086 Alkane Shares (0.1%) | 720,086 Alkane Shares (0.1%) | 144,017 ASM Shares (0.1%) | 144,017 ASM Shares (0.1%) |
| Gavin Smith | 331,875 Alkane Shares (0.1%) | 0 Alkane Performance Rights | 331,875 Alkane Shares (0.1%) | 331,875 Alkane Shares (0.1%) | 66,375 ASM Shares (0.1%) | 66,375 ASM Shares (0.1%) |

[1] Rounded to a single decimal place.

[2] Mr Gandel holds his relevant interest in Alkane Shares through his private investment vehicle, Abbotsleigh Pty Ltd.

For Mr Woodall (who is a director of ASM but not a director of Alkane), the above details are set out in the table below:

| | Number and percentage[3] of Alkane Shares in which Mr Woodall has an interest (as at the date of this Demerger Booklet) | Number and percentage of Alkane Performance Rights in which Mr Woodall has an interest (as the date of this Demerger Booklet) | Number and percentage of Alkane Shares in which Mr Woodall would have an interest if all his Alkane Performance Rights vested | Number and percentage of Alkane Shares in which Mr Woodall would have an interest assuming the treatment of the Alkane Performance Rights in accordance with Section 4.7 of this Demerger Booklet | Number and percentage of ASM Shares to be distributed to Mr Woodall under the Demerger | Number and percentage of ASM Shares to be distributed to Mr Woodall under the Demerger assuming the treatment of the Alkane Performance Rights in accordance with Section 4.7 of this Demerger Booklet |
|---|---|---|---|---|---|---|
| Mr Woodall | 35,000 Alkane Shares (0.0%) | 0 Alkane Performance Rights | 35,000 Alkane Shares (0.0%) | 35,000 Alkane Shares (0.0%) | 7,000 ASM Shares (0.0%) | 7,000 ASM Shares (0.0%) |

## 11.2 Benefits and agreements with Alkane directors and executives

Except as disclosed in this Demerger Booklet:

(a) there is no agreement or arrangement made between any Alkane Director and any other person in connection with or conditional on the Demerger;

(b) no Alkane Director has been paid or given, or is entitled to be paid or given, any sum or benefit to induce them to become a director of ASM;

(c) no director or proposed director of ASM, and no firm in which a director or proposed director of ASM is a partner or was a partner in the last two years, holds, or held at any time during the last two years before the date of this Demerger Booklet, any interest in:

(i) the formation or promotion of ASM;

(ii) any property acquired or proposed to be acquired by ASM in connection with its formation or promotion or the Demerger; or

(iii) the Demerger,

and no amounts (whether in cash or securities or otherwise) have been paid or agreed to be paid, and no one has given or agreed to give a benefit, to any director or proposed director of ASM either to induce them to become, or to qualify them as, a director of ASM, or otherwise for services rendered by them in connection with the formation or promotion of ASM or the Demerger; and

(d) it is not proposed that any payment or other benefit will be made or given to any Alkane Director, or secretary or executive officer of Alkane, or any body corporate

[3] Rounded to a single decimal place.

related to Alkane (including ASM), as compensation for loss of, or as consideration for or in connection with, his or her retirement from office as director, secretary or executive officer of Alkane or a body corporate connected with Alkane as a consequence of or in connection with the Demerger.

### 11.3 Rights attaching to ASM Shares and ASM Constitution

A description of material rights attaching to ASM Shares is set out below. It is noted that the ASM Constitution is in substantially the same form as the constitution of Alkane and, accordingly, the rights attaching to ASM Shares will not materially differ from the rights attaching to Alkane Shares.

This summary is not exhaustive and does not constitute a definitive statement of the rights and liabilities of ASM Shares. The summary is qualified by the full terms of the ASM Constitution. These rights and liabilities can involve complex legal questions of law arising from an interaction of the ASM Constitution with statute, ASX Listing Rules and common law requirements.

(a) Voting rights

A resolution put to the vote at a general meeting of ASM Shareholders must be decided on a show of hands unless a poll is demanded. If a resolution is put to vote on a show of hands, every ASM Shareholder present in person, or by proxy, attorney or representative to a general meeting of ASM will have one vote (unless a ASM Shareholder has appointed more than one proxy). Upon demand for a poll (in accordance with the ASM Constitution), every ASM Shareholder present in person, or by proxy, attorney or representative has one vote for every ASM Share held by them (with adjusted voting rights for partly paid shares).

(b) Meeting of members

Each ASM Shareholder is entitled to receive notice of, attend and vote at general meetings of ASM and receive all notices, accounts and other documents required to be sent to ASM Shareholders under the ASM Constitution, Corporations Act, ASX Listing Rules and ASX Settlement Operating Rules. ASM must give at least 28 days' written notice of a general meeting.

(c) Dividends

The ASM Board may resolve to pay any dividend (including an interim dividend, special dividend or final dividend) it thinks appropriate and fix the time for payment. A debt arises only when the time fixed for payment arises and a decision to pay a dividend may be revoked by the ASM Board at any time before then. The decision to pay a dividend may be revoked by the Board at any time before then.

Subject to the Corporations Act, ASM may pay a dividend on one class of shares to the exclusion of another class. Each share of a class on which the Board resolves to pay a dividend carries the right to participate in the dividend in the same proposition that the amount for the time being paid on the share bears to the total issue price of the share.

(d) Dividend reinvestment plan

The ASM Constitution authorises the Board to adopt and implement, at its discretion, a re-investment plan (under which ASM Shareholders are given the option to elect that any dividend or other cash payment in respect of a share or convertible security be retained by ASM and applied in payment for fully paid shares issued under the plan).

(e) Transfer of ASM Shares

Subject to the ASM Constitution and any restrictions attaching to an ASM Share, an ASM Shareholder may transfer an ASM Share by any means permitted by the Corporations Act or by law. The ASM Board may request ASX Settlement to apply a holding lock to prevent a transfer, or may decline to register an instrument to transfer in accordance with the Corporations Act or the ASX Listing Rules.

(f) Issue of further shares

Subject to the Constitution, ASX Listing Rules and the Corporations Act, the ASM Board may issue, cancel or grant options over, or otherwise dispose of, ASM Shares on such terms as the ASM Board decides.

(g) Variation of rights

Immediately after implementation of the Demerger, the only class of shares on issue in ASM will be ASM Shares. The procedure set out in the ASM Constitution must be followed for any variation of rights attached to the ASM Shares subject to the Corporations Act and the terms of issue of a class of shares. The rights attached to a class of shares in ASM may be varied by:

(i) the holders of at least 75% of the issued shares in the class consenting in writing; or

(ii) a special resolution passed at a separate meeting of the holders of shares in that class.

(h) Preference shares

ASM may issue preference shares (including preference shares that are liable to be redeemed or converted. The rights attaching to any preference shares must include the rights set out in or determined in accordance with the ASM Constitution unless other rights have been approved by special resolution of ASM.

(i) Unmarketable parcels

In accordance with the ASX Listing Rules, the ASM Board may sell ASM Shares that constitute less than a marketable parcel by following the procedures set out in the ASM Constitution, unless a takeover is announced after the ASM Board gives a notice pursuant to the ASM Constitution. A marketable parcel of ASM Shares is defined in the ASX Listing Rules and is generally a holding of ASM Shares with a market value of not less than $500.

(j) Winding up

Subject to the ASM Constitution, the Corporations Act and any preferential rights attaching to any class or classes of ASM Shares, ASM Shareholders will be entitled on a winding up to a share in any surplus assets of ASM in proportion to the number of ASM Shares they hold (a partly paid share is counted as a fraction of a fully paid share).

If ASM is wound up, the liquidator may, with the sanction of a special resolution of ASM shareholders, divide the whole or part of ASM's property among ASM Shareholders and decide how the division is to be carried out as between ASM Shareholders or different classes of ASM Shareholders. The liquidator cannot compel a member to accept marketable securities in respect of which there is a liability as part of a distribution of assets of ASM.

(k) Alteration of share capital

In accordance with the ASM Constitution, ASX Listing Rules and Corporations Act, ASM may capitalise profits, reserves or other amounts available for distribution to ASM Shareholders. ASM Shareholders are entitled to participate in a capital distribution in the same proportions in which they are entitled to participate in dividends by following the procedures set out in the ASM Constitution.

(l) Proportional takeover provisions

The ASM Constitution requires ASM Shareholder approval in relation to any proportional takeover bid. An approving resolution is implemented by following the procedure set out in the ASM Constitution. Subject to the Corporations Act, these provisions will cease to apply unless they are renewed by ASM Shareholders passing a special resolution by the third anniversary of either the date that those rules were adopted or the date those rules were last renewed.

(m) Directors – appointment and removal

Under the Constitution, the ASM Board must have at least three and not more than eight ASM Directors. The ASM Board may, from time to time, increase the maximum number of ASM Directors but the maximum applying at any time cannot be reduced unless ASM Shareholders pass a resolution varying that maximum number at a general meeting. ASM Directors are elected or re-elected at general meetings of ASM.

No ASM Director (excluding the managing director) may hold office without re-election beyond the third annual general meeting following the meeting at which the Director was last elected or re-elected. The ASM Board may also appoint a ASM Director in addition to the existing ASM Directors or to fill a casual vacancy on the ASM Board, and that Director (apart from the managing director) will then hold office until the conclusion of ASM's next annual general meeting.

(n) Directors – voting

Questions arising at a meeting of the ASM Board must be decided by a majority of votes cast by the ASM Directors present at the meeting and entitled to vote on the matter. If the votes of present ASM Directors are equal on a proposed resolution, the chairperson of the meeting does have a second or casting vote as long as the chairperson is not entitled to vote or only two ASM Directors are entitled to vote.

A written resolution of the ASM Board may be passed without holding a meeting of the ASM Board if all of the eligible ASM Directors sign or consent to the resolution.

(o) Directors – remuneration

Under the ASM Constitution, the ASM Board may decide the remuneration from ASM to which each ASM Director is entitled for his or her services as a ASM Director. However, the total amount payable to all non-executive ASM Directors for their services as non-executive ASM Directors must not exceed in aggregate in any financial year the amount fixed by ASM Shareholders in a general meeting or consist of a commission on, or percentage of, operating revenue. Until otherwise determined by ASM Shareholders in general meeting, the amount is fixed at $500,000.

ASM Directors may be paid for travel and other expenses incurred in attending to ASM affairs, including attending and returning from meetings of ASM Directors or ASM Board committees or general meetings. Any ASM Director who devotes special attention to the business of ASM or who performs services which, in the opinion of the ASM Board, are outside the scope of ordinary duties of a ASM Director, may be remunerated for the services (as determined by the ASM Board) out of the funds of ASM.

Details of the remuneration of the ASM Directors are set out in Section 6.7.

(p) Powers and duties of ASM Directors

The business and affairs of ASM are to be managed by or under the direction of the ASM Board, which (in addition to the specific powers and authorities conferred on it by the Constitution) may exercise all powers and do all things that are within ASM's power and the powers that are not required by law or by the ASM Constitution to be exercised by ASM in a general meeting. The power of the Board must be exercised in accordance with the ASM Constitution or by resolution passed at a meeting of the Board pursuant to the ASM Constitution.

(q) Indemnities

Subject to and so far as permitted by the Corporations Act and any other applicable law, ASM must indemnify directors or officers (or, if determined by the ASM Directors, auditors) of ASM against all losses or liabilities incurred by that person as a director, officer or auditor of ASM or of a Related Body Corporate. The indemnity in favour of officers is a continuing indemnity, and applies in respect of all acts done by a person while an officer of ASM (or one of its wholly owned subsidiaries) even though that person is not an officer at the time the claim is made.

ASM may, to the extent permitted by law, purchase and maintain insurance or pay, or agree to pay, a premium for insurance for each director or officer (or, if determined by the ASM Directors, auditors) of ASM against any liability incurred by that person as a director, officer or auditor of ASM or of a related body corporate, including but not limited to, liability for negligence or for reasonable legal costs incurred in defending a proceeding brought against that person.

(r) Amendments

ASM's Constitution may only be amended by a special resolution passed by ASM Shareholders at a general meeting.

## 11.4 Trading ASM Shares

In connection with its application for admission to the Official List of ASX, ASM will apply to participate in CHESS, in accordance with the ASX Listing Rules and ASX Settlement Operating Rules. CHESS is an electronic transfer and settlement system for transactions in securities quoted on the ASX under which transfers are affected in electronic form. ASM Shareholders who hold their ASM Shares on the CHESS or Australian issuer sponsored subregister will be able to sell or buy ASM Shares through their existing ASX participant broker. ASM is expected to trade under the ASX code of "ASM".

## 11.5 Regulatory relief, confirmations and waivers

(a) ASIC relief

(i) ASIC relief in respect of requirement to prepare a prospectus

ASIC has granted an exemption from Parts 6D.2 and 6D.3 of the Corporations Act to permit Alkane to use the Demerger Booklet in lieu of a prospectus in connection with the Demerger.

(ii) ASIC relief in respect of secondary sales of ASM Shares

ASIC has granted an exemption from the resale provisions in sections 707(5) and 707(6) of the Corporations Act to permit ASM Shares to be on-sold within the 12 months following their transfer under the Demerger (irrespective of whether those ASM Shares were transferred to Eligible Shareholders or to the Sale Agent).

(iii) ASIC relief in operation of Ineligible Foreign Shareholder Sale Facility

ASIC has granted an exemption from certain requirements that Alkane may otherwise be required to comply with in order to operate the Ineligible Foreign Shareholder Sale Facility, including:

(A) section 601ED of the Corporations Act in relation to the Ineligible Foreign Shareholder Sale Facility;

(B) Divisions 2 to 5 of Part 7.9 of the Corporations Act in relation to an interest in the Ineligible Foreign Shareholder Sale Facility; and

(C) the requirements to hold an Australian financial services licence for the provision of the following financial services:

(aa) dealing in an interest in the Ineligible Foreign Shareholder Sale Facility; and

(bb) the provision of general advice in relation to an interest in the Ineligible Foreign Shareholder Sale Facility.

(b) ASX confirmations and waivers

In March 2020, ASX provided the following in-principle advice (which is no longer current):

(i) in-principle confirmation that, for the purposes of ASX Listing Rule 1.1, condition 3, ASM may issue an information memorandum that complies with the requirements of ASX Listing Rule 1.4 on the condition that the information memorandum incorporates parts of the Demerger Booklet, rather than a prospectus for the purposes of its admission to the Official List;

(ii) in-principle confirmation that the distribution of ASM Shares to Alkane's substantial shareholder does not require separate shareholder approval, or otherwise a waiver from the obligation to obtain shareholder approval pursuant to ASX Listing Rule 10.1;

(iii) in-principle waiver of ASX Listing Rule 10.14 such that the grant of ASM performance rights to the Managing Director will not require separate shareholder approval; and

(iv) in-principle confirmation that the Demerger does not require shareholder approval under Chapter 11 of the ASX Listing Rules.

While this in-principle advice has expired, ASM will apply for the formal waiver and confirmations on the same basis. The Demerger is conditional on the receipt of the waiver and confirmations.

(c) ATO correspondence

Alkane has received a draft class ruling from the Australian Commissioner of Taxation which is to the satisfaction of Alkane. It is not intended that the draft class ruling is relied upon as the Australian Commissioner of Taxation is not bound to this draft ruling, nor has it been formally approved by the Commissioner.

## 11.6 Consents and disclaimers

(a) Each of the parties has given and has not, before the date of this document, withdrawn its written consent to be named in this document in the form and context in which it is named:

  (i) BDO Australia, as Independent Expert;

  (ii) PricewaterhouseCoopers Securities, as Investigating Accountant; and

  (iii) David Ian Chalmers, as Competent Person.

(b) The following persons have given and have not, before the date of this Demerger Booklet, withdrawn their written consent to the inclusion of the following statements and reports (where applicable) in this Demerger Booklet in the form and context in which they are included, and to all references in this Demerger Booklet to such statements and reports in the form and context in which they appear:

  (i) BDO Australia, in respect of its role as Independent Expert and in respect of the Independent Expert's Report in Annexure 3;

  (ii) PricewaterhouseCoopers Securities, in respect of its role as Investigating Accountant and in respect of the Investigating Accountant's Report in Annexure 4; and

  (iii) David Ian Chalmers, in respect of his role as Competent Person and in respect of the mineral resources and ore reserves information in Section 6.5 and Annexure 2.

(c) None of the above named persons:

  (i) has authorised or caused the issue of this Demerger Booklet; or

  (ii) makes, or purports to make, any statement in this Demerger Booklet or any statement on which a statement in this Demerger Booklet is based, other than a statement or report (if any) as specified in this Section 11.6.

(d) Each of the above named persons to the maximum extent permitted by law, expressly disclaims all liability in respect of, makes no representation regarding, and takes no responsibility for, any part of this Demerger Booklet other than a reference to its name and the statement or report (if any) that has been included in this Demerger Booklet with the consent of that person as specified in this Section 11.6.

## 12.DEFINITIONS AND GLOSSARY OF TECHNICAL TERMS

For the purpose of this document, capitalised terms used in this Demerger Booklet have the meaning given below, unless the context requires otherwise (words in the singular include the plural and vice versa).

**"AAS"** means the Australian Accounting Standards.

**"AASB"** means the Australian Accounting Standards Board.

**"Alkane"** means Alkane Resources Ltd ACN 000 689 216.

**"Alkane Board"** means the board of directors of Alkane.

**"Alkane Director"** means a director of Alkane.

**"Alkane Financial Information**" has the meaning given to it in Section 5.1.

**"Alkane Group"** means Alkane and its subsidiaries.

**"Alkane Historical Financial Information**" has the meaning given to it in Section 5.1.

"**Alkane Market Value**" means the volume weighted average market price (as defined in the ASX Listing Rules) of Alkane Shares traded, on a normal settlement basis, over the five trading days commencing on the ASX Listing, multiplied by the number of Alkane Shares on issue as at the Demerger Record Date.

"**Alkane Performance Rights**" has the meaning given to it in Section 4.7.

**"Alkane Post-Demerger Group"** means Alkane and its subsidiaries immediately following implementation of the Demerger (which will exclude ASM and its subsidiaries) and, where the context requires, any one of them.

**"Alkane Post-Demerger Group Member"** means a member of the Alkane Post-Demerger Group.

**"Alkane (Post-Demerger) Pro Forma Historical Financial Information"** has the meaning given to it Section 5.1.

**"Alkane Share"** means a fully paid ordinary share in Alkane.

**"Alkane Shareholder"** means a holder of Alkane Shares.

**"Alkane Share Capital Amount"** means the balance in the Alkane share capital account immediately prior to the Demerger Record Date.

**"ASM"** means Australian Strategic Materials Limited ACN 168 368 401.

**"ASM Board"** means the board of directors of ASM.

**"ASM Constitution"** means the constitution of ASM.

**"ASM Director"** means a director of ASM.

**"ASM Equity Incentive Plan"** means the equity plan ASM intends to establish to facilitate the grant of ASM equity awards to employees.

**"ASM Group"** means ASM and its subsidiaries.

**"ASM Group Member"** means a member of the ASM Group.

**"ASM Historical Financial Information**" has the meaning given to it in Section 7.1.

**"ASM Holdings"** means Australian Strategic Materials (Holdings) Ltd ACN 091 489 511.

**"ASM Information Memorandum**" means document being prepared by ASM for the admission of ASM Shares to trading on the ASX.

**"ASM Long-term Incentive Plan"** has the meaning given to it in Section 6.11.

**"ASM Long-term Incentives"** has the meaning given to it in Section 6.11.

**"ASM Market Value"** means the volume weighted average market price (as defined in the ASX Listing Rules) of ASM Shares traded, on a normal settlement basis, over the five trading days commencing on the ASX Listing, multiplied by the number of ASM Shares on issue as at the Demerger Record Date.

**"ASM (post-Demerger) Pro Forma Historical Financial Information"** has the meaning given to it in Section 7.1.

**"ASM Share"** means a fully paid ordinary share in ASM.

**"ASM Shareholder"** means a holder of ASM Shares.

**"ASX Listing"** means the commencement of trading in ASM Shares on ASX.

**"ASX Recommendations"** means ASX Corporate Governance Principles and Recommendations 4th Edition.

**"BDO Australia"** means BDO Corporate Finance (WA) Pty Ltd ACN 124 031 045.

**"Capital Reduction"** means the reduction of the share capital of Alkane, without the cancellation of any Alkane Shares, by the Capital Reduction Amount.

**"Capital Reduction Amount"** means the amount calculated in accordance with the following formula:

$$A = \left(\frac{B}{B + C}\right) x\ D$$

where:

*A* is the Capital Reduction Amount;

*B* is the ASM Market Value;

*C* is Alkane Market Value; and

*D* is Alkane Share Capital Amount;

and, in relation to a Demerger Participant, means so much of this amount as is attributable to the Alkane Shares held by that Demerger Participant.

**"CHESS"** means the electronic transfer and settlement system for transactions in securities quoted on the ASX under which transfers are affected in electronic form.

**"Competent Person"** means Mr David Ian Chalmers, FAusIMM, FAIG.

**"Competent Person's Report"** means the report prepared by the Competent Person set out in Annexure B.

**"Corporations Act"** means *Corporations Act 2001* (Cth).

**"Demerger"** means the proposed demerger of ASM from Alkane, as described in this Demerger Booklet.

**"Demerger Costs"** means costs or expenses incurred or committed to by any Alkane Post-Demerger Group Member or ASM Group Member as a direct consequence of taking actions that are reasonably necessary to plan for, structure, document and implement the Demerger and which but for the announcement or implementation of the Demerger would not have been incurred, unless otherwise agreed.

**"Demerger Deed"** means the demerger deed dated 16 June 2020 between Alkane and ASM, which is summarised in Section 8.6(a) of this Demerger Booklet.

**"Demerger Dividend"** means:

(a) the distribution (whether by way of dividend or capital return) of the Demerger Dividend Amount; or

(b) in relation to a Demerger Participant, so much of such distribution as is attributable to the Alkane Shares held by that Demerger Participant.

**"Demerger Dividend Amount"** means the difference determined by subtracting the Capital Reduction Amount from the Distribution Amount.

"**Demerger Effective Date**" means the day on which the Demerger becomes effective, which will be a date to be announced as such to ASX by Alkane after the Demerger Resolution has been passed at the Extraordinary General Meeting. As at the date of this Demerger Booklet it is anticipated that the date on which the Demerger will become effective is as set out in the Indicative Timetable on page 8 of this Demerger Booklet. However, all dates in the Indicative Timetable are subject to change as described on that page.

**"Demerger Implementation Date"** means the date of implementation of the Demerger determined by Alkane in accordance with the ASX listing rules. As at the date of this Demerger Booklet, Alkane expects that the date on which implementation of the Demerger will occur is as set out in the Indicative Timetable on page 8 of this Demerger Booklet. However, all dates in the Indicative Timetable are subject change as described on that page.

**"Demerger Participant"** means an Alkane Shareholder as at the Demerger Record Date (i.e. each Eligible Shareholder and each Ineligible Foreign Shareholder).

**"Demerger Principle"** has the meaning given to it in Section 4.1.

**"Demerger Record Date"** means 7.00pm (Sydney time) on the third Business Day after the Demerger Effective Date (or such other date as may be agreed in writing between Alkane and ASM or as may be required by ASX).

**"Demerger Resolution"** means the ordinary resolution to be voted on by Alkane Shareholders to approve the Demerger, set out in the Notice of Extraordinary General Meeting (as Resolution 1) which accompanies this document.

**"Distribution Amount"** means the amount calculated in accordance with the following formula:

$$DA = X\,x\,Y$$

where:

*DA* is the Distribution Amount;

*X* is the volume weighted average market price (as defined in the ASX Listing Rules) of ASM Shares traded, on a normal settlement basis, over the five trading days commencing on the ASX Listing; and

*Y* is the number of Alkane Shares on issue as at the Demerger Record Date divided by five.

**"Dubbo Project"** means the rare metal project conducted by ASM and located at Toongi, 25 kilometres south of Dubbo in central NSW.

**"Early Vesting Resolution"** means the ordinary resolution to be voted on by Alkane Shareholders to approve the accelerated vesting of the 2017 TSR Performance Rights and the 2018 TSR Performance Rights, as set out in the Notice of Extraordinary General Meeting which accompanies this document.

**"EFA"** means Export Finance Australia.

**"Eligible Shareholder"** means a Demerger Participant with a registered address in Australia and New Zealand as at the Demerger Record Date.

**"Extraordinary General Meeting"** or **"General Meeting"** means the general meeting of Alkane Shareholders convened by the notice of meeting set out in Annexure 1 to this Demerger Booklet.

**"FEED Study"** means the Dubbo Project Front End Engineering Study**.**

**"IASB"** means the International Accounting Standards Board.

**"IFRS"** means the International Financial Reporting Standards.

**"Independent Expert"** means BDO Australia, which was appointed by Alkane to prepare the Independent Expert's Report.

**"Independent Expert's Report"** means the report prepared by the Independent Expert, set out in Annexure 3.

**"Indicative Timetable"** means the Indicative Timetable appearing on page 8 of this Booklet as altered from time to time. The Indicative Timetable is subject to alterations as notified by Alkane to, or as required by, ASX from time to time.

**"Ineligible Foreign Shareholder"** means a Demerger Participant with a registered address outside of the Australia and New Zealand as at the Demerger Record Date.

**"Ineligible Foreign Shareholder Sale Facility"** means the arrangement described in Section 8.4 above under which ASM Shares to which Ineligible Foreign Shareholders would otherwise be entitled under the Demerger will be transferred to the Sale Agent and sold on behalf of the Ineligible Foreign Shareholders.

**"Information Claim Liability"** means any Liability or Loss incurred by an Alkane Post-Demerger Group Member and/or an ASM Group Member and/or a Beneficiary of Alkane and/or a Beneficiary of ASM that is related to or connected with or arises from an Information Claim by a Third Party that a Disclosure Document is misleading or deceptive in any respect (whether by omission or otherwise) or otherwise fails to comply with applicable legal requirements but excludes any such Claim to the extent it relates to information provided by or on behalf of a Third Party with their written consent for inclusion in the relevant Disclosure Document.

**"Intercompany Services Agreement"** or "**ISA**" means the intercompany services agreement dated 20 May 2020 between Alkane and ASM (Holdings), which is summarised on Section 8.6(b) of this Demerger Booklet.

**"Investigating Accountant"** means PricewaterhouseCoopers Securities.

**"Investigating Accountant's Report"** means the report prepared by the Investigating Accountant, set out in Annexure 4.

**"PricewaterhouseCoopers"** or **"PwC"** means PricewaterhouseCoopers, Australian Partnership.

**"PricewaterhouseCoopers Securities"** or **"PwCS"** means PricewaterhouseCoopers Securities Ltd.

**"Registries"** means the share registries of Alkane and ASM.

**"Resolutions"** means each of the Demerger Resolution and the Early Vesting Resolution.

**"Restructure Deed"** means the restructure deed to be made between Alkane, ASM, TPC and another wholly-owned member of the Alkane Group, referred to in Section 8.6(c) of this Demerger Booklet.

**"RMR Tech"** means the entity in which ASM holds a 10% equity interest – see Section 6.14(a) for details.

**"RMR Board"** has the meaning given to it in Section 6.14(a).

**"Sale Agent"** means Petra Capital Pty Limited ABN 95 110 952 782.

**"Specified Excluded Offers"** means any offer made or option acquired, or ASM Shares issued under the ASM Long-Term Incentive Plan that is to be disregarded when calculating the share limit referred to in Section 6.11(c), as a result of:

i. an offer to a person situated outside Australia at the time of receipt of the offer;
ii. an offer that did not need disclosure to investors because of section 708 of the Corporations Act;
iii. an offer that did not require the giving of a product disclosure statement (as defined in the Corporations Act) because of section 1012D of the Corporations Act; or
iv. an offer made under a disclosure document or product disclosure statement (each as defined in the Corporations Act).

**"Tomingley Holdings"** means Tomingley Holdings Pty Ltd ACN 148 060 208.

"**Tomingley Operations"** or **"Tomingley Gold Operations"** or "**TGO**" means the gold operations conducted by Alkane's wholly-owned subsidiary Tomingley Gold Operations Pty Ltd and located at Tomingley, approximately 50 kilometres south-west of Dubbo in central NSW.

**"TPC"** means Toongi Pastoral Company Pty Ltd ACN 610 749 187.

**"VWAP"** means volume weighted average price.

**"Ziron Tech"** has the meaning given to it in Section 6.3.

## ANNEXURES

**ANNEXURE 1**

**NOTICE OF EXTRAORDINARY GENERAL MEETING**

Notice is hereby given of an Extraordinary General Meeting of Shareholders of Alkane Resources Ltd (the **Company**) (**Extraordinary General Meeting** or **Meeting**). The Extraordinary General Meeting is to be held on 16 July 2020 at 10:00am (AWST) as a virtual only meeting via a live webcast.

As a result of the potential health risks from the Coronavirus (COVID-19) pandemic and in line with the Australian Government's restrictions on travel and social gatherings, it is not currently advisable to host shareholders and members of the public in person at the Extraordinary General Meeting (**EGM**). The Company will therefore be holding a virtual meeting through an online webcast powered by "Lumi AGM", where Shareholders will be able to watch, listen, submit written questions and vote online. The Company cannot facilitate the physical attendance of Alkane Shareholder at the EGM as a consequence of the current COVID-19 restrictions. Instructions on how to join the meeting and vote on the resolutions through the Lumi webcast are set out in the Online Meeting Guide, enclosed with this notice and can also be found on the Company's website at www.alkane.com.au/demerger/.

## Provision of Extraordinary Meeting materials

In accordance with the Australian Government's temporary modifications provided under the Corporations (Coronavirus Economic Response) Determination (No. 1) 2020, the Notice of EGM, the accompanying explanatory statement (ie, the Demerger Booklet) and Proxy Form are being made available to shareholders electronically.

All Alkane Shareholders will be able to access the Notice of Extraordinary General Meeting, the Demerger Booklet and all annexures (including the Proxy Form) online at: www.alkane.com.au/demerger/. Alkane have also provided the meeting materials on the Company's ASX announcements page and are therefore available through the ASX Market Announcements Platform by inserting Alkane's ASX code (ALK) into the search function on https://www.asx.com.au/asx/statistics/announcements.

Any Alkane Shareholders that have nominated an email address and have elected to receive electronic communications from the Company, will also receive an email to their nominated account with a link to an electronic copy of the Notice of Extraordinary General Meeting, Demerger Booklet and all annexures (including the Proxy Forms).

If you are unable to access the relevant meeting materials online, please contact the EGM help line on +61 8 9227 5677 between 9:00am and 5:00pm AWST Monday to Friday. If you wish to receive a paper copy of the meeting materials, please contact the Alkane Shareholder Information Line on 08 9227 5677 or email the Company at info@alkane.com.au and the Company will mail one to you. Please remember to provide your name, address and contact phone number.

## Participation at the EGM

Alkane Shareholders who wish to participate in the EGM online may do so:

1. Online at https://web.lumiagm.com/350099625; or

2. Using the Lumi AGM App

In order to access the Lumi online platform, Alkane Shareholders should use the Meeting ID 350099625. Your username is your SRN/HIN and your password is the postcode registered to your holding if you are an Australian shareholder. Overseas shareholders should refer to the Online Meeting Guide for their password details. Further instructions on how to participate in the EGM are set out in the Online Meeting Guide, enclosed with this Notice and can also be found on the Company's website at www.alkane.com.au/demerger/.

### Voting on the resolutions

If you attend the EGM webcast, you will be able to vote directly during the EGM. Voting on each item of business will be by poll.

Instruction on how to vote on the resolutions via the online platform are set out in the enclosed Online Meeting Guide, enclosed with this Notice of EGM and can also be found on the Company's website at www.alkane.com.au/demerger/.

The Chairman will open the poll shortly after the EGM commences and you will be able vote at any time during the EGM and for 10 minutes afterwards. If you have lodged a direct vote and then vote online again during the EGM, your first direct vote lodged will be cancelled.

Voting on the resolutions at the Meeting is important and the Alkane Board encourages all Alkane Shareholders to either vote at the Meeting via the online platform, or nominate a proxy by providing the Proxy Form according to the instructions provided on the Proxy Form. Proxy Forms can be lodged online at www.advancedshare.com.au/investor-login or sent by mail to the Company's Share Registry, Advanced Share Registry Services, so that it is received by 10:00am (AWST) on 14 July 2020.

Shareholders experiencing difficulties accessing the virtual EGM can call the EGM help line on +61 8 9227 5677 on the day of the meeting to request assistance.

**BUSINESS**

**Resolution 1: Approval of Demerger (including reduction of capital) ("Demerger Resolution")**

To consider and, if thought fit, pass the following resolution as an ordinary resolution:

"*That:*

*(a)* *the Demerger (including the Demerger Deed and the Intercompany Services Agreement) be approved for all purposes; and*

*(b)* *without limiting paragraph (a), for the purposes of section 256B and section 256C(1) of the Corporations Act and rule 32 of the Company's constitution, the share capital of the Company be reduced on the Demerger Implementation Date:*

*(i)* *by the Capital Reduction Amount; and*

*(ii)* *if and to the extent that the Demerger otherwise involves a return of share capital for the purpose of Division 1 of Part 2J.1 of the Corporations Act, by the amount of share capital that is to be so returned;*

*and the total amount by which the share capital is so reduced be applied to each holder of ordinary shares as at the Demerger Record Date in proportion to the number of ordinary shares they hold in the manner more particularly described in the explanatory statement contained in the booklet of which the notice convening this meeting forms part.*

*Terms ascribed a meaning by the explanatory statement contained in the booklet of which the notice convening this meeting forms part have the same meaning in this resolution.*"

*Note*
The explanatory statement and proxy form accompanying this notice convening the Meeting are incorporated in and comprise part of the Notice of Meeting.

**Resolution 2: Approval of early vesting of Performance Rights upon implementation of the Demerger ("Early Vesting Resolution")**

To consider and, if thought fit, pass the following resolution as an ordinary resolution:

"*That, for the purposes of sections 200C and 200E of the Corporations Act and ASX Listing Rule 6.23, and for all other purposes, approval be given for the treatment of Alkane Performance Rights as described in section 4.7 of the explanatory statement contained in the booklet of which the notice convening this meeting forms part, including (without limitation) for the* *giving of any benefits arising from or in connection with the early vesting of Alkane Performance Rights as so described upon and subject to implementation of the Demerger."*

*Voting Exclusion Statement*

Voting exclusions apply in relation to this Early Vesting Resolution. Details of the voting exclusions are set out in Section 4.7 of this Demerger Booklet.

**Other business**

To consider any other business as may be lawfully put forward in accordance with the Constitution of the Company.

By order of the Board

Dennis Wilkins
Company Secretary

## NOTES

This Notice of Extraordinary General Meeting should be read as part of the booklet (**Demerger Booklet**) of which the notice convening the Extraordinary General Meeting is contained. The Demerger Booklet should be read in its entirety.

Information relating to the proposed Demerger and the Resolutions are set out elsewhere in the Demerger Booklet.

Your Board recommends that you vote in favour of the Resolutions. The Demerger Booklet provides further background in relation to the Board's recommendation that you vote in favour of these resolutions.

Terms ascribed a meaning elsewhere in the Demerger Booklet in which this Notice is contained have the same meaning in this Notice, unless the context otherwise requires.

### 1. Intention of Chairman

The Chairman of the Meeting intends to vote all available undirected proxies in favour of the Resolutions.

### 2. Eligibility to vote

The board of Directors of the Company (**Board**) has determined, pursuant to Regulation 7.11.37 of the *Corporations Regulations 2001* (Cth), that persons who are registered holders of shares of the Company (Shareholders) as at 5pm (Perth time) / 7pm (Sydney time) on 14 July 2020 will be entitled to attend and vote at the Extraordinary General Meeting.

If more than one joint holder of Shares is present at the Meeting (whether personally, by proxy or by attorney or by representative) and tenders a vote, only the vote of the joint holder whose name appears first on the register will be counted.

### 3. Voting Procedure

In accordance with temporary modification provided under Corporations (Coronavirus Economic Response) Determination (No. 1) 2020, and recent changes to ASX Guidance, the resolutions must be decided by a poll rather than a show of hands.

As part of the live webcast of the Extraordinary General Meeting, Shareholders will be able to vote on the resolutions to be considered at the Extraordinary General Meeting, either at the meeting via the online platform or by appointing a proxy to vote on their behalf.

Enclosed with this Notice of Extraordinary General Meeting, is an online meeting guide that provides instructions on how to join the webcast, vote on the resolutions and ask questions. The online meeting guide can also be found on the Company's website at www.alkane.com.au/demerger/.

Online registrations will begin one hour before the start of the Extraordinary General Meeting.

### 4. Appointment of proxies

A Proxy Form is attached to the Notice. This Form may be used by Shareholders if they wish to appoint a 'proxy' to vote on their behalf at the Meeting. All Shareholders are invited and encouraged to attend the Meeting via the online portal, or if they are unable to attend online, either lodge the Proxy Form online at www.advancedshare.com/investor-login or sign and return the Proxy Form to the Company or the Company's Share Registry in accordance with the instructions thereon. Lodgement of a Proxy Form will not preclude a Shareholder from attending and voting at the Meeting in person.

A Shareholder has the right to appoint a proxy, who need not be a Shareholder of the Company. Shareholders entitled to cast two or more votes may appoint two proxies and may specify the proportion or number of votes each proxy is appointed to exercise. If the appointment does not specify this proportion, each proxy may exercise half the votes.

Sections 250BB and 250BC of the Corporations Act apply to voting by proxy. Generally, these sections mean that if proxy holders vote, they must cast all directed proxies as directed, and any directed proxies that are not voted will automatically default to the Chairman of the Meeting, who must vote the proxies as directed. If the proxy has two or more appointments that specify different ways to vote on the resolution, the proxy must not vote on a show of hands.

Information about voting by proxy, including appointing a proxy and lodging a Proxy Form, is set out in instructions included in the Proxy Form that accompanies this Notice of Extraordinary General Meeting.

Proxy appointments must be received no later than 10:00am (AWST) on 14 July 2020. **Proxy forms received later than this time will not be valid for the Meeting.** The Company encourages all Alkane Shareholders who intend to appoint a proxy to submit their Proxy Forms as early as possible.

## 5. Corporate representatives

A body corporate which is an Alkane Shareholder, or that has been appointed as a proxy, may appoint a person to act as its representative at the Meeting. The appointment of the representative must comply with the requirements under section 250D of the Corporations Act. The representative should have evidence of his or her appointment as the body corporate's representative, including any authority under which the appointment is signed, unless it has been previously given to the Company.

## 6. Shareholder Questions

Shareholders will be able to ask questions relevant to the business of the Extraordinary General Meeting, at the Extraordinary General Meeting.

Instructions on how to submit questions via the online platform are set out in the online meeting guide that accompanies this Notice of Extraordinary General Meeting and can also be found on the Company's website (www.alkane.com.au/demerger/).

Shareholders who are unable to attend the Meeting or wish to submit questions prior to the Meeting may submit written questions by emailing info@alkane.com.au. Questions must be received by 10.00am (AWST), 14 July 2020.

The more frequently raised shareholder issues will be addressed by the Chairman during the course of the Meeting. While there will be an allotted time for questions, the Alkane Board will endeavour to respond to as many Shareholder Questions as possible. However, there may still not be sufficient time available at the meeting to address all of the questions raised. Please note that individual responses will not be sent to shareholders.

**7. ASIC and ASX**

A copy of the Demerger Booklet (including this Notice of Extraordinary General Meeting) has been lodged with ASIC and ASX. Neither ASIC, ASX nor any of their respective officers takes any responsibility for the contents of this document.

**8. No financial product advice**

This document does not constitute financial product, taxation or investment advice nor a recommendation in respect of the Alkane Shares or ASM Shares. It has been prepared without taking into account the objectives, financial situation or needs of Shareholders or other persons. Before deciding how to vote or act, Shareholders should consider the appropriateness of the information, having regard to their own objectives, financial situation and needs and seek legal, taxation and financial advice appropriate to their circumstances.

Neither the Company nor ASM is licensed to provide financial product advice. No cooling-off regime applies in respect of the acquisition of ASM Shares under the in specie distribution (whether the regime is provided for by law or otherwise).

**9. No internet site is part of this document**

No internet site is part of this Notice of Extraordinary General Meeting or the Demerger Booklet. The Company maintains an internet site (www.alkane.com.au). Any reference in this document to this internet site is a textual reference only and does not form part of this document.

ANNEXURE 2

Mineral resources and reserves information

## JORC Code, 2012 Edition – Table 1 report – Dubbo Project

### Section 1 Sampling Techniques and Data

(Criteria in this section apply to all succeeding sections.)

| Criteria | JORC Code explanation | Commentary |
|---|---|---|
| ***Sampling techniques*** | • *Nature and quality of sampling (eg cut channels, random chips, or specific specialised industry standard measurement tools appropriate to the minerals under investigation, such as down hole gamma sondes, or handheld XRF instruments, etc). These examples should not be taken as limiting the broad meaning of sampling.*<br>• *Include reference to measures taken to ensure sample representivity and the appropriate calibration of any measurement tools or systems used.*<br>• *Aspects of the determination of mineralisation that are Material to the Public Report. In cases where 'industry standard' work has been done this would be relatively simple (eg 'reverse circulation drilling was used to obtain 1 m samples from which 3 kg was pulverised to produce a 30 g charge for fire assay'). In other cases more explanation may be required, such as where there is coarse gold that has inherent sampling problems. Unusual commodities or mineralisation types (eg submarine nodules) may warrant disclosure of detailed information.* | • The deposit was primarily sampled via reverse circulation chip samples from reverse circulation drill holes and half core samples based on geological considerations within diamond drill holes drilled on an average 80m x 80m grid through the deposit. The samples were typically taken on 1m intervals through the deposit.<br>• The holes were orientated to ensure drill intersections were approximately perpendicular to the dip and strike of the mineralisation lenses and overall geological package which is generally flat lying.<br>• Diamond core and reverse circulation drill samples were crushed and assayed for $ZrO_2$, $HfO_2$, $Nb_2O_5$, $Ta_2O_5$, $Y_2O_3$, $La_2O_3$, $CeO_2$, Th, U, $Nd_2O_3$, $Dy_2O_3$, $Er_2O_3$, $Eu_2O_3$, $Gd_2O_3$, $Ho_2O_3$, $Lu_2O_3$, $Pr_6O_{11}$, $Sm_2O_3$, $Tb_4O_7$, $Tm_2O_3$ and $Yb_2O_3$ via a combination of Pressed Powder XRF, mixed acid digest ICPMS and NAA (Neutron Activation) methods. |
| ***Drilling techniques*** | • *Drill type (eg core, reverse circulation, open-hole hammer, rotary air blast, auger, Bangka, sonic, etc) and details (eg core diameter, triple or standard tube, depth of diamond tails, face-sampling bit or other type, whether core is oriented and if so, by what method, etc).* | • A total of 127 drillholes holes have been used to estimate the Toongi Resources, of these a total of 4 were surface diamond holes and 123 were reverse circulation holes. The diamond core size drilled was predominately with standard tube NQ2 sized core. All diamond core was orientated. |
| ***Drill sample recovery*** | • *Method of recording and assessing core and chip sample recoveries and results assessed.*<br>• *Measures taken to maximise sample recovery and ensure representative nature of the samples.*<br>• *Whether a relationship exists between sample recovery and grade and whether sample bias may have occurred due to preferential loss/gain of fine/coarse material.* | • The diamond core drill recovery was monitored using a combination of the drillers run sheets, core block markings and manual piecing together of core and measurement. Any core loss was noted within the logging sheets. Core recovery averaged >98% through the ore intervals. Recovery of the RC samples were not routinely recorded however samples were weighed of the subset of samples that were sent for metallurgical testwork, these weights were in line with expectations from the size of hammer used. |
| ***Logging*** | • *Whether core and chip samples have been geologically and geotechnically logged to a level of detail to support appropriate Mineral Resource estimation, mining studies and metallurgical studies.*<br>• *Whether logging is qualitative or quantitative in nature. Core (or costean, channel, etc) photography.*<br>• *The total length and percentage of the relevant intersections logged.* | • All diamond core and reverse circulation chips were logged for geological and geotechnical characteristics. Rock type, alteration style and sulphide mineral content were logged by a site geologist. The logging was sufficient to enable creation of detailed geological model that supports the resource estimate. |
| ***Sub-sampling techniques*** | • *If core, whether cut or sawn and whether quarter, half or all core taken.* | • HQ2 sized diamond core was marked up and cut in half with a diamond core saw. The right side of the core as sampled according to 1m |

| Criteria | JORC Code explanation | Commentary |
|---|---|---|
| ***and sample preparation*** | • *If non-core, whether riffled, tube sampled, rotary split, etc and whether sampled wet or dry.*<br>• *For all sample types, the nature, quality and appropriateness of the sample preparation technique.*<br>• *Quality control procedures adopted for all sub-sampling stages to maximise representivity of samples.*<br>• *Measures taken to ensure that the sampling is representative of the in situ material collected, including for instance results for field duplicate/second-half sampling.*<br>• *Whether sample sizes are appropriate to the grain size of the material being sampled.* | intervals selected by the site Geologist. Sample fillets were also taken from the core holes where half core samples was not taken.<br>• The RC samples were poured through a riffle splitter after the sample was circulated from the drill face through a cyclone and into a large plastic bag.<br>• The methodology of selecting half core via geological intervals guarantees that the core samples are representative. The reverse circulation drilling samples are collected on 1m intervals so there is no selectivity bias with these.<br>• The sample sizes vary from material sourced from the core samples given the varying sample lengths. The RC samples are generally 5-10 kg.<br>• The sample sizes are appropriate given the relatively even distribution of base metal grades within the deposit |
| ***Quality of assay data and laboratory tests*** | • *The nature, quality and appropriateness of the assaying and laboratory procedures used and whether the technique is considered partial or total.*<br>• *For geophysical tools, spectrometers, handheld XRF instruments, etc, the parameters used in determining the analysis including instrument make and model, reading times, calibrations factors applied and their derivation, etc.*<br>• *Nature of quality control procedures adopted (eg standards, blanks, duplicates, external laboratory checks) and whether acceptable levels of accuracy (ie lack of bias) and precision have been established.* | • Analabs Perth, Analytical Services (WA), ALS (Brisbane), Ultra Trace Pty Ltd and Becquerel Laboratories have all completed assaying of the Toongi mineralisation at various stages. Standard and duplicate samples were assessed for the 2000 and 2001 drilling samples. The results of these samples indicate that there are no known material biases in the original Toongi assay dataset. |
| ***Verification of sampling and assaying*** | • *The verification of significant intersections by either independent or alternative company personnel.*<br>• *The use of twinned holes.*<br>• *Documentation of primary data, data entry procedures, data verification, data storage (physical and electronic) protocols.*<br>• *Discuss any adjustment to assay data.* | • Several campaigns of duplicate sampling were completed, the majority of the results for these samples indicate an acceptable correlation with the original assay determinations. Reference standards were also used to ensure accuracy within the laboratory assaying protocols, as with the duplicates these samples show sufficient accuracy to confirm the validity of the original assay dataset.<br>• Data was entered into a central database and then validated by a series of validation checks to ensure erroneous data was not saved into the resource database. |
| ***Location of data points*** | • *Accuracy and quality of surveys used to locate drill holes (collar and down-hole surveys), trenches, mine workings and other locations used in Mineral Resource estimation.*<br>• *Specification of the grid system used.*<br>• *Quality and adequacy of topographic control.* | • The GDA94 grid system was used as the grid reference for the Toongi deposit. All holes were surveyed using a differential GPS survey system.<br>• The topography surface is represented by a wireframe file. The surface covers the complete Toongi deposit area. The surface is an accurate representation of the actual topographic surface at the site. |

| Criteria | JORC Code explanation | Commentary |
|---|---|---|
| ***Data spacing and distribution*** | • *Data spacing for reporting of Exploration Results.*<br>• *Whether the data spacing and distribution is sufficient to establish the degree of geological and grade continuity appropriate for the Mineral Resource and Ore Reserve estimation procedure(s) and classifications applied.*<br>• *Whether sample compositing has been applied.* | • The Toongi deposit has been drilled on an average spacing of 80 x 80m along the strike of the ore domain. This drill spacing provides evidence of the mineralized zone continuity for the purposes of resource estimation.<br>• No sampling compositing was necessary in the initial diamond drilling or RC drilling however compositing of raw assay data was completed in preparation for the resource estimation process. |
| ***Orientation of data in relation to geological structure*** | • *Whether the orientation of sampling achieves unbiased sampling of possible structures and the extent to which this is known, considering the deposit type.*<br>• *If the relationship between the drilling orientation and the orientation of key mineralised structures is considered to have introduced a sampling bias, this should be assessed and reported if material.* | • The majority of RC drill holes were orientated to provide an approximate perpendicular intersection angle with the main mineralized zone.<br>• No sampling bias is assessed as being caused by the drilling orientation. |
| ***Sample security*** | • *The measures taken to ensure sample security.* | • Samples were supervised by either the drill crew, field assistant or geologist and at all times. Given the low grade rare earth oxide nature of the deposit sample security was not assessed as a significant risk. |
| ***Audits or reviews*** | • *The results of any audits or reviews of sampling techniques and data.* | • No audits have been undertaken |

## Section 2 Reporting of Exploration Results

(Criteria listed in the preceding section also apply to this section.)

| Criteria | JORC Code explanation | Commentary |
|---|---|---|
| ***Mineral tenement and land tenure status*** | • *Type, reference name/number, location and ownership including agreements or material issues with third parties such as joint ventures, partnerships, overriding royalties, native title interests, historical sites, wilderness or national park and environmental settings.*<br>• *The security of the tenure held at the time of reporting along with any known impediments to obtaining a licence to operate in the area.* | • The Toongi deposit is located within ML1724 that is located within EL5548.<br>• The license areas area current. |
| ***Exploration done by other parties*** | • *Acknowledgment and appraisal of exploration by other parties.* | • All work completed by Australian Strategic Materials Ltd (formerly known as Australian Zirconia Ltd) or associated parties |
| ***Geology*** | • *Deposit type, geological setting and style of mineralisation.* | • The deposit consists of rare earth oxide mineralisation disseminated within a trachyte sill that occurs within the sedimentary units of the Jurassic Napperby Formation. |
| ***Drill hole Information*** | • *A summary of all information material to the understanding of the exploration results including a tabulation of the following information for all Material drill holes:*<br>o *easting and northing of the drill hole collar*<br>o *elevation or RL (Reduced Level – elevation above sea level in metres) of the drill hole collar*<br>o *dip and azimuth of the hole*<br>o *down hole length and interception depth*<br>o *hole length.*<br>• *If the exclusion of this information is justified on the basis that the information is not Material and this exclusion does not detract from the understanding of the report, the Competent Person should clearly explain why this is the case.* | • A list of each resource drillhole location and downhole survey is located as an appendices 2 & 3 to this table, see below. |
| ***Data aggregation methods*** | • *In reporting Exploration Results, weighting averaging techniques, maximum and/or minimum grade truncations (eg cutting of high grades) and cut-off grades are usually Material and should be stated.*<br>• *Where aggregate intercepts incorporate short lengths of high grade results and longer lengths of low grade results, the procedure used for such aggregation should be stated and some typical examples of such aggregations should be shown in detail.*<br>• *The assumptions used for any reporting of metal equivalent values should be clearly stated.* | • The exploration results reported for the Toongi deposit were included assay intervals for $ZrO_2$ and an extensive suite of rare earth oxide grades. No cutting of high grades was completed when reporting as exploration results |
| ***Relationship between mineralisation widths and intercept lengths*** | • *These relationships are particularly important in the reporting of Exploration Results.*<br>• *If the geometry of the mineralisation with respect to the drill hole angle is known, its nature should be reported.*<br>• *If it is not known and only the down hole lengths are reported, there should be a clear statement to this effect (eg 'down hole length, true width not known').* | • The typical drill sample interval is 1m in length, the average thickness of the mineralized zone 20m, there are no issues with reporting the results based on this.<br>• The drillholes intercepted the mineralized lenses at an approximately perpendicular angle. All exploration results were reported as downhole thicknesses. |
| ***Diagrams*** | • *Appropriate maps and sections (with scales) and tabulations of intercepts should be included for any significant discovery being reported These should include, but not be limited to a plan view of drill hole collar locations and appropriate sectional views.* | • See Appendix 4 for a location plan of all drill collars used in the resource estimate. |

| Criteria | JORC Code explanation | Commentary |
|---|---|---|
| ***Balanced reporting*** | • *Where comprehensive reporting of all Exploration Results is not practicable, representative reporting of both low and high grades and/or widths should be practiced to avoid misleading reporting of Exploration Results.* | • Exploration data is not being reported here |
| ***Other substantive exploration data*** | • *Other exploration data, if meaningful and material, should be reported including (but not limited to): geological observations; geophysical survey results; geochemical survey results; bulk samples – size and method of treatment; metallurgical test results; bulk density, groundwater, geotechnical and rock characteristics; potential deleterious or contaminating substances.* | • Exploration data not being reported here. No other data to report |
| ***Further work*** | • *The nature and scale of planned further work (eg tests for lateral extensions or depth extensions or large-scale step-out drilling).*<br>• *Diagrams clearly highlighting the areas of possible extensions, including the main geological interpretations and future drilling areas, provided this information is not commercially sensitive.* | • Further infill drilling will be required within the deposit area with a view to upgrading inferred resources to either indicated or measured categories. |

## Section 3 Estimation and Reporting of Mineral Resources

(Criteria listed in section 1, and where relevant in section 2, also apply to this section.)

| Criteria | JORC Code explanation | Commentary |
|---|---|---|
| ***Database integrity*** | • *Measures taken to ensure that data has not been corrupted by, for example, transcription or keying errors, between its initial collection and its use for Mineral Resource estimation purposes.*<br>• *Data validation procedures used.* | • The survey, sampling and logging data was electronically imported into the resource database. A visual check was also made of the drill traces, assay and logging data in the 3D environment of Surpac to ensure that results correlated between drillholes and were in line with the geological interpretation and mineralization continuity. |
| ***Site visits*** | • *Comment on any site visits undertaken by the Competent Person and the outcome of those visits.*<br>• *If no site visits have been undertaken indicate why this is the case.* | • A site visit was completed by Stuart Hutchin in October 2016 where the Toongi site and core samples located within the core storage facility were inspected. |
| ***Geological interpretation*** | • *Confidence in (or conversely, the uncertainty of ) the geological interpretation of the mineral deposit.*<br>• *Nature of the data used and of any assumptions made.*<br>• *The effect, if any, of alternative interpretations on Mineral Resource estimation.*<br>• *The use of geology in guiding and controlling Mineral Resource estimation.*<br>• *The factors affecting continuity both of grade and geology.* | • The confidence in the overall geological interpretation is high given the regular distribution of the trachyte sill and 80m x 80m drill coverage over the deposit that have defined the sill edges in all directions.<br>• The mineralisation occurs disseminated throughout the trachyte sill. Grades are relatively consistent however the grain size of the host trachyte does have a minor effect on grade variability, there is also some enrichment of grades in the vicinity of the trachyte contact. |
| ***Dimensions*** | • *The extent and variability of the Mineral Resource expressed as length (along strike or otherwise), plan width, and depth below surface to the upper and lower limits of the Mineral Resource.* | • The strike length of the mineralised domain modelled is approximately 500m long by 400m wide with an average thickness of 30m. The resource domain is located from near the surface topography and extends to a depth of 50m below surface. |
| ***Estimation and modelling techniques*** | • *The nature and appropriateness of the estimation technique(s) applied and key assumptions, including treatment of extreme grade values, domaining, interpolation parameters and maximum distance of extrapolation from data points. If a computer assisted estimation* | • The resource model was constructed using Surpac software. Mineralised domain wireframes were constructed using the geology boundary of the trachyte to guide the interpretation. A minimum |

| Criteria | JORC Code explanation | Commentary |
|---|---|---|
| | *method was chosen include a description of computer software and parameters used.*<br>• *The availability of check estimates, previous estimates and/or mine production records and whether the Mineral Resource estimate takes appropriate account of such data.*<br>• *The assumptions made regarding recovery of by-products.*<br>• *Estimation of deleterious elements or other non-grade variables of economic significance (eg sulphur for acid mine drainage characterisation).*<br>• *In the case of block model interpolation, the block size in relation to the average sample spacing and the search employed.*<br>• *Any assumptions behind modelling of selective mining units.*<br>• *Any assumptions about correlation between variables.*<br>• *Description of how the geological interpretation was used to control the resource estimates.*<br>• *Discussion of basis for using or not using grade cutting or capping.*<br>• *The process of validation, the checking process used, the comparison of model data to drill hole data, and use of reconciliation data if available.* | domain thickness of 5m was used, this corresponds to the minimum practical mining width within an open pit mining scenario.<br>• After review of the assay dataset statistics it was assessed that no top cutting was valid or required for the Toongi mineralisation.<br>• A composite file was created using a composite length of 1m. The median sample length within the assay dataset is also 1m.<br>• Variograms for each attribute were created for the modelled domain with the results of these used to assist with estimation of resources.<br>• An ordinary kriged estimate was run for $ZrO_2$, $HfO_2$, $Nb_2O_5$, $Ta_2O_5$, $Y_2O_3$, $La_2O_3$, $CeO_2$, Th and U. For the other oxides where assay data was not available for all holes an inverse distance estimate was run.<br>• The estimation process was validated by comparing global block grades with the average composite grades, visual checks comparing block grades with raw assay data, volume checks of the ore domain wireframe vs the block model volume and comparison of the ordinary kriged results with an inverse distance estimate.<br>• The validation steps taken indicate that the block estimates are a realistic representation of the source assay data and that they block model volumes are valid in comparison to the modelled interpretation. |
| ***Moisture*** | • *Whether the tonnages are estimated on a dry basis or with natural moisture, and the method of determination of the moisture content.* | • The resource tonnages have been estimated on a dry basis |
| ***Cut-off parameters*** | • *The basis of the adopted cut-off grade(s) or quality parameters applied.* | • Given the very even grade distribution within the deposit applying resource cut-off was not assessed as necessary, the grade tonnage curves of $ZrO_2$ % and TREO% demonstrate this. |
| ***Mining factors or assumptions*** | • *Assumptions made regarding possible mining methods, minimum mining dimensions and internal (or, if applicable, external) mining dilution. It is always necessary as part of the process of determining reasonable prospects for eventual economic extraction to consider potential mining methods, but the assumptions made regarding mining methods and parameters when estimating Mineral Resources may not always be rigorous. Where this is the case, this should be reported with an explanation of the basis of the mining assumptions made.* | • The resources have been estimated using a minimum thickness of 5m for the domain shape, this minimum thickness therefore accounts for any dilution in zones that are less than this thickness. The proposed mining method is via open pit mining techniques, the model parameters are therefore deemed to be suitable for this type of potential mining operation. |
| ***Metallurgical factors or assumptions*** | • *The basis for assumptions or predictions regarding metallurgical amenability. It is always necessary as part of the process of determining reasonable prospects for eventual economic extraction to consider potential metallurgical methods, but the assumptions regarding metallurgical treatment processes and parameters made when reporting Mineral Resources may not always be rigorous. Where this is the case, this should be reported with an explanation of the basis of the metallurgical assumptions made.* | • A detailed metallurgical testwork program, has been completed including the construction and running of a pilot plant. The metallurgical process, including capital and operating costs, is well understood. A detailed Front End Engineering Design report has been completed. |

| Criteria | JORC Code explanation | Commentary |
|---|---|---|
| ***Environmen-tal factors or assumptions*** | • *Assumptions made regarding possible waste and process residue disposal options. It is always necessary as part of the process of determining reasonable prospects for eventual economic extraction to consider the potential environmental impacts of the mining and processing operation. While at this stage the determination of potential environmental impacts, particularly for a greenfields project, may not always be well advanced, the status of early consideration of these potential environmental impacts should be reported. Where these aspects have not been considered this should be reported with an explanation of the environmental assumptions made.* | • An Environmental Impact Statement has been prepared and approved covering all aspects of environmental impacts for the proposed project. Development Approval has been granted by the NSW Government |
| ***Bulk density*** | • *Whether assumed or determined. If assumed, the basis for the assumptions. If determined, the method used, whether wet or dry, the frequency of the measurements, the nature, size and representativeness of the samples.*<br>• *The bulk density for bulk material must have been measured by methods that adequately account for void spaces (vugs, porosity, etc), moisture and differences between rock and alteration zones within the deposit.*<br>• *Discuss assumptions for bulk density estimates used in the evaluation process of the different materials.* | • The bulk densities for the ore and waste rock types were estimated using the Archimedes method, that is (Dry Weight / (Dry Weight – Wet Weight). A density of 2.49 was assigned to the fresh ore material. |
| ***Classification*** | • *The basis for the classification of the Mineral Resources into varying confidence categories.*<br>• *Whether appropriate account has been taken of all relevant factors (ie relative confidence in tonnage/grade estimations, reliability of input data, confidence in continuity of geology and metal values, quality, quantity and distribution of the data).*<br>• *Whether the result appropriately reflects the Competent Person's view of the deposit.* | • The resources have been classified according to the drill density and the modelled continuity of both the thickness and grade of the mineralized zones in the view of the competent geologist. Measured and Indicated blocks have been reported for the resource.<br>• The resource classification is deemed appropriate in relation to the drill spacing and geological continuity of the mineralized domains. |
| ***Audits or reviews*** | • *The results of any audits or reviews of Mineral Resource estimates.* | • Stuart Hutchin has visited the Toongi site in 2016. The review involved a high level assessment of the exploration potential. |
| ***Discussion of relative accuracy/ confidence*** | • *Where appropriate a statement of the relative accuracy and confidence level in the Mineral Resource estimate using an approach or procedure deemed appropriate by the Competent Person. For example, the application of statistical or geostatistical procedures to quantify the relative accuracy of the resource within stated confidence limits, or, if such an approach is not deemed appropriate, a qualitative discussion of the factors that could affect the relative accuracy and confidence of the estimate.*<br>• *The statement should specify whether it relates to global or local estimates, and, if local, state the relevant tonnages, which should be relevant to technical and economic evaluation. Documentation should include assumptions made and the procedures used.*<br>• *These statements of relative accuracy and confidence of the estimate should be compared with production data, where available.* | • The resource estimate is deemed to be an accurate reflection of both the geological interpretation and tenure of mineralization within the deposit. |

## JORC Code, 2012 Edition – Table 1 report

### Section 4 Estimation and Reporting of Ore Reserves

(Criteria listed in section 1, and where relevant in sections 2 and 3, also apply to this section.)

<table>
<tr><th>Criteria</th><th>JORC Code explanation</th><th>Commentary</th></tr>
<tr><td>Mineral Resource estimate for conversion to Ore Reserves</td><td><ul><li>Description of the Mineral Resource estimate used as a basis for the conversion to an Ore Reserve.</li></ul></td><td>The Mineral Resources are reported inclusive of the Mineral Resources used to define the Ore Reserves.<br>The sub-celled Mineral Resource block model named 'toongi_model_dec16.mdl' was used for the pit optimisation. This model was produced by Stuart Hutchin of Mining One in December 2016. The Mineral Resource Estimate of this block model was reported in accordance with the JORC Code.</td></tr>
<tr><td>Site visits</td><td><ul><li>Comment on any site visits undertaken by the Competent Person and the outcome of those visits.</li></ul>(If no site visits have been undertaken indicate why this is the case.)</td><td>Ievan Ludjio visited the site 2nd of March 2017 and has met with relevant ASM personnel and the consultants.</td></tr>
<tr><td>Study status</td><td><ul><li>The type and level of study undertaken to enable Mineral Resources to be converted to Ore Reserves.</li></ul>(The Code requires that a study to at least Pre-Feasibility Study level has been undertaken to convert Mineral Resources to Ore Reserves. Such studies will have been carried out and will have determined a mine plan that is technically achievable and economically viable, and that material Modifying Factors have been considered.)</td><td>A Definitive Feasibility Study (DFS), prepared by TZ Minerals International Pty Ltd (TZMI), was completed in 2013 which built on previous studies prepared by TZMI in 2011 and SNC Lavalin in 2002. Subsequent studies and reports have been prepared by Hatch Pty Ltd in 2015, and then GHD in 2017.</td></tr>
<tr><td>Cut-off parameters</td><td><ul><li>The basis of the cut-off grade(s) or quality parameters applied.</li></ul></td><td>As the deposit is polymetallic, a block value script using all relevant parameters was used to code a block value into the resource model. Each block needs to have a block value greater than zero for it to be included in the Ore Reserves.<br>For the price assumptions please see section "Costs" below.</td></tr>
<tr><td>Mining factors or assumptions</td><td><ul><li>The method and assumptions used as reported in the Pre-Feasibility or Feasibility Study to convert the Mineral Resource to an Ore Reserve (i.e. either by application of appropriate factors by optimisation or by preliminary or detailed design).</li><li>The choice, nature and appropriateness of the selected mining method(s) and other mining parameters including associated design issues such as pre-strip, access, etc.</li><li>The assumptions made regarding geotechnical parameters (e.g. pit slopes, stope sizes, etc), grade control and pre-production drilling.</li><li>The major assumptions made and Mineral Resource model used for pit and stope optimisation (if appropriate).</li><li>The mining dilution factors used.</li><li>The mining recovery factors used.</li><li>Any minimum mining widths used.</li><li>The manner in which Inferred Mineral Resources are utilised in mining studies and the sensitivity of the outcome to their inclusion.</li><li>The infrastructure requirements of the selected mining methods.</li></ul></td><td>The Dubbo Project (DP) is a polymetallic zirconia, hafnium, niobium, and rare earth metals deposit. It is planned that the operation use front end loaders and articulated trucks along with a fleet of auxiliary equipment.<br>This proposed mining method is appropriate for the style and size of the mineralisation.<br>As DP consists of a simple bulk massive style deposit with no internal waste, a mining recovery of 100% and mining dilution of 0% has been assumed.<br>Pit slope geotechnical parameters:<table><tr><th>Parameter¤</th><th>Value¤</th></tr><tr><td>Batter·Angle¤</td><td>55°¤</td></tr><tr><td>IRSA¤</td><td>40°¤</td></tr><tr><td>Berm·width¤</td><td>8m·¤</td></tr><tr><td>Bench·Height¤</td><td>10m¤</td></tr></table>No Inferred material has been included in optimisation and/or Ore Reserves reporting.</td></tr>
</table>

| Criteria | JORC Code explanation | Commentary |
|---|---|---|
| ***Metallurgical factors or assumptions*** | • *The metallurgical process proposed and the appropriateness of that process to the style of mineralisation.*<br>• *Whether the metallurgical process is well-tested technology or novel in nature.*<br>• *The nature, amount and representativeness of metallurgical test work undertaken, the nature of the metallurgical domaining applied and the corresponding metallurgical recovery factors applied.*<br>• *Any assumptions or allowances made for deleterious elements.*<br>• *The existence of any bulk sample or pilot scale test work and the degree to which such samples are considered representative of the ore body as a whole.*<br>• *For minerals that are defined by a specification, has the ore reserve estimation been based on the appropriate mineralogy to meet the specifications?* | Ore is crushed and screened with the dry ground ore then mixed with sulphuric acid and roasted to form sulphated solids. The sulphated solids are subjected to quenching to extract zirconium, niobium and rare earth sulphates as well as impurity elements leaching in the water into solution. The leach slurry is washed in two stages of counter current decantation (CCD) thickeners, each stage comprising four thickeners. The CCD circuit separates the light rare earth (LRE) bearing solution from the zirconium/niobium/heavy rare earth (HRE) solution. Separation of zirconium, niobium and HRE takes place in the solvent extraction (SX) circuit.<br>The various products are then separated and refined in separate treatment circuits to produce the zirconium and niobium products and intermediate products for the heavy rare earth and light rare earth products.<br>Metallurgical Recoveries:<br>Lanthanum Oxide 80.1%<br>Cerium Oxide 69.8%<br>Praseodymium Oxide 66.7%<br>Neodymium Oxide 74.5%<br>Samarium Oxide 51.2%<br>Europium Oxide 42.3%<br>Gadolinium Oxide 56.9%<br>Terbium Oxide 47.5%<br>Dysprosium Oxide 67.4%<br>Holmium Oxide 59.3%<br>Erbium Oxide 74.0%<br>Thulium Oxide 38.6%<br>Ytterbium Oxide 69.9%<br>Lutetium Oxide 26.0%<br>Yttrium oxide 74.3%<br>Zirconium Oxide 84.4%<br>Hafnium Oxide 50.0%<br>Niobium Oxide 61.2% |
| ***Environmental*** | • *The status of studies of potential environmental impacts of the mining and processing operation. Details of waste rock characterisation and the consideration of potential sites, status of design options considered and, where applicable, the status of approvals for process residue storage and waste dumps should be reported.* | An Environmental Protection Licence (EPL 20702) was issued in March 2016 by the NSW Environment Protection Authority. This licence allows ASM to undertake Scheduled Development Works for the establishment of the Dubbo Project<br>To minimise impacts on the endangered Pink-tailed Worm-Lizard, the Stage 1 of the open pit will be mined in two separate cutbacks. The western section of the open pit will be mined in the first 10 years with the eastern portion mined in the following 10 years. Extraction of both ore and waste will occur by bench, |

| Criteria | JORC Code explanation | Commentary |
|---|---|---|
| | | in line with the mining phases defined to address the environmental concerns. |
| ***Infrastructure*** | • *The existence of appropriate infrastructure: availability of land for plant development, power, water, transportation (particularly for bulk commodities), labour, accommodation; or the ease with which the infrastructure can be provided, or accessed.* | In order for mining, processing and product transportation to be undertaken, in addition to the standard infrastructure requirements, the following off-site infrastructure and other site features would first need to be established:<br>• Upgrades and construction of road and bridges network including curve realignment, pavement upgrades and upgrades to creek crossings on Obley and Toongi Roads;<br>• Installation of a Western Plains Zoo noise barrier along a 1 km section of the Obley Road;<br>• Installation of a pumping station located at the Macquarie River and a 7 km water pipe to deliver raw water to the site;<br>• A natural gas pipeline within the Toongi-Dubbo Rail and Gas Pipeline Corridor;<br>• Installation of a new single circuit 132 kV overhead transmission line to supply HV power to site from Geurie sub-station; and<br>Construction of a range of water management and retention structures within the DP site. |
| ***Costs*** | • *The derivation of, or assumptions made, regarding projected capital costs in the study.*<br>• *The methodology used to estimate operating costs.*<br>• *Allowances made for the content of deleterious elements.*<br>• *The source of exchange rates used in the study.*<br>• *Derivation of transportation charges.*<br>• *The basis for forecasting or source of treatment and refining charges, penalties for failure to meet specification, etc.*<br>• *The allowances made for royalties' payable, both Government and private.* | Costs used in the determination of the Ore Reserves have been sourced from the following documents:<br>• **Project Capital Estimate** - Hatch Pty Ltd, 'Addendum to FEED Services Report, H346794-00000-00-124-0007', 15th June 2015<br>• **Site General & Administration** - Hatch Pty Ltd, 'FEED Services Report, H346794-00000-00-124-0006', 21st August 2015<br>• **Processing (excluding SRSF costs)** - Hatch Pty Ltd, 'FEED Services Report, H346794-00000-00-124-0006', 21st August 2015<br>• **SRSF Costs** – 'GHD Memorandum 'Concept Design – Cost Estimate, Andrew Simmons, February 2017.<br>• **Mining Costs** – 'Dubbo Zirconia Project Budget Mining Costs Owner Operator Model, by Glastonbury Mining Consultants in 2013 |
| ***Revenue factors*** | • *The derivation of, or assumptions made regarding revenue factors including head grade, metal or commodity price(s) exchange rates, transportation and treatment charges, penalties, net smelter returns, etc.*<br>• *The derivation of assumptions made of metal or commodity price(s), for the principal metals, minerals and co-products.* | For cost assumptions see section above – "Costs"<br>Alkane employs specialist consultants and specific industry contacts to maintain an interactive product pricing regime. The assumed commodity prices, reported in ASX Announcement on 27th of August 2015, are based on the anticipated 2020 prices.<br>The following commodity prices were used (values are in USD/kg): |

| Criteria | JORC Code explanation | Commentary |
|---|---|---|
| | | Praseodymium Oxide $80.00<br>Neodymium Oxide $60.00<br>Samarium Oxide $3.00<br>Europium Oxide $300.00<br>Gadolinium Oxide $20.00<br>Terbium Oxide $650.00<br>Dysprosium Oxide $350.00<br>Holmium Oxide $40.00<br>Erbium Oxide $40.00<br>Ytterbium Oxide $30.00<br>Lutetium Oxide $990.00<br>Yttrium oxide $15.00<br>Zirconium Oxide $8.27<br>Hafnium Oxide $500.00<br>Niobium Oxide $40.00 |
| ***Market assessment*** | • *The demand, supply and stock situation for the particular commodity, consumption trends and factors likely to affect supply and demand into the future.*<br>• *A customer and competitor analysis along with the identification of likely market windows for the product.*<br>• *Price and volume forecasts and the basis for these forecasts.*<br>• *For industrial minerals the customer specification, testing and acceptance requirements prior to a supply contract.* | The output of the various products planned to be produced by DP, is large enough to provide an alternative source of these critical metals, without being too large to affect the supply and demand balance. Markets for each of the DP products are separate but related, and have experienced high annual growth rates of between 7%-10%. The high growth rates are due to the rapid industrial and social development of countries such as China, where GDP is growing strongly and the intensity of use of critical metals is increasing from a low base compared to western industrialised economies. |
| ***Economic*** | • *The inputs to the economic analysis to produce the net present value (NPV) in the study, the source and confidence of these economic inputs including estimated inflation, discount rate, etc.*<br>• *NPV ranges and sensitivity to variations in the significant assumptions and inputs.* | The costs used in the economic valuation are based on detailed studies mentioned in the “Costs” section of this table. They all have a level of confidence to be included in the Ore Reserve as per the requirements listed in the 2012 JORC Code.<br>The inputs that inform the economic analysis include all foreseeable operating and capital costs, resulting in a positive NPV for the Ore Reserve. A discount rate appropriate to the size and nature of the organisation and deposit has been used in the determination |
| ***Social*** | • *The status of agreements with key stakeholders and matters leading to social licence to operate.* | As part of the 2012 DFS, a study on the social impact of the project determined that the project would have an overall beneficial impact on the surrounding local communities. |
| ***Other*** | • *To the extent relevant, the impact of the following on the project and/or on the estimation and classification of the Ore Reserves:*<br>• *Any identified material naturally occurring risks.*<br>• *The status of material legal agreements and marketing arrangements.* | All government agreements and approvals required to realise the Ore Reserves are current and will be in place until the end of mine life. |

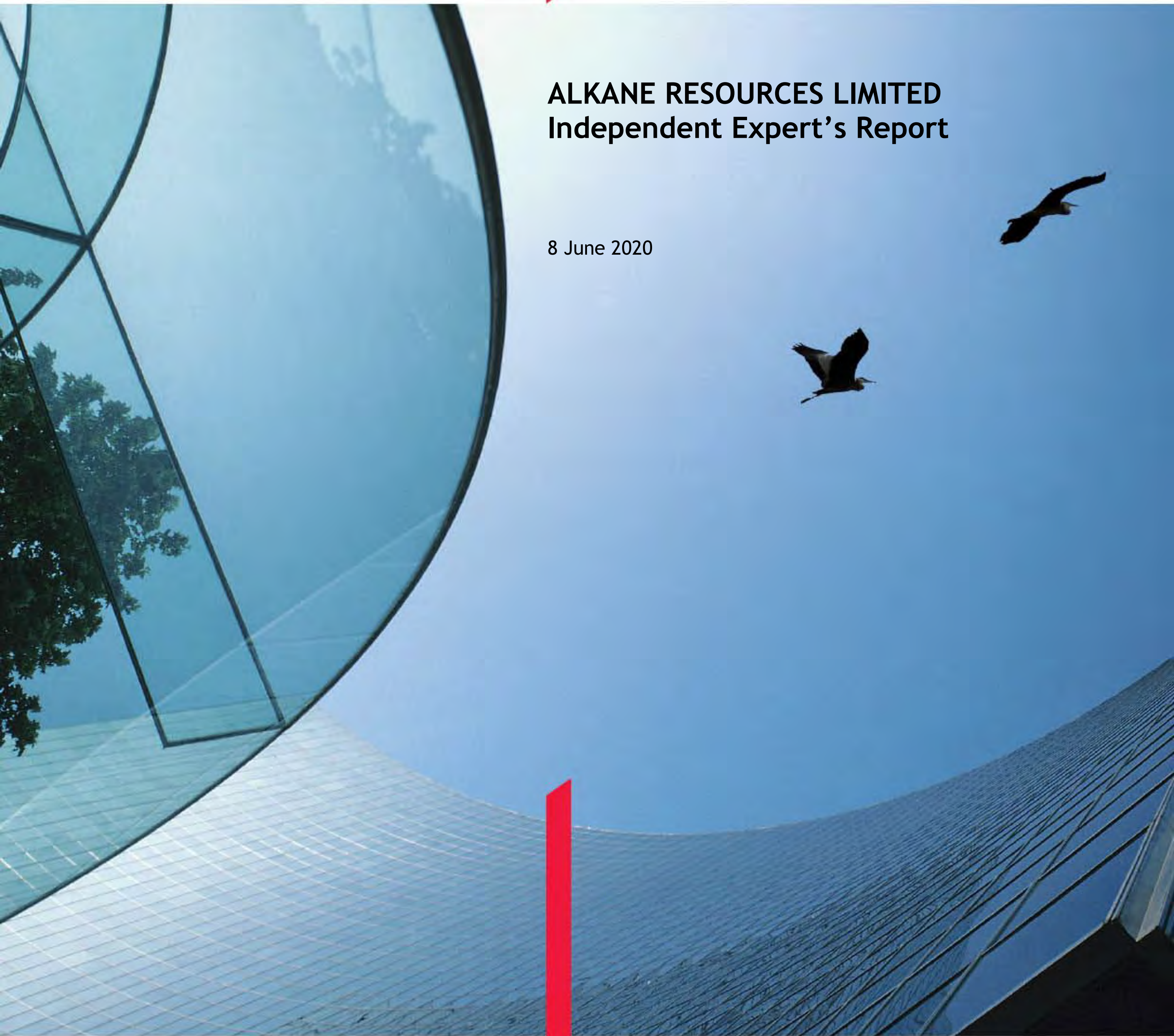
| Criteria | JORC Code explanation | Commentary |
|---|---|---|
| | • *The status of governmental agreements and approvals critical to the viability of the project, such as mineral tenement status, and government and statutory approvals. There must be reasonable grounds to expect that all necessary Government approvals will be received within the timeframes anticipated in the Pre-Feasibility or Feasibility study. Highlight and discuss the materiality of any unresolved matter that is dependent on a third party on which extraction of the reserve is contingent.* | |
| ***Classification*** | • *The basis for the classification of the Ore Reserves into varying confidence categories.*<br>• *Whether the result appropriately reflects the Competent Person's view of the deposit*<br>• *The proportion of Probable Ore Reserves that have been derived from Measured Mineral Resources (if any).* | The Ore Reserves classification is based on the JORC 2012 requirements. The basis for the classification was the Mineral Resource classification and economic cut-off grade. |
| ***Audits or reviews*** | • *The results of any audits or reviews of Ore Reserve estimates.* | No Ore Reserve audits have been carried out, however Internal Peer Review has been carried out as part of this Ore Reserves Estimate |
| ***Discussion of relative accuracy/ confidence*** | • *Where appropriate a statement of the relative accuracy and confidence level in the Ore Reserve estimate using an approach or procedure deemed appropriate by the Competent Person. For example, the application of statistical or geostatistical procedures to quantify the relative accuracy of the reserve within stated confidence limits, or, if such an approach is not deemed appropriate, a qualitative discussion of the factors which could affect the relative accuracy and confidence of the estimate.*<br>• *The statement should specify whether it relates to global or local estimates, and, if local, state the relevant tonnages, which should be relevant to technical and economic evaluation. Documentation should include assumptions made and the procedures used.*<br>• *Accuracy and confidence discussions should extend to specific discussions of any applied Modifying Factors that may have a material impact on Ore Reserve viability, or for which there are remaining areas of uncertainty at the current study stage.*<br>• *It is recognised that this may not be possible or appropriate in all circumstances. These statements of relative accuracy and confidence of the estimate should be compared with production data, where available.* | The most significant factors affecting confidence in the Ore Reserves are:<br>• Although previous DFS's and other studies have been prepared to a sufficient level of confidence, variation in the capital, operating costs, and market fluctuations will have an impact on the project economics.<br>• Traditionally as a result of their similar chemical properties, REE metals are extremely difficult to separate from each other. The technical metallurgical assumptions may differ once the plant is operating affecting the project economics. |

ANNEXURE 3

Independent Expert's Report

# ALKANE RESOURCES LIMITED
# Independent Expert's Report

8 June 2020



## Financial Services Guide

8 June 2020

**BDO Corporate Finance (WA) Pty Ltd** ABN 27 124 031 045 (**'we'** or **'us'** or **'ours'** as appropriate) has been engaged by Alkane Resources Limited (**'Alkane'**) to provide an independent expert's report on the proposed demerger of its critical materials division, including the Dubbo Project and other related assets, through an in-specie distribution. You are being provided with a copy of our report because you are a shareholder of Alkane and this Financial Services Guide (**'FSG'**) is included in the event you are also classified under the Corporations Act 2001 (**'the Act'**) as a retail client.

Our report and this FSG accompanies the demerger booklet (**'Demerger Booklet'**) required to be provided to you by Alkane to assist you in deciding on whether or not to approve the proposal.

**Financial Services Guide**
This FSG is designed to help retail clients make a decision as to their use of our general financial product advice and to ensure that we comply with our obligations as a financial services licensee.

This FSG includes information about:

- Who we are and how we can be contacted;
- The services we are authorised to provide under our Australian Financial Services Licence No. 316158;
- Remuneration that we and/or our staff and any associates receive in connection with the general financial product advice;
- Any relevant associations or relationships we have; and
- Our internal and external complaints handling procedures and how you may access them.

**Information about us**
We are a member firm of the BDO network in Australia, a national association of separate entities (each of which has appointed BDO (Australia) Limited ACN 050 110 275 to represent it in BDO International). The financial product advice in our report is provided by BDO Corporate Finance (WA) Pty Ltd and not by BDO or its related entities. BDO and its related entities provide professional services primarily in the areas of audit, tax, consulting, mergers and acquisition, and financial advisory services.

We and BDO (and its related entities) might from time to time provide professional services to financial product issuers in the ordinary course of business and the directors of BDO Corporate Finance (WA) Pty Ltd may receive a share in the profits of related entities that provide these services.

**Financial services we are licensed to provide**
We hold an Australian Financial Services Licence that authorises us to provide general financial product advice for securities to retail and wholesale clients, and deal in securities for wholesale clients. The authorisation relevant to this report is general financial product advice.

When we provide this financial service we are engaged to provide an expert report in connection with the financial product of another person. Our reports explain who has engaged us and the nature of the report we have been engaged to provide. When we provide the authorised services we are not acting for you.

**General Financial Product Advice**
We only provide general financial product advice, not personal financial product advice. Our report does not take into account your personal objectives, financial situation or needs. You should consider the appropriateness of this general advice having regard to your own objectives, financial situation and needs before you act on the advice. If you have any questions, or don't fully understand our report you should seek professional financial advice.

**Fees, commissions and other benefits that we may receive**
We charge fees for providing reports, including this report. These fees are negotiated and agreed with the person who engages us to provide the report. Fees are agreed on an hourly basis or as a fixed amount depending on the terms of the agreement. The fee payable to BDO Corporate Finance (WA) Pty Ltd for this engagement is approximately $28,000.

Except for the fees referred to above, neither BDO, nor any of its directors, employees or related entities, receive any pecuniary benefit or other benefit, directly or indirectly, for or in connection with the provision of the report and our directors do not hold any shares in Alkane.

**Remuneration or other benefits received by our employees**
All our employees receive a salary. Our employees are eligible for bonuses based on overall productivity but not directly in connection with any engagement for the provision of a report. We have received a fee from Alkane for our professional services in providing this report. That fee is not linked in any way with our opinion as expressed in this report.

**Referrals**
We do not pay commissions or provide any other benefits to any person for referring customers to us in connection with the reports that we are licensed to provide.

**Complaints resolution**
*Internal complaints resolution process*
As the holder of an Australian Financial Services Licence, we are required to have a system for handling complaints from persons to whom we provide financial product advice. All complaints must be in writing addressed to The Complaints Officer, BDO Corporate Finance (WA) Pty Ltd, PO Box 700 West Perth WA 6872.

When we receive a written complaint we will record the complaint, acknowledge receipt of the complaint within 15 days and investigate the issues raised. As soon as practical, and not more than **45 days** after receiving the written complaint, we will advise the complainant in writing of our determination.

**Referral to External Dispute Resolution Scheme**
A complainant not satisfied with the outcome of the above process, or our determination, has the right to refer the matter to the Australian Financial Complaints Authority ('**AFCA**').

AFCA is an external dispute resolution scheme that deals with complaints from consumers in the financial system. It is a not-for-profit company limited by guarantee and authorised by the responsible federal minister. AFCA was established on 1 November 2018 to allow for the amalgamation of all Financial Ombudsman Service ('**FOS**') schemes into one. AFCA will deal with complaints from consumers in the financial system by providing free, fair and independent financial services complaint resolution. If an issue has not been resolved to your satisfaction you can lodge a complaint with AFCA at any time.

Our AFCA Membership Number is 12561. Further details about AFCA are available on its website www.afca.org.au or by contacting it directly via the details set out below.

Australian Financial Complaints Authority
GPO Box 3
Melbourne VIC 3001
AFCA Free call: 1800 931 678
Website: www.afca.org.au
Email: info@afca.org.au

You may contact us using the details set out on page 1 of the accompanying report.

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8 June 2020

The Directors
Alkane Resources Limited
89 Burswood Road
Burswood, WA, 6100

Dear Directors

# INDEPENDENT EXPERT'S REPORT

## 1. Introduction

The board of directors (**'the Directors'**) of Alkane Resources Limited (**'Alkane'** or **'the Company'**) has resolved to propose a demerger (**'Proposed Transaction'** or **'Demerger'**) of the Company's wholly owned subsidiary, Australian Strategic Materials Limited (**'ASM'**), as a separate listed entity on the Australian Securities Exchange (**'ASX'**).

ASM represents the critical materials division within the business of Alkane, and is the entity which holds the Dubbo Project, a zirconium and rare earth metals project situated in Central Western New South Wales (**'NSW'**). Alkane also holds a well-established gold mining division, which holds the Tomingley Gold Project and other regional exploration projects (see Section 5 of our Report for more information).

The Demerger will be completed via a distribution of ASM shares to all eligible shareholders of Alkane (**'Shareholders'**) in proportion to their existing shareholding in Alkane. Australian Strategic Materials Limited will be used as the new listed entity for the critical materials business.

When distributed, eligible Shareholders will own one ASM share for every five shares held in Alkane. (Alkane Shareholders whose addresses are shown in the Alkane Share Register on the Demerger Record Date as not being in Australia or New Zealand are Ineligible Shareholders for the purpose of the Demerger.)

In addition, Alkane will provide ASM with $20.0 million of cash for working capital purposes and will not retain any interest in ASM post-Demerger.

Further details of the Demerger are outlined in Section 4 of our Report. All figures in this report are stated in Australian dollars (**'A$'** and **'AUD'**) unless otherwise stated.

## 2. Summary and Opinion

### 2.1 Requirement for the report

The Directors of Alkane have requested that BDO Corporate Finance (WA) Pty Ltd (**'BDO'**) prepare an independent expert's report (**'our Report'**) to express an opinion as to whether or not the Demerger is in the best interests of Shareholders.

There is no requirement under ASX Listing Rules or the Corporations Act (**'Corporations Act'** or **'the Act'**) for Alkane to engage an independent expert in relation to the Demerger but it is considered best practice. Our Report is prepared to assist Shareholders in their decision whether to approve the Demerger and is to be included in the Demerger Booklet for Alkane.

## 2.2 Approach

Our Report has been prepared having regard to Australian Securities and Investments Commission ('**ASIC**') Regulatory Guide 111 'Content of Expert's Reports' ('**RG 111**') and Regulatory Guide 112 'Independence of Experts' ('**RG 112**').

We have analysed the structure and the substance of the Demerger and have concluded that the Demerger does not represent a change in the underlying economic interests of Shareholders with the exception of minor dilution to Shareholders' interest in Alkane and ASM from the vesting of certain performance rights (see Section 4 of our Report for more information).

This is on the basis that the assets to be held by Alkane and ASM following the Demerger are distinct groups of assets with no commonality, and the successful development of these projects or assets are not related to or dependant on each other. Ownership and use of the assets will also be completely segregated between Alkane and ASM following the Demerger. Our conclusion on the independence of assets held by the demerged entities is based on Company background information in Section 5 of our Report and is detailed in Section 8.1 of our Report.

Therefore, we consider the issue of 'value' to be of secondary importance and have instead provided an opinion as to whether or not the advantages of the Demerger outweigh the disadvantages (RG 111.36).

In arriving at our opinion, we have assessed the terms of the Demerger as outlined in the body of our Report. We have considered:

- The advantages of the Demerger;
- The disadvantages of the Demerger; and
- Other factors which we consider to be relevant to the Shareholders in their assessment of the Demerger.

## 2.3 Opinion

We have considered the terms of the Demerger as outlined in the body of this Report and the Demerger Booklet and in our opinion, the position of Shareholders if the Demerger is approved is more advantageous than the position if the Demerger is not approved and as such is in the best interest of Shareholders.

Our primary reason for this conclusion is that the gold and critical materials operations currently held by the Company are distinct and independent assets, with minimal benefit arising from being held together in one entity. Although the Demerger will result in an increase in corporate costs going forward, we consider this to be outweighed by the flexibility that Shareholders will receive in their choice of commodity exposure, which can be tailored to their respective portfolios. Furthermore, if the Demerger were to proceed, the focused leadership and management of two separate entities may accelerate the rate of development of the Tomingley Project and the Dubbo Project.

In addition, the Demerger is structured such that there is minimal dilution to the interest held by Shareholders with the exception of the dilution arising from the vesting of certain performance rights. An initial cash balance of $20 million provided to ASM by Alkane as well as the capitalisation and forgiving of intercompany loans between Alkane and ASM, reduces the need for ASM to raise capital upon its listing on the ASX, thus avoiding further dilution.

While some Shareholders may be concerned with whether the adverse impact of COVID-19 on capital markets justifies delaying or postponing the Demerger, we have also identified in Section 8.4.2 the potential benefit of the current strength of the gold market and gold price for Alkane as a standalone gold company.

The respective advantages and disadvantages considered are summarised below:

| ADVANTAGES AND DISADVANTAGES | | | |
|---|---|---|---|
| **Section** | **Advantages** | **Section** | **Disadvantages** |
| 8.2.1 | Shareholder flexibility | 8.3.1 | Duplication of corporate costs going forward |
| 8.2.2 | Focused leadership and management | 8.3.2 | Transaction costs related to the Demerger |
| 8.2.3 | Potential opportunity for future takeover | 8.3.3 | Minor dilution of Shareholders' interests |
| 8.2.4 | Dedicated funding for ASM | | |

Other key matters we have considered include:

| Section | Description |
|---|---|
| 8.4.1 | Potential movements in liquidity |
| 8.4.2 | Impact of COVID-19 |
| 8.4.3 | Ineligible overseas shareholders |
| 8.4.4 | Taxation implications for shareholders |

# 3. Scope of the Report

## 3.1 Purpose of the Report

There is no requirement under ASX Listing Rules, or Corporations Act or Regulations, for Alkane to engage an independent expert in relation to the Demerger.

Notwithstanding the above, Alkane engaged BDO to prepare this report for provisions to Shareholders to assist them in deciding whether or not to accept the Demerger.

## 3.2 Regulatory guidance

In determining the basis of our evaluation and opinion, we have had regard to the views expressed by ASIC in RG 111.

RG 111.35 and RG 111.36 suggests, in the case of a demerger, if there is not;

- a change in underlying economic interests of security holders;
- a change of control; or

- selective treatment of different security holders;

then the issue of 'value' may be of secondary importance.

An expert should provide an opinion as to whether the advantages of the demerger outweigh the disadvantages (RG 111.36). An expert may choose to consider whether the value of the demerged entities is greater than or less than the value of the existing entity.

RG 111.37 suggests that if the demerger involves a scheme of arrangement then the expert should comment on whether or not the demerger is in the best interest of security holders. RG 111.38 states that in a demerger, security holders will typically have to balance issues such as the benefits of a greater focus afforded to the demerged entities against increased costs and reduction in diversified earnings streams.

We have analysed the structure and the substance of the Demerger and have concluded that the Demerger does not represent a change in the underlying economic interests of Shareholders with the exception of minor dilution to Shareholders' interest in Alkane and ASM from the vesting of certain performance rights (see Section 4 of our Report for more information).

This is on the basis that the assets to be held by Alkane and ASM following the Demerger are distinct groups of assets with no commonality, and the successful development of these projects or assets are not related to or dependant on each other. Ownership and use of the assets will be completely segregated between Alkane and ASM post Demerger.

Furthermore, it is our understanding that the resources and reserves of Alkane and ASM have not been determined on the assumption that the assets will be developed together, and that the implementation of the Demerger will not change the underlying value of the resources and reserves. Our conclusion on the independence of assets held by the demerged entities is based on Company background information in Section 5 of our Report and is detailed in Section 8.1 of our Report.

Therefore, nothing has come to our attention that leads us to consider whether the value of the demerged entities is greater than or less than the value of the existing entity. Our opinion therefore addresses whether the advantages of the Demerger outweigh the disadvantages.

In determining whether the advantages of the Demerger outweigh the disadvantages, we have had regard to the views expressed by ASIC in RG 111. This Regulatory Guide suggests that an opinion as to whether the advantages of a transaction outweigh the disadvantages should focus on the purpose and outcome of the transaction, that is, the substance of the transaction rather than the legal mechanism to affect it.

RG 111 sets out that the expert should inquire whether further transactions are planned between the entity, the vendor or their associates and if any are contemplated determine if these are at arm's length. RG 111 also suggests that an expert should consider whether the transaction will deter the making of a takeover bid.

## 3.3 Adopted basis of evaluation

RG 111 suggests that the main purpose of an independent expert's report is to adequately deal with the concerns that could reasonably be anticipated of those persons affected by the transaction.

Having regard to RG 111, we have completed our Report as follows in order to arrive at our opinion as to whether the Demerger is in the best interests of shareholders:

- An investigation into the advantages and disadvantages of the Demerger (Sections 8.1 and 8.2); and

- An analysis of any other issues that could be reasonably anticipated to concern Shareholders as a result of the Demerger (Section 8.3).

# 4. Outline of the Demerger

The following section outlines a brief overview of the proposed Demerger and contains information that we consider relevant to our assessment. Any information relating to the Demerger not stated herein is detailed in the Demerger Booklet.

## Overview

The Demerger will be completed via an in-specie distribution of ASM shares to all eligible Shareholders of Alkane, where each Shareholder will receive one ASM share for every five shares held in Alkane.

More specifically, ASM will undergo a capital restructure as part of the Demerger process, with existing intercompany loans capitalised or forgiven, resulting in ASM having one ordinary share for every five Alkane ordinary shares outstanding on the implementation date for the Demerger. This will deliver a 1:5 ratio for ASM when listed on the ASX.

Implementation of the Demerger is subject the following conditions (‘**Conditions**’):

- Alkane obtains shareholder approval for the Demerger resolution, in accordance with Division 1 of Part 2J.1, which contains Sections 256B and 256C, of the Corporations Act and rule [32.5(a)] of Alkane’s constitution;
- The ASX approves the admission of ASM to the Official list of ASX and quotation of ASM shares on the ASX is granted, subject only to the Demerger becoming effective and such other conditions that may be acceptable to Alkane and ASM;
- All regulatory approvals which are necessary or, in the opinion of Alkane and ASM, desirable in connection with the Demerger are obtained;
- Alkane receiving a draft class ruling from the Australian Taxation Office (‘**ATO**’), to its satisfaction, confirming that the Demerger will qualify for demerger tax relief; and
- The Alkane board remains of the view that the Demerger is in the best interests of Alkane as a whole, fair and reasonable to the Alkane Shareholders as a whole, and does not materially prejudice the Company’s ability to pay its creditors.

## Ineligible shareholders

Alkane shareholders with addresses on the Company’s share register that reside outside of Australia or New Zealand are not eligible to receive ASM shares (‘**Ineligible Shareholders**’) under the Demerger due to the substantial costs of complying with the legal and regulatory requirements in various overseas jurisdictions. ASM shares that would have otherwise been distributed to Ineligible Shareholders will be transferred to a sale agency, which will sell the shares on the ASX, with net proceeds of the sale to be paid to the Ineligible Shareholders.

## Board changes

The current board of Directors and senior management are outlined in Section 5.1 of our Report.

Following the Demerger, the respective boards of Alkane and ASM are outlined in the tables below:

| Alkane Board | |
|---|---|
| **Name** | **Position** |
| Ian Gandel | Non-executive Chairman |
| Nicholas Earner | Managing Director |
| David Ian Chalmers | Technical Director |
| Anthony Lethlean | Non-executive Director |
| Gavin Smith | Non-executive Director |
| Dennis Wilkins | Company Secretary |
| James Carter | Joint Company Secretary |

Source: Alkane Demerger Booklet.

| ASM Board | |
|---|---|
| **Name** | **Position** |
| Ian Gandel | Non-executive Chairman |
| David Woodall | Managing Director |
| Nicholas Earner | Non-executive Director |
| David Ian Chalmers | Non-executive Director |
| Gavin Smith | Non-executive Director |
| Dennis Wilkins | Company Secretary |

Source: Alkane Demerger Booklet.

## Vesting of performance rights and impact on Shareholders' interests

In connection with the Demerger, as outlined in Section 4.7 of the Demerger Booklet, the Directors of Alkane propose that:

- All Alkane performance rights (**'Rights'**) with Dubbo Project performance conditions will be cancelled; and
- All FY18 and FY19 Alkane Rights with a Total Shareholder Return (**'TSR'**) performance condition will vest in full, thereby entitling the holder to one Alkane share for each Alkane Right exercised.

Subject to Shareholder approval, the above will result in the cancellation of 3,940,540 Rights and the vesting of 15,215,584 Rights. The Rights that vest will result in the addition of 15,215,584 shares to the pro-forma capital structure of Alkane.

Following the Demerger, the capital structure of Alkane and ASM will be as follows:

| | Number of Shares |
|---|---|
| **Capital Structure of Alkane** | |
| Total shares on issue | 580,033,307 |
| Rights that vest | 15,215,584 |
| *Total Alkane shares on issue Post-Demerger* | *595,248,891* |
| **Capital Structure of ASM** | |
| 1/5 of Alkane shares on issue Pre-Demerger | 116,006,661 |

| | Number of Shares |
|---|---|
| 1/5 of Alkane shares from Rights that vest | 3,043,117 |
| *Total ASM shares on issue Post-Demerger* | *119,049,778* |

Source: Alkane Demerger Booklet.

The impact of the vesting of Rights, though minimal, will result in a minor dilution to the interest held by Shareholders who are not holders of those Rights. We note however that this minimal dilution would have occurred independent of the Demerger if the performance conditions for the FY18 and FY19 TSR Rights had been met and the rights were to vest in accordance with the existing vesting conditions. We have depicted an example of the potential dilution to Shareholders, through a hypothetical Shareholder 'X', who currently holds a 1.00% interest in Alkane pre-Demerger and is not a holder of the Rights to be vested:

| Shareholder 'X' | |
|---|---|
| ***Pre-Demerger*** | |
| Number of Alkane (merged) Shares held | 5,800,000 |
| Total number of Alkane Shares outstanding | 580,033,307 |
| Interest in Alkane (%) | 1.00% |
| | |
| ***Post-Demerger*** | |
| Number of Alkane (demerged) Shares held | 5,800,000 |
| Total number of Alkane Shares outstanding | 595,248,891 |
| Interest in Alkane (%) | 0.97% |
| | |
| Number of ASM Shares held | 1,160,000 |
| Total number of ASM Shares outstanding | 119,049,778 |
| Interest in Alkane (%) | 0.97% |

Source: BDO analysis.

We have included the analysis above in our assessment of disadvantages to the proposed Demerger in Section 8.3.3 of our Report.

### Pro-forma financial information

Alkane has provided ASM with $20.0 million of cash on 1 April 2020 for ASM's working capital purposes and ongoing operations. Following the Demerger, Alkane will not retain any interest in ASM.

Furthermore, as part of the Demerger, all intercompany loans between Alkane and ASM will either be capitalised or forgiven, such that ASM will hold no debt following the Demerger. The pro-forma financial information of Alkane and ASM post-Demerger is detailed in Sections 5 and 7 of the Demerger Booklet.

### Demerger transaction documents

As part of the implementation of the Demerger, Alkane and ASM propose to enter into a demerger deed ('**Demerger Deed**') and restructure deed ('**Restructure Deed**') in addition to an intercompany services agreement ('**ISA**') already entered into by both parties, effective as at 1 April 2020 ('**Demerger Transaction Documents**').

The Demerger Deed deals with the issues arising in connection with the Demerger and separation of ASM from Alkane, and the ongoing relationship between Alkane and ASM after the implementation of the Demerger, such that each part may carry forward the commercial benefits, risks and liabilities of the relevant business independently without shared liability.

The Restructure Deed deals with the multiple intra group restructuring steps that must be implemented prior to the Demerger with respect to various existing intercompany loans between Alkane and ASM. It is under the Restructure Deed, which outlines the deed of forgiveness to forgive the portion of intercompany loans owed by ASM to Alkane that will not be capitalised prior to the implementation of the Demerger.

The ISA deals with the provision of professional and IT support services, as well as access to certain office facilities between Alkane and ASM following the Demerger.

Further details on the Demerger Transaction Documents are found in Section 8.6 of the Demerger Booklet.

# 5. Profile of Alkane

The following section contains an analysis of the Company's operations with specific regard to its gold and critical materials divisions. Our analysis aims to assist with the determination of the level of commonality of the assets held under each division. This assessment is outlined in Section 8.1 of our Report.

## 5.1 History

Alkane is an ASX-listed, multi-commodity mining and exploration company, operating in the Central West region of NSW, Australia. The Company's operations can be categorised into its gold and critical materials divisions. The Company's flagship project within its gold division is its 100%-owned Tomingley Gold Project (**'Tomingley Project'**) which it acquired as part of a joint venture with Compass Resources NL (**'Compass Resources'**) in 2001. The Company's flagship project within its critical materials division is the Dubbo Project, which holds zirconium, hafnium, niobium, tantalum, yttrium and rare earth deposits. The exploration permits of the Dubbo Project were granted in 1987.

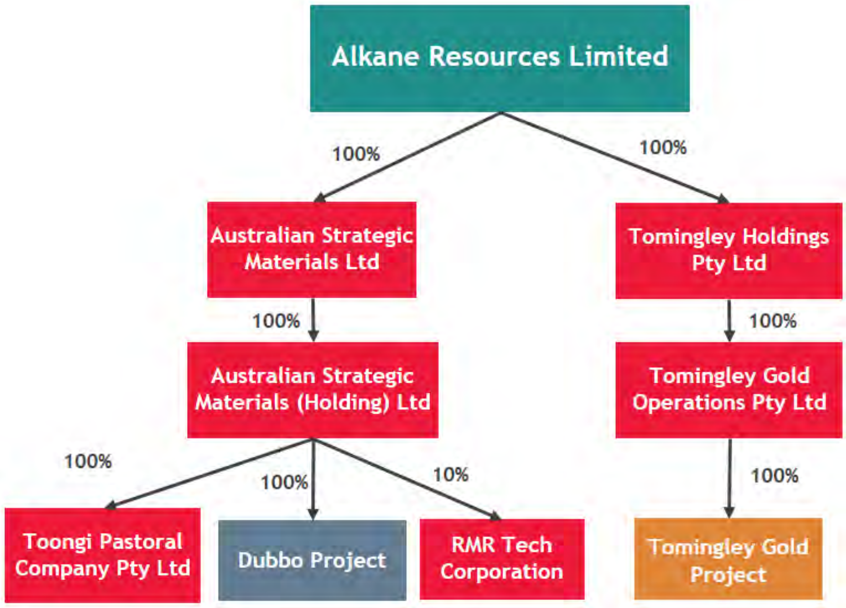
The Company also holds several exploration projects around the region, with the objective of identifying additional resources for processing at the Tomingley Project. Alkane was incorporated in 1969 and is headquartered in Burswood, Australia.

The current board of directors and senior management of Alkane are:

- Mr. Ian Gandel – Non-Executive Chairman;
- Mr. Nicholas Earner – Managing Director of Alkane;
- Mr. David Ian Chalmers – Technical Director;
- Mr. Anthony Dean Lethlean – Non-Executive Director;
- Mr. Gavin Smith – Non-Executive Director;
- Mr. Dennis Wilkins – Company Secretary; and
- Mr. James Carter – Chief Financial Officer and Joint Company Secretary.

## 5.2 Corporate Structure

The corporate structure of the Company is depicted in the diagram below:




Source: FY19 Annual Report.

Toongi Pastoral Company Pty Limited (**'Toongi Pastoral'**) was established by Alkane in 2016 to manage agricultural land, farm assets and biodiversity offset areas associated with the Dubbo Project. The establishment of Toongi Pastoral was part of Alkane's approach towards conservation and land management in relation the Dubbo Project.

RMR Tech Corporation (**'RMR Tech'**) is a South Korean entity, which was established as a result of an incorporated joint venture for the development of a new metallisation technology process (see Section 5.4.2 for details). ASM holds a 10% interest in the entity.

## 5.3 Gold Operations

From 1996 to 2002, Alkane's primary gold operation was the Peak Hill Gold Mine (**'Peak Hill Project'**), which operated as an open cut mine 15 kilometres south of the Tomingley Project. Mining operations at the Peak Hill Project have since been completed in 2002 and the mine is currently under care and maintenance. Using a heap leach operation, the Peak Hill Project produced approximately 154,000 ounces of gold from 4.7 million tonnes of ore. Following the closure of the Peak Hill Project, the Company shifted its focus on the development of the Tomingley Project, which has now become the flagship asset of Alkane's gold operations.

With the recent strengthening of the gold market, Alkane has placed greater focus on its gold production, exploration and partnerships in recent years. The Company's gold operations can be further categorised into the following segments:

- The Tomingley Project – main gold-producing asset;
- Regional exploration projects – exploration for gold and other commodities within the region; and
- ASX gold investments – investments and partnerships with prospective gold assets.

### 5.3.1. Tomingley Gold Project

The Tomingley Project is located approximately 50 kilometres south-west of Dubbo in Central West NSW and is held by Alkane's wholly owned subsidiary, Tomingley Gold Operations Pty Ltd (**'TGO'**). Mining operations at the Tomingley Project in the form of open cut mines commenced in early 2014 at four gold deposits: Wyoming One, Wyoming Three, Caloma One and Caloma Two. The gold processing plant at the Tomingley Project was also commissioned in January 2014 and has been operating at a design capacity of 1 Mtpa since late May 2014.

Following the completion of the Wyoming Three and Caloma One open cuts in 2015 and 2017 respectively, mining at the Wyoming One and Caloma Two open cuts ceased in FY19. This has resulted in the commencement of the Company's transition to an underground mining development at the Wyoming One deposit.

The development of underground mining operations was approved by the board of Alkane in September 2018, with an initial target of 108,000 oz of gold to be mined. Development work on the underground mine commenced in January 2019 with the purchase of necessary equipment and the recruitment of qualified personnel. Based on the Company's latest JORC 2012 resource and reserve estimate announced on 23 September 2019, the underground operations of the Tomingley Project hold approximately 165,000 oz of gold resources and 74,000 oz of gold reserves.

Alkane recorded total gold poured of 48,969 oz in FY19 primarily from medium and low-grade ore stockpiles. This is compared to the 78,533 oz in FY18 and 68,836 oz in FY17. The Company aims to commence gold production from underground ore in early 2020.

### 5.3.2. Regional exploration projects

Concurrent with transition to underground mining operations, Alkane has been focused on exploration around the region to increase its gold resource for its 1 Mtpa processing facility.

#### Tomingley Corridor

One such area is the gold corridor between the Tomingley Project and the Peak Hill Project (**'Tomingley Corridor'**), whereby the Company has conducted drilling programs comprising of reverse circulation (**'RC'**) drilling and diamond core drilling. In July 2019, the Company announced a potential quantity of 15.8 Mt to 23.8 Mt at a grade ranging between 1.7 g/t to 2.2 g/t gold across the Roswell, El Paso and San Antonio prospects within the Tomingley Corridor.

On 28 January 2020, Alkane announced an initial inferred resource at the Roswell prospect of 445,000 oz as a result of the ongoing resource definition drilling program on the Roswell and San Antonio prospects. Further on 20 April 2020, Alkane announced an initial inferred resource at the San Antonio prospect of 453,000 oz of gold.

On 11 May 2020, Alkane announced that the NSW Government Resources Regulator granted approval for the development of an underground exploration drive from its existing Wyoming One operations to the Roswell and San Antonio deposits, which allows the Company to potentially conduct underground mining operations at Roswell and San Antonio, independently of an open cut operation.

### Peak Hill

The Company also re-evaluated the potential of the Peak Hill Project and completed a revised JORC 2012 mineral resource estimate in October 2018, which identified an initial inferred resource of 108,000 oz of gold. Although Alkane has retained its mining lease and environment protection license for the Peak Hill Project, any further mine development would require further environmental assessment and government approval.

### Northern Molong Porphyry Project ('NMPP')

The NMPP covers an area of 110 km$^2$ and encompasses three exploration licenses: Bodangora ('**Boda**'), Kaiser and Finns Crossing. The Company executed RC and diamond core drilling at these prospects in May to August 2019.

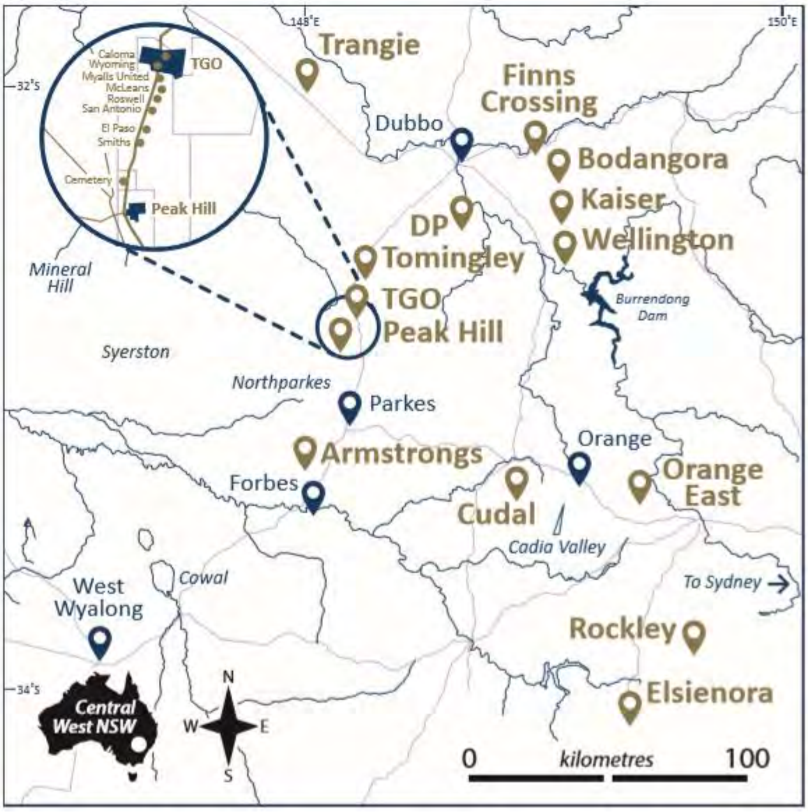
On 9 September 2019, Alkane announced the discovery of significant porphyry style gold-copper mineralisation at the Boda prospect, implying the potential for large porphyry gold-copper deposits in the area. Subsequently on 14 November 2019, the Company announced a follow up drilling program of five core holes totalling approximately 5,000 metres to commence at Boda. Since then the Company has announced array results of the five diamond core drill holes, KSDD005, KSDD006, KSDD007, KSD008 and most recently on 19 May 2020, KSDD009, which have indicated significant gold-copper mineralisation at Boda. The Company has planned for a major RC and diamond core drilling program to commence in the third quarter of 2020 to further test the resource potential at Boda.

### Other Exploration Areas

The Company also holds other prospective exploration areas for which significant field work and drilling have yet to commence. These areas and the degree of ownership held by Alkane are outlined below:

- Rockley– 100%;
- Cudal - 100%;
- Elsienora – 100%;
- Wellington – 100%;
- Mount Conqueror – 100%;
- Gundong – 100%;
- Armstrongs – 100%;
- Trangie – 100%; and
- Leinster Region Joint Venture – 19.4% diluting.

An overview of Alkane's gold assets and exploration areas is outlined below:




Source: FY19 Annual Report.

### 5.3.3. ASX Gold Investments

Alkane also holds significant interests in two ASX-listed gold explorers, Calidus Resources Limited (‘**Calidus**’) and Genesis Minerals Limited (‘**Genesis**’) as part of its strategic objective to grow its gold operations.

The Company currently holds a 13.0% interest on an undiluted basis in Calidus. Calidus is an ASX-listed gold exploration company which holds the Warrawoona Gold Project, located in the Pilbara Goldfield region in Western Australia. The Warrawoona Gold Project includes a 712,000 oz resource and is in a position to progress through feasibility.

The Company also currently holds a 15.51% interest on an undiluted basis in Genesis, which is currently the largest shareholding in Genesis. Genesis is an ASX-listed gold exploration company which holds the Ulysses Gold Project located 30 km south of Leonora with 867,000 oz of gold resource. Alkane’s managing director, Nicholas Earner, was also appointed as a non-executive director of Genesis in October 2019.

## 5.4 Critical Materials Operations

### 5.4.1. Dubbo Project

The Company’s critical materials operations are centred on the Dubbo Project, which is located near the village of Toongi, 25 km south of Dubbo in Central Western NSW. The Dubbo Project is held by Alkane’s wholly owned subsidiary, ASM and holds a large in-ground resource of zirconium, hafnium, niobium, yttrium and rare earth elements, which are rare metals used in a range of advanced technologies.

The Dubbo Project is a construction-ready project with the major state and federal approvals and licenses in place, along with an established process flowsheet. Commencement of construction is subject to project financing which the Company aims to achieve by first converting its existing Memoranda of Understanding (**'MoU'**) and Letters of Intent (**'LoI'**) into offtake agreements.

On 4 June 2018, the Company announced an engineering and financial review for the Dubbo Project, which provided an update to the existing results of the Front End Engineering Design (**'FEED'**) study completed in August 2015. The review outlined an initial base case project life of 20 years with a 1 Mtpa plant feed rate, which may generate a potential $4.7 billion in undiscounted free cash flows over the life of the project. This is based on a revised JORC 2012 mineral resource and reserve estimate of 75.18 Mt of resources and 18.90 Mt of proven reserves announced on 19 September 2017. The review also outlined a two-staged build scenario of 500,000 Mtpa each, with potential undiscounted free cash flows of $3.9 billion over the life of the project.

ASM owns a demonstration pilot plant (**'DPP'**) that was commissioned at ANSTO Minerals in 2008. ANSTO Minerals is a business unit of the Australian Nuclear Science and Technology Operations (**'ANSTO'**) and is one of Australia's premier research facilities. The DPP was designed to explore potential downstream metal conversion technologies in order to establish the process flow sheet and conduct process trials for the Dubbo Project. In 2015, ASM and ANSTO developed a process pathway to recover hafnium from the zirconium circuit which resulted in higher-purity zirconium products. Subsequently from 2015 to 2018, ASM invested more than $4 million in research and process trials to establish the current process flow sheet for the Dubbo Project.

### 5.4.2. RMR Tech

On 6 June 2019, Alkane announced that it had executed a binding agreement with Zirconium Technology Corporation (**'ZTC'**), a South Korean company, to fund the final stage research and feasibility in relation to a clean metal process to convert metal oxide (including key Dubbo Project metals) to metals of high marketable purity. The metallisation technology was developed by scientists at Chungnam National University (**'CNU'**) in South Korea, whom ASM has been working with since 2014. The agreement resulted in the establishment of RMR Tech, owned 90% by ZTC and 10% by ASM.

Under the agreement with ZTC, ASM invested US$1.2 million towards a pilot plant facility located at CNU and will supply Dubbo Project metallic oxide samples for processing. ASM also holds exclusive global rights to use the metallisation technology at a commercial scale in relation to all relevant metals.

## 5.5 Recent Corporate Events

On 23 December 2019, Alkane announced a capital raising comprising a $20.00 million institutional placement and a non-renounceable rights issue to fund an accelerated exploration and development program in the Tomingley Corridor. The rights issue was completed on the basis of one new share for every eight shares held by eligible Shareholders, at an issue price of $0.55 per share to raise up to $34.79 million. At completion, proceeds of $20.67 million had been raised, representing a 59.4% take up. Together with the $20.00 million raised from the institutional placement, Alkane raised a total of $40.67 million. The non-renounceable rights issue was not underwritten.

## 5.6 Historical Balance Sheet

| Statement of Financial Position | Reviewed as at 31-Dec-19 $'000 | Audited as at 30-Jun-19 $'000 | Audited as at 30-Jun-18 $'000 |
|---|---|---|---|
| **CURRENT ASSETS** | | | |
| Cash and cash equivalents | 78,420 | 69,582 | 72,003 |
| Trade and other receivables | 2,478 | 1,998 | 2,030 |
| Inventories | 5,589 | 4,816 | 19,153 |
| Derivative financial assets | - | 25 | - |
| Biological assets | 37 | 80 | 12 |
| **TOTAL CURRENT ASSETS** | **86,524** | **76,501** | **93,198** |
| **NON-CURRENT ASSETS** | | | |
| Property, plant and equipment | 70,332 | 51,038 | 36,266 |
| Exploration and evaluation expenditure | 112,056 | 103,894 | 93,136 |
| Financial assets at fair value through OCI | 14,946 | 7,767 | - |
| Derivative financial assets | 247 | 678 | - |
| Biological assets | 268 | 402 | 526 |
| Other financial assets | 8,388 | 8,417 | 8,347 |
| Investments | 127 | - | - |
| **TOTAL NON-CURRENT ASSETS** | **206,364** | **172,196** | **138,275** |
| **TOTAL ASSETS** | **292,888** | **248,697** | **231,473** |
| **CURRENT LIABILITIES** | | | |
| Trade and other payables | 7,856 | 8,007 | 9,299 |
| Income tax provision | - | - | 6,929 |
| Provisions | 2,241 | 4,438 | 11,202 |
| **TOTAL CURRENT LIABILITIES** | **10,097** | **12,445** | **27,430** |
| **NON-CURRENT LIABILITIES** | | | |
| Provisions | 14,259 | 13,059 | 13,647 |
| Deferred tax liabilities | 12,550 | 9,317 | - |
| Other | 132 | - | - |
| **TOTAL NON-CURRENT LIABILITIES** | **26,941** | **22,376** | **13,647** |
| **TOTAL LIABILITIES** | **37,038** | **34,821** | **41,077** |
| **NET ASSETS** | **255,850** | **213,876** | **190,396** |
| **EQUITY** | | | |
| Issued capital | 254,371 | 220,111 | 220,160 |
| Reserves | 1,654 | 2,352 | 2,116 |
| Accumulated losses | (175) | (8,587) | (31,880) |
| **TOTAL EQUITY** | **255,850** | **213,876** | **190,396** |

Source: Half-year report of Alkane for the half year ended 31 December 2019 and Annual financial statements for the years ended 30 June 2019 and 2018.

## Commentary on Historical Statements of Financial Position

- Cash and cash equivalents decreased by $2.42 million from $72.00 million at 30 June 2018 to $69.58 million at 30 June 2019 primarily from the payments for Property, Plant and Equipment (**'PP&E'**) of $19.62 million and payments for exploration expenditure of $11.58 million, which were enough to offset the net cash inflow from sales of $36.57 million.
- Cash and cash equivalents increased by $8.84 million from $69.58 million at 30 June 2019 to $78.42 million at 31 December 2019 primarily from the proceeds of the issue of shares of $35.93 million. This was offset by payments for development of $13.05 million, payments for financial assets at fair value of $8.64 million and payments for PP&E of $5.45 million during the period.
- The breakdown of inventory over the three periods is outlined below:

| Inventories | 31-Dec-19<br>$'000 | 30-Jun-19<br>$'000 | 30-Jun-18<br>$'000 |
|---|---|---|---|
| Ore stockpiles | 564 | 704 | 11,229 |
| Gold in circuit | 2,718 | 834 | 1,184 |
| Bullion on hand | 11 | 1,539 | 5,333 |
| Consumable stores | 2,296 | 1,739 | 1,407 |
| **Total** | **5,589** | **4,816** | **19,153** |

Source: Half-year report of Alkane for the half year ended 31 December 2019 and Annual financial statements for the years ended 30 June 2019 and 2018.

The decrease in gold inventory from $19.15 million at 30 June 2018 to $4.82 million at 30 June 2019 is consistent with the slowdown in gold mining operations in FY19, whereby total gold poured decreased from 78,533 oz in FY18 to 48,969 oz in FY19.

- Biological assets of $0.04 million (current) and $0.27 million (non-current) at 31 December 2019 relates to livestock which were acquired by Toongi Pastoral as part of farming operations on surrounding land to the Dubbo Project mining lease.
- The breakdown of PP&E as at 31 December 2019 is outlined below:

| Property, Plant and Equipment | Land and buildings<br>$'000 | Plant and equipment<br>$'000 | Capital WIP<br>$'000 | Mine Properties<br>$'000 | Total<br>$'000 |
|---|---|---|---|---|---|
| Opening cost | 40,379 | 80,448 | 3,728 | 174,479 | 299,034 |
| Additions | - | - | 7,741 | 13,929 | 21,670 |
| Transfers between classes | 518 | 4,052 | (5,386) | 816 | - |
| Disposals | - | - | - | - | - |
| Accumulated depreciation | (12,674) | (73,322) | - | (162,000) | (247,996) |
| Depreciation charge | (62) | (1,337) | - | (977) | (2,376) |
| **Closing value** | **28,161** | **9,841** | **6,083** | **26,247** | **70,332** |

Source: Half-year report of Alkane for the half year ended 31 December 2019 and Annual financial statements for the years ended 30 June 2019 and 2018.

- Exploration and evaluation expenditure of $112.06 million at 31 December 2019 relates to costs and related overhead expenditure that have been capitalised on the basis that such costs are expected to be recouped through successful development or sale of the relevant mining interest.

For the half-year ended 31 December 2019, $8.16 million of exploration expenditure had been capitalised.

- Non-current provisions of $14.26 million at 31 December 2019 primarily relate to rehabilitation provisions of $14.13 million.
- As at 31 December 2019, Alkane holds a contingent liability of $8.20 million in the event that the Company's forward gold sales contracts are not settled by the physical delivery of gold.
- In addition, Alkane holds contingent liabilities estimated up to $5.65 million for the potential acquisition of several parcels of land surrounding the Dubbo Project.
- Furthermore, Alkane holds a contingent liability of $2.75 million in relation to an option agreement with landholders over a section of the Tomingley Corridor as part of potential project life extension for the Tomingley Gold Operations.

## 5.7 Historical Statement of Comprehensive Income

| Statement of Comprehensive Income | Reviewed for the half-year ended 31-Dec-19 $'000 | Audited for the year ended 30-Jun-19 $'000 | Audited for the year ended 30-Jun-18 $'000 |
|---|---|---|---|
| Revenue | 34,098 | 93,994 | 129,974 |
| Cost of sales | (17,897) | (60,912) | (89,323) |
| **Gross profit** | **16,201** | **33,082** | **40,651** |
| Other net income | 844 | 1,856 | 1,548 |
| **Expenses** | - | | |
| Corporate administration | (1,578) | (2,288) | (2,225) |
| Employee remuneration and benefits expense | (1,100) | (1,570) | (1,829) |
| Share based payments | (627) | (865) | (1,087) |
| Professional fees and consulting services | (1,031) | (1,633) | (1,467) |
| Restructuring provision | (103) | 104 | (496) |
| Exploration expenditure provided for or written off | - | (582) | (188) |
| Director's fees and salaries | (343) | (614) | (726) |
| Depreciation | (71) | (162) | (264) |
| Dubbo project expenses not capitalised | (295) | 80 | (945) |
| Non-core project expenses | - | (1,357) | (1,053) |
| Pastoral company operating expenses | (545) | - | - |
| Finance costs | (109) | (419) | (603) |
| **Profit/(loss) from continuing operations before income tax** | **11,243** | **25,632** | **31,316** |
| Income tax (expense)/benefit | (3,753) | (2,339) | (6,845) |
| **Profit/(loss) from continuing operations after income tax** | **7,490** | **23,293** | **24,471** |

| Statement of Comprehensive Income | Reviewed for the half-year ended 31-Dec-19 $'000 | Audited for the year ended 30-Jun-19 $'000 | Audited for the year ended 30-Jun-18 $'000 |
|---|---|---|---|
| Other comprehensive (loss)/income | (1,602) | (629) | - |
| **Total comprehensive (loss)/profit for the year** | **5,888** | **22,664** | **24,471** |

Source: Half-year report of Alkane for the half year ended 31 December 2019 and Annual financial statements for the years ended 30 June 2019 and 2018.

### Commentary on Historical Statements of Comprehensive Income

- The breakdown of revenue for the three periods is outlined below:

| Revenue | 31-Dec-19 $'000 | 30-Jun-19 $'000 | 30-Jun-18 $'000 |
|---|---|---|---|
| Gold sales | 34,098 | 92,513 | 128,799 |
| Interest income | -* | 1,481 | 1,175 |
| **Total** | **34,098** | **93,994** | **129,974** |

**Interest income for the half year ended 31 December 2019 is classified in other net income.*

Source: Half year report of Alkane for the period ended 31 December 2019 and Annual financial statements for the years ended 30 June 2019 and 2018.

The decrease in gold sales from $128.80 million for the year ended 30 June 2018 to $92.51 million for the year ended 30 June 2019 is consistent with the slowdown in gold mining operations in FY19, whereby total gold poured decreased from 78,533 oz in FY18 to 48,969 oz in FY19.

## 5.8 Capital Structure

The share structure of Alkane as at 11 May 2020 is outlined below:

| | Number |
|---|---|
| Total ordinary shares on issue | 580,033,307 |
| Top 20 shareholders | 250,884,009 |
| Top 20 shareholders - % of shares on issue | 43.25% |

Source: Share registry as at 11 May 2020.

The range of shares held in Alkane as at 11 May 2020 is as follows:

| Range of Shares Held | Number of Ordinary Shareholders | Number of Ordinary Shares | Percentage of Issued Shares (%) |
|---|---|---|---|
| 1 - 1,000 | 1,122 | 599,480 | 0.10% |
| 1,001 - 5,000 | 2,735 | 7,890,485 | 1.36% |
| 5,001 - 10,000 | 1,517 | 11,691,907 | 2.02% |
| 10,001 - 100,000 | 2,810 | 91,799,598 | 15.83% |
| 100,001 - and over | 549 | 468,051,837 | 80.69% |
| **TOTAL** | **8,733** | **580,033,307** | **100.00%** |

Source: Share registry as at 11 May 2020.

The ordinary shares held by the most significant shareholders as at 11 May 2020 are detailed below:

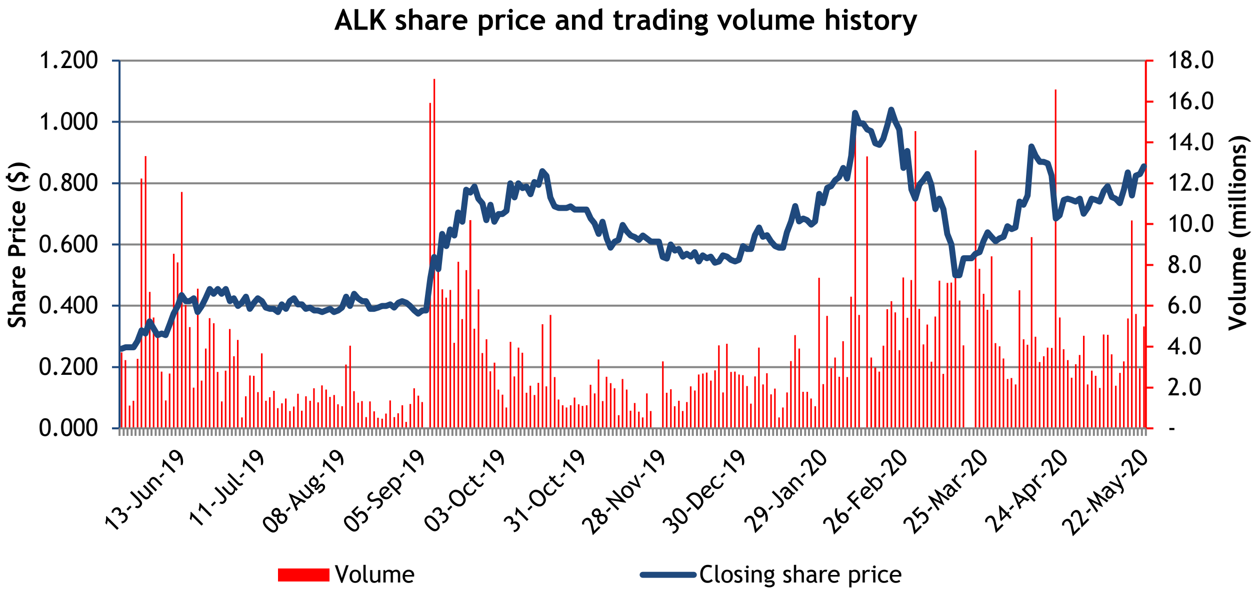
| Name | Number of Ordinary Shares Held | Percentage of Issued Shares (%) |
|---|---|---|
| Mr. Ian Jeffrey Gandel | 136,021,143 | 23.45% |
| Chapelgreen Pty Limited | 25,900,000 | 4.47% |
| Dimensional Fund Advisors | 12,338,349 | 2.13% |
| Credit Suisse Private Banking | 9,280,954 | 1.60% |
| Subtotal | 183,540,446 | 31.64% |
| Others | 396,492,861 | 68.36% |
| **Total ordinary shares on Issue** | **580,033,307** | **100.00%** |

Source: Share registry as at 11 May 2020.

## 5.9 Share price trading history and liquidity

We have analysed the trading history of the Company's shares over the 12 months to 22 May 2020 and have conducted an assessment on the liquidity of Alkane's shares.

The following chart provides a summary of the share price movement over the 12 months to 22 May 2020.




Source: Bloomberg and BDO analysis.

The daily price of Alkane's shares over the 12 months to 22 May 2020 has ranged from a low of $0.260 on 22 May 2019 to a high of $1.040 on 21 February 2020.

Alkane's share price held at generally consistent levels averaging at $0.402 over July and August, until early September 2019, when the share price increased sharply, eventually peaking at $0.789 on 24 September 2019. The sharp increase in the share price on 9 September 2019 coincided with the highest single day of trading when 17,108,764 shares were traded. Subsequently, the share price continued to increase to reach $0.839 on 17 October 2019, before gradually decreasing to an average of $0.565 over December 2019.

In mid-January, Alkane's share price began to climb again, reaching an annual peak of $1.030 on 10 February 2020, corresponding to a day of high trading volume of 14,453,612 shares traded. In line with the significant decline experienced by equity securities on the ASX from COVID-19, Alkane's share price dropped from the end of February through mid-March, reaching a low point of $0.500 on 16 March 2020. The Company's share price has since recovered, reaching $0.930 on 5 June 2020.

During the 12 months to 22 May 2020, a number of announcements were made to the market. The key announcements are set out in the table below:

| Date | Announcement | Closing Share Price Following Announcement | | | Closing Share Price Three Days After Announcement | | |
|---|---|---|---|---|---|---|---|
| | | $ (movement) | | | $ (movement) | | |
| 19/05/2020 | Boda Drilling Update, Project Summary and Proposed Program | 0.760 | ▼ | 9.0% | 0.855 | ▲ | 12.5% |
| 11/05/2020 | Approval Received for Underground Exploration Drive | 0.790 | ▲ | 1.9% | 0.735 | ▼ | 7.0% |
| 29/04/2020 | Quarterly Activities Report | 0.740 | ▼ | 0.7% | 0.720 | ▼ | 2.7% |
| 22/04/2020 | Further Extensive Porphyry Au-Cu Mineralisation at Boda | 0.685 | ▼ | 17.0% | 0.750 | ▲ | 9.5% |
| 20/04/2020 | Initial San Antonio Inferred Resource | 0.865 | ▼ | 0.6% | 0.695 | ▼ | 19.7% |
| 09/04/2020 | Roswell and San Antonio Resource Definition Drilling Update | 0.760 | ▲ | 4.1% | 0.870 | ▲ | 14.5% |
| 23/03/2020 | Significant High Grade Au-Cu Mineralisation at Boda | 0.570 | ▲ | 2.7% | 0.640 | ▲ | 12.3% |
| 19/03/2020 | Trading Halt | 0.555 | ▶ | 0.0% | 0.575 | ▲ | 3.6% |
| 09/03/2020 | Roswell and San Antonio Resource Definition Drilling Update | 0.715 | ▼ | 10.1% | 0.635 | ▼ | 11.2% |
| 05/03/2020 | EFA Confirms Interest in Dubbo Project Financing | 0.830 | ▲ | 2.5% | 0.750 | ▼ | 9.6% |
| 26/02/2020 | Appendix 4D and Interim Financial Report | 0.850 | ▼ | 12.8% | 0.750 | ▼ | 11.8% |
| 13/02/2020 | Significant Porphyry Au-Cu Mineralisation Width increase | 0.975 | ▼ | 2.0% | 0.925 | ▼ | 5.1% |
| 11/02/2020 | Trading Halt | 0.995 | ▼ | 3.4% | 0.970 | ▼ | 2.5% |
| 30/01/2020 | Quarterly Activities Report | 0.785 | ▲ | 6.8% | 0.820 | ▲ | 4.5% |
| 28/01/2020 | Initial Roswell Inferred Resource | 0.765 | ▲ | 13.3% | 0.790 | ▲ | 3.3% |
| 17/01/2020 | Resource Definition Drilling Update | 0.725 | ▲ | 7.4% | 0.680 | ▼ | 6.2% |
| 23/12/2019 | Completion of Capital Raising and Shortfall Notification | 0.550 | ▼ | 1.8% | 0.595 | ▲ | 8.2% |
| 10/12/2019 | Extension to Closing Date of Non-Renounceable Issue | 0.575 | ▲ | 2.7% | 0.555 | ▼ | 3.5% |
| 05/12/2019 | Roswell and San Antonio Resource Definition Drilling Update | 0.560 | ▼ | 4.3% | 0.575 | ▲ | 2.7% |
| 28/11/2019 | Offer Booklet for non renounceable Rights Issue | 0.559 | ▼ | 8.2% | 0.580 | ▲ | 3.7% |
| 28/11/2019 | Launches Non-Renounceable Issue | 0.559 | ▼ | 8.2% | 0.580 | ▲ | 3.7% |
| 26/11/2019 | Trading Halt | 0.609 | ▶ | 0.0% | 0.554 | ▼ | 9.0% |
| 14/11/2019 | Further core drilling initiated at Boda Porphyry Prospect | 0.664 | ▲ | 8.1% | 0.624 | ▼ | 6.0% |

| Date | Announcement | Closing Share Price Following Announcement | | | Closing Share Price Three Days After Announcement | | |
|---|---|---|---|---|---|---|---|
| | | $ (movement) | | | $ (movement) | | |
| 06/11/2019 | Roswell and San Antonio Resource Definition Drilling Update | 0.634 | ▼ | 5.2% | 0.589 | ▼ | 7.1% |
| 21/10/2019 | Quarterly Activities Report | 0.754 | ▼ | 8.5% | 0.719 | ▼ | 4.6% |
| 21/10/2019 | Quarterly Cashflow Report | 0.754 | ▼ | 8.5% | 0.719 | ▼ | 4.6% |
| 23/09/2019 | Resource and Reserve Statements FY19 | 0.769 | ▼ | 1.3% | 0.734 | ▼ | 4.5% |
| 23/09/2019 | Roswell and San Antonio Resource Definition Drilling Update | 0.769 | ▼ | 1.3% | 0.734 | ▼ | 4.5% |
| 09/09/2019 | Discovers Significant Porphyry Au Cu Mineralisation at Boda | 0.490 | ▲ | 27.3% | 0.634 | ▲ | 29.6% |
| 05/09/2019 | Trading Halt | 0.385 | ▲ | 2.7% | 0.559 | ▲ | 45.4% |
| 02/09/2019 | Full Year Statutory Accounts | 0.400 | ▼ | 2.4% | 0.385 | ▼ | 3.8% |
| 12/08/2019 | GMD: Offer Document Non-Renounceable Rights Issue | 0.400 | ▼ | 7.0% | 0.415 | ▲ | 3.8% |
| 12/08/2019 | Roswell and San Antonio Resource Definition Drilling Update | 0.400 | ▼ | 7.0% | 0.415 | ▲ | 3.8% |
| 02/08/2019 | Strategic Investment in Genesis Minerals | 0.385 | ▲ | 1.3% | 0.385 | ▶ | 0.0% |
| 02/08/2019 | GMD: Strategic Investment in Genesis | 0.385 | ▲ | 1.3% | 0.385 | ▶ | 0.0% |
| 31/07/2019 | Quarterly Cashflow Report | 0.385 | ▶ | 0.0% | 0.390 | ▲ | 1.3% |
| 29/07/2019 | Gold Mineralisation Drilling at Peak Hill | 0.395 | ▲ | 1.3% | 0.380 | ▼ | 3.8% |
| 11/07/2019 | Quarterly Activities Report | 0.415 | ▼ | 2.4% | 0.390 | ▼ | 6.0% |
| 09/07/2019 | Significant Exploration Target Defined At Tomingley | 0.410 | ▲ | 5.1% | 0.395 | ▼ | 3.7% |
| 12/06/2019 | Further Significant Gold Intercepts In TGO Gold Corridor | 0.400 | ▲ | 6.7% | 0.415 | ▲ | 3.8% |
| 11/06/2019 | Response to ASX Aware Query | 0.375 | ▲ | 10.3% | 0.415 | ▲ | 10.7% |
| 06/06/2019 | Investment in Clean Metal Processing Technology | 0.305 | ▼ | 1.6% | 0.400 | ▲ | 31.1% |
| 05/06/2019 | Tomingley Gold Production Update and Revised FY 19 Guidance | 0.310 | ▲ | 1.6% | 0.375 | ▲ | 21.0% |
| 05/06/2019 | Tomingley Gold Production Update and Revised FY 19 Guidance | 0.310 | ▲ | 1.6% | 0.375 | ▲ | 21.0% |

Source: Bloomberg, BDO analysis

On 5 June 2019, the Company released its Tomingley Gold Production Update and Revised FY 2019 Guidance to the market, which noted that gold production for FY19 was expected to be 48,000 to 49,000 ounces which is above the upper range of the previous guidance range. On the date of the announcement, the Alkane share price increased by 1.6% to close at $0.310, before increasing a further 21.0%, over the subsequent three-day period to close at $0.375.

On 6 June 2019, Alkane announced that through its wholly owned subsidiary, ASM had executed a binding agreement with ZTC to fund the final stage research and feasibility in relation to a clean metal process to convert metal oxide (including key Dubbo Project metals) to metals of high marketable purity. The agreement resulted in a new Korean-domiciled company established with ZTC and ASM as shareholders. On the date of the announcement, the Alkane share price decreased by 1.6% to close at $0.305, before increasing 31.1%, over the subsequent three-day period to close at $0.400.

On 11 June 2019, Alkane responded to an ASX Aware Query in reference to the delay of information being released to the ASX concerning a binding agreement between a wholly owned subsidiary of Alkane and ZTC. On the date of the announcement, the Alkane share price increased by 10.3% to close at $0.375, before increasing a further 10.7%, over the subsequent three-day period to close at $0.415.

On 9 September 2019, Alkane announced the discovery of gold-copper mineralisation at the Boda and Kaiser Prospects. On the date of the announcement, the Alkane share price increased by 27.3% to close at $0.490, before increasing a further 29.6%, over the subsequent three-day period to close at $0.634.

On 21 October 2019, Alkane released its Quarterly Cashflow Report and Quarterly Activities Report, outlining that total gold production was above forecast at 7,497 ounces and that guidance for FY20 had increased from 30,000 to 35,000 ounces of gold. On the date of the announcement, the share price decreased by 8.5% to close at $0.754, before further decreasing by 4.6% over the subsequent three-day trading period to close at $0.719.

On 14 November 2019, Alkane announced that a follow up drilling program of initially five core holes was scheduled to commence to test the substantial Boda porphyry gold-copper mineralisation. On the date of the announcement, the Alkane share price increased by 8.1% to close at $0.664, before decreasing by 6.0%, over the subsequent three-day period to close at $0.624.

On 28 January 2020, Alkane announced that the ongoing 60,000-metre resource definition drilling program on the Roswell and San Antonio prospects has demonstrated an Inferred Mineral Resource of 7.02 million tonnes grading 1.97g/t gold at the Roswell Deposit. On the date of the announcement, the Alkane share price increased by 13.3% to close at $0.765, before increasing a further 3.3%, over the subsequent three-day period to close at $0.790.

On 26 February 2020, Alkane released the Company's Appendix 4D and Interim Financial Report outlining a 35% decrease in revenue and 39% decrease in net profit for the period attributable to members. On the date of the announcement, the Alkane share price decreased by 12.8% to close at $0.850, before decreasing a further 11.8%, over the subsequent three-day period to close at $0.750.

On 9 March 2020, Alkane announced that the first phase of the Roswell and San Antonio resource definition drilling program to advance inferred resources to indicated/measured resource status was nearing completion. On the date of the announcement, the Alkane share price decreased by 10.1% to close at $0.715, before decreasing a further 11.2%, over the subsequent three-day period to close at $0.635.

On 23 March 2020, the Company announced high-grade gold-copper mineralisation results of drill holes KSDD006 and KSDD007 intersected at Boda. On the date of the announcement, the share price increased 2.7% to close at $0.570, before increasing by a further 12.3% to close at $0.640 over the subsequent three-day trading period.

On 9 April 2020, the Company released a Roswell and San Antonio prospects resource definition drilling update, detailing the completion of the first phase of the drilling program and the continuation of the second phase of drilling. On the date of the announcement, the share price increased by 4.1% to close at $0.760, before increasing by a further 14.5% to close at $0.870 over the subsequent three-day trading period.

On 20 April 2020, the Company announced the initial inferred resource estimate of 453,000 oz of gold at the San Antonio prospect, bringing the total resource estimate for the Tomingley Gold operations and exploration tenements in excess of one million ounces of contained gold. On the date of the announcement, the share price decreased by 0.6% to close at $0.865, before decreasing by a further 19.7% to close at $0.695 over the subsequent three-day trading period.

On 22 April 2020, Alkane announced assay results for diamond core drill hole KSDD008 at Boda, which confirmed further extensive porphyry gold-copper mineralisation. On the date of the announcement, the share price decreased by 17.0% to close at $0.685, before increasing by 9.5% to close at $0.750 over the subsequent three-day trading period.

On 29 April 2020, the Company released its Quarterly Activities Report for the March 2020 quarter, which highlighted among other things, a steady state underground stoped ore production of 5,723 ounces of gold at the Tomingley Project in the quarter ended 31 March 2020, and the results of the inferred resource estimate at the San Antonio prospect. On the date of the announcement, the share price decreased by 0.7% to close at $0.740, before decreasing by a further 2.7% to close at $0.720 over the subsequent three-day trading period.

On 11 May 2020, the Company announced it had received approval from the NSW Government Resources Regulator to develop an exploration drive from the Wyoming Ore deposits, to the Roswell and San Antonio deposits. On the date of the announcement, the share price increased by 1.9% to close at $0.790, before declining by 7.0% to close at $0.735 over the subsequent three-day trading period.

On 19 May 2020, Alkane announced the initial modelling of drilling completed at Boda and the assay results for diamond core drill hole KSDD009. The Company also announced that a major RC and diamond core drilling program was planned to commence early in the third quarter of 2020 at Boda. On the date of the announcement, the share price decreased by 9.0% to close at $0.760, before increasing by 12.5% to close at $0.855 over the subsequent three-day trading period.

An analysis of the volume of trading in Alkane's shares for the 12 months to 22 May 2020 is set out below:

| Trading days | Share price low | Share price high | Cumulative volume traded | As a % of Issued capital |
|---|---|---|---|---|
| 1 Day | $0.810 | $0.885 | 4,994,649 | 0.86% |
| 10 Days | $0.730 | $0.885 | 45,362,406 | 7.82% |
| 30 Days | $0.675 | $0.935 | 135,058,628 | 23.28% |
| 60 Days | $0.460 | $0.935 | 300,102,653 | 51.74% |
| 90 Days | $0.460 | $1.160 | 432,468,958 | 74.56% |
| 180 Days | $0.385 | $1.160 | 701,584,511 | 120.96% |
| 1 Year | $0.255 | $1.160 | 915,486,152 | 157.83% |

Source: Bloomberg and BDO analysis

We consider the following characteristics to be representative of a liquid and active market:

- regular trading in a company's securities;
- approximately 1% of a company's securities are traded on a weekly basis;
- the spread of a company's shares must not be so great that a single minority trade can significantly affect the market capitalisation of a company; and
- there are no significant but unexplained movements in share price.

Based on the characteristics above, we consider that Alkane's shares on the ASX exhibit a high level of liquidity given that 157.83% of the Company's current issued capital had been traded in the historical 12-

month period. In addition, we observed the percentage of the Company's securities traded on a weekly basis to be considerably higher than the benchmark of 1%.

## 6. Economic analysis

In the following section, we set out an analysis of the current economic context and outlook in Australia including the COVID-19 outbreak and consider the implications for Alkane and the mining industry. We note that the situation continues to evolve.

### The Australian economy and COVID-19 outbreak

The Australian economy grew at 2% over 2019. The Reserve Bank of Australia (**'RBA'**) had been predicting Gross Domestic Product (**'GDP'**) growth of around 2.75% over 2020 and around 3% by the end of 2021, based on low interest rates, lower exchange rates, a rise in mining investment, high levels of spending on infrastructure and an expected recovery in residential construction. However, as a result of the COVID-19 outbreak and the Australian bushfires, this momentum has been significantly disrupted.

COVID-19 is currently having a significant impact on the Australian economy and financial system, along with creating considerable volatility in financial markets. Equity prices have experienced large declines, and the yield on government bonds has fallen to historic lows.

The federal government announced a $17.6 billion stimulus package on 12 March 2020 to provide short-term support to the economy. On 19 March 2020, the RBA announced it would implement a number of measures including:

- Lowering the cash rate by a further 25 basis points to 0.25%, along with a commitment to maintain it at this level until progress is made towards full employment and it is confident that mid-term inflation will fall within the 2% to 3% target band;
- A target for the yield on 3-year Australian Government bonds of approximately 0.25%, which will be achieved through the purchases of Government bonds in the secondary market;
- A term funding facility for the banking system, with particular support for credit to small and medium-sized businesses, and a complementary program of support for the non-bank financial sector; and
- Exchange settlement balances at the RBA will be remunerated at 10 basis points, rather than zero, which will mitigate the cost to the banking system associated with the large increase in banks' settlement balances at the RBA as a result of the policy actions.

Following the announcements, the RBA has reached its target yield on 3-year Government bonds, and the functioning of the Government bond market has improved. Since the target was introduced, the RBA has purchased around $36 billion worth of Government bonds in the secondary market. The RBA will continue to monitor the Government bond market and make further purchases should it be necessary to achieve the 0.25% target.

According to the May 2020 Monetary Policy Statement released by the RBA, the appetite for gold has been strong over the past year, outperforming bulk commodities, rural commodities, base metals and Brent crude oil with an increase in prices of 33.0% over the past year and 9.0% since the previous statement in February 2020. This has been driven by the many investors who flocked to gold as a safe haven asset amidst the current uncertain economic environment.

Once COVID-19 is contained, the RBA expects the Australian economy to recover and return to an improving trend, with output growth of 6% expected for 2021. In the interim, the RBA is focusing on reducing economic and financial disruptions and supporting jobs, incomes and businesses.

Source: www.rba.gov.au *Statement of Monetary Policy May 2020*, www.rba.gov.au *Statement by Glenn Stevens, Governor: Monetary Policy Decision 5 May 2020*, www.rba.gov.au *Statement by Philip Lowe, Governor: Monetary Policy Decision* 19 *March 2020, Statement by Philip Lowe, Governor: Monetary Policy Decision 3 March 2020*, and *Statement on Monetary Policy February 2020.*

# 7. Industry analysis

Following the Demerger, Alkane will operate in the gold mining industry, while ASM will operate in the critical materials sector. Therefore, we have set out an analysis of and commentary on the key trends for the two industries in the following paragraphs.

## 7.1 Gold

Gold is a soft malleable metal which is highly desirable due to its rarity, permanence, and unique mineral properties. Gold has been used in jewellery and as a form of currency for thousands of years, however in more recent history there has been increasing demand for its use in the manufacture of electronics, dentistry, medicine and aerospace technology.

In addition to its practical applications, gold also serves as an international store of monetary value. Gold is widely regarded as a monetary asset as it is considered less volatile than world currencies and therefore provides a safe haven investment during periods of economic uncertainty.

Once mined, gold continues to exist indefinitely and is often melted down and recycled to produce alternative or replacement products. Consequently, demand for gold is supported by both gold ore mining and gold recycling. A summary of the recent historical supply of gold is provided in the table below:

Historically, the price of gold is negatively correlated to the prices of other asset classes during times of uncertainty and financial crises. Due to the recent coronavirus outbreak sparking uncertainty, the price of gold has rallied as investors demand the high liquidity that gold provides. This increase in the price of gold will positively impact Alkane if this uncertainty prevails.

The World Gold Council expects that the interplay between financial uncertainty, lower interest rates, weakening in global economic growth and gold price volatility will drive gold demand in 2020.

| Gold supply (tonnes) | 2012 | 2013 | 2014 | 2015 | 2016 | 2017 | 2018 | 2019 |
|---|---|---|---|---|---|---|---|---|
| Mine production | 2,930 | 3,112 | 3,204 | 3,291 | 3,399 | 3,447 | 3,509 | 3,464 |
| Net producer hedging | (45) | (28) | 105 | 13 | 38 | (26) | (13) | 8 |
| Recycled gold | 1,671 | 1,248 | 1,188 | 1,121 | 1,282 | 1,156 | 1,176 | 1,304 |
| **Total supply** | **4,556** | **4,332** | **4,497** | **4,425** | **4,719** | **4,577** | **4,672** | **4,776** |

Source: World Gold Council Quarter 4 2019 Statistics, 30 January 2020.

The gold ore mining industry has performed steadily in recent years, with growth driven by price increases and slow economic growth. However, gold mine production was 1.3% lower than in 2018, the first annual decline in production since 2008. This decline can be mainly attributed to China's fall in mine output by 6% due to strict environmental restrictions that have come into force in recent years.

## Key external drivers

Global gold prices have a significant impact on the revenue generated by industry operators. When gold prices are low, gold miners are less likely to commit to projects with lower gold grades and higher production costs. Ultimately, a decline in gold prices reduces the viability of new and existing projects, which hinders industry growth.

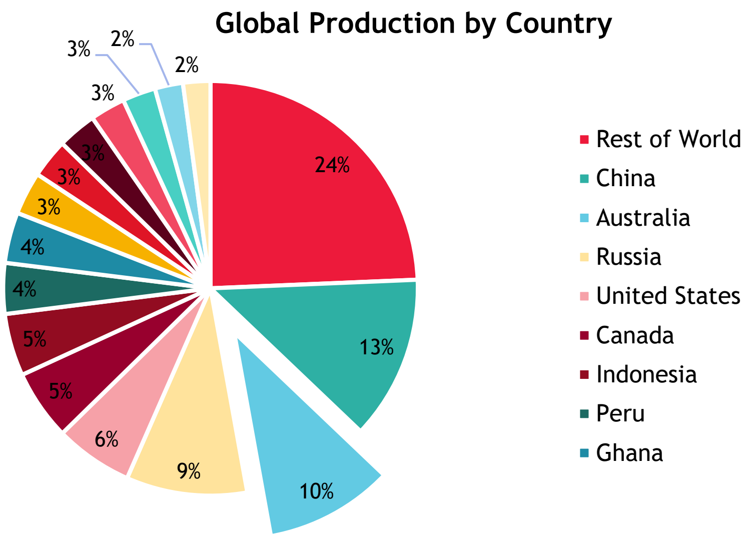
The global gold price is denominated in US dollars and therefore, the exchange rate directly affects the returns received by local industry operators. A weaker Australian Dollar benefits the domestic industry by reducing prices in export markets and pushing up domestic prices, likely resulting in higher volumes.

Global demand for gold is also inversely related to global economic performance. As gold is regarded as a store of value and is particularly sought after during periods of economic uncertainty, demand follows a counter cyclical pattern. Strong global GDP growth can therefore have a negative impact on gold demand and the industry. The recent rally in gold prices is partly a reflection of the high level economic uncertainty stemming primarily from the COVID-19 outbreak and other geopolitical events.

## Gold ore mining trends

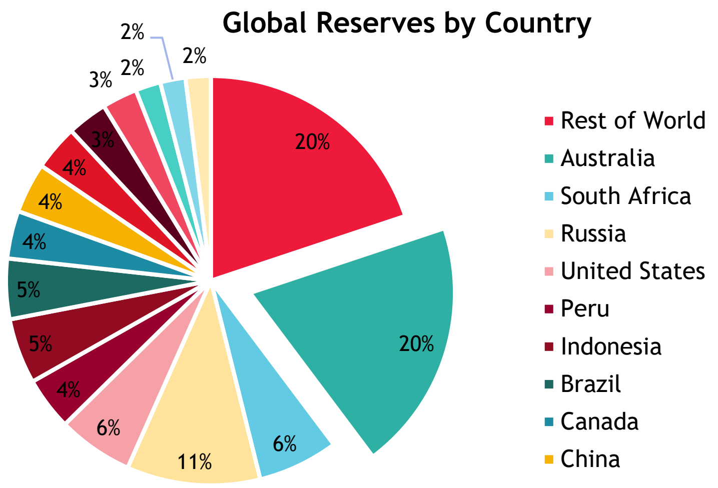
Gold ore mining is a capital intensive and high cost process, which is becoming increasingly difficult and more expensive as the quality of ore reserves diminishes. The industry also incurs many indirect costs related to exploration, royalties, overheads, marketing and native title law. Typically, many of these costs are fixed in the short term as a result of industry operators' inability to significantly alter cost structures once a mine commences production.

Until the late 1980s, South Africa produced approximately half of the total gold ore mined globally. More recently however, the industry has diversified geographically and China and Australia now dominate global gold production. According to the United States Geological Survey, total estimated global gold ore mined for 2019 was approximately 3,287 metric tonnes. The chart below illustrates the estimated global gold production by country for 2019.




Source: 2020 United States Geological Survey and BDO analysis.

Despite China leading global gold production in 2019, Australia, South Africa and Russia hold the largest known gold reserves globally. As depicted below, the United States Geological Survey estimates that collectively these three countries account for approximately 37% of global gold reserves.




Source: 2020 United States Geological Survey and BDO analysis.

According to the 2020 United States Geological Survey, Australia's gold reserves amount to 10,000 tonnes, representing 20% of global reserves and the largest percentage held by any one country. IBIS World estimates domestic industry revenue to grow by an annualised 0.8% over the five year period through to 2022-23, reaching approximately $18.8 billion. However, rising production costs due to lower ore quality and higher transportation costs are anticipated to reduce industry profitability over the period.

## Gold prices

The price of gold peaked at US$1,900 on 5 September 2011, due largely to the debt market crisis in Europe and the Standard and Poor's downgrade of the US credit rating. Global stock markets subsequently went into turmoil, which saw investors opt for the stability offered by gold.

The price of gold fluctuated around US$1,700 during 2012 before entering a steep decline in 2013. The downturn represented the beginning of a correction in the price of gold, which had almost tripled in the two-year period prior to the European crisis in 2011. Improved market sentiment and increased risk appetite from investors saw gold prices continue to decline throughout 2014 and 2015 to US$1,051 in December 2015.

During 2016, gold prices strengthened, likely as a result of heightened uncertainty surrounding the US Presidential election and the United Kingdom's exit from the European Union. The price of gold reached US$1,363 in late 2016 before stabilising around US$1,200 to US$1,300 throughout 2017.

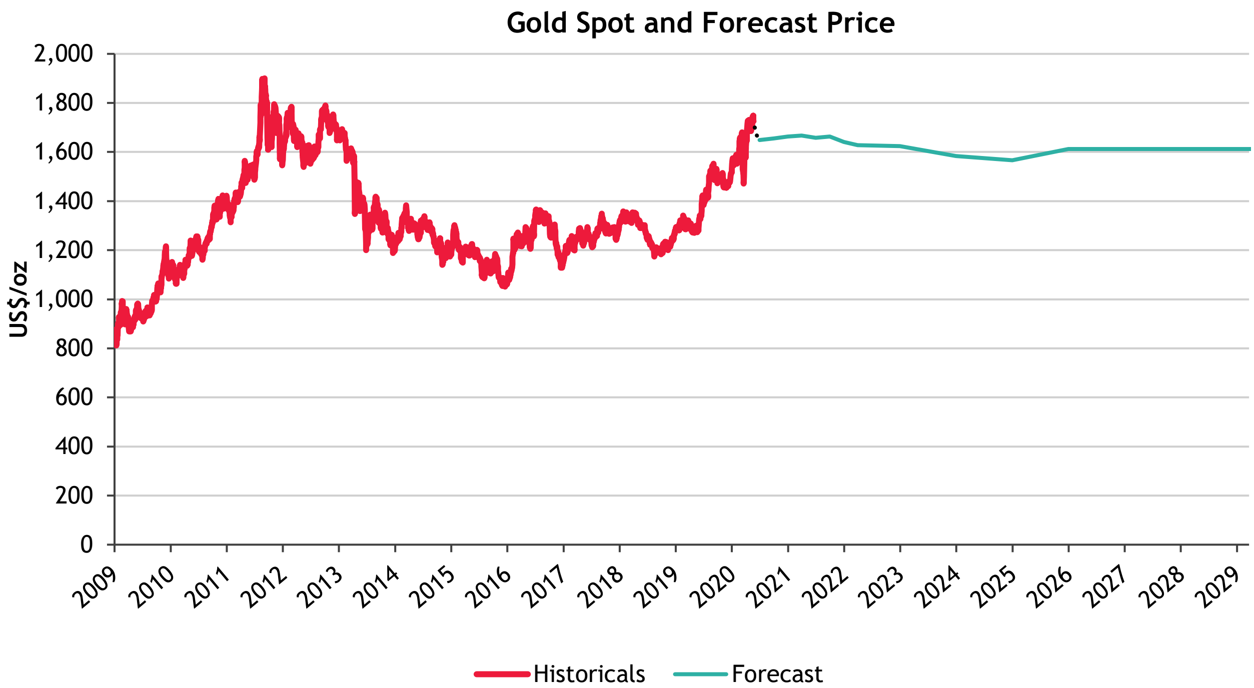
The gold price fluctuated throughout 2018. In January 2018, the gold price strengthened, rising to approximately US$1,360, spurred on by a weak US dollar. From April 2018 through to August 2018, the price of gold trended downwards. Prices remained flat through August and September of 2018, before increasing in October and November of 2018.

The price of gold reached US$1,341 in February 2019, before declining to US$1,270 in May 2019. On 25 June 2019, the US dollar gold price reached a 17-month high of US$1,423. The rise in the US dollar gold price, coupled with a weak Australia dollar, saw the Australian dollar spot price of gold reach an all-time high of $2,046 per oz. In August 2019, the gold price rallied past US$1,500 reaching six year highs. Demand for gold was primarily driven by investors looking to avoid US-China trade war uncertainties, while civil unrest in Hong Kong further spurred investors to abandon riskier asset classes for safe haven assets. The gold price continued to remain around US$1,500 throughout October 2019, although it dipped slightly to US$1,465 in mid-November 2019.

Gold prices have increased in further in the first quarter of 2020 in reaction to the uncertainty created by the global spread of COVID-19, as investors move to safe haven assets. Global investors are expected to continue to favour gold as a safe haven asset throughout 2020, as higher levels of global risk and uncertainty persist. Additionally, political instability in various regions and the potential for higher inflation levels will encourage investors to demand gold.

According to Consensus Economics forecasts, the price of gold will continue to remain at its current high levels with the uncertainty created by the spread of COVID-19 sustaining demand for gold.

The gold spot price since 2009 and forecast prices through to 2029 are depicted in the graph below.




Source: Bloomberg, Consensus Economics and BDO Analysis.

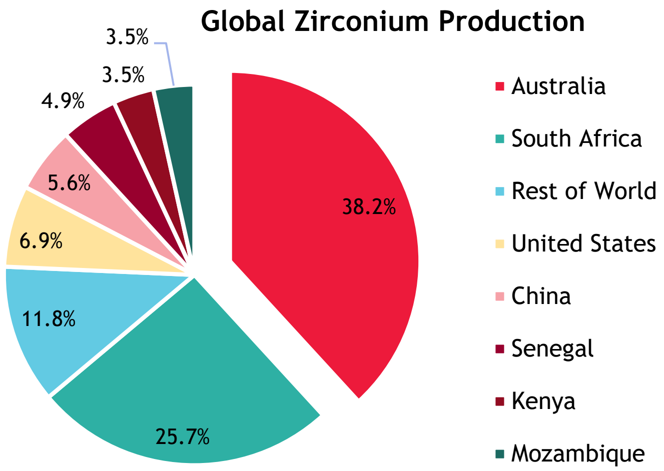
## 7.2 Critical Materials

### Zirconium

Zirconium is a soft silvery-white metal primary produced from the mineral zircon. Zirconium is used for cladding nuclear reactor fuels, whilst zirconium compounds are used in a variety of high temperature applications such as moulds for molten metals. The Dubbo project is a large in-ground resource of zirconium and will produce a mix of 'base' and 'premium' zirconium products, including zirconium oxychloride, zirconium basic carbonate and zirconium oxide at a range of purities.

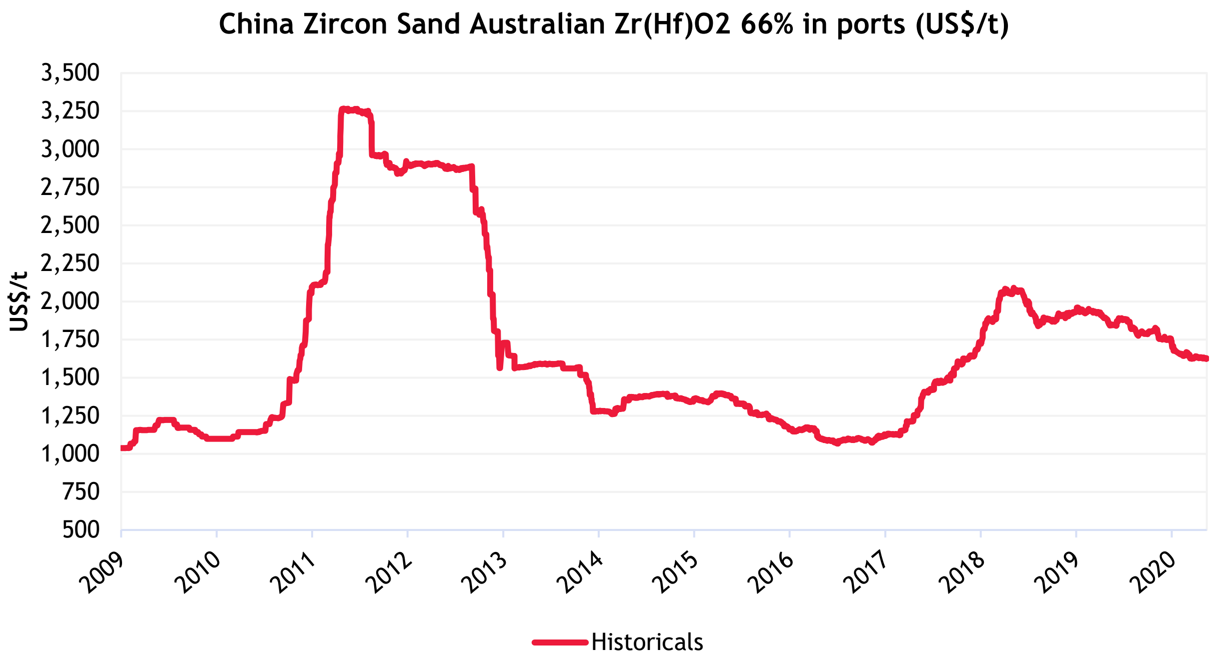
The Asia-Pacific region dominated the global market share in 2019 with majority of demand coming from China. The global zirconium market is highly consolidated with the top five companies accounting for around 70% of the global production capacity as at 2017. Currently, Iluka Resource Limited, an ASX-listed entity with operations within Australia leads the zirconium market with a share of over 25% of the total production capacity.

As depicted below, Australia is currently the largest producer of zirconium in the world, providing opportunities for ASM to capitalise on Australia's rich zirconium supply. Furthermore, Australia is also home to the most zirconium reserves in the world, containing 67% of the world's reserves.




Source: 2020 United States Geological Survey and BDO analysis

Market prices for zirconium products remained relatively stable in the 2019 financial year after rapid rises in the previous year driven primarily by supply disruptions from China. The chart below outlines the movements in the spot price of zircon, the primary material for zirconium products from January 2009 to May 2020.




Source: Bloomberg.

Zirconium has an optimistic price forecast driven by growth in foundries and refractories and the growth of nuclear power stations in Asia-Pacific. An oversupply in the zirconium market has caused the price to marginally decrease over Q1 2020 and Q2 2020. However, it is anticipated zirconium prices will recover over the next financial year due to reduced production from major mines. The entire Zirconium and Hafnium market was valued approximately US$700 million and is forecasted to reach approximately US$900 million by 2026.

The 2019 World Energy Outlook report sees installed nuclear capacity growth of over 15% from 2018 to 2040. Currently there are a total of 450 nuclear power reactors operating in over 30 countries. However, nuclear power capacity worldwide is increasing steadily, with approximately 50 nuclear power reactors under construction. This scenario would potentially result in an increase in demand and therefore the price of zirconium, which is necessary in the construction of nuclear reactors.

Source: Australian Critical Minerals Prospectus 2019 by *Australian Trade and Investment Commission*, Alkane Resources Annual Report 2019, World Energy Outlook Report 2019, Thomson Reuters.

### Niobium

Niobium was first discovered in 1801 and is a grey, soft, ductile, transitional metal largely found in pyrochlore however can also be found with tantalum in columbite ore. The global steel industry is the main driver for niobium consumption, where 90% of all niobium is used as ferro-niobium for high strength alloy steels for the construction and automotive sectors. Niobium can increase the mechanical strength, corrosive resistance and high temperature strength of steel. It is for this reason that niobium steels are often used in cars, pipelines, buildings and bridges.

The current niobium market is dominated by Brazil, in particular Metalurgia Companhia Brasileira de Metalurgia e Mineração (‘**CBMM**’), which currently produces 92% of the world’s niobium. The two smaller players, Anglo American PLC (‘**Anglo American**’) and Magris Resources Inc (‘**Magris**’). produce approximately 3% each. CBMM and Anglo American both have operations in Brazil, while Magris operates in Canada.

Over the medium to long-term, US President Donald Trump's US$1.0 trillion infrastructure plan to boost the American economy may bode well for mineral producers as demand for minerals such as arsenic, natural graphite, manganese, niobium and tantalum may increase as part of the plan.

According to the USGS, estimated global reserves and resources of niobium are sufficient enough to meet global demand for the foreseeable future. However, possible disruptions such as war, civil unrest, political changes, natural disasters, environmental issues and market manipulation may potentially generate supply problems for the metal. This is particularly a risk for Brazil, which is the world's largest producer of niobium. Following the demerger, ASM will be the only Australian producer of ferro-niobium via a joint-venture with Treibacher AG.

### Hafnium

Hafnium is a shiny, silvery, corrosion resistant metal which is primarily used in the control rods of nuclear reactors, in vacuum tubes and has been used as an alloying agent with iron, titanium, niobium and other metals. Hafnium oxide, a compound of hafnium, is used as an electrical insulator in microchips.

Currently, the United States of America and France are the major hafnium producing countries with a combined share of more than 85% of the global production. This can be explained by the increasing demand from applications such as aerospace and submarines as global security threats have intensified. Hafnium is essential for aerospace applications, such as space rocket engines and heat-resistant hafnium-niobium alloys.

Following strong growth in the global commercial aerospace industry during 2018, the industry has since declined due to production issues in particular aircraft models. However, the industry is expected to recover moving forward as long-term demand for commercial aerospace vehicles remains optimistic with approximately 40,000 vehicles to be produced over the next 20 years.

### Rare Earth Elements

Rare earth elements ('**REE**') is segmented by 15 lanthanides plus scandium and yttrium that have similar chemical properties to the lanthanides. The REE are conventionally divided into "Light" REE ('**LREE**') and "Heavy" REE ('**HREE**'). REE are more abundant in the Earth's crust than gold, silver or platinum metals. However, because of their geochemical properties, REE are typically dispersed and not often found in concentrated and economically viable quantities. Due to the very similar chemical characteristics of REE, the preparation of pure oxide or metal products of the individual REE from rare earth mineral concentrate is complex and expensive.

The table below depicts each REE, their atomic number, symbol and their main usages in the market:

| A/N | Symbol | Name | Type of REE | Selected Usages |
|---|---|---|---|---|
| **57** | La | Lanthanum | LREE | High refractive index glass, flint, hydrogen storage, battery-electrodes, camera lenses, fluid catalytic cracking catalyst for oil refineries |
| **58** | Ce | Cerium | LREE | Chemical oxidizing agent, polishing powder, yellow colours in glass and ceramics, catalyst for self-cleaning ovens, fluid catalytic cracking catalyst for oil refineries |

| A/N | Symbol | Name | Type of REE | Selected Usages |
|---|---|---|---|---|
| **59** | Pr | Praseodymium | LREE | Rare-earth magnets, lasers, core material for carbon arc lighting, colorant in glasses and enamels, additive in Didymium glass used in welding goggles, ferrocerium fire steel (flint) products |
| **60** | Nd | Neodymium | LREE | Rare-earth magnets, lasers, violet colours in glass and ceramics, ceramic capacitors |
| **61** | Pm | Promethium | LREE | Nuclear batteries |
| **62** | Sm | Samarium | LREE | Rare-earth magnets, lasers, neutron capture, masers |
| **63** | Eu | Europium | HREE | Red and blue phosphors, lasers, mercury-vapour lamps |
| **64** | Gd | Gadolinium | HREE | Rare-earth magnets, high refractive index glass or garnets, lasers, x-ray tubes, computer memories, neutron capture |
| **65** | Tb | Terbium | HREE | Green phosphors, lasers, fluorescent lamps |
| **66** | Dy | Dysprosium | HREE | Rare-earth magnets, lasers |
| **67** | Ho | Holmium | HREE | Lasers |
| **68** | Er | Erbium | HREE | Lasers, vanadium steel |
| **69** | Tm | Thulium | HREE | Portable X-ray machines |
| **70** | Yb | Ytterbium | HREE | Infrared lasers, chemical reducing agent |
| **71** | Lu | Lutetium | HREE | PET Scan detectors, high refractive index glass |
| **21** | Sc | Scandium | HREE | Light Aluminium-scandium alloy for aerospace components, additive in Mercury-vapour lamps |
| **39** | Y | Yttrium | HREE | Yttrium-aluminium garnet (YAG) laser, YBCO high-temperature superconductors, yttrium iron garnet (YIG) microwave filters |

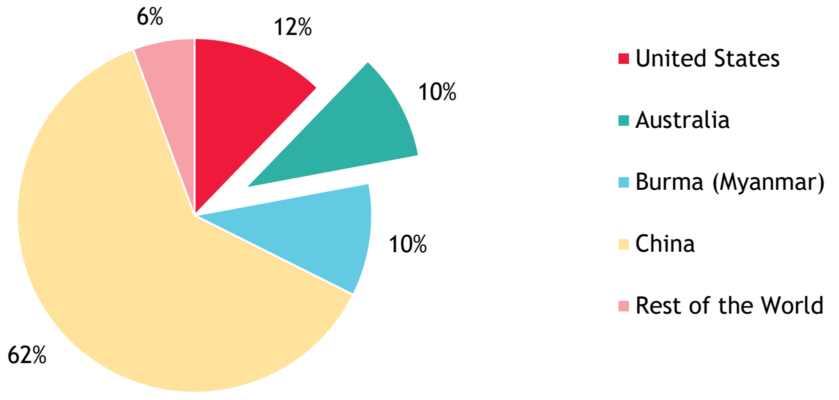
REE demand is growing rapidly due to the adoption of environmentally-friendly energy technologies; in particular wind energy generation and low-emission “hybrid” motor vehicles. Further, REE is a vital mineral necessary for the production of various high technology products and defence equipment.

The prices for REE are not fixed by central trading exchanges but are fixed on a trade-by-trade basis. The price of individual rare earths varies widely. Therefore, REE deposits are compared on the basis of its relative concentrations of individual REE in the ore.

The Asia-Pacific region dominated the global production of REE in 2019, as production has significantly declined over the past few decades in countries outside of this region. China is the world’s largest automotive producer and is focussed on increasing the production and sale of electric vehicles across the country. China is the world’s leading REE producer, with an estimated 132,000 tonnes of REE mined throughout 2019 equating to approximately 62% of the world REE production.

The graph below exhibits estimated production output for 2019:

REE Production by Country 2019



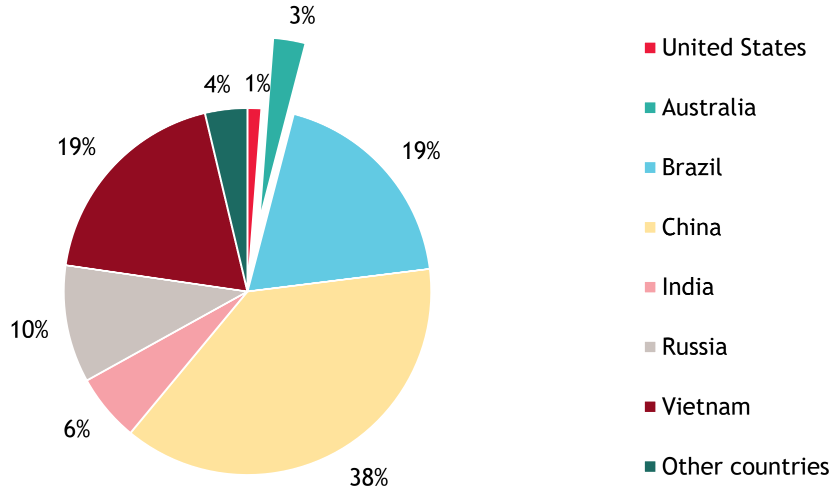

Source: 2020 United States Geological Survey and BDO analysis.

Australia is the third largest REE producer in the world, with an estimated 21,000 tonnes of REE mined throughout 2019.

## REE Reserves

At the end of 2019, China and Brazil were collectively estimated to account for 57% of the global REE reserves. A figure illustrating an estimated country breakdown of reserves is shown below:

REE Reserves by Country 2019




Source: 2020 United States Geological Survey and BDO analysis.

# 8. Do the advantages of the Demerger outweigh the disadvantages?

## 8.1 Independence of assets

Based on the analysis of the Company's current operations under its gold and critical materials divisions, we consider that the assets under each division are independent of each other. Our reasons for this conclusion are as follows:

- The commodities that are currently produced or are expected to be produced under each division are distinct from each other, with different economic drivers influencing demand and supply;
- The resources and reserves of the assets under each division have not been determined on the assumption that all assets will be developed together;
- Plans for development of the projects are not dependant on each other and do not assume any shared infrastructure or technologies; and
- The projects are in different stages, whereby the Dubbo Project is a construction-ready project pending financing, while the Tomingley Project is at the stage of developing its underground mining operations as well as continuing its drilling programmes in prospective tenement areas to increase its gold resource for its 1 Mtpa processing facility.

Furthermore, nothing has come to our attention to suggest that there will be significant synergies in developing the projects together. Therefore, if the Demerger were to be successful, we consider that the underlying value of the assets to be held by Alkane and ASM will remain unchanged, and hence there will be no material change in the value to Shareholders.

Consequently, in order to determine whether the Demerger is in the best interests of Shareholders, we have considered the advantages, disadvantages and other factors that are likely to impact Shareholders.

## 8.2 Advantages of the Demerger

We have considered the following advantages when assessing the Demerger.

### 8.2.1. Shareholder flexibility

On the implementation of the Demerger, Shareholders will have the same proportionate shareholding in ASM that they currently hold in Alkane, with the in-specie distribution to be completed on a pro-rata basis based on one ASM share for every five Alkane shares held.

Following this, Shareholders will have the flexibility to choose whether they continue to keep their exposure to the gold assets held in Alkane and the critical materials assets held in ASM, providing Shareholders with the flexibility to structure their portfolios as they see fit.

### 8.2.2. Focused leadership and management

For the last 15 years, the management of Alkane have been managing both gold operations and critical materials operations concurrently. As a result, the time and attention of the Directors and senior management have been divided between both business units, potentially limiting the rate at which the Tomingley Project and the Dubbo Project progress.

As part of the Demerger, Alkane and ASM will have two separate boards with different managing directors (see Section 4 of our Report for board changes). Nicholas Earner will remain the managing director of

Alkane, with his focus solely on Alkane's gold operations following the Demerger, while David Woodall will be the managing director of the new listed entity, ASM, following the Demerger, focused on the development of the Dubbo Project. The credentials of Nicholas Earner and David Woodall are detailed in Section 6.9 of the Demerger Booklet.

Having two separate managing directors each with a specific focus on the respective assets of Alkane and ASM is expected to allow for the boards and management of Alkane and ASM to focus on developing their own corporate strategies and streamlining their time and attention towards the individual projects.

### 8.2.3. Potential opportunity for future takeover

If the Demerger is implemented, the separation of Alkane and ASM may create an opportunity for potential acquirers to access Alkane or ASM as standalone entities, which would not have otherwise been available.

This is particularly so for Alkane as a standalone gold mining company, given that we have observed an increase in M&A activity of gold companies on the ASX in recent years, driven by the high gold prices which peaked on 20 May 2020 to US$1,748/oz. The economic uncertainty surrounding the impact of COVID-19 and other geopolitical events continues to spur investors towards gold as a safe haven asset, driving prices even higher.

The high gold price is not only beneficial to the value of Alkane's Tomingley Project, but may also position Alkane as a potential takeover target amidst an environment where consolidation in the gold sector is prevalent. The likelihood of a takeover increases if Alkane becomes a standalone gold company following the Demerger.

A takeover often results in an increase in value for Shareholders. Set out below is a list of recent announced, proposed and completed acquisitions of gold companies on the ASX that have resulted in an increase in value for Shareholders:

| Announced Date | Target Company | Acquirer | Announced Transaction Value ($m) | Announced premium (%) |
|---|---|---|---|---|
| 03/06/2020 | Exore Resources Ltd (ASX:ERX) | Perseus Mining Ltd (ASX:PRU) | 39.4 | 57.2% |
| 07/05/2020 | ALT Resources Ltd (ASX:ARS) | Aurenne Group Holdings Pty Ltd | 29.2 | 161.7% |
| 16/03/2020 | Cardinal Resources Ltd (ASX:CDV) | Nord Gold SE | 198.2 | 34.7% |
| 10/02/2020 | Spectrum Resources Limited (ASX:SPX) | Ramelius Resources Limited (ASX:RMS) | 187.1 | 62.5% |
| 18/09/2019 | Azumah Resources Limited (ASX:AZM) | IGIC Pte Limited | 29.3 | 136.0% |
| 27/08/2019 | Echo Resources Limited (ASX:EAR) | Northern Star Resources Limited (ASX:NST) | 173.2 | 51.7% |
| 30/07/2019 | Egan Street Resources (ASX:EGA) | Silver Lake Resources Limited (ASX:SLR) | 45.9 | 41.1% |

| Announced Date | Target Company | Acquirer | Announced Transaction Value ($m) | Announced premium (%) |
|---|---|---|---|---|
| 14/06/2019 | Bligh Resources Limited (ASX:BGH) | Saracen Minerals Holdings Limited (ASX:SAR) | 35.3 | 114.9% |
| 02/05/2019 | Finders Resources Limited (ASX:FND) | Saratoga Investama Sedaya Tbk PT,Provident Capital Indonesia PT,Merdeka Copper Gold Tbk PT | 18.1 | 8.6% |
| 23/09/2018 | Beadell Resources Limited (ASX:BDR) | Great Panther Mining Limited | 220.0 | 56.4% |
| 10/09/2018 | Explaurum Limited (ASX:EXU) | Ramelius Resources Limited (ASX:RMS) | 56.9 | 52.5% |
| | | **Average** | **93.9** | **70.7%** |

Source: Bloomberg.

As Alkane continues to increase its exploration information at the prospective Tomingley Corridor and Boda prospects, a continuation in positive results may make the Company more attractive to a takeover.

### 8.2.4. Dedicated funding for ASM

Alkane provided ASM with cash of $20 million for working capital requirements on 1 April 2020.

As detailed in Section 6.6 of the Demerger Booklet, the $20 million of cash is sufficient for ASM's intended work plan over a budgeted three-year period which is intended to cover:

- Funding of optimisation and feasibility work in relation to a "Clean Metal" metallisation facility to produce and sell relevant products;
- Continuation of the marketing in relation to both the Dubbo Project and potential metallisation facility;
- Initiatives to obtain financing for the Dubbo Project, including progressing debt, equity and strategic partner investment;
- Corporate overheads; and
- Any remaining funding to be provided to RMR Tech to develop the "Clean Metal" technology.

We note that the timing and amount of expenditure over the budgeted period is dependent on progress achieved in securing financing and off-take for the Dubbo Project.

In addition, BDO has previously undertaken an analysis of the cash balances of exploration companies on the ASX, and we consider that ASM will be well positioned amongst its peers in this regard.

To further illustrate the significance of the funding, we have set out the cash position and market capitalisation of resource companies on the ASX with a cash position between $15 million and $25 million, based on their cash balance on 31 December 2019 and market capitalisation at 22 May 2020, respectively.

| Company Name | Cash and cash equivalents at 31-Dec-19 ($m) | Market capitalisation at 22-May-20 ($m) |
|---|---|---|
| Arafura Resources Limited | 22.9 | 86.5 |
| Ora Banda Mining Limited | 22.9 | 138.0 |
| Catalyst Metals Limited | 21.7 | 232.4 |

| Company Name | Cash and cash equivalents at 31-Dec-19 ($m) | Market capitalisation at 22-May-20 ($m) |
|---|---|---|
| Duketon Mining Limited | 20.9 | 17.7 |
| Bellevue Gold Limited | 20.7 | 470.6 |
| Red 5 Limited | 20.7 | 575.6 |
| Cardinal Resources Limited | 20.6 | 202.5 |
| Kingsrose Mining Limited | 20.0 | 30.7 |
| Myanmar Metals Limited | 18.4 | 90.2 |
| Hastings Technology Metals Limited | 18.0 | 96.2 |
| Capral Limited | 17.9 | 49.7 |
| Stavely Minerals Limited | 17.5 | 128.3 |
| TNG Limited | 16.4 | 64.1 |
| Piedmont Lithium Limited | 16.2 | 95.0 |
| Talisman Mining Limited | 16.1 | 17.9 |
| Rand Mining Limited | 15.5 | 117.3 |
| **Average** | **19.1** | **150.8** |

Source: Bloomberg and BDO analysis.

Based on the table above, the level of funds available covers a wide range of companies with different market capitalisations, which is a product of company-specific factors. In the case of ASM, the cash position represents a significant initial cash balance for a newly listed entity.

This lowers the chance of ASM needing to raise initial capital following the Demerger, which in turn reduces the likelihood of a dilution to Shareholders' interests in the short term. Although we note that the cash balance is insufficient to fund the construction for the Dubbo Project in the long term, the initial period when there is a lower chance of dilution allows Shareholders to make a decision on whether they wish to retain their exposure in the critical materials industry.

## 8.3 Disadvantages of the Demerger

We have considered the following disadvantages when assessing the Demerger.

### 8.3.1. Duplication of corporate costs going forward

The Demerger will result in the creation of a new ASX listed entity with its own separate management structure. It is likely that some additional costs will be incurred by ASM, as a result of the need to maintain its own board of directors, share register, and corporate and administrative functions.

We note that the Demerger Transaction Documents are intended by Alkane to minimise these costs.

### 8.3.2. Transaction costs related to the Demerger

Alkane estimates incurring a total of $1.615 million in transaction costs in relation to the Demerger and its listing on the ASX. However, the majority of these costs will be incurred even if the Demerger is not approved by Shareholders.

### 8.3.3. Minor dilution of Shareholders' interests

As depicted in Section 4, the vesting of certain performance rights as part of the Demerger will result in a dilution of the interest in Alkane and ASM held by Shareholders who are not holders of these performance rights. The example to this was Shareholder 'X', who currently holds a 1.00% interest in Alkane pre-Demerger and is not a holder of the Rights to be vested:

| Shareholder 'X' | |
|---|---|
| ***Pre-Demerger*** | |
| Number of Alkane (merged) Shares held | 5,800,000 |
| Total number of Alkane Shares outstanding | 580,033,307 |
| Interest in Alkane (%) | 1.00% |
| | |
| ***Post-Demerger*** | |
| Number of Alkane (demerged) Shares held | 5,800,000 |
| Total number of Alkane Shares outstanding | 595,248,891 |
| Interest in Alkane (%) | 0.97% |
| | |
| Number of ASM Shares held | 1,160,000 |
| Total number of ASM Shares outstanding | 119,049,778 |
| Interest in Alkane (%) | 0.97% |

Source: BDO analysis.

Therefore, the Demerger will result in a minor dilution to interests of some Shareholders. However, we note that this dilution could have occurred if the FY18 and FY19 performance rights vested independent of the Demerger.

## 8.4 Other factors relevant to the Demerger

In addition to the advantages and disadvantages above, we have also considered the following factors below.

### 8.4.1. Potential movements in liquidity

As discussed in Section 5.9 of our Report, Alkane shares display a high level of liquidity with 157.83% of the issued capital trading in the 12 months prior to 22 May 2020. It is likely that due to the reduction in size of the entity, that the liquidity of Alkane and ASM post-Demerger are not likely to provide a material benefit to the liquidity experienced currently by Alkane.

### 8.4.2. Impact of COVID-19

We consider that impact of COVID-19 on the operations of Alkane and ASM and the industries they operate in would be similar whether or not the Demerger proceeds. This is on the basis that the assets held by Alkane and ASM are independent (as discussed in Section 8.1 of our Report) and will experience the same effects of COVID-19 whether they are held together in one entity or separately.

In addition, we note that COVID-19 has contributed to a strengthening in the gold sector, with an observed increase in M&A activity in the recent period. If the Demerger were to be approved in this market, this may increase the probability of a potential takeover of Alkane as a standalone gold company.

### 8.4.3. Ineligible overseas shareholders

Shareholders of Alkane with addresses that reside outside of Australia and New Zealand will not receive ASM shares under the Demerger. ASM shares that would have otherwise been distributed to Ineligible Shareholders will be transferred to a sale agency, which will sell the shares on the ASX, with net proceeds of the sale to be paid to the Ineligible Shareholders. We note that it is an essential component of the Demerger for the ASX listing of ASM to be secured which will allow this process to take place. Any delay will further disadvantage Ineligible Shareholders.

### 8.4.4. Taxation implications for Shareholders

The tax implications for Alkane Shareholders are set out in Section 9 of the Demerger Booklet and should be considered by Shareholders in making their assessment in light of their personal circumstances.

## 9. Conclusion

We have considered the terms of the Demerger as outlined in the body of this Report and the Demerger Booklet and in our opinion, the position of Shareholders if the Demerger is approved is more advantageous than the position if the Demerger is not approved and as such is in the best interest of Shareholders.

Our primary reason for this conclusion is that the gold and critical materials operations currently held by the Company are distinct and independent assets, with minimal benefit arising from being held together in one entity. Although the Demerger will result in an increase in corporate costs going forward, we consider this to be outweighed by the flexibility that Shareholders will receive in their choice of commodity exposure, which can be tailored to their respective portfolios. Furthermore, if the Demerger were to proceed, the focused leadership and management of two separate entities may accelerate the rate of development of the Tomingley Project and the Dubbo Project.

In addition, the Demerger is structured such that there is minimal dilution to the interest held by Shareholders with the exception of the dilution arising from the vesting of certain performance rights. An initial cash balance of $20 million provided to ASM by Alkane as well as the capitalisation and forgiving of intercompany loans between Alkane and ASM, reduces the need for ASM to raise capital upon its listing on the ASX, thus avoiding further dilution.

While some Shareholders may be concerned with whether the adverse impact of COVID-19 on capital markets justifies delaying or postponing the Demerger, we have also identified in Section 8.4.2 the potential benefit of the current strength of the gold market and gold price for Alkane as a standalone gold company.

## 10. Sources of information

This report has been based on the following information:

- Draft Demerger Booklet on or about the date of this report;

- Audited financial statements of Alkane for the years ended 30 June 2019 and 30 June 2018;
- Reviewed financial statements of Alkane for the half year ended 31 December 2019;
- Share registry information of Alkane as at 11 May 2020;
- Bloomberg;
- S&P Capital IQ;
- RBA monetary policy decisions for 2019 and 2020;
- IBIS World;
- United States Geological Survey;
- Energy and Metals Consensus Forecast for 2020;
- Information in the public domain; and
- Discussions with Directors and Management of Alkane.

## 11. Independence

BDO Corporate Finance (WA) Pty Ltd is entitled to receive a fee of $28,000 (excluding GST and reimbursement of out of pocket expenses). The fee is not contingent on the conclusion, content or future use of this Report. Except for this fee, BDO Corporate Finance (WA) Pty Ltd has not received and will not receive any pecuniary or other benefit whether direct or indirect in connection with the preparation of this report.

BDO Corporate Finance (WA) Pty Ltd has been indemnified by Alkane in respect of any claim arising from BDO Corporate Finance (WA) Pty Ltd's reliance on information provided by the Alkane, including the non-provision of material information, in relation to the preparation of this report.

Prior to accepting this engagement BDO Corporate Finance (WA) Pty Ltd has considered its independence with respect to Alkane and any of their respective associates with reference to ASIC Regulatory Guide 112 'Independence of Experts'. In BDO Corporate Finance (WA) Pty Ltd's opinion it is independent of Alkane and their respective associates.

Neither the two signatories to this report nor BDO Corporate Finance (WA) Pty Ltd, have had within the past two years any professional relationship with Alkane, or their associates, other than in connection with the preparation of this report.

A draft of this report was provided to Alkane and its advisors for confirmation of the factual accuracy of its contents. No significant changes were made to this report as a result of this review.

BDO is the brand name for the BDO International network and for each of the BDO Member firms.

BDO (Australia) Ltd, an Australian company limited by guarantee, is a member of BDO International Limited, a UK company limited by guarantee, and forms part of the international BDO network of Independent Member Firms. BDO in Australia, is a national association of separate entities (each of which has appointed BDO (Australia) Limited ACN 050 110 275 to represent it in BDO International).

## 12. Qualifications

BDO Corporate Finance (WA) Pty Ltd has extensive experience in the provision of corporate finance advice, particularly in respect of takeovers, mergers and acquisitions.

BDO Corporate Finance (WA) Pty Ltd holds an Australian Financial Services Licence issued by the Australian Securities and Investment Commission for giving expert reports pursuant to the Listing rules of the ASX and the Corporations Act.

The persons specifically involved in preparing and reviewing this report were Adam Myers and Sherif Andrawes of BDO Corporate Finance (WA) Pty Ltd. They have significant experience in the preparation of independent expert reports, valuations and mergers and acquisitions advice across a wide range of industries in Australia and were supported by other BDO staff.

Adam Myers is a member of the Australian Institute of Chartered Accountants. Adam's career spans 20 years in the Audit and Assurance and Corporate Finance areas. Adam is a CA BV Specialist and has considerable experience in the preparation of independent expert reports and valuations in general for companies in a wide number of industry sectors.

Sherif Andrawes is a Fellow of the Institute of Chartered Accountants in England & Wales and a Fellow of Chartered Accountants Australia & New Zealand. He has over 30 years' experience working in the audit and corporate finance fields with BDO and its predecessor firms in London and Perth. He has been responsible for over 300 public company independent expert's reports under the Corporations Act or ASX Listing Rules and is a CA BV Specialist. These experts' reports cover a wide range of industries in Australia with a focus on companies in the natural resources sector. Sherif Andrawes is the Corporate Finance Practice Group Leader of BDO in Western Australia, the Global Natural Resources Leader for BDO and a former Chairman of BDO in Western Australia.

## 13. Disclaimers and consents

This report has been prepared at the request of Alkane for inclusion in the Demerger Booklet which will be sent to all Alkane Shareholders. Alkane engaged BDO Corporate Finance (WA) Pty Ltd to prepare an independent expert's report to consider the proposed Demerger of its critical materials subsidiary, ASM.

BDO Corporate Finance (WA) Pty Ltd hereby consents to this report accompanying the above Demerger Booklet. Apart from such use, neither the whole nor any part of this report, nor any reference thereto may be included in or with, or attached to any document, circular resolution, statement or letter without the prior written consent of BDO Corporate Finance (WA) Pty Ltd.

BDO Corporate Finance (WA) Pty Ltd takes no responsibility for the contents of the Demerger Booklet other than this report.

We have no reason to believe that any of the information or explanations supplied to us are false or that material information has been withheld. It is not the role of BDO Corporate Finance (WA) Pty Ltd acting as an independent expert to perform any due diligence procedures on behalf of the Company. BDO Corporate Finance (WA) Pty Ltd provides no warranty as to the adequacy, effectiveness or completeness of the due diligence process.

The opinion of BDO Corporate Finance (WA) Pty Ltd is based on the market, economic and other conditions prevailing at the date of this report. Such conditions can change significantly over short periods of time.

With respect to taxation implications it is recommended that individual Shareholders obtain their own taxation advice, in respect of the Demerger, tailored to their own particular circumstances. Furthermore, the advice provided in this report does not constitute legal or taxation advice to the Shareholders of Alkane, or any other party.

The statements and opinions included in this report are given in good faith and in the belief that they are not false, misleading or incomplete.

The terms of this engagement are such that BDO Corporate Finance (WA) Pty Ltd is required to provide a supplementary report if we become aware of a significant change affecting the information in this report arising between the date of this report and prior to the date of the meeting or during the offer period.

Yours faithfully

**BDO CORPORATE FINANCE (WA) PTY LTD**

**Adam Myers**

Director

**Sherif Andrawes**

Director

# Appendix 1 – Glossary of Terms

| Reference | Definition |
|---|---|
| The Act | The Corporations Act 2001 Cth |
| AFCA | Australian Financial Complaints Authority |
| Alkane | Alkane Resources Limited |
| Anglo American | Anglo American PLC |
| ANSTO | Australian Nuclear Science and Technology Operations |
| ASIC | Australian Securities and Investments Commission |
| ASM | Australian Strategic Materials Limited |
| ASX | Australian Securities Exchange |
| AUD or A$ | Australian dollars |
| AZH | Australian Zirconia Holdings Pty Ltd |
| BDO | BDO Corporate Finance (WA) Pty Ltd |
| Boda | Bodangora exploration license under the Northern Molong Porphyry Project |
| Calidus | Calidus Resources Limited |
| CBMM | Metalurgia Companhia Brasileira de Metalurgia e Mineração |
| CNU | Chungnam National University |
| Conditions | The conditions necessary for the successful implementation of the Demerger |
| the Company | Alkane Resources Limited |
| Compass Resources | Compass Resources NL |
| Corporations Act | The Corporations Act 2001 Cth |
| Demerger | The demerger proposed by Alkane Resources Limited |
| Demerger Booklet | Booklet provided by Alkane to shareholders to assist in deciding on whether to approve the proposed Demerger |

| Reference | Definition |
|---|---|
| Demerger Deed | The deed entered into between ASM and Alkane that deals with the issues arising in connection with the Demerger and separation of ASM from Alkane, and the ongoing relationship between Alkane and ASM after the implementation of the Demerger, such that each part may carry forward the commercial benefits, risks and liabilities of the relevant business independently without shared liability |
| Demerger Transaction Documents | Refers to the Demerger Deed, Restructure Deed and ISA |
| the Directors | The board of directors of Alkane Resources Limited |
| DPP | Demonstration Pilot Plant |
| FEED | Front End Engineering Design |
| FOS | Financial Ombudsman Service |
| FSG | Financial Services Guide |
| FYXX | Financial year ended 30 June 20XX |
| Genesis | Genesis Minerals Limited |
| GDP | Gross Domestic Product |
| HREE | Heavy Rare Earth Elements |
| Ineligible Shareholders | Alkane shareholders with addresses on the share register that reside outside of Australia or New Zealand |
| ISA | Intercompany Services Agreement entered into between ASM and Alkane that deals with the provision of professional and IT support services, as well as access to certain office facilities between Alkane and ASM following the Demerger |
| LoI | Letter of Intent |
| LREE | Light Rare Earth Elements |
| Magris | Magris Resources Inc. |
| MoU | Memoranda of Understanding |
| NMPP | Northern Molong Porphyry Project |
| NSW | New South Wales |
| Peak Hill Project | The Peak Hill Gold Mine that was formerly operated by Alkane from 1996 to 2002 |

| Reference | Definition |
|---|---|
| PP&E | Property, Plant and Equipment |
| Proposed Transaction | The demerger proposed by Alkane Resources Limited |
| RBA | Reserve Bank of Australia |
| RC | Reverse circulation |
| REE | Rare earth elements |
| our Report | This Independent Expert's Report prepared by BDO |
| Restructure Deed | The deed entered into between ASM and Alkane that deals with the multiple intra group restructuring steps that must be implemented prior to the Demerger with respect to various existing intercompany loans between Alkane and ASM |
| RG 111 | Australian Securities and Investments Commission Regulatory Guide 111 'Content of Expert's Reports' |
| RG 112 | Australian Securities and Investments Commission Regulatory Guide 111 'Independence of Experts' |
| Rights | Performance rights on issue by Alkane |
| Shareholders | Eligible shareholders of Alkane Resources Limited |
| TGO | Tomingley Gold Operations Pty Ltd |
| Tomingley Corridor | The gold corridor between the Tomingley Project and the Peak Hill Project |
| Tomingley Project | The gold project 100%-owned by Alkane Resources Limited |
| Toongi Pastoral | Toongi Pastoral Company Pty Limited |
| TSR | Total Shareholder Return |
| ZTC | Zirconium Technology Corporation |

For permission requests, write to BDO Corporate Finance (WA) Pty Ltd, at the address below:

The Directors

BDO Corporate Finance (WA) Pty Ltd

38 Station Street

SUBIACO, WA 6008

Australia

## ANNEXURE 4

## Investigating Accountant's Report

The Directors
Alkane Resources Ltd (**Alkane**)
89 Burswood Road
BURSWOOD WA 6100

The Directors
Australian Strategic Materials Ltd (**ASM**)
89 Burswood Road
BURSWOOD WA 6100

16 June 2020

Dear Directors

***Investigating Accountant's Report***

***Independent Limited Assurance Report on the historical and pro forma historical balance sheets of Alkane and ASM and Financial Services Guide***

We have been engaged by Alkane and ASM (together, **you**) to report on the Alkane Historical and Pro Forma Historical Balance Sheets and the ASM Historical and Pro Forma Historical Balance Sheets (as those terms are defined in the "Scope" section of this report) for inclusion in the Demerger Booklet dated on or about 16 June 2020, to be issued by Alkane in respect of the proposed demerger of ASM from Alkane (the **Demerger**).

Expressions and terms defined in the Demerger Booklet have the same meaning in this report.

The nature of this report is such that it can only be issued by an entity which holds an Australian Financial Services License under the Corporations Act 2001. PricewaterhouseCoopers Securities Ltd, which is wholly owned by PricewaterhouseCoopers holds the appropriate Australian financial services license under the Corporations Act 2001. This report is both an Investigating Accountant's Report, the scope of which is set out below, and a Financial Services Guide, as attached at Appendix A.

## Scope

*Alkane and ASM historical balance sheets*

You have requested PricewaterhouseCoopers Securities Ltd to review the following historical balance sheets included in the Demerger Booklet, the:

- Alkane historical balance sheet as at 31 December 2019 (**Alkane Historical Balance Sheet**) as set out in table 5.6A in section 5.6 of the Demerger Booklet; and
- ASM historical balance sheet as at 31 December 2019 (**ASM Historical Balance Sheet**) as set out in table 7.6 in section 7.6 of the Demerger Booklet.

The Alkane and ASM Historical Balance Sheets have been prepared in accordance with the stated basis of preparation, being the recognition and measurement principles contained in Australian Accounting Standards and Alkane's and ASM's adopted accounting policies. The Alkane Historical Balance Sheet has been extracted from the interim financial report of Alkane for the half year ended 31 December 2019, which was reviewed by PricewaterhouseCoopers in accordance with the Australian Auditing Standards and upon which PricewaterhouseCoopers issued an unmodified review opinion. The ASM Historical Balance Sheet has been extracted from the interim financial report of ASM for the half year ended 31 December 2019, which was reviewed by PricewaterhouseCoopers in accordance with the Australian Auditing Standards and upon which PricewaterhouseCoopers issued an unmodified review opinion with an emphasis of matter with respect to the basis of accounting and restriction on use. The Alkane and ASM Historical Balance Sheets are presented in the Demerger Booklet in an abbreviated form, insofar as it does not include all of the presentation and disclosures required by Australian Accounting Standards and other mandatory professional reporting requirements applicable to general purpose financial reports prepared in accordance with the *Corporations Act 2001*.

### *Alkane (post-demerger) and ASM pro forma historical balance sheets*

You have requested PricewaterhouseCoopers Securities Ltd to review the following pro forma historical balance sheets included in the Demerger Booklet, the:

- Alkane (post-demerger) pro forma historical balance sheet as at 31 December 2019 (**Alkane pro forma historical balance sheet**) as set out in table 5.6A in section 5.6 of the Demerger Booklet; and
- ASM pro forma historical balance sheet as at 31 December 2019 (**ASM pro forma historical balance sheet**) as set out in table 7.6 in section 7.6 of the Demerger Booklet.

The Alkane and ASM Pro Forma Historical Balance Sheets have been derived from the Alkane and ASM Historical Balance Sheets, after adjusting for the effects of pro forma adjustments described in sections 5.6 and 7.6 of the Demerger Booklet. The stated basis of preparation is the recognition and measurement principles contained in Australian Accounting Standards and Alkane's and ASM's (as applicable) adopted accounting policies applied to the Alkane Historical Balance Sheet and ASM Historical Balance Sheet (as applicable) and the events or transactions to which the pro forma adjustments relate, as described in sections 5.6(b) and 7.6(b) of the Demerger Booklet, as if those events or transactions had occurred as at 31 December 2019. Due to its nature, the Alkane Pro Forma Historical Balance Sheet and ASM Pro Forma Historical Balance Sheet (as the case may be) does not represent Alkane's and ASM's (as applicable) actual or prospective financial performance, financial position and/or cash flows.

## *Directors' responsibility*

The directors of Alkane are responsible for the preparation of the Alkane and ASM Historical Balance Sheets and the Alkane and ASM Pro Forma Historical Balance Sheets, including their basis of preparation and the selection and determination of pro forma adjustments made to the historical balance sheets and included in the pro forma historical balance sheets. This includes responsibility for its compliance with applicable laws and regulations and for such internal controls as the directors determine are necessary to enable the preparation of historical balance sheets and pro forma historical balance sheets that are free from material misstatement.

## *Our responsibility*

Our responsibility is to express a limited assurance conclusion on the Alkane and ASM Historical Balance Sheets and the Alkane and ASM Pro Forma Historical Balance Sheets based on the procedures performed and the evidence we have obtained. We have conducted our engagement in accordance with the Standard on Assurance Engagement ASAE 3450 *Assurance Engagements involving Corporate Fundraisings and/or Prospective Financial Information.*

A review consists of making enquiries, primarily of persons responsible for financial and accounting matters, and applying analytical and other review procedures. A review is substantially less in scope than an audit conducted in accordance with Australian Auditing Standards and consequently does not enable us to obtain reasonable assurance that we would become aware of all significant matters that might be identified in an audit. Accordingly, we do not express an audit opinion.

Our engagement did not involve updating or re-issuing any previously issued audit or review report on any financial information used as a source of the financial information.

## *Conclusions*

### *Alkane and ASM historical balance sheets*

Based on our review, which is not an audit, nothing has come to our attention that causes us to believe that the:

- Alkane historical balance sheet as at 31 December 2019 as set out in table 5.6A in section 5.6 of the Demerger Booklet; and
- ASM historical balance sheet as at 31 December 2019 as set out in table 7.6 in section 7.6 of the Demerger Booklet,

are not presented fairly, in all material respects, in accordance with the stated basis of preparation, as described in sections 5.2(b) and 7.2(b) of the Demerger Booklet.

### *Alkane (post-demerger) and ASM pro forma historical balance sheets*

Based on our review, which is not an audit, nothing has come to our attention that causes us to believe that the

- Alkane (post-demerger) pro forma historical balance sheet as at 31 December 2019 as set out in table 5.6A in section 5.6 of the Demerger Booklet; and
- ASM pro forma historical balance sheet as at 31 December 2019 as set out in table 7.6 in section 7.6 of the Demerger Booklet,

in each case, which assumes completion of the Demerger,

are not presented fairly, in all material respects, in accordance with the stated basis of preparation, as described in sections 5.2(c) and 7.2(c) of the Demerger Booklet.

### *Notice to investors outside Australia*

Under the terms of our engagement this report has been prepared solely to comply with Australian Auditing Standards applicable to review engagements.

This report does not constitute an offer to sell, or a solicitation of an offer to buy, any securities. We do not hold any financial services licence or other licence outside Australia. We are not recommending or making any representation as to suitability of any investment to any person.

### *Restriction on Use*

Without modifying our conclusions, we draw attention to the sections 5.2 and 7.2 of the Demerger Booklet, which describes the purpose of the financial information, being for inclusion in the Demerger Booklet. As a result, the financial information may not be suitable for use for another purpose.

### *Consent*

PricewaterhouseCoopers Securities Ltd has consented to the inclusion of this assurance report in the public document in the form and context in which it is included.

### *Liability*

The liability of PricewaterhouseCoopers Securities Ltd is limited to the inclusion of this report in the Demerger Booklet. PricewaterhouseCoopers Securities Ltd makes no representation regarding, and has no liability for, any other statements or other material in, or omissions from the Demerger Booklet.

### *Independence or Disclosure of Interest*

PricewaterhouseCoopers Securities Ltd does not have any interest in the outcome of this Demerger other than the preparation of this report and participation in due diligence procedures for which normal professional fees will be received.

### *Financial Services Guide*

We have included our Financial Services Guide as Appendix A to our report. The Financial Services Guide is designed to assist retail clients in their use of any general financial product advice in our report.

Yours faithfully

Darren Carton
Authorised Representative of
PricewaterhouseCoopers Securities Ltd

## Appendix A – Financial Services Guide

# PRICEWATERHOUSECOOPERS SECURITIES LTD

# FINANCIAL SERVICES GUIDE

**This Financial Services Guide is dated 16 June 2020**

### 1. About us

PricewaterhouseCoopers Securities Ltd (ABN 54 003 311 617, Australian Financial Services Licence no 244572) (**PwC Securities**) has been engaged by Alkane Resources Ltd (**Alkane**) and Australian Strategic Materials Ltd (**ASM**) to provide a report in the form of an Investigating Accountant's Report (the **Report**) in relation to the Alkane Historical and Pro Forma Historical Balance Sheets and the ASM Historical and Pro Forma Historical Balance Sheets (as those terms are defined in the Report) for inclusion in the Demerger Booklet to be dated on or about 16 June 2020 and relating to the proposed demerger of ASM from Alkane.

You have not engaged us directly but have been provided with a copy of the Report as a retail client because of your connection to the matters set out in the Report.

### 2. This Financial Services Guide

This Financial Services Guide ("**FSG**") is designed to assist retail clients in their use of any general financial product advice contained in the Report. This FSG contains information about PwC Securities generally, the financial services we are licensed to provide, the remuneration we may receive in connection with the preparation of the Report, and how complaints against us will be dealt with.

### 3. Financial services we are licensed to provide

Our Australian financial services licence allows us to provide a broad range of services, including providing financial product advice in relation to various financial products such as securities, interests in managed investment schemes, derivatives, superannuation products, foreign exchange contracts, insurance products, life products, managed investment schemes, government debentures, stocks or bonds, and deposit products.

4. **General financial product advice**

The Report contains only general financial product advice. It was prepared without taking into account your personal objectives, financial situation or needs.

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8. **Contact Details**

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## SCHEDULE 2

**ALKANE ASX ANNOUNCEMENT 4 JUNE 2018 (DETAILED ENGINEERING, FINANCIAL AND MARKET UPDATE ON THE DUBBO PROJECT)**

## ASX and MEDIA RELEASE

## 4 June 2018

# *Dubbo Project: Status*

- Estimated 20-year project life (at 1Mtpa plant feed rate).
- Multi-commodity asset with zirconium, niobium, hafnium and rare earths.
- Positioned as independent global supplier outside China.
- All key state and federal approvals and licences required for plant construction and mining commencement have been received and are in place.
- The process flowsheet that would be used in the commercial scale Project plant has been extensively piloted since 2008 using a purpose-built demonstration pilot plant at the Australian Nuclear Science and Technology Organisation (ANSTO) in Sydney.
- The global mining resource of 75+ years at nameplate capacity of 1Mtpa means not only the potential for cash generation for a very long period, but also the potential to expand materially beyond this critical production rate.
- The Project could potentially be successfully implemented as a single 1Mtpa plant (base case) or via two stages of development at 500,000 tonnes per annum (500ktpa) plant feed rate each (staged build).
- Located in Australia near the city of Dubbo in the state of New South Wales, approximately 400km from Sydney, a very stable geo-political jurisdiction with excellent surrounding infrastructure.

Multi commodity miner and explorer, Alkane Resources (ASX: ALK), has completed an engineering and financials review of its zirconium, niobium, hafnium and rare earths project which confirms a viable project of significance. The details of this review are in the following pages of this announcement and should be read in their entirety.

Among key points from Alkane's project review are, that in circumstances where the Project is successfully funded and developed:

- The Project could generate A$4.7 billion free cash flow at the 20 year base case with a forecast capital cost of A$1.3 billion base case build or A$808 million for the stage 1 build.
- Internal rate of return is estimated between 16.1 to 17.5 per cent, depending on whether capital is managed to build the Project in two stages or proceeds to a single 1mtpa plant, with both alternatives confirmed viable.


| | | |
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The global market for the Dubbo Project's products is undergoing considerable change and continues to evolve rapidly:

- Magnet rare earths are forecast to grow at a 6-10 per cent compound annual growth rate to 2030, primarily driven by demand for electric vehicles.
- Raw material for zirconia products is undergoing significant price rises, with zirconium oxychloride (ZOC), a potential Alkane product, having gone up 80 per cent in the past 18 months.
- There is little rare earth supply entering the market outside of China, even as prices increase, and the forecast demand curves show an ever-widening gap from existing supply options.

Development of the flow sheet for the project has expanded the product range to include high purity zirconia and hafnia, broadening access to growing markets.

Managing Director of Alkane, Nic Earner, said the review confirmed Australia had a significant project, capable of supplying specialty metals globally as an independent source to China.

"The project review details the considerable body of technical work that has occurred on the Dubbo Project. In an external environment of rising commodity prices, interest in the Project's products is increasing as global manufacturers look for both material sources and supply chains outside China." Nic Earner said.

The project review is intended to sharpen current discussions globally with industry participants and funding bodies in Australia, Japan, Korea, USA, Europe and China, with a view to enhancing prospects for a project start.

It is important that investors read the entirety of this document. Investors should be certain to read and consider the Cautionary statements & risk on Page 3, the General disclaimer on Page 4, the summary of risks and uncertainties in Section 8 and the assumptions underlying the financial analysis of the Project in Section 7.

# DUBBO PROJECT: ENGINEERING & FINANCIALS UPDATE

Current as at 31 May 2018

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Alkane Resources Ltd (**Alkane** or the **Company**), through its wholly owned subsidiary Australian Strategic Materials Ltd (**ASM**), is pleased to provide an update on recent engineering studies and financial analyses relating to its Dubbo Project (**Dubbo Project** or **Project**) (100% owned by Alkane).

This announcement consolidates a large body of technical work executed by ASM's Dubbo Project team since the completion of its Front End Engineering Design (**FEED**) study in 2015. The results of that FEED study were described in an announcement to ASX dated 27 August 2015. This study indicatees not only that a lower capital development scenario is achievable, but also that the Dubbo Project has expansion capacity beyond the base case of 1 million tonnes per annum (1Mtpa). The path to development and expansion capability positions the Dubbo Project to be able to take a key role in the global supply of its core products of zirconium and rare earth metals (the latter for use in permanent magnets), as well as contribute to the niobium and emerging hafnium industries. The market for these products is undergoing considerable change and is currently experiencing strong price momentum.

## *Purpose of this announcement*

The primary purpose of this announcement is to provide information on the significant body of engineering and design studies, as well as product development undertaken over recent years in connection with the Dubbo Project (**Project**). The announcement is also intended to provide more detailed information on the proposed product suite for the Project, the markets for its products and to provide an indication of the potential financial outcomes that may eventuate from any successful development of the Project.

The contents of this announcement reflect various technical and economic conditions at the time of writing, or projected future conditions based on an assessment of trends using currently available information. Given the nature of the resources industry, these conditions can change significantly over relatively short periods of time. Consequently, actual results and outcomes are likely to vary (whether more or less favourable) from those detailed in this announcement.

The production targets referred to in this announcement are based completely on ore reserves determined in accordance with the 2012 JORC Code.

## *Cautionary statements and risks*

The announcement contains some statements regarding estimates or future events which constitute forward looking statements. They include indications of, and guidance on, future earnings, cash flow, costs and financial performance (including references to, and statements about, net present values and expected cash flows). Forward looking statements include, but are not limited to, statements preceded by words such as "planned", "expected", "projected", "estimated", "may", "scheduled", "intends", "anticipates", "believes", "potential", "predict", "foresee", "proposed", "aim", "target", "opportunity", "could", "nominal", "conceptual" and similar expressions.

Forward looking statements are provided as a general guide only and should not be relied on as a guarantee of future performance. Forward looking statements may be affected by a range of variables that could cause actual results to differ from estimated results, and may cause the Company's actual performance and financial results in future periods to materially differ from any projections of future performance or results expressed or implied by such forward looking statements. So there can be no assurance that actual outcomes will not materially differ from these forward looking statements.

These statements are subject to significant risks and uncertainties, which are summarised in Section 8 of this announcement. Investors should read, and consider, those risks and uncertainties carefully.

Forward looking statements, opinions and estimates included in this announcement are based on assumptions and contingencies. There are material assumptions supporting the forward looking statements contained within this document, including market growth rates, demand for products, the projected product pricing and resultant revenues, the projected production rates and quantities, the capital costs to develop and operate the Project, the ability to secure sufficient and binding offtake contracts with bankable counterparties, the availability, certainty and sources of funding, the marketing strategy, and financial performance (including the discounted cashflows analysis supporting the net present value and internal rate of return information included in this announcement).

Whilst the Company considers all of the material assumptions to be based on reasonable grounds at the time of writing, there is no certainty that they will prove to be correct or that the range of outcomes indicated will be achieved. These assumptions are subject to change without notice, as are statements about market and industry trends, which are based on interpretations of current market conditions. No representation or warranty, express or implied, is made by the Company that the matters stated in this announcement will in fact be achieved or prove to be correct.

To develop the Dubbo Project to position the Company to achieve the outcomes indicated in this announcement, a significant amount of funding will be required, most likely from a number of sources (refer Section 7.3 of this announcement). Investors should note that, as at the date of this announcement the Company has not yet secured any funding arrangements required in connection with development of the Project, and there is no certainty that the Company will be able to raise the required amount of funds when needed on reasonable terms or at all. However, having regard to the information available to it and the analysis undertaken (as explained in this announcement), the Company considers that it has a reasonable basis to expect it will be able to fund the development of the Project. The various assumptions underlying the Company's expectation that it will be able to fund the development of the Project, and the specific risks associated with those assumptions, are described throughout Section 7 of this announcement. A number of those assumptions relate to future events and conditions, which are difficult to predict. Should any of these assumptions prove to be incorrect, or where the Company is not ultimately able to secure the requisite amount of funding on acceptable terms, there is a risk that the Company will not be able to fund the development of the Project. In these circumstances the financial metrics provided in this announcement will not eventuate.

Given the uncertainty involved, investors should not make any investment decisions based solely on the information included in this announcement.

### *General disclaimer*

Except for statutory liability which cannot be excluded, the Company, its officers, employees and advisers expressly disclaim any responsibility for the accuracy or completeness of the material contained in this announcement and exclude all liability whatsoever (including in negligence) for any loss or damage which may be suffered by any person as a consequence of any information in this announcement or any error or omission there from.

This announcement does not take into account the individual investment objectives, financial or tax situation or particular needs of any person. It does not contain financial advice. Investors should consider seeking independent legal, financial and taxation advice in relation to the contents of this announcement.

Except as required by applicable law, the Company does not undertake any obligation to release publicly any revisions to any forward-looking statement to reflect events or circumstances after the date of this announcement, or to reflect the occurrence of unanticipated events, except as may be required under applicable securities laws.

## Summary of updated business case

Since completion of the FEED study in 2015 the Company has:

- Continued to work with engineering companies and major equipment suppliers to further refine the engineering design and capital and operating costs for the Dubbo Project. This effort has given ASM strong confidence that, subject to receiving financing for the development of the Dubbo Project, not only is building a full-scale facility technically achievable, but a staged-build approach featuring cost-effective modularisation is also a feasible option.
- Continued to develop its product suite, resulting in the confirmation of the project's ability to produce high-purity zirconium oxide (zirconia) and hafnium oxide (hafnia[1]).
- Continued its marketing efforts, as the external market for the Dubbo Project's key zirconia and rare earth products has seen rising demand, tightened supply and resultant increased pricing.

The Company's engineering and financial models for the Dubbo Project have subsequently been updated and show, in circumstances where the Project is successfully funded and developed (see sections 7 and 9 of this announcement for details about relevant assumptions and commentary about funding conditions):

- 18.90Mt ore reserve and 75.18Mt resource[2], giving an estimated 20-year project life (at 1Mtpa plant feed rate) and significant extension and expansion potential.
- The Project could potentially be successfully implemented as a single 1Mtpa plant (base case) or via two stages of development at 500,000 tonnes per annum (500ktpa) plant feed rate each (staged build). The final decision is dependent on customer demand, securing adequate funding for development of the Project and strategic partner requirements. Crucially, the studies also demonstrate the Project's capacity to grow beyond 1Mtpa through the addition of more production trains.
- A technically sound and financially viable Project generating a potential A$4.7 billion[3] in undiscounted free cash flow (base case, pre-tax) over an initial 20-year project life (20YP).
- A forecast capital cost (base case) of A$1,297M[4] with an additional A$124M of sustaining capital over 20YP, giving an estimated Net Present Value (NPV 8%, pre-tax) of A$1,236M and estimated 17.5% Internal Rate of Return (IRR, pre-tax).
- Potential undiscounted free cash flow (staged build, pre-tax) in excess of A$3.9 billion[3], forecast capital cost (staged build) of A$808M for stage 1[5], A$692M for stage 2 (with opportunities to stage further) and an additional A$39M of sustaining capital over 20YP, giving an estimated Net Present Value (NPV 8%, pre-tax) of A$909M and an estimated 16.1% Internal Rate of Return (IRR, pre-tax).

[1] As documented in ASX announcement 17 January 2018

[2] As documented in ASX Announcement 19 September 2017 (no material changes in the assumptions used)

[3] Section 7.4 of this document describes the modelling assumption and risks

[4] Section 7.1 of this document details the capital costs

[5] Section 7.1 of this document details the capital costs

The Dubbo Project has many strengths:

- It is located in Australia near the city of Dubbo in the state of New South Wales, approximately 400km from Sydney, a very stable geo-political jurisdiction with excellent surrounding infrastructure.
- All key state and federal approvals and licences required for construction commencement have been received and are in place. Further minor permits and licenses will be required during detailed design, construction and operations phase of the Project.
- The process has been extensively piloted since 2008 using a purpose-built demonstration pilot plant at the Australian Nuclear Science and Technology Organisation (ANSTO) in Sydney. Targeted test work and refinement is ongoing.
- The global mining resource of 75+ years at nameplate capacity of 1Mtpa means not only the potential for cash generation for a very long period, but also the potential to expand materially beyond this production rate.
- It is a poly-metallic orebody with diverse revenue streams.
- It is designed to produce at the project site products of a type and quality that are traded in the global market, and it is therefore not dependent on third party processing to sell its products.
- It has had extensive engineering studies and design undertaken with globally reputable engineering houses and suppliers.

The global market for the Dubbo Project's products is undergoing considerable change and continues to evolve rapidly:

- The global markets for zirconium and rare earths are dominated by China's manufacturing industry. The *Made in China 2025* policy, accompanied by a domestic war on pollution, is expected to have long-term and far-reaching effects. Rising prices and limited supply of zirconium chemicals and rare earths outside China have already led many western manufacturers to start seeking alternative supply sources outside China.
- Zircon derived from mineral sands operations, the primary raw material for zirconia products, is undergoing significant price rises – increasing by 40% in 2017, with further increases in early 2018.
- Prices for zirconium oxychloride (ZOC), the main precursor for high-purity downstream zirconium products and one of the Dubbo Project's primary zirconium products, have increased by 80% in the past year.
- Rare earth permanent magnets (REPM) used in electric motors are the main driver for the global rare earths industry, accounting for 80% by value. They are forecasted to have a compound annual growth rate (CAGR) of 6–10% through to 2030, primarily driven by growth in electric vehicle drive trains.
- The Chinese Government continues to curb illegal mining sources of rare earths, which are estimated to be approximately 30% of China's total output; again, contributing to the shortage of rare earth product in the China domestic and global markets.[6]
- Currently there is little rare earth supply entering the market outside of China, even as prices increase, and the forecast demand curves show an ever-widening gap from existing supply options.

[6]IMCOA – Curtin-IMCOA 8 Year Demand & Supply Summary

- Prices for praseodymium/neodymium (known as didymium or PrNd) metal, used in REPM, peaked at US$100/kg in 2017 before falling back, but have increased in early 2018 to around US$70/kg, FOB China.
- The global steel industry is the main driver for niobium consumption, where 90% of all niobium is used as ferro-niobium for high strength low alloy steels. Brazilian company Companhia Brasileira de Metalurgia e Mineração (or CBMM) dominates the market for niobium, with approximately 80% of ferro-niobium supply. Niobium prices have remained stable during the past year.
- The hafnium market lacks transparency, but potential for considerable growth is evident through discussions with current market participants.
- A number of specialist independent industry consultants have provided detailed market assessments for all products; their demand and price curves have informed the revenue estimates for this study.

These changes, together with expected further disruption and anticipated price rises, encourage the Company to believe that there is a price environment arriving in which investment in the Dubbo Project will take place.

Table 1 below summarises the potential financial outcomes in relation to any successful development of the Dubbo Project, subject to various assumptions described in this announcement (see Sections 7 and 9 of this announcement in particular) and on the basis that development of the Project is capable of being fully funded.

## Table 1 Summary of Financial Outcomes (real terms, 2018 dollars)

| Measure | Unit | 1 Mtpa Base Case 20YP | Staged Build 20YP |
|---|---|---|---|
| **Production** | | | |
| **Nd** | t (as oxide) | 17,843 | 15,720 |
| **Pr** | t (as oxide) | 4,581 | 4,036 |
| **Tb** | t (as oxide) | 267 | 236 |
| **Dy** | t (as oxide) | 2,348 | 2,069 |
| **ZrO2** | t (as oxide equivalent basis) | 317,266 | 280,210 |
| **FeNb** | t (Nb metal basis) | 38,138 | 33,652 |
| **Hf** | t (metal basis) | 968 | 968 |
| **Ore Processed** | Mt / % of Resource | 19.3Mt / 26% | 16.7Mt/ 22% |
| **Gross Revenue** | A$M | 12,768 | 11,495 |
| **Undiscounted Free Cash Flow (pre-tax)** | A$M | 4,656 | 3,943 |
| **Annual Full Capacity Free Cash Flow (pre-tax)** | A$M | 323 | 323 |
| **Capital Cost** | A$M | | |
| **Stage 1** | | 1,297 | 808 |
| **Stage 2** | | N/A | 692 |
| **Sustaining** | | 124 | 39 |
| **NPV (8%, pre-tax)** | A$M | 1,236 | 909 |
| **Project IRR (pre-tax)** | % | 17.5 | 16.1 |

The Dubbo Project is expected to produce a suite of high-value downstream products used in a range of advanced technologies.

- The marketing strategy is based on securing long-term customer relationships, founded on a reliable and secure production base in Australia.
- The initial product range will be complemented by the progressive development of further high-value products in response to customer and market demands.
- ASM will produce a mix of 'base' zirconium products (including ZOC, zirconium basic carbonate and zirconium dioxide) and 'premium' zirconium products (including yttria-stabilised zirconia and low-hafnium zirconium products). At the current time, ASM already has a global marketing and sales agreement in place with UK-based Minchem Limited for zirconium products and seven letters of intent for supply in respect of these products.
- PrNd, Dy, Tb and Y oxide will be separated on site at the Dubbo Project. Other unseparated rare earths contained in the concentrates will be sold on the market. ASM has a MoU with Siemens in place for supply of a number of rare earth products.
- ASM has a joint venture with Treibacher Industrie AG for the production and marketing of ferro-niobium using all niobium concentrate produced by the Dubbo Project.

ASM is actively investigating partnerships or joint-venture opportunities to convert zirconia and hafnia to high-value metals to add further value, above what has been assumed for the purposes of the financial model.

The steps forward for the Dubbo Project from today are:

- Continued development of the hafnium product stream to demonstrate metal production, in order to directly access the largest market for hafnium products (superalloys).
- Detailed engineering of the staged-build option to enable rapid tender and execution, post financing.
- Securing binding offtake contracts for the Project's products to underpin the financing.
- Giving effect to the Company's funding strategy for the Project, which includes negotiating strategic investment by an industry player or national funding body. As mentioned, a significant amount of funding will be required (with Project development having a capital cost of between approximately $1,297 million (for the base case) and $1,500 million (for the staged-build model, staggered across two tranches of approximately $808 million and $692 million). There is no certainty that the Company will be able to raise the required amount of funds when needed on reasonable terms or at all and, as at the date of this announcement, the Company has not yet secured any funding arrangements required in connection with development of the Project. However, having regard to the information available to it and the analysis undertaken (as explained in this announcement), the Company considers that it has a reasonable basis to expect it will be able to fund the development of the Project. See below in Section 7.3 for further detail.

These contracts and investments are currently being discussed globally with industry participants and funding bodies in Australia, Japan, Korea, USA, Europe and China. There is a tension between rising prices of products, project value, project risk, product discounting, national interest and the strategic investment mandate of major industry participants that adds complexity to these negotiations.

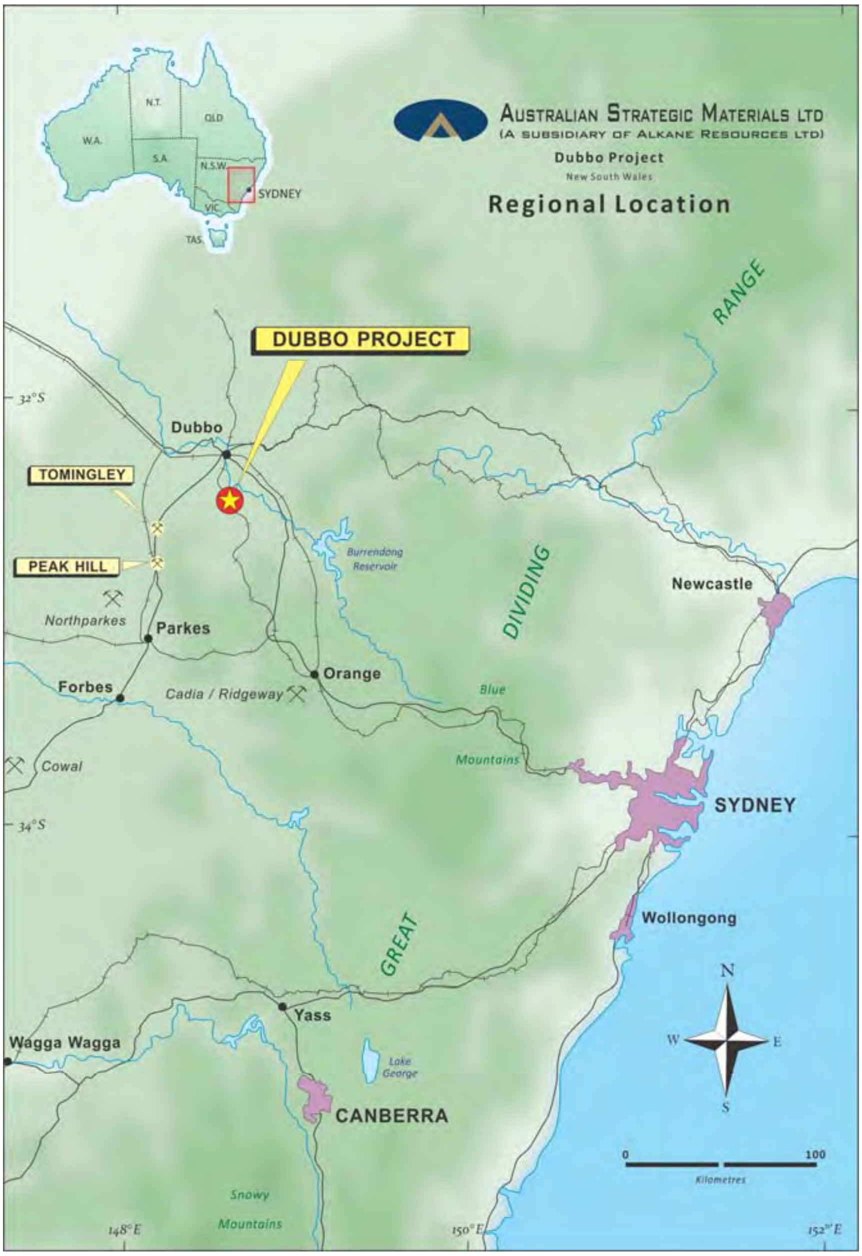
# TABLE OF CONTENTS

# 1. INTRODUCTION

Australian Strategic Materials (ASM) intends to develop the Dubbo Project (Dubbo Project or Project), which is located near the village of Toongi, 25km south of Dubbo in Central Western New South Wales (NSW), Australia, approximately 400km northwest of Sydney. The Dubbo Project is a large in-ground poly-metallic resource of the metals zirconium, hafnium, niobium, tantalum, yttrium and rare earth elements. The project has a mine life potential of 75+ years.

ASM owns 3,456 hectares of land at Toongi, encompassing Mining Lease (ML) 1724, granted on 21 December 2015. ML 1724 includes the ore resource as well as all of the land required for materials processing. With all other material state and federal approvals and licences in place, the Dubbo Project is construction-ready, subject to financing.

Figure 1 Location of the Dubbo Project



At full capacity and once developed, the Dubbo Project mineral processing plant will be capable of receiving 1,000,000 tonnes per annum (1Mtpa) of crushed ore, which will be processed using sulphuric acid leach and solvent extraction recovery to recover zirconium, hafnium, niobium and rare earth products. The process flow sheet has been extensively trialled and proven since 2008 at ASM's demonstration pilot plant (DPP), located at the facilities of the Australian Nuclear Science and Technology Organisation (ANSTO) Minerals in Sydney. The DPP has provided data incorporated in the capital and operating cost estimates, as well as product samples for testing and customer certification.

Following the completion of two Definitive Feasibility Studies (DFS) for the Dubbo Project in 2011 and 2013, the Front End Engineering Design (FEED) was completed by Hatch Pty Ltd in August 2015. ASM then sought to further identify opportunities to maximise value and reduce capex through a series of engineering reviews and options analyses (modularisation and value investigations).

Oil and gas industry modularisation specialists were initially engaged to assess the likely cost impacts of an aggressive modularisation strategy and a repeatable train execution methodology (that is, a staged approach to construction and development). The results from this work were reviewed internally and ASM decided to pursue this strategy in order to provide a lower capital cost of entry to the project. Global minerals and metals processing technology supplier, Outotec Pty Ltd, was engaged under two phases of engineering services to seek process optimisation and study modularisation opportunities. Hatch was also later engaged in parallel to further validate modularisation concepts for specific key parts of the process plant and the likely cost impacts.

The results of all of these work streams, carried out from 2015 through to early 2018, have been combined internally by ASM (and Alkane) to prepare the results described and tabled in this update. They demonstrate the strong potential for a modularised build approach, where the processing plant could be built in two stages, each of half capacity (500ktpa each), utilising some common infrastructure. This would allow the second stage to be built after the first stage is successfully commissioned and market pricing achieved for the products, allowing staging of capital and solid post build cash flow. Ramping the project to full production capacity of 1Mtpa, and subsequent further expansion if possible, is the key to higher project returns and the potential to generate more significant cash flows.

Throughout this same time period, substantial process improvements and optimisation of the flow sheet, particularly in the area of product purity, have been achieved through research at ANSTO (detailed in Section 5.3.1 below). The results from this work have been combined into the capital, operating and revenue estimates in this report (Section 7).

The substantial body of work and analysis undertaken on the Dubbo Project gives ASM a high degree of confidence in its ability to execute and deliver the program described.

# 2. MINERAL RESOURCES AND ORE RESERVES

## 2.1 Resources Tables

The Mineral Resources and Ore Reserves for the Toongi deposit, which is the basis of the Dubbo Project, were independently re-estimated by industry consultants Mining One Pty Ltd in 2017 to account for revised estimated operating costs, product revenues and regulatory approved site layouts[7].

The revised estimation took account of the Dubbo Ore Reserve Upgrade[8]; Definitive Feasibility Study[9]; the Front End Engineering Design – FEED[10]; and the Significant Improvements in Capital Cost and Execution Strategy for the DZP – Modular Study[11] to comply with the 2012 edition of the Australasian Code for Reporting of Exploration Results, Mineral Resources and Ore Reserves (JORC 2012).

The revised Mineral Resources and Ore Reserves estimations are summarised in the tables below. Mineral Resources are wholly inclusive of Ore Reserves, which are based on economic parameters applied to the Mineral Resources, reflecting an initial project horizon of 20 years.

### Table 2 Dubbo Project Mineral Resources

| ***Resource Category*** | ***Tonnes (Mt)*** | ***$ZrO_2$ (%)*** | ***$HfO_2$ (%)*** | ***$Nb_2O_5$ (%)*** | ***$Ta_2O_5$ (%)*** | ***$Y_2O_3$ (%)*** | ***TREO* (%)*** |
|---|---|---|---|---|---|---|---|
| ***Measured*** | 42.81 | 1.89 | 0.04 | 0.45 | 0.03 | 0.14 | 0.74 |
| ***Inferred*** | 32.37 | 1.90 | 0.04 | 0.44 | 0.03 | 0.14 | 0.74 |
| ***Total*** | **75.18** | **1.89** | **0.04** | **0.44** | **0.03** | **0.14** | **0.74** |

**TREO% is the sum of all rare earth oxides excluding $ZrO_2$, $HfO_2$, $Nb_2O_3$, $Ta_2O_5$, $Y_2O_3$,*

[7] As documented in ASX Announcement 19 September 2017 (no material changes in the assumptions used)

[8] As documented in ASX Announcement 16 November 2011

[9] As documented in ASX Announcement 11 April 2013

[10] As documented in ASX Announcement 27 August 2015

[11] As documented in ASX Announcement 28 October 2016

Table 3 Dubbo Project Ore Reserves

| Reserve Category | Tonnes (Mt) | $ZrO_2$ (%) | $HfO_2$ (%) | $Nb_2O_5$ (%) | $Ta_2O_5$ (%) | $Y_2O_3$ (%) | TREO* (%) |
|---|---|---|---|---|---|---|---|
| **Proved** | 18.90 | 1.85 | 0.04 | 0.44 | 0.03 | 0.14 | 0.74 |
| **Total** | **18.90** | **1.85** | **0.04** | **0.44** | **0.03** | **0.14** | **0.74** |

*TREO% is the sum of all rare earth oxides excluding $ZrO_2$, $HfO_2$, $Nb_2O_3$, $Ta_2O_5$, $Y_2O_3$,

## 2.2 Geology

The Toongi deposit is centred on a trachyte outcrop that forms one of several alkaline volcanic and intrusive bodies of Jurassic age in the region (formed approximately 205 to 140 million years ago). The elliptical-shaped body has approximate dimensions of 850m east–west by 550m north–south. The deposit forms a low irregular topographic rise and has a depth extent of 115m below surface.

The orebody is dominantly a massive, fine-grained microporphyritic trachyte comprising more than 80% feldspar, albite and aegirine in roughly equal amounts. The remainder of the rock is made up of opaque minerals. Extensive mineralogical studies indicate that the ore minerals contained in the deposit are extremely fine-grained, being less than 100µm in size (and generally less than 10µm), and uniformly distributed throughout the rock mass. The bulk of the ore metals are hosted in complex Na–Ca–Zr–Hf–HREE silicate phases (eudialyte like). The dominant Nb (and Ta) mineral is close to $NaNbO_3$ (natroniobite) in composition. Separately bastnasite hosts the light rare earth metals.

The deposit contains elevated levels of the metals zirconium (Zr), hafnium (Hf), niobium (Nb), tantalum (Ta), yttrium (Y) and rare earth elements (REEs) – lanthanum (La), cerium (Ce), praseodymium (Pr), neodymium (Nd), samarium (Sm), europium (Eu), gadolinium (Gd), terbium (Tb), dysprosium (Dy), holmium (Ho), erbium (Er), thulium (Tm), ytterbium (Yb) and lutetium (Lu). The orebody also contains uranium and thorium and is classified as a weakly radioactive ore.

## 2.3 Drilling and Analysis

The Mineral Resource is based on 122 largely vertical RC holes drilled on a 50m offset rectangular pattern to vertical depths varying from 50–100m. Five vertical diamond core holes were also drilled to confirm the geology and geochemistry of the deposit. Several analytical processes were used and detailed statistical studies completed to provide a comprehensive grade model within the deposit.

Figure 2 Schematic of Toongi Deposit

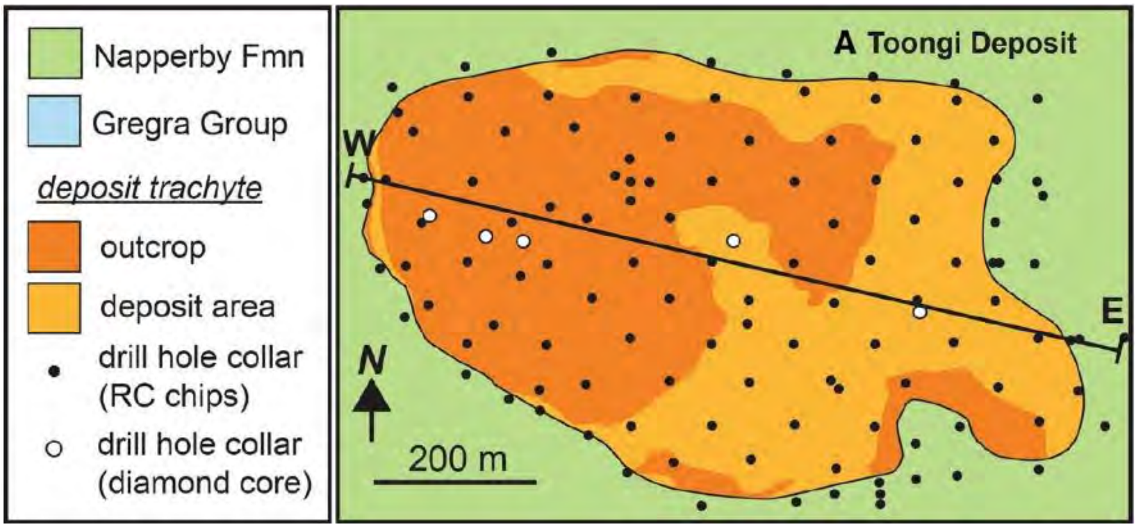
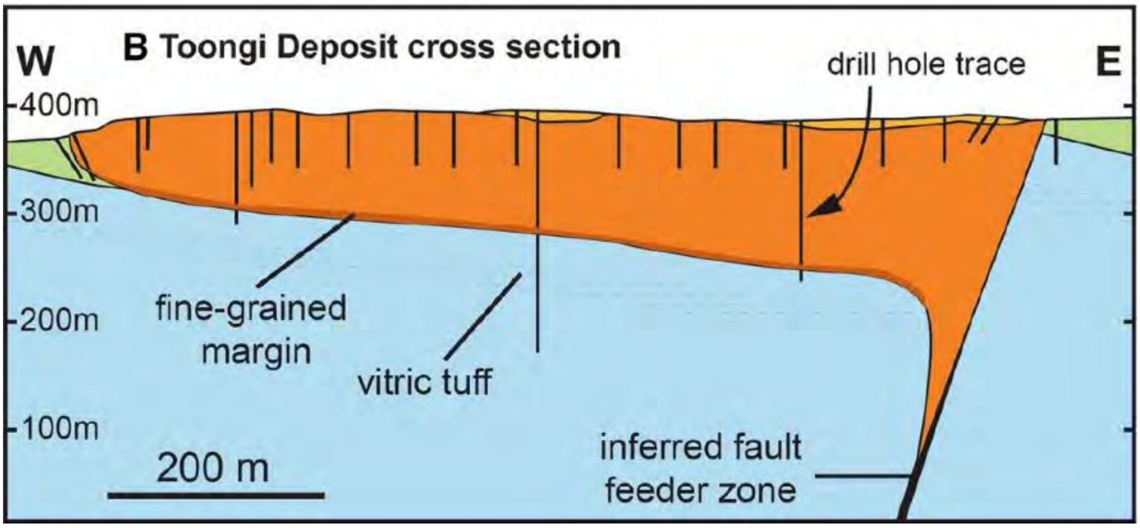



Figure 3 Cross-section of Toongi Deposit



# 3. UPDATED FEASIBILITY & ENGINEERING

The various studies referred to in this Section 3 have formed the basis for the Company's estimate of various financial metrics attached to development of the Project, including, but not limited to, capital costs, EBITDA and NPV values. These values are subject to a number of assumptions that are described in this announcement, and on the basis that the Company reasonably expects that development of the Project is capable of being fully funded (see specifically sections 7 and 9 of this announcement).

## 3.1 Engineering Studies

Between 2010 and late 2015 two Definitive Feasibility Studies (DFS) and one Front End Engineering Design (FEED) study were completed to further define the scope and develop the engineering, design and capital and operating costs for the Dubbo Project.

### 3.1.1 2011 – DFS at 400ktpa (plus 1Mtpa overview) – by TZMI[12]

In September 2011, TZ Minerals International Pty Ltd (TZMI) completed a Definitive Feasibility Study (DFS) for the Dubbo Project at a base case throughput of 400ktpa.

The study estimated capital cost at A$470M, annual operating costs of A$97M, EBITDA of A$92M, an IRR of 16.8% and an NPV of A$181M.

Due to positive changes in the market place for the Dubbo Project's products at that time, TZMI also reviewed at a higher level the impact of developing the project at 1Mtpa throughput. The indicative case for a 1Mtpa plant was at that time compelling, with estimates for capital costs at A$893M, operating costs at A$196M annually, EBITDA of A$312M annually, IRR of 30.2% and an NPV of A$1,207M.

### 3.1.2 2013 – DFS at 1Mtpa – by TZMI[13]

Building from the previous study, a full DFS at 1Mtpa was completed by TZMI in Q1 2013.

The study reported estimates of capital costs at A$996M, operating costs at $214M annually, EBITDA of A$290M annually, an IRR of 19.3% and an NPV of A$1,235M.

### 3.1.3 2015 – FEED at 1Mtpa – by Hatch[14]

A full Front End Engineering Design (FEED) study was completed for a 1Mtpa processing facility by Hatch in mid-2015.

Following a post-completion value engineering exercise, a comprehensively prepared study forecast a capital cost of A$1,297M to an estimated accuracy level at ±16%, which included contingency of A$103M. Annual revenue was estimated at A$580M and operating costs at A$260M, delivering an annual EBITDA of $320M and a 20-year NPV of $1,220M and IRR of 17.5%. The estimate was prepared

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[12] As documented in ASX Announcement 19 September 2011

[13] As documented in ASX announcement 11 April 2013

[14] As documented in ASX announcement 27 August 2015

on an Engineering, Procurement and Construction Management (EPCM) basis, and contained firm pricing for most of the packages from the marketplace.

Several significant process improvements resulted from the FEED study, including improvements for water management and waste treatment, as well as a revamped rare earth circuit to improve recoveries. Projected water consumption and the site footprint were both halved. The design was also modified to provide closer integration and more tailored products to downstream customers and toll treatment partners.

The capital estimate prepared using the results of the FEED study included an estimate for the addition of a hafnium separation circuit. The revenue estimates included hafnium as a revenue source for the project for the first time.

The FEED study remains the main basis of the estimate of the operating and capital costs of the project, the majority of its design and is the preferred method of executing the project.

## 3.2 Modularisation and Value Investigations

Following completion of the FEED in 2015, ASM moved forward with further investigations into engineering, construction and project delivery strategies, to develop concepts offering potential cost savings and reduced initial capital costs.

In seeking such cost benefits, ASM has investigated four main opportunities:

- Modularisation;
- Process and equipment optimisation;
- Staged construction, i.e. installation of fully functional 'trains'; and
- Capital cost deferment (in favour of increased operating costs)

Explanation for these opportunities follows, as well as details of the actual investigations completed, those currently underway, and those planned for the future.

### 3.2.1 Modularisation

Modularisation is a project execution concept whereby a process plant, structure or building is designed and engineered to be manufactured and installed in pre-assembled, fully fitted-out, tested and substantially commissioned units of transportable size. The concept is commonly used in the oil and gas industry for space restricted off-shore installations, and over recent years has also been implemented for a wide range of on-shore process facilities.

The modularisation concept is typically adopted by project owners for a variety of reasons. For the Dubbo Project the potential benefits include:

- Minimisation of onsite installation hours, by substituting onsite labour with offsite (or off-shore) fabrication hours, reducing overall costs and potentially reducing onsite risks
- Improved installation schedule
- Substantial offsite testing and pre-commissioning, reducing onsite commissioning time and complexity

- Reduced plant footprint; and
- Reduced requirements for onsite materials storage.

A successful modularisation strategy must take into account (trade-off) the optimised balance of a number of factors, such as:

- Module size and equipment density
- Sea and road transportation and logistics
- Fabrication costs and schedule
- Installation methodology and schedule; and
- Impacts of civil works and foundations.

The use of the concept, however, may also introduce complexities, risks and costs, such as:

- Complex planning and coordination of engineering, fabrication, logistics and onsite construction activities
- Increased requirement for offsite quality and procurement management
- Potential for additional materials and fabrication costs (in fabrication of modules)
- Increase in sea freight and overland transportation costs; and
- Increased offsite laydown and storage areas.

All of the above trade-off and risk factors must be considered and weighed against the standard 'stick-built' construction methodology when determining whether modularisation is a viable option for any one part of the process plant.

From the modularisation work carried out to date it is considered that for the Dubbo Project process plant the adoption of an aggressive modularisation strategy will result in reduced overall capital costs versus a traditional method at the same capacity. These reductions are included in the staged-build cost estimate detailed in Section 7.1 of this document.

### 3.2.2 Process and Equipment Optimisation

Key equipment suppliers, particularly Outotec, suggested changes to individual items or sections of plant that would add value to the project. These changes have been incorporated into the plant design and estimate.

### 3.2.3 Staged Construction – Repeatable Train Expansion

Whilst the baseline capacity for the Dubbo Project is for 1Mtpa throughput, the prospect of a staged construction and commissioning of the process plant, and to a lesser extent the supporting non-process infrastructure work, has been investigated.

The concept is centred around staged construction, and the development of a 'repeatable' reduced-capacity train that can be replicated to expand plant capacity. To the greatest extent possible, each successive train is a copy of the initial plant.

The main aim of this stage construction strategy is the reduction of initial capital cost, bringing the project into production with a lower initial commitment. Later expansion becomes a matter of reproducing the initial train as needed, opening a pathway to rapid development and expansion to 1Mtpa capacity (and potentially beyond), with relative speed and without substantial re-engineering.

The physical works of the Dubbo Project can be broadly grouped into two categories:

- Process infrastructure, being the process plant itself; and
- Non-process infrastructure, being the supporting infrastructure that provides access to the site along with necessary services and utilities.

When investigating staged construction for the **process infrastructure**, consideration has been given to identifying the optimal balance between size and cost. Reduction in throughput capacity will in general terms lower the capital cost, as the process equipment can be sized smaller; however, the relationship between equipment size and cost is generally not linear.

As a broad example, the crushing plant sized to process 1Mtpa of ore may cost only 20% more than a plant sized to process 500ktpa, meaning that a repeat of two trains for crushing ultimately costs considerably more than one at 1Mtpa. In such a scenario, a decision may be taken to install a 1Mtpa capacity crushing plant with the initial 500ktpa train.

The balance must be found and the optimal design solution identified; this process has been continuous with regular review as engineering detail increases.

When considering the **non-process infrastructure**, the capacity versus cost equation must also be considered. In some cases, the capacity of the plant may not have a direct impact on the cost of the work. For example, the road and bridge upgrades in the area must be completed and also the sound barrier to the Taronga Western Plains Zoo, regardless of whether a 500ktpa or 1Mtpa plant is built. Services to site such as electricity, water and gas will be needed, and potentially, with consumption reduced, could be sized smaller and save money; but the economy of later upgrades may often deem these initial cost savings not worthwhile.

These considerations are included in the staged-build cost estimate and will continue to be reviewed as the engineering is further detailed.

### 3.2.4 Capital Cost Deferment

A further line of investigation for reduction of initial capital outlay has been the deferment of capital investment in favour of an increased operating cost solution. Put simply, this means initially leaving out the installation of a part of the process plant or non-process infrastructure by utilising an alternative source or method of performing that function, which is instead paid for as an operating cost.

These trade-offs have been considered and are reflected in the staged-build estimate; they explain in part the difference in capital and operating costs between the two stages (see Sections 7.1 & 7.2).

## 3.3 Key Outcomes of the Engineering Studies and Value Investigations

The key financial assumptions, estimates and modelling outcomes from the three engineering studies carried out at 1Mtpa have been published previously and are summarised in Table 4 below. In the calculation of capital cost, each study was consistent in contemplation of traditional 'stick-built' construction methodology, and construction and commissioning of the preferred 1Mtpa plant in one campaign.

Table 4 also summarises results for the post-FEED quest for reduction of both the overall and initial capital cost, collectively here called the value investigations. This post-FEED development phase has delivered value in the validation of cost-reduction concepts and development of alternative execution methodologies. Being 'investigations' rather than definitive studies, the resultant definition and range of accuracy of estimates is lower; however, the engineering experience and modularisation expertise that has been leveraged throughout the investigations is considerable.

The resultant estimated price of A$808M for Train 1 and $692M for Train 2 has been based off (adjusted from) both the detailed FEED study capital cost estimate and current budget pricing for the most significant individual components of the process plant. ASM therefore has a higher level of confidence in the veracity of these figures and has committed to ongoing engineering development to further detail and refine the process plant design, based on a modular solution comprising two-trains. This flexible engineering strategy permits rapid execution of either a single or two-train plant (i.e. initial execution at 500ktpa or 1Mtpa rate). Refer to Section 3.4 below for details of the ongoing development work.

## Table 4 Outcomes of Engineering Studies and Value Investigations

| | DFS 1 – 1Mtpa investigation | DFS 2 | FEED | Updated Model | Post FEED Development - Train 1 | Post FEED Development - Train 2 |
|---|---|---|---|---|---|---|
| **Project Capacity** | 1Mtpa | 1Mtpa | 1Mtpa | 1Mtpa | 500ktpa | 500ktpa |
| **Capex** | A$893M | A$996M | A$1,297M | A$1,297M | A$808M | A$692M |
| **Revenue per year** | A$508M | A$540M | A$580M | A$663M | A$397M | A$663M |
| **Opex per year** | A$196M | A$214M | A$260M | A$341M | A$202M | A$341M |
| **EBITDA** | A$312M | A$290M | A$320M | A$322M | A$195M | A$322M |
| **IRR[1]** | 30.2% | 19.3% | 17.5% | 17.5% | | 16.1% |
| **NPV[1]** | A$1,207M | A$1,235M | A$1,220M | A$1,236M | | A$909M |
| **Product / Process Notes** | | | Includes hafnium | Includes ZOC conversion costs | | |
| **Scope Notes** | | | | | Deferred Capex for:<br>Gas Supply Pipeline<br>Brine Concentrator<br>Crushing system | Includes at 1Mtpa capacity:<br>Gas Supply Pipeline<br>Brine Concentrator<br>Crushing system |

[1] *Based on a project cash flow analysis (ie incorporating all capital and operating outflows excluding company taxation), 8% real discount rate for NPV*

While the combined total capex for Trains 1 and 2 exceeds the previous total for the FEED, this is not unprecedented due to the well-understood non-linear relationship between capacity and equipment cost. Additionally, construction and commissioning in two campaigns significantly increases the time-based indirect costs and contingency allowances.

The identification and further development of a viable two-stage construction is considered to be a valuable additional execution option for the Project. See Section 7.1 of this document for the capital costs and expected value to be derived from the Project under the base case and the staged, two train approach.

## 3.4 Ongoing Engineering Investigation and Development Work

Utilising early contractor involvement principles, Hatch will continue to work in collaboration with ASM to further develop the concepts identified in the value investigations. The focus will be on advancing the modularised two-train (or staged construction) design to the same level as the 1Mtpa FEED. Ultimately, execution documentation for the initial train, including the associated non-process infrastructure, will be prepared in readiness for execution.

Further development to 2Mtpa capacity, and possibly beyond, remains a consideration for the future. A repeatable train design philosophy lends itself to rapid incremental expansion as product demand grows and funding becomes available. Though further study is required, it is expected that future expansion could be achieved at a lower capital cost than the present first two trains. With much of the non-process infrastructure in place, process design will become a matter of incremental refinement, and layouts amended only if required by land or topographical constraints.

## 3.5 Project Execution

The Dubbo Project has an estimated 27-month program from financing to construction completion, based on the base case (and preferred) execution plan to install a 1Mtpa plant in one campaign (as identified and contemplated by ASM's FEED study in 2015).

### 3.5.1 Project Execution Planning

The Project Execution Plan (PEP) identified in the FEED study forms the basis of the Company's execution schedule. With assistance from Hatch, ASM will continue detailed execution planning for a modularised design and staged construction focusing in particular on:

- Global Sourcing Strategy
- Project Execution Schedule; and
- Principal's Project Requirements – Scope of Work.

For the FEED study, an Engineering, Procurement, Construction Management (EPCM) delivery for the whole project was contemplated. For the purposes of cost estimating and work packaging, this delivery method will be carried forward; however, it remains only one of a number of possible contract execution options.

### 3.5.2 Contracting and Procurement Strategy

At the time of financing for development of the Project, where secured, ASM will finalise the contract and procurement strategy to support the required risk profile for the Project, as this will be affected by contractual conditions required by financiers. Hatch will continue to develop procurement documentation in an execution work package structure. This facilitates the later selective grouping of packages and, together with the Principal's Project Requirements document, can be used for either Engineering, Procurement, Construction (EPC), EPCM or ASM directly managed procurement, as required.

### 3.5.3 Execution Schedule

The modularised design solution adds complexity to the execution schedule. Careful coordination and timing are required for orders and deliveries of equipment to the place of module assembly, and then the modules forwarded to site in an appropriate sequence for construction. Planning is underway and will continue to develop in parallel with the module designs.

Construction is expected to commence with upgrades to the local roads and bridges for increased traffic, and also a sound barrier to reduce traffic noise at the Taronga Western Plains Zoo. These items are critical path activities, and these packages will therefore be amongst the first commitments following finance approval.

### 3.5.4 Staged Construction

The base case (and preferred) execution plan remains to install a 1Mtpa plant in one campaign; however, this is subject to off-take and finance arrangements. Planning and design is being progressed in connection with the staged construction approach currently being considered, to bring the Train 1 work packages to execution readiness. Financial models assume that Train 2 will be constructed in Years 4 and 5 of Train 1 production. As noted earlier in this report, the deferred capital items are planned for installation at full capacity at Train 2; this continues to be reviewed.

# 4. PROJECT APPROVALS

ASM has obtained all major state and federal regulatory approvals necessary to commence detailed design and construction of the Dubbo Project.

- The Dubbo Project received development consent from the New South Wales Planning Assessment Commission on behalf of the Minister for Planning on 28 May 2015. This was followed by federal approval under the *Commonwealth Environment Protection and Biodiversity Conservation Act 1999* on 24 August 2015.
- ML 1724 was granted by the NSW Department of Industry, Division of Resources and Energy (now known as NSW Department of Planning and Environment, Division of Resources and Geoscience) on 18 December 2015. It covers 2,390 hectares and includes the operating site, significant biodiversity offset areas and residual agricultural land.
- The Environment Protection Licence for construction activities was granted on 14 March 2016 by the NSW Environment Protection Authority under the NSW *Protection of the Environment Operations Act 1997*.
- A Conservation Property Vegetation Plan (PVP00199) has been negotiated with Central West Local Land Services to protect and conserve 1,021Ha of biodiversity offsets in perpetuity.

ASM has lodged a draft Mining Operations Plan (MOP) with the Division of Resources and Geoscience for the construction activities. This will be finalised by the lodging of the Rehabilitation Bond at the time of financial approval for the Project.

Further minor permits and licences that will be required during detailed design, construction and operation phases (which have not yet been obtained) include:

- Water Supply Works and Use Approvals under the NSW *Water Management Act 2000*.
- Water Access Licences under the NSW *Water Management Act 2000*.
- A Section 138 Permit, issued by the Dubbo City Council under the NSW *Roads Act 1993*, for all works affecting classified roads, namely Obley and Toongi Roads.
- Approval from the NSW Dams Safety Committee for the design and construction of the solid and liquid residue storage facilities.
- A licence issued by the WorkCover Authority of NSW for the storage and use of explosives and other dangerous goods within the Dubbo Project Site.

In addition, and as is always the case, modifications to project approval and the Environment Protection Licence may be sought once the detailed design is complete and final licensed discharge points are known.

# 5. OPERATIONS

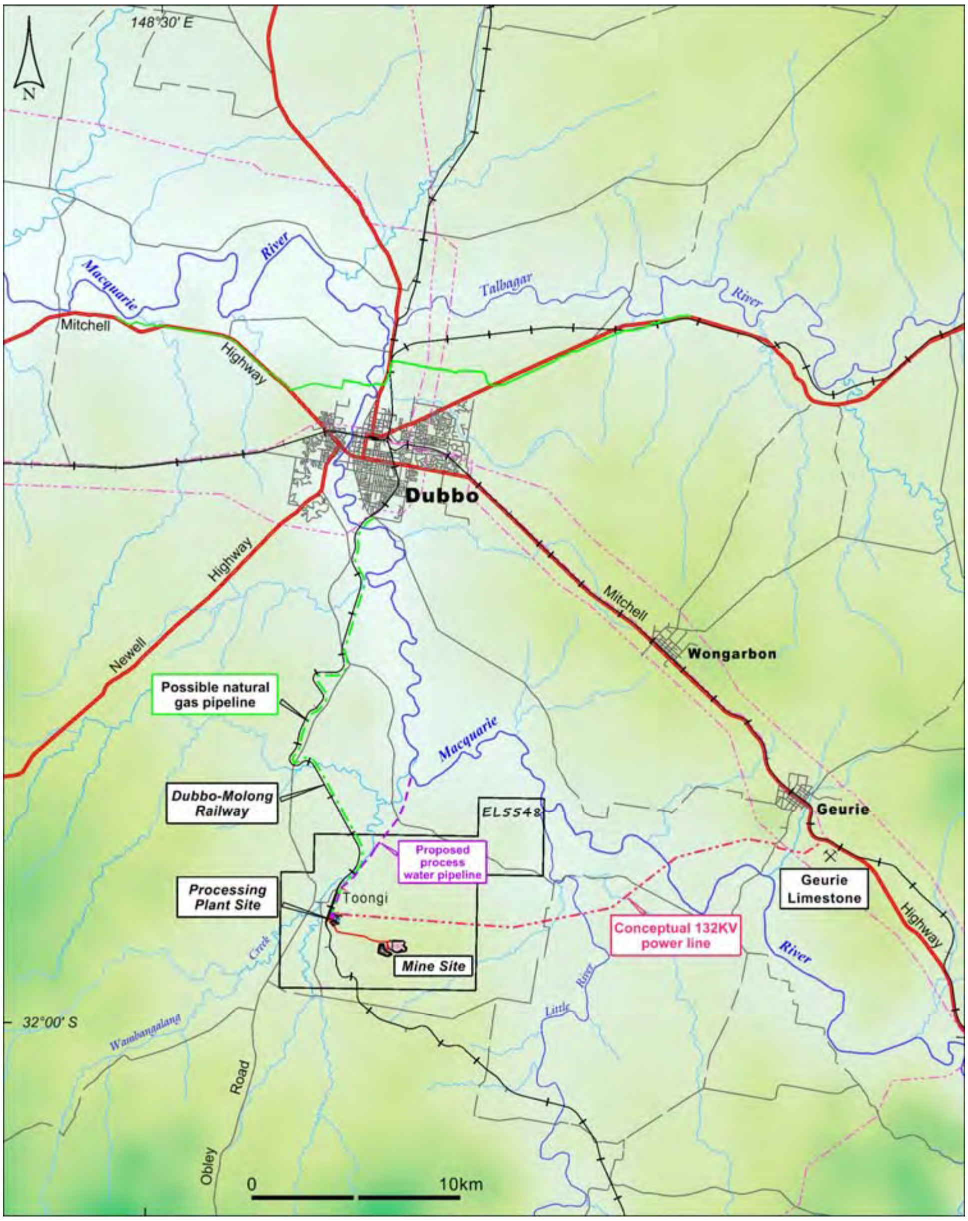
## 5.1 Operations Overview

At full capacity, the mineral processing plant will be capable of receiving 1,000,000 tonnes per annum (1Mtpa) of crushed ore, which will be processed via a sulphuric acid leach and solvent extraction to recover zirconium, hafnium, niobium and rare earth products.

Sulphuric acid used for leaching will be produced on site using a sulphur burning acid plant that also generates electricity and steam for the process plant. Other reagents will be transported via the public road network. Water will be supplied to the project via pipeline from the Macquarie River and a bore north of the river. Electricity will be supplied via an overhead 132kV line from Geurie 30km to the east of the site.

A small amount of waste rock (weathered material or rock containing insufficient metals for processing) will be extracted and transported to a small waste rock emplacement (WRE) to the southwest of the open cut. The liquid and solid residues from the process plant will be transported and stored in liquid residue storage facilities, solid residue storage facilities and salt encapsulation cells.

Figure 4 Location of the Dubbo Project




## 5.2 Mining

Mining of the ore deposit will take place in a single open pit, using drill and blast methods to fragment material that will then be transported to the Run-of-Mine (ROM) Pad for crushing and grinding. Approximately 19Mt of ore will be extracted at a rate of 1Mt per year.

### 5.2.1 Mining Schedule

The open cut will be developed in two stages, each of approximately 10 years, commencing in the western half of the orebody (in accordance with project approvals received to date). The initial open cut will cover an area of approximately 20ha, excavated to a maximum depth of 32m (355m Australian Height Datum/AHD). During the second 10-year period, the eastern half of the orebody will be mined to approximately 360m AHD, with the depth below the natural land surface varying from 15m to 32m. At the end of 20 years, the open cut will cover approximately 40ha, with a long axis (east–west) of approximately 925m and a width (north–south) of approximately 550m. All mining during the 20-year operation will remain above the groundwater table.

### 5.2.2 Waste Rock Management

Material that is excavated to enable access to the defined ore, or which contains insufficient grades of the targeted minerals, will be placed within a waste rock emplacement (WRE) located alongside the open cut to the southwest. The WRE has been designed with a capacity approximately 50% greater than the anticipated volume of waste rock to be generated from the open cut over 20 years. Waste rock will be used to back-fill a basalt quarry that will be commissioned to source construction materials.

## 5.3 Ore Processing and Production

### 5.3.1 Metallurgical Process Development

The Dubbo Project is based on a large poly-metallic resource of rare metals and rare earth elements. Recovery of metals from the orebody requires metallurgical processing that involves a large number of individual steps. Over many years, Australian Strategic Materials has developed and refined the process flow sheet based on sulphuric acid leaching, followed by solvent extraction recovery and refining.

The commercial potential of the Dubbo Project has been investigated since 1998. A pre-feasibility study completed in September 2000 under the management of industrial mineral consultants, DEMA Pty Ltd, identified the requirements for further study, including the development of a commercially viable process flow sheet and establishment of products with genuine market appeal.

Alkane has been working with the Australian Nuclear Science and Technology Organisation (ANSTO) in Sydney since 2006 to further refine the process flow sheet and conduct process trials. An important step was the establishment of a demonstration pilot plant (DPP) at ANSTO Minerals' Lucas Heights facility in 2008, under the supervision of TZMI. Operation of the DPP has demonstrated the Project's technical viability and informed feasibility studies for capital and operating cost estimates. It continues to assist with further product refinement and provide materials and product samples for market evaluation and assessment.

The initial scope of the Dubbo Project in the late 1990s was to economically extract zirconium and niobium from the ore. This has progressed over time in response to changes in market demand. The value of rare earth elements has increased and the market for particular rare earths, such as neodymium, praseodymium and dysprosium, is becoming increasing more attractive. These changes in market conditions and requirements from potential off-take customers, have driven continuous review and updates to the process flow sheet. Ongoing collaboration with ANSTO has been critical in developing new products and refining the process flow sheet to satisfy these demands.

In 2015, ASM developed a process pathway to recover hafnium (which always occurs with zirconium in nature) from the zirconium circuit, working with ANSTO to produce hafnium products via the

DPP[15]. Previously, the flow sheet incorporated recovery of zirconium, niobium and rare earth products only. The inclusion of a hafnium circuit has had little impact on the overall flow sheet; however, the removal of hafnium (along with other impurities) from the zirconium stream has resulted in higher-purity zirconium products.

As proof of concept for the updates to the flow sheet and to demonstrate capability to produce the required precursors for final products, the DPP was operated for several weeks in 2016. The DPP was configured to allow continuous operation of the front end of the process to separate the individual precursors for zirconium, niobium, hafnium and rare earth products. This campaign was successful in verifying the process flow sheet design.

Work continues with ANSTO to further refine the purity and variety of the final products that can be produced by the Dubbo Project – in particular individual rare earth products and zirconium and hafnium metals. Market research has shown these are of interest to specific customers and improvements to the process flow sheet design have resulted in the capability of producing them at the required market level. The DPP has successfully produced samples for customer evaluation and feedback regarding quality and suitability for their final end-use.

Table 5 summarises some of the A$4M worth of investigative, developmental and pilot plant work that has been completed at ANSTO since 2015.

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[15] As documented in ASX announcement 27 August 2015

## Table 5 ANSTO Testwork History

| Item | Description |
|---|---|
| | ***2015*** |
| ***1*** | Refining of crude niobium concentrate |
| ***3*** | Zirconium Basic Carbonate (ZBC) production |
| ***5*** | ZBC confirmation tests and sample preparation |
| ***7*** | Hafnium pilot plant operation |
| ***8*** | Hafnium recovery development |
| | ***2016*** |
| ***3*** | Integrated pilot plant operation |
| ***4*** | Production of Dehafniated Zirconia (DHZ) |
| ***5*** | Process optimisation for solvent extraction of Zirconium Basic Sulphate (ZBS) and Hafnium Basic Sulphate (HBS) |
| ***6*** | Zr/Hf separation piloting |
| ***7*** | Zr and Hf product recovery optimisation |
| ***8*** | Upgrade of Hf intermediate product |
| | ***2017*** |
| ***2*** | Preparation of Zirconium OxyChloride (ZOC) from ZBC, SZC and ZBS |
| ***3*** | Solvent extraction rare earth separation study |
| ***4*** | DHZ and high-purity Hf separation |
| ***5*** | ZOC process refinement |
| | ***2018*** |
| ***1*** | Production of rare earth chloride liquor |
| ***2*** | ZBD process circuit optimisation |

### 5.3.2 Process Overview

The mined ore is delivered by road to the ROM pad, where it undergoes several stages of crushing and grinding in the comminution circuit. The crushed ore is then dry ground in a ball mill to the optimum particle size for good extraction of valuable elements.

Dry ground ore is then mixed with concentrated sulphuric acid and roasted to form sulphated solids. These solids are cooled and mixed with chilled water in a leach tank, where the sulphate species formed during the sulphation process (including zirconium, hafnium, niobium and rare earths, along with impurities of iron, aluminium and zinc) are leached into solution.

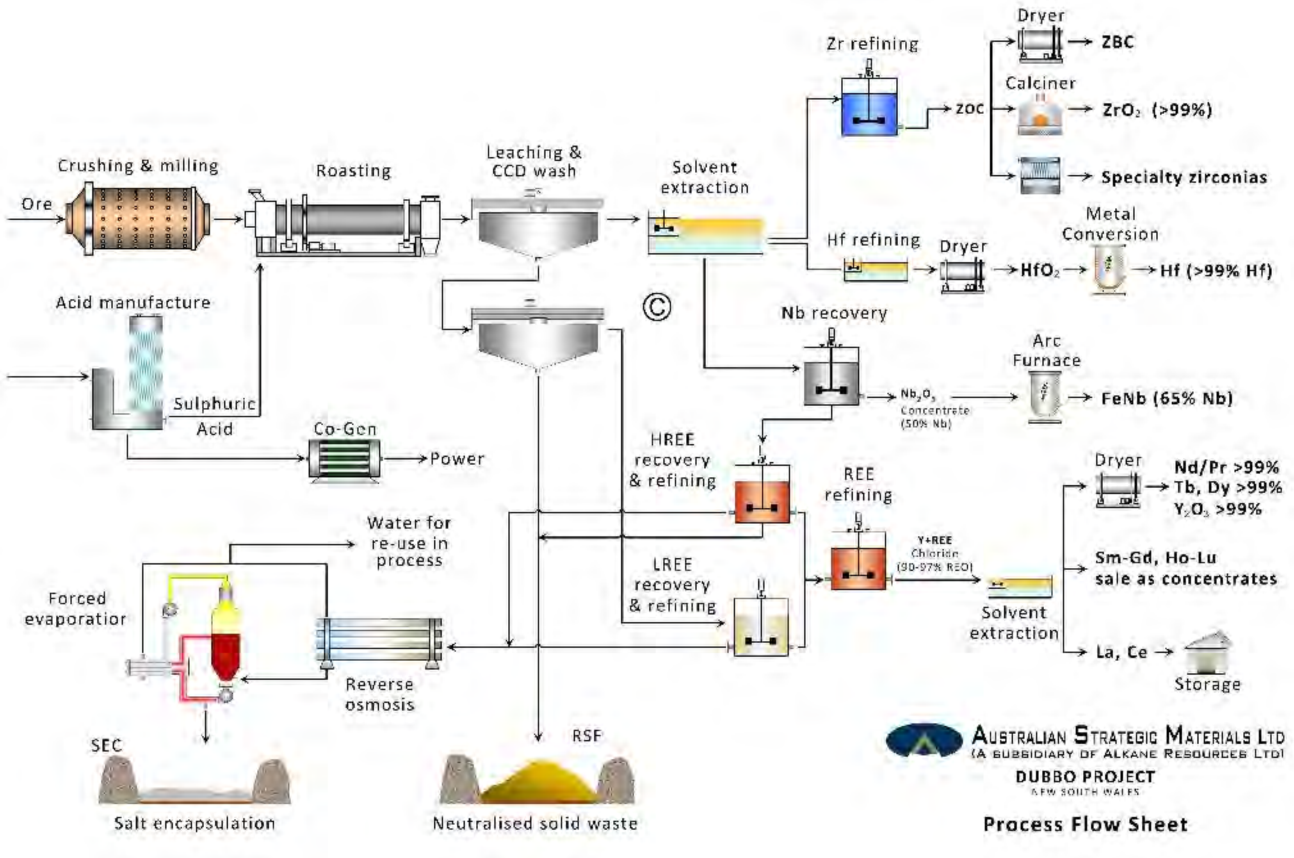
After a nominal time of leaching, the leach slurry is passed through the counter current decantation (CCD) circuit to wash and separate the solids into two liquors: one that comprises the majority of the light rare earth elements (LREE), and a second bearing zirconium/hafnium/niobium/heavy rare earth elements (HREE).

The LREE liquor passes directly from the CCD circuit to the LREE recovery circuit. The remaining liquor passes through several stages of a solvent extraction (SX) circuit, which separates the other metals in solution (zirconium/hafnium, niobium and HREEs):

- Zirconium/hafnium (combined) is recovered from the loaded strip liquor in the first SX stage.
- The raffinate from the first SX cycle is heated to recover a crude niobium-tantalum precipitate, which is then further refined to produce the final niobium product.
- Following niobium recovery, the main process liquor stream is cooled and contacted in the SX plant by the circulated organic flow to recover residual zirconium (zirconium scavenging).
- The remaining process liquor (mainly HREE concentrate) is combined with the LREE concentrates and pumped to a REE SX separation process, which produces final separated REEs in oxide form.
- After recovery and purification, some of the zirconium stream passes through a hafnium removal circuit. Both zirconium and hafnium then enter product finishing and packing circuits.

The process is illustrated in the process flow sheet for the Dubbo Project – Figure 5.

Figure 5 *Process Flow Sheet Schematic*




### 5.3.3 Process Design and Recoveries

The plant is designed to feed reserve grade ore at a feed rate of 1Mtpa. The design recoveries, as determined through piloting, are given in Table 6 below. Note that the recoveries are expressed as a percentage of the total mass of the element fed into the plant, and the final separation of rare earth oxides assumes a 95% yield in that plant section.

Table 6 Product recovery at 1Mtpa (% of input)

| $ZrO_2$ | $HfO_2$ | $Nb_2O_5$ | | | | | |
|---|---|---|---|---|---|---|---|
| **84.40%** | 25.00%[1] | 61.20% | | | | | |
| **Rare Earths** | | | | | | | |
| La | **Ce** | **Pr** | **Nd** | **Sm** | **Eu** | **Gd** | |
| **80.10%** | 69.80% | 66.70% | 74.50% | 51.20% | 42.30% | 56.90% | |
| | | | | | | | |
| Tb | **Dy** | **Ho** | **Er** | **Tm** | **Yb** | **Lu** | **Y** |
| **47.50%** | 67.40% | 59.30% | 74.00% | 38.60% | 69.90% | 26.00% | 74.30% |

*1 Note the hafnium recovery is driven by sales projections and does not represent the maximum possible hafnium recovery.*

### 5.3.4 Mineral Processing Facility

The main physical plant process areas that will be built to deliver the above process are:

- Comminution (crushing and grinding)
- Sulphation Roast (roasting, off-gas treatment, acid recovery, alkali scrubbing, de-misting and solids removal)
- Wet Ore Treatment (roast quench, counter current decantation washing)
- Solvent Extraction
- Product Recovery and Handling (zirconium, hafnium, niobium and rare earths)
- Waste Treatment (chloride and sulphate effluent neutralisation and treatment, reverse osmosis plant, solid waste residue treatment, brine concentrator evaporation)
- Water Services (raw water, process water, demineralised water, cooling water, fire water, potable water)
- Reagents (limestone circuit, chemical storage and handling)
- Sulphuric Acid Plant and Steam Generation
- Site Wide Infrastructure (instrument and plant air, natural gas, sewage and wastewater)

A potential design layout of the Dubbo Project mineral processing facility is shown in Figure 6 below.

Figure 6 Dubbo Project – Mineral Processing Facility design

# 6. INFRASTRUCTURE, TRANSPORT AND SERVICES

Throughout the Dubbo Project DFS and FEED studies, the scope of the supporting non-process infrastructure has been developed and optimised. Cost estimation and engineering for the project's associated access roads, main road upgrades, supporting utilities, and services and administration facilities have been completed in compliance with the project approval. The scope and status of these activities is described further below and, as described in Section 4, ASM and Alkane will likely require minor permits and licences (not yet obtained) to access and develop a number of these services.

## 6.1 Site Access and Road Upgrades

The Dubbo Project site will be accessed via local main roads (Obley Road and Toongi Road), with a new single carriageway turn-out to be constructed leading to the site entrance. These roads will transport all traffic to and from the site and accommodate increased traffic volumes at shift changes. Site-based road design will facilitate the separation of heavy vehicles (carrying bulk commodities, reagents and products) from light vehicles (carrying employees and visitors). A secondary gated emergency access road will also be constructed.

## 6.2 Reagents

Two of the process plant's main reagent consumables are sulphuric acid and limestone. ASM is intending to produce both in-house. Sulphuric acid will be produced in a dedicated sulphur-burning plant located on site. Waste heat from the acid plant will be used to co-generate electricity. Limestone is intended to be quarried from a nearby location at Guerie. This quarry is yet to be approved or developed, so until that occurs the limestone will be purchased externally.

Other reagents will be delivered to site, initially by road. Reagent handling, storage and mixing facilities are significant infrastructure requirements, and form an important aspect of the process plant. Reagent bulk storage is provided for sulphuric acid, hydrochloric acid, solvent extraction reagents and caustic. Reagent bulk storage and mixing facilities are provided for anhydrous ammonia, sodium carbonate, sodium chloride, lime coagulant and flocculant. Sulphur storage and melting plants are also required.

## 6.3 Water Supply

Operational and construction water will be supplied from the Macquarie River and the Upper Macquarie River Alluvial Aquifer, with existing licenses obtained by ASM providing for around 2 gigalitres annually. A bore and associated pumping station will be located on the northern side of the river, with the pipeline buried under the river using underboring so as to minimise site disturbance. The buried pipeline will continue approximately 7km along an easement to the Dubbo Project site.

Water for construction and processing will be shared and scheduled between the two water sources to minimise impacts on existing groundwater users.

Water is required for construction purposes, in particular the civil and earth works. This work has been identified as a critical early works opportunity to reduce construction indirect costs associated with importing water.

## 6.4 Gas

Up to 970TJ/year of natural gas is required for the heating of reagents within various circuits of the processing plant. Discussions are underway with the owner and operator of the gas distribution network in NSW to expand the existing gas network to the Dubbo Project site, rather than ASM build and own a gas facility within the Dubbo-Molong rail line easement. Trucking of gas to site is also an option and has been used for the operating cost estimate.

## 6.5 Power

Incoming high-voltage supply will require the installation of a new single-circuit 132kV overhead transmission line from the existing 132kV feeder to the Dubbo Project main switchyard, plus an additional dual-circuit 132kV overhead transmission line to the Geurie Switching Station.

An easement has been secured by ASM for the route from Toongi to Geurie.

## 6.6 Site Buildings

Project site buildings will accommodate personnel working on operational, logistics and administrative tasks, and the servicing and repair of plant and machinery.

Administration buildings are comprised of:

- Main administration buildings
- Security/logistics/training/emergency services building
- Dispersed satellite cribs proximate to operator workstations
- Laboratory
- Change house
- Bulk linen laundry and storage building
- Processing facility administration and plant control room building

Industrial buildings

- Stores warehouse

- Product store
- Maintenance workshop

## 6.7 Process Waste Storage Facilities

The wet solid residue (slurry) produced by the plant will be treated then stored and dried in a solid residue storage facility (SRSF). The SRSF will comprise a series of cells, double-lined to prevent leakage, where each cell is able to be filled, closed and rehabilitated independently of the other cells. At maximum production (1Mtpa), approximately 2Mtpa of wet solid residue will be produced, reducing to 1.3Mtpa after drying.

The liquid residue from the processing plant will be chemically treated and neutralised, before being passed through a brine concentrator, involving forced evaporation of water to produce salts. The salts will be stacked and stored in covered salt encapsulation cells. The salt encapsulation cells will also incorporate a double-lining system with a leak-detection layer in-between.

# 7. COSTS AND FINANCIAL ANALYSIS

## 7.1 Capital Cost Estimate

The capital cost estimate for the base case 1Mtpa is based on the FEED estimate. The staged build estimates are also based on the FEED estimate with adjustments made principally for the anticipated effects of modularisation, the reduced throughput capacity at each train and, in the case of Stage 1 only, deferred capital expenditure.

### Table 7 – Capital Costs

| ***Plant Area*** | ***Base Case 1Mtpa (A$M)*** | ***Stage 1 500ktpa (A$M)*** | ***Stage 2 500ktpa (A$M)*** | ***Combined 1Mtpa via Staged Build (A$M)*** |
|---|---|---|---|---|
| ***Mining, crushing and grinding*** | 28 | 13 | 13 | 26 |
| ***Roasting and leaching*** | 47 | 37 | 35 | 72 |
| ***Solvent extraction, product refining and finishing*** | 298 | 192 | 153 | 345 |
| ***Waste treatment*** | 161 | 56 | 100 | 156 |
| ***Reagents (incl. acid plant)*** | 199 | 88 | 106 | 194 |
| ***Infrastructure*** | 247 | 164 | 87 | 251 |
| ***EPCM, construction facilities and freight*** | 140 | 132 | 91 | 223 |
| ***Contingency*** | 103 | 95 | 83 | 178 |
| ***Owners costs and provisions*** | 74 | 31 | 24 | 55 |
| ***TOTAL*** | **1,297** | **808** | **692** | **1,500** |

Additional notes for the capital cost estimates:

- It is presented in Australian dollars, based on exchange rates at 31 January 2018
- Labour and commodities rates are adjusted to a 31 January 2018 base
- Select pricing estimates sourced by ASM have been used where better rates or equipment specifications have been achieved since FEED

The difference in the base case versus staged-build capital cost is largely due to the duplication of some costs on the building of the second stage as well as the increased cost of design in an extensively modularised plant.

It can also be seen that the indirect costs associated with the stage 1 plant are higher than for stage 2. This is due to the requirement for basic infrastructure in stage 1 that is not required in stage 2 (e.g. major road and bridge upgrades) and less requirement for EPCM work in stage 2 (given the design is largely complete).

The appeal of the staged approach for plant construction is that it requires a lower initial capital investment and is able to demonstrate the capability of the process to produce products on a large scale. It also means any process improvements (such as process efficiencies and cost reductions) can be incorporated into the stage 2 design.

Alkane's and ASM's review of both build scenarios shows that a single 1Mtpa plant installation as the most economically attractive option (that is, the 'base case'). It also suggests that at the forecast prices for the Project's products the 500ktpa process train is the minimum size that would be considered economically viable as a process plant building block.

## 7.2 Operating Expenditure

### 7.2.1 Key Parameters

Estimated average operating costs for the project apply to the period following the initial commissioning and ramp-up. These costs were estimated for both the base case and staged-build scenarios.

The operating cost estimate considered the capacity ramp-up of the facility (based on McNulty curves).

The following main components have been included in the preparation of the overall plant operating cost estimate:

- Labour
- Electric power
- Reagents
- Consumables (including fuels – gas and diesel)
- Maintenance
- General and administrative; and
- Product transport.

The plant design availability is 8,000 hours per annum (91.3%), with the exception of crushing, which has an operating availability of 4,964 hours per annum (56.7%).

Mining costs were estimated assuming a contractor mining model. All processing inputs are derived from mass balance and process design criteria established via the studies mentioned previously (Section 5.3). Main reagent costs are based on current supplier quotations. Maintenance costs were factored on capital cost. Federal, state and local government charges and levies are included as appropriate in the cost estimates.

The operating cost estimate has been prepared in Australian dollars.

### 7.2.2 Staged Plant Cost Estimation and Ramp-up

It is widely known that newly constructed plants and brownfield expansions go through a period of ramp-up to full capacity. An industry-standard method of predicting ramp-up capacity is to compare a project to a set of ramp-up curves, commonly known as McNulty curves after the original study author.

The four types of averaged McNulty start-up curves are defined by the following scenarios:

- **Series 1**: Mature technology used elsewhere. The process has been thoroughly piloted, with complete process development and engineering.
- **Series 2:** Some prototype technology is established; however, it has severe process conditions and incomplete or non-representative pilot testing.
- **Series 3**: As with series 2, but the technology has serious design flaws due to limited piloting (steps missed) and/or feed variability, poor quality during process development, misunderstood feed/mineralogy, and fast-tracked engineering and construction.
- **Series 4:** As with series 2 and 3, but any continuous tests that were run were only to make product. The process has an unusually complex flow sheet with two or more prototype unit operations, downsized equipment to save costs, and misunderstood process chemistry.

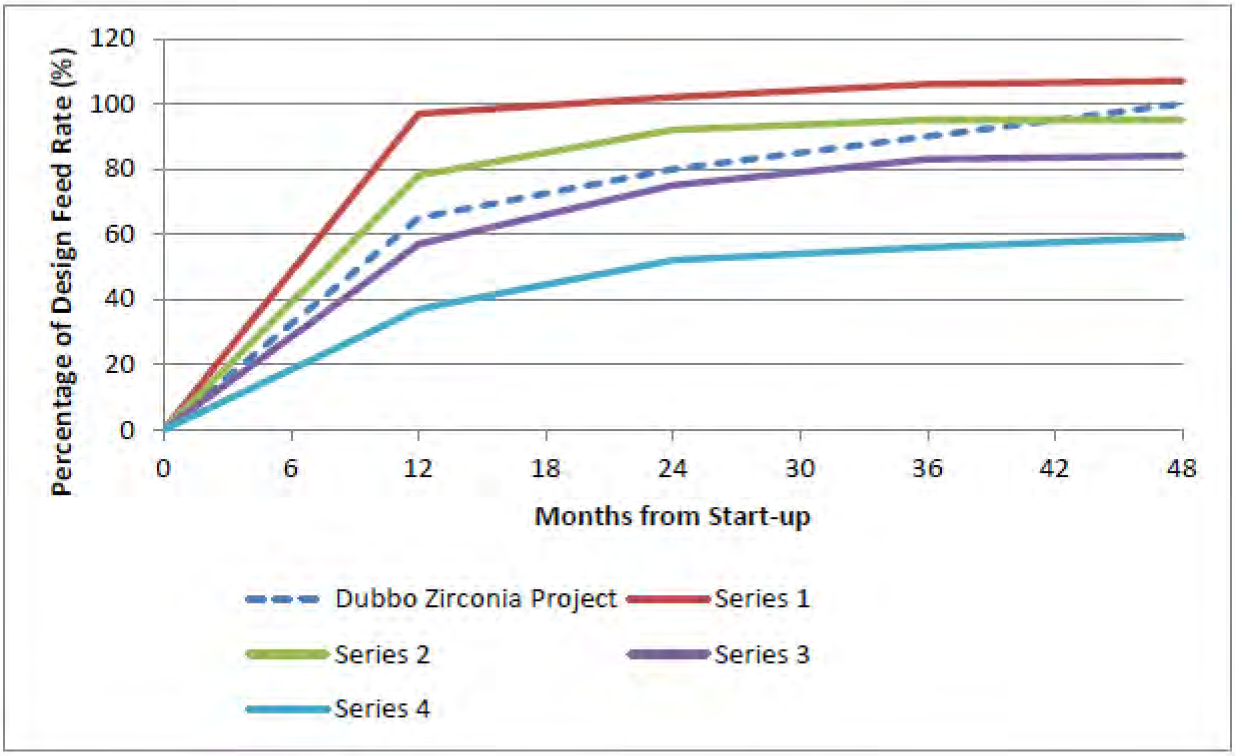
ASM has adopted a staged ramp-up capacity for the first plant build (either 1Mtpa base case or 500ktpa in the staged-build scenario) that is consistent with a series 2 or 3 start-up, followed by a steady increase in feed ore processing rate to 100% after 36 months (Figure 7). This ramp-up relies on the remediation of any design flaws or equipment bottlenecks that would otherwise hinder a series 2 or 3 plant ramp-up.

As any further expansions (such as the second 500ktpa stage, for instance) would be based on an existing operating plant, the ramp-up was considered to be more rapid, reflected by a one-year period to reach 100% operational capacity.

Based on McNulty curves, the staged-plant capacity ramp-up for the project was selected to be:

| | ***Year 1*** | ***Year 2*** | ***Year 3*** | ***Year 4*** |
|---|---|---|---|---|
| ***1 Mtpa and Stage 1 build*** | 0.65 | 0.8 | 0.9 | 1.0 |
| ***Stage 2 build*** | 0.75 | 1.0 | 1.0 | 1.0 |

Figure 7 Dubbo Project ramp-up compared to average McNulty Curves




The cost components of the operating cost were also considered and apportioned between fixed and variable during the ramp-up period. This apportioning was made on a nominal basis, in consideration of the nature of the ramp-up activities.

### 7.2.3 Operating Cost Summaries

Estimated operating costs for the base case 1Mtpa and staged-build scenarios are summarised below:

Table 8 Operating cost summary for two scenarios

| Operating cost item | Cost (A$M/year) Stage 1 (500ktpa) | Base case (1Mtpa) and Staged-build post-Stage 2 completion |
|---|---|---|
| ***Mining*** | 2 | 3 |
| ***Labour*** | 29 | 36 |
| ***Utilities (Power, Gas)*** | 22 | 27 |
| ***Reagents*** | 113 | 209 |
| ***Consumables*** | 3 | 7 |
| ***Maintenance Materials*** | 8 | 19 |
| ***Product Transport*** | 2 | 5 |
| ***General and Administration*** | 9 | 11 |
| ***Royalties and Selling Costs*** | 13 | 27 |
| *Total* | **201** | **344** |

Note that Stage 2 of the process plant construction achieves the full 1Mtpa capacity. As such, the operating cost estimate and breakdown for the 1Mtpa base case are the same as for the stage 2 case.

### 7.2.4 Individual Opex Cost Components

#### *Mining*

The mining operation is expected to be relatively straightforward, with minimal overburden removal required and a mobile digger used to mine the ore once it has been blasted. A small fleet of trucks would be used to transport the mined ore to the crusher. The small fleet size and relatively shallow pit depth results in a low operating cost estimate for mining.

#### *Labour*

The labour costs were estimated through development of a detailed organisation chart for the Dubbo Project operation. This organisation chart is populated with personnel to cover specific roles, including process plant operation, maintenance, technical and administration to meet the requirements of the operation.

Personnel costs were based on the base salaries for each role, estimated according to the level of seniority, experience and category for each respective role. The base salaries reflect the experience of Alkane Resources in operating process plant facilities in the Central Western NSW region.

### *Utilities (Power, Fuel Gas)*

The process plant electric power load is estimated from the mechanical equipment list. Electric drive sizes were derived from equipment supplier input, the Hatch in-house database for specific equipment packages, or calculated based on the mass balance flow data. Power supply is based upon the provision of electricity from the grid. The electric power costs exclude power generation from the sulphuric acid plant steam turbines, which are noted as a 'cost credit' in the overall operating cost summary.

Natural gas consumptions were provided by equipment suppliers or estimated based on similar equipment calculations. It is assumed that liquid fuel delivery would be used for the stage 1 plant. The gas supply pipeline would be installed for the stage 2 plant.

### *Reagents (Chemicals)*

Reagent consumptions are based on the process mass balance at the supplied concentrations noted, with the criteria for each reagent backed up by test work conducted as part of the study, or test work previously conducted by ASM. Reagent prices were built-up by ASM with input from suppliers for reagent purchase costs. The major costs are caustic soda, sulphur and soda ash, which account for 56% of the total reagent costs.

### *Consumables*

Consumables estimates are based on the process mass and energy balance, the consulting engineer in-house database for equipment-specific requirements, and equipment supplier input. The base case (1Mtpa plant) was used for these costs, and the staged-plant consumptions and costs were factored-in in consideration of the ramp-up for the process plant.

### *Maintenance*

Maintenance cost estimates for the process plant have been based on a fixed percentage of the total direct capital cost for each area. The maintenance percentage varies, depending on the type of equipment and process conditions of operation in each area.

The percentage values have been developed based on experience with similar operations and equipment. The values represent averaged maintenance costs over the first few years of operation, and account for years of standardised maintenance and years with typical major maintenance. Where higher maintenance costs are expected in any one particular year, these costs are averaged over the first few years.

The maintenance costs only include equipment replacement, repair and refurbishment costs. The maintenance labour costs are captured in the overall labour costs.

### *General and Administration Costs*

A number of general and administration costs are allowed for in the operating cost estimate, based on experience from projects of a similar size and nature.

### *Transport*

Transport cost estimates incorporate the cost to bring raw materials to site, the cost to transport products from site and the costs to transport materials or waste within the plant site. The costs are based on all-in rates for transportation trucks, truck maintenance, fuel and labour.

The solid and liquid transport costs have been built up based on estimates provided by general truck transport contractors in NSW. The transport costs are based on product transportation between site and the Port Botany, NSW. These costs exclude product packaging costs, which are captured under consumables. Handling and loading labour costs are covered under labour operating costs.

### *Royalties and Selling Costs*

Royalties are levied by the New South Wales Department of Planning and Energy, Resources and Energy at the rate of 4% of the ex-mine value less allowable deductions.

Selling costs comprise sales and marketing agency fees for certain products.

## 7.3 Funding Options and Strategy

A detailed financial model and discounted cash flow analysis has been prepared in order to support the economic viability of the Dubbo Project. The Company believes that it has reasonable grounds for the assumptions contained in the financial model and discounted cash flow, and those assumptions present a balanced view of the potential value of a funded Dubbo Project. Certain assumptions or projections, particularly those underpinning revenue, are inherently difficult to make due to the complexity in the underlying drivers and the need to provide those projections over a long period of time, i.e. the initial 20-year project life. Key inputs and assumptions are set out at Section 7.4 of this document to allow analysts and investors to calculate project valuations based on their own revenue assumptions, should they be different to those used by the Company. An analysis of the sensitivity of material key assumptions on the valuation has been included in Section 7.4.8 to assist investors and analysts.

The Company has engaged the services of Sumitomo Mitsui Banking Corporation (SMBC), a global banking and financial services company, to provide financial advisory services and to assist with arranging the debt financing for the Project. SMBC has provided a range of relevant advisory services to Alkane and ASM.

The Company also intends to appoint equity capital market specialist advisors that have significant experience in raising funds for projects of the size and nature of the Dubbo Project to assist with any equity component of the required funding package.

It is important to note that no funding arrangements have yet been put in place. However, the Company maintains an open dialogue with financial institutions that have experience in funding projects like the Dubbo Project. Formal discussions will commence once off-take contract negotiations are sufficiently advanced, such that counterparties and key contract terms become clear. Having regard to the information available to it and the analysis undertaken, the Company considers that it has a reasonable basis to expect it will be able to fund the development of the Project in the manner described in this announcement, although there is no certainty that this will occur in any particular timeframe, or at all.

The Company recognises that securing off-take on commercially acceptable terms for a material proportion of production is essential to successfully fund the Project. Product off-take is particularly important for the markets that the Dubbo Project will supply, in the absence of financial derivatives to manage the quantity and price risk relating to projected revenues. The strength of product off-take counterparties and the key contractual terms will assist in expanding the range of financing solutions and driving down the financing costs. As previously disclosed, Alkane has already secured a global marketing and sales agreement for zirconium products with UK-based Minchem Limited, a joint venture with Treibacher Industrie AG for the production and marketing of ferro-niobium, a memorandum of understanding with Siemens Ltd for supply of a number of rare earth products, and range of other letters of intent for the supply of zirconium products. The Company and ASM continue to explore and pursue arrangements with potential off-take counterparties, with a view to securing binding arrangements that will, in turn, bolster the business case to secure financing for development of the Project.

ASM's proposed financing strategy for the Dubbo Project will include, but will not be limited to, the following:

1) Securing long-term off-take contracts on commercial terms with financially robust counterparties
2) Seeking partnerships through project investment with strategic parties (potentially off-take partners) aligned with the long-term interests of Alkane's shareholders
3) Securing a fully funded solution appropriate for the development of the Project; and
4) Seeking to minimise potential dilution to existing Alkane shareholders.

It is likely that funding for the Project will be sought from a number of sources.

Prioritised potential funding solutions being sought by the Company include:

1) **Sale of Project Interest to Strategic Investor:** The Company continues to meet with potential product off-take partners and investment funds with mandates targeting investment in the key products of the Dubbo Project, organisations considered to have the best strategic alignment with the Company.
2) **Export Credit Agencies (ECAs):** The Company continues to liaise with ECAs from potential off-take partner countries, as well as engineering, equipment supply and construction partners, recognising that the different financial metrics and investment outcomes applied by ECAs to support their national interest is best suited to provide part of the funding solution for a project like the Dubbo Project. The ability to secure ECA funding will depend upon, amongst other factors, whether it is a national priority to secure sources of supply for the products that the Project will produce for the off-take counterparties and/or whether it is in the national interest to assist engineering and equipment service providers awarded contracts to construct the Project.

3) **Traditional Debt and Equity Structures:** The Company continues to keep financial institutions informed about the Dubbo Project and its markets to enable the greatest spread of available funds with investors (debt and equity) that understand the markets and their dynamics to enable expedited execution once conducive market conditions and sufficient off-take contracts are in place.

4) **Other Debt or Financing Structures:** The Company recognises that it may be necessary to look beyond traditional sources of debt finance to expand the pool of funds available. Sources such as prepaid off-take contracts, royalties and product streaming and equipment leasing or off-balance sheet funding arrangements (e.g. BOOT).

The Company's current market capitalisation is ~A$144M (as at 29 May 2018). The Company anticipates that, as further developments with the Project are made and announced to ASX, its market capitalisation may be higher, incorporating a higher proportion of the assessed value of the Project as a result of the Company having further de-risked the Project through securing off-take contracts and potentially a sale of a Project interest. Any market capitalisation increase that occurs may potentially reduce the dilution from further equity raisings, and form the basis for securing larger amounts of funding from third party financiers, improving the potential ability of the Company to secure finance that will enable the Dubbo Project to be brought into production. The Company also maintains a strong balance sheet, with no debt. Maintaining this strong balance sheet position, as the Project develops over time, would also assists in positioning Alkane and ASM to secure the required funding, as described in this announcement.

Alkane has a high-quality Board and management team, comprising highly experienced and respected resource executives, with extensive finance, commercial and capital markets experience.

Despite the comments above, there remains the risk that the Project is not fully funded or that funding is secured, in which case the financial outcomes that the Company is targeting may not be achieved.

## 7.4 Financial modelling and evaluation

The financial model start date assumes financing is in place and allows 27 months for detailed engineering, design and construction. Investors should refer to Section 7.3 of this announcement for a discussion about funding requirements in connection with the Project. Commissioning is included in the first year of operations. All expenses incurred prior to securing financing and commencement of detailed engineering and design, including any remaining engineering and design activities or any additional value optimisation activities undertaken, are treated as sunk costs.

The key assumptions used for the financial modelling and evaluation for the base case 1Mtpa scenario and the modular staged-build scenario are outlined in Table 9 and further described in this Section 7.4.

Table 9 Key assumptions for financial model and evaluation

| Parameter | Units | Assumption |
|---|---|---|
| **Exchange Rate** | A$1:US$ | 0.75 |
| **Discount Rate (Post Tax, Real)** | % | 8.0 |

### 7.4.1 Mining Schedule and Ore Grades

The financial model assumes a mining and processing rate of 1Mtpa at the Reserve grade (or 500ktpa for the first stage of a staged-build execution method).

### 7.4.2 Production Ramp-Up

As discussed in operating costs above, the production ramp-up is based on standard McNulty curves. The ramp up used is given in Table 10 below.

Table 10 Production ramp-up

| Parameter | Units | Assumptions | |
|---|---|---|---|
| | | **1Mtpa** | **Staged** |
| **Production Ramp Up*** | | | |
| **Stage 1** | | | |
| **Production Year 1** | % | 65.0 | 32.5 |
| **Production Year 2** | % | 80.0 | 40.0 |
| **Production Year 3** | % | 90.0 | 45.0 |
| **Production Year 4** | % | 100.0 | 50.0 |
| **Stage 2** | | | |
| **Production Year 5** | % | N/A | 50.0 |
| **Production Year 6** | % | N/A | 87.5 |
| **Production Year 7** | % | N/A | 100.0 |

** % of 1Mtpa full-capacity production.*

### 7.4.3 Product Mix, Production and Sales Volumes

The financial model assumes that all production is sold in the year produced. In addition, the remaining rare earths are sold as a concentrate. See Section 9 below for further detail about the basis for these assumptions as to sales volumes.

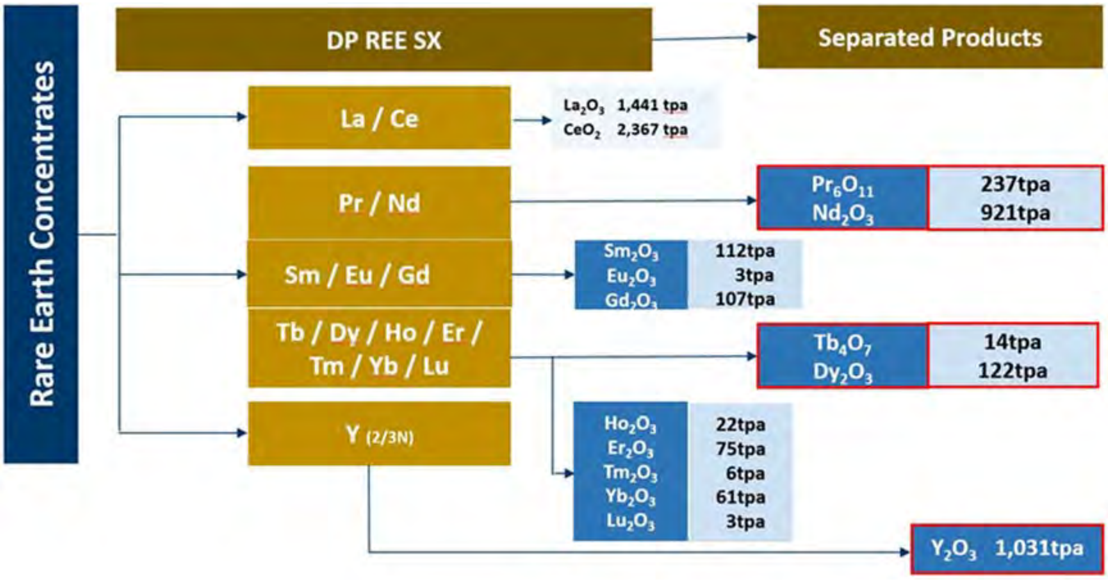
## Table 11 Product tonnage

| Product | Unit | Year 1* | Year 2* | Year 3* | Year 4 on* |
|---|---|---|---|---|---|
| *Base Zirconia Products (priced as ZOC)* | tonnes ($ZrO_2$) | 9,792 | 11,841 | 11,519 | 10,205 |
| *Premium Zirconia Products*** | tonnes ($ZrO_2$) | 500 | 1,000 | 3,077 | 6,153 |
| ***Total Zirconia Products*** | **tonnes** | **10,292** | **12,841** | **14,596** | **16,358** |
| ***Hafnium Metal*** | tonnes (Hf) | 33 | 40 | 45 | 50 |
| ***Niobium Metal*** | tonnes (Nb) | 1,287 | 1,582 | 1,773 | 1,966 |
| ***Rare Earth Oxides*** | | | | | |
| *Praseodymium* | tonnes | 155 | 190 | 213 | 237 |
| *Neodymium* | tonnes | 603 | 740 | 831 | 921 |
| *Terbium* | tonnes | 9 | 11 | 12 | 14 |
| *Dysprosium* | tonnes | 79 | 97 | 109 | 122 |
| *Yttria*** | tonnes | 674 | 828 | 854 | 877 |
| ***Total Rare Earth Oxides*** | **tonnes** | **1,520** | **1,866** | **2,019** | **2,169** |

** Production year. Refer Table 10 for production ramp up profile.*

*** Yttria consumed in the production of stabilised zirconia products is reflected in the quantity of stabilised zirconia in the table above.*

Figure 8 Separated rare earth product tonnages




### 7.4.4 Product Price and Revenues

Table 12 below lists the key products, assumed long-term average pricing per internal forecasts and revenue for 1Mtpa full-production facility. In generating these internal product pricing forecasts, the Company had regard to detailed market assessments provided by a number of specialist independent industry consultants for all products. See section 9 below for further detail about the basis for these pricing assumptions.

Table 12 Key products, forecast pricing and revenue

| Product | Unit | Price | Unit | Revenue(*1) |
|---|---|---|---|---|
| *Base Zirconia Products (priced as ZOC)* | US$/kg | 10.00 | US$M's | 102.0 |
| *Premium Zirconia Products* | US$/kg | 21.00 | US$M's | 129.1 |
| ***Average Zirconia Price*** | **US$/kg** | **14.13** | **US$M's** | **231.1** |
| | | | | |
| ***Hafnium Metal*** | **US$/kg** | **600.00** | **US$M's** | **30.0** |
| ***Niobium Metal*** | **US$/kg** | **33.35** | **US$M's** | **65.6** |
| | | | | |
| ***Rare Earth Oxides*** | | | | |
| *Didymium (NdPr)* | US$/kg | 90.00 | US$M's | 104.8 |
| *Terbium* | US$/kg | 650.00 | US$M's | 9.0 |
| *Dysprosium* | US$/kg | 325.00 | US$M's | 39.4 |
| *Yttria* | US$/kg | 10.00 | US$M's | 8.8 |
| *Other Rare Earth Products (*2)* | | | US$M's | 9.0 |
| ***Total Rare Earth Revenues*** | | | **US$M's** | **171.0** |
| ***Total Revenues*** | | | **US$M's** | **497.7** |
| ***Total Revenues(*3)*** | | | **A$M's** | **663.6** |

*(*1) Revenue for 1Mtpa production facility at steady state production rates after ramp-up.*

*(*2) Other rare earth products include low-value sales of lanthanum oxide, cerium oxide and heavy and light rare earth concentrates.*

*(*3) Long-term average exchange rate A$1:US$ 0.75*

### 7.4.5 Product Recoveries

Product recoveries used in the financial model are as per those detailed in Section 5.3.3 (Table 6) above.

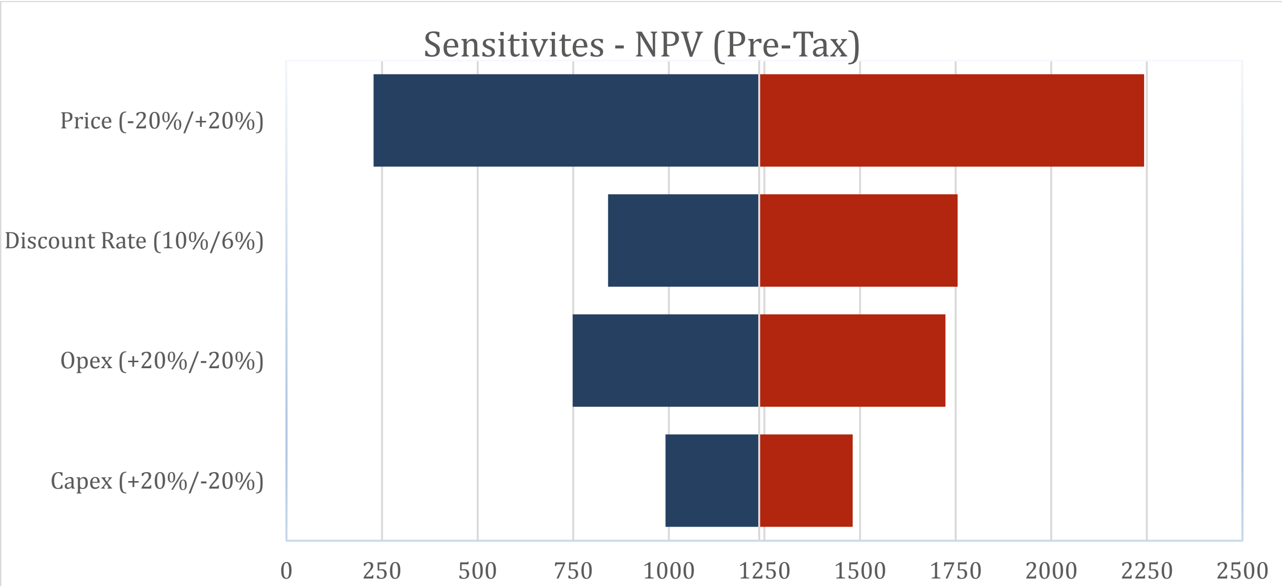
### 7.4.6 Operating Cost Ramp-Up

An estimation of the composition of fixed and variable costs for each type of operating expense has been used to determine the ramp-up of operating costs, in addition to the physical ramp-up of production.

### 7.4.8 Financial sensitivity

The potential financial impact of changes to some of the key assumptions or projections are shown below.

Figure 9 Sensitivity analysis (A$ NPV on X-Axis)




As would be expected with any positive NPV project with high free cash flow generated (given the assumptions made) the NPV is most sensitive to changes in price, and therefore revenue.

An exchange rate sensitivity has not been included as the final mix of currencies for non-Australian dollar denominated operating costs and capital costs will be determined as part of the contract award process. The price sensitivity approximates the impact of commensurate movements in the exchange rate on revenues.

# 8. MATERIAL RISKS

There are a number of risks, both specific to Alkane and of a general nature, which may, either individually or in combination, affect the future operational and financial performance of Alkane, the development of its Project as described in this announcement, and the value of its shares.

The risks set out below are not, and should not be considered to be, an exhaustive list of all the risks relevant to the proposed development of the Project, and an investment in Alkane generally. Alkane, however, considers that these risks represent key risks to the proposed development of the Project, and an investment in Alkane generally. Additional risks and uncertainties that Alkane is unaware of, or that Alkane considers to be immaterial, may also become key risks that can adversely affect Alkane's operational and financial performance in the future and ability to ultimately develop the Dubbo Project to production. These key risks are general in nature and regard has not been had to the investment objectives, financial situation, tax position or particular needs of any investor.

### *Securing funding and future capital requirements*

In order to develop the Project as described in this announcement, Alkane will, in the future, need to secure a significant amount of funding. This funding will likely come from a range of sources, some of which are described in Section 7.3 of this announcement. The Company considers that it has a reasonable basis to expect it will be able to fund the development of the Dubbo Project, however, this cannot be guaranteed, and Alkane may not be able to secure the required level of funding either at the present time, or in the future.

Any additional equity raising conducted by the Company may be dilutive to its shareholders, or may be undertaken at lower share prices than the then market price, or may involve restrictive covenants which limit the Company's operations and business strategy. Debt financing, if available, may involve restrictive covenants that may limit the Company's operations, business strategy and its other financing and operating activities.

### *Product/commodity prices and currency fluctuations*

Alkane’s revenues and cash flows will be derived from the sale of its product. As such, the Company's financial performance is exposed to fluctuations in commodity price. Commodity prices may be influenced by numerous factors and events that are beyond the control of Alkane, and Alkane cannot provide any assurance as to the prices it will achieve for its products. Changes in commodity prices may have a positive or negative effect on the Company’s profit margins, project development and production plans and activities, together with its ability to fund those plans and activities.

Alkane's revenues and costs (including any potential debt funding it may receive) may be sensitive to currency fluctuations. Accordingly, the value of its business may be affected by fluctuations in currency exchange rates.

### *Exploration and Ore Reserves and Mineral Resources estimate risk*

Despite the mineral Ore Reserve and Resources being JORC 2012 compliant, there is a risk that the ore grade and tonnes recovered are different to that modelled. In addition, Ore Reserves and Mineral

Resources are expressions of judgement based on industry practice, experience and knowledge and are estimates only. Estimates of Ore Reserves and Mineral Resources are necessarily imprecise and depend to some extent on interpretations which may prove inaccurate. No assurance can be given that the estimated Ore Reserves and Mineral Resources are accurate or that the indicated level of ore will be produced.

### *Mine development risk*

Whilst the mining operation is small with a low strip ratio and pit depth, there is a risk that the mining operation is delayed during operations. In addition, future development of a mining operation is dependent on a number of factors, including those matters identified in this Section 8.

When the Company commences production, its operations may be impacted by a variety of risks that are beyond its control, including environmental hazards, industrial accidents, technical failures, labour disputes and climatic conditions. No assurance can be given that the Company will achieve commercial viability through the development or mining of the Project.

### *Construction delays and cost overruns*

As the Dubbo Project requires a large construction effort, there is a risk of cost overrun in construction. To the extent that construction activities are delayed, this may impact the total development costs, and the timing and amount of revenue derived from the operation. This may have an adverse effect on the Company. Some of the impact of this risk is realised by the provision of a contingency on financing, as well as the level of detail in engineering and the type of contracts awarded.

### *Ability to achieve product recoveries, production targets and meet ramp-up assumptions*

The Dubbo Project has had extensive piloting and design. As with all operations being built in full scale versus pilot scale, there is risk that the product recoveries and ramp-up will not be met as assumed. There can also be no guarantee that anticipated tonnages (and grades) of ore will always be achieved during mining and production. Even in circumstances where such tonnages are achieved, there is no guarantee that they will be sufficient to sustain a profitable operation.

### *Product sales agreements*

Any product sales agreements reached by Alkane for the sale of its products will have the risks usually associated with contracted counterparties. Alkane will be seeking to enter into binding off-take agreements with various counterparties for the sale of the products derived from the Project.

There is no guarantee that Alkane will be able to reach agreement on terms satisfactory to it for the sale of products. If Alkane cannot reach satisfactory terms, this may have an adverse effect on the Company's future revenues.

### *Penetration of premium product markets*

The Dubbo Project assumes that premium pricing will be received for some if its zirconium products with time. It is a risk that, with increased competition, changing customer demand or other market risks, the premium pricing will not be achieved as modelled.

### *Technological advances and disruption*

The viability of the Dubbo Project, and the metrics detailed in this announcement, assumes that there will be suitable demand for its products. There is a risk that technological advances (and any resulting market disruption) may reduce the demand for the products derived from the Dubbo Project, and resultant sales and pricing will not be achieved as modelled.

### *Regulatory approvals, licences*

The Dubbo Project is subject to the laws of Australia and the state of New South Wales. These laws include those relating to mining, development, permit and licence requirements, environment, industrial relations, land use, water, native title and cultural heritage, land access, and mine safety and occupational health. Approvals, licences and permits required to comply with such laws may, in some instances, be subject to the discretion of the applicable government or government officials and, in some cases, the local community. To the extent such approvals are required and not retained or obtained in a timely manner or at all, this may have an adverse effect on Alkane.

### *Adverse changes to government policy and legislation*

The Dubbo Project and all mining and minerals processing assets in Australia are subject to changes in government policy and legislation. These can result in increased costs to the company or restrictions on its activities.

### *Environmental risks*

Mining (and exploration) can be potentially environmentally hazardous, giving rise to potentially substantial costs for environmental rehabilitation, damage control and losses. Alkane is subject to environmental laws and regulations in connection with its operations, and could be subject to liability due to risks inherent in its activities, including unforeseen circumstances.

### *Reliance on key personnel*

Alkane's success depends, in part, on its ability to attract, retain and motivate suitably qualified personnel, including its executive officers, senior management and other consultants, and for these personnel to operate effectively. The inability to access and retain the services of a sufficient number of qualified staff could be disruptive to the Company's business development and could materially adversely affect its operating results.

### *Reliance on joint venture partners and contractors, and counterparty risk*

The financial performance of Alkane is exposed to potential failure to perform by counterparties to its contractual arrangements. This includes a risk of failure or default (financial or otherwise) by a participant to any joint venture to which Alkane is, or may become, a party. This may also lead to adverse financial consequences for Alkane and there can be no guarantee that the Company would be able to recover the full amount of any loss through legal action.

### *General economic risks*

General economic conditions in Australia, and any other future jurisdictions that the Company may operate in, may have an adverse effect on Alkane's business activities and on its ability to fund those activities. Economic factors include, but are not limited to, new legislation, tax reform, changes in investor interest, inflation rates, interest rates, currency exchange rates, changes in political and economic policy, terrorism or other hostilities, and other factors outside the control of Alkane.

### *Landholder and title risk*

Alkane owns all of the land on which the Dubbo Project will be located. However, mining licences are granted subject to various conditions and failure to comply with conditions may lead to forfeiture. Any forfeiture or detrimental events in respect tenure may have an adverse effect on Alkane.

### *Competition*

Alkane competes with other companies internationally. Some of these companies have greater financial and other resources than Alkane and, as a result, may be in a better position to compete for future business opportunities. There can be no assurance that Alkane will be able to compete effectively with these companies in the future.

### *Insurance availability*

The Company maintains insurance coverage as determined appropriate by its board and management, but no assurance can be given that it will continue to be able to obtain such insurance coverage at reasonable rates (or at all), or that any coverage it obtains will be adequate and available to cover all relevant claims.

### *Claims, liability and litigation*

Alkane may have disputes with counterparties in respect of major contracts, or may be exposed to customer or environmental, occupational health and safety or other claims. The Company may incur costs in defending or making payments to settle any such claims, which may not be adequately covered by insurance or at all. Such payments may have an adverse impact on either or both of the Company's profitability and financial position.

# 9. PRODUCTS & MARKETING

## 9.1 Overview

The Dubbo Project intends to supply significant quantities of zirconium and rare earth materials (the latter predominantly for use in permanent magnets), as well as contribute to the niobium and emerging hafnium industries. The global markets for most of these products are largely dominated by China's vast manufacturing industry and its integrated domestic supply chains. However, changes within China's manufacturing sector suggest the period of low prices and oversupply is now over for rare earths and zirconium materials in particular.

Announced in 2015, the *Made in China 2025* policy is expected to have long-term and far-reaching effects. The policy aims to move Chinese industry away from low-value, polluting industries to manufacturing for higher-value, downstream markets. The Chinese Government has already embarked upon a 'war on pollution', leading to stricter enforcement of environmental laws across the sector.

The impacts of this policy, implemented in the form of new environmental regulations, inspections and audits, are already being seen – particularly in the rising prices of rare earth magnet and zirconium materials supply chains external to China. The zirconium materials market has also seen instances of inability of supply to non-Chinese customers.

As an operation that is both independent of China and traditional supply sources, the Dubbo Project represents an alternative strategic potential source of these materials that are in high demand for a range of existing and future technologies.

## 9.2 Markets and Price Considerations

### 9.2.1 Zirconium

The global zirconium market (not including the direct zircon market) is forecast by the Roskill Consulting Group[16] to reach 203ktpa by 2026, with the highest growth rates predicted for high-purity zirconium chemicals. At full capacity, the Dubbo Project will account for about 8% of global supply of zirconium materials, making it a significant long-term alternative source of these sought-after products.

Rapid price increases and supply disruptions for Chinese zirconium materials in the past year have highlighted supply risks and significantly increased demand for alternative supply sources. China currently dominates 75% of global zirconium supply, and 95% of zirconium chemicals, but depends exclusively on import zircon as the source of zirconium units.

[16] Ref - Roskill- ASM commissioned report

Zirconium oxychloride (ZOC) is the main precursor used for high-purity downstream zirconium products, and prices have increased by 80% in the past year. Fused zirconia is the other main zirconium product category, where Chinese prices have doubled in the past year. ZOC prices (36% $ZrO_2$) are now at US$2,750/t, FOB (free on board) China (US$7,600/t $ZrO_2$), while fused zirconia is US$5,400/t, FOB China. China's increased focus on environmental pollution and compliance is expected to lead to further supply disruption, while higher prices for raw materials and process chemicals are expected to add further pressure to costs.

Reduced zircon production from older mines due to declining ore grades is also pushing up production costs for producers, as more ore is mined to recover less zircon. Zircon prices increased by 40% in 2017 and have increased further in early 2018. Reduced availability of premium zircon is also affecting fused zirconia production, where low impurities are required for the fusion process. (Zircon with low levels of uranium and thorium is especially needed to produce fused zirconia with less than 500ppm combined uranium and thorium.)

The Dubbo Project will produce a mix of 'base' and 'premium' zirconium products, where the premium products include higher-value yttria-stabilised zirconia and low-hafnium zirconium products. The base zirconium products will include zirconium oxychloride (ZOC), zirconium basic carbonate (ZBC) and zirconium oxide, which are expected to dominate sales during the first few years of operations. It is assumed that base zirconium prices will average US$10.00/kg over the first 20 years of operations, with lower prices in the first few years and higher prices in later years.

Premium zirconium products, including higher-value zirconium chemicals and zirconium oxides, will also be continuously developed to complement the base zirconium products. This will increase average zirconium prices over time. Yttria-stabilised zirconia products will include powders for different applications and functional products such as milling media. It is assumed that yttria-stabilised zirconia products will be within the range of US$20-40/kg over the first 20 years of operations, with product sales commencing in year three after commissioning.

Low-hafnium zirconia is another premium zirconium product to complement the zirconium product range; it will be introduced at commissioning and progressively increased during production ramp-up. It is assumed that the average price for low-hafnium zirconia products will be within the range of US$18-25/kg over the first 20 years, with some of this material being blended with other zirconium products or converted to zirconium metal.

The Company and ASM has adopted an optimistic approach to determining projected penetration into the premium zirconium markets; however, pricing discounts have also been reflected in the Company's and ASM's models to achieve that level of penetration and sales. Potential market penetration for the premium products includes, but is not limited to, the following risks:

- Ramp-up slower than expected or not achieved in full;
- Higher discounting required;
- Retaliation from existing suppliers;
- Increased product returns and/or warranty issues if products not up to specs (e.g. performance);
- Inability to secure low-hafnium zirconium off-take; and

- Changes in market requirements or substitution for other materials.

This will result in increased sales of base zirconium products such as ZOC, and lower total revenue and return.

### 9.2.2 Rare Earths

China dominates the global rare earths market (US$3-5 billion), with its integrated downstream manufacturing industry from mining through to intermediate and finished products. IMCOA[17] estimates China's share of global supply was 85% in 2017, while its internal consumption was 70% of global supply, leaving just 15% of global supply available for export.

Rare earth permanent magnets (REPM) are the main driver for the global rare earths industry at present, accounting for 30% of the market by volume – but 80% by value. The magnet rare earths include neodymium, praseodymium, samarium, dysprosium and terbium. High growth rates for REPMs in electric motors – used in electric vehicles, robotics and other applications – is expected to lead to shortages by 2020, with limited new sources of supply available in China or elsewhere. (With the demand/supply balance driven by REPMs, this causes some (non-magnet) rare earth elements to be in oversupply.)

Other market factors include the *Made in China 2025* policy to maximise downstream processing into finished products. This is likely to reduce supplies of rare earth oxides, metals, and magnets available for export, with leading companies seeking independent REPM supply chains outside China. China's commitment to stamp out illegal rare earths production could also reduce supply and support prices, as it faces mounting costs to rehabilitate rare earths mines across China. IMCOA estimates US$20-30 billion is required for a national rehabilitation exercise, which it assumes will be passed on in time through higher prices.

Prices for praseodymium/neodymium (known as didymium or PrNd) metal have increased in early 2018, with the current price around US$65/kg, FOB China. This follows a significant increase in 2017, where PrNd metal prices touched US$100/kg, before falling back at the end of the year. It is assumed the prices of PrNd oxide will average US$90/kg over the first 20 years of Dubbo Project production. Similarly, it is assumed that average prices for dysprosium oxide will be US$325/kg and terbium oxide US$650/kg during the first 20 years of production.

It is assumed that PrNd, Dy, Tb and Y oxide will be separated on site at the Dubbo Project. Other unseparated rare earths contained in the concentrates will be sold on the market and are forecast to result in an average of US$9 million per year in revenue over the first 20 years of production. ASM will continue to investigate options around separation of these additional rare earths on site, or third-party toll-processing alternatives.

The Dubbo Project's estimated full-capacity output of 1.3ktpa of magnet rare earth oxides represents approximately 3% of 2016 demand.

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[17] IMCOA – Curtin-IMCOA 8 Year Demand & Supply Summary

Roskill Consulting Group[18], Adamas Intelligence[19], Argus Metals[20] and IMCOA have each provided in-depth market and price analyses for rare earths – these include medium- and long-term price forecasts. Price forecasts used in this document are based on forecasts from these independent companies, plus internal ASM forecasts. In the case of the magnet rare earths, it is assumed that continued strong growth in demand for neodymium, praseodymium, dysprosium and terbium oxides will exceed supply and support prices over the first 20 years of Dubbo Project production. Magnet rare earths revenue represents around 89% of total rare earths revenue and is the primary focus of the rare earths marketing effort.

### 9.2.3 Niobium

The global steel industry is the main driver for niobium consumption, where 90% of all niobium is used as ferro-niobium for high strength low alloy (HSLA) steels for the construction and automotive sectors. Minor additions of niobium to steel can greatly increase strength, leading to weight and cost savings.

The total niobium market was approximately 60kt in 2016, dominated by Brazil's Companhia Brasileira de Metalurgia e Mineração (CBMM), with approximately 80% of ferro-niobium supply. This dominance has also historically provided market stability, as CBMM has adjusted supply against demand.

Niobium prices have remained stable during the past year, with spot prices for 66% ferro-niobium at around US$36/kg in warehouse Rotterdam.

At full capacity, the Dubbo Project will produce 1,967tpa of niobium via a joint venture with Treibacher Industrie AG (TIAG). This volume represents only 3% of global production.

The TIAG joint venture will produce ferro-niobium as its primary niobium product at a purpose-built ferro-niobium facility on site at the Dubbo Project. It is assumed the average ferro-niobium (FeNb) price will be within the range of US$35.00-45.00/kg during the first 20 years of production, with an average of US$33.35/kg assumed for the contained niobium metal over the first 20 years of production.

### 9.2.4 Hafnium

The nuclear industry has been the main source of hafnium for the past 70 years, owing to the need to remove hafnium from zirconium used in fuel assemblies for nuclear reactors. Zirconium permits clear passage for neutrons to maintain efficient reaction in a nuclear reactor, but hafnium interferes with this by absorbing the neutrons (and hafnium is therefore often used as part of the control rods in a nuclear reactor). With a current total market value of about US$70 million, the hafnium market is one of the smallest markets for minor metals, yet it offers some of the best prospects for future growth.

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[18] Roskill Ref- ASM commissioned report

[19] Adamas 'Rare Earths Market Outlook to 2025'

[20] Argus Rare Earths Annual

Roskill[21] estimates hafnium metal demand was 67t (79t $HfO_2$) in 2016, and forecasts a base case demand of 112t (132t $HfO_2$) by 2026 and 160t by 2036 (189t $HfO_2$). The Dubbo Project is one of the few sources of hafnium that could meet this anticipated demand and is also independent of the nuclear industry.

Currently the greatest demand by volume is for hafnium metal, and ASM is actively investigating partnerships or joint-venture opportunities to convert hafnium oxide to hafnium metal. In recent years, global research and development has focused on the ferroelectric and thermoelectric properties of hafnium oxide; commercial applications of these would see escalating demand for hafnium oxide.

With its small size and supply concentrated in the hands of few companies, the hafnium market is opaque with limited reference information available. Current prices for hafnium crystal bar are approximately US$900-1,200/kg, depending on zirconium content. The Dubbo Project will produce hafnium according to identified demand, yet it has the capability to supply in excess of 100 tonnes per annum. This should provide end-users with confidence for stable and increased supply.

The primary hafnium products recovered from the Dubbo Project zirconium stream will be hafnium oxychloride (HOC) and hafnium oxide ($HfO_2$). However, it is anticipated that hafnium metal will be produced as the primary marketable product through strategic relationships or joint ventures. An average hafnium metal price of US$600/kg is assumed for the first 20 years of production, with a forecast range of US$500-700/kg.

Forecast penetration into the hafnium market is aggressive and pricing reflects discounts to achieve sales. Potential market penetration for hafnium products includes, but is not limited to, the following risks:

1) Inability to secure relationship with metal technology provider
2) Economic research and development not progressing
3) Ramp-up slower than expected or not achieved in full
4) Higher discounting required; and
5) Retaliation from existing suppliers.

[21] Roskill Ref- ASM commissioned report

## 9.3 ASM product range

ASM will produce a suite of zirconium, hafnium, rare earth and niobium materials in the form of chemicals, powders and metals. These products will be available in a range of standard and customised specifications, based on market requirements.

### 9.3.1 Zirconium products

ASM's zirconium range will include high-purity zirconium chemicals and a range of zirconium oxide (zirconia) powders.

**High-purity zirconium chemicals** (≥ 99.5% $ZrO_2$):

- ***Zirconium oxychloride (ZOC)*** – ZOC is the key chemical precursor used to produce most downstream zirconium chemicals and chemical zirconia.
- ***Zirconium basic carbonate (ZBC)*** – ZBC is one of the most important zirconium chemicals derived from ZOC. It is used in many applications in its own right or is converted directly to zirconia or stabilised zirconia for a range of uses.

**Zirconium oxide/zirconia** (≥ 99.5% $ZrO_2$):

- ***High-purity monoclinic (unstabilised) zirconia powders*** in a range of surface areas and particle sizes

**Premium zirconium products**

- ***Low-hafnium zirconium oxide (<100 ppm $HfO_2$)*** – A special high-purity grade of zirconium oxide has been developed for producing zirconium metal required in the nuclear industry. This premium zirconia product attracts a significant price premium over other grades containing hafnium.
- ***Yttria-stabilised zirconia powders and products*** – Yttrium and zirconium can be combined to produce premium yttria-stabilised zirconia powders and products for a range of applications and markets. This includes zirconia milling media, which is used across a wide range of applications to reduce and control particle sizes.
- ***Zirconium metal*** – Conversion of zirconium oxide to zirconium metal is a small but high-value application for zirconium oxide, with growing demand for industrial applications and the nuclear industry (hafnium-free). ASM is investigating options to produce zirconium metal through strategic partnerships or joint ventures, which could add further value and revenues. No revenue from zirconium metal is assumed.

### 9.3.2 Hafnium products

ASM will supply high-purity hafnium chemicals and oxides (>99.8% $HfO_2$), containing low levels of zirconium (up to 99.9% Zr+$HfO_2$). The Dubbo Project will become a major new source of this critical element, which can be converted to metal or used in chemical or oxide form.

**Hafnium chemicals** (>99.8% $HfO_2$):

- ***Hafnium oxychloride (HOC)*** – High-purity hafnium oxychloride can be used as a source of hafnium to produce other hafnium chemicals or complexes, or converted to high-purity hafnium oxide.

**Hafnium oxide ($HfO_2$)** (>99.8% $HfO_2$):

- ***High-purity hafnium oxide*** has an increasing range of applications due to its specific ferroelectric and thermoelectric properties. However, it is primarily used as the precursor for hafnium metal, which it is mostly consumed by superalloys. The zirconium content in hafnium oxide can be changed according to the application requirements.

**Hafnium metal (Hf)**:

- Globally, most hafnium is consumed in metal form, so ASM is investigating options to produce hafnium metal through strategic partnerships or joint ventures to maximise value capture. It is assumed that most hafnium revenue will come from hafnium metal.

### 9.3.3 Ferro-niobium products

ASM will produce ferro-niobium (FeNb) in the form of crushed ingots with a composition of ~65% Nb via a joint venture with Treibacher Industrie AG. The main market for ferro-niobium is the steel industry, where it is used in high strength low alloys (HSLA) steels for the construction and automotive sectors.

### 9.3.4 Rare earth products

ASM will produce a suite of separated rare earth oxides for up to 15 rare earth elements. The primary focus will be the elements used in rare earth permanent magnets, which will account for over 80% of rare earths income.

The main magnet rare earths are praseodymium and neodymium. These will be recovered at the Dubbo Project as praseodymium/neodymium (PrNd or didymium) oxide; the PrNd oxide will be unseparated at project start-up, but may be separated into praseodymium oxide and neodymium oxide at a later time according to market requirements.

The other rare earths produced by the Dubbo Project, dysprosium oxide and terbium oxide, will be separated at site, as will yttrium oxide. Other rare earths will initially be sold as unseparated concentrates.

**Magnet rare earths:**

- Praseodymium/Neodymium (PrNd) oxide
- Dysprosium (Dy) oxide
- Terbium (Tb) oxide

**Other rare earths:**

- Samarium (Sm) oxide
- Europium (Eu) oxide
- Gadolinium (Gd) oxide
- Lutetium (Lu) oxide
- Yttrium (Y) oxide
- Unseparated lanthanum and cerium concentrates

**Rare earths and zirconium:**

- A number of value-added products combining zirconium and rare earth oxides are under active development or consideration by ASM.

## 9.4 Marketing Strategy

The Dubbo Project is expected to produce a suite of high-value downstream products used in a range of advanced technologies by leading companies worldwide. The path to development positions the Dubbo Project to be an important global source of critical zirconium, rare earth and hafnium materials.

ASM's marketing strategy is based on securing long-term customer relationships, founded on a reliable and secure production base in Australia. The Dubbo Project will also provide a strategic alternative to existing supply chains, enabling companies to significantly reduce existing supply chain risks. This is especially true for advanced economies in Europe, North America and North Asia, where there is a high dependence on supply from China for zirconium, hafnium and rare earths.

The initial product range will be complemented by the progressive development of further high-value products in response to customer and market demands. This includes the production of specialty chemicals or the conversion of chemicals to powders or metals, as well as the production of functional products. In the future, there will also be opportunities to recover and recycle elements from end-of-life products to develop new income streams.

### 9.4.1 Zirconium products marketing

ASM has an exclusive worldwide marketing, sales and distribution agreement with Minchem Limited (Minchem) for all zirconium materials produced by the Dubbo Project. Minchem is a technical ceramics marketing and manufacturing business that has been involved in zirconium chemicals and zirconium oxide products for over 40 years. Minchem is based in England and has a global reach in the zirconium industry. ASM currently has Letters of Intent (LoI) from seven companies for supply of zirconium chemicals covering 30% of the base case output, which also equates to 60% of the stage 1 output if a staged build occurs.

### 9.4.2 Rare earths products marketing

ASM will market rare earths products directly to end-users, particularly for the manufacture of rare earth magnets, or via existing marketing relationships according to market requirements. ASM has a current Memorandum of Understanding (MoU) with the large international industrial group Siemens Ltd for supply of a number of rare earth products. There are numerous discussions with customers in Europe, US, Japan, Korea and China for supply of rare earth products.

### 9.4.3 Niobium products marketing

ASM has a joint venture with Treibacher Industrie AG (TIAG) for the production and marketing of ferro-niobium using niobium concentrate from the Dubbo Project. TIAG is a privately owned international metal alloy and chemical products company based in Althofen, Austria. The joint venture will produce ferro-niobium using TIAG's proprietary technology at the Dubbo Project site in Australia to produce over 3,000 tonnes of FeNb. This will utilise all of the niobium concentrate produced by the Dubbo Project.

### 9.4.4 Hafnium products marketing

ASM will market hafnium products directly to end-users, and is investigating options to produce hafnium metal through strategic partnerships or joint ventures to maximise value capture. Most hafnium demand is for hafnium metal, so ASM is seeking involvement in metal manufacture and marketing as a long-term goal.

# 10. COMMUNITY AND EMPLOYMENT

## 10.1 Community Engagement

The Dubbo Project is a major new project to be developed in the rural Central Western region of New South Wales (near Dubbo). Since developing the Peak Hill Gold Mine project in 1993 and the Tomingley Gold Mine in 2013 (currently in operation) in the same region, ASM's parent company Alkane has successfully engaged with local communities. Through these projects, Alkane has established a positive regional presence and built long-standing local relationships, successfully accommodating local community requirements to operate with positive community impact.

Building upon this long-standing regional presence, ASM has consulted and communicated proactively with the community during development of the Dubbo Project. All impact studies conducted by ASM and adopted in the Environmental Impact Statement and project approval have forecast and accommodated likely community impacts, incorporating local stakeholder issues and concerns. ASM maintains and updates its community engagement strategies, including establishment of the Dubbo Project Community Consultative Committee, and maintains a strong local presence to keep the community informed of project status and changing community impacts.

## 10.2 Employment

Historically, Alkane has successfully developed its regional projects sourcing locally based workers and contractors. It is therefore expected that a substantial proportion of the Dubbo Project construction and operations workforce will be filled by local people and those choosing to relocate to Dubbo permanently. It is expected Dubbo Project construction will attract a workforce of up to 450 persons over the two-year construction schedule.

Following construction, the facility will be operated by a team of approximately 250 people, comprising chemical engineers, metallurgists, mechanical and electrical engineers supervising tradespeople and other operators. Throughout both construction and operations phases, local workers and contractors will be sourced as a preference. Furthermore, ASM anticipates both local and non-locally sourced personnel will live in Dubbo or the surrounding local communities. ASM will work with local training organisations to recruit and train locally based operators.

The large task of supplying reagents to site will require dozens of transport workers, creating spin-off employment opportunities for service companies and tradespeople.

## 10.3 Toongi Pastoral Company

ASM has established the Toongi Pastoral Company to manage the residual farmland and biodiversity offset areas associated with the Dubbo Project. This is overseen by a professional farm manager employed to execute the business plan. Nine farmhouses are located within the project footprint; these are tenanted to maintain the fabric of the Toongi community, which has a focal point at the Toongi Hall and Recreation Reserve immediately neighbouring the project.

# 11. TECHNICAL GLOSSARY

ANSTO = Australian Nuclear Science and Technology Organisation

BOOT – Build Own Operate Transfer

Capex = Capital expenditure

ECI = Early Contractor Involvement

EPC = Project delivery method whereby a contractor carries out engineering, procurement and construction for a price

EPCM = Project delivery method where consultant (engineer) carries out engineering, procurement and construction management for a fee

FEED = Front End Engineering Design

IRR = Internal rate of return

tpa = Tonnes per annum; generally referring to the quantity of mined ore feed for the plant per year

REPM = Rare earth permanent magnet

ROM = Run of Mine; raw ore as extracted from the mine and delivered to the processing plant

Opex = Operational Expenditure

# DIRECTORY

**ASM Directors**
Ian Jeffrey Gandel (Non-Executive Chairman)
David Woodall (Managing Director)
Nicolas Earner (Director)
David Ian Chalmers (Director)
Gavin Smith (Director)
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