

JUNE 2021 QUARTERLY ACTIVITIES REPORT

HIGHLIGHTS

- ▶ **New test work using commercially available coatings products enhanced with Sparc's graphene additives confirmed exceptional 62% improvement in anti-corrosion performance**
- ▶ **Results confirmed significant commercial applicability for the world's leading coatings products used in industrial applications, marine environments and global shipping**
- ▶ **MOU signed with leading Australian environmental remediation company JBS&G in which Sparc's proprietary graphene products are to be used in site trials for the adsorption of PFAS**
- ▶ **Pilot plant to be jointly developed with JBS&G for PFAS adsorption from ground water**
- ▶ **Sparc's Managing Director provided the market with a business strategy update which revolved around ensuring the activities of the business are focused on opportunities linked directly to near term market outcomes and deliverables**
- ▶ **Additional Sparc PFAS adsorption testing, further to previously announced positive results, demonstrated consistently higher performance than industry-leading activated carbon**
- ▶ **\$2.93m cash at bank as at 30 June 2021**

Sparc Technologies Limited (**ASX: SPN**) (**Sparc** or the **Company**) is pleased to provide its June 2021 Quarterly Activities Report.

Coatings Products Deliver Exceptional Results

Sparc advised that test work confirmed that outstanding results continue for the company's proprietary graphene-based additives for use in improving the performance of anti-corrosion coatings. Sparc's addressable coatings market is estimated to be US\$44bn by 2025 and these results complement the Company's engagements with major industry participants (See Presentation dated 22 Mar 2021).

Sparc's test work programme utilised smooth cold rolled steel panels with 150 microns of Epoxy coating which were subjected to 1344 hours of salt spray, under controlled conditions and subject to stringent ISO9227^{^^} standards. This test work on non-standard substrate approximates the requirements of ISO12944-6 for High Durability (15 – 25 years) in aggressive C5 environments and was intended to amplify observable differences in corrosion performance between the various samples evaluated.

The coatings used were commercially available Epoxy coatings, from leading global coatings companies to which Sparc's proprietary graphene was added. The control panels had no graphene added to the paint, while the panels with graphene added exhibited up to 62% improvement in scribe creep*, being the measure of corrosion resistance.

For one particular additive, this high level of improvement was seen consistently across a range of commercial coating types. This test work is also significant in that the substrate was smooth cold rolled steel, as opposed to the [previously announced](#) coatings test work on abrasive blast cleaned steel. This signifies a far more challenging environment for the coating system and highlights the enhancement provided by Sparc's Graphene based additives.

In the context of Sparc's targeted customer industries, these results represent a potential for substantial performance improvements. Anti-corrosion test work continues with a full six-month ISO12944 cyclic ageing test program underway and results to be announced as they come to hand later in the year.

Figure 1 below illustrates scribe corrosion creep performance. A lower value indicates less corrosion. Tests performed on paint brands that had a Sparc Graphene additive, showed up to 62% performance improvement in scribe corrosion creep (i.e., less corrosion), when compared to control paint brands that did not have a Sparc graphene additive.

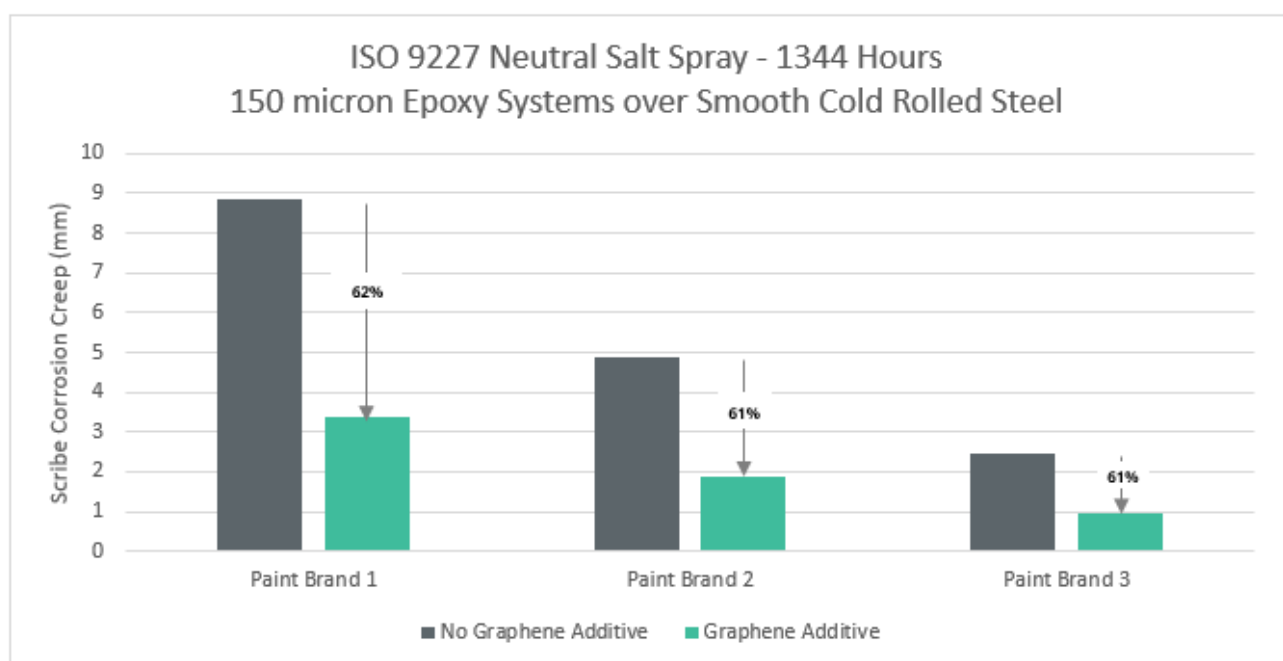


Figure 1: Test results showing anti-corrosion performance of coatings with a Sparc Graphene additive. Lower values demonstrate better performance

^^ ISO9227 2017 specifies the apparatus, the reagents and the procedure to be used in conducting the neutral salt spray (NSS), acetic acid salt spray (AASS) and copper-accelerated acetic acid salt spray (CASS) tests for assessment of the corrosion resistance of metallic materials, with or without permanent or temporary corrosion protection.

*Scribe Creep describes the scribing of coated samples through the coating layer and into steel panels using a scribe tool and the resultant corrosion. The less corrosion creep on either side of the scribe, the higher the corrosion resistance performance.

MOU with JBS&G

In early June, Sparc entered into a Memorandum of Understanding (**MOU**) with one of Australia's leading environmental remediation companies, JBS&G. The non-binding MOU allows for the immediate testing under field conditions of Sparc's proprietary functionalised graphene for the adsorption of PFAS through research and development successfully undertaken at the University of Adelaide.

The key terms of the joint project which is exclusive to JBS&G within Australia, will involve the development of a pilot plant for adsorption of PFAS from contaminated water via graphene filtration. The pilot plant will be situated at a site where JBS&G is undertaking remediation with each party to pay for their own materials and labour. Testing of functionalised graphene for the adsorption and immobilisation of PFAS in soil will also be undertaken as a separate project and falls within this MOU. The MOU will be ongoing for the duration of the projects or until a binding agreement is entered into between the parties.

On the basis that the trial work is successful, JBS&G and Sparc have agreed to undertake a scoping study to determine the economic feasibility of using Sparc's graphene-based adsorbents. Furthermore, should the study prove the graphene-based adsorbents products to be feasible, then JBS&G and Sparc would seek to negotiate a Supply Agreement for the sale of graphene based adsorbent filter products, or the associated technology.

The parties agreed that the MoU is an exclusive arrangement for the development and marketing of graphene based adsorbent filters for PFAS remediation in Australia. In the event that either party does not meet its obligations under the MoU in a material way this exclusivity will end.

About JBS&G

JBS&G is Australia's leading environmental consultancy which has been operating nationally for 25 years and has significant experience in relation to a range of environmental remedial technologies including PFAS management. The company employs more than 250 people across Australia. (jbsg.com.au)

Managing Director Business Strategy Update

In mid-May, a strategic review of the Company's core business activities and market opportunities was concluded, led by the Company's MD, Mr Mike Bartels. Having spent his time working through the pipeline of opportunities and workstreams since joining, Mr Bartels and the Company provide the following update to the market and the Company's shareholders.

The primary results of the review revolved around ensuring the activities of the business are focused on opportunities linked directly to near term market outcomes and deliverables. Given the unique properties of graphene and the breadth of the potential applications available for deployment of Sparc's unique and proprietary graphene technologies, the Company has established a matrix by which it will pursue a number of key opportunities across its core business lines, and advance those that are nearer term to market implementation and adoption in priority to others.

"Having identified a number of core market opportunities arising from the exceptional results established by our development activities, the Company is now progressing from the R&D phase to engaging with potential customers. Accordingly, we have now entered into a significant number of Non-Disclosure Agreements with major industry players interested in potentially incorporating our graphene technology into their global products. As an example, Sparc is now working on twelve projects within the coatings enhancement work stream, which targets niche markets that we believe can be fast-tracked to

commercialisation. Against this backdrop and as a result of our strategic review, it is important that we provide this operational clarity to the market.” Mr Bartels said.

Business Strategy

Sparc’s primary focus is on commercialising graphene technologies and products developed from conducting and investing in Research and Development (R&D) as it relates to the functionalising and optimising of Graphene based materials. R&D activities are being managed utilising in-house expertise and supplemented with support from external research institutes. Planned manufacturing capabilities will be tailored and engineered to produce material that advances research, development, and commercialisation activities.

Research and Development Program



To ensure future research and development activities are focused, the business will now be managed as three dedicated workstreams which relate to Environment and Sustainability and Health:

- ▶ Environment - Industrial Materials - Product Enhancement
- ▶ Sustainability & Remediation - Extraction
- ▶ Health – ‘Living a Better Life’



Industrial Materials - Product Enhancement

This workstream will be concerned with optimising the performance of materials through the addition of Graphene based products.

The technology platform being developed is concerned with the ability to disperse and stabilise Graphene based products allowing these to be incorporated into a range of materials. Employing in-house expertise, Sparc has established Know-How as it relates to the incorporation of Graphene based products into polymeric and building materials which can be deployed in global industrial markets.

Activities are currently focused on:

- ▶ **Coatings – 12 coatings projects underway**
- ▶ **Concrete – development of in-house expertise and targeting niche applications**
- ▶ **Composites – applying proprietary graphene dispersion techniques to enhance composites**

Coatings - Sparc expertise in Graphene based products for Coatings will eventually deliver products across a multitude of paint and coatings categories. As an update, 12 specific projects have been recognised within this business unit to date with commercialisation work now underway. Projects include anticorrosive, antifouling, fireproofing, corrosion under insulation (CUI) and antibacterial coating categories.



A number of specific programs relating to anticorrosive coatings, testing to relevant ISO standards, which are critical to global adoption. These programmes are now well advanced, and the Company is expecting comprehensive results from these programs in CY Q4 2021. Given positive results from earlier test programs, discussions regarding collaboration with both domestic and international Coatings companies have already commenced.

The Company has invested in the testing equipment required to conduct corrosion resistance testing in accordance with ISO 12944 and related industry standards and has developed significant internal expertise and IP in this area. Progress in the other areas will be achieved in cooperation with various industry and academic partners. Several NDAs associated with this work are also now in place.

Concrete - Graphene additive product developed by Sparc is currently being evaluated by a major concrete manufacturing company. In support of Know-How developed by Sparc Technologies, work with this industry partner is being conducted under a Non-Disclosure Agreement. In addition to this project, work has already commenced on recognising applications within the broader cementitious product portfolio where graphene enhanced concrete can benefit numerous niche products.

Composites - Testing is about to commence with work being undertaken by a significant industry partner under a Non-Disclosure Agreement. More details will be released around this program when they become available to the Company.

Sustainability and Remediation - Extraction



This workstream is concerned with developing products that will serve to both optimise, or where applicable, disrupt current industry practise regarding extraction, which currently mostly uses activated carbon. The technology platform being developed uses Graphene based products to optimise the extraction of targeted materials, some which are toxic and others that are valuable minerals. Utilising our exclusive licensing agreement with the University of Adelaide, Sparc has developed an understanding of how to functionalise

Graphene for this purpose and in doing so, exploit the unique adsorbent characteristics inherent in this material.

Adsorbent materials can be used to extract precious materials and for remediation purposes. Sparc has active programs in each of these areas, namely:



Tailings - Research undertaken by our strategic partners has indicated that Graphene can be functionalised to deliver above industry accepted extraction yields of precious metals (Ag, Au, Cu). Activities are now focused on confirming these results with an industry partner.

PFAS - Research undertaken by the University of Adelaide has indicated that Graphene can be functionalised to deliver exceptional results in the extraction of PFAS materials from aqueous solutions. Activities are now focused working with an industry partner to test the graphene technology in the field. Please refer to previous ASX announcements of 11th February 2021 and 27th April 2021.

Health - 'Living a Better Life'



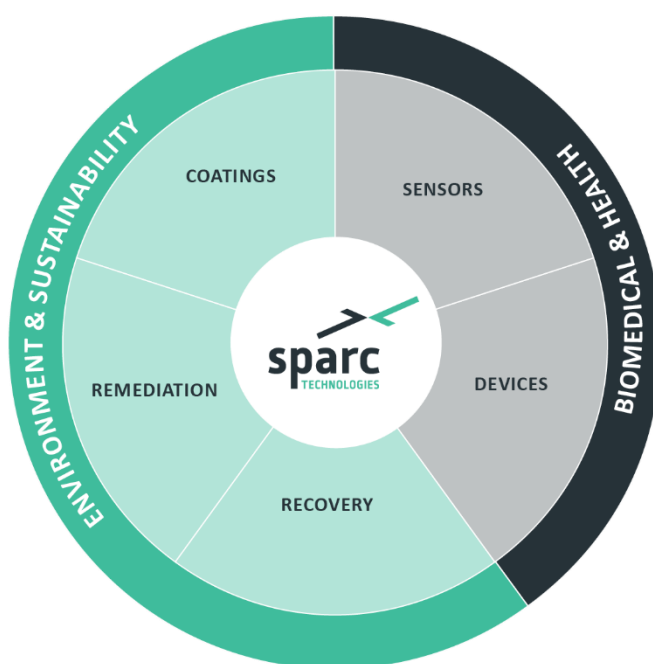
The company is also currently collaborating with several major industry partners in the biomedical and health space. Whilst considered an emerging market for Sparc Technologies, the company is working on two applications of graphene in medical technology. First, the company is developing technology for wearable graphene biosensors which will allow for remote, real-time monitoring of health. Second, the company is working on the enhancement of medical-grade materials through the deposition of graphene in order to enhance properties that are of interest to established players in this market.

In the emerging market that is Graphene, the Company is confident that it can add significant value to its chosen market sectors. With Graphene's potential to deliver benefits to so many industries it is important that activities are focused. Targeting Industrial Materials, Sustainability & Remediation and Health will see Sparc exploit current

capabilities and maximise returns from our on-going commitment to research and development, and commercialisation activities.

As Graphene represents an emerging market, significant emphasis will be placed on collaboration, both domestically and internationally, with Research institutes, Industry Partners and Customers operating within our chosen markets.

Sparc looks forward to providing further updates as it progresses this exciting research and development phase towards commercialisation.



Outlook for Next Quarter

Coatings – Sparc is undertaking graphene test work on 12 separate coatings. Coatings test results and industry partner discussions are expected to progress throughout the next quarter.

Concrete – completion of test program and progression to producing a commercially available material

Tailings – Demonstration model development is expected to commence in the third quarter.

Health – advancing the Sensor project and industry partner discussions to continue throughout the next quarter.

Research & Development – establishment of agreements with a number of institutions aimed at supporting current activities and accelerating product commercialisation in Coatings, Composites and Concrete.

Corporate

Mike Bartels was appointed to Managing Director (MD) effective from 1 July 2021. Mike adds considerable experience, both technically and commercially to the Sparc Board. Mike, who joined Sparc on 1 March 2021 as Chief Executive Officer (CEO), led the Sparc management team in undertaking a review of the business with a strong focus on streamlining research and development activities and aiming to fast-track commercialisation opportunities.

Mike holds a Bachelor of Science in Applied Chemistry and has a wealth of experience in sales and marketing with major multinational coatings companies in Australia and internationally, including Sherwin Williams (NYSE: SHW) and AkzoNobel (AKZA.AS). Mike is an expert at developing strategy, setting vision, and executing plans to deliver growth. Mike brings a vast depth of experience to Sparc given his previous roles as global head of marketing, business development manager and sales director for paint, protective coatings, and insulation products for major multinational coatings companies.

Mr. Mike Bartels' Executive Services Agreement as announced on [2 March 2021](#), has not changed.

Statement of Commitments

The current quarter is covered by the Statement of Commitments¹ outlined in the Prospectus dated 5 October 2020. A summary of expenditure to date is outlined below:

	Expenditure for the Qtr to 30 June 2021 (\$)	Expenditure described in Use of Funds in prospectus (\$)
Cost of offer	0	(470,000)
Corporate administration	(323,000)	(1,000,000)
Research and development	(441,000)	(1,300,000)
Graphene plant construction	(170,000)	(1,900,000)
Marketing and business development	(7)	(730,000)
Working capital	3	(900,000)
Total	(938,000)	(6,300,000)

¹ The above table is a statement of current intentions. Investors should note that the allocation of funds set out in the above table may change depending on a number of factors. In light of this the Board reserves the right to alter the way the funds are applied

Cash

As at 30 June 2021, the Company had a reported cash position of \$2.93m

Related Party Payments

In line with its obligations under ASX Listing Rule 4.7C.3, Sparc Technologies Limited notes that the only payments to related parties of the Company, as advised in the Appendix 4C for the period ended 30 June 2021, pertain to payments to directors for reimbursement of arrears of Directors Fees and Travel Expenses totalling \$63,368.97

-ENDS-

Authorised for release by: Mike Bartels, CEO.

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About Sparc Technologies

Sparc Technologies Limited (ASX: SPN) is a South Australian based company that is focussing on the development of innovative technology solutions using the unique properties of graphene. Graphene, which can be extracted from graphite, is a 2-dimensional nano material made of carbon atoms arranged in a hexagonal pattern, giving it unique and powerful properties that, with the right technology, can be imparted on products to improve performance. Sparc Technologies has licenced graphene-based technologies from the University of Adelaide, a leading institution in the field of graphene research, and will focus on commercialising graphene-based technologies for large industrial markets for marine and protective coatings, environmental remediation, and bio-medical applications.

Appendix 4C

Quarterly cash flow report for entities subject to Listing Rule 4.7B

Name of entity

Sparc Technologies Limited	
ABN	Quarter ended ("current quarter")
13 009 092 068	30 June 2021

Consolidated statement of cash flows	Current quarter \$A'000	Year to date (12 months) \$A'000
1. Cash flows from operating activities		
1.1 Receipts from customers	2	2
1.2 Payments for		
(a) research and development	(239)	(1,056)
(b) product manufacturing and operating costs		
(c) advertising and marketing	(7)	(37)
(d) leased assets	(26)	(26)
(e) staff costs	(336)	(521)
(f) administration and corporate costs	(163)	(681)
(g) exploration and evaluation (if expensed)		(3)
1.3 Dividends received (see note 3)		
1.4 Interest received	1	13
1.5 Interest and other costs of finance paid		
1.6 Income taxes paid		
1.7 Government grants and tax incentives		
1.8 Other (provide details if material)		(69)
1.9 Net cash from / (used in) operating activities	(768)	(2,378)

2. Cash flows from investing activities		
2.1 Payments to acquire or for:		
(a) entities		(201)
(b) businesses		
(c) property, plant and equipment	(170)	(325)
(d) investments		
(e) intellectual property		

Consolidated statement of cash flows		Current quarter \$A'000	Year to date (12 months) \$A'000
2.2	(f) other non-current assets Proceeds from disposal of:		
	(g) entities		
	(h) businesses		
	(i) property, plant and equipment		
	(j) investments		
	(k) intellectual property		
	(l) other non-current assets		
2.3	Cash flows from loans to other entities		
2.4	Dividends received (see note 3)		
2.5	Other (provide details if material)		(3)
2.6	Net cash from / (used in) investing activities	(170)	(529)

3.	Cash flows from financing activities		
3.1	Proceeds from issues of equity securities (excluding convertible debt securities)		4,000
3.2	Proceeds from issue of convertible debt securities		
3.3	Proceeds from exercise of options		
3.4	Transaction costs related to issues of equity securities or convertible debt securities		(406)
3.5	Proceeds from borrowings		
3.6	Repayment of borrowings		
3.7	Transaction costs related to loans and borrowings		
3.8	Dividends paid		
3.9	Other (provide details if material)		
3.10	Net cash from / (used in) financing activities	0	3,594

4.	Net increase / (decrease) in cash and cash equivalents for the period		
4.1	Cash and cash equivalents at beginning of period	3,871	2,246
4.2	Net cash from / (used in) operating activities (item 1.9 above)	(768)	(2,378)
4.3	Net cash from / (used in) investing activities (item 2.6 above)	(170)	(529)

Consolidated statement of cash flows		Current quarter \$A'000	Year to date (12 months) \$A'000
4.4	Net cash from / (used in) financing activities (item 3.10 above)	0	3,594
4.5	Effect of movement in exchange rates on cash held		
4.6	Cash and cash equivalents at end of period	2,933	2,933

5.	Reconciliation of cash and cash equivalents at the end of the quarter (as shown in the consolidated statement of cash flows) to the related items in the accounts	Current quarter \$A'000	Previous quarter \$A'000
5.1	Bank balances	2,933	3,871
5.2	Call deposits		
5.3	Bank overdrafts		
5.4	Other (provide details)		
5.5	Cash and cash equivalents at end of quarter (should equal item 4.6 above)	2,933	3,871

6.	Payments to related parties of the entity and their associates	Current quarter \$A'000
6.1	Aggregate amount of payments to related parties and their associates included in item 1	63
6.2	Aggregate amount of payments to related parties and their associates included in item 2	

Note: if any amounts are shown in items 6.1 or 6.2, your quarterly activity report must include a description of, and an explanation for, such payments.

7.	Financing facilities <i>Note: the term "facility" includes all forms of financing arrangements available to the entity.</i> <i>Add notes as necessary for an understanding of the sources of finance available to the entity.</i>	Total facility amount at quarter end \$A'000	Amount drawn at quarter end \$A'000
7.1	Loan facilities		
7.2	Credit standby arrangements		
7.3	Other (please specify)		
7.4	Total financing facilities		
7.5	Unused financing facilities available at quarter end		
7.6	Include in the box below a description of each facility above, including the lender, interest rate, maturity date and whether it is secured or unsecured. If any additional financing facilities have been entered into or are proposed to be entered into after quarter end, include a note providing details of those facilities as well.		

8.	Estimated cash available for future operating activities	\$A'000
8.1	Net cash from / (used in) operating activities (item 1.9)	(768)
8.2	Cash and cash equivalents at quarter end (item 4.6)	2,933
8.3	Unused finance facilities available at quarter end (item 7.5)	
8.4	Total available funding (item 8.2 + item 8.3)	2,933
8.5	Estimated quarters of funding available (item 8.4 divided by item 8.1)	3.82
<i>Note: if the entity has reported positive net operating cash flows in item 1.9, answer item 8.5 as "N/A". Otherwise, a figure for the estimated quarters of funding available must be included in item 8.5.</i>		
8.6	If item 8.5 is less than 2 quarters, please provide answers to the following questions:	
8.6.1	Does the entity expect that it will continue to have the current level of net operating cash flows for the time being and, if not, why not?	
Answer:		
8.6.2	Has the entity taken any steps, or does it propose to take any steps, to raise further cash to fund its operations and, if so, what are those steps and how likely does it believe that they will be successful?	
Answer:		

8.6.3 Does the entity expect to be able to continue its operations and to meet its business objectives and, if so, on what basis?

Answer:

Note: where item 8.5 is less than 2 quarters, all of questions 8.6.1, 8.6.2 and 8.6.3 above must be answered.

Compliance statement

- 1 This statement has been prepared in accordance with accounting standards and policies which comply with Listing Rule 19.11A.
- 2 This statement gives a true and fair view of the matters disclosed.

Date:29 July 2021.....

Authorised by:With authority of the Board.....

(Name of body or officer authorising release – see note 4)

Notes

1. This quarterly cash flow report and the accompanying activity report provide a basis for informing the market about the entity's activities for the past quarter, how they have been financed and the effect this has had on its cash position. An entity that wishes to disclose additional information over and above the minimum required under the Listing Rules is encouraged to do so.
2. If this quarterly cash flow report has been prepared in accordance with Australian Accounting Standards, the definitions in, and provisions of, *AASB 107: Statement of Cash Flows* apply to this report. If this quarterly cash flow report has been prepared in accordance with other accounting standards agreed by ASX pursuant to Listing Rule 19.11A, the corresponding equivalent standard applies to this report.
3. Dividends received may be classified either as cash flows from operating activities or cash flows from investing activities, depending on the accounting policy of the entity.
4. If this report has been authorised for release to the market by your board of directors, you can insert here: "By the board". If it has been authorised for release to the market by a committee of your board of directors, you can insert here: "By the [*name of board committee – eg Audit and Risk Committee*]". If it has been authorised for release to the market by a disclosure committee, you can insert here: "By the Disclosure Committee".
5. If this report has been authorised for release to the market by your board of directors and you wish to hold yourself out as complying with recommendation 4.2 of the ASX Corporate Governance Council's *Corporate Governance Principles and Recommendations*, the board should have received a declaration from its CEO and CFO that, in their opinion, the financial records of the entity have been properly maintained, that this report complies with the appropriate accounting standards and gives a true and fair view of the cash flows of the entity, and that their opinion has been formed on the basis of a sound system of risk management and internal control which is operating effectively.