

**IN THE HIGH COURT OF NEW ZEALAND
AUCKLAND REGISTRY**

**I TE KŌTI MATUA O AOTEAROA
TĀMAKI MAKĀURAU ROHE**

**CIV-2016-404-2256
[2018] NZHC 1724**

BETWEEN SEALEGS INTERNATIONAL LIMITED
Plaintiff

AND YUN ZHANG
First Defendant

ORION LIMITED AND ORION MARINE
LIMITED
Second Defendants

SMUGGLER MARINE LIMITED
Third Defendant

DARREN LEYBOURNE
Fourth Defendant

CONT...

Hearing: 2, 3, 4, 5, 6, 9, 10, 11, 12, 13, 16, 17, 18, 19, 20, 24, 25, 26
October, 6, 7, 11, 12, 13 December 2017

Appearances: B P Henry & C S L Foster for Plaintiff
P J K Spring & A K Hyde for first, second, third, fourth, sixth and
ninth Defendants

Judgment: 12 July 2018

Reissued: 6 December 2018: see Judgment of 5 December 2018

JUDGMENT OF PAUL DAVISON J

*This judgment was recalled and reissued by me on 6 December 2018 at 4:00 pm
pursuant to r 11.5 of the High Court Rules.*

Registrar/Deputy Registrar

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CONT...

AND

VLADAN ZUBCIC
Sixth Defendant

WARREN FARR
Seventh Defendant

DAVID PRINGLE AND PAULINE
PRINGLE
Ninth Defendants

STRYDA MARINE LIMITED
Tenth Defendant

TABLE OF CONTENTS

Introduction	[1]
Background	[8]
<i>Concept boat 1</i>	[11]
<i>Concept boat 2</i>	[15]
<i>First model – prototype boat 1</i>	[18]
<i>Mr Leybourne commences employment at Sealegs</i>	[24]
<i>The Sealegs three-wheel drive system – Prototype boat 136</i>	[29]
<i>Project 100</i>	[34]
<i>Mr Leybourne resigns</i>	[37]
<i>The Sealegs USB data stick</i>	[39]
<i>Mr Zhang visits New Zealand and presents Mr Leybourne with a business proposition</i>	[44]
<i>Orion is incorporated and the business established</i>	[53]
<i>Mr Zubcic designs a wheel with an off-set rim</i>	[59]
<i>Sealegs provides Orion with its detailed specifications</i>	[63]
<i>Shanghai boat show in April 2014</i>	[71]
<i>SL100 project suspended</i>	[74]
<i>Sealegs CEO photographs the Orion ARC600 craft</i>	[76]
<i>Shanghai boat show in April 2015</i>	[88]
<i>Smuggler Marine’s use of the Sealegs system</i>	[98]
<i>Mr Pringle approaches Orion</i>	[105]
<i>Orion starts work on producing a three-wheel system for Smuggler</i>	[111]
<i>Mr Pringle reports to Mr Leybourne</i>	[136]
<i>Peter Allen visits Smuggler Marine – 7 September 2016</i>	[148]
<i>Sealegs commences proceedings and applies for interim injunctions</i>	[151]
The expert witnesses	[155]
<i>Dr Bruce Field</i>	[158]
<i>Dr Shayne Gooch</i>	[163]
<i>Mr David Dippie</i>	[168]
<i>Mr Brian Bellingham</i>	[175]
<i>Mr Peter Allen</i>	[179]
Law and relevant legal principles: Analysis and discussion	[189]
<i>Identifying the alleged copyright works</i>	[192]

Originality	[198]
<i>The plaintiff's case regarding originality</i>	[208]
<i>The defendants' case regarding originality</i>	[212]
<i>Analysis and discussion regarding originality</i>	[214]
<i>Are the Sealegs prototypes or the CAD models the original expression of Mr Bryham's ideas?</i>	[220]
Ownership: Does the plaintiff own copyright in the three models?	[226]
<i>The plaintiff's submissions</i>	[231]
<i>The defendants' response</i>	[234]
<i>Analysis and discussion regarding ownership</i>	[235]
Infringement	[246]
Objective similarity	[250]
<i>The parties' submissions</i>	[253]
<i>Functional constraints affecting design</i>	[259]
<i>Objective similarity in the front leg assemblies on Orion S25-3WD and Sealegs S60-3WD: analysis and discussion</i>	[262]
<i>Objective similarity in the rear leg assemblies on Orion S25-3WD and Sealegs S60-3WD: analysis and discussion</i>	[272]
<i>Objective similarity between the Orion S25-4WD front leg assembly and the Sealegs S60-3WD and SL100</i>	[278]
<i>Conclusions as to objective similarity</i>	[284]
Causality and derivation	[286]
<i>The plaintiff's submissions as to causality</i>	[296]
<i>The defendants' submissions as to causality</i>	[311]
<i>The issues</i>	[316]
<i>Mr Leybourne and the USB data stick</i>	[319]
<i>Mr Zhang's visit to New Zealand and the establishment of Orion</i>	[325]
<i>The Zubcic / Redpath conversation and its implications</i>	[332]
<i>Opportunity to copy</i>	[338]
<i>Was the Orion system developed by means of an independent design path?</i>	[341]
(i) <i>The significance of the defendants' conceptual design decisions</i>	[343]
(ii) <i>The four-stage design process</i>	[356]
(iii) <i>The defendants' design path documentation and chronology</i>	[366]
(iv) <i>Absence of documentation</i>	[377]
(v) <i>Conclusion as to independent design path</i>	[388]
<i>Functional constraints and their relevance</i>	[389]

(i) Submissions	[390]
(ii) Analysis and discussion regarding functional constraints	[395]
Substantiality	[402]
<i>The plaintiff's submissions</i>	[410]
<i>The defendants' submissions</i>	[413]
<i>Conclusions as to substantiality</i>	[418]
Summary and conclusions as to infringement of copyright	[421]
<i>Overview</i>	[421]
<i>Conclusion as to alleged copyright infringement by first, second, fourth, and sixth defendants</i>	[435]
<i>Conclusion as to alleged copyright infringement by Smuggler Marine (third defendant) and David and Pauline Pringle (ninth defendants)</i>	[437]
<i>Alleged copyright infringement by Stryda and its directors</i>	[448]
Relief	[454]
<i>Plaintiff's allegation of flagrant breach of copyright</i>	[454]
Design registration	[463]
<i>Submissions</i>	[463]
<i>Analysis</i>	[465]
Result	[472]
Costs	[479]

Introduction

[1] The plaintiff, Sealegs International Ltd, manufactures amphibious kits for installation on small boats. These feature retractable legs that enable boats to be driven over land and into and out of the water. Once afloat, the legs are retracted entirely clear of the water so that they are positioned in front of the bow and at the stern of the boat. When returning to shore the retracted legs are again extended, and the craft may be driven out of the water and back up the beach or ramp. The powered wheels enable the craft to be driven at a moderate speed on land.

[2] The design and development of the Sealegs amphibious system was the work of Mr Maurice Bryham, who built and tested initial versions of his designs over a period of years commencing in 2000. Sealegs has since achieved commercial success using the core pattern or arrangement of components developed by Mr Bryham, having sold significant numbers of its amphibious craft in New Zealand and internationally.

[3] Orion Marine Limited was incorporated in 2012 to compete with Sealegs by developing amphibious leg kits for application on medium-sized runabout boats of the same size and type as those using the Sealegs amphibious system. Its business was established by the fourth defendant, Mr Darren Leybourne, a former employee of Sealegs, and the first defendant Mr Yun Zhang. Shortly afterwards the sixth defendant, Mr Vladan Zubicic, also left his employment at Sealegs and joined Orion Marine.

[4] Sealegs now alleges that Orion Marine Limited and the other defendants have infringed its copyright interests as the creator of original artistic works as expressed in three specified models of its craft, each of which are equipped with its amphibious retractable leg system. Sealegs claims that it owns copyright in the way in which it has combined and arranged the functional components of its retractable amphibious leg assembly. It says that the amphibious leg assembly constitutes a unique pattern of components, albeit using well-known engineering mechanisms and principles.

[5] On 19 December 2016 Sealegs was granted an interim injunction restraining Orion and the other defendants from doing any acts that would infringe Sealegs' claimed copyright. Sealegs now seeks relief by way of a permanent injunction

restraining the defendants from manufacturing, displaying, offering for sale or selling copies of the plaintiff's copyright works either in New Zealand or any other country until the expiry of its copyright interests. Sealegs also seek an inquiry as to damages or at its election an account of profits derived from the copying of its copyright pattern.

[6] There are ten defendants, although the plaintiff has discontinued proceedings against the fifth and eighth defendants. The first defendant, Mr Zhang, is the owner and director of the second defendants, Orion Limited and Orion Marine Limited. The third defendant is Smuggler Marine Limited, a boat-building company of which the ninth defendants (David and Pauline Pringle) are directors. The fourth, sixth and seventh defendants, (Darren Leybourne, Vladan Zubcic and Warren Farr respectively) are former employees of the plaintiff. The tenth defendant is a company, Stryda Marine Limited, of which Mr Zhang is the sole director.

[7] References to "the defendants" throughout this judgment should be taken as referring to the Orion defendants, namely Orion Ltd, Orion Marine Ltd, Mr Leybourne, Mr Zubcic and Mr Zhang. The specific liability of the remaining defendants will be addressed at the conclusion of the judgment.

Background

[8] As noted above, the Sealegs amphibious system was the work of Mr Maurice Bryham, now the Chief Technology Officer of Sealegs. Mr Bryham resided at a beachside location in Auckland and was inspired to design and construct a three-legged amphibious boat with supporting legs and powered wheels that could be manoeuvred while on land, driven from the beach into the water and the legs then retracted when the boat was afloat. Sealegs was incorporated on 5 October 2000, with Mr Bryham as its sole director and majority shareholder.

[9] Mr Bryham set out to design and construct a product that would appeal to the high end of the recreational boating market, and which would provide the convenience and safety of a boat that could be launched and returned to land without the occupants having to leave the craft. He explained in his evidence that while there are many different ways of attaching and retracting supporting legs fitted to the hull of a boat, his idea was to locate the legs and wheels, as well as the hydraulic actuator that would

power the extension and retraction of the legs, all entirely external of the hull. When retracted, the legs and their wheels would be elevated above the waterline so as not to compromise the hull's hydrodynamic performance.

[10] Mr Bryham further explained that while other solutions might involve raising and lowering the wheels vertically, or incorporating a hinge to enable the legs to be folded and more compact when retracted, he decided to employ an extension/retraction movement of the front leg by attaching it to a pivot point located on the bow above the waterline, and extending and retracting it by means of a hydraulic-powered actuator lifting and rotating the leg through a semi-circular arc as it moved from a near vertical position when fully extended, up to its fully retracted position. When fully retracted into the up position, the wheel would sit in front of the bow and the tyre would act as a bumper to protect the hull from contact with a wharf or other craft. Similarly, the rear legs and their actuators would also be located on the outside of the hull. When extended or lifted by a hydraulic actuator, they would rotate around a pivot point located on the transom above the waterline, and when retracted they would be elevated above the waterline into an open position at the stern of the boat.

Concept boat 1

[11] Mr Bryham commenced his design project with the construction of his first boat and model which is conveniently described as "concept boat 1". Mr Bryham constructed this boat entirely by himself. He purchased a 4.7 metre rigid-inflatable boat (RIB) and built wooden mock-ups of legs and wheels to create a pattern for the external legs and to work out the placement of the leg pivot points and actuator connection points on the hull, as well as the geometry of the movement they were required to perform in order to extend and retract externally of the boat. Having settled upon a system, he then had the pattern of his wooden mock-ups replicated by a stainless-steel fabricator. On this initial boat, the front and rear legs – which rotated around external pivot points – were manually lifted out of the water and the rear wheels were electrically driven. Mr Bryham considered several possible methods of steering the boat, including by means of driving and controlling the rear wheels independently. However, the solution he chose was to steer the front wheel by means of an external actuator which would turn the front wheel. Working in his garage at home, he himself

assembled the legs and attached the amphibious leg system onto the RIB he had purchased. He then tested the completed concept boat 1 by driving it from his garage to the nearby beach, and into and out of the water.

[12] After testing concept boat 1, Mr Bryham proceeded to improve and develop the design. From his test driving on the beach and from launching and returning to shore, he decided that the rather small wheels and tyres used on concept boat 1 should be replaced with larger and wider wheels and tyres with a larger diameter in order to reduce the ground pressure. He also decided to use tyres with a particularly well-defined and prominent tread pattern in order to improve traction over sand and beach terrain.

[13] During the design and development of concept boat 1, Mr Bryham and Sealegs engaged Pipers Patent Attorneys (Pipers), and on 17 December 2001 lodged a patent application for an invention described as “Motorised Retractable and Steerable Boat Wheel System”.

[14] Then on 23 December 2002, with the assistance of Pipers, Sealegs lodged a Design Registration with the New Zealand Intellectual Property Office (NZIPO). The design was registered by the NZIPO and published on 16 January 2003, and following subsequent renewals had a final expiry date of 23 December 2017. The design registration ‘Statement of Novelty’ stated that the novelty of the design resides in the shape and configuration of the boat as depicted in the accompanying representations, being computer-generated images which show the boat as having a retractable undercarriage system and which demonstrate both the wheels-up and wheels-down positions. The computer images show that when retracted, the front wheel is almost entirely concealed within a recessed cavity located at the bow between the inflatable pontoons. The computer images show the rear legs when retracted to be almost fully covered and enclosed within a recessed cavity at the rear of each of the pontoons.

Concept boat 2

[15] Mr Bryham and Sealegs then proceeded to further develop the design and system by means of “concept boat 2”. To provide the basis for concept boat 2, once again a standard RIB boat was purchased from its manufacturer for modification by

Sealegs. To assist in developing the initial design and the production of the second concept model, Sealegs and Mr Bryham engaged several businesses and consultants. Mr Thomas Gardiner of Fulcrum Solutions Ltd (Fulcrum) was engaged to produce computer-based engineering drawings of the various development pathways being considered and the amphibious legs and their associated fittings. Mr Leybourne, then the owner and principal of Central Hydraulic Services Ltd (Central Hydraulics), was engaged to provide advice regarding the hydraulic system required to power the actuators which would extend and retract the legs, and to power the hydraulic motors used to drive the rear wheels.

[16] During the early stages of the development of concept boat 2, Mr Bryham was advised by Fulcrum to dispense with his idea of rotating the front wheel forward and away from the bow, and instead retract it backwards towards the stern of the boat and into a recess created within the hull form. To demonstrate its proposed solution, Fulcrum had the hull recess built as a mock up. Mr Bryham, however, preferred his original concept boat 1 geometry with the front leg rotating forward, so that when fully retracted, the leg and wheel were positioned in the open directly in front of the bow. He then built his own mock up to demonstrate the forward pivot system he had earlier developed with concept boat 1, and which he preferred as being a simpler solution for both the front and rear legs by being fixed and functioning on the outside of the hull and without requiring any modification of the hull form to accommodate them.

[17] The concept boat 2 model had the hydraulic retraction system of the front leg located inside the hull. Part of the front wheel steering system was also contained inside the hull. The front wheel was secured by an inverted “U” shaped fork, and the rear legs were retractable by means of an external hydraulic lift cylinder. In the course of its development the system initially used electric motors to drive the wheels, then hydrostatic drive, then mechanical drive, before hydraulic power was finally selected to drive the wheels. The hydraulic drive system for the rear wheels used a hydraulic motor located inside the hull with chains running inside the rear legs, which had larger wheels and tyres with a more defined tread than had been used previously on concept boat 1.

First model – prototype boat 1

[18] With the lessons learned from the development and construction of concept boat 2, Sealegs and Mr Bryham then set about the design and construction of what was to become prototype boat 1. As had been the case with concept boat 2, once again Sealegs engaged a number of outside businesses and consultants to assist with the process, including Mr Gardiner of Fulcrum and Mr Leybourne of Central Hydraulics.

[19] In the course of developing the design of prototype boat 1, Mr Gardiner and his Fulcrum staff produced engineering drawings of alternative development pathways that could be adopted, including the partly internal steering arrangement used on concept boat 2. Mr Bryham decided, however, that the partly internal steering arrangement was too complicated as it required a number of additional mechanical parts to engage and disengage the steering mechanism when the front wheel was extended or retracted. He decided to revert to his original design as employed in concept boat 1, with both the front leg lifting actuator and the steering actuator located external to the hull, and with the rear leg lifting actuators also external to the hull. This arrangement was considered not only simpler, but also had the advantage that the legs and wheels were entirely clear of the water when retracted, without compromising the hydrodynamic qualities of the hull.

[20] Mr Bryham said in evidence that after discussions with the Fulcrum staff and consideration of a number of their drawings of his front leg and wheel design, he and Mr Gardiner sat together at Fulcrum's design computer and prepared drawings to his specifications which were then entered into the SolidWorks CAD program¹ to produce a series of computer-generated renderings, or images, of the design showing what a manufactured boat would look like. Sealegs then commissioned Metal Designs Auckland Ltd (Metal Designs) to prepare engineering drawings of the components required to construct the rear legs.

[21] Mr Bryham and Sealegs then engaged Metal Designs to construct the hull and the rear legs for prototype boat 1. Fulcrum was engaged to manufacture parts. The front leg and wheel assembly was manufactured by Gilbert Sheet Metals Ltd, which

¹ CAD, computer-aided design.

was engaged and paid by Sealegs to construct the front leg in accordance with the engineering drawings prepared by Fulcrum to Mr Bryham's design.

[22] Mr Leybourne and Central Hydraulics were also engaged by Sealegs to provide advice regarding the hydraulic system. The hydraulic cylinders or actuators were ordered by Mr Bryham and built by Victor Hydraulics for Sealegs. The plaintiff produced invoices from the consultants it engaged and Mr Bryham explained in his evidence that all of the parties engaged and commissioned by Sealegs were paid for their work, and in each case they designed or built pursuant to his instructions and specifications.

[23] Prototype boat 1 was approved for production in late 2003 to early 2004, and the retractable leg assembly developed for prototype boat 1 was known as "System 40". Production drawings were subsequently prepared based on the prototype model, with the first production boat sold on 30 April 2004. As already noted, the initial design of the front leg had the wheel secured in an inverted U-shaped fork. The U-shaped fork was found to be subject to bearing and shaft failure and, because it used a different wheel from that on the rear legs, it also meant that a boat owner would need to have two different wheels for use as spares. Mr Bryham also wanted to produce a more aesthetically pleasing and sculpted look for the front leg, and decided that an inverted L-shaped single arm with a rectangular cross-section design would be an improvement. An engineering company was engaged to construct a prototype of this new front fork and once approved, production drawings of the new fork were commissioned by Sealegs. The new inverted L-shaped fork was brought into production and became a feature of all Sealegs boats sold from 5 September 2005.

Mr Leybourne commences employment at Sealegs

[24] In April 2004 Mr Leybourne commenced employment at Sealegs. He had earlier that year sold his hydraulics business in which he was principally involved in the servicing and repair of existing hydraulic systems, including marine-based systems. As I have already noted, he had been engaged by Sealegs during the period between 2002 and 2004, through his company Central Hydraulics, to make and supply hydraulic components and to provide technical consultant services relating to the

hydraulics to be used by Sealegs for extending and retracting the amphibious legs and for driving the rear wheels on concept boat 2 and prototype boat 1. Upon commencing employment with Sealegs, Mr Leybourne was initially engaged in a mechanical fitting role where he was involved with the construction of Sealegs boats. Subsequently, between 2004 and 2006, he also became involved in the repair and servicing of Sealegs boats within New Zealand and overseas.

[25] Around 2006 Mr Leybourne's work at Sealegs shifted from day-to-day operational work to that of project management. This included managing the establishment of an in-house hull fabrication process, which was a significant undertaking that involved the creation of a new business unit, the leasing of premises, significant capital expenditure on equipment, and the recruitment of staff, as well as the establishment of new operational procedures and systems. Once Mr Leybourne had successfully completed this project he ceased involvement in its day-to-day operational management, while still maintaining a supervisory role. In 2009, following staff redundancies at Sealegs that resulted in a number of key operational staff leaving the company, Mr Leybourne resumed his responsibilities for day-to-day management of the hull fabrication operation.

[26] In mid-2010 Sealegs decided to bring the manufacture of machined components in-house. Mr Leybourne was given the role of managing the establishment of this new operation, which once again required Mr Leybourne to oversee and manage significant capital expenditure, the recruitment of staff, and the establishment of new systems and procedures. In the course of this project, Mr Leybourne worked closely with Mr Zubcic, who had commenced his employment at Sealegs as a mechanical and design engineer in February 2008. Once these projects had established in-house manufacturing operations and capability, Mr Leybourne and Mr Zubcic recommended the purchase and use of a computer-based material requirements planning (MRP) programme to more efficiently control and manage the production operation. Once again, the establishment of the MRP system was undertaken and managed by Mr Leybourne, and it produced significant benefits in terms of monitoring production capacity and planning.

[27] Mr Leybourne explained in his evidence that although he was a hydraulic specialist, hydraulics-related work was only a small part of the Sealegs business, and comprised only a small part of his work at Sealegs. Over time, his project management and operational management responsibilities expanded and he eventually became responsible for the on-going management of approximately 28 staff.

[28] Throughout his employment at Sealegs, Mr Leybourne was frequently critical of decisions made by Sealegs senior management and often raised his concerns in a forthright and outspoken manner. He frequently commented on what he considered to be manufacturing faults and defects, and about what he saw as being a general lack of quality control and assurance in the production of the boats. He was especially critical of Sealegs for selling boats intended for use for commercial applications, as he considered the boats and their amphibious systems had neither been designed nor proven suitable for such purposes.

The Sealegs three-wheel drive system – Prototype boat 136

[29] Around August 2009, Sealegs decided to develop and introduce a three-wheel drive system by adding drive power to the wheel of the front leg. Mr Leybourne was asked by management to take responsibility for this project. He strongly resisted being assigned to the project, saying that he had made a “unique” contribution to the success of Sealegs in his existing role where he was engaged in the fabrication of the boats. He also considered that the production of quality hulls needed to be prioritised over the creation of a three-wheel drive system. In a lengthy email sent to Mr Bryham and Mr McKee-Wright² on 4 August 2009, Mr Leybourne wrote:

Why build a three wheel drive system when our main fuel tanks have potential leaks, our aux fuel tanks do not fabricate square, the fuel overflow boxes are custom fitted each time, or, when we employ a new fabricator he builds the hull 12 mm to [sic] long or welds on the wrong leg brackets because we do not have the build manuals, or, or, or.

You want me to walk away from continuing to set up fabrication, driving quality, improving output to build three wheel drive?

Is Sealegs suffering because we cannot build a three wheel drive boat? Not from what I can see. Production capacity restraint seems to be a bigger challenge to overcome.

² Mr McKee-Wright was Sealegs' CEO.

Will we suffer if we cannot produce a sufficient quantity of quality hulls? YES we will.

Interesting how the fabrication facility with all the cool stuff, router, press brake, CAD etc has become one of our most powerful sales tools.

...

Why else am I unique, because I have a vision for Sealegs that many others dont [sic]. I continue to see new ideas, new products, and new ways of doing. These I believe have considerable potential to continue to make Sealegs product a world beater.

My dossier on these products is great. Most others simply pass by these new ideas without giving any thought to how much better they can make the Sealegs product.

...

So in summary, I quote from todays [sic] meeting we have reached an impasse because I am being asked to stop doing the job that I was asked to do because there was nobody else available after the last round of redundancies, a job that I have made significant head way into, a job that I am enjoying, a job that I have been acknowledged as doing well.

...

It is madness to have an individual of my calibre being put is [sic] this position. The last 12 months have been very stressful this now just adds to the stress and anxiety.

...

[30] Despite his initial opposition, Mr Leybourne relented and became involved in Sealegs' development of a three-wheel drive system with a powered wheel on the front leg. Mr Leybourne's work related particularly to the hydraulic functioning and controls. The three-wheel drive system became known as 'Prototype boat 136' and was a three-wheel drive version of the standard Sealegs production boat. It was subsequently released to the market in 2010. The introduction of power to the front wheel meant that as the craft transitioned from floating to being supported on its legs, the craft would be drawn by the front wheel when it made contact with the beach or ramp, instead of being pushed by the outboard motor until the rear driving wheels had made sufficient contact with the ground to gain traction and provide forward motion.

[31] The introduction of a hydraulic hub motor to power the front wheel required redevelopment of the hydraulic system and its controls. Mr Leybourne was involved in the design and development of the hydraulic system. Sealegs also engaged the firm

Hydraulic Cartridge Valves Ltd (HCV) to assist with the system design. In his evidence Mr Leybourne said that his involvement was in the nature of project management and that he had suggested that Sealegs engage HCV to design the hydraulic circuit and supply the valves.

[32] A new differential lock system and a redesigned front steering arm were further modifications that were introduced on prototype boat 136. Apart from those features, prototype boat 136 was substantially the same as prototype boat 1. It was called prototype boat 136 because the boat used as the basis for development of the prototype was Sealegs' 136th production boat.

[33] Prototype boat 136 was constructed in-house by Sealegs, as by 2010 the company had established its own fabrication and assembly workshop. Once testing of the prototype was completed, prototype boat 136 was approved for production, and production drawings were thereafter prepared by Sealegs' own engineering and computer design staff, principally Mr Zubcic. Once in production, the three-wheel drive system was called "System 60" and became an option for customers to purchase. It proved very popular, and the fiftieth "System 60" was sold on 31 May 2011.

Project 100

[34] In mid-2010 Sealegs initiated a project to develop a new heavy-lift Sealegs system for use on larger craft. The first phase of this project became known as "Project 100". The objective was to upscale the existing System 40 and develop a system that would support an amphibious craft weighing 5000kg with a length of around nine metres. Initially, Sealegs recruited a team of design engineers to specifically undertake Project 100. Mr Paul Hood and Mr Anthony Wraight were the principal design engineers and they were assisted by Mr Andrew Percival.

[35] Mr Percival is a qualified engineer who had previously operated an engineering manufacturing business called Allied Precision Engineering (1992) Ltd (APEL). From around 2003, APEL had been engaged by Sealegs to manufacture component parts, and Mr Percival had redesigned and made parts required for Prototype 1 and Prototype Boat 136. In 2010 he sold APEL's assets to Sealegs; his machinery was

then relocated and set up at Sealegs' factory, and he commenced working for Sealegs as an employee.

[36] Because of his hydraulics expertise Mr Leybourne also became involved in Project 100. He undertook the calculations of the hydraulic requirements and specifications for the proposed 5000kg craft weight. These calculations dictated the choice of hydraulic components and those choices in turn dictated aspects of the design of the functional leg assemblies' components. Mr Hood and Mr Wraight directed the manufacture of the prototype leg assemblies which were fitted to a test platform known as the "the barge". In around July 2011, Project 100 was suspended because of funding issues, and Mr Hood and Mr Wraight were made redundant and left Sealegs.

Mr Leybourne resigns

[37] By email dated 31 May 2011, Mr Leybourne notified Mr Bryham of his resignation. He explained that he had made his decision to resign following the announcement of a new reporting structure for the upper level of Sealegs management which would have him reporting to the Operations Manager and not directly to the new CEO who was to be based in Hong Kong. He said that he had some flexibility before taking up new employment and was happy to negotiate his final date at Sealegs. In his evidence Mr Leybourne explained that he was unhappy at Sealegs for a number of other reasons relating to the senior management of the company, and that when confronted with the new reporting structure it was the "last straw" and he had made "a bit of an impulse decision to resign on the spot."

[38] A short time after handing in his resignation, and after Mr Hood and Mr Wraight had already left the company, Mr Leybourne was asked to finish Project 100 with the assistance of Mr Percival and Mr Warren Farr (the seventh defendant) before he left Sealegs. As a result, Mr Leybourne became involved in managing the construction of the barge, and the installation of the Project 100 amphibious leg assembly system onto it, and he was present when it was first launched in November 2011 shortly before his last day at the company on 30 November 2011.

The Sealegs USB data stick

[39] Mr David Redpath is employed at Sealegs as a Production Safety Manager and was called as a witness by the plaintiff. In 2011 he was working as a Machining Manager reporting to Mr Leybourne. He said that in the weeks before Mr Leybourne left the company, he had told him a “bizarre story” about having been given a Sealegs USB stick that had been found by a friend of his on a beach near Dunedin. Mr Redpath said that Mr Leybourne told him that a friend of his had found the USB stick while walking on a Dunedin beach, and had given it to Mr Leybourne as it contained Sealegs files. Mr Redpath said that Mr Leybourne said that he was downloading the stick onto his computer at home, and that it contained “everything including financials”.

[40] Mr Redpath said that he considered the finding of the USB stick as indicating there had been a serious security breach, and that he had commented to Mr Leybourne at the time that he thought someone would lose their job at Sealegs because of it. He said that Mr Leybourne had said it would not be possible to find out who had downloaded the information onto the data stick. Mr Redpath said that he had also commented to Mr Leybourne that there were only three or four people in the company who would have access to the information.

[41] Mr Redpath said that although he considered the matter as representing a very serious security breach by someone with access to the inner security files held in the Sealegs computer system, he himself did not report this information to anyone as Mr Leybourne was his “boss”, and he expected that Mr Leybourne would himself raise the matter with the senior executives of the company.

[42] Mr Leybourne in his evidence disputed Mr Redpath’s account of the conversation. He denies having told Mr Redpath that the USB stick had “everything including financials” on it, or that he had said that he was downloading the stick onto his computer at home. Mr Leybourne said in his evidence that he was telephoned by a friend of his, Mr Rod Nicol, who had previously done some building work for Sealegs and who knew that he worked there. He said that Mr Nicol told him that he had been in Dunedin and had found the Sealegs USB stick while walking along a beach. Mr Leybourne said that he did not remember whether the USB stick had

Sealegs' name on it or whether Mr Nicol had opened it on a computer and had seen it contained Sealegs information. Mr Leybourne said that after Mr Nicol gave him the data stick, he would have checked what was on it using a company computer, and saw that it had pdf drawings of the Sealegs parts at that time. Mr Leybourne said that he could not recall precisely what he had done with the data stick, but suggested he had given it to "one of the CAD guys". He said that so far as he was concerned it was a "non-issue".

[43] Mr Rodney Nicol, who is a building contractor in Auckland, gave evidence for the defendants by means of a signed witness statement. He was not required by the plaintiff to give evidence in person or be cross-examined. In his statement he said that as a result of an introduction by his friend Mr Leybourne, he had undertaken building work at Sealegs. He said that when in Dunedin with his wife in October 2011, he had found a USB stick while walking along a beach. He said that he picked it up and saw that it had something on it which said Sealegs. He said after he returned to Auckland, he contacted Mr Leybourne, told him the story and dropped the USB stick off to him.

Mr Zhang visits New Zealand and presents Mr Leybourne with a business proposition

[44] Mr Leybourne said in evidence that at the time of his resignation and departure from Sealegs on 30 November 2011, he had no plans for any other employment, and had decided that he would take some time off work for a while and see how he felt after that. However, he says that he did undertake some contract work for hydraulics companies in New Zealand and Australia doing hydraulic system repairs and installations of the kind he had been involved with before joining Sealegs.

[45] Mr Leybourne says that once back working in hydraulics, his knowledge of the field was updated, and he started seeing where the industry was going and saw ideas that could be applied to other amphibious systems. He said that he was particularly impressed with the evolution of hydraulic controls and thought there were some great ideas and new concepts that could be applied to amphibious systems, and this sparked his thinking. However, despite undertaking research and considering the possible applications of hydraulic controls and equipment in amphibious system applications,

Mr Leybourne says that he had no intention of setting out to create a new amphibious system himself at that time.

[46] Then in mid-2012 Mr Leybourne says he received a surprise visit to his home from Mr Zhang. Between 2003 and 2007, when Mr Zhang was a student, he had lived with Mr Leybourne and his family on a homestay basis. After Mr Zhang returned to China they had maintained contact. Mr Leybourne said that Mr Zhang had travelled to Auckland from China accompanied by his wife and their young child, but until their unannounced arrival at the Leybourne residence, Mr Leybourne says he had no idea that Mr Zhang was even in New Zealand. Although he says he can remember the visit “vividly”, Mr Leybourne is unable to be specific as to the date or even the month of Mr Zhang’s visit. He says the visit was a big surprise and took place on a Friday night in the middle of winter, “possibly May, June in 2012.”

[47] Mr Leybourne says that Mr Zhang explained to him that he and his wife had come for a week to see if she would like New Zealand as a place to live. Mr Zhang said that if they decided to move to New Zealand, they would do so under the immigration entrepreneurial scheme and would establish a business which would employ a number of people. Mr Leybourne says that Mr Zhang then asked him if he would like to go into business with him. Mr Leybourne says that he suggested to Mr Zhang that he and his wife should proceed with their trip first, and then come back and see him again in a week. If they had decided to apply for residence in New Zealand, they could discuss the matter of starting a business together further.

[48] Mr Leybourne says that a week later Mr Zhang and his wife returned and said that they had decided to apply for New Zealand residence and that Mr Zhang wanted to involve Mr Leybourne in establishing a new business. Mr Leybourne says that no decision was made during Mr Zhang’s visit to New Zealand as to what type of business they would go into, and after Mr Zhang and his wife had returned to China they had initially considered exporting milk powder and Manuka honey to China. Mr Leybourne says although in hindsight it was an obvious choice, he cannot remember when the idea of an amphibious boat business came up. He said that he had seen that Sealegs had been enjoying a monopoly in the amphibious boat market and thought that he could do better than they were doing.

[49] Mr Zhang gave his evidence by way of video link from China. He gave his evidence in capable English without the need for any assistance from an interpreter. He confirmed that he is the sole director and shareholder of both Orion Marine Limited and Orion Limited, and the sole director of the tenth defendant, Stryda Marine Limited (Stryda). He said that he and his family moved to New Zealand in 2015 and that he obtained permanent residency in January 2017.

[50] Mr Zhang explained that he was born in China and had lived and studied in New Zealand from 2002 (when aged 18) until April 2007, and had lived with Mr Leybourne and his family from 2003 until his return to China. He said that since 2008 he had been a director of one his family's companies called Jiangyin Rongxing Technology Development Co Ltd (JRTD), which was started in 2001 and which currently manufactures and markets amphibious craft in China as "Surfcon". He said he came to New Zealand to talk to Mr Leybourne about business opportunities, and that it was Mr Leybourne who had suggested that they establish an amphibious boat business.

[51] Consistently with Mr Leybourne's account, Mr Zhang said that he and his wife and son came to New Zealand during the winter of 2012 and met with Mr Leybourne. However, contrary to Mr Leybourne's account, Mr Zhang says that he only met with Mr Leybourne once during that visit. He said that he did not really talk about business with Mr Leybourne other than saying he was looking for business opportunities outside China and that maybe they could work together.

[52] Mr Zhang was unable to specify or confirm the date or year of his visit to New Zealand when he came and met Mr Leybourne to discuss going into business. He said that he had renewed his Chinese passport in 2016, and could not find his previous passport, explaining that he had moved house twice in the time since that visit to New Zealand. He said that he had come to New Zealand in 2009 for a brief visit but had not been back in New Zealand again until his visit in 2012 when he met with Mr Leybourne.

Orion is incorporated and the business established

[53] On 28 September 2012, Orion Marine Limited was incorporated. Mr Zhang provided the funding and Mr Leybourne was responsible for locating and arranging to lease premises and the purchase of plant and equipment for the manufacture of components. Mr Leybourne explained in his evidence that there was never any concealment of the intention to set up Orion to design and manufacture a new amphibious system. As part of the planning for the establishment of Orion, Mr Leybourne had spoken to Mr Zubcic and offered him employment at Orion. Mr Zubcic agreed and he resigned from Sealegs effective from 2 February 2013 and straightaway commenced employment at Orion.

[54] In early 2013 Mr Bryham, who by then knew that Mr Leybourne was setting up the new business, contacted Mr Leybourne and said that Sealegs would like to be Orion's first customer. He said that Sealegs wanted to engage Orion to assist with the completion of projects such as S60 SE, which was based on using a single engine for both marine and land power, and with System 100 (SL100) which had previously been called Project 100.

[55] Mr Leybourne and Orion agreed, and Sealegs' terms of engagement with Orion in relation to SL100 were set out in a detailed written design brief which was negotiated during March 2013 and dated 9 April 2013. The design brief stated that Orion was to design, manufacture, install and validate an amphibious system suitable for craft up to 6000kg gross vehicle mass (GVM) and stipulated that SL100 geometry is based on the existing SL40. At Sealegs' request the design brief further provided that:

The intellectual property of all proprietary components that are designed as part of SL100 shall be the sole ownership of Sealegs Corporation Ltd.

[56] In addition to the design brief, Orion required Sealegs to complete an account application form and provided Sealegs with its written "Terms of Trade" which stated:

These Terms apply to every supply of Goods and Services made by Orion to the Customer. By placing an Order with Orion, the Customer agrees that it is bound by these Terms and that the Customer's own terms and conditions do not apply. These Terms may be modified by Orion's specific terms in a Quote or Order.

...

Nothing in this agreement will be construed as transferring to the Customer any intellectual property of Orion (including in relation to any designs, manuals, drawings, or other materials or information provided to the Customer).

[57] When Mr Leybourne for Orion accepted Sealegs' engagement to work on SL100, he realised that Orion would not have the engineering and design resources sufficient to develop its own amphibious system while also undertaking the SL100 project. Mr Zubcic was to be responsible for the design engineering of Orion's new amphibious system project, and so Mr Leybourne employed Mr Percival to take on the design engineering for SL100. Recognising the conflicting interests of Orion and Sealegs, Mr Leybourne organised for Mr Zubcic and Mr Percival to occupy separate offices, while he "floated between both projects".

[58] Because of the increase of the GVM from the 5000kg applicable to the Project 100 barge to the 6000kg GVM for SL100, the engineering design process had to start again from scratch. This applied not only to the hydraulic calculations undertaken by Mr Leybourne, but also to all the components that Mr Percival was required to design for SL100. In terms of the appearance of the leg assemblies, Mr Bryham wanted the design to maintain the existing curved form of the existing Sealegs assemblies. While Mr Percival was the principal design engineer during the early phase of SL100's development, he did not have the expertise necessary to run the FEA (finite element analysis) computer simulation system which was used to analyse the strength of designed components. Consequently Mr Zubcic operated and ran the FEA of Mr Percival's component designs during 2013, and in doing so inevitably became familiar with the SL100 components that Mr Percival had designed.

Mr Zubcic designs a wheel with an off-set rim

[59] Mr Zubcic said in evidence that one of the first things he did at Orion to commence the design and development of Orion's amphibious system was to prepare some sketches of a wheel with an off-set rim. An off-set rim would allow a hub motor to sit substantially within the wheel, and thereby direct the effects of weight and force upon the motor to the optimal position as dictated by the motor manufacturer, compared to the sub-optimal location of weight and forces upon a motor connected to

a standard centre rim wheel. On 22 March 2013 Mr Zubcic created a computer sketch of an off-set rim wheel in the Orion SolidWorks computer programme. On 16 May 2013, Mr Zubcic sent an email to Mr Zhang attaching a copy of an off-set rim wheel, commenting that although the drawing was not fully defined, it had enough information for pricing. Mr Zhang responded to Mr Zubcic in an email sent on 21 May 2013, enquiring whether Mr Zubcic had asked Mr Bryham about the rim. Mr Zubcic replied that he had not yet done so.

[60] On 5 July 2013, Mr Zubcic sent an email to Mr Bryham attaching six computer sketches of off-set wheels. In his email Mr Zubcic referred to one of the sketches and asked Mr Bryham what he thought of it. Mr Bryham responded almost straight away to Mr Zubcic in an email saying that the sketch looked great, and made some suggestions for minor improvements.

[61] Mr Zubcic stated in evidence that he had sent the six off-set wheel designs to Mr Bryham because Mr Bryham knew he was working on designing a new wheel rim. He explained that over the preceding period, Mr Bryham had often called in to the Orion office to discuss and review drafting and machining work that Mr Zubcic was doing for him on other unrelated projects. Mr Zubcic said that he and Mr Bryham were friends at that time, and that he and Mr Bryham would discuss what he was working on. From these conversations Mr Zubcic says that Mr Bryham knew that he was working on the design of a new wheel rim for Orion's own new amphibious system. Mr Zubcic says that the issue of copying never arose, because Mr Bryham knew he was developing his own design.

[62] Mr Zubcic did not explain why Mr Zhang had asked him whether he had asked Mr Bryham about the rim, or why Mr Bryham's view of the rim was at all relevant to what he was doing in designing a new wheel rim for a new Orion amphibious system. I note too that Mr Bryham's comments in his email of 5 July 2013 regarding one of the computer sketches Mr Zubcic sent to him appear to be more consistent with those of a client commenting on their own design preferences, rather than what might be expected of someone in the position that Mr Zubcic says Mr Bryham was in. It is also clear that at the time of this email correspondence regarding the new wheel rim, Orion was well underway working on the Sealegs System 100 project.

Sealegs provides Orion with its detailed specifications

[63] In an email sent by Mr Leybourne to Mr Bryham on 15 May 2013, he asked Mr Bryham to call in to Orion the following day to discuss the SL100 front assembly with Mr Percival. Mr Bryham agreed and a time was arranged. The following day Mr Leybourne sent an email to Mr Bryham saying:

We are debating the method of determining the force required to steer SL100. We want to validate our thinking against a current Sealegs. Can we pick up a Sealegs and bring [it] back to Orion for testing?

[64] As a result of the request, arrangements were made for a Sealegs boat to be made available to Orion at Sealegs premises for testing to be done, which included Orion measuring the weight over the front tyre of the Sealegs boat.

[65] On 21 May 2013, Mr Bryham sent Mr Leybourne the detailed operation specifications for Sealegs: Generation 1 System 60; 7R System 40; and 6R System 40. Mr Bryham explained in his evidence that as Orion's design and development of SL100 involved them upscaling the existing Sealegs design, they needed the information set out in the specifications to look at what sort of stresses and forces needed to be upscaled. In particular, Orion was looking at the amount of load, stress, and force that was on the front steering system. He explained that Orion wanted the information so as to have a starting point for designing the upscaled system required for SL100. For example, Sealegs Generation 1 System 40 specifications were based on a fully-laden craft or vehicle weight of 2500kg. The specifications set out information regarding the maximum static wheel loads on the front and rear wheels as well as detailed information regarding the hydraulic system, wheel motors, tyres, the maximum inclines for which the system was designed, the maximum speed of the system over level ground, and the operating life of components.

[66] In his evidence Mr Leybourne disputed Mr Bryham's explanation for Sealegs having provided Orion with the detailed specifications. Mr Leybourne said that the reason that Mr Bryham provided the specifications had nothing to do with the forces on the steering system. Under cross-examination, Mr Leybourne said that by the date he was sent the specifications, Orion had already undertaken the testing of a Sealegs boat and so would not have needed the specifications for that purpose. However, he

also said that his evidence on this issue was based upon his reconstruction of the events rather than his recollection. He thought that Mr Bryham had sent him the three specification documents because Mr Bryham had wanted his opinion or critique of them, as Sealegs lacked the expertise to do so. Mr Leybourne said that there had obviously been some conversation between Mr Bryham and himself prior to the specifications being sent to him, and as Orion was not working exclusively on SL100 for Sealegs, he had concluded that the specifications sent to him related to matters arising in general conversations between Mr Bryham and himself regarding the other work that Orion was doing for Sealegs at that time.

[67] On Monday 15 July 2013, Mr Bryham sent Mr Leybourne an email asking what the status of the SL100 front and rear assemblies would be by the end the following week. Mr Leybourne responded by email the following day saying:

Hi Maurice,

The design detail is being worked on by Vladan [Zubic] and Andrew [Percival] at present.

Because Vladan has the final sign off, he is peer reviewing the design (calculations, fitment, etc.). Vladan will let you know tomorrow how this is going, along with an ideal of when the assemblies will start to be manufactured.

...

[68] In 2013 Mr Zhang, as the owner of Orion, was introduced to Mr Bryham by Mr Leybourne, who explained his background and their connection. Mr Bryham was told that Mr Zhang and his family were seeking New Zealand residency and he agreed to write a letter that could be provided to Immigration New Zealand to support Mr Zhang and his family's residence applications. On 22 July 2013, Mr Bryham, as Founder and Chief Technology Officer of Sealegs, wrote to Orion Marine and Mr Zhang confirming that Sealegs had engaged Orion as a design partner to develop new amphibious marine solutions, and that Sealegs was already utilising the design and development services of Orion Marine. He went on:

The team and skills that Orion Marine offer complement those of Sealegs. Orion Marine adds additional expertise and experience to the knowledge base of Sealegs.

We consider the establishment of Orion Marine is positive for Sealegs as it enables new projects to be commissioned and new improved amphibious technology to be developed. [sic]

Allen [Mr Zhang], we have found yourself and the team at Orion to be very professional, to have a very high level of technical expertise, and be both reliable and capable. We look forward to working with yourself and Orion as we move forward on the development of the Sealegs System 100 and associated amphibious technology.

[69] By September 2013, Orion was making progress with the development of SL100, and had made a frame on which it installed the three SL100 leg assemblies and which was for display at the Sealegs AGM that month. For the purposes of the display the leg assemblies were electric rather than hydraulically powered. Shortly after its AGM, Sealegs suspended further development of SL100 because of funding issues. Notwithstanding the suspension of the SL100 project, Orion continued to undertake other minor work for Sealegs. Mr Leybourne says that Mr Bryham was keen to ensure that Orion did not take on another project that would prevent it from resuming work on SL100 once Sealegs had secured further funding to enable the project to proceed.

[70] In early 2014 the SL100 project was resumed and Orion continued to work on its development until around the end of July, when Orion again stopped work because of Sealegs' funding issues.

Shanghai boat show in April 2014

[71] In April 2014 Mr Bryham and Mr McKee-Wright attended the Shanghai boat show where they met and had discussions with Mr Leybourne and Mr Zhang. The parties dispute what was said between them during their discussions about Orion's amphibious system projects.

[72] Mr Leybourne says that he attended the April 2014 boat show at Mr Zhang's suggestion, and that they met Mr Bryham and Mr McKee-Wright who were there because Sealegs had one of their boats on display. Mr Leybourne says that by that time, Mr Bryham and Mr McKee-Wright already knew that Orion was developing its own amphibious system known as S25-4WD. He says that during their discussions, Mr Bryham and Mr McKee-Wright suggested that Orion should offer their S25-4WD

system to Sealegs for exclusive worldwide distribution, except China. Mr Leybourne says that Mr Bryham and Mr McKee-Wright said that if Orion went ahead and launched its S25-4WD system other than through Sealegs, Mr Eric Series, the Chairman of Sealegs' board of directors, would cause Sealegs to commence legal proceedings against Orion. Mr Leybourne says that he was told that an alternative would be for Orion to offer Sealegs a "no fight fee" for each Orion S25-4WD system it sold into an established Sealegs market. Mr Leybourne says that he responded to this suggestion by saying that Orion was open to considering a "no fight fee" as a means of keeping both parties happy. He says that Mr Bryham and Mr McKee-Wright said that as soon as they were back in control of Sealegs, they would make it happen.

[73] Mr Bryham agrees that he and Mr McKee-Wright had a discussion with Mr Leybourne and Mr Zhang during the 2014 Shanghai boat show, but says that what Mr Leybourne and Mr Zhang talked about was that Orion was developing an amphibious system on a flood rescue craft for the Chinese market, and he says that they assured him that the Orion product would not infringe Sealegs' intellectual property. Mr Bryham says that no specific details were provided by either Mr Leybourne or Mr Zhang about the Orion amphibious system or as to how many wheels it would have. Mr Bryham agrees that there was discussion around the prospect of Orion giving Sealegs distribution rights for their yet-to-be-produced amphibious flood rescue craft, which Sealegs could sell and distribute into other Asian countries where there was a need for such craft. He said that his understanding was that Orion would be producing a low-cost flood rescue product in China and that Sealegs might be able to sell that product to other Sealegs customers in Asia, especially in Malaysia where Sealegs had already sold boats for use as flood rescue craft. He said that Mr McKee-Wright, Sealegs' Sales Manager at the time, had commented that if the price of the Orion amphibious rescue craft was \$50,000 it could be sold into other Asian countries. Mr Bryham denies any discussion regarding a "no fight fee", and says that it is not a term he has used. Mr Bryham also denies that he said that the Orion product looked like a copy of Sealegs. He says that at the time of the 2014 Shanghai boat show he had not seen the Orion amphibious system, and was in no position to make any such statement.

SL100 project suspended

[74] Mr Leybourne says that around June 2014 Orion encountered delays with Sealegs paying its invoices. On 21 July 2014, Mr Leybourne forwarded an email to Sealegs' CEO, Mr David Glen, advising that because of the ongoing uncertainty surrounding SL100 and the sum outstanding, Orion staff would be deployed to other projects. He further said that a final invoice had been issued and it was time for a payment plan to be formalised and agreed upon.

[75] Sealegs paid the outstanding amount due to Orion, and the SL100 project was again suspended.

Sealegs CEO photographs the Orion ARC600 craft

[76] Mr David Glen was employed as Chief Executive Officer of Sealegs International Ltd in November 2011 and continued in that position until November 2014. Mr Glen was subpoenaed by the defendants to give evidence. He said that Mr Leybourne, who was regarded by senior Sealegs management as being a talented hydraulic engineer, had already departed Sealegs and was working at Orion when he joined the company as its CEO.

[77] In the course of Sealegs' engagement of Orion on the SL100 project, Mr Glen observed Mr Bryham and Mr McKee-Wright working closely with Mr Leybourne and frequently attending meetings at Orion's premises. Mr Glen said in evidence that from 2013, Mr McKee-Wright, Mr Bryham and himself were all well aware that Mr Leybourne was engaged in developing a new amphibious craft for the Chinese market with the financial backing of a Chinese investor. They also knew that Orion had engaged a number of former Sealegs employees, but he said that the situation was not of any major concern for Sealegs as China was not a market the company was intending to target, and moreover Mr Leybourne was not subject to a restraint of trade provision.

[78] In early to mid-October 2014, Mr Glen was driving in traffic on Auckland's North Shore when he found himself driving behind a vehicle being driven by Mr Leybourne. Mr Glen by then knew that Mr Leybourne was working on developing an

amphibious system at Orion, and he was curious as to where he might be heading, so he followed him into a marine businesses area off Wairau Road, which was not where Orion's principal premises were located. Upon arrival at Mr Leybourne's destination, Mr Glen saw in a garage on the premises an amphibious craft of a kind he had not seen before. He concluded it was being developed by Orion.

[79] On 22 October 2014, Mr Glen again drove past the Wairau Road premises and on this occasion saw what he thought was the same craft on the back of a truck. Mr Glen stopped and took several photographs of the truck and boat using his cell-phone. When he returned to the Sealegs offices later that day he sent the photographs to Mr Series, and the following day he sent the photographs to Mr Bryham and Mr McKee-Wright.

[80] Mr Glen said in evidence that although difficult to tell from his photographs, the amphibious craft he photographed could only have been the Orion ARC600 four-wheel drive version that was subsequently put on display at the 2015 Shanghai Boat Show, as Orion did not produce their three-wheel drive amphibious system until 2016. It is clear from Mr Glen's photographs, which were produced in evidence, that the craft on the truck trailer is the same red coloured craft as shown in the Surfcon brochure produced by Mr Zhang's JRTD company in China, called the Surfcon ARC600, which has a four-wheel drive amphibious system.

[81] Mr Glen said that after he had sent copies of his photographs to Mr Bryham and Mr McKee-Wright, the three met to discuss them. Mr Glen says that at this meeting both Mr Bryham and Mr McKee-Wright indicated that they had known of the existence of a boat that Mr Leybourne was trialling, but they were surprised that Mr Glen had been able to photograph it. Mr Glen says that at that time neither Mr Bryham nor Mr McKee-Wright expressed any concerns about breach of patent or copyright. Mr Bryham says however that he could see very little design detail from the photographs, and consequently had been unable to make any assessment or other comment.

[82] On 23 October 2014, the day after Mr Glen had taken his photographs, Mr Leybourne sent an email to Mr Eric Series, Mr Glen, Mr Bryham and Mr McKee-

Wright (with copies sent to Mr Zhang and Mr Zubcic). Mr Series had telephoned him a week earlier to ask whether Mr Bryham had personally engaged Orion to develop his own amphibious system. Mr Leybourne wrote:

Hello Eric,

Thank you for calling last Friday. I appreciate you taking the time to discuss your concerns and look forward to meeting with you in November.

Too often little monsters grow because of rumours and half-truths, an honest conversation like last Fridays [sic] will put the monsters to bed. I reiterate – my comments were truthful and accurate – there is no need for us to be misleading.

Opportunities for Sealegs and Orion to work together are many, collectively we lead the world in the amphibious marine market. Continued innovative thinking solidifies our position as global leaders in this segment, thats cool. You should be proud in the knowledge that your support is a key component of this success.

A complimentary [sic] (not competitive) business, we have a combined strength that is unequalled. Thats also cool.

Lastly, one of my colleagues noticed David Glenn [sic] taking some spy photos of our customers craft yesterday. It is considered respectful to ask for permission first, we would be happy to oblige.

Additionally, I can ask our customer for approval for you to inspect the craft (in China) if you desire.

Regards

Darren.

[83] On 10 December 2014, Mr Leybourne wrote to Mr Bryham suggesting that they should meet to discuss the Sealegs/Orion relationship. He said:

Allen [Mr Zhang] has asked for clarity of the Sealegs/Orion relationship sooner rather than later.

It would be great to conclude the meeting with an understanding that there is a shared vision. Equally, we have no problem if it is decided the time is right for Sealegs and Orion to head in separate directions.

We are comfortable with either outcome.

[84] The following day, on 11 December 2014, Mr Leybourne sent an email to Mr Bryham regarding the possible resumption of the SL100 project, noting that Mr Percival could have capacity to work on SL100 for the remainder of the year.

[85] Mr Leybourne says that at a meeting on 12 December 2014 he asked Mr Bryham about the suggested “no fight fee” regarding the Orion S25-4WD, and was told by Mr Bryham that Sealegs did not think it appropriate to enter into that sort of relationship.

[86] In mid-February 2015, Mr Bryham contacted Mr Leybourne regarding the resumption of the SL100 project. Mr Leybourne says that because of the previous problems encountered in relation to payment for Orion’s work on the SL100 project, he proposed a service agreement between the two companies. A service agreement was executed and took effect from 31 March 2015. The “Introduction” section of the service agreement provided:

- A. Sealegs is a manufacturer and supplier of amphibious vehicles to customers throughout the world.
- B. Orion Marine provides engineering design and development services to the marine industry.
- C. Sealegs has engaged Orion Marine to design and develop an amphibious system to be known as SL100 (SL100 project).
- D. Due to previous delays to the SL100 Project caused by a shortage of Sealegs funding, the parties have agreed to enter into this agreement to record the terms on which Orion Marine provides services to Sealegs in relation to the SL100 Project, and any further projects that may be agreed by the parties from time to time.

[87] Under the heading “Intellectual Property”, the service agreement provided:

6.1 Ownership. Unless otherwise agreed in a Statement of Work³, the parties agree that:

- (a) subject to clauses 6.1(c) and 6.1(d), any Background IPR⁴ will remain the exclusive property of its owner;
- (b) any improvements to any Background IPR will remain the exclusive property of the owner of that Background IPR;
- (c) any Project IPR (and Improvements to) will be owned exclusively by Sealegs, from the date at which the relevant IPR arises; and

³ A Statement of Work Template dated 9 March 2015 set out the particulars of the SL100 project (described as RC34-SLG100).

⁴ The term “Background IPR” is defined in the service agreement as: “Background IPR means all Intellectual Property Rights created or developed by a party before the date of this agreement or otherwise independently of this agreement.”

- (d) to avoid doubt, any Third Party Background IPR (and improvements to) will remain the property of that third party owner whether or not included in or used in the provision of the Services.

6.2 Residuals. Nothing in this agreement limits Orion Marine's right to use its ideas, concepts, methodologies, processes and know-how that are used, developed or created in the course of providing the Services, provided that such use does not breach any confidentiality obligations owed to Sealegs under this agreement or any IPR of Sealegs.⁵

Shanghai boat show in April 2015

[88] The Shanghai boat show was held between 9–12 April 2015. Mr Bryham attended the boat show, and Sealegs again had a boat on display. On a stand near to the Sealegs boat was the amphibious rescue craft branded “Surfcon ARC600”, presented by Chinese company JRTD of which Mr Zhang was then the General Manager. On viewing the Surfcon craft, Mr Bryham could see that it was equipped with a retractable three-leg amphibious system, which appeared to him to be a substantial copy of the Sealegs amphibious system. Accompanying the display of the Surfcon ARC600 was a video showing the craft being driven into the water, on the water and exiting the water at a location in China.

[89] Sometime later during the boat show, Mr Bryham saw Mr Zhang in the company of Mr Leybourne and spoke to them. He says he told them that their boat's amphibious system looked like a copy of the Sealegs system. Mr Bryham says that Mr Leybourne and Mr Zhang told him that they were only going to sell the craft in China, and that they had no intention of selling it outside the Chinese market. Mr Bryham says that while the Surfcon ARC600 craft had been built in New Zealand, he understood from what he was told at the time that further boats and amphibious systems were to be built in China. Mr Bryham says that a discussion ensued about whether the two companies and their products could exist together in the market.

⁵ The term “Confidential Information” is defined in the service agreement as follows: “Confidential Information means the terms of this agreement, and all information (whether in oral or written form, or both) which is disclosed by the Discloser to, or otherwise accessed by, the Recipient, and:

- (a) is identified as being confidential upon disclosure;
- (b) is confidential in nature or ought reasonably be treated by the Recipient as being confidential in nature; or
- (c) which relates to the Discloser's business affairs (including its finances, customers, suppliers, products, processes, inventions, research, technologies, and Intellectual Property Rights).”

[90] In an email sent to Mr Bryham on 13 April 2015, Mr Leybourne said an offer to enter into a distribution agreement with Sealegs had merit and was worth further exploration. However, he considered that the difficulty would be in working out the detail. He emphasised again that Orion and Sealegs were complementary, not competing businesses, and invited further dialogue with the Sealegs board so that they could better understand the nature of Orion's business. As for SL100, Mr Leybourne wrote that he was happy if the Sealegs Board wanted to cancel or postpone the project, although there would be a cost associated with this. He concluded by indicating that Orion wanted to work collaboratively.

[91] Mr Bryham prepared a written report to the Sealegs board which he sent the same day, 13 April 2015. He recorded that he had seen Surfcon's ARC600 craft at the Shanghai boat show, and recorded the following three options:

I believe that Sealegs has 3 options with Surfcon in China;

Option 1 – Do nothing

Option 2 – Fight them legally on all IP fronts

Option 3 – Look at a possible agreement that contains them and has commercial upside for Sealegs.

Option 1 is not acceptable in the medium/long term as it could encourage others to follow in Surfcon's path.

Option 2 is possible, but we have no Sealegs patent in China (nor in many other currently non-key Sealegs markets), so we are weak on actually trying to stop them on this front in China. There are possible copyright, ex-employee avenues, but that could all be fairly time consuming, legally expensive and with little commercial result to Sealegs.

Option 3 is a possible option that could see agreement where Surfcon only sell in China in certain markets, with a clause where Sealegs could buy the Surfcon craft to sell into our existing patented markets. This effectively would add a new flood rescue ARC to the Sealegs range at no development cost to Sealegs, and would legally lock down the Surfcon sales channel within China.

I meet [sic] with Darren Leybourne (ex-Sealegs key hydraulics engineer) and Allan (the Chinese owner of Surfcon) to discuss Sealegs concerns. For Option 2, I said that Sealegs would STRONGLY protect its IP using ALL avenues and that it would be an expensive, time consuming process for all involved.

[92] Mr Bryham went on to comment that Option 3 would be worth exploring before taking legal action. He also recorded his observations of the Surfcon ARC600 craft, including criticism of some of its features.

[93] Attached to Mr Bryham's report to the board were several photographs of the Surfcon ARC600 craft on display at the Shanghai boat show. One of the photographs shows the promotional video seen by Mr Bryham being played in the background.

[94] At the Shanghai boat show Mr Bryham also saw a Surfcon brochure, written in both Chinese and English, which was being distributed to the public to promote the ARC600 craft. The brochure set out the company's profile, stating that JRTD first opened its doors in 2001, but "sharpened [its] focus" on amphibious craft design and production in 2011.

[95] It is clear from Mr Bryham's report that although Sealegs had concerns about an infringement of their copyright, the fact that he had been told that the Surfcon craft was not going to be sold outside China, and that he considered the Surfcon amphibious system looked inferior to the Sealegs system, were factors leading to his suggestion that Sealegs should endeavour to negotiate a distribution agreement.

[96] Mr Bryham responded to Mr Leybourne's email of 13 April 2015 on 14 April, saying that it was good to adopt a collaborative approach and to try to work out an agreement. However no steps were taken by either party to follow up the possibility of a distribution agreement.

[97] On 22 April 2015 Sealegs forwarded a "Sealegs Intellectual Property Agreement" to Mr Leybourne and Orion Marine, requesting that it be signed and returned. The document, although signed by the Sealegs CEO, does not appear to have been either executed by Orion Marine or returned. The agreement contained provisions whereby Orion would confirm and agree that all intellectual property rights including copyright and the right to apply for patent or design registrations in respect of all design and product development work undertaken by Orion for Sealegs belonged to Sealegs. Despite Mr Bryham's initial view that the Orion system was inferior to the Sealegs system, and despite Mr Leybourne's assurances that the amphibious

system Orion had developed for Surfcon would only be marketed in China and not be in competition with Sealegs, this was an early sign that Sealegs nevertheless had concerns about Orion's activities and wished to obtain further written acknowledgement from Orion regarding Sealegs' ownership of intellectual property arising from the design and manufacturing work being undertaken on its behalf by Orion.

Smuggler Marine's use of the Sealegs system

[98] Smuggler Marine is owned and operated by Mr David Pringle and his wife Pauline Pringle. Mr Pringle has extensive experience as a boat builder, having started his first boat building company in 1982. The company now known as Smuggler Marine was established in 1986, and changed its name to Smuggler in 2003 around the time it began making and marketing boats using the Smuggler brand. Smuggler Marine is now a successful business and well-known brand, selling boats both in New Zealand and overseas. It manufactures fibreglass trailer boats and tenders for large motor yachts. Included in the Smuggler range are RIB boats between four to 11 metres in length, which comprise Smuggler's Strata branded craft.

[99] In 2011 Mr Pringle approached Sealegs CEO David Glen, whom he knew as a fellow member of the Boating Industry Board, about the possibility of Sealegs becoming an original equipment manufacturer (OEM)⁶ and supplying Smuggler with its amphibious system kits for installation on its boats. In May 2011 Sealegs and Smuggler reached agreement whereby Sealegs would supply its amphibious leg kits together with technical drawings and instructions to enable Smuggler to install the systems on the hulls of its craft. Sealegs committed to supplying its system to Smuggler for a term of five years. The systems to be supplied by Sealegs were a package that included the retractable legs as well as the power plant, instruments, hydraulics, drive, and controls that would be fitted to the Smuggler boats as bolt-on kits. Pursuant to the arrangements Smuggler would fit the Sealegs supplied system onto its boats, and thereafter as part of the purchase price of \$65,000 plus GST, Sealegs staff would undertake the commissioning work to make the systems operative.

⁶ The term used where a manufacturer makes a part or subsystem that is sold and used by another manufacturer in the construction of its products.

[100] The first Smuggler craft to be fitted with the Sealegs system was known as Smuggler Strata 770 Centre Console (Strata 770 CC) and was fitted with the Sealegs System 40. Although Smuggler was not intending to sell this first Strata 770 fitted with the System 40, and intended to replace it with the bigger System 60 (capable of supporting a maximum design capability of 2,500 kg) before offering the boats for sale, it planned to display the Strata 770 at the Auckland on Water Boat Show in September 2012. Prior to the boat show, differences arose between Mr Pringle and Mr Bryham, as Mr Bryham did not want Smuggler to display the boat with the System 40 on it. Despite their disagreement, the Smuggler boat was successfully displayed at the boat show and orders for boats fitted with the Sealegs system were subsequently received.

[101] Further difficulties in the relationship between Smuggler and Sealegs arose the following year arising from what was called the TAAF project, which involved Sealegs developing a single-engine diesel amphibious boat for sale to the French government. Smuggler was engaged by Sealegs to make the hull. The project eventually failed as the hull and added components were found to be too heavy for the Sealegs System 60 fitted to it, resulting in the prototype being rejected by the French government. Sealegs maintained that Smuggler was responsible for the failure of the project, claiming that the hull it had manufactured was overweight. As a result of the failure of the project, the relationship between the two companies deteriorated further, and in September 2013 Sealegs advised Smuggler that it would no longer supply it with its amphibious kits. However, after Smuggler changed its manufacturing process to use lighter materials to reduce the weight of its hulls, Sealegs agreed to resume supply.

[102] In November 2014, following Mr Glen's departure from Sealegs, Mr McKee-Wright (who had been reappointed as Sealegs CEO) proposed that a new agreement be negotiated between the two companies setting out the terms on which Sealegs would agree to supply its kits to Smuggler. Negotiations regarding the contents of the proposed agreement proceeded through early 2015, with Sealegs preparing a draft agreement in February 2015 setting out the key terms to be included in a new 12-24 month contract to be executed by 31 March 2015. The terms proposed by Sealegs represented a significant change to the terms of trade that had applied previously. The

proposed terms stipulated that the price of the OEM Sealegs system would be \$75,000; that Smuggler was required to pay for the onsite installation support provided by Sealegs; and that Smuggler would be required to purchase and pay for five kits immediately, and a further five kits in six months' time. Further proposed terms required Smuggler to agree to sell fully kitted-up hulls to Sealegs ready for Sealegs to install its system onto and then sell the boats in New Zealand, and through its dealers internationally, branded as "Smuggler powered by Sealegs". Both Sealegs and Smuggler would also agree to promote and sell their respective "Smuggler Powered by Sealegs" boats at the same price in New Zealand. Under the proposed terms Smuggler would not be permitted to sell its own craft equipped with the Sealegs system overseas, and would be precluded from developing any new models or changing its existing models without Sealegs' prior approval.

[103] While Smuggler was not willing to accept the proposed terms, Mr Pringle and Smuggler were nevertheless keen to maintain their relationship with Sealegs so as to be able to continue installing the Sealegs system on their boats. By early 2015, Smuggler had sold 15 of their boats fitted with the Sealegs system, and had been developing and marketing a new mid-cabin model it was intending to produce and which had already attracted considerable interest from existing customers. Then on 3 March 2015 the Chairman of Sealegs, Mr Eric Series, wrote an email to Mr Pringle advising him that the Sealegs Board had instructed its CEO not to supply any further Sealegs parts to Smuggler until a new agreement was executed and in place. He acknowledged the existence of a current five-year contract, but noted that it was unsatisfactory because it contained no reference to price and credit terms; nor was a sales contract agreed. Mr Series said that a new agreement was necessary to "tidy these issues up". He also noted that Sealegs appreciated Smuggler's commitment, investment and success to date, and said that Sealegs wished to continue the relationship.

[104] On 29 April 2015 Mr Pringle sent a memorandum to Mr Series and Mr McKee-Wright succinctly summarising Smuggler's position. In it he emphasised Smuggler's success and extensive experience in boat building, noting that Smuggler had sold 15 Sealegs units, the last two at a price of \$75,000 (plus GST). He also said that Smuggler had enhanced the Sealegs brand and had been very compliant with all Sealegs'

requests. He stated his view that Sealegs was a “fantastic product”, but suggested that they needed to update their model. He also said that Sealegs was “a challenge to work with”.

Mr Pringle approaches Orion

[105] As a result of the difficulties Smuggler was having resolving their arrangement with Sealegs, Mr Pringle began actively looking for an alternative to the Sealegs system. One of his Smuggler staff who had previously worked at Sealegs had seen a video of an amphibious boat which had been made by Orion being demonstrated in China. The day after sending his memorandum to the Sealegs board on 29 April 2015, Mr Pringle emailed Mr Leybourne asking him to send him the link to Orion’s video of the barge fitted with their system on it. He said he was “keen to find an alternative”, and commented that “Sealegs are too hard”.

[106] Mr Leybourne responded by email dated 4 May 2015 advising that he would be “out your way tomorrow, will you be about”. From their email exchange it is clear that a meeting was to be arranged.

[107] Mr Leybourne says that in late April 2015, Mr Pringle contacted him saying that he was having a tough time with Sealegs, and asked him whether Orion would be interested in making a three-wheel drive amphibious system for installation on the Smuggler boats. Mr Leybourne says that he told Mr Pringle that Orion was too busy with Sealegs work at that time, but that they could discuss the matter again once Orion had completed the SL100 project for Sealegs. Mr Leybourne said in evidence that, by reference to Mr Pringle’s email of 30 April in which he requested the link to Orion’s video of the ARC600 craft, he thought Mr Pringle’s first approach to him was in late April 2015.

[108] Mr Pringle’s evidence is that in early May 2015 he did access and watch the video of the Surfcon ARC600 and, as he was interested in exploring the Orion system further, he spoke with Mr Leybourne.

[109] From their evidence and emails it is evident that around 30 April 2015, Mr Pringle and Mr Leybourne discussed the possibility of Orion producing a three-wheel

drive amphibious system for installation on the Smuggler boats in place of the Sealegs system. It is also clear that at the time that Mr Pringle made his initial approach to Mr Leybourne, Smuggler's relationship with Sealegs had become increasingly difficult for Smuggler, particularly in light of Sealegs' recently proposed terms for the continued supply of its systems to Smuggler, which Mr Pringle viewed as being one-sided in favour of Sealegs, and expensive in terms of price. Mr Pringle was anxious at the prospect of Sealegs deciding not to continue supplying its system to Smuggler and he was obviously looking to Orion to produce and supply an alternative system.

[110] On 6 July 2015, Mr Pringle once again contacted Mr Leybourne by email to follow up their earlier discussions regarding an alternative to the Sealegs system. Mr Pringle explained in his email that Smuggler had received a "serious enquiry" for a 1100kg super-yacht tender, and asked whether Mr Leybourne would be interested in helping him. Mr Leybourne responded saying that he was interested in working with the team at Smuggler, but that at present Orion was fully committed to SL100 and would be for at least another four weeks. He said he would call Mr Pringle later the following month.

Orion starts work on producing a three-wheel system for Smuggler

[111] SL100 was installed on the prototype craft known as IKA11 and displayed at the Auckland On Water boat show in September 2015.

[112] In October 2015 Orion finished working on SL100 and the Sealegs boat IKA11 fitted with the prototype SL100 system was sold for \$500,000 and shipped to a purchaser in the United States of America around 14 October 2015.

[113] Anticipating Orion's work on SL100 coming to an end in late September or early October 2015, Mr Leybourne resumed his discussions with Mr Pringle regarding the requested three-wheel system. On Friday 2 October 2015, Mr Pringle and Mr Leybourne exchanged emails and arranged to meet that morning. At the meeting Mr Leybourne introduced Mr Pringle to Mr Zubcic and they discussed Smuggler's requirements for a three-wheel drive amphibious system to replace the Sealegs system 60 that they had previously been fitting to their craft. Mr Pringle provided Mr Leybourne and Mr Zubcic with a detailed drawing of its 7.5 metre mid-cabin RIB

craft. Smuggler had already fitted the Sealegs system to its mid-cabin craft, as is evident from the contents of Mr Pringle's email to Mr Zubcic on Monday 5 October 2015 in which he said he had "done a reasonable amount of motoring around in two of our mid cabin amphibious craft with no issues".

[114] Mr Leybourne said in his evidence that Mr Pringle told him during their early discussions that he wanted to do something completely different and better than the Sealegs system, and that he wanted to get far away from the Sealegs design. Mr Leybourne says that Mr Pringle said that he loved Orion's use of a fuel injected engine instead of a carburetted one, and that he did not like how the Sealegs system required two keys compared to Orion's single key. He also preferred Orion's tidier and more compact console with fewer parts. Mr Leybourne says that there were "lots of things about Sealegs that Dave [Pringle] didn't like."

[115] Mr Leybourne further said in evidence that Orion had looked at the Smuggler 7.5 metre hull to see how an amphibious system would work, and used the geometry applicable to that Smuggler hull as the basis from which it developed its design. He explained that they wanted to use the same method of attaching the legs to the hull as they had developed for the Orion S25-4WD system. Referring to himself, Mr Zubcic and Mr Pringle, he says that they also wanted to use the same rear assemblies as had already been developed for the Orion four-wheel drive system, and accordingly Orion provided Mr Pringle with drawings of its design to enable Smuggler to modify its hull to accommodate the Orion system for attaching and connecting their leg assemblies to the hull.

[116] Mr Leybourne further explained in his evidence that having examined the Smuggler 7.5 metre craft and its specifications, he found that it was very similar to Orion's ARC600 rescue craft in terms of size and weight, with the result that the three-wheel system Orion produced for Smuggler could have very similar specifications. Mr Leybourne says that in the interests of saving time, Mr Pringle had to make his boats work using the rear leg assemblies that Orion had already produced for the rescue craft, and which were designed for craft weighing 2,500kg. However, the Orion front leg with its two wheels had been designed for a barge type of craft and after some initial consideration it was soon decided that it would not be suitable for fitting to high-

end recreational craft such as the Smuggler boats, where aesthetics was an important consideration. Rather, it was decided that the only realistic option they had was a front leg assembly with one wheel.

[117] Mr Leybourne said that as the existing Orion rear leg assemblies, hydraulic power unit and user controls were suitable for the Smuggler craft, the only thing that Orion needed to design was a new front leg assembly with one wheel. He explained their approach as wanting the new front assembly to be based on the Orion four-wheel design as much as possible, as that would reduce development time and provide Smuggler and Mr Pringle with a prompt solution.

[118] Mr Zubcic commenced work on designing the new single-wheel front leg assembly later in October 2015. There was some initial delay because Mr Leybourne was occupied with SL100 for Sealegs until 13 October 2015, when Mr Leybourne wrote to Mr Pringle suggesting a meeting so that they could “collectively firm up some of the ideas we have been pushing around”. He proposed a meeting after 4pm “once our guys have finished”. Suggesting a meeting time after the Orion staff had finished for the day may simply have been a matter of convenience; however, as subsequent events show, Mr Leybourne wanted to keep Orion’s involvement with Mr Pringle and Smuggler confidential. Mr Zubcic explained in his evidence his approach to the development and design of the new front leg assembly:

- A. The starting point. As I explained above, we already had a functioning four-wheel drive system so it made sense to use that as our starting point. The rear assemblies I had designed would also work in three-wheel drive system so the only new design I had to consider was of the front leg assembly. As with the four-wheel drive, we wanted the system to be modular so any boat builder could install it. With the four-wheel drive system we had established our leg mounting system; we had tested glue and found that principle works for us. So, there was no reason not to use the same mounting system for three-wheel drive.

...

We also already had our steering system, arm, hinge and cylinder, our lifting cylinders, our hydraulic system, tyres and our wheel rim, all of which could easily be carried over to a three-wheel drive system. What I needed to do was to put these things together in the design of a front leg with one wheel only. I also wanted to use the same principles and visual aesthetic I used for the four-wheel drive. So, for example, I wanted to adapt my existing four-wheel drive yoke design

in the three-wheel drive, rather than creating a new version altogether. As much as possible, I wanted to use the same parts for the two systems. Having common and interchangeable parts is preferable from a manufacturing and inventory perspective, because it is easier to organise manufacturing and control stock. Design of front leg assembly. When we began to develop a one wheel drive leg, October 2015, I started ... thinking of possible options. I was never happy with Sealegs' front leg mechanism, which I thought required an unnecessary modification on a hull to accommodate the movement of trunnion cylinder. So, I started playing with the kinematic of a leg and experimenting and found it could be done in a completely different way.

[119] On 21 October 2015, following a telephone conversation between Mr Pringle and Sealegs Sales Manager Mr Damon Jolliffe, Sealegs proposed terms that would enable them to move forward from the impasse which had resulted in Sealegs ceasing to supply Smuggler with amphibious kits.

[120] On 28 October 2015 Mr Pringle and Mr Leybourne exchanged emails. Mr Pringle wrote in his email:

Hi Darren,

How is your next boat going when will you be going to test ride it I'd be really Keen [sic] to come and see it in action.

...

The other company are even more impossible to deal with it [sic] will talk to a pattern [sic] lawyer soon to help the way forward.

[121] Mr Leybourne replied:

Hi David,

We are chipping away at finishing the test craft. Most of the mechanical parts are fitted – working on wiring looms/hydraulic hoses at this stage (everything takes longer)!!

Vladan is working on a design for the single wheel front assembly, once we have progressed this further we will send to you for comment. The design is heading towards a similar geometry as used by that other company. If this proves unacceptable a radical re-design will be required.

[Redacted paragraph]

Darren.

[122] On 25 November 2015 Mr Zubcic sent Mr Pringle a computer-aided first drawing of the three-wheel drive assembly, describing it as “an idea”.

[123] Mr Zubcic proceeded with the design of the front leg assembly and its component parts during November and December 2015, and the machining of the parts to be made by Orion commenced. During this period Mr Pringle maintained regular contact with both Mr Leybourne and Mr Zubcic regarding their progress. The issue of design patents held by Sealegs featured in their communications. In an email Mr Pringle sent to Mr Leybourne on 15 December 2015 he wrote:

Hi Darren

Has the pattern [sic] Lawyer [sic] got any updates and when will your new boat be driving around I'd love to see it going.

[124] On 11 February 2016, in response to an email from Mr Pringle advising that Smuggler was receiving a lot of enquiries regarding their amphibious boat and saying that he would much rather pay Orion for an amphibious system than Sealegs, Mr Leybourne wrote:

Hi Dave,

We are working on a concept that will stop the bow wheel turning in the retracted position. This would reduce the space needed to move the bow wheel back inside the hull/tube line.

Result is an improvement to the “look” but more importantly, it could possibly prevent infringing Sealegs patent because the bow wheel would no longer be a bumper.

As always the devil is in the detail, once we have advanced the concept we would then:

- Need your input to advise if the hull/tube modifications are possible/practical
- Baldwin's [sic] to confirm this concept would not infringe Sealegs patent.

Darren

[125] Mr Zubcic continued to work on the project. On 2 March 2016 he sent an email to Mr Pringle advising that he had been working on a concept model, and proposed calling in at Smuggler as he had something to discuss with him.

[126] On 24 February 2016, Mr Bryham and Mr McKee-Wright received an email from Mr Mark Goodhew of Explorer Inflatable Craft NZ, in which he cancelled his earlier request of 18 February to meet with them to discuss the production of an amphibious craft. The reason Mr Goodhew gave for cancelling the meeting was that Explorer's client had undertaken their own research and had become interested in contracting Mr Leybourne and Orion to construct and supply an Explorer craft fitted with the Orion amphibious system. Mr McKee-Wright reacted promptly to this information by sending an email to Mr Leybourne that same afternoon, forwarding Mr Goodhew's emails and requesting that they meet.

[127] Mr Bryham subsequently met with Mr Leybourne and Mr Zhang at Orion on 5 April 2016. Their discussion appears to have centred on whether the SL100 project could be taken further and put into production, and Mr Bryham asked questions regarding the Orion amphibious system on Surfcon's ARC600. Following their meeting, Mr Leybourne sent Mr Bryham an email which he copied to Mr Zhang. He said:

I think we both agree that taking SL100 to production in its current design state would be unwise. Orion are happy to continue discussions on future SL100 opportunities if and when you believe Sealegs have the budget to take from the current Proof of Concept to Production Ready state.

...

Both Allen [Mr Zhang] and I will email you a response to your questions about ARC600 and S25 in the next couple of days.

[128] As Mr Leybourne had indicated, Mr Zhang sent an email to Mr Bryham on 7 April commenting that he thought Sealegs and Surfcon could work together, and suggesting that they talk again.

[129] Mr Bryham responded by email to Mr Zhang, copied to Mr Leybourne, suggesting a further meeting in the week of 26 April, and requesting an indicative price for the Orion S25 system. Mr Bryham and Mr McKee-Wright then met with Mr Leybourne and Mr Zhang at Orion's premises on 26 April 2016. Mr Leybourne says that Mr Bryham and Mr McKee-Wright proposed an arrangement whereby Sealegs would become the exclusive distributor of Orion's systems and that there was also further discussion of a "no fight fee" as an alternative arrangement. Mr Leybourne

takes issue with Mr Bryham's assertion that he and Sealegs only found out that Orion had built the S25-3WD system a few days before Orion proposed to display it publicly. He says that the matters discussed at the meeting on 26 April make it clear that Mr Bryham, Mr McKee-Wright and Sealegs were well aware in February that Orion had built the S25-3WD system, as that was the reason for the meeting on 26 April.

[130] The day following his meeting with Mr Bryham on 26 April, Mr Leybourne wrote to Mr and Mrs Pringle to alert them that Smuggler's name had been mentioned during the conversation. It is clear from the contents of this email that Mr Leybourne and Orion had been trying to conceal from Sealegs their involvement with Smuggler and that they were developing an Orion amphibious system for Smuggler. Mr Leybourne offered his suggestions of how Smuggler should respond to any queries from Sealegs. He wrote:

Hi Dave/Pauline,

Yesterday during a meeting with Maurice and Dave [McKee-Wright] from Sealegs, Smuggler Marine was mentioned.

We were asked a number of times why we would want to have a relationship with Smuggler which would jeopardise bigger opportunities with Sealegs.

The points we communicated back (more than once) were as follows:

- This is not just about Smuggler and Orion
- Orion has had many parties contact us – including, suppliers, customers, employees (both current and former) – stating it is a challenge to have a relationship with Sealegs
- Because of this “Challenge” there is a “Collective” of opportunities in the market who are wanting an “Alternative” to Sealegs
- The “Collective” are driving the creation of the “Alternative”

No doubt you will be informally questioned about your current position in the coming days.

My suggestion would be to respond in general terms along the lines that you are considering your options and that you are observing what a number of other parties are pursuing [sic] in the wider amphibious market.

In summary, they will try the bully boy tactic [sic]. We just continually reinforce back to Sealegs that Smuggler/Orion are not exclusively driving this – there is more horsepower on tap.

Darren.

[131] The following day, 28 April 2016, Mr Pringle met with Mr Jolliffe to discuss the terms on which Sealegs could purchase Smuggler craft to be fitted with the Sealegs amphibious system. Agreement was reached whereby Sealegs would provide Smuggler with its Amphibious Enablement System (AES) kits to be fitted onto Smuggler's 770 Centre Console boats. Sealegs would then purchase the Smuggler craft for \$95,000 and commission the amphibious system at Sealegs, adding Sealegs badging on the boats. Shortly after their meeting, Mr Jolliffe sent Mr Pringle an email confirming the agreement and arrangements.

[132] During April 2016 Mr Pringle maintained contact with Mr Zubcic regarding progress being made by Orion, and on 11 April Mr Zubcic advised him that Orion would shortly start machining the bow and stern hinge brackets which would be available in two weeks.

[133] On 3 May 2016 Mr Leybourne sent Mr McKee-Wright and Mr Bryham an email (copied to Mr Zhang) in which he advised that Orion was working with a number of parties, whom he termed "the Collective", and was at an advanced stage of developing an alternative amphibious system. He said that Orion could no longer back out on its commitments to the Collective, and that conversations between Sealegs and Orion about a closer business relationship needed to have started six months earlier. Mr Leybourne further wrote that although he understood Sealegs wanting to protect their business model, they should not cross into anti-competitive conduct. He raised the prospect of a "no fight fee" again and suggested terms on which it could be paid. He went on to say:

Again, I understand if Sealegs reject the concept of a NFF [no fight fee]. But in deciding to reject (and presumably going legal) please consider all or at least some of the following:

- We believe avoiding patent infringement is obtained by using our Core technology
- Should patent infringement be a possibility we simply adjust the design – we have this flexibility with Core technology
- If an interim injunction is sought [sic] (which we would contest) and granted, Sealegs will need to have a strong belief in winning the longer game

- If Sealegs lose [sic] the long game the Collective will claim costs against Sealegs. The big number claimed will not be the legal costs, but the cost of lost business
- The longer the game the larger the cost of lost business

Claiming (and winning) the costs of lost business – how much would this impact Sealegs?

[134] The email then requested an “intelligent, technical discussion” that avoided inflaming emotions, and mediation was suggested.

[135] Mr Leybourne says that by raising the subject of a “no fight fee”, he was not acknowledging that Orion had copied the Sealegs system, but rather he was looking for a possible pragmatic solution that would enable both companies to co-exist in the market, and did so because Sealegs were threatening to ruin Orion unless it agreed to an arrangement whereby Sealegs became the exclusive distributor of its system and products.

Mr Pringle reports to Mr Leybourne

[136] On 15 June 2016 Mr Pringle and Mr Leybourne exchanged emails regarding the steering system to be used in the Orion system, and whether Orion would supply a helm pump as Sealegs did. Mr Pringle then followed up his initial email with another advising:

I Forwarded [sic] the video to Damon [Jolliffe] they had seen it at the beach races, quick on the beach.

[137] Mr Leybourne replied:

That is good – seen by Sealegs and no action taken.

[138] The evidence does not establish what it was that Sealegs had seen at the beach races, or what was recorded on the video Mr Pringle sent to Mr Jolliffe, but Mr Leybourne’s comment shows his anticipation of some reaction by Sealegs to what Orion had been working on with Smuggler.

[139] On 28 June 2016, Mr Pringle sent Mr Zubcic an email advising that Smuggler was starting on its first hull modified to take the Orion system. The two arranged for Mr Zubcic to visit Smuggler to discuss the work.

[140] On 6 July 2016, Smuggler (Mrs Pauline Pringle) advised Sealegs (Mr Jolliffe) that it no longer wanted Sealegs to advertise the Smuggler boats on the Sealegs website. The following day Mr Jolliffe sent Mr Pringle a proposed “Smuggler – Sealegs Agreement” incorporating the terms and arrangements that had been discussed between them the previous day. The agreement was expressed as superseding all previous discussions and arrangements. Included within the proposed terms was a provision headed: “Intellectual Property Rights” which stated:

Smuggler acknowledge all and enduring intellectual property rights owned by Sealegs for the amphibious enablement of a Smuggler craft.

In recognition of these IP rights, Smuggler agrees not to engage in any business activity either directly or indirectly for the manufacture, assembly, or sale of amphibious products, which compete with, or are equivalent to, Sealegs products, except with the written permission of Sealegs.

[141] Mr Pringle replied attaching a copy of the proposed agreement with handwritten amendments, including the deletion of the whole of the Intellectual Property Rights provision. Further discussions followed, and on 25 July Mr Jolliffe sent Mr Pringle a further revised form of agreement. Mr Pringle did not immediately reply to Mr Jolliffe regarding execution of this revised version of the agreement.

[142] Mr Series, the Chairman of Sealegs, then became involved and having unsuccessfully tried to contact Mr Pringle directly, sent him an email on 28 July requesting a response regarding the proposed agreement. Mr Pringle initially deflected responding, explaining that he was very busy with another matter, but when pressed by Mr Series for a reply in an email on 29 July 2016, he wrote that Smuggler has recently completed a review of its whole business and concluded that it would not enter into any exclusive supplier agreements. He considered that such agreements tended to favour one side, and that this one-sided outcome would restrict growth opportunities for Smuggler.

[143] In response to Mr Pringle's email, Sealegs terminated its relationship and arrangements with Smuggler. In an email sent to Mr Pringle on 29 July, Mr Series explained that Sealegs operated on the basis of an exclusive relationship with its boat builder partners, and because Smuggler did not want to enter into an exclusive relationship with Sealegs, Sealegs had no option but to terminate their partnership.

[144] On 15 July 2016, Orion issued a tax invoice addressed to Smuggler Marine for the supply of one "S25-3W Amphibious System" at a price of \$65,000.00 plus GST. The due date of the invoice was 1 September 2016 and it credited the sum of \$22,425.00 as "Less Amount Paid".

[145] Through July and August 2016, Mr Zubcic, Mr Leybourne and Mr Pringle were in regular communication regarding progress with the construction of the Smuggler craft in accordance with the requirements for the fitting and installation of the Orion system. On 15 August, Mr Leybourne advised Mr Pringle that Orion was assembling the front leg assembly, saying he would have it delivered to Smuggler for fitting on their craft.

[146] On 1 and 2 August 2016, Smuggler accepted two written orders for amphibious Smuggler Strata 770 Mid Cabin craft. The amphibious technology to be fitted to the craft was described in the order specifications sheet as "S25 wheels, engine, all systems for powering amphibious operation..."

[147] On 1 September 2016 Mr Pringle sent Mr Leybourne a series of photographs of a Smuggler 770 boat under construction, and showing components of the Orion S25 fitted to it. They show the rear leg assemblies fitted to the hull and the power unit and hydraulic hoses installed with the craft awaiting installation of the front leg assembly and the inflatable pontoon tubes. On 9 September Mr Pringle sent Mr Leybourne photographs of the Orion front leg assembly attached to the Smuggler craft.

Peter Allen visits Smuggler Marine – 7 September 2016

[148] Mr Peter Allen is a mechanical engineer employed as a patent engineer by Pipers Intellectual Property (Pipers). Pipers was initially engaged by Sealegs in 2002 to undertake the drafting and registration of a patent application for the Sealegs

retractable leg amphibious system then in development. Mr Allen gave evidence for the plaintiff regarding his involvement in the patent application and as regards the defendants', and particularly Orion's, design path of the S25-4WD and S25-3WD systems.

[149] In its promotional material published in the September 2016 issue of the Boating New Zealand magazine, Smuggler said that it would be unveiling a "very special" craft at the September 2016 Auckland On Water Boat Show, which it said was "destined to be a game changer". On 7 September 2016, Mr Allen was instructed by his employer, Mr Piper, to visit the premises of Smuggler Marine in order to see if they were fitting any three-legged amphibious systems to their craft. Mr Allen went to the Smuggler premises purporting to be interested in purchasing a Sealegs type of boat, and spoke to Mr Pringle. Mr Pringle said that although they had used the Sealegs system on their boats, "things [were] about to change". Mr Allen says that Mr Pringle went on to explain that Smuggler was now making its own system, and showed him a photograph of a new Smuggler boat and explained that the cowling that would cover the front wheel when retracted was there to get around the Sealegs patent, as the wheel could not be regarded as acting as a bumper.

[150] Mr Allen says that Mr Pringle told him that Smuggler had already sold four boats which would have the new system on them. Mr Allen further says that he was told by Mrs Pringle, who was also present in the Smuggler office, that Smuggler boats with the new amphibious system would be on display at the Auckland boat show on 28 September, and that he was offered tickets for the boat show. Mr Pringle then took Mr Allen into the workshop where he says there were at least four boats under construction. Mr Pringle showed him one of the boats that already had the new front leg assembly fitted and another boat that was awaiting installation of its front leg. In the course of their conversation, Mr Allen says he was told by Mr Pringle that the new amphibious system had been designed by one of the head designers from Sealegs who had left Sealegs' employment to design the new system.

Sealegs commences proceedings and applies for interim injunctions

[151] On 9 September 2016 Sealegs commenced proceedings seeking an injunction restraining the defendants from displaying or selling copies of the Sealegs copyright works, or the Orion S25-3WD and S25-4WD products. The plaintiff also made an inter partes application for an interim injunction, and then also brought a without notice application on a Pickwick basis seeking orders restraining the defendants from exhibiting the Orion amphibious products at the Auckland On Water Boat Show which was shortly to commence on 29 September 2016. This application was heard by Faire J on 23 September 2016. In his judgment of 26 September 2016, Faire J noted that the inter partes application was already set down for hearing on 28 October 2016, and he declined to grant the without notice application relating to display of the Orion products at the boat show.⁷ He noted that the injunction sought related to a limited period and only to marketing and not the actual sale of products, as any orders taken at the boat show could not be filled during that period.

[152] The interim injunction application was heard by Peters J on 28 October 2016. In her judgment dated 19 December 2016, Peters J granted the application and made orders restraining the defendants from copying, issuing (by sale or otherwise), showing to the public or adapting the plaintiff's claimed copyright works, and in particular from issuing, showing to the public or adapting the Orion S25-3WD system or any similar product.⁸

[153] Mr Bryham says he first saw the Orion S25-3WD and S25-4WD systems together at the Auckland On Water Boat Show in late September 2016. He says that he was unable to get a close look at the S25-3WD system, but was able to view the rear of a craft fitted with the S25-4WD system which appeared to be the same as he had seen on the Surfcon ARC600 craft in Shanghai, and which he considered was a copy of the Sealegs port and starboard rear leg assemblies.

[154] Mr Bryham was subsequently able to inspect and examine the Orion S25-3WD assembly more closely pursuant to an order of the Court. Having done so, he

⁷ *Sealegs International Ltd v Zhang* [2016] NZHC 2274.

⁸ *Sealegs International Ltd v Zhang* [2016] NZHC 3143.

concluded that the rear leg assemblies on both the S25-4WD and S25-3WD are identical to each other, and appear to be substantial copies of the Sealegs rear leg assemblies. He says that while employed at Sealegs, Mr Leybourne, Mr Zubcic and Mr Percival all had access to and involvement in the development and recording of details of the Sealegs' design information, and the only rational explanation for the close similarity of the Orion front and rear leg assemblies to those produced by Sealegs is that Orion commenced and undertook the development of its amphibious system by substantially copying the unique design arrangement of the key components of Sealegs' amphibious leg assemblies.

The expert witnesses

[155] The defendants called Dr Bruce Field and Dr Shayne Gooch as expert witnesses, while the plaintiff called Mr David Dippie, Mr Brian Bellingham and Mr Peter Allen.

[156] Both Dr Field and Dr Gooch explained that they had undertaken their examination and comparison of the Sealegs and Orion systems and their respective design paths by reference to four key sequential elements of a design process typically faced by a technical design engineers. These are:

- (a) *Clarification of the task to be performed by the product*: this process involves determining and defining specifications that the product must comply with or achieve and the problem to be solved.
- (b) *Concept design*: which typically includes the preparation of quick sketches of options or partial options and a sorting of partial solutions. At this stage decisions are made regarding the engineering functions required to achieve the task.
- (c) *Embodiment design*: in this phase the concept and design requirements and specifications are applied to determine the kinematic geometry of the systems that will comprise the product. During this design phase, the overall concept or idea is developed into an actual product and detailed information required for manufacturing the product is

produced. An engineering analysis is undertaken including calculations, layout drawings, selection of commercial off-the-shelf (COTS) items and components, and the preparation of detailed costings. The objective at this stage is to ensure that the product will perform the tasks required and meet the design specifications.

- (d) *Detail design*: in which the separate components are selected or designed from scratch to suit or meet kinematic or other constraints such as strength, weight, economics and aesthetics. The product of this phase is a series of typically CAD drawings or 3D models from which the systems can be manufactured. In the final detail design phase, the embodiment decisions and information derived from calculations is applied to the design of components to comply with kinematic requirements. These are to be assembled in the manufacture of the finished product.

[157] Drs Field and Gooch explained that in a typical design engineering process and sequence, the design detail phase probably occupies up to 95 per cent of the engineer's time.

Dr Bruce Field

[158] Dr Field is the managing director of an engineering and manufacturing company. He is highly qualified. He holds a Doctor of Philosophy, a Master of Engineering Science, and a Bachelor of Engineering (Mechanical) (Honours). He has been employed in an academic role in three different Australian universities as a specialist in mechanical design and in developing, teaching and administering courses combining mechanical engineering and industrial design. He has been actively involved in the teaching of manufacturing and mechanical design processes for mechanical engineers for more than 30 years. Dr Field also has extensive experience as an advisor and expert witness in relation to disputes involving the design of machinery and has previously appeared as an expert witness at many levels of the Australian court system.

[159] In the present case, Dr Field reviewed the witness affidavits and statements and discovered documents. In June 2017, he inspected Smuggler boats fitted with both the Sealegs and Orion amphibious systems. Dr Field examined both the Sealegs and Orion systems and identified many differences between the systems that he said arise from different design approaches and different goals, such as Orion's apparent attempt to build a product suitable for a wider range of hulls than Sealegs. His assessment of the differences that he identified led to him conclude that the Orion system is not derived or copied from the Sealegs system. He said:

In my expert opinion, to a reasonable extent, differing design paths for each of the Sealegs and Orion systems can be deduced from the resulting product. In particular, the starting points of designing the wheels and method of mounting the amphibious assemblies to the hull are quite different and create different design paths for each system, as well as different appearances of the arm's main portions.

[160] Dr Field examined the design paths of the Orion S25-4WD and S25-3WD systems. He noted that in designing the 4WD system, Orion had identified a different market need or niche for a 4WD system as opposed to a 3WD system for a similar weight hull. On the evidence I do not consider that to be entirely correct, as Mr Zubcic has explained that the initial objective of Orion was to produce an amphibious system that would be applicable to single hull craft of six to seven metres and thereby compete in the same market as Sealegs. However, Dr Field formed the opinion that Orion had demonstrated by its development of the 4WD system that it possessed the ability to undertake an analytical design from a specification entirely different from the original Sealegs, while noting that Orion at the same time was developing Project 100 for Sealegs.

[161] In relation to the Orion 3WD system, Dr Field said that the design path of Orion commenced by way of a specification for the system provided by Smuggler. He said that the second phase of design, namely that of conceptual design, would be similar to Sealegs as in both cases the designs were directed at an amphibious kit suitable for installation on the Smuggler hull. Dr Field observed that not only would the second phase of conceptual design be similar, but there would also be many common elements in the third embodiment design phase due to the functional constraints of designing an amphibious kit. He concluded:

However in the fourth and final phase of the design process which comprises 95% of the effort Orion took a markedly different path as I have explained in my primary evidence. That independent path resulted in physically different components and a visually dissimilar kit. It may be relevant to add at this point that when one inspects with the naked eye the Sealegs and Orion systems as applied to a Smuggler vessel – as I understand Your Honour did on Tuesday – a strong impression of similarity is likely to be obtained because most of what is perceived is indeed identical, ie the Smuggler hull and the abstract kinematic geometry. However, a comparison of the two systems not applied to a boat (ie on their own) shows that they are not at all similar ... A further comparison can be made by considering each of the rear legs individually (as opposed to being part of a system) because that removes the common kinematic geometry which is a product of the functional constraint.

[162] In commenting on Mr Bryham's evidence, Dr Field said:

Mr Bryham maintains that the Sealegs amphibious design conceived by him is unique. I accept that it is unique in the sense that I have not been able to find an identical combination of the elements of which he speaks including external pivoting legs, hydraulically powered wheels and no openings in hull for wheel. However, all of those elements were pre-existing in prior designs. Indeed, some could be called common place.

Dr Shayne Gooch

[163] Dr Gooch is currently the Head of Mechanical Engineering at the University of Canterbury and is the director of a company providing engineering consultancy services in engineering design process issues, forensic investigations and failure analysis involving engineering systems. He has a Doctor of Philosophy and a Bachelor of Engineering from the University of Canterbury. Since 1999, Dr Gooch has held a fulltime academic position at the University of Canterbury. He previously worked as a research engineer and as a lecturer teaching mechanical engineering drawing.

[164] Like Dr Field, Dr Gooch was engaged by the defendants to examine the features claimed by Sealegs to have been copied by Orion, consider the design path followed by Orion in relation to its 4WD and 3WD products and to address the issue of the engineering design process as applicable to the design of amphibious systems.

[165] In his evidence Dr Gooch explained that having examined the Sealegs and Orion systems, he had concluded that the similarities between them are explained by functional constraints. He further concluded that differences between the two systems

meant Orion followed an independent design path and that the Orion system was not derived from the detailed engineering design information that was used to make the Sealegs system.

[166] Having examined and compared the two systems, Dr Gooch concluded that the Orion engineers may well have had a pre-existing technical knowledge of the Sealegs system. However, he said that much of this technical knowledge would normally be acquired during the initial task clarification phase of the design process as this is the phase where competitive products such as the Sealegs design and other similar systems are analysed as part of developing the design specification. He said that both amphibious systems have a similar overall concept and share some of the same basic working concepts. However, that is not unexpected because both systems solve a similar problem, namely providing an amphibious function to an otherwise conventional watercraft using accessories. The design specifications for systems that solve that problem for similar-sized craft can also be similar.

[167] Dr Gooch observed that it was in the development or embodiment of the concepts where the two systems are very different. He said:

The Orion 25 design is generally more sophisticated and this appears to be a technical advance over the Sealegs system. The pre-existing design knowledge of the Sealegs system would have been of limited value to Orion engineers due to the differences in technical solutions that have been developed.

Mr David Dippie

[168] Mr Dippie was engaged by the plaintiff as an expert witness. His background is as a commercial engineer and he holds a New Zealand Certificate in Engineering. He has extensive experience working in a heavy engineering business during which he developed alternative technologies for wool scouring, before transferring to a heavy engineering business designing a range of industrial plant. He purchased Easteel Industries in 1985, which designed thermal energy equipment and employed some 30 engineers and designers and over 100 other project and technical staff.

[169] Mr Dippie explained that he has had an interest in amphibious craft for nearly 40 years and acknowledged that he was familiar with the Sealegs amphibious boat

designs as he had looked at them in the context of considering the purchasing of one for his own use.

[170] Having reviewed the evidence of Dr Field, Mr Dippie comments that the design paths described by Dr Field, whilst accurate, are in his view an academic analysis which requires “real world experience” to understand how new products are designed at the manufacturer and design level. Mr Dippie explained in his evidence that in 1980, he and his father-in-law themselves designed and built an amphibious boat which they called the Otter. The Otter was designed and intended for use in the exposed waters of Hawke’s Bay and was required to enter and exit the sea via a hard sand beach and drive approximately 600 metres from the water’s edge to a residence. Mr Dippie described in evidence the design process that he and his father-in-law undertook, including at the outset establishing the design criteria and thereafter the design path that was followed. The Otter was very successful in that it performed well at sea and on the road and was operated by Mr Dippie’s family for some four years.

[171] Mr Dippie explained that once the method of conveyance is determined by the designer, the configuration of the legs then needs to be considered and the range of options is huge. He said that he became interested in purchasing a new amphibious boat for himself and attended the Cannes Boat Show where he saw the amphibious boat Iguana 29. Rather than wheels, it has a system of two retractable tracks each being supported on two legs. Other amphibious craft manufacturers have opted for four retractable wheels, such as the Humdinger, and Sealegs had opted for three. Mr Dippie notes that after determining the configuration of the legs, the next series of design options are the method of retraction with the options being lifting the leg vertically, pivoting the leg forwards, pivoting the leg backwards, pivoting the leg to the left, or pivoting the left leg to the right. Mr Dippie notes that there are also other leg retraction options, such as those used on aircraft where a complex arrangement of links allows a wheel to trace a compound motion. A further option arises as to where the leg is to be placed and stored whilst retracted. He notes that the range is again wide, including retraction wholly into and within the boat hull, partially into the boat hull or entirely external of the boat hull and stored in front or on the sides or to the rear of the hull.

[172] In the Otter design, the front wheel was lifted almost vertically to be stored in the hull and the rear wheels were also lifted upwards to be stored in the hull. Mr Dippie said:

The Sealegs design is a powerful expression of an amphibious boat design, in my opinion it made bold decisions to keep the lifting mechanism external to the boat. To me that was a counter intuitive decision. It was/is one of the few amphibious boat designs on the market with this feature. I believe in 2003 when the boat was first designed it was a radical design departure from what would seem intuitively most marketable; to look like a boat underway with the mechanisms concealed in the hull as we did with Otter. It has, in my opinion, created its own design appeal. I am aware people see it as ugly and others as cool. I have come to like the aesthetics over time – form follows function.

[173] Having considered the possible explanations for the Orion system's similarity to the Sealegs system, Mr Dippie expressed his opinion that given the wide range of design decisions required to develop an amphibious boat from scratch, the odds of the two designs being as similar as Dr Field had described cannot be a coincidence. He noted that three other craft with similar functions to Sealegs, namely the Iguana, the Gibb's Humdinger and his own boat, the Otter, which were undoubtedly developed independently, were all radically different in appearance and mechanical specifics. Mr Dippie expressed his opinion that the functional constraints identified by Dr Field do not in fact provide a limitation on design to the extent that he suggests. For example, as demonstrated with his own Otter boat, there is no structural impediment to mounting the front wheel aft of the bow and doing so was in fact a simpler and cheaper arrangement with other advantages such as reducing the ground clearance needed by shortening the wheel base. In Mr Dippie's opinion the picture painted by Dr Field of the inevitability of someone starting with a blank sheet of paper and ending up with a design almost identical to Sealegs is "absurd".

[174] In his view, the most charitable explanation as to why the Orion system looks and performs almost identically to a Sealegs system is that its designers were comprehensively affected by confirmation bias as a result of their intimate knowledge of Sealegs. Mr Dippie explained his reference to confirmation bias as follows:

I've had a long experience of running design teams and I used to find that once they had been down a certain path and that they would be blinkered and head down that path next time without considering how the circumstances have changed and how they could do it differently, and so – and I understand in a

scientific point of view that that's a trap that scientists also fall into and don't consider all of the possible possibilities that should be considered rather than the ones that they are familiar with.

Mr Brian Bellingham

[175] Mr Bellingham also gave evidence as an expert witness called by the plaintiff. Mr Bellingham has owned and operated a number of engineering-based businesses and describes himself as mainly a self-taught engineer. He also has expertise in marine technology, having constructed a number of air boats including four amphibious boats all powered by air propellers. Mr Bellingham explains that he has been involved in building air boats and amphibians for most of his working life, and in 1992 established his company International Air Boats Limited in order to promote his amphibious air boats. He has also been involved in the manufacture of carbon fibre reinforced laminates and has constructed yacht masts for large ocean-going yachts. Of the four amphibious boats he has built he constructed the hulls of three of them and had the fourth constructed by a boat builder. The fourth and most recent amphibious boat he built was constructed with three retractable legs, the front leg being mounted internally of the craft and extending through an aperture at the bow of the boat. The pivot point is located inside the boat so that the front leg extends from a position just above horizontal downwards through an arc to be close to vertical when extended in order to support the front of the boat when on land. The two rear wheels, which are affixed to the transom of the boat, move from their extended almost-vertical position, to be in an almost horizontal position above the waterline when retracted.

[176] Mr Bellingham examined the evidence of Mr Zubcic and Mr Leybourne and the defendants' discovered documentation relating to the Orion design path. Mr Bellingham says that as a practical engineer he has found that once an engineer sees a working and effective solution to the problem they wish to achieve, it is virtually impossible for it not to influence their own design work. Mr Bellingham referred to the Orion computer drawings of its front leg assembly saying that he can see the clear influence of the Sealegs SL100/IKA11 design evident in the Orion assembly. He notes that the design features from the hull to the motors that drive the wheels are substantially the same and that in his view the designer has substantially adopted the Sealegs solution to the retraction of the wheel unit. He notes that the Orion 4WD

system involves a double motor and two wheels at the bottom of the leg, which is different from Sealegs but nevertheless uses a similar wheel to Sealegs. He says that in his view, the key features of the Sealegs design are the design decisions made as to retraction of the conveyance mechanisms. The use of two motors on the Orion 4WD system, while a different design option, does not detract from the fact that substantially the design adopts the work and design decisions made by Sealegs in reaching their amphibious solution.

[177] In relation to the rear leg assemblies and particularly Sealegs SL100-IKA11, Mr Bellingham says that the Orion solution and system is an externally mounted rearward geometry with a similar style wheel and tyre to Sealegs, as they both have a solid aluminium block hydraulic cylinder to elevate the leg with essentially the same geometry. Mr Bellingham notes that the Orion rear leg assembly has the oil gallery built inside the leg which is a similar feature to Sealegs. In his opinion, whatever design path was followed, the similarities between the two designs cannot be a coincidence and the designer of the Orion system has been hugely influenced by his knowledge of the Sealegs boat models and IKA11, being the latest generation of the Sealegs models.

[178] Mr Bellingham also commented on the defendants' evidence regarding Orion working through design problems. He notes that "debugging" a design is a normal process as theory is always different when reaching the stage of practical application. He said that someone adopting the Sealegs design which has already been debugged means they are taking advantage of the benefit of an integral part of the Sealegs design path. Having built a series of amphibious boats, he says that a testing programme is inevitable. In his case, he said that the testing process was extensive and took years. He notes that he would expect to find the defendants having documented such a process, but was not referred to any documentation indicating that any such testing process had been undertaken. Rather, what he has seen are references to the Sealegs product, indicating Orion's use of that testing information to go straight to a finalised design. Mr Bellingham says that in his opinion such an approach means that the defendants have not had to make what he regards as the essential engineering decisions to produce the design by adopting the Sealegs solution. Mr Bellingham says that such

an approach is not possible without the Orion design having been directly derived from the earlier Sealegs models, using those models to effectively take a short cut.

Mr Peter Allen

[179] Peter Allen is, as I have said, a mechanical engineer employed by Piper Intellectual Property (Pipers). Pipers is engaged by the plaintiff in the proceedings, and Mr Allen was called as an expert witness by the plaintiff. Mr Allen has a Bachelor of Engineering degree in mechanical engineering and a New Zealand Certificate of Engineering. Prior to working as a patent engineer with Pipers, he trained as an aircraft maintenance engineering tradesman with Air New Zealand and worked as an aircraft engineer for approximately 20 years.

[180] Mr Allen first became involved with Sealegs in 2002 when Pipers were engaged in relation to Sealegs' patent application. Mr Allen was personally involved in drafting Sealegs' two initial patent applications relating to their retractable leg system in 2002 and 2003.

[181] In his evidence Mr Allen describes a visit he made to the premises of Smuggler Marine in September 2016 under the auspices of being a prospective buyer. He had been instructed by Pipers to visit the premises with a view to ascertaining information as regards Smuggler's use of the defendants' amphibious kits. Mr Allen spoke with Mr Pringle regarding the defendants' amphibious kits and has given evidence about what he saw and what he was told.

[182] The defendants object to Mr Allen giving evidence as an expert witness. They submit that Mr Allen lacks independence, as is evident from the fact that he has been the patent engineer advising and assisting the plaintiff for some 15 years and from his visit to Smuggler Marine in September 2016 in which he posed as a prospective purchaser. The defendants say that Mr Allen has thereby shown partiality towards the plaintiff such as precludes him from complying with the Code of Conduct for Expert Witnesses contained in Schedule 4 of the High Court Rules 2016. The defendants say that by reason of his inability to comply with the Code, Mr Allen requires leave of the Court pursuant to s 26(2) of the Evidence Act 2006 before being permitted to express his expert opinions.

[183] While Mr Allen does not satisfy the prerequisite of independence required by the Code by reason of his involvement with the plaintiff's patent applications and the steps taken by him in visiting Smuggler Marine in September 2016 to gather information on behalf of his employer, I consider that he has nevertheless given his evidence in a manner which is characterised by his professional objectivity rather than partiality. Accordingly I admit Mr Allen's evidence as an expert. However, I propose to reflect his lack of independence in the weight to be given to his expert opinion evidence and in particular to any evidence which is not otherwise consistent with other admissible evidence.⁹

[184] As well as giving evidence of his visit to Sealegs on 7 September 2016, which I have already referred to, Mr Allen gave evidence following his review of the defendants' discovery and the defendants' evidence regarding the design path followed by Orion. Mr Allen said that following his examination of the defendants' discovery he had been unable to locate any relevant documentation amongst the defendants' documents that referred to an amphibious flood rescue craft in any detail or any documents showing how the design brief affected any of the design decisions. He looked for but did not locate any documents showing evidence of investigations by the defendants into the conditions in which a Chinese flood rescue vehicle would operate; the speed requirements or terrain over which the vehicle would have to travel; the loads it would be expected to carry; and how rescued people would get in and out of the vehicle in poor weather conditions. He further explained that he had looked for documents indicating that Orion engineers had reviewed the design of other vehicles or vessels that could have provided some helpful design ideas which could have been incorporated into their rescue craft design.

[185] Mr Allen further said that he had been unable to locate any documents amongst the defendants' discovery relating to an iterative development process in the steps towards producing the defendants' rescue vehicle in a manner consistent with the design path described by Dr Gooch. He said he was looking for initial concept sketches, photos of prototype models, cardboard mock-ups, calculations of vehicle weights, sketches of leg swing geometries, trials of prototype vehicles in different

⁹ See *Prattley Enterprises Ltd v Vero Insurance New Zealand Ltd* [2016] NZCA 67, [2016] 2 NZLR 750 at [94]–[101].

terrains and with different wheels and tyres, turning circle tests, changes in engine power requirements as the design matured, changes in design direction, and records of designs that were discarded along the way. No such material or documentation was located.

[186] Mr Allen noted that the discovery documents do however contain a number of spreadsheets relating to hydraulic component requirements. He also found amongst the defendants' discovery documents relating to the final design parameters, for example the final all-up vehicle weight distribution, the final configuration of the retractable leg, the final leg hinge location, finalised stowed wheel positions, final engine type, final engine location, final drive motor type, final drive motor numbers, and final drive motor locations. However, he did not find any preliminary rough calculations or follow-on calculation sheets where everything is updated after initial trials. He said that there is no indication in the calculations provided of any iterative processes in determining final specifications, and that he could find no documentary evidence of any trial work, for example navigation over different types of terrain, that may have led to a need for reassessment or recalculation.

[187] As regards the Orion 4WD front leg assembly, Mr Allen says that the retraction pivoting action, steering pivoting action and rotation of the wheels are arranged in the same sequence as appears on the Sealegs front leg assembly. He further says that he has reviewed the defendants' discovery documents looking for any development history relating to the Orion 4WD front leg assembly, such as photos of an initial prototype, records of how and where the leg assembly was tested, and records of problems experienced and design changes made in the course of a usual iterative design process. He says he was unable to find any documents indicating such a process had been undertaken.

[188] Mr Allen said that he had been instructed to undertake an extensive search of publicly available information for drawings, photographs, websites or patent specifications that showed any other amphibious vehicles having the combination of features present in the Sealegs amphibious assemblies and also present on the Orion amphibious leg assemblies. He said that despite his search he had been unable to find

any amphibious vessels other than the Sealegs and Orion vessels that have that same combination of features.

Law and relevant legal principles: Analysis and discussion

[189] In New Zealand, the law of copyright is governed by the Copyright Act 1994 (the Act). To succeed in a claim for breach of copyright, the plaintiff must show first that it is the owner of a copyright work, and secondly that the defendant has infringed the plaintiff's copyright in that work.¹⁰

[190] The first issue I must consider is whether the Sealegs amphibious leg assembly pattern, which Sealegs claims to be an original artistic work constituting a novel and unique arrangement of features, is protected by copyright. Section 14(1)(a) of the Act relevantly provides:

14 Copyright in original works

(1) Copyright is a property right that exists, in accordance with this Act, in original works of the following descriptions:

(a) literary, dramatic, musical, or artistic works:

[191] I begin by identifying the works that the plaintiff seeks to protect by way of copyright.

Identifying the alleged copyright works

[192] In opening the plaintiff's case, Mr Henry said that the plaintiff's copyright work(s) are the combination of features developed by Mr Bryham after he had made and tested a series of models. He says that while all of the individual features are well known, they were never previously assembled and collocated in the combination developed by Mr Bryham. Mr Henry submits that the original quality of the plaintiff's copyright work is the combination of features that together comprise retractable front and rear leg assemblies which, when attached to a craft, give it amphibious capability.

¹⁰ *Henkel KGaA v Holdfast New Zealand Ltd* [2006] NZSC 102, [2007] 1 NZLR 577 at [34].

[193] The combination of features identified and relied on by the plaintiff and for which copyright is claimed are those set out in schedules A, B, C, D, E, F, and G of the plaintiff's fifth amended statement of claim dated 25 August 2017. Those schedules detail the claimed copyright features of:

- (a) the prototype boat 1 retractable front leg assembly (schedule A);
- (b) the port and starboard assemblies of the rear retractable legs and powered wheels (schedule B);
- (c) the modified prototype retractable front leg assembly of Model boat 1 (schedule C);
- (d) the port and starboard assemblies of the rear retractable legs and powered wheels of model Boat 1 with a single billet hydraulic lift cylinder (schedule D);
- (e) the powered front retractable leg assembly of prototype boat 136 (schedule E);
- (f) the powered front retractable leg assembly of prototype IKA11 (schedule F); and
- (g) the rear port and starboard powered retractable legs of prototype IKA11 (schedule G).

[194] The copyright claimed by the plaintiff relating to the Sealegs front leg assemblies of the several models detailed in the schedules can be conveniently summarised by reference to the features present in Boat 136:

- (a) A front leg fixed at a pivot point on the bow external of the hull, which locks down in a near vertical position, and which when retracted rotates in an arc around the pivot point and directly forward of the bow of the craft. When fully retracted, the front leg is elevated above the waterline and directly ahead of the bow.

- (b) The leg is extended and retracted by means of a hydraulic actuator connected to a yoke and to which the lower steerable section of the leg is also connected.
- (c) The front leg has a steering pivot creating an upper static section and lower steerable section and wheel.
- (d) The front leg is attached at one end to the hull pivot point on the bow and at the other end has an axle-mounted wheel.
- (e) A hydraulically powered steering actuator is located on the static upper section of the leg, and connected to the wheel fork to provide front wheel steering.
- (f) The wheel on the leg is powered by a hydraulic motor.
- (g) The powered wheel has a balloon type of tyre with a well-defined V tread pattern.

[195] The copyright claimed by the plaintiff relating to the Sealegs rear leg assemblies of the several models detailed in the schedules can also be conveniently summarised by reference to the features present in Boat 136:

- (a) Two retractable hydraulically powered leg assemblies located on the transom of the craft, each with:
 - (i) a hydraulic lifting actuator attached to the exterior of the hull; and
 - (ii) hydraulically-powered wheels with motors located on the wheel hubs.
- (b) The powered wheel has a balloon type of tyre with a well-defined V tread pattern.

[196] The IKA11 model shares the same features as Boat 136 in the same combination, with added features being:

- (a) the legs being constructed with a box section and an “industrial design” appearance;
- (b) an alloy front fork with hydraulic hoses located inside the leg; and
- (c) an off-set rim front wheel hub with a hydraulic motor concealed within the off-set wheel cavity.

[197] I turn next to consider whether the identified works are sufficiently original to be protected by copyright.

Originality

[198] Although an artistic work need not be of artistic quality, in the sense of being visually appealing, s 14 makes it clear that the work must be original in order to be protected by copyright. Originality is not defined in the Act,¹¹ so common law principles apply. The courts have indicated that the threshold for originality is low.¹² The work need not be novel or unique in form; it must simply originate from its author and be the product of more than minimal skill and labour.¹³ The Supreme Court of Canada described the requirement for originality as follows:¹⁴

What is required to attract copyright protection in the expression of an idea is an exercise of skill and judgment.

[199] It went on to explain:¹⁵

By skill, I mean the use of one’s knowledge, developed aptitude or practised ability in producing the work. By judgment, I mean the use of one’s capacity for discernment or ability to form an opinion evaluation by comparing different possible options in producing the work. This exercise of skill and

¹¹ Beyond s 14(2), which clarifies that a work is not original if it is a copy of another work or itself infringes copyright.

¹² *Henkel KGaA v Holdfast New Zealand Ltd* [2006] NZSC 102, [2007] 1 NZLR 577 at [38]; see also *University of Waikato v Benchmarking Services Ltd* (2004) 8 NZBLC 101,561 (CA) at [27].

¹³ *Henkel KGaA v Holdfast New Zealand Ltd* [2006] NZSC 102, [2007] 1 NZLR 577 at [37]–[38]; see also *Wham-O MFG Co v Lincoln Industries* [1984] 1 NZLR 641 (CA) at 664.

¹⁴ *Law Society of Upper Canada v CCH Canadian Ltd* 2004 SCC 13, [2004] 1 SCR 339 at [16].

¹⁵ At [16].

judgment will necessarily involve intellectual effort. The exercise of skill and judgment required to produce the work must not be so trivial that it could be characterized as a purely mechanical exercise.

[200] As noted, it is original skill or labour *in execution* that is required for copyright to arise, not originality of thought.¹⁶

[201] Although the threshold for originality is low, the extent of the work's originality will be relevant to the scope of copyright protection.¹⁷ The Court of Appeal explained the practical effect of this in *Land Transport Safety Authority of New Zealand v Glogau*.¹⁸

Where the originality is low, it is to be expected that anything other than almost exact reproduction will not support an inference of copying amounting to infringement, whereas where there is a higher degree of originality in the work an inference of copying will more readily be drawn even where the degree of similarity is less. In this way the reward in the scope of protection will tend to be related to the degree of originality. Retaining a low threshold for protection therefore presents no real harm.

[202] The defendants submit that the plaintiff cannot claim copyright in an arrangement of individually unoriginal features. They say they are not aware of any case in which an arrangement of features has itself been found to constitute a copyright work, and that discussions of collections of features have always arisen as a point of comparison between a copyright work and an allegedly infringing item.

[203] It is plain from the decisions in *Bonz Group (Pty) Ltd v Cooke* and *Henkel* that copyright may arise in a collection of individual features which are not in themselves original and which would not attract copyright if assessed on their own.¹⁹ This is because the work's originality lies in the skill and labour required to arrange or collocate those features.²⁰

¹⁶ Gillian Davies, Nicholas Caddick and Gwilym Harbottle *Copinger and Skone James on Copyright* (17th ed, Thomson Reuters, London, 2016) at [3-227], an identical passage from an older edition of *Copinger* was cited with approval in *Martin v Polyplas Manufacturers Ltd* [1969] NZLR 1046 (SC) at 1050.

¹⁷ Ian Finch (ed) *James & Wells: Intellectual Property Law in New Zealand* (3rd ed, Thomson Reuters, Wellington, 2017) at 389; *Henkel KGaA v Holdfast New Zealand Ltd* [2006] NZSC 102, [2007] 1 NZLR 577 at [38].

¹⁸ *Land Transport Safety Authority of New Zealand v Glogau* [1999] 1 NZLR 261 (CA) at 271.

¹⁹ *Bonz Group (Pty) Ltd v Cooke* [1994] 3 NZLR 216 (HC) at 220; *Henkel KGaA v Holdfast New Zealand Ltd* [2006] NZSC 102, [2007] 1 NZLR 577 at [40]–[41].

²⁰ *Henkel KGaA v Holdfast New Zealand Ltd* [2006] NZSC 102, [2007] 1 NZLR 577 at [40]; see also *Bonz Group (Pty) Ltd v Cooke* [1994] 3 NZLR 216 (HC) at 220.

[204] In *Bonz Group*, the plaintiff claimed that the defendants had infringed its copyright in relation to handknitted woollen garments depicting dancing lambs and golfing kiwis, among other things. Tipping J held that originality was not in issue because the “collocation of features” found in the plaintiff’s garments was accepted as being original, as opposed to the features individually.²¹ However, because the plaintiff relied for its copyright on a collection of individual features, this had ramifications when it came to infringement. Tipping J commented:²²

To infringe in such circumstances the defendant must have used the same or a substantially similar arrangement or collocation of the individual features. If the defendant has copied the individual features but has made its own arrangement of them, this will not represent an infringement. *That is because the plaintiff has no monopoly in the individual features as such but only in their arrangement or collocation.*

(emphasis added)

[205] In *Henkel*, the plaintiff claimed infringement of its copyright in artistic works underlying its packaging of adhesive products. The pleaded features of its artistic work included a red and blue card with blister pack; a red horizontal stripe at the top of the card with the majority of the rest of the card being blue; and writing in white at the top right-hand corner within the red horizontal stripe, among others. The Supreme Court held that this was a case involving copyright that derives from a collocation or arrangement of features which are not original in themselves. It cited a passage from *Bonz Group* with approval, including the excerpt at [204] above, and further commented:²³

As we observed earlier, it may be relevant for infringement purposes to determine how much skill and labour went into the making of the copyright work. This point can have particular relevance in arrangement cases. The skill and labour which has given rise to the arrangement is what gives the work its originality, and if that skill and labour is not great, another arrangement of the same unoriginal underlying features may not have to depart greatly from the copyright arrangement in order to avoid infringement. If the level of originality in the copyright arrangement is low, the amount of originality required to qualify another arrangement of the same elements as original is also likely to be low. Substantial reproduction of those aspects of the work in which the originality lies must be shown to establish infringement. This is consistent with the purpose of the law of copyright, which is to recognise and protect the skill and labour of the author of the copyright work.

²¹ At 219.

²² At 220.

²³ At [41].

(footnotes omitted)

[206] It is clear from these cases that copyright may be established in an original collection of individually unoriginal components or features, although there may be implications at the second stage of the analysis (infringement). Lord Reid explained the proper approach in *Ladbroke (Football) Ltd v William Hill (Football) Ltd*:²⁴

A wrong result can easily be reached if one begins by dissecting the plaintiffs' work and asking, could section A be the subject of copyright if it stood by itself, could section B be protected if it stood by itself, and so on. To my mind, it does not follow that, because the fragments taken separately would not be copyright, therefore the whole cannot be. Indeed, it has often been recognised that if sufficient skill and judgment have been exercised in devising the arrangements of the whole work, that can be an important or even decisive element in deciding whether the work as a whole is protected by copyright.

[207] The defendants seek to distinguish *Ladbroke* on the grounds that the pleaded copyright work in that case was a literary work in the form of a compilation, but I consider that Lord Reid's comments are of broader general application and align with the approaches taken in *Bonz Group* and *Henkel*.

The plaintiff's case regarding originality

[208] Sealegs claims that it holds copyright in its Sealegs prototype boat one, prototype boat 136, and Sealegs model IKA11, saying that each represents high originality and is the result of the effort and skill applied by Mr Bryham and Sealegs in the development of the Sealegs amphibious system. The plaintiff says that the copyright works are an arrangement of features that were placed in their eventual combination by Mr Bryham (as an employee of the plaintiff) after a process in which a series of models were made and tested before the final models were produced. The plaintiff says that in this case the quality of the design is the original way in which Mr Bryham combined otherwise known features to develop retractable front and rear leg assemblies for an amphibious craft.

[209] The plaintiff accepts that the individual elements or features of the leg assemblies may not of themselves have originality in an engineering sense; rather, it refers to the original way in which Mr Bryham combined and arranged those features

²⁴ *Ladbroke (Football) Ltd v William Hill (Football) Ltd* [1964] 1 WLR 273 (HL) at 277.

on a boat to create an amphibious craft with fully retractable legs, all external of the craft. The plaintiff says that this combination of features represents an expression for an amphibious system which was and is entirely original: before Mr Bryham and Sealegs developed the system, no other such system had been developed, produced or manufactured anywhere else in the world. There can therefore be no suggestion that Mr Bryham or Sealegs copied the arrangement of features and components that make up its system from any other design or from any other person.

[210] The plaintiff says that the Sealegs retractable amphibious leg system was produced as a result of the application of considerable skill, effort, labour and expense on the part of the plaintiff and it is that which it seeks to protect in asserting copyright over its amphibious system.

[211] The plaintiff further says that the Sealegs design path can be seen in the development of the series of concept models, followed by prototype models, prior to production. Throughout this process of development, the Sealegs system was improved from prototype model one by the addition of a new front fork, a single block rear hydraulic cylinder, model 136 with its addition of power to the front wheel, and the SL100 designs ending in the IKA11 with its components designed to have an industrial and functional look. The plaintiff says that the originality of its design is emphasised by the fact that the placement of the retractable legs on and outside the hull ran contrary to conventional thinking of good design at the time that Sealegs created its system. Rather than attempting to retract and conceal the legs and wheels into positions that would not project beyond the hull form, the Sealegs system placed its retractable legs entirely outside the hull with no attempt to conceal them when retracted. At the time that Mr Bryham and Sealegs developed this design, it was an entirely new and original approach that had not been accomplished before anywhere in the world. The plaintiff says that the subsequent commercial success of Sealegs and its amphibious boats itself emphasises the nature and extent of the innovation.

The defendants' case regarding originality

[212] The defendants acknowledge that the standard for originality to be met by the plaintiff is low, in that the plaintiff must show that the work originates from its author

and is the product of more than minimal skill and labour. The defendants, however, raise another issue as to whether the prototypes in respect of which the plaintiff claims copyright are in fact copies of underlying CAD-based computer models and if so they say that the plaintiff has not identified, produced or even pleaded the original works in which copyright might subsist.

[213] The defendants further acknowledge, however, that were the Court to find the plaintiff to be the author of the independently designed copyright works involving the expenditure of effort and skill, the Court may consider that the low standard of originality required under the Act has been met. The defendants say that such an analysis must be undertaken in relation to each element of the prototype and by reference to an identified author.

Analysis and discussion regarding originality

[214] I am satisfied from the evidence that the Sealegs' retractable amphibious system when developed was unique and quite different from anything that had been previously developed by any other manufacturers of amphibious craft. This was accepted by Dr Field. Dr Field conducted extensive research of amphibious craft and identified a wide range of craft manufactured to have amphibious capability. While noting that most of the elements of the Sealegs system could be found in use in other contexts, he accepted that the Sealegs system as a whole is unique in that there is no other identical product available anywhere. Dr Field said, referring to the Sealegs amphibious design:

I accept that it is unique in the sense that I have not been able to find an identical combination of the elements of which he [Mr Bryham] speaks including external pivoting legs, hydraulically powered wheels and no opening in hull for wheels. However all of those elements were pre-existing in prior designs. Indeed, some could be called commonplace.

[215] Produced in evidence are photographs depicting a wide range of amphibious craft including motor cars modified to operate on the water, and boats with wheel appendages both static and retractable back within the hull form, which have an amphibious capability. This evidence is consistent with the Sealegs system being original and illustrates that there was no prior existing system of any similarity to that developed by Mr Bryham. In his evidence Mr Bryham has explained how he

developed the Sealegs system and he makes no reference to being inspired by any other pre-existing system. None of the amphibious systems employed on earlier produced boats bear any visual resemblance to the Sealegs system. In all material respects what Mr Bryham and Sealegs developed was novel and original in terms of the placement of bow and stern retractable legs on the exterior of the boat hull, to be either extended or retracted while at all times remaining entirely outside the hull form. The amphibious legs of the Sealegs system do not retract into recesses within the hull form, and there is no attempt made to conceal the legs and wheels as is often a feature with many other amphibious craft. When retracted the Sealegs wheels and legs remain entirely visible and obvious. I accept the evidence of Mr Dippie that this was a radical design departure from other amphibious boats on the market.

[216] As well as the exterior positioning on the boat hull of the retractable legs, the composition of the functional features of the retractable legs is also original in my view. The front leg assembly is comprised of components that are arranged and combined to achieve the functions of being extended and retracted by rotating through an arc directly forward of the bow of the craft, and when extended provide driven power and steerage.

[217] I shall undertake a closer examination of the Sealegs system in the context of the issue of whether the Orion products are objectively similar to the Sealegs system; however, I am satisfied that the collocation of components and features comprising the Sealegs system is the product of substantial skill and labour and is an original work for the purposes of the Act.

[218] I further consider there to be a high degree of originality in the Sealegs assembly pattern. While each individual functional component of the leg assembly performs well-known mechanical functions which are themselves not original, the combination and arrangement of the components so as to achieve the functionality and movement required to extend and retract the amphibious legs, coupled with their open positioning at the bow and transom when retracted, combine to make a highly original, effective and immediately recognisable amphibious system of a kind that had not previously been produced by anyone anywhere in the world.

[219] The arrangement of the components developed and determined by Mr Bryham can be contrasted to artistic works which involve the purely aesthetic assembly of known features or elements in order to achieve an original work. Here, the originality of the arrangement of the components yielded a novel solution to the problems of providing amphibious capability for small craft. Moreover, the originality resulted from Mr Bryham adopting an arrangement that is appropriately described by Mr Dippie as being counter-intuitive. Mr Bryham rejected his initial designs and models in which the retracted wheels were substantially concealed and enclosed within recesses built into the hull form, in favour of the external positioning of the legs on the exterior of the hull, meaning they are prominent and entirely visible in their retracted positions. While such an arrangement and positioning may be regarded as visually detracting from the aesthetic and hydrodynamic form of the boats on which it is installed, the advantages and utility of the amphibious capability it provides clearly outweigh those purely aesthetic considerations. The commercial success of the Sealegs system is evidence that despite being obvious and utilitarian in appearance, as well as generally inconsistent with conventional marine design aesthetics, the system is nevertheless well received and regarded in the market, reflecting its originality as an effective amphibious solution.

Are the Sealegs prototypes or the CAD models the original expression of Mr Bryham's ideas?

[220] The defendants submit that while the plaintiff has claimed copyright in the three models,²⁵ those prototypes are in fact copies of underlying computer-assisted design (CAD) models. The defendants submit that it is the CAD computer models which are the original expression of the ideas in which copyright might subsist. The defendants say that the plaintiff is purporting to claim copyright in prototypes manufactured from what were the original underlying 3D CAD computer models. The defendants say that the plaintiff has not pleaded its CAD models as being its original work, nor have the CAD models been produced in evidence.

[221] The plaintiff says that the three key models for which it claims copyright are the physical prototypes built by the plaintiff to test their design concepts. At the

²⁵ Prototype boat 1, prototype boat 136 and IKA11.

completion of the design process, it was these prototypes that were used to develop the CAD-based plans required for the manufacture of components and the production of its amphibious boats. The process of design development undertaken by Mr Bryham and Sealegs involved progressing through a design path aimed towards the construction of a physical prototype to be tested and modified before finalising the design. The process of designing and manufacturing components was undertaken by Mr Bryham with the assistance of consulting and manufacturing engineers engaged by Sealegs. While this process involved sketches and engineering drawings at various stages, it was not until the prototype had been completed and settled on that the process of creating CAD drawings of the prototype and thereby a CAD computer model of the prototype was commenced and production drawings were prepared based on the prototype model. The plaintiff submits that as a result of its design development process, prototype boat one became the first copyright work. The plaintiff says that prototype one is the model which contains the features of its amphibious system and in which copyright is claimed.

[222] Similarly, as regards prototype boat 136, the same development process was adopted, with the prototype boat 136 model being the final expression of the plaintiff's artistic work in which copyright is claimed. Once again it was that model from which the production drawings were subsequently developed on the SolidWorks computer system, including a computer model and component design drawings.

[223] In relation to IKA11, the plaintiff says that this prototype was developed as a design project and intended by Sealegs to be finalised once approved as a physical model from which computer drawings to enable production will be made.

[224] While professional design engineers will in most cases progress the design of original works starting from initial sketches, progressing to CAD drawings and computer models, and then moving to the manufacture of components based upon the CAD drawings and physical models, such an approach is obviously not the only method of converting an original idea into the physical expression of the idea. In Sealegs' case, the approach adopted was more of a trial and error method by which functional solutions were tested and various components manufactured and trialled before the prototype was finally acceptable and settled on. It was only when that stage

had been reached that CAD production drawings and a computer model were prepared which would enable production of the prototype.

[225] I accept Mr Bryham's explanation of the process of design development that ended with the creation of the prototypes for prototype boat one and prototype boat 136, and accordingly I am satisfied that those prototypes are the original work that was produced by the application of the skill and labour of Mr Bryham and Sealegs. Consequently I reject the defendants' submission that the underlying CAD model was the actual original work. The sketches and drawings that were created along the design pathway prior to the creation of the prototype boats, including those undertaken on a computer, were in the nature of design work undertaken in the course of a design pathway where the objective was the creation of a final prototype, rather than being expressions of the original idea of Mr Bryham and Sealegs. The development of the expression was not complete until the prototypes had been settled upon and at that point each prototype represented the plaintiff's original expression of its idea for an amphibious system.

Ownership: Does the plaintiff own copyright in the three models?

[226] The author of a copyright work is the person who contributes the skill, labour and judgment comprising the actual work.²⁶ The default position in s 21(1) of the Act is that the author of a work is the first owner of any copyright in the work. Where two or more authors collaborate in producing a copyright work, it is a work of joint authorship.²⁷ All of those authors are then taken to be the owners of copyright in the work.²⁸

[227] There are two important exceptions to the default rule that the author of a work is the owner of copyright:

²⁶ *Oraka Technologies Ltd v Geostel Vision Ltd* [2010] NZCA 232, (2010) 88 IPR 227 at [20].

²⁷ Copyright Act, s 6(1).

²⁸ Copyright Act, s 8(1).

- (a) where an employee makes a copyright work in the course of his or her employment, the employer is the first owner of any copyright in that work;²⁹ and
- (b) where a person commissions and pays for, or agrees to pay for, a work (other than a literary work) and the work is made in pursuance of that commission, that person is the first owner of any copyright in that work.³⁰

[228] In determining whether an employee made a copyright work “in the course of employment”, it is necessary to consider the scope of what the employee was employed to do, and whether the creation of the copyright work can be regarded as falling within the employee’s role.³¹ It is also relevant to consider whether the copyright work was made during work hours, on the employer’s premises, using the employer’s equipment and materials, and using ideas and expertise that were gained in the course of or related to the employee’s employment duties.³²

[229] As for commissioning, to “commission” simply means to order or to request.³³ This must take place before the work is made.³⁴ However, the Court can infer the existence of a commission; there need not necessarily be a written agreement.³⁵

[230] Section 21(4) of the Act makes it clear that the parties may contract out of these statutory presumptions of copyright ownership.³⁶

The plaintiff’s submissions

[231] The plaintiff says that by means of Mr Bryham’s own design work, coupled with Sealegs’ engagement of consultant engineers and manufacturers, it produced the

²⁹ Copyright Act, s 21(2).

³⁰ Copyright Act, s 21(3).

³¹ See *Empress Abalone Ltd v Langdon* [2000] 2 ERNZ 53 (CA).

³² See *Fleming v Fletcher Concrete and Infrastructure Ltd* HC Auckland CIV-2005-404-4598, 1 December 2006 at [68].

³³ *Pacific Software Technology Ltd v Perry Group Ltd* [2004] 1 NZLR 164 (CA) at [55].

³⁴ *Pacific Software Technology Ltd v Perry Group Ltd* [2004] 1 NZLR 164 (CA) at [56].

³⁵ *Pacific Software Technology Ltd v Perry Group Ltd* [2004] 1 NZLR 164 (CA) at [52]–[53] and [60].

³⁶ See *Oraka Technologies Ltd v Geostel Vision Ltd* [2010] NZCA 232, (2010) 88 IPR 227 at [23].

original works which were the models in which it claims copyright. Amongst the exhibits presented by the plaintiff are tax invoices rendered to Sealegs by a number of consultants and suppliers of services, parts and components in relation to its development of its prototype boats with its amphibious system. The consultants included: Fulcrum Limited and its principal Mr Thomas Gardiner; Metal Designs Auckland Limited; Central Hydraulics Limited and its principal Mr Leybourne; and Allied Precision Engineering (1992) Limited and its principal Mr Andrew Percival.

[232] The invoices produced include one from Metal Designs from 28 April 2003 for the manufacture of a prototype hull. The Fulcrum invoices produced include one dated 16 May 2002 for work described as “completion phase one Sealegs prototype DVL”. Thereafter, throughout the remainder of 2002 and continuing into 2003, Fulcrum invoiced Sealegs almost monthly for computer-based design work. The work being undertaken by Fulcrum was obviously substantial as reflected by the total of the invoices being in excess of \$180,000.

[233] Also produced in evidence by the plaintiff are invoices issued to Sealegs by Allied Precision for work undertaken during 2004 and 2005 in relation to the machining of parts and components required for the Sealegs assembly. Sealegs also engaged Watts Engineering Limited in 2002 to undertake design work for the development of a driven amphibious leg and engineering work required for the construction of a prototype. Also produced are the invoices issued by Mr Leybourne’s Central Hydraulic Services Limited from 2002 through to March 2004 for the supply of items relating to the hydraulic systems and also installation work, development work relating to the hydraulic power system, and fit-out work.

The defendants’ response

[234] The defendants submit that the plaintiff has produced only some of the invoices that relate to work by consultants and suppliers engaged by the plaintiff. The defendants submit that it is incumbent on the plaintiff to prove the commissioning of the design and development work which was involved in the creation of the original work and which it owns as a consequence of its commissioning. The defendants

submit that the Court should not be left to speculate regarding the fundamental issue of ownership.

Analysis and discussion regarding ownership

[235] From the invoices produced by the plaintiff and the evidence of Mr Bryham which I accept, I am satisfied that Mr Bryham proceeded as he described by engaging consultants, such as Fulcrum, to assist with the development of computer-based drawings and designs of the prototype boat one and prototype boat 136 models. I also accept that Central Hydraulics was engaged by the plaintiff to manufacture components and to assist with the design and development as well as the supply componentry, and that Allied Precision Engineering were engaged to manufacture parts and machinery. There can be no question that although actual design work was undertaken by principals and staff of such consultant firms as Fulcrum and Central Hydraulics, those businesses were engaged and commissioned by Sealegs to do so and the copyright in the original work they produced is consequently owned by Sealegs.

[236] The development work of prototype boat 136 and particularly the development of the new three-wheel drive system with a motorised front wheel was developed substantially in-house by Sealegs. Mr Leybourne was himself directly involved in the development of this system and the hydraulic functioning and controls. As an employee of Sealegs, any design and development work that he undertook in relation to prototype boat 136 is the property of Sealegs.

[237] Similarly, the work undertaken from mid-2010 onwards in relation to project 100 involved a design team comprised of Sealegs' employees with the assistance of Allied Precision Engineering who were engaged and paid for their services. The Project 100 progression to IKA11 was also undertaken by Sealegs' own staff including Mr Leybourne. As such, all or any copyright in the original work produced in the form of the Project 100 amphibious system installed on the barge prior to Mr Leybourne's departure from Sealegs as an employee in November 2011 is also the property of Sealegs.

[238] Next I turn to the work Orion carried out for Sealegs on SL100. As I have previously noted, the terms of Sealegs' engagement of Orion in March 2013 were

contained in the written Orion terms and conditions and the Sealegs Design Brief documents. The Sealegs design brief for its SL100 dated 9 April 2013 provides that the intellectual property of all proprietary components shall be the sole ownership of Sealegs. However, the subsequent Service Agreement entered into between Sealegs and Orion on 31 March 2015 provided:

Entire Agreement. This agreement records the entire agreement and understanding of the parties in relation to the subject matter of this agreement, and supercedes and cancels all previous understandings or agreements (whether written, oral or both) between the parties relating to that subject matter.

[239] A further provision of the Service Agreement deals with intellectual property and states that unless otherwise agreed in the Statement of Work Schedule attached to the Agreement, any background intellectual property rights (defined as being those intellectual property rights created or developed by a party before the date of the agreement), would remain the exclusive property of its owner. The Agreement also provides that any improvements to any background intellectual property rights will remain the exclusive property of the owner of that background intellectual property. The Agreement further provides that the parties agree that unless otherwise agreed in the Statement of Work:

(c) any Project IPR (and improvements to) will be owned exclusively by Sealegs, from the date at which the relevant IPR arises; and

[240] The Statement of Work schedule attached to the Service Agreement described the services that Sealegs engaged Orion to carry out, defined “Project IPR”, and contained other terms as follows:

Services: SL100 amphibious system for craft designation: RC34- SLG100 in its current design state.

Project IPR: All proprietary amphibious components belonging to Sealegs current family of design and technology.

....

Other Terms: Orion Marine is being engaged to install and commission SL100 in its current design state. Design changes required after commissioning will be considered out of the scope of this Statement of Work and will require the parties to enter into a new Statement of Work.

[241] The defendants say that at the time the Service Agreement was entered into in March 2015, Orion had already completed the design of its S25-4WD system. The defendants say that from the terms of the agreement it is plain that it was contemplated that Orion had by then already developed its own “background intellectual property rights”, which having regard to the timing would have included that relating to its own amphibious system, even if Mr Bryham and Sealegs did not know the detail of the defendants’ designs. The defendants submit that Orion’s later developed S25-3WD system was a development from or modification of its S25-4WD system, which falls within the definition of an “improvement” to Orion’s background intellectual property rights.

[242] The defendants acknowledge that the intention of the Agreement was that Sealegs would be the owner of any new intellectual property that arose from original work undertaken in the course of Orion’s engagement. However, the defendants say that the plaintiff has failed to establish ownership of any intellectual property arising from or relating to the work undertaken by Orion pursuant to its engagement and that it has failed to identify any artistic work or works in respect of which it claims copyright.

[243] Sealegs says that by the time that Orion was engaged to assist with the development of SL100, and particularly to manufacture a prototype, being the IKA11, the combination of features comprised in its amphibious system was well established. The plaintiff says that IKA11 is a further original work, and a further iteration of the copyright work. The plaintiff says that while IKA11 has a new form in relation to some features, it is nevertheless still an expression of the copyright works. In particular, the plaintiff refers to the addition of a second front lifting cylinder having a pivot point located at its top, and the development of an off-set front wheel hub.

[244] I consider that it is clear from the terms of the Service Agreement that any intellectual property arising from Orion’s work and engagement on the SL100/IKA11 project was to be the property of Sealegs.

[245] The defendants say that features such as the offset wheel rim and box section components used on IKA11 had already been developed and used by Orion on its S25-

4WD, and consequently Sealegs cannot claim ownership of any copyright existing in those features. However, the issue of whether Orion has breached Sealegs' copyright by its development and manufacture of the S25-4WD and S25-3WD is the central issue for determination in this proceeding. If the plaintiff is successful in establishing that the defendants have breached its copyright by adopting and reproducing the manner in which the plaintiff arranged and organised the features which comprise the Sealegs retractable leg assemblies, then the question of the ownership of the copyright arising from the IKA11 engagement will also be determined.

Infringement

[246] Infringement of copyright occurs when a person copies a copyright work without authorisation.³⁷ Section 2(1) of the Act defines copying as “reproducing, recording, or storing the work in any material form (including any digital format), in any medium and by any means”. As the Court of Appeal has observed, this does not provide a useful explanation of what copying actually entails.³⁸ Development of the concept has been left to the common law.

[247] In determining whether there has been copying, the law must strike a fair balance. As Hoffmann J put it:³⁹

On the one hand, wholesale copying is not fair competition. On the other hand, all technological progress depends upon the adaptation and improvement of other people's ideas.

[248] The test for infringement by copying has three well-established steps:⁴⁰

- (a) *Objective similarity*: there must be sufficient objective similarity between the infringing work and the copyright work.

³⁷ Copyright Act, ss 29(1) and 30; *Henkel KGaA v Holdfast New Zealand Ltd* [2006] NZSC 102, [2007] 1 NZLR 577 at [42].

³⁸ *Oraka Technologies Ltd v Geostel Vision Ltd* [2013] NZCA 111 at [84].

³⁹ *Billhöfer Maschinenfabrik GmbH v TH Dixon & Co Ltd* [1990] FSR 105 (Ch) at 124.

⁴⁰ *Wham-O MFG Co v Lincoln Industries* [1984] 1 NZLR 641 (CA) at 666; see also *Oraka Technologies Ltd v Geostel Vision Ltd* [2013] NZCA 111 at [85]–[86] in which the Court of Appeal approved that test but adjusted the ordering of the steps.

- (b) *Causal connection*: there must be some causal connection between the copyright work and the infringing work, in the sense that the copyright work is the source from which the infringing work is derived.
- (c) *Substantiality*: the copying must be either of the entire work or of a substantial part.

[249] There is a degree of overlap between these three issues.

Objective similarity

[250] Objective similarity is not the court's main concern in a breach of copyright case: the ultimate issue is derivation, not similarity.⁴¹ However, the extent of similarity between the copyright work and the allegedly infringing work has evidentiary significance in terms of proving copying.⁴² As Lord Millett explained in *Designers Guild Ltd v Russell Williams (Textiles) Ltd (trading as Washington DC)*:⁴³

The copyright owner does not complain that the defendant's work resembles his. His complaint is that the defendant has copied all or a substantial part of the copyright work ... But while the copied features must be a substantial part of the copyright work, they need not form a substantial part of the defendant's work ... Thus the overall appearance of the defendant's work may be very different from the copyright work. But it does not follow that the defendant's work does not infringe the plaintiff's copyright.

The first step in an action for infringement of artistic copyright is to identify those features of the defendant's design which the plaintiff alleges have been copied from the copyright work. The court undertakes a visual comparison of the two designs, noting the similarities and the differences. The purpose of the examination is not to see whether the overall appearance of the two designs is similar, but to judge whether the particular similarities relied on are sufficiently close, numerous or extensive to be more likely to be the result of copying than of coincidence. It is at this stage that similarities may be disregarded because they are commonplace, unoriginal, or consist of general ideas. If the plaintiff demonstrates sufficient similarity, not in the works as a whole but in the features which he alleges have been copied, and establishes that the defendant had prior access to the copyright work, the burden passes to the defendant to satisfy the judge that, despite the similarities, they did not result from copying.

⁴¹ *Henkel KGaA v Holdfast New Zealand Ltd* [2006] NZSC 102, [2007] 1 NZLR 577 at [43].

⁴² *Henkel KGaA v Holdfast New Zealand Ltd* [2006] NZSC 102, [2007] 1 NZLR 577 at [43].

⁴³ *Designers Guild Ltd v Russell Williams (Textiles) Ltd (trading as Washington DC)* [2000] 1 WLR 2416 (HL) at 2425.

Even at this stage, therefore, the inquiry is directed to the similarities rather than the differences. This is not to say that the differences are unimportant. They may indicate an independent source and so rebut any inference of copying. But differences in the overall appearance of the two works due to the presence of features of the defendant's work about which no complaint is made are not material ...

Once the judge has found that the defendants' design incorporates features taken from the copyright work, the question is whether what has been taken constitutes all or a substantial part of the copyright work. This is a matter of impression, for whether the part taken is substantial must be determined by its quality rather than its quantity. It depends upon its importance to the copyright work. It does not depend upon its importance to the defendants' work, as I have already pointed out. (citations omitted)

[251] Whether there is objective similarity is largely a matter of impression for the Court.⁴⁴ Although the Court may be assisted by expert witnesses,⁴⁵ it must ultimately reach its own view.⁴⁶

[252] The objective similarity analysis in *Oraka Technologies Ltd v Geostel Vision Ltd* is instructive. In that case, the plaintiff claimed copyright in the cup assembly components of its automatic asparagus grading machine.⁴⁷ It said the defendant had manufactured and sold a cup assembly that was a substantial copy of the plaintiff's copyright works. In comparing the two cup assemblies, the Court of Appeal engaged in a feature-by-feature analysis. It noted that there was objective similarity with regard to the dimensions of the two cups, the presence of flared or ramped ends on the cup, and the use of a bracket to mount the cup.⁴⁸ The trigger, pivot points, latch arrangements and chassis plate measurements were also similar.⁴⁹ On the other hand, there were also significant differences between the two cup assemblies, particularly relating to the integration of the chassis with the chain link, the spring that joined the bracket to the pivot pin and the different trigger mechanisms.⁵⁰ However, the experts all accepted that the defendants' cup assembly essentially resembled a "second

⁴⁴ *Eight Mile Style, LLC v New Zealand National Party* [2017] NZHC 2603 at [53].

⁴⁵ *Designers Guild Ltd v Russell Williams (Textiles) Ltd (trading as Washington DC)* [2000] 1 WLR 2416 (HL) at 2423, cited in *Steelbro NZ Ltd v Tidd Ross Todd Ltd* [2007] NZCA 486 at [106].

⁴⁶ *Plix Products Ltd v Frank M Winstone (Merchants) Ltd* (1984) 1 TCLR 176 (HC) at 188–189, citing *Ancher, Mortlock, Murray and Woolley Pty Ltd v Hooker Homes Pty Ltd* [1971] 2 NSWLR 278 (SC) at 286.

⁴⁷ *Oraka Technologies Ltd v Geostel Vision Ltd* [2013] NZCA 111.

⁴⁸ At [109].

⁴⁹ At [109].

⁵⁰ At [110].

generation model” of the plaintiff’s cup assembly.⁵¹ Overall, the Court concluded there was objective similarity between the two works.⁵²

The parties’ submissions

[253] The plaintiff submits that the Orion S25-3WD front leg assembly is very similar to the Sealegs assembly, and has all of the features of the Sealegs system in the same order and arrangement as for prototype 136 (S60-3WD) and Sealegs SL100. The plaintiff says that while there is a difference in the positioning of the Sealegs wheel motor outside the wheel hub, as compared to the positioning of the Orion wheel hub motor within the wheel hub, that difference does not apply in the case of the Sealegs SL100 which has an offset front wheel rim with the wheel-motor mounted substantially within the wheel in the same way as on the Orion front leg assembly.

[254] The defendants say that the Court is required to look at the defendants’ products and decide whether, visually, they are objectively similar to an identified copyright work. This approach must be undertaken on a work-by-work basis and not by adopting a global approach based on whether each work exhibits some features of the copyright work. The defendants submit that it would be wrong to approach this issue by effectively summarising the Sealegs works by reference to the underlying arrangement of features without undertaking an examination in the form of a visual comparison of the works. They submit that the plaintiff’s leg assemblies have a low level of originality, and that consequently any small differences between the two systems, particularly any considered by an engineer to be significant, will be of greater significance.

[255] The defendants say that a certain level of similarity is to be expected as a consequence of Orion adopting some of the same ideas as Sealegs, which necessarily led to similarities. Mr Spring for the defendants says that, for example, they do not deny the Orion leg assemblies use hydraulic cylinders to raise and lower the legs in a similar manner to Sealegs. However, he submits that simply having common components does not create objective similarity. In his submission, when the

⁵¹ At [111].

⁵² At [112].

hydraulic cylinders are looked at more closely and from an engineer's perspective, numerous differences are apparent, such as:

- (a) Different attachment locations on the hull, with consequent different retracting and extension motion.
- (b) Orion's decision not to use hydraulic hoses outside the hull by instead passing hydraulic oil through conical pins that penetrate the hull and attach to an internal plate.
- (c) Orion's hydraulic cylinders include holding valves incorporated in the cylinder tube, while the load holding valves on the Sealegs assemblies are contained in a separate block attached to the cylinder.
- (d) The front lift cylinder on the Orion system is designed to accommodate bump loads when it strikes an object, while the Sealegs system uses an additional component to accommodate bump loads by a mechanical stop.
- (e) The front lift cylinder on the Orion system has a rectangular cross-section and standard end connections, while the Sealegs front cylinder has a round cross-section with a trunnion mounting.

[256] In closing for the defendants Mr Spring said that the defendants do not deny that their systems are underpinned by an "arrangement" which necessarily arises from functional constraints. He further acknowledges that the defendants cannot and do not deny that similarity exists at the conceptual level of the design stages. This was accepted by Dr Field in cross-examination:

Counsel: Well, just come back to the question. The question is, when you look at the geometry and the alignment of features in the geometry in the stick figure, do you agree that the Sealegs [and] the Orion design are simply different iterations of that geometry as per the sketch there?

Dr Field: Different iterations, yes.

Counsel: One is a second iteration of the other because one is first in time?

Dr Field: Well, an iteration isn't a copy.

Counsel: I'm not asking if it is. I'm asking you if you would agree with the proposition that the Orion front leg assembly is a second iteration of the features in the geometry that we see in the stick figure when compared to the first in time, Sealegs.

Dr Field: I still say no. I need to give you an example. I look at the so called outline of the steering box which has got this cylinder through it. The Sealegs one has a circle in the middle. This is where diameter 6 is indicated and it is right there. The equivalent diameter on the Orion one, you can see the circle, but above the circle by a significant amount is the small circle representing the end of the same part. So is it an iteration, or is it not? It's certainly not coinciding with the red circle, so I'm having trouble answering the question. Some parts are similar and some are quite different.

Counsel: So what you're saying is that if we dig down to the fourth level of the design process that you talk about, it's not. I'm asking, if we come back up to the second level, do you agree that one is the second iteration of the other?

Dr Field: The second level is concept design, yes.

[257] However, significantly in this regard, the defendants' expert witness Dr Field said that he accepted that as a whole, the Sealegs system is unique in that there is no other identical product available. Dr Field said that he had identified two aspects of the Orion front assembly which are similar to the Sealegs system and which are not purely functional. These are the location of the hydraulic steering cylinder, and the connection of the hydraulic steering cylinder to the lower leg. In all other respects Dr Field said that the actual similarities are the result of employing conventional engineering solutions to a set of identical design constraints. When comparing the two systems, Dr Field commented that the biggest differences between them were internal and consequently hidden from view. He said:

220. In my opinion, most of the similarities listed by Mr. Bryham arise from the constraints imposed by the selection of the same basic hull for both assemblies, along with the common goal of minimising modifications to the hull. There are many differences in the front wheel assembly *not* listed by Mr. Bryham, such as:

- (a) Hydraulic motor mounted inside the wheel (Orion) / outside the fork (Sealegs).
- (b) Retraction cylinder with trunnion (Sealegs) / with end clevis (Orion). This is the attachment point between the cylinder and basically the hull. One end or the other end of the cylinder quite different.

- (c) Steering oil supply through trunnion (Orion) / through external hoses (Sealegs).
 - (d) Retraction oil supply through trunnion (Orion) / through external hoses (Sealegs).
 - (e) External bow bracket (Sealegs) / internal mounting frame (Orion).
 - (f) Steering cylinder position sensor (Orion) / no steering sensor (Sealegs).” They’re hidden inside, you can’t see them.
 - (g) Wide upper yoke (Sealegs) / narrow upper yoke (Orion).” We’ll see some of those later.
 - (h) Small-offset wheel (Orion) / large-offset wheel (Sealegs).
 - (i) Retraction clevis in separate block (Sealegs) / retraction clevis through yoke (Orion).” I can point those out in diagrams later. The mechanical construction is different.
 - (j) Pivot clevis outside yoke (Orion) / inside yoke (Sealegs).” Again, that would be shown on a diagram when I get to it. I should have made a reference here.
 - (k) Aluminium alloy mono-block retraction cylinder (Orion). That is a solid block of aluminium cut-out, but with the fabricated steel/stainless steel cylinder (Sealegs). Quite different constructions.
221. Importantly, Mr Bryham's schedules do not allow for the fact that some of the biggest differences between the two systems are hidden. For example, the hydraulics at the rear wheels ...

[underlining added]

[258] Apart from the position of the wheel motor being located substantially within the Orion wheel, and the larger Sealegs yoke compared to the Orion yoke, all of the other dissimilarities identified by Dr Field relate either to the choice of materials or manufacturing processes used in making the Orion components, or to engineering solutions which have resulted in functions being located inside components, for example the transfer of hydraulic fluid by means of internal hydraulic galleries located internally within components, in contrast to Sealegs’ use of external hydraulic hoses.

Functional constraints affecting design

[259] In relation to the issue of whether there is objective similarity between the plaintiff’s and the defendants’ leg assemblies, the defendants also submit that the Court should exercise caution and recognise that where there are manufacturing or functional

constraints, competing products will necessarily have some similarities, and differences may be of particular significance.

[260] Mr Spring submits that functional constraints and common concepts and ideas should be put aside for the purposes of assessing similarity. He identifies a large number of functional constraints applicable to the design of externally-located leg assemblies for amphibious craft. He submits that these functional constraints are what determined the presence and arrangement of the components comprising the Orion design in the same way as they determined the plaintiff's design. He says that the similarities between the two systems should be viewed as existing by reason of the functional constraints, and that when these functional constraints are put to one side, what remains to be compared between the two systems shows them to have no objective similarity.

[261] However, at this first step in my determination of whether the plaintiff's copyright has been infringed, I consider it appropriate to address the issue of whether there is an objective similarity between the Sealegs and Orion systems on the basis of their visual appearance, leaving the question of functional constraints to be addressed in the context of determining the issues of causal connection (the second step) and substantiality (the third step). This sequential approach avoids confusing the three steps in the analysis, and was adopted and approved by the Court of Appeal in *Oraka Technologies Ltd v Geostel Vision Ltd*.⁵³ Further, the extent to which similarities are the result of functional constraints is more logically relevant to the second and third stages of the analysis, as similarities that are purely the result of functional constraints may indicate a lack of causal connection between two works, or they may indicate that the defendants have not copied a "substantial part" of the plaintiff's copyright work.

Objective similarity in the front leg assemblies on Orion S25-3WD and Sealegs S60-3WD: analysis and discussion

[262] The defendants cite the observations of Panckhurst J in *Hammar Maskin AB v Steelbro New Zealand Ltd* and submit that the Court must consider and compare the

⁵³ *Oraka Technologies Ltd v Geostel Vision Ltd* [2013] NZCA 111 at [85]–[88].

relevant works through the eyes of an engineer.⁵⁴ Panckhurst J said:

[173] ...whether there is visual objective similarity between a copyright work and the alleged infringement is to be assessed through the eyes of the kind of person to whom the relevant drawings are addressed. Visual similarity and significance to a layman is not the test. Accordingly, I turn to the expert evidence.

...

[182] The focus is necessarily upon the similarities evident in the respective designs. I have already made the point that in comparing engineering drawings it is the impact upon an engineering eye which is important. Matters of detail, which may not attract the eye of a layman, may nonetheless be important. Equally the originality, or distinctiveness, of the copyright work will be relevant to the assessment of substantiality. Conversely, manufacturing and engineering constraints may dictate that product design is necessarily similar. In such cases even lesser differences of design may be of significance.

[263] It is important to note that in *Hammar Maskin*, Panckhurst J was considering whether there had been an infringement of copyright in relation to four engineering drawings relating to the design of a stabiliser leg attached to a truck. In assessing objective similarity, it was therefore logical and necessary to consider the impact of the drawings on an engineering eye. Here, the relevant items for comparison are not engineering drawings, but the actual leg assemblies as manufactured by Sealegs and Orion. I do not consider the approach Panckhurst J adopted, and his consideration of expert evidence as to the engineering significance of features of the relevant engineering drawings, is the appropriate approach here at this stage of my consideration as to whether the defendants' leg assemblies are objectively similar to those of the plaintiff.

[264] I commence my assessment of whether there is objective similarity between the Sealegs and Orion systems by visually comparing the two systems in terms of their external appearance (including size and dimensions), and obvious functioning. At an early stage of the trial I conducted a view and had the opportunity of seeing and comparing both the Sealegs and Orion systems attached to boat hulls and frames. Both parties displayed their systems attached to a number of different craft and each separately demonstrated the functioning of their retractable leg systems. In some

⁵⁴ *Hammar Maskin AB v Steelbro New Zealand Ltd* HC Christchurch CIV-2006-409-977, 8 October 2008.

examples, the leg assemblies had been attached to frames for the purposes of demonstrating their functioning. Orion also demonstrated the functioning of its electronic control unit with S25-4WD leg assemblies attached to a frame.

[265] Broadly speaking, I consider that the front leg assemblies of the two systems are visually similar both in their appearance and functioning. The features of the two systems are identified on photographs and placed side by side in an exhibit produced by the plaintiff.⁵⁵ In both the Sealegs and Orion systems:

- (a) the front leg assemblies are connected to the hull of the boat by means of a bracket at the bow;
- (b) the front leg assemblies are retracted and extended by means of a hydraulic actuator or cylinder;
- (c) from their extended position the legs are retracted by being drawn forward of the bow through an arc into a retracted at rest position, in which they are located above the waterline and in front of the bow in an external position;
- (d) the legs rotate around a pivot point that appears to be similarly positioned at the bow of the craft;
- (e) a yoke is connected to the leg pivot point, to which the hydraulic actuator is connected to extend or retract the leg – while the shape of the yokes of the two systems differ, with Sealegs having a larger yoke compared to Orion's, the functioning of both is the same and the overall impression and appearance is one of similarity;
- (f) the yoke is connected to a single-sided wheel fork, to which the front wheel is connected;

⁵⁵ Appendix, figure 1.

- (g) steering the front wheel and turning the wheel fork is achieved by means of a hydraulic steering cylinder, which in both systems is located at the rear of the yoke and moves a steering link arm connected to the wheel fork;
- (h) the tyres and wheels attached to the wheel forks are of similar size and appearance, with the wheels being driven in both cases by a hydraulic motor located on (in the case of Sealegs) or within (in the case of Orion) the wheel hub. Despite the difference in terms of the positioning of the hydraulic hub motors, and the visually obvious wheel hub motor housing on the Sealegs system compared to the internally located Orion hub motor, the overall appearance is nevertheless one of similarity; and
- (i) the hydraulic fluid to power the wheel hub motor is supplied by means of external hydraulic hoses – while there are differences in how the hydraulic hose lines are connected and as to how the hydraulic fluid is conveyed to the hub motors, the overall appearance is one of similarity.

[266] Each of the abovementioned features are evident on both the Sealegs S60-3WD (which is the production version of Sealegs Prototype 136), and on the Orion S25-3WD. Moreover, the two assemblies are also substantially similar in terms of their dimensions and geometry.

[267] The plaintiff produced several further photographs of the two front leg assemblies as well as overlaid line drawings depicting the leg assembly components with measurements, dimensions and geometry to show the close similarity between the Sealegs and Orion systems. In one diagram,⁵⁶ nine features of the Sealegs assembly are drawn and identified in a diagrammatical presentation, which is then overlaid upon photographs of the Sealegs S60-3WD and the Orion S25-3WD showing the features common to both.

[268] In a second diagram, the dimensions and geometry of the two systems as installed on a Smuggler hull are presented side by side. As is apparent from this

⁵⁶ Appendix, figure 2.

diagram, the two systems both have the same or very similar dimensions. For example, in both cases the measurement of the distance between the ground and the leg pivot point is exactly the same, 1.0 metres. The size of the wheels and tyres are exactly the same (0.3metres and 0.6metres respectively). The distance between the pivot point and the centre of the wheel hub is the same (0.7metres). Where the measurements and geometry are different between the two systems, those differences are minor. The difference in the arc of movement between the assemblies' extended positions and retracted positions is 13 degrees (Sealegs 110 degrees, Orion 97 degrees). The greater arc of the Sealegs system is due to its leg being closer to vertical when extended than is the case with the Orion leg when it is extended.

[269] Mr Bryham explained the preparation of the diagram, saying that he had taken the measurements of the dimensions of the two assemblies and had determined the radius of the movement of the two legs when extended and retracted. Mr Bryham said of this comparison:

So the important thing is here effectively I believe all of those dimensions are substantially similar, if not identical. The main differences probably are there's a slight difference in how high the wheel raises above the water. But I mean again if you were looking at it without any measurements you may not actually be able to discern that difference.

[270] I consider that it is evident from a direct visual comparison of the two front leg assemblies (as illustrated by the comparative photographs and diagrams) that they both possess the same arrangement of functional components, and that they are substantially similar in overall appearance. The two leg assemblies are also closely comparable in terms of their size and dimensions. Moreover, such dissimilarities in appearance and design as do exist between them are not of a kind or degree as would displace the overall appearance of the two leg assemblies as being objectively similar. I do not consider that the dissimilarities identified by Dr Field are such as to conclude that the two systems are not objectively similar, when in my view the dominant impression on comparing them is one of substantial similarity.

[271] I have already noted that Dr Field has referred to a number of differences between the two systems relating to engineering methods and solutions which are not apparent by reason of being located internally within the relevant Orion components.

I shall address the significance of these concealed components (such as the hydraulic hub motor) and the internally located functions (such as the hydraulic galleries used for the passage of hydraulic fluid as an alternative to external hydraulic hoses) in the context of causality and substantiality. However, I do not consider that any of the concealed functional features that have been identified by Dr Field and the defendants are such as would lead to a different conclusion on the question of objective similarity.

Objective similarity in the rear leg assemblies on Orion S25-3WD⁵⁷ and Sealegs S60-3WD,⁵⁸ SL100⁵⁹ analysis and discussion

[272] The rear leg assemblies of the Orion and Sealegs systems are in each case affixed to the transom at the stern of the craft and are extended and retracted by means of a hydraulic actuator or cylinder and rotate around a pivot point located on the stern of the boat. There are two rear leg assemblies located to port and starboard of the transom of the craft. When retracted, the legs are rotated away from the stern of the boat and are elevated above the water-line to a rest position at the rear of the boat hull.

[273] The methods by which Sealegs and Orion attach the rear legs to the hull of the boat are different in appearance. The Sealegs system uses a bracket mounted by bolts to the exterior surface of the transom, which extends from the top of the transom to the pivot point located at or just above the waterline. The oblong and bevelled-edge quadrangular-shaped hydraulic actuator is attached to a pivot point at the top of the stern bracket. It is milled from a single metal block. The top of the leg is connected by a pivot point located at the bottom of the stern bracket, with the lifting rod attached near the top of the leg. The hydraulic fluid to drive the hub mounted motors is conveyed by hoses that are attached to pipes passing through the stern. The leg itself has a curved sculptured shape.

[274] The Orion S25-3WD and S25-4WD share the same leg assemblies. The plaintiff produced a diagram to compare the rear leg assemblies of the Sealegs S60-3WD and Orion S25-3WD as attached to Smuggler RIB hulls. As with a comparison of the front leg assemblies, here too the dimensions of the wheels and tyres are the

⁵⁷ Orion S25-3WD rear leg assembly Appendix, figure [4].

⁵⁸ Sealegs S60-3WD rear leg assembly Appendix, figure [4].

⁵⁹ Sealegs SL100 Appendix, figure [6].

same. With the rear leg extended, the measured distance between the ground and the bottom of the inflatable pontoon is also exactly the same at 0.83 metres (829 millimetres), and the length of the leg measured from pivot point to the centre of the wheel is the same at 0.60 metres (595 millimetres).

[275] There are some obvious visual differences between the Sealegs S60-3WD and Orion systems and how the Orion assemblies are installed onto the stern of the hull. Instead of an exterior surface mounted bracket as used in the Sealegs system, the Orion rear leg and lifting actuator are connected to a plate bracket located and glued on the inside of the hull. While the leg itself is connected to the hull in a similar location to Sealegs, the lifting arm is connected to the hull in a lower and closer position to the leg than the Sealegs system. Whereas the lifting rod on the Sealegs system is connected at the top of the leg, the lifting rod on the Orion system is connected to a pivot point located near the bottom of the leg.

[276] Compared to the sculpted shape of the Sealegs S60 rear leg assembly, the Orion leg is a straight sided oblong shape with an engineered appearance. The Orion lifting actuator is similarly oblong shaped and has a quadrangular profile. However, the Sealegs SL100 rear leg assembly also has an engineered appearance and styling.

[277] While the differences to which I have referred readily enable the Orion system to be distinguished from the Sealegs system, I nevertheless consider that the Orion rear leg assemblies are objectively similar to the Sealegs rear legs. I shall however address the significance of these differences when dealing with the issues of causality and substantiality.

Objective similarity between the Orion S25-4WD⁶⁰ front leg assembly and the Sealegs S60-3WD and SL100⁶¹

[278] The plaintiff says that the Orion S25-4WD front leg is comprised of all of the same features in the same sequence as in its Sealegs systems, including the S60-3WD and the SL100 front leg assembly which was manufactured for Sealegs by Orion. The most obvious point of dissimilarity is that it has two front wheels attached to an axle,

⁶⁰ Orion S25-4WD Appendix, figure [5].

⁶¹ Sealegs SL100 Appendix, figure [6].

and no single-sided wheel fork. The hydraulic steering cylinder is located at the front of the yoke rather than on the back as is the case with the Sealegs S60-3WD, SL100, and the Orion S25-3WD.

[279] In both the SL100 and the Orion S25-4WD, the top of the lift cylinder is attached to the hull pivot point instead of to a trunnion mount as used in the plaintiff's prototype 136, which the plaintiff says results in both systems sharing the same geometry. The plaintiff further says that the "box section industrial design" of the front fork and wheel assemblies on the Orion S25-4WD have the same look and appearance as the Sealegs SL100, and that the S25-4WD front leg assembly is objectively similar to both the Sealegs S60-3WD and SL100 front leg assemblies.

[280] A diagram prepared by the plaintiff showing the Sealegs S60-3WD and the Orion S25-4WD (as attached to Smuggler hulls) contains measurements of the leg assemblies, wheels and the arc of movement of the leg between the extended and retracted positions. The distance between the pivot point on the hull and the centre of the wheel is the same on both assemblies (0.7 metres). The size of the wheel and tyre are also the same (0.3 metres and 0.6 metres respectively). There is a small difference between the arc of travel between full extension and full retraction on the Sealegs assembly (110 degrees) and the Orion assembly (97 degrees), and another small difference in the elevation of the wheels in their retracted position.

[281] A visual comparison of the Orion S25-4WD with the Sealegs S60-3WD shows that while there are close similarities in terms of dimensions and geometry, there are also some obvious differences. The visually apparent differences present on Orion's S25-4WD are: the two front wheels; the front mounted steering actuator; and the connection of the top of the hydraulic lifting cylinder to a hull pivot point, compared to the Sealegs S60-3WD where the lift cylinder is connected by a trunnion mount on the bottom of the lift cylinder. However, as with the Orion S25-4WD, the top of the two lift cylinders of the SL100 are connected to a pivot point on a hull mounted bracket.

[282] In both the Orion S25-4WD and the Sealegs SL100, the lifting cylinders have a straight flat-sided squared-off shape (the 'engineered' shape), compared to the round

cylindrical shape of the Sealegs S60-3WD lifting actuator. The same engineered appearance of the Orion S25-4WD is however also evident in the appearance and style of the SL100.

[283] Although the differences I have identified between the Orion S25-4WD and the two Sealegs assemblies are clearly apparent, there are nevertheless similarities in terms of the squared-off engineered appearance seen on the SL100, and the close similarities in terms of size and dimensions when compared to the S60-3WD. The Orion S25-4WD front leg assembly has other features similar to the Sealegs assemblies, including its position at the bow, its retraction/extension movement around a pivot point to a rest position outside the hull, and the use of hydraulic hub motors.

Conclusions as to objective similarity

[284] In summary, I consider that the Orion S25-4WD and S25-3WD front leg and rear leg assemblies possess the same arrangement of features and functional components required to perform the extension and retraction of the amphibious leg system, and show a sufficiently close visual and functional resemblance to the Sealegs assemblies as to be objectively similar to the Sealegs front leg and rear leg assemblies which appear on the Sealegs prototype boat one, prototype 136 (S60-3WD) and SL100. Furthermore, while there are certainly differences in appearance as I have noted, in each case the positioning of the assemblies on the boat hulls and the movement functions performed by the front and rear assemblies are the same. The overall size and dimensions of the Orion systems are either the same or very similar to the Sealegs S60-3WD front and rear assemblies, and although on a different scale, also similar in function and general appearance to the front and rear assemblies of the Sealegs SL100 system.

[285] The differences that are visually apparent and the functional and internally located differences identified by the defendants are in my view more appropriately considered, as I have said, in the context of considering causality and substantiality. As the plaintiff must also establish both causality and substantiality to succeed in establishing an infringement of its copyright, those features and functions which the

defendants rely on as showing an independent design pathway will be addressed later in this judgment.

Causality and derivation

[286] Infringement of copyright does not occur if the defendant has independently created a work that happens to be objectively similar to that of the plaintiff.⁶² Rather, the plaintiff must show that the defendant copied the plaintiff's work. As regards proof of copying, the Supreme Court in *Henkel* explained:⁶³

The ultimate issue in a breach of copyright case concerns derivation, not similarity, albeit the degree of similarity between the copyright work and the allegedly infringing work has evidentiary significance. Proof of copying will seldom be direct; in most cases the Court will rely on inference. The closer the similarity between the two works the stronger the inference is likely to be that the one was copied from the other. If the alleged infringer has had access to, and therefore an opportunity to copy, the copyright work, and the similarity between the works supports an inference of copying, it may well be appropriate for the Court to conclude, on the balance of probabilities, that there was indeed copying. This, of course, is subject always to the evaluation of any evidence there may be that no copying actually took place.

(footnotes omitted)

[287] Where the plaintiff has provided prima facie evidence of copying, for example by showing substantial similarity combined with the possibility of access, the evidential burden shifts to the defendant to show that it has not copied the plaintiff's work.⁶⁴ The defendant may discharge this burden by giving evidence of independent creation or some alternative explanation for the similarities.⁶⁵ One such alternative explanation may be that the similarities are the result of functional or manufacturing constraints, rather than copying. In such a case, however, one would expect evidence from the defendant demonstrating how its work was produced, and showing an

⁶² *Oraka Technologies Ltd v Geostel Vision Ltd* [2013] NZCA 111 at [113].

⁶³ At [43].

⁶⁴ Gillian Davies, Nicholas Caddick and Gwilym Harbottle *Copinger and Skone James on Copyright* (17th ed, Thomson Reuters, London, 2016) at [7-24], a similar passage from an earlier edition was cited in *Inverness Medical Innovations Inc v MDS Diagnostics Ltd* (2010) 93 IPR 14 (HC) at [168].

⁶⁵ Gillian Davies, Nicholas Caddick and Gwilym Harbottle *Copinger and Skone James on Copyright* (Thomson Reuters, London, 2016) at [7-24], a similar passage from an earlier edition was cited in *Inverness Medical Innovations Inc v MDS Diagnostics Ltd* (2010) 93 IPR 14 (HC) at [168].

independent design path that started with the general functional constraints of the product.⁶⁶

[288] In *Wham-O v Lincoln Industries Ltd*, the Court of Appeal addressed the requirement for proof of causation and explained:⁶⁷

In order to succeed in a copyright action, a plaintiff must prove that the defendant has directly or indirectly made an unlawful use of the plaintiff's copyright work. It is not necessary to show that the defendant has copied directly from the plaintiff's work. It is sufficient for the plaintiff to establish some chain of causation linking the plaintiff's copyright work with the defendant's alleged infringing copy. The copying need not be direct copying. It may be indirect. What must be shown, however, is that either directly or indirectly the alleged defendant copier has in making his copies appropriated the labours of the plaintiff. That copying has taken place is for the plaintiff to establish and prove as a matter of fact. The beginning of the necessary proof normally lies in the establishment of similarity combined with proof of access to the plaintiff's productions ...

[289] In another case the Court of Appeal observed that the factors to which the courts commonly have regard in assessing causal connection include:⁶⁸

... the "starting point" of the defendant's work; the extent of the defendant's alteration (i.e. whether a substantial part of the plaintiff's work survived in the defendant's so as to appear to be a copy of the original work); and generally the way in which the defendant has taken advantage of the plaintiff's work.

[290] The fact that the defendant has added separate original work to an infringing copy, perhaps enhancing the product in the process, does not make it any the less an infringement.⁶⁹

[291] Chisholm J's analysis in *Tidd Ross Todd Ltd v Steelbro New Zealand Ltd*,⁷⁰ which was upheld on appeal,⁷¹ demonstrates these points. In that case, the defendant developed a sidelifter (the SB121) which the plaintiff alleged was an infringing copy of its own (the TRT triple). Chisholm J found that the defendant's engineer had access to the TRT triple while developing the SB121: it had engineering drawings showing

⁶⁶ See *Oraka Technologies Ltd v Geostel Vision Ltd* [2013] NZCA 111 at [115] and [119].

⁶⁷ *Wham-O v Lincoln Industries Ltd* [1984] 1 NZLR 641 (CA) at 668

⁶⁸ *Steelbro NZ Ltd v Tidd Ross Todd Ltd* [2007] NZCA 486 at [109].

⁶⁹ *Bleiman v News Media (Auckland) Ltd* [1994] 2 NZLR 673 (CA) at 679; see also *LB (Plastics) Ltd v Swish Products Ltd* [1979] FSR 145 (HL) at 152.

⁷⁰ *Tidd Ross Todd Ltd v Steelbro New Zealand Ltd* HC Christchurch CIV-2004-409-1386, 1 December 2005.

⁷¹ *Steelbro NZ Ltd v Tidd Ross Todd Ltd* [2007] NZCA 486.

the dimensions of the TRT triple as well as opportunities to view the TRT triple and take measurements. He further found that the defendant's engineer inputted the TRT triple dimensions when commencing geometry optimisation for the SB121, and that the inputting of these measurements was deliberate rather than dictated by functional constraints or pure coincidence. Although the defendant subsequently modified the design with a view to producing a "more effective and efficient 'TRT style triple,'"72 Chisholm J found that there was a clear chain of causation linking the plaintiff's copyright work to the defendant's SB121.⁷³ The defendant's access to the plaintiff's product and the use made of it went "far beyond keeping an eye on a competitor's product".⁷⁴

[292] The Court of Appeal upheld Chisholm J's conclusion, observing:⁷⁵

The key points are that Steelbro started with TRT's product distinctly in mind. That is a critical finding of the trial judge which we are not minded to disturb on appeal. In that sense the Steelbro product is derivative. Steelbro then endeavoured to replicate the TRT model, in the sense of building a better model of that kind. From time to time Steelbro "checked back" against what TRT had done. In fairness, there is no question Steelbro did a great deal of work itself. In the classic economist's phrase "it built a better mousetrap". Nevertheless, an inference of copying was possible, indeed probable, unless Steelbro could negative it by establishing that the similarity was not due to the copying.

[293] By way of contrast, the case of *Hammar Maskin AB v Steelbro New Zealand Ltd* demonstrates that simply copying the plaintiff's original idea is not an infringement of copyright.⁷⁶ In that case, the plaintiff developed the concept of a negatively inclined stabiliser leg on a sidelifter. Panckhurst J held that the evidence strongly supported the conclusion that the defendant "filched the idea" of negative inclination of a stabiliser leg from the plaintiff, particularly given that one of the plaintiff's former design draughtsmen was employed by the defendant.⁷⁷ However, the Judge emphasised that copyright law does not prevent people from copying others' ideas. Although the designs of the plaintiff and defendant demonstrated the adoption

⁷² At [127].

⁷³ At [134].

⁷⁴ At [107].

⁷⁵ *Steelbro NZ Ltd v Tidd Ross Todd Ltd* [2007] NZCA 486 at [113].

⁷⁶ *Hammar Maskin AB v Steelbro New Zealand Ltd* HC Christchurch CIV-2006-409-977, 8 October 2008.

⁷⁷ At [209].

of a common idea, the embodiments of that idea were significantly different and there was no infringement of copyright.⁷⁸

[294] Similarly, the Court of Appeal in *UPL Group Ltd v Dux Engineers Ltd* concluded:⁷⁹

Although we have little doubt that [the defendant] has filched the idea of a connector piece from [the plaintiff], that which it has produced is in our opinion not substantially the same as [the plaintiff's product].

[295] In *Oraka*, the Court of Appeal explained the implications of the Court finding the defendant's work to be objectively similar to the plaintiff's copyright work:⁸⁰

[113] Where a claimant's and a defendant's works are objectively similar, there are four possible explanations: the defendant copied the claimant's work; the claimant copied the defendant's work; both arose from a common source; or the similarities occurred though mere chance or coincidence. It is only in the first case that an infringement of the claimant's work has occurred. No infringement occurs by an act of independent creation.

[114] In most cases, copying can only be deduced by inference from all the surrounding circumstances. It is unusual for there to be evidence of actual copying from someone observing the person making his or her work. In *Henkel KGaA v Holdfast New Zealand Ltd* the Supreme Court remarked that causality is the "ultimate issue" in a copyright case. The Court said that the degree of similarity between two works has evidentiary significance and is of assistance in satisfying causality: the greater the similarity between the two works, the stronger the inference is likely to be that the one was copied from the other. The Court went on to say that, if an alleged infringer has had access to, and therefore an opportunity to copy, the copyright work, and the similarity between the works supports an inference of copying, it may well be appropriate for the court to conclude that there was copying. This, however, is subject always to the evaluation of any evidence there may be that no copying actually took place.

[115] Evidence of independent design will assist in rebutting any inference of copying. The fact that a defendant fails to give evidence to indicate how the alleged infringing work was produced can be taken into account.

(footnotes omitted)

⁷⁸ At [186]–[187] and [210]–[211].

⁷⁹ *UPL Group Ltd v Dux Engineers Ltd* [1989] 3 NZLR 135 (CA) at 144.

⁸⁰ *Oraka Technologies Ltd v Geostel Vision Ltd* [2013] NZCA 111.

The plaintiff's submissions as to causality

[296] Mr Henry for the plaintiff submits that here there is overwhelming evidence of the defendants' access to the plaintiff's copyright works from their direct involvement with the Sealegs products during their employment by the plaintiff, and their consequent close familiarity with the particular collocation and arrangement of the features of the Sealegs amphibious leg systems as represented on prototype 136 and SL100.

[297] Mr Henry says that by the time that Orion was engaged by Sealegs to assist with the development and manufacture of SL100 and particularly to manufacture a prototype (the IKA11), the plaintiff's copyright in the arrangement and combination of features present in its models was well established and well known to the defendants. He says that the defendants' knowledge of the plaintiff's copyright interest in its leg assemblies is confirmed by the contents of the 4 April 2013 Design Brief, which Orion signed in relation to their engagement to design, manufacture, install, and validate SL100. The Design Brief referred to Sealegs' sole ownership of the intellectual property of all proprietary components designed as part of SL100. Mr Henry also relies on the Service Agreement dated 31 March 2015, which stipulated that any background intellectual property (being intellectual property rights created or developed before the date of the agreement) would remain the exclusive property of its owner.

[298] Mr Henry submits that because the Orion products are objectively similar to the plaintiff's models and the defendants had extensive prior access to the plaintiff's copyright works, an evidential burden shifts to the defendants to show that they have not copied the plaintiff's work.

[299] Mr Henry says that the defendants are unable to discharge the evidentiary burden that applies, as they cannot rebut the "insurmountable inference" of copying which in this case is the only possible explanation for the objective similarity that exists between the defendants' and the plaintiff's products. He says that the following facts and circumstances support a finding of direct copying:

- (a) the in-depth knowledge on the part of the defendants' design team of the plaintiff's combination and arrangement of features that constituted its copyright in the Sealegs models;
- (b) the absence of any evidence presented by the defendants of the existence of their independent design path to the production of their amphibious leg system;
- (c) the defendant's adoption of the same starting point as Sealegs by producing an amphibious system for use on craft of the same size and type as that for which the Sealegs system was designed;
- (d) the defendants' repeated reference to the Sealegs design to avoid or solve similar problems; and
- (e) the defendants' product being designed to share the same geometry as Sealegs, as evident from Mr Leybourne's email to Mr Pringle on 28 October 2015 in which he said:

The design is heading towards a similar geometry as used by that other company. If this proves unacceptable a radical re-design will be required.

[300] The plaintiff says that by reason of their employment at Sealegs, Mr Leybourne and Mr Zubcic had full access to the Sealegs models, designs and manufacturing processes which provided them with complete and detailed knowledge of the plaintiff's copyright works. The plaintiff further says that Mr Pringle also had a full and detailed knowledge of the plaintiff's products and copyright works through his purchase and installation of the plaintiff's amphibious systems onto his Smuggler boats and close business association with Sealegs.

[301] Mr Henry says that Mr Leybourne's possession of a Sealegs USB stick in late 2011, which he told Mr Redpath contained "everything including financials", is evidence of his possession of detailed plans and design information relating to Sealegs' products shortly before he left Sealegs. Counsel submits that Mr Leybourne's explanation that he had handed the USB stick to another staff member, and did not say

anything about the matter to Sealegs' senior management, is implausible given the highly unusual explanation of how it had come into his possession.

[302] Mr Henry says that Mr Zubcic and Mr Leybourne were friends and close associates while both employed at Sealegs. He notes that shortly after Mr Leybourne had left Sealegs, Mr Zubcic told Mr Redpath that he was committed to working for Mr Leybourne, explaining that he had turned down a promotion opportunity at Sealegs because he had made a commitment to Mr Leybourne that he would leave Sealegs and go and work for him.

[303] The plaintiff says that the defendants have failed to discover any documents relating to the period between Mr Leybourne's departure from Sealegs in November 2011 and the opening of a new Orion business in February to March 2013. Mr Henry submits that in order for Mr Zhang to obtain a visa in the entrepreneurial category, he would have had to submit a business plan setting out information regarding the proposed business he was intending to establish, but there has been no discovery of such a business plan.

[304] Furthermore, Mr Henry says the defendants have failed to discover any documents recording or relating to a decision to adopt the same arrangement of features as exist on the plaintiff's amphibious system. He says the defendants have failed to discharge the onus upon them to present documentary evidence regarding the business plan, the design criteria of the Orion system, and as to how they selected the same arrangement of features as Sealegs and a product that was manufactured to be suitable for use on the same type and weight of boats as the Sealegs system.

[305] Mr Henry notes that under cross-examination Mr Leybourne accepted that during the development of Orion's amphibious system, he had proceeded on the understanding that the only legal impediment to how Orion designed its system was the Sealegs patent in relation to the positioning of the front wheel and tyre assembly so as to act as a bumper when the front leg was in the retracted position. Because of that understanding, Mr Leybourne also proceeded upon the basis that there were no other aspects of the Sealegs system that were the subject of intellectual property, and

he had no appreciation of Sealegs claiming to have a copyright interest in the combination and arrangement of features that made up its systems.

[306] Mr Henry further says that in his evidence, Mr Zubcic accepted under cross-examination that he had commenced the process of developing the Orion design by starting from the position of the Sealegs system, with the intention of improving on it:

Counsel: Mr Zubcic, do we get to the position that in terms of the design of your systems, that effectively what you've done is taken all your knowledge from Sealegs and you have just simply carried on working from those designs to develop the Orion system?

Mr Zubcic: I am an engineer, I am a professional and all my knowledge I am carrying with me. So, you can't, I can't tell – it's not true, it is everything I learned in my life I carry with me, is it learnt in Sealegs or is it learnt wherever.

Counsel: Well, I am asking a little bit more than that. What we're saying is that when you joined Orion you just carried on developing the technology that you'd worked at Sealegs and when you got to Orion it was a seamless continuation of developing the Sealegs system as you built the Orion system?

Mr Zubcic: It's, it will be, telling that will be bit too simplified, you know, it's not – I wasn't part of Sealegs development and our system we start from scratch so it wasn't development, it was starting from beginning developing a product or developing the same idea of amphibious system so.

Counsel: What I'm putting to you is that what happened when you got to Orion is you decided to develop a competing amphibious system, correct?

Mr Zubcic: Yes.

Counsel: And what you did is you had all the knowledge of the Sealegs system because you'd been working in the [sic] Sealegs for a number of years and you'd been able to assess and see their technology, the good and the bad?

Mr Zubcic: That's true.

Counsel: And what you did is you kept the good and you developed the way you saw it should be developed what you considered to be the bad?

Mr Zubcic: I developed what I consider ...

Counsel: What you considered to be the bad –

Mr Zubcic: To be better, better than Sealegs.

Counsel: To make it better than Sealegs?

Mr Zubcic: Oh yes, this is what I believe, still believe. Maybe I'm wrong at the time [sic] going to show but this is what I did.

Counsel: So you believe you have used the lessons you learnt at Sealegs as to what you considered they had made mistakes on and you proceeded on that knowledge and information to make what you considered to be better, that's a fair summary of what you've done?

Mr Zubcic: It's a simplification but I can agree, yes, all my knowledge I took with me.

Counsel: Well that's not the question is that you took the knowledge with you and then you used that knowledge from Sealegs in areas where you thought you could do better to do better in designing an amphibian?

Mr Zubcic: I didn't use knowledge from Sealegs to make better. I used my knowledge to make system better than – learning on a bad experience.

Counsel: So you learned from what you saw was the bad experience and then you applied your knowledge to what you considered had been a bad experience or a mistake by Sealegs to improve on the design of an amphibian?

Mr Zubcic: Yeah that's true.

Counsel: That's true?

Mr Zubcic: Yeah.

[307] Mr Henry submits that Mr Zubcic embarked on the Orion design process using the detailed knowledge he had gained while employed at Sealegs as a starting point, and then set out to improve on the Sealegs design. He says this is a clear demonstration that the Orion design is directly derived from the Sealegs design. He submits that such a process clearly shows that Orion appropriated the skill and knowledge applied by Sealegs in the development and production of its system, including the Sealegs arrangement of features, and did so without the consent or approval of Sealegs, so as to be an infringement of Sealegs' copyright.

[308] The plaintiff also refers to the evidence of the defendants' expert witness Dr Field who responded to questions from the Court regarding a design engineer's use of prior knowledge and experience:

Court: And so an engineer confronted with this kind of task will operate quite differently, I presume, depending on whether they are starting afresh themselves with no constraints on a white piece of paper, or with a series of constraints imposed either by decisions they've made as to what the use is or by a client as what the client wants?

Dr Field: Theoretically yes, but no one starts with no constraints.

Court: So if you could just help me with this. How does the situation differ when the designer has had extensive involvement with the development of a product, has been effectively at the heart of the decision-making ... throughout the development of a product and is then confronted with the task, do they ignore everything which they have learned or do they start from where they left off?

...

Court: I was really thinking about the engineering ... sequence, not necessarily their personal motivation, which is another matter, it may affect their actions but I'm talking about their engineering design development.

Dr Field: Yes, I – the practical, as I said the practical application is everyone uses their past experience to do the best they can now in any area, so it's no different from anything else ... So in general terms one will use as much as possible what one already knows as a normal course of human problem solving.

Court: So where problems have been addressed and solved as part of a design path ... it would be natural to adopt the same solutions, because those solutions had already been achieved as a result of whatever process the design had undertaken, is that right?

Dr Field: Well that is correct, that would say there had to be the same design path, not a similar design path. There's an important difference.

[309] Mr Henry submits that once the defendants were familiar with the Sealegs system and the solution that Sealegs had arrived at in the course of designing its system, it was impossible for them to put that solution out of their minds when it came to designing the Orion system, especially when the intention was to manufacture an amphibious system which would compete with Sealegs.

[310] As regards Mr Pringle and Smuggler Marine, the plaintiff notes that Mr Pringle requested Orion to construct its own amphibious system to replace the Sealegs S60-3WD system he had been installing on the Smuggler boats. The Orion system was to be designed to the same geometry as the Sealegs' system, and was for use on the same Smuggler boats. Mr Pringle sought to avoid the Sealegs patent by designing and constructing a cowling extension at the bow of the craft to create a recess into which the front leg wheel assembly would be retracted, so as not to act as a bumper.

The defendants' submissions as to causality

[311] Mr Spring for the defendants submits that even if the plaintiff establishes objective similarity between the Sealegs and Orion leg assemblies, it has singularly

failed to prove any derivation of the Orion design from its own. Mr Spring says that here, unlike other cases where infringement has been found to have occurred, the plaintiff cannot point to the defendants using the plaintiff's assemblies as a reference point for the development of their design or any specific instances of the defendants deriving one or more of the allegedly infringed features from or with reference to the plaintiff's copyright work.

[312] Mr Spring says that the plaintiff has conflated the opportunities for copying that would have been available to Mr Leybourne and Mr Zubcic during their employment at Sealegs with actual copying. He submits that the plaintiff has failed to produce any evidence to show that actual copying took place. He further submits that Mr Leybourne and Mr Zubcic in their evidence, and particularly in the course of their cross-examination, rebutted the likelihood of any copying having taken place.

[313] Mr Spring submits that Mr Zubcic made it clear in his evidence that he regarded the Sealegs system as having a number of inadequacies and had no wish or intention of copying what he regarded as an inferior product. Mr Spring says that having regard to Mr Zubcic's view of the Sealegs system, the plaintiff's contention that he would leave Sealegs in order to replicate what he considered to be a flawed system is implausible.

[314] The defendants say that Mr Zubcic is a highly competent engineer with 25 years of experience and a specialisation in Computer Assisted Design (CAD) and Computer Assisted Manufacturing (CAM) technology. Mr Spring says that Mr Zubcic was not involved in the Sealegs design team that worked on the amphibious assemblies, but was employed as a production engineer and as a Computer Numerical Control (CNC) programmer to manufacture parts for the assemblies. Mr Zubcic did however directly assist the Sealegs design team when asked to resolve issues relating to the rear leg and the designing of the front leg hub motor cover. More significantly, at the commencement of his employment at Sealegs, Mr Zubcic had spent the first month or so modelling Sealegs parts by making CAD drawings of existing Sealegs parts. This involved an examination and measurement of each part, and then the creation and entering of a CAD drawing of the part into the Sealegs computer system using the software program called SolidWorks. In his evidence Mr Zubcic described

this process as being practically a reverse-engineering of the Sealegs parts and components. As a result of this process Mr Zubcic's name appears on the Sealegs SolidWorks computer drawings in its system, although he had not been involved in the actual design of the parts and components. While Mr Spring is correct to note that Mr Zubcic was not involved in the designing of the Sealegs parts that he examined and drew in the course of this work, it is clear that he necessarily acquired a detailed knowledge of the Sealegs parts and leg assemblies as a result of this process.

[315] Mr Spring also refers to Mr Zubcic's evidence under cross-examination in which he rejected a suggestion that when designing the Orion system he had adopted the same sequence of components or features as used by Sealegs in its front leg assemblies, saying that:

Mr Zubcic: This is not taking Sealegs' sequencing. This is simply – those parts are parts of an assembly and a mechanism that you simply have to have. You have to have a part, I [call] that “yoke”, or you can call it, “mounting block”, or you can call it – but you need to have that part in order to achieve the functionality of the leg. So you have to have it and it can look like this or look like that, but function [sic] of that part is required by the function of the mechanism.

...

Counsel: So, what you actually did is you took the Sealegs designs and you applied knowledge that you had gained while at Sealegs of things that were wrong with their design and you brought them into your design, didn't you?

Mr Zubcic: No, that's completely wrong. I didn't take Sealegs' design. I learned their mistakes and I had idea [sic] how to do that right and I did it completely different.

...

Mr Zubcic: No. I haven't changed anything in Sealegs' design to come up to my design. I start my design with my start point. It's different than Sealegs. So, I didn't change anything in Sealegs' design.

The issues

[316] I propose to begin my analysis by discussing the implications of Mr Leybourne's possession of the Sealegs data stick, the timing of Mr Zhang's visit to New Zealand, and the conversation between Mr Zubcic and Mr Redpath. While these may seem like tangential points, given that the focus is properly on whether or not Orion copied the Sealegs pattern, I consider these aspects of the factual background to

be nevertheless relevant as informing my assessment of the credibility and reliability of the important defence witnesses.

[317] Next I will set out my findings as to the opportunity to copy, which relates to the knowledge that Mr Leybourne and Mr Zubcic brought from Sealegs when they commenced their design work at Orion.

[318] Finally, I will address the defendants' contentions that there was no copying. Mr Spring for the defendants accepted that should the Court find objective similarity between the plaintiff's copyright works and Orion's allegedly infringing works, the defendants bear the evidential onus of showing that their systems were independently designed, and that there are alternative explanations for any similarities. There are two primary ways in which the defendants seek to rebut the conclusion that the Orion system was copied from the plaintiff's leg assembly: first, that the defendants followed an independent design path and any similarities are the result of coincidence; and secondly that functional constraints explain the similarities between the Sealegs and Orion leg assemblies. I will address these in turn.

Mr Leybourne and the USB data stick

[319] Mr Spring submits that Mr Leybourne's resignation from his employment was for mature and balanced reasons, and that he had no intention to establish a competitive business at the time. He says that the decision to start a new business to compete with Sealegs was not made until after Mr Zhang's visit during the winter of 2012, and following Mr Leybourne's earlier return to work on hydraulics during the first half of that year. Counsel submits that despite some conflicts and tensions with Mr Bryham and Mr McKee-Wright, there is no evidence of any malice on the part of Mr Leybourne towards Sealegs, nor any evidence of intent on his part to misappropriate the intellectual property of his employer.

[320] As for the Sealegs USB stick, Mr Spring says that the evidence shows that Mr Leybourne was given the USB stick by his friend Mr Nicol, who had found it while walking on a beach near Dunedin. He says that while Mr Leybourne accepted that he told Mr Redpath about receiving the USB stick containing confidential Sealegs information and where it had been found, he absolutely denied telling Mr Redpath that

he was downloading the contents of the USB stick onto his computer at home, and that it contained “everything including the financials”. Mr Spring notes that Mr Nicol’s evidence was presented by consent as a written witness statement without cross-examination, and says that consequently the Court must accept the bizarre story of where and how it was found as true. This means, says Mr Spring, that Mr Leybourne’s account as to how he had come into possession of the USB stick should also be accepted to be true.

[321] Mr Spring further says that had Mr Leybourne been planning at the time to set up a competing business, he would have kept the existence of the USB stick to himself and would not have mentioned it to Mr Redpath or to the other Sealegs staff. Moreover, says Mr Spring, if Mr Leybourne had wanted to remove confidential information from Sealegs he could have done so surreptitiously any time between May and November 2011, after he had given notice of his resignation and prior to his departure.

[322] Mr Nicol’s account of finding the Sealegs USB stick on a beach near Dunedin is indeed bizarre. The chances of a Sealegs USB stick somehow finding its way from Auckland, where Sealegs has its premises, and onto a beach near Dunedin where it was seen and picked up by someone who knew a senior member of the Sealegs staff and was thus able to return it to the company must be exceedingly remote. However, Mr Nicol’s evidence was not challenged by the plaintiff, and accordingly I accept it as providing an accurate explanation of how the USB stick came into Mr Leybourne’s possession. Nevertheless, it was at the very least, highly fortuitous that the USB stick was found and returned to someone at Sealegs. Once Mr Leybourne knew that it contained pdf files of Sealegs parts, the obvious thing for him to have done would be to immediately bring the matter to the attention of Mr Bryham or another member of the Sealegs senior management. Not only was it such an unusual event, it also raised important issues regarding the security of Sealegs’ data which would obviously be a matter of concern to the company. However, in his evidence Mr Leybourne said that the matter was a “non-issue” for him, and that he had retained the USB stick in his possession for three weeks before handing it to anyone at Sealegs.

[323] Mr Leybourne's explanation that he had possession of the USB stick for some three weeks before rather casually giving it to one of the Sealegs CAD staff is inconsistent with what would be expected of anyone in his position who had received an item containing significant information belonging to his employer, and I find Mr Leybourne's evidence regarding the USB stick to be implausible and lacking credibility. I prefer and accept Mr Redpath's evidence that Mr Leybourne told him that he had downloaded the contents of the USB stick onto his computer at home, and that the USB stick contained "everything including financials". Mr Redpath in his evidence quoted those words as having been those actually spoken by Mr Leybourne, and he clearly remembered them being said.

[324] While there is no evidence that Mr Leybourne did any more than simply look at the contents of the USB stick before passing it on to the Sealegs CAD staff, I find that it shows that he had downloaded pdf drawings of the Sealegs amphibious assembly parts onto his home computer, in and around November 2011, and consequently had possession of that information shortly before leaving the company.

Mr Zhang's visit to New Zealand and the establishment of Orion

[325] Mr Henry submits that the defendants have failed to disclose or produce any documents that show dates to prove when Mr Zhang came to New Zealand with his wife and family and had the initial discussions with Mr Leybourne leading to their decision to establish a new business to manufacture amphibious systems in competition with Sealegs. Mr Leybourne in his evidence was not specific as to when in 2012 Mr Zhang had visited him, saying only that the visit took place in the middle of winter, possibly May or June. Mr Henry says that a brochure published by Mr Zhang's family business in China, trading as Surfcon, states that the company commenced looking at designing and developing amphibious craft in 2011, which was the same year that Mr Leybourne handed in his notice of resignation, and of course a year before Mr Leybourne says he and Mr Zhang had their first discussion about the possibility of going into business together. Mr Henry says that Mr Leybourne may have resigned from Sealegs in May 2011 in a fit of pique or because he had already begun planning to start his own business. He says that the dates correlate exactly if Mr Zhang's visit was in 2011 rather than the claimed 2012.

[326] Under cross-examination by Mr Henry, Mr Zhang said that he had been unable to locate his passport or any other documents which would verify the date of his visit to New Zealand with his wife and child in 2012. Mr Henry particularly notes that the defendants have not disclosed or produced the business plan that Mr Zhang would necessarily have provided to Immigration New Zealand in support of his visa application, and says that the defendants have displayed prevarication around the 2011 date appearing in the Surfcon brochure.

[327] Mr Spring says that had Mr Leybourne started planning to establish Orion while still employed at Sealegs, it would have been a serious breach of his duty of good faith to his employer, but there is no evidence of him having in fact done so. He says that the only evidence that would tend to support that suggestion is the reference in the Surfcon brochure prepared for the Shanghai boat show which states that the company started focussing its attention on amphibious craft design and production in 2011. Mr Spring says that the 2011 date is a mistake made in the Surfcon publication and has been explained as such by Mr Zhang in his evidence where he said that the Surfcon Sales Manager had prepared an inaccurate document.

[328] I find the evidence of the defendants on this issue unsatisfactory and unconvincing. It is simply inconceivable that Mr Zhang is unable to locate any documentation relating to his travel to New Zealand in mid-2012 if that is when he came. Mr Zhang may have lost his passport, but his wife must also have a passport which would contain information confirming the dates of travel to New Zealand. The use of credit cards, travel and accommodation bookings and other documentation would confirm the dates of their travel to New Zealand.

[329] At the conclusion of his evidence, in questions by the Court, Mr Leybourne was asked if he could explain the inconsistency between the 2011 date referred to in the Surfcon brochure as being when the company started to focus on amphibious craft and production, and his evidence that the idea of establishing Orion to produce amphibious systems had not arisen until Mr Zhang's visit to New Zealand during the winter of 2012. This was the first time that this apparent inconsistency had been mentioned during the hearing. Mr Leybourne said he could not explain it and said that Mr Zhang would have to. Mr Leybourne then appeared to faint and collapsed in the

witness box and was unable to continue giving evidence. He returned to conclude his evidence on a later date. As Mr Leybourne's collapse was referred to by counsel for the plaintiff in closing as being relevant to Mr Leybourne's credibility, I simply note its occurrence and its immediate coincidence with the issue being raised of when he and Mr Zhang had met and began their planning to establish a new business. However, I prefer to regard the matter as an unfortunate coincidence, and I do not draw any adverse inference as regards Mr Leybourne's credibility from what occurred.

[330] However, I found Mr Zhang's evidence and explanation regarding the reference to 2011 in the Surfcon brochure to be unconvincing. He blamed the Surfcon Sales Manager for making the error which he had not noticed at the time it was used and distributed at the Shanghai boat show. He also did not notice the same date appearing on the Surfcon website which also had the brochure information on it. When giving evidence Mr Zhang produced a document which he said he had located on his own personal computer the previous night and which he thought was a marketing document written by a former company marketing manager. It also contained errors as to the date of events referred to in the document, the inference being that the same marketing manager responsible for the Surfcon brochure had made other errors in the information he had produced.

[331] The most effective manner of establishing the dates of Mr Zhang's trip to New Zealand would be his travel and accommodation records. If they are lost or misplaced, it was open to Mr Zhang and his solicitors to obtain the relevant information from the New Zealand immigration or Customs authorities. Had those documents and records shown that Mr Zhang travelled to New Zealand in 2012 and not 2011, it would have confirmed Mr Leybourne's evidence. However, the defendants' inability to prove Mr Zhang's travel dates to New Zealand in 2012 only serves to undermine the reliability and credibility of Mr Leybourne's evidence regarding the meeting with Mr Zhang that he says took place in 2012 well after he had already resigned from Sealegs.

The Zubcic / Redpath conversation and its implications

[332] As earlier mentioned, Mr David Redpath, who is employed by Sealegs in the role of Production and Safety Manager, gave evidence that sometime after Mr

Leybourne had left Sealegs, Mr Zubcic told him that he had been offered the role of managing the research and development department (R&D) at Sealegs, but that he could not take the position because he had given Mr Leybourne his word that he would join him when he was ready for him at the new business he was establishing. Mr Redpath maintained this version of events under cross-examination.

[333] In reply, Mr Spring says the evidence of Mr Redpath to that effect is mistaken. He says that Mr Zubcic in his evidence denied saying anything to Mr Redpath about having made a commitment to work for Mr Leybourne when telling him about turning down the position at Sealegs. Rather, Mr Zubcic says he was not asked by Mr Leybourne to go and work for the new company until September 2012, and the conversation he had with Mr Redpath in which he told him that he had turned down a promotion at Sealegs had taken place some considerable time earlier, either in late 2011 or early 2012. Mr Spring says that Mr Redpath has mistakenly combined two separate conversations into one.

[334] The significance of this conversation and its timing is of course relevant to show when Mr Zubcic had made his commitment to Mr Leybourne. Mr Zubcic says that at the end of 2011 or early 2012, being soon after Mr Leybourne had left the company, he was asked to consider the R&D position at Sealegs and had turned it down. He says that much later, around September 2012, he told Mr Redpath about his intention to join Mr Leybourne at the new company. Mr Redpath, however, said that Mr Zubcic had told him sometime after Mr Leybourne had left that he had turned down the R&D role, because of his commitment to Mr Leybourne. Mr Redpath said that it was well over a year before Mr Zubcic left to go and work at Orion, and that he was surprised by Mr Zubcic's decision to turn down a very good role at Sealegs.

[335] I prefer Mr Redpath's evidence with regard to this matter. Mr Redpath recalls a single conversation during which Mr Zubcic gave him an explanation as to why he had turned down the R&D position. On Mr Zubcic's own account, the R&D position was offered to him soon after Mr Leybourne had left Sealegs, and Mr Zubcic's explanation to Mr Redpath about having made a commitment to Mr Leybourne was his justification at the time for what would otherwise be an unusual decision to turn down the opportunity of appointment to a more responsible and senior position at

Sealegs. The implications of this conversation taking place in either late 2011 or early 2012 are significant, as it shows that Mr Leybourne had already raised the topic of Mr Zubcic working for or with him at a new company by early 2012, which was well before the meeting he says he had with Mr Zhang during mid-2012 at which he says the idea of starting a business together was first discussed. It is a further indication that Mr Leybourne had ideas of starting the new business well before he stated this to be the case in his evidence.

[336] In summary, Mr Leybourne's explanation of when he decided to start a business to manufacture amphibious kits is inconsistent with Mr Redpath's evidence of his conversation with Mr Zubcic, and the reference in the Surfcon brochure to the company commencing its focus on the design and production of amphibious craft in 2011. Furthermore, the failure of the defendants to produce any reliable documentary evidence as to the timing of Mr Zhang's claimed visit to New Zealand in mid-2012 is another feature of the evidence that contributes to the unsatisfactory and implausible nature of the defendants' account of these events.

[337] Accordingly I find the evidence of Messrs Leybourne, Zubcic and Zhang regarding the timing and events that preceded the establishment of Orion to be unreliable, and that finding is relevant to and informs my assessment of the reliability and credibility of their evidence regarding the key question of whether the Orion leg assemblies were copied from and derived from the Sealegs leg assembly pattern.

Opportunity to copy

[338] Mr Leybourne embarked upon the new business venture at Orion with the intention of producing an amphibious leg assembly to compete with the Sealegs product. Mr Leybourne himself had a detailed knowledge of the Sealegs leg assemblies, their specifications and how they were designed and manufactured, having been directly involved in the manufacturing and assembly of components comprising the Sealegs system and in attending to after-sale problems. In addition to the detailed knowledge he had accumulated by the time of his departure from Sealegs in November 2012, he also had access to CAD SolidWorks drawings of the Sealegs parts as a result of having downloaded the contents of the USB stick onto his home computer.

[339] Mr Leybourne then enlisted and engaged Mr Zubcic as the design engineer at Orion at least by early 2012, meaning that Mr Zubcic spent the remainder of his employment at Sealegs knowing that he would be leaving to design a system for Orion. While Mr Zubcic had not himself designed the Sealegs system, he nevertheless had a very detailed knowledge of all the parts that it was comprised of and how they were assembled and combined from his work in measuring the parts, creating CAD drawings, and entering the Sealegs parts into the SolidWorks computer programme. As a result of their work at Sealegs, Mr Leybourne and Mr Zubcic knew everything necessary to copy and reproduce the Sealegs system in their Orion system. Unlike most cases where the plaintiff seeks to establish that the defendant/s have had opportunities to copy the plaintiff's copyright work, here the plaintiff need not do more than prove that Mr Leybourne and Mr Zubcic possessed a detailed knowledge of the Sealegs system and then used that knowledge to copy the Sealegs system.

[340] I also note that during the period that Orion's S25-4WD system was being designed and manufactured, Mr Zubcic and Orion were also working on the development of the SL100 system for Sealegs, which involved the design of the offset rim wheels and the adoption of an "industrial" style with box-like legs rather than the sculpted look used on the previous Sealegs leg assemblies.

Was the Orion system developed by means of an independent design path?

[341] Despite the knowledge that Mr Leybourne and Mr Zubcic carried with them from Sealegs, the defendants contend that the Orion S25-4WD and S25-3WD leg assembly systems were produced as the result of the defendants' wholly independent design path and were not copied from or derivative of the plaintiff's models for which copyright is claimed. Mr Spring rejects any suggestion made by the plaintiff that Orion may have taken information or data from Sealegs and used it to assist their own CAD testing. He says that such a suggestion was not put to Mr Zubcic, and that no evidence was produced by the plaintiff showing that any such information would be of assistance to Orion in the development of its design. He says that in any event, the use of another party's data for testing a prototype has no relevance to a copyright claim.

[342] The defendants say that the Orion systems were principally designed by Mr Zubcic in collaboration with Mr Leybourne, and that they started “from scratch” to develop an entirely new design for an amphibious kit suitable for use on a standard-sized New Zealand runabout boat. They acknowledge the absence of a complete paper trail, but say that there was nevertheless sufficient documentation of the design process to satisfy Drs Field and Gooch that the Orion system was produced as the result of an authentic independent design path.

(i) *The significance of the defendants’ conceptual design decisions*

[343] The defendants accept that the Orion system is underpinned by an arrangement of features that is the same as in the Sealegs system. They therefore accept that similarity exists with the Sealegs amphibious leg assemblies at the conceptual level of the Orion design.

[344] The defendants rely on Orion’s design and development of a series of features and components as evidencing that they undertook an independent design path. Such items include:

- (a) The method of fixing the leg assemblies to the boat hull by means of an internal mounting block glued to the hull interior with a composite bonding material so as to become a structural component of the hull.
- (b) The design and use of a wheel with an off-set rim so as to enable the hydraulic hub motor to be located substantially within the wheel, and in a position where the load on the bearings complied with the motor manufacturer’s specifications.
- (c) The use of hollow extrusion for the leg assemblies as compared to the solid cast metal used by Sealegs.
- (d) The funnelling of hydraulic oil through internal galleries in the lifting cylinders, thereby dispensing with hydraulic hoses.

- (e) The placement of the steering cylinder directly on the yoke, enabling hydraulic oil to be fed into the cylinder through the yoke and dispensing with external hoses.
- (f) Machining the steering arm from aluminium alloy billet.

[345] In my view, all these items were designed for the Orion system after the decision to adopt the same pattern and arrangement of leg assembly components as used by Sealegs. They each relate to different engineering methods or different materials chosen by Mr Zubcic to perform the functions of equivalent parts or components of the Sealegs system.

[346] The defendants say, however, that their conceptual approach to a number of aspects of the Orion system demonstrates that they adopted an independent design path. They decided that the Orion system would have three legs that would rotate forward of the bow and towards the rear of the stern. They decided that the Orion system would be built to support 2500kg so as to be suitable for installation on a boat of six to seven metres in length. They decided to use hydraulic power for the leg actuators and to power the hub wheels. They decided that the Orion system would be functional rather than aesthetic in its appearance. They decided that they would design a system that would be modular, in that it would be capable of being fitted to a variety of different hulls.

[347] However I consider that those conceptual design decisions confirm that they simply adopted the same three-leg system as Sealegs and the same geometry as Sealegs in terms of the placement of the legs onto the hull and in terms of the use of hydraulic powered actuators for extension and retraction of the legs. The adoption of the 2500kg load bearing specification was also the same as Sealegs, as was the use of hydraulic power for the hub wheels. Further, while the defendants made choices to give the Orion system a functional appearance in contrast to the sculptured appearance of the Sealegs system, that did not represent any material departure from the established Sealegs combination of features for which the plaintiff claims copyright. The different design features that Dr Field and the defendants rely on as demonstrating that they adopted an independent design path are not differences so far as the

composition and collocation of the functioning components of the leg assemblies are concerned, but are rather due to different approaches being taken to aspects of design detail. I consider this distinction to be of real significance in this case.

[348] The defendants further say that Mr Zubcic's work in designing the S25-4WD front leg assembly with two wheels is also evidence of their independent design path. Mr Zubcic said in evidence that the defendants had decided to develop a front leg with two wheels so it would be different from the Sealegs system. It is clear from the evidence that the decision to attach two wheels to the front leg assembly to be used on the Surfcon ARC600 craft required the preparation of a design detailing the attachment of the wheels onto the front leg, the conveying of hydraulic oil to power the hub wheels, and the placement of the steering actuator.

[349] However, although this system incorporated two wheels, it nevertheless employed the same externally-mounted placement of the legs on the hull and the same geometry in terms of the extension and retraction of the front leg assembly, being the same arrangement of features as exist on the Sealegs system. Despite the obvious differences relating to the 4WD front leg design, I do not consider that they are evidence that the defendants undertook an independent design path in creating the 4WD that was not derived and copied from the Sealegs system and its arrangement of features. As with the other differently designed features relied upon by the defendants, I consider the design of the Orion 4WD system to be effectively a further iteration of the Sealegs system, specifically adapted for use on the Surfcon ARC600 flood rescue craft.

[350] Mr Leybourne and Mr Zubcic also say that the Orion S25-3WD was produced as the result of their independent design path, and they deny that Mr Pringle commissioned Orion to make a copy of the Sealegs system for his Smuggler boats after he had fallen out with Sealegs in mid-2015. They say that far from requesting a copy of the Sealegs system, Mr Pringle wanted a different and superior amphibious kit for installation on his boats.

[351] The defendants submit that in his design of the Orion S25-3WD system, Mr Zubcic made a number of decisions that show his independent design path. These are:

- (a) Front leg angle and lifting cylinder: in order to avoid using a support for the lift cylinder (as on the Sealegs system), the front leg is positioned on a 15-degree angle from vertical. The lifting cylinder design was based on Mr Zubcic's pre-existing rear cylinder on the Orion S25-4WD.
- (b) The front fork: Mr Zubcic designed the front fork to be fully machined into a 'C' shape, unlike the Sealegs fork which is manufactured differently.
- (c) The yoke: when designing the yoke, Mr Zubcic initially designed a yoke that, although suitable in terms of kinematic and strength requirements, in appearance looked quite similar to the Sealegs yoke. He then proceeded to re-design the yoke so that it was narrower and quite different in appearance to the Sealegs yoke. By virtue of being narrower, the final design was more easily able to be designed to supply hydraulic oil through an internal gallery.
- (d) Steering cylinder: the position of the steering cylinder was changed from its position on the front of the yoke on the 4WD front leg to the rear side of the yoke.
- (e) Partial retraction of front wheel into Smuggler hull recess: when installed on the Smuggler craft with a specially designed bow, the front wheel when retracted is located and concealed within a recess at the bow. The defendants say this was done to avoid the Sealegs patent, and to hide the otherwise exposed front wheel, which Mr Pringle regarded as unsightly.

[352] Mr Zubcic explained in his evidence that when given the task of designing a front leg assembly for the Smuggler craft with a single front wheel, he wished to use as much of the existing Orion S25-4WD system as possible to avoid cost and delay. He also said that he wanted to improve on the Sealegs front leg assembly.

[353] While the design elements introduced by Mr Zubcic result in the Orion S25-3WD front leg assembly having a different appearance than the Sealegs system, those engineering solutions are in this context different methods of achieving the same function as the Sealegs system by means of the same arrangement of features with the same fundamental geometry. The close similarity in terms of geometry was recognised at the time by Mr Leybourne in his email to Mr Pringle in which he said that:

The design is heading towards a similar geometry as used by that other company. If this proves unacceptable a radical re-design will be required.

[354] Mr Pringle in his evidence said that when he met with Mr Leybourne and Mr Zubcic in October 2015, he was shown an S25-4WD. He said that he asked Mr Leybourne if Orion could design Smuggler a three-wheel drive system with the front wheel enclosed within a recess at the bow when in the retracted position. He said that he did not ask Orion to copy the Sealegs system, and the whole point of going to Orion was to get an amphibious system that was superior to the Sealegs system.

[355] However, I find that the evidence establishes that as a direct consequence of the deterioration of his company's relationship with Sealegs, Mr Pringle was anxious to obtain an alternative source for an amphibious kit to replace the Sealegs kit for installation onto the Smuggler boats. What he wanted was in effect a similar functioning system to Sealegs at less cost. The replacement system would be required to meet the same specifications as the Sealegs' system and have the same dimensions so as to fit readily into the established attachment positions being used by Smuggler for fixing the Sealegs system on its boats. Mr Pringle and Mr Leybourne were aware of the Sealegs patent and its reference to the front wheel operating as a bumper, and having taken legal advice they believed that they would not infringe the Sealegs patent if they could find a way of retracting the front leg wheel into a covered recess created at the bow of the boat. Mr Zubcic's choice of engineering innovations and appearance differences did not amount to him adopting an independent design path, as his starting point was the Sealegs system, and his objective was to produce a system that could be readily substituted by Smuggler for the Sealegs system they had been using.

(ii) *The four-stage design process*

[356] I have rejected the defendants' contention that the differences of detail in the Orion design amounted to the defendants adopting an independent design path. However, the defendants also frame this point in another way, relying on Drs Field and Gooch's four-stage analysis of engineering design.

[357] Dr Gooch explained in his evidence that the conventional analysis of the progression of mechanical engineering design can be divided into the four stages that I set out earlier, being: clarification of the task; concept design; embodiment design; and detail design. Dr Field and Dr Gooch both say that the embodiment and detail design phases of the design sequence will generally occupy the bulk of an engineer's time required to develop a final design.

[358] Having compared the Sealegs and Orion amphibious systems and examined Orion's design path documentation, Drs Field and Gooch concluded that because of the differences they identified, the Orion system was the product of an independent design path. They both acknowledge that at a concept level, the Orion system represents a series of fundamental design decisions and solutions that are apparent in the Sealegs system. However, they say that where an independent design path has been followed, it is not uncommon to see concepts overlap. Drs Field and Gooch expressed their opinions that because the bulk of the design work is undertaken during the embodiment and detail design stages, the detailed design work undertaken by Mr Zubcic showed that the Orion system was the result of independent design work.

[359] Relying on this evidence, Mr Spring submits that the Orion design path must be considered in the context of modern, professional engineering design, rather than by reference to what he describes as Sealegs' design process of 'trial and error'. He emphasises that the law of copyright does not protect ideas; rather, it protects the skill and labour employed in the expression of ideas. He therefore submits that an "independent design path" in copyright law means independence at the embodiment and design stages only: the defendants' design path is only required to be independent from the point at which the embodiment design function begins. He submits that

overlap at the clarification and conceptual design stages is entirely permissible: it is the embodiment stage that determines how the designed item actually looks.

[360] Adopting that approach, the defendants seek to rely on their efforts in developing the detailed aspects of the Orion system as demonstrating that they undertook an independent design path, avoiding any implications and consequences of their use of the same arrangement of features that was developed by Sealegs on the basis that they are conceptual features not protected by copyright.

[361] I consider the defendants' submission that design overlap is permissible at the clarification of task and conceptual stages of the design process to be misconceived. Provided the plaintiff has embodied an original idea into a work for which copyright may legitimately be claimed, it does not matter at what stage of the professional engineers' design path that process occurred. Where it is alleged that copyright in an artistic work has been infringed, the question of whether an independent design path has been followed in the creation of a product is not answered by reference to how much time and effort has been expended on design details, or indeed whether extensive detailed design work has been undertaken to create a product that is different as regards the choice of certain engineering solutions and methods. Here the plaintiff does not allege that the detailed features designed and incorporated into the Orion system by Mr Zubcic were copied from the Sealegs system. What the plaintiff alleges is that Orion copied the arrangement of functional features in its assembly, including the external placement position of the leg assemblies on the boat hull, the geometry of the system and its movement. Those same fundamental design decisions and solutions that were developed by Sealegs and which are incorporated and represented in the assembly of components comprising its amphibious system had to have been adopted by Mr Zubcic before he could possibly proceed to address the aspects of detailed design which in each instance related to alternative engineering solutions for components and functions already resolved and apparent in the Sealegs system.

[362] I agree with the evidence of Mr Dippie in which he explains the significance of the design decisions incorporated into the Sealegs arrangement of features comprising its leg assemblies, and Orion's adoption of that arrangement as the basis of its own leg assemblies. The differences between the Orion system and the Sealegs

system as identified by Dr Field, whilst achieved by skilled engineering and which may be seen as being improvements, are nevertheless alternative engineering solutions to achieving the same functions performed by the equivalent Sealegs components, and they do not alter the leg assembly's fundamental functionality. An example is Orion's incorporation of drilled galleries in the retraction and steering cylinders to transfer hydraulic oil, rather than using external hydraulic hoses. Using this method the associated hydraulic hoses remain static and do not articulate as the leg extends and retracts, thereby extending their longevity.

[363] Another example is the front and rear leg assembly mounting frames, located inside the hull, to secure the leg assemblies at the bow and transom. The mounting frame is bonded to the inside of the hull with a structural adhesive, and has tapered holes to accept the tapered spigots for the hinged mounts of the lifting cylinder. While this method of connecting the leg assembly to the hull is quite different to that used by Sealegs, which uses an external mounting, it is nevertheless simply a means of attaching the leg onto the hull. In the case of the rear leg assemblies, the internal mounting plates provide an advantage by reducing the bulk of the assembly on the transom, as compared to the large bracket used to secure the rear legs on the Sealegs system. Again, however, the use of the mounting brackets is an alternate method of fixing the legs to the boat hull, and while there are advantages derived from this solution, they make no change to the fundamental functionality of the leg assemblies as innovated by Sealegs. Dr Field acknowledged this to be the case:

The Sealegs and Orion systems have the *same set of sub systems* because they are products that apply to the same amphibious craft (type 'E' in Figure A1): these subsystems include wheels, hydraulic drives, retraction mechanisms, steering mechanisms and hydraulic power packs. Sealegs's and Orion's subsystems also have some *physically different* but '*equivalent*' parts because they have to perform the same generic functions or because they are the best standard way of fulfilling their function: these include tyres, retraction arms, retraction cylinders, steering fork, steering cylinder and control valves. But there also parts in each system that are unique to either Sealegs or Orion, which I set out below.

[364] The unique parts referred to by Dr Field include the hydraulic cylinders with internal galleries and the internal mounting plates that I have referred to. I do not consider that either of these result in a materially different leg assembly than that of Sealegs. Another unique part referred to by Dr Field is Orion's use of an off-set wheel

hub to enable the hydraulic hub motor to be positioned within the wheel where the vertical wheel loads can be transferred into the motor's shaft and bearings for optimum weight-bearing. However, Mr Zubcic and Orion had designed a wheel with an off-set hub for use on the Sealegs SL100 in July 2013 in the course of carrying out work on SL100 pursuant to the Sealegs Design Brief, which provided that the intellectual property of all components designed as part of SL100 were the sole property of Sealegs. Consequently, this feature was not unique to Orion.

[365] I therefore consider that the defendants cannot discharge the onus of showing an independent design path by means of evidence showing that the bulk of the design time and effort was spent on the detailed design stage and by a process similar to that of a professional engineer's design pathway. Comparing the Sealegs design process to that of a professional engineer is of little relevance to the issues that I am required to determine here, where the evidence is clear that what Mr Bryham and Sealegs developed and produced was an original design to produce a functional amphibious system of a kind that had not been achieved before, by either qualified or unqualified engineers.

(iii) The defendants' design path documentation and chronology

[366] Mr Leybourne explained Orion's design path in his evidence.⁸¹ He said that the first step in any design process is to understand the customer's proposed application, and to get a feel for the product's market. As the first amphibious product to be designed and built was for a flood rescue craft for use in China, the first steps taken were to determine the type of craft on which the new amphibious system would be used. He said this process resulted in a decision that the craft would be six metres in length and would have a dry weight of 1500kg and be capable of carrying a payload of 1000kg (approximately 10 people and equipment). That meant the amphibious leg system would need to be capable of supporting a gross weight of 2500kg. Mr Leybourne said that consideration was also given to compliance with the European

⁸¹ Mr Leybourne explained that the description he would give of the Orion design process was in the nature of a guide, as the various steps were often run together or even in reverse order. He agreed that his account of the sequence was not an actual account of the Orion design process but was in effect "a reconstruction".

standards for craft of that type and to the cost of production so as to ensure the product was commercially viable.

[367] Mr Leybourne said that once it was determined what type of craft the system was to be designed for and once the commercial considerations had been addressed, an operating specification was required. The operating specifications that were determined included: the payload to be supported (2500kg); wheels to be clear of the water when retracted; the ground clearance (400mm); the land speed of the system (9 kph); maximum drive incline (10 degrees); capable of operating over soft sand; capable of being driven over obstacles of a maximum height of 200mm; capable of continuous operation on land for 10 minutes before overheating; and an operating temperature between negative five degrees Celsius to 42 degrees Celsius.

[368] Mr Leybourne said that once the operating specifications had been determined, they were used as the basis for undertaking calculations to determine the requirements of power, torque, cooling and filtration and to determine the specifications of the hydraulic motors and pump systems of the COTS components to be ordered.

[369] Mr Leybourne then explained that he had used a spreadsheet to make the calculations related to the hydraulic system that would power and turn the wheels, and another set of calculations to determine the size of the hydraulic cylinders used on the system for lifting the legs and steering. These calculations enabled him to determine the required specifications of the hydraulic motor, the transmission pump, and engine power as well as determining hydraulic cylinder sizes and the size of the oil cooler. Mr Leybourne said that he and Mr Zubcic discussed his idea of using a structural adhesive to attach the leg assemblies to the hull, and the use of load-holding valves inside the hydraulic cylinders resulting in allowing a tighter (or closer) leg-to-cylinder clearance. He explained that they had also investigated the viability of using electric power but had discounted it.

[370] Mr Leybourne said that once the key design features were decided he had done his preliminary calculations, and the process of designing the component parts began with the first part designed being the wheel with an off-set rim to accommodate the hydraulic hub motor and a suitable tyre.

[371] As regards the S25-3WD, which was built following the request from Mr Pringle and Smuggler, Mr Leybourne said that because Mr Pringle wanted a solution as soon as possible it was decided to base the new front assembly on the Orion 4WD system as much as possible. He explained that he was conscious that by moving to a three-wheel drive system the Orion system was getting closer to the Sealegs system and, knowing of the Sealegs patent, he took legal advice. This led to the decision to modify the design of the Smuggler boat to be fitted with the Orion assembly, so that when the front leg was fully retracted, the wheel would be concealed within a recess located at the bow. This required the use of a sensor to self-centre the wheel so that it would enter the bow recess correctly and accurately. Mr Leybourne located and sourced the sensor system required.

[372] In response to the plaintiff's notices to answer interrogatories, Mr Leybourne swore an affidavit in which he described Orion's development of their 4WD and 3WD systems. The affidavit was produced as an exhibit. Attached and exhibited to his affidavit were a large number of documents, including emails, computer images, drawings and photographs related to each step of the design process. Mr Leybourne qualified the accuracy of the completeness of this material by saying that he cannot attest to the absolute accuracy of the steps described or dates, and that design steps could be comingled, concurrently or consecutively or even reversed.

[373] Regarding the existence of any documents relating to the initial steps taken by the defendants in formulating their understanding of the application of their planned new amphibious system, Mr Leybourne states that he is not able to provide a specific start date, and the best he can say is that the process commenced approximately during February – March 2013. He says that there are no documents relating to the initial planning stage but that there were verbal discussions between himself, Mr Zubcic and Mr Zhang.

[374] The first dated documents produced are dated 15 February 2013 and are an email exchange between Mr Zubcic and the firm Solitec regarding the purchase of the SolidWorks software programme. The first design-related documents are dated 15 March 2013 and are a computer drawing prepared by Mr Zubcic of a wheel rim subsequently used for both the 4WD and 3WD systems, and a report prepared for

Orion regarding an electric drive system. In his affidavit Mr Leybourne explains the absence of any SolidWorks CAD conceptual models of the Orion systems as being because the conceptual models either evolved into final models or were discarded as unsuitable.

[375] Mr Zubcic described the process of designing the Orion system in much the same terms as Mr Leybourne. He said the intention was to build a system that was modular and run by hydraulics. He said he wanted to design a system that was fundamentally functional rather than aesthetic in appearance. He said that he and Mr Leybourne had worked closely together on the design of the Orion system. As regards the positioning of the legs on the hull and the geometry of their extension and retraction, Mr Zubcic said that the method they settled on was obvious. He explained:

The most common kind of six metre craft, which our modular system would attach to, is the ordinary mono-hull boat. The shape of ordinary mono-hull boat is kind of triangle, so it was natural option to have three legs, practically one on each corner. Three points of contact with the ground at the same time is minimum required for stability. One leg attached on each side of transom and one attached on bow. There is a certain number of possible options how you can move legs up and down, but if we talk about simple ways to do that, we come to very few options. Those options are the ones that imitate human extremities. Such mechanisms are widely used all around the world, especially in earth-moving heavy machinery. For Darren it was so obvious solution because he was in that industry good part of his life. Such mechanisms are common in aircraft industry too which I am familiar with. Therefore, we decided to stay right there, simple, so our legs move up and down rotating around a horizontal axis and get powered with hydraulic cylinder as an actuator (like the muscle in human arms). Having three legs attached on the hull makes so obvious that front leg, in order to be lifted above water line, has to rotate forward and rear legs to rotate backwards. Otherwise, legs would hit the hull. It was an existing option in that it appeared not only in the Sealegs system but some others too.

[376] Mr Zubcic's evidence regarding his designing of the Orion parts demonstrates the extensive work and industry he applied to designing the Orion components to achieve those objectives, for example by designing the system of attaching the legs to the hull with an internal bracket bonded onto the hull; by designing the components so that hydraulic oil could be conveyed internally without the use of external hoses; and by adopting a functional rather than aesthetic style for the leg assemblies. However all of what Mr Zubcic did in terms of design was founded upon the same pattern of assembly, or arrangement of features, as exists in the Sealegs system.

(iv) *Absence of documentation*

[377] Although Mr Leybourne explained in his evidence how he and Mr Zubcic had made decisions regarding the COTS parts required, the style of the Orion system, the surface finish to be used on the aluminium parts (anodising) and many other design details, he did not produce any document or correspondence that recorded the detailed product specifications that he referred to in his evidence. Nor did he explain a design path or design process that started with an evaluation of the possible options for designing an amphibious system for a small craft. Rather, what he described is consistent with proceeding from a start point where the system to be produced would function in the same way as the Sealegs system, and would require the same functional components arranged in the same way as the Sealegs system that was so well known to both him and Mr Zubcic.

[378] Mr Spring submits that spreadsheets created by Mr Leybourne when undertaking hydraulic drive calculations, hydraulic cylinder size calculations and cooler size calculations are evidence of him investing skill and labour in formulating the independent design of the hydraulics for the Orion amphibious system. However, the spreadsheets produced as exhibits have creation dates ranging between 23 March 2014 and 10 December 2014, which is well after the time at which the defendants say they commenced designing the Orion system and made the decisions that determined, in a conceptual sense, what type of system they were intending to make. The spreadsheets therefore do not represent documentary evidence regarding the defendants' initial decisions about the type of system they would create and its application, which the defendants say were made in or around February-March 2013.

[379] Mr Spring also refers to another spreadsheet prepared by Mr Zubcic as part of his work in designing the Orion 4WD system as evidencing his independent and original design work. While Mr Zubcic says that he made the calculations on the spreadsheet in early 2013, there is no date recorded on the spreadsheet, and the document properties information records that the document was last modified on 9 November 2015. Therefore this spreadsheet does not amount to documentary evidence of the initial design and proposed product decisions made at the commencement of the Orion design path.

[380] The defendants say that confirmation that they adopted an independent design path can also be seen from the steps they took to consider and evaluate an electric powered system as an alternative to using hydraulic power to drive the hub motors. Mr Leybourne explained that he and Mr Zubcic wanted to test whether electric drive technology was sufficiently advanced to be viable and economic to produce, but they decided that an electric system would not be cost competitive and so proceeded with hydraulics which Mr Zubcic says was the obvious solution as both he and Mr Leybourne were so familiar with it. The defendants have produced a report on an electric drive concept that Mr Zubcic obtained from a friend and which he received on 11 April 2013. However, the defendants' consideration of an electric powered system to drive the wheels as an alternative to hydraulics does not mean that they were considering a different composition or arrangement of the geometry or the features used in the Sealegs system.

[381] Further, although the defendants produced in evidence numerous and detailed drawings created in SolidWorks for the purpose of designing the parts and components comprised in the two Orion systems, there is nothing amongst this extensive material which is evidence of the initial design decisions taken to produce an amphibious system suitable for installation onto six to seven metre craft and which would compete in the market with the Sealegs system. The design documents produced by the defendants certainly demonstrate that extensive design work was undertaken by the defendants in designing the parts of their system once the geometry and arrangement of component parts and functions had been determined, but there is nothing that shows an independent design path which led to adopting and choosing the arrangement of the functioning elements of the leg assemblies, or the positioning on the hull and geometry of the leg assemblies.

[382] At the conclusion of his evidence the Court asked Mr Zubcic about the absence of documentation and he said that he did not make any notes or record the specifications of the new product as he had no need to. Mr Zubcic said that if he had been designing something as an "official job from a customer" he would need a written specification, but for the purposes of designing the Orion system, he simply did not need to. As a consequence, there is no written material prepared by either Mr Leybourne or Mr Zubcic containing any reference to the design objectives, parameters

or specifications of the system that Mr Zubcic was to design. Mr Zubcic said that the only records relating to the design specifications of the Orion system are represented in the drawings he created in the Orion SolidWorks computer programme, on spreadsheets, or in his own memory.

[383] I consider the explanations of Mr Leybourne and Mr Zubcic as to the absence of any contemporaneous records of their design decisions to be wholly implausible, and inconsistent with the defendants' contention that they developed the design of the Orion system by means of an entirely independent design path and process. In order for Mr Leybourne to communicate his and Mr Zhang's intentions to Mr Zubcic regarding the development of the Orion amphibious kit, some form of written or electronic communications would be necessary. Even if the requirements of the new system were discussed directly and informally by Mr Laybourne and Mr Zubcic, it would be remarkable if neither of them made any record as to the matters discussed and agreed on in their discussions. There are no emails exchanged between the three men, nor are there any costings or other contemporary records that could be expected to accompany the designing of an authentically new product.

[384] The total absence of any relevant contemporaneous design-related records containing information regarding the defendants' proposed new amphibious system is in my view highly significant. For a professional engineer such as Mr Zubcic to start "from scratch" as is claimed by the defendants, it seems unusual that he would depart from the practices and requirements he would generally apply to any other professional design work where specifications and descriptions of the tasks the proposed product would be required to perform would be set out and recorded in order to establish the design criteria.

[385] Furthermore, it is surprising that professionals embarking on the process of designing and manufacturing a new and authentically original amphibious system for commercial production and sale would not document the process or refer to what they were proposing in emails passing between them, when they have no reason not to do so. This is reinforced by the detail referred to by Mr Leybourne when describing the key specifications that were determined during discussions between Mr Zubcic, Mr Zhang and himself. Detail of that kind, which includes weights and measurements in

degrees, makes the absence of any contemporaneous records relating to the key aspects of the design and its composition, even more implausible.

[386] Had such contemporaneous records been made and retained, they would have been relevant to the issue of how the Orion design process was commenced and whether any part of the Sealegs system was referred to or relied on as a basis from which to develop the Orion design. I consider that the absence of any records or other contemporaneous correspondence setting out the initial design objectives and required capabilities of the new Orion system provides support for the plaintiff's contention that the defendants started their design process by copying the plaintiff's leg assembly system and particularly the arrangement of features and components as used in the Sealegs system. Assuming the Orion design starting point was the Sealegs assembly, there would perhaps be no need for the defendants to undertake the process of defining the specifications and required functioning of the new system they were intending to produce.

[387] I also note that the absence of such records is consistent with the manner in which the defendants maintained confidentiality of the development of their new leg assembly system from Mr Bryham and Sealegs until October 2014 when it was seen attached to the Surfcon ARC600 by Sealegs CEO Mr Glen, who photographed it.

(v) *Conclusion as to independent design path*

[388] I do not consider that the evidence shows that the Orion amphibious system was produced as a result of an independent design path. What it shows is that Mr Leybourne and Mr Zubcic commenced their design process with full knowledge of the Sealegs system, and their design efforts were directed to making innovative improvements to the components and refining the functioning of the existing Sealegs system. Despite the introduction of some innovations, improvements, and alterations, in each case their real starting point was their detailed knowledge of the Sealegs system and the proven arrangement of the Sealegs pattern of features. Rather than producing an original work as the result of following an independent design path, what the defendants produced was a further iteration and reproduction of the Sealegs

pattern, albeit with some differences in appearance and adopting some alternative engineering solutions, to perform the same functions as in the Sealegs system.

Functional constraints and their relevance

[389] The second major submission made by the defendants in relation to causality and derivation is that functional constraints dictated the defendants' design and explain the similarities between the Orion and Sealegs leg assemblies. The proposition advanced by the defendants here is that, having embarked upon the design of an amphibious kit for use by boats of the same type and size as were being fitted with the Sealegs amphibious kits, it was inevitable that the Orion design process would produce the same outcome, and that the two systems would necessarily share many of the same functional components, some of which would be identical.

(i) Submissions

[390] Mr Spring says that the functional constraints that the defendants have identified are those that arise once the conceptual decisions had been made to make an externally-mounted amphibious kit suitable for attachment to any hull, and which can be raised and lowered to provide amphibious capability.

[391] Mr Spring referred to the evidence of Dr Field in which he said that important design constraints applied to the Orion amphibious system because Orion had decided to produce amphibious equipment for craft of the same weight and hull type as Sealegs, with the same or similar capabilities on land in terms of ground clearance, land speed, incline limits, depth of outboard motor and existing steering system as Sealegs. Because of Orion's decision to enter the same market as Sealegs and produce an amphibious kit that met close to the same specifications as the Sealegs system, Dr Field said it was therefore inevitable that most of their functional constraints would be identical, leading to similar optimal solutions being adopted, and in some cases identical components such as the hydraulic motors and tyres. However, said Dr Field, that did not mean that the features of the Orion system were copied from the Sealegs system, and he noted that there were several features of the Orion system that had no Sealegs equivalent.

[392] Mr Spring also referred to the evidence of Dr Gooch on this issue, in which he said that to create an amphibious craft there are some basic functional dimensions that constrain the design. Mr Spring therefore submits that in respect of a front leg assembly, for example, it must for reasons of functional necessity possess:

- (a) a tractive, steerable front wheel attached to the hull which can be raised above the waterline and lowered to the ground while providing adequate ground clearance;
- (b) part of the leg must be steerable and part will be fixed, to which the mechanism for raising and lowering the leg is attached;
- (c) the steerable part of the leg must connect the wheel/s to the leg, with the wheel on the centre-line of the assembly and secured by an arm (fork) on one side;
- (d) the fixed part of the leg, which will be the upper part, must be:
 - (i) connected to the hull at a point which will allow the wheel to be raised above the waterline when retracted, and connected to the hull in a manner that will spread the load bearing into the hull;
 - (ii) hinged to allow it to be raised and lowered, and connected to the lifting actuator; and
 - (iii) of sufficient length to provide adequate ground clearance for the craft;
- (e) the lifting cylinder must be attached to the hull and to the leg, and of a size and capacity to support the weight of the craft on land and to lift and retract the leg;
- (f) the steering system must be fixed to the unmoving upper leg and connected to the steerable part of the lower leg;

- (g) the wheel and tyre must be large enough to enable satisfactory ground pressure and small enough to be able to be retracted above the waterline, and the tyre must have a suitable tread pattern for traction over soft terrains; and
- (h) where the front wheel is to be driven, the tractive power must be connected to the wheel, and if a hydraulic-powered wheel motor is chosen, it will need to be located in a position where it can bear the load forces to which it will be subjected.

[393] Mr Spring also made the same submission regarding the components of the Orion rear leg assemblies where there are equivalent components in the Sealegs rear leg assemblies. He says that in each case the Orion components and features are present by reason of functional necessity.

[394] In response, Mr Henry submits that functional constraints do not arise from design decisions where an engineer has a wide range of choices in the course of progressing along a design path; rather, actual functional constraints are those that all designers must of necessity adopt. He submits that any design constraints are not truly “functional constraints” if they apply after the designer has chosen to design an amphibious leg assembly that adopts the same design decisions as were made by Mr Bryham regarding the Sealegs leg assemblies. He says that the design constraints relied on by the defendants are only constraints that arose from Orion choosing to compete in the same market as Sealegs, and to start from and copy the Sealegs arrangement of features, which thereafter necessarily constrained Orion within that design or arrangement.

(ii) Analysis and discussion regarding functional constraints

[395] Drs Field and Gooch say that the Sealegs arrangement of functional features are comprised of commonly known and understood engineering solutions as used in other engineering and industrial contexts, albeit not in marine applications. Dr Field acknowledges, however, that the Sealegs solution and leg assembly can be regarded as unique as he could find nothing like it having been created previously.

[396] I consider that Sealegs had already developed and selected from a wide range of options and had composed an arrangement of functional components that comprised an effective amphibious kit. As indicated in the evidence of Mr Allen, Sealegs chose a pattern or arrangement of components that had never been done previously anywhere in the world and was truly unique. It was this pattern that was the product of the design development and the application of skill by Mr Bryham and Sealegs, and it is this pattern which the plaintiff seeks to protect by copyright. The components each have a functional purpose for their presence within the Sealegs pattern and they combine their various individual functions to produce fully retractable amphibious functionality.

[397] I agree with the plaintiff that all the functional constraints identified by the defendants are in fact due to their appropriation and use of the Sealegs pattern and consequently due to the design decisions that Sealegs had already made in selecting and arranging the functional components that combine to make up the Sealegs leg assembly. It follows that the functions required to be performed by each of the components of the appropriated leg assembly pattern must necessarily also be present in the Orion leg assemblies. These are not functional constraints that apply to any amphibious system, but rather functional constraints applicable to the particular components of the leg assembly pattern previously developed and adopted by Sealegs.

[398] Accordingly I find that the decision made by the defendants to appropriate the Sealegs leg assembly component pattern is what explains the close and objective similarity of the Orion system to the Sealegs system, rather than the similarity being due to functional constraints dictating Orion's design.

Conclusion on causality and derivation

[399] When Mr Zubcic embarked upon the process of computer-aided drafting of the component parts of the Orion amphibious leg assembly, I find that what he and the defendants did involved copying of the Sealegs assemblies as regards the combination and arrangement of features that made up its systems. There is no evidence of any consideration having been given to any alternative geometry other than that used in the Sealegs system, which is characterised by its externally located and mounted leg

assemblies. There is no evidence of any consideration having been given to any other combination of features or components which would be other than that already developed and used by Sealegs. In my view, it is clear that Mr Zubcic began the design process by using his detailed knowledge of the Sealegs system to copy and reproduce its functions and key features, albeit while looking to make engineering improvements. As noted above, I do not consider that his design choices resulting in reproduction of Sealegs' features were dictated by functional constraints.

[400] To conclude, I find that the plaintiff has established that the Orion design was a copy of and directly derived from the Sealegs system and the arrangement of features that are comprised in the models for which copyright is claimed. I further find that the defendants have not established that the Orion amphibious leg assemblies, and specifically the arrangement of the essential functional components, were developed by means of their adopting an independent design path. While the defendants did independently design and incorporate alternative engineering solutions for several aspects of the Orion leg assemblies, those solutions did not materially or substantially depart from the functional arrangement of features comprised in the Sealegs models.

[401] For these reasons, I find that the objective similarity of the Orion S25-4WD and S25-3WD to the Sealegs S60-3WD and SL100 is explained by the fact that they were in each case copied from and directly derived from the Sealegs system.

Substantiality

[402] The last remaining question is whether the defendant copied a substantial part of the plaintiff's copyright work. This is a mixed question of fact and law, in that the Court must apply a legal standard to the facts as found.⁸² As the Court of Appeal noted in *Oraka*:⁸³

The "substantiality" test can be regarded in part as a practical threshold designed to limit claims of infringement to those that are real and substantial.

[403] Assessing substantiality involves a value judgment as to:⁸⁴

⁸² *Designers Guild Ltd v Russell Williams (Textiles) Ltd (trading as Washington DC)* [2000] 1 WLR 2416 (HL) at 2423, cited in *Steelbro NZ Ltd v Tidd Ross Todd Ltd* [2007] NZCA 486 at [106].

⁸³ *Oraka Technologies Ltd v Geostel Vision Ltd* [2013] NZCA 111 at [87].

⁸⁴ *UPL Group Ltd v Dux Engineers Ltd* [1989] 3 NZLR 135 (CA) at 144.

... the balance between the private right to exploit the expression of the author's ingenuity, skill, labour or imagination and the public interest in obtaining the benefit of creative work and thought.

[404] The substantiality test requires the Court to evaluate the overall significance of any features the defendant has copied from the plaintiff.⁸⁵ The Court explained in *Oraka*:⁸⁶

The essential test is whether a claimant can show substantial use by the defendant of those features of the claimant's work that, by reason of the knowledge, skill and labour employed in their production, constituted it as an original copyright work. It is wrong to jump to the conclusion that a substantial part was taken simply on the basis that copying occurred. What constitutes a "substantial part" is necessarily a question of fact and degree. The quality or importance of what has been taken is much more significant than the quantity.

This means that what is or is not "substantial" is closely associated with how original the work, or respective part of the work, is. The law of copyright is not concerned with originality of ideas but with originality of expression. Protection is given to a work (being a pattern of ideas), not a general idea or principle. The line between ideas and their expression, however, is notoriously ill-defined. Originality, in the sense of the contribution of the author's skill and labour, tends to lie in the detail with which the basic idea is presented. The greater the originality, the greater the protection that copyright will afford it.

The issue of functional constraints may become important at this point. If similarities between two works are dictated by the function of the item, then the similarities are an inevitable consequence of the object and its function rather than the labour and skill of the claimant, against whose misappropriation the law of copyright seeks to protect.

(footnotes omitted)

[405] In *Billhöfer Maschinenfabrik GmbH v TH Dixon & Co Ltd*, Hoffmann J phrased the question as being whether the particular dimensions and spatial arrangements copied by the defendant from the plaintiff's design would to an engineer have been of sufficient importance to constitute a substantial part of the overall work.⁸⁷ In that case, Hoffmann J evaluated the similarities and concluded that the visual features and dimensions copied were not qualitatively sufficient to make the defendant's work a substantial copy of the plaintiff's work.⁸⁸ The dimensions that

⁸⁵ *Designers Guild Ltd v Russell Williams (Textiles) Ltd (trading as Washington DC)* [2000] 1 WLR 2416 (HL) at 2423, cited in *Steelbro NZ Ltd v Tidd Ross Todd Ltd* [2007] NZCA 486 at [106].

⁸⁶ *Oraka Technologies Ltd v Geostel Vision Ltd* [2013] NZCA 111 at [129]–[131].

⁸⁷ *Billhöfer Maschinenfabrik GmbH v TH Dixon & Co Ltd* [1990] FSR 105 (Ch) at 122.

⁸⁸ At 123.

were copied were not critical to the overall work, and there were considerable differences in design.

[406] The extent of originality in the copyright work will inform the Court's assessment of whether or not a substantial part has been copied. As foreshadowed earlier, where the level of originality in the copyright arrangement is low, the amount of originality required to qualify another arrangement of the same elements as original is also likely to be low.⁸⁹ In this context, it is relevant to consider whether similarities are the inevitable result of functional constraints. The Court of Appeal explained in *Oraka*:⁹⁰

Functional constraints have been considered in the United Kingdom under the notion of "commonplace". If the claimant's design is very ordinary (commonplace) given the constraints imposed by the function of the object and there is nothing new added, then the originality of the claimant's work might be non-existent or so low that the defendant can easily avoid breach by adding something of his or her own to the design.

(footnotes omitted)

[407] Functional constraints may therefore assist in determining the originality of the copyright work and whether the defendant has appropriated a substantial part of the plaintiff's labour and skill.⁹¹ The Court will discard any similarities that are due to true functional constraints.⁹²

[408] *UPL Group Ltd v Dux Engineers Ltd* provides an example of functional constraints limiting the originality of the plaintiff's copyright work, and ultimately leading to a conclusion that there was no copying.⁹³ That case concerned lavatory seats and lids which were similar in appearance but with some small differences:⁹⁴

The curves, while nearly the same, do not exactly match. As well the Hibiscus lid is more convex than that of the Dux so as to form an increasingly wider edge than that of the Dux. The front of the seats similarly exhibited, display like differences, in particular the similarity of curve is not so close and the width of the Dux seat is somewhat greater.

⁸⁹ *Henkel KGaA v Holdfast New Zealand Ltd* [2006] NZSC 102, [2007] 1 NZLR 577 at [41].

⁹⁰ *Oraka Technologies Ltd v Geostel Vision Ltd* [2013] NZCA 111 at [132].

⁹¹ *Oraka Technologies Ltd v Geostel Vision Ltd* [2013] NZCA 111 at [133].

⁹² *Oraka Technologies Ltd v Geostel Vision Ltd* [2013] NZCA 111 at [145].

⁹³ *UPL Group Ltd v Dux Engineers Ltd* [1989] 3 NZLR 135 (CA).

⁹⁴ At 145.

[409] The Court of Appeal concluded that the defendant had not copied a substantial part of the plaintiff's work:⁹⁵

In the case of common domestic appliances such as lavatory seats and lids to cover the same, the range of curves adapted to a front having a square appearance is probably not large and small differences will be enough to rebut the inference of copying. Sufficient differences exist in this case and we therefore reject the appellants' claims.

The plaintiff's submissions

[410] Here, Sealegs says that the copyright work is the original expression of ideas represented by the combination of functional features chosen by Mr Bryham and comprised in the copyright models. Mr Henry submits that it is the Sealegs arrangement which is the substance of its copyright and it is that arrangement which Orion has appropriated. He says that the Orion designs rely completely on the same set of features ordered in the same arrangement as the copyright models. He says that the defendants' witnesses and submissions confuse the quality of the plaintiff's copyright work with the quality of the engineering, while in fact the two are quite different.

[411] Mr Henry responds to the defendants' submission that similarities due to functional constraints should be set aside when the issue of substantiality is considered by saying that that the design constraints relied on by the defendants are only constraints that arose from Orion choosing to compete in the same market as Sealegs, and to start from and copy the Sealegs arrangement of features. They do not explain away the similarities between the two systems, and should not be set aside as the defendants submit. Mr Henry submits that the quality of the Sealegs design is the highly original and unique arrangement and sequencing of the key leg assembly features which he says represents a "pattern of ideas". He says that it is this assembly, arrangement or pattern that has been copied and taken by the defendants in its entirety. He submits that the defendants have thereby infringed the plaintiff's copyright by having copied a substantial part of the plaintiff's copyright work. Any differences relating to alternative engineering methods or solutions or arising from superficial

⁹⁵ At 145.

appearance are immaterial in the context of assessing the substantiality of what has been copied.

[412] As regards the Orion S25-4WD, the plaintiff says that the front and rear leg assemblies possess the Sealegs geometry. In the case of the front leg, it has two hull pivots, with the lifting cylinder attached to the upper pivot and the leg yoke attached to the lower pivot. The lifting cylinder is also attached to the yoke, with the wheel assembly and steering assembly attached at a pivot point in the base of the yoke. The obvious difference is the addition of two motorised wheels compared to the single wheel on the Sealegs assembly. Mr Henry submits the close similarity between the Orion 4WD assembly and the Sealegs prototype boat 136 (S60-3WD) and system 100 (SL100) is clearly demonstrated by the evidence that when designing the S25-3WD for Smuggler Marine, all Orion had to do was change the lower wheel assembly by substituting a single-sided fork and one motorised wheel. In relation to the Orion S25-3WD, the plaintiff says that it is clear that it is a direct copy of the arrangement and sequencing of features present in the Sealegs copyright models. Mr Henry says that while Orion has changed the shape of some of the features, especially the yoke which was narrowed from an initial design which looked similar to the Sealegs yoke, the Sealegs arrangement of components can clearly be seen to have been copied.

The defendants' submissions

[413] Mr Spring notes that reproduction of a part which by itself has no originality will not normally be a substantial part of the copyright, and will not be protected. He submits that functional constraints in design may minimise the originality involved in the copyright work and the protection afforded to it. The defendants say that functional constraints should not be included in the assessment of the extent of any copying found to have taken place.

[414] He further says that where it is alleged that a defendant has altered a plaintiff's copyright work, such that an altered copy has been produced, the Court will look to whether the defendant has appropriated the time, labour, skill and judgement

contributed by the original author creating the copyright work.⁹⁶ He submits that the law of copyright does not protect ideas.

[415] Mr Spring submits that while Mr Bryham claims to have taken a significant amount of time and effort to develop the Sealegs products, that effort was to a large extent due to his inexperience, and would not have been required by an experienced engineer. He says that what Mr Bryham determined through a process of trial and error were matters that an engineer would know immediately. As a result, a high level of effort was put into achieving a design of very low originality. Mr Spring refers to Mr Bryham's design progression from the initial use of 0.3 metre tyres to the final choice of 0.6 metre tyres to cope with the soft sand terrain over which the boats would travel when transitioning in and out of the water. He says that an analytical design path employed by an engineer would have quickly concluded that a larger tyre was required to perform better over soft ground. The choice of an aggressive V-tread tyre was also an obvious solution for travel over soft ground.

[416] Mr Spring says Orion did not require a great deal of testing because of the simplicity of the amphibious leg mechanism of its product. The defendants say that their application of ordinary engineering principles meant that they were not required to expend the same amount of time and effort as Mr Bryham. As a result, their development of the Orion system did not constitute an appropriation of Mr Bryham's efforts which they say were largely unnecessary.

[417] The defendants further say that in any event, Mr Zubcic and Mr Leybourne themselves expended considerable skill and effort on developing the Orion amphibious systems. As an example, they refer to Dr Field's evidence that Orion's through-trunnion, tapered-spigot oil channels require very specialised manufacture and result in the leg attachments being exceptionally rigid.

⁹⁶ He relies on *Designers Guild Ltd v Russell Williams (Textiles) Ltd (trading as Washington DC)* [2000] 1 WLR 2416 (HL).

Conclusions as to substantiality

[418] The substance of the copyright claimed by the plaintiff is represented in the arrangement of functional features comprising the Sealegs system. It is clear from the evidence that Mr Bryham and the plaintiff expended extensive time, effort and resources in the course of progressing the design from the initial concept models through to the final prototype models. As noted earlier, I do not accept that the plaintiff's copyright works are of low originality. Nor do I accept the defendants' submission that the features identified by the defendants are due to actual functional constraints.

[419] While the defendants say that Mr Bryham's "trial and error" approach was due to his lack of engineering expertise and that any qualified engineer would have immediately known the solution, the evidence clearly establishes that prior to Mr Bryham developing the Sealegs leg assembly, no other person had done so. I reject the defendants' submission that Mr Bryham's extensive work and efforts were unnecessary because an engineer would have readily solved the design problems. Moreover, whether or not the design and development work undertaken by Mr Bryham could have been achieved more quickly by others is not in my view relevant. What is relevant is that, having expended considerable effort and skill in developing and constructing an innovative and original design, Mr Bryham's and Sealegs' system was wholly adopted and copied by Orion when the defendants set about designing the Orion system.

[420] I find that what the defendants did copy was a substantial part of the Sealegs copyright models by reason of their adoption and reproduction of the Sealegs arrangement or pattern of features. By doing so they did much more than "filch" the core design concepts and features embodied in the Sealegs pattern, they unreservedly appropriated it. Having first appropriated the Sealegs arrangement or pattern, the independent design work thereafter undertaken by the defendants resulted in some different engineering solutions and a different appearance, but nevertheless retained the essential Sealegs pattern and composition of components.

Summary and conclusions as to infringement of copyright

Overview

[421] In conclusion, I find that when Mr Leybourne and Zubcic embarked upon the process of designing the Orion amphibious system, they commenced by appropriating the collocation and arrangement of components that comprised the essential core of the Sealegs system. This was an arrangement or pattern of components which was already well known to them. What they then designed and produced in the Orion S25-4WD and S25-3WD products was a substantial copy and reproduction of the Sealegs amphibious leg pattern for both the front and rear leg assemblies in which Sealegs held copyright. I reject the defendants' contention that the Orion system was produced as a result of the Orion defendants following an independent design path. While the Orion defendants certainly adopted alternative engineering solutions for some visual and functional aspects of the Orion leg assemblies, in each case they related to design details and did not involve changes or substantial differences in terms of the composition and arrangement of what was the existing and well-known Sealegs pattern.

[422] I regret to say that I found the evidence of Mr Leybourne, Mr Zhang and Mr Zubcic lacking in credibility as regards their explanation of the development of the Orion design and their claim that they did not find the Orion design on the Sealegs pattern. Mr Leybourne's and Mr Zhang's account of the origins of the Orion business and just when they decided to go into business manufacturing amphibious systems lacks cogency and is in my view implausible.

[423] The evidence establishes that by mid-2011 Mr Leybourne, who was clearly an experienced and very competent senior member of the Sealegs operational staff, had become increasingly critical of the senior management at Sealegs. Through his time with Sealegs he had acquired a detailed knowledge of the Sealegs amphibious leg assembly and its functioning. He had worked closely with Mr Zubcic in relation to the Sealegs' in-house component manufacturing and assembly operation, and it is clear that between them they identified what they considered would be improvements that could be made to the Sealegs system.

[424] Although I find the defendants' evidence as to when and what occurred to be unsatisfactory, the visit by Mr Zhang and his wish to start a business in New Zealand in order to satisfy immigration requirements provided the opportunity for Mr Leybourne to set up Orion to compete with Sealegs. Mr Leybourne and Mr Zubcic believed that they could improve on the Sealegs amphibious system and produce a superior kit for use on small recreational craft, and Mr Zubcic agreed to leave Sealegs and join Mr Leybourne at Orion with that objective.

[425] In Mr Leybourne's communications with Sealegs and Mr Bryham following the establishment of Orion, he stated on several occasions that Orion was not proposing to compete with Sealegs and that the Orion business should be regarded by Sealegs as being complementary to its own business, rather than a competitor. There was of course nothing to stop Orion competing with Sealegs with a product that was produced by means of an independent design path and which was not derived from the Sealegs copyright pattern. However, the statements claiming that Orion was not a competitor were inconsistent with Orion's actual intention of competing with Sealegs, and show that Mr Leybourne and Orion wished to convey to Sealegs that it need have no concerns about the Orion amphibious system in terms of competition in the market, or by reason of it being based on the Sealegs design. While maintaining the confidentiality of a new and independently designed product makes commercial sense, especially from a competitor, those statements went well beyond what was necessary to maintain confidentiality.

[426] It appears, however, that while Mr Leybourne and Mr Zubcic were well aware that Sealegs claimed intellectual property rights relating to its amphibious leg assemblies, they were focussed on the existence of the Sealegs patent and consequently may not have fully appreciated the effect of Sealegs' copyright. From the evidence it appears that they proceeded to develop the Orion products upon the understanding that they were not constrained in any way when developing the Orion design, other than by the Sealegs patent which related to using the front leg wheel and tyre as a bumper when the leg assembly was in the retracted position.

[427] The first Orion product (the S25-4WD) was developed and produced for installation on a flood rescue craft to be sold in China through Mr Zhang's family

company trading as Surfcon. With that type of product being sold into the Chinese market, it was not likely that Sealegs' commercial interests would be affected to any significant degree. However, Mr Leybourne and Orion nevertheless went to considerable trouble to ensure that Mr Bryham and Sealegs did not know about the system that they were developing.

[428] It is also relevant to note that while Orion was in the initial stages of developing its S25-4WD system, it was also working for Sealegs to design and manufacture the Sealegs SL100. Between May to July 2013, well before the Orion S25-4WD was constructed, Mr Zubcic worked on the design of an off-set rim wheel for use on the SL100 for Sealegs. This off-set rim wheel enabled the hub motor to sit inside the wheel in the same way as the wheels used on the Orion S25-4WD. While Mr Zubcic says that one of the first things he did at Orion was to make sketches of an off-set rim wheel for the Orion amphibious system, I consider it to be significant that when he sent Mr Zhang a copy of the computer sketch in May 2013 to enable Mr Zhang to obtain prices for its manufacture, Mr Zhang's response was to ask whether he had asked Mr Bryham about it yet. That exchange is a clear indication that Sealegs and Mr Bryham were being treated as Orion's client in relation to the wheel design under discussion. The subsequent exchange between Mr Zubcic and Mr Bryham (in which Mr Bryham nominated the sketch he preferred) confirms this. I do not accept Mr Zubcic's explanation that he sent the sketches to Mr Bryham because of his friendship with Mr Bryham.

[429] The provisions of the SL100 design brief stipulated that the intellectual property of all proprietary components designed as part of SL100 would be the sole ownership of Sealegs. I find that Mr Zubcic's design work for the SL100 off-set wheel rim in mid-2013 produced intellectual property belonging to Sealegs pursuant to the terms of the SL100 design brief. This preceded the manufacture of the Orion S25-4WD which took place in the second half of 2014.

[430] By reason of Orion's engagement by Sealegs on that design brief, Orion's employees – including especially Mr Leybourne and Mr Zubcic – had ongoing direct access to Sealegs' design information and involvement with the development of the new SL100 Sealegs design and its features. While Mr Leybourne claims to have

maintained separation between Orion staff involved in designing the Orion products and those engaged in the design and manufacture of SL100 for Sealegs, any effective separation between the two groups was in practice impossible. Mr Percival was unable to undertake the essential computer-based testing of the Sealegs designs and was assisted by Mr Zubcic in this regard. Having regard to the small number of staff employed by Orion and the significant role that Mr Zubcic played in relation to Orion's engineering designs, I consider that the only reasonable inference to draw is that Mr Zubcic was well aware of the design work being done on the Sealegs SL100 as he was directly involved in performing aspects of it himself. Mr Leybourne explained in his evidence that although Mr Zubcic and Mr Percival sat in separate offices, he "floated between" them, and so I consider that he too was privy to the designs and progress being made by both.

[431] The reasons for the objective similarity between the Orion products and the Sealegs boat 136 and SL100 are obvious when examined under this light. The situation here is quite unlike most cases where infringement of copyright is alleged and where the plaintiff seeks to rely on an inference that the objective similarity between its product and the defendants' is due to copying. Here, the plaintiff has proved that the authors of the allegedly infringing works were its own former employees who therefore had a detailed knowledge of the plaintiff's copyright work. Moreover, the same former employees – with the assistance of other former Sealegs employees – were engaged to work on the plaintiff's new amphibious leg assembly design (SL100) at the very same time as they were developing their own amphibious product.

[432] I find the plaintiff has proved that copying of its copyright pattern did take place by the way that Mr Zubcic and Orion reproduced the Sealegs amphibious leg assembly copyright pattern in the design and manufacture of the Orion products. The detailed knowledge of the Sealegs pattern by Mr Leybourne and Mr Zubcic and their reproduction of the Sealegs copyright pattern as the basis of the Orion configuration clearly establishes, in my view, that the two Orion designs were directly derived from the Sealegs leg assembly pattern.

[433] While the Orion defendants were able to produce in evidence considerable documentation relating to the design, manufacture and acquisition of the components required for assembling the Orion products, they produced nothing whatsoever in the form of documentation of the design choices and decisions made regarding the pattern or composition of the Orion leg assemblies. No records of decisions or notes were produced and no emails or other correspondence were presented in evidence regarding Orion's crucial design decisions that would establish the starting point of its design path.

[434] While the plaintiff contends that the Orion defendants have been selective in their discovery and that there must be documents relating to those matters, an alternative and possible explanation is that quite simply there were no such documents or communications because the Orion defendants never needed to address those fundamental design decisions, as they had already decided to adopt the Sealegs pattern and there was therefore nothing to be discussed or decided. Apart from the lack of documentation there is no evidence to support the plaintiff's allegation that the defendants have withheld discoverable material, and on reflection I conclude that the absence of any design-related documentation regarding the type and general component configuration of the Orion systems is consistent with the Orion defendants having appropriated the Sealegs copyright pattern, rather than having withheld any such material.

Conclusion as to alleged copyright infringement by first, second, fourth, and sixth defendants

[435] Having found objective similarity between the Orion products and the Sealegs copyright models; a causal connection between the Sealegs copyright models and the Orion products in that the Orion products were derived from the Sealegs copyright models; and that the Orion products reproduce the Sealegs component pattern and thereby a substantial part of the Sealegs copyright work, I find Sealegs' copyright to have been infringed by the first, second, fourth, and sixth defendants.

[436] Mr Leybourne and Mr Zubcic were most directly and actively involved in the steps taken to copy the Sealegs system, but Mr Zhang was also involved from the outset with the initial plans for Orion to develop an amphibious system to compete in

the same market as Sealegs, with a product that would be suitable for application on the same type of small craft as the Sealegs system. Mr Zhang was also involved in the sourcing of components necessary for the construction of the Orion products, and he clearly knew what Mr Leybourne and Mr Zubcic were doing by adopting and appropriating the Sealegs leg assembly pattern as the starting point of the Orion design.

Conclusion as to alleged copyright infringement by Smuggler Marine (third defendant) and David and Pauline Pringle (ninth defendants)

[437] Having found that the Orion S25-3WD infringes the plaintiff's copyright, I turn to address the question of whether the plaintiff has established that Smuggler Marine also infringed the plaintiff's copyright.

[438] Mr Henry submits that both Smuggler and Mr Pringle are responsible for primary infringement of the plaintiff's copyright, pursuant to ss 29 to 31 of the Copyright Act 1994. The effect of those sections is that copying a work or issuing copies of a work to the public are primary infringements of copyright.

[439] Mr Henry notes that in his sworn answers to interrogatories, Mr Leybourne named the persons involved in the decision to develop the S25-3WD as being himself, Mr Zhang, Mr Zubcic and Mr Pringle. Mr Henry therefore says that Smuggler and Mr Pringle are primary infringers by reason of Mr Pringle's direct involvement with Orion to appropriate the Sealegs assembly pattern and reproduce it in the Orion 3WD system, and by reason of Smuggler and Mr Pringle selling boats fitted with the infringing Orion leg assemblies to the public and thereby issuing copies to the public.

[440] Mr Spring says that Smuggler denies any infringement of copyright, whether primary or secondary. He submits that Sealegs has no copyright in the Smuggler hull, and that the Smuggler hulls to which the Orion S25-3WD systems were attached were different hulls to those on which the Sealegs systems were used. However, I do not understand the plaintiff to have alleged that Sealegs did have copyright in the Smuggler hulls.

[441] Mr Spring further says that Smuggler cannot be liable under s 31 of the Act for issuing copies to the public as it was Orion who first issued or circulated copies to the public by selling the S25-3WD assemblies to Smuggler. Mr Spring says that Smuggler's on-sale of the Orion S25-3WD assemblies attached to its hulls were subsequent distributions or sales of the copies, which are excluded by s 9(1)(a) of the Act from the definition of issuing to the public. However, I consider that such an analysis fails to recognise that Mr Pringle and Smuggler were not simply purchasers of the Orion 3WD system; rather, they had been directly and jointly involved with Orion in the production of the Orion 3WD system which they knew commenced with an appropriation of the established pattern of functioning components and geometry comprised in the Sealegs leg assemblies. Accordingly, by selling its boats with the Orion system installed on them, Smuggler and Mr Pringle put into circulation copies not previously put into circulation.

[442] I reject Mr Spring's submission that Mr Pringle and Smuggler played little or no role in the design and manufacture of the S25-3WD. It is clear from the evidence that as a result of differences with Sealegs over price and terms of supply, Mr Pringle had reached a point in late April 2015 at which he was keen to source an alternative amphibious system to use on the Smuggler boats in place of the Sealegs system he had been using for some time, because Sealegs was "too hard" to deal with. In May 2015, Mr Pringle told Mr Leybourne that he was interested in exploring the Orion system further. By October 2015, Mr Pringle had sent plans of the Smuggler 750 RIB to Orion, which had commenced work on designing a single-wheel front assembly. In an email exchange on 28 October 2015, Mr Leybourne advised Mr Pringle that the Orion design was heading towards a similar geometry as that used by Sealegs. Mr Pringle replied proposing to speak to a patent lawyer regarding the way forward. It is clear from these communications that Mr Pringle knew that Sealegs held intellectual property rights over its amphibious system design, and was also well aware that the design Orion was developing was "similar" in terms of geometry to the Sealegs system.

[443] On 25 November 2015, Mr Zubcic sent Mr Pringle a computer drawing of a 3WD system from which it can be seen that the front leg retains the same key features and geometry as the Sealegs system. In further email correspondence on 11 February

2016, Mr Leybourne advised Mr Pringle that Orion was working on a solution to a problem that would result in the bow wheel no longer functioning as a bumper, and that Orion would seek legal advice as to whether the solution would avoid infringing Sealegs' patent. While Mr Leybourne and Mr Pringle were both focussed on the issue of whether the new Orion 3WD product they were developing would infringe Sealegs' patent rather than its copyright interest, it is nevertheless clear that Mr Pringle was actively involved in design-related discussions and decisions, and knew that the product Orion was developing was substantially derived from the Sealegs system and would emulate the Sealegs functionality.

[444] The plaintiff pleads that Mr Pringle and his wife Pauline Pringle are directors of Smuggler Marine and are joint tortfeasors with Smuggler Marine. Mr Spring realistically acknowledges that were the Court to find that Smuggler Marine did breach the plaintiff's copyright by manufacturing and or selling its Smuggler craft with the Orion S25-3WD installed, then Mr Pringle would be liable as a joint tortfeasor. However, Mr Spring says that although Mrs Pringle is a director of Smuggler Marine, there is no evidence that she played any part in the infringing acts.

[445] Any person who infringes copyright by doing a restricted act, such as copying, will be liable. Where more than one person acts, they may be liable as joint tortfeasors.⁹⁷ Company directors who themselves infringe copyright will be liable together with the company itself: they cannot rely on the rules of limited liability in company law to escape the consequences of infringement.⁹⁸

[446] Here, Mr Pringle was directly involved with Orion in the copying of the Sealegs copyright work. His actions were undertaken in his capacity as director of Smuggler Marine, on behalf of the company and for the benefit of the company's business, and his actions are therefore attributable to Smuggler Marine. I find that both Mr Pringle and Smuggler Marine are liable for the infringement of the plaintiff's copyright.

⁹⁷ *Electroquip Ltd v Craigco Ltd* HC Auckland CIV-2006-404-6719, 3 September 2008 at [133].

⁹⁸ *Electroquip Ltd v Craigco Ltd* HC Auckland CIV-2006-404-6719, 3 September 2008 at [134], citing Susy Frankel and Geoff McLay *Intellectual Property in New Zealand* (LexisNexis, Wellington, 2002) at [5.27]. See also *MCA Records Inc v Charly Records Ltd* [2001] EWCA Civ 1441 at [29]–[53].

[447] There is no evidence that Mrs Pringle was directly involved in those activities or that she played any other part in the infringing acts. Accordingly, I find that Mrs Pringle is not liable to the plaintiff for any infringement of its copyright.

Alleged copyright infringement by Stryda and its directors

[448] The plaintiff alleges that the tenth defendant, Stryda Marine (Stryda) has infringed its copyright by purchasing Orion S25-4WD amphibious systems, installing them onto its craft and then selling the Orion-equipped craft to the public in New Zealand and in China.

[449] Although the plaintiff alleges that the first defendant, Mr Zhang, and the seventh defendant, Mr Warren Farr, are both directors of Stryda and are also both executives of the company, the evidence shows that Mr Farr is not in fact a director of Stryda.

[450] The plaintiff further alleges that Mr Zhang was directly involved in Orion's actions in infringing the plaintiff's copyright, and that Mr Farr knew that Mr Zhang was involved in the design and development of the Orion system which infringed the plaintiff's copyright.

[451] Mr Spring says that the plaintiff has not led any evidence regarding Mr Farr's involvement, and says that the plaintiff has failed to establish that he committed any act amounting to primary infringement of the plaintiff's copyright.

[452] Here too, Mr Spring acknowledges that should the Court find that Stryda has infringed the plaintiff's copyright by manufacturing and/or selling its boats with the Orion S25-4WD system installed on them, then it is accepted that Mr Zhang will be liable as a joint tortfeasor for primary infringement.

[453] As I have already said, it is clear from the evidence that Mr Zhang was closely and directly involved from the outset with the initial plans for Orion to develop an amphibious system to compete in the same market as Sealegs with a product that would be suitable for application on the same type of small craft as the Sealegs system. He was also involved in the sourcing of components necessary for the construction of

the Orion products, and he knew what Mr Leybourne and Mr Zubcic were doing by adopting and appropriating the Sealegs leg assembly pattern as the starting point of the Orion design. Accordingly I find that by arranging for Stryda to purchase the Orion S25-4WD assemblies for installation onto Stryda craft, and then arranging the sale of the Stryda boats to the public in New Zealand and China, both Mr Zhang and Stryda are joint tortfeasors and are both liable to the plaintiff for infringing its copyright.

Relief

Plaintiff's allegation of flagrant breach of copyright

[454] In addition to the injunctive orders sought by the plaintiff in its prayer for relief, the plaintiff also seeks an inquiry as to the damage it has incurred, or alternatively at its election an account of profits derived by the defendants from the sales of the Orion S25-3WD system including additional damages for the flagrancy of the infringement of the plaintiff's copyright.

[455] For the plaintiff to be entitled to an award of damages for the flagrancy of the breach of its copyright, it must establish that there has been deliberate copying of the plaintiff's copyright models, undertaken with knowledge of the plaintiff's copyright interest and with conscious disregard for the plaintiff's copyright interest. In *Wellington Newspapers Ltd v Dealers Guide Ltd*, McMullin J described what is required for conduct to be regarded as flagrant.⁹⁹ He said:

The ordinary dictionary meaning of flagrant is 'glaring, scandalous, or outrageous'. Flagrancy was described by Brightman J in *Ravencroft v Herbert* [1980] RPC 193, 208 as:

'Flagrancy in my view implies the existence of scandalous conduct, deceit and such like; it includes deliberate and calculated copyright infringement.'

What is flagrant must of course be a question of fact and degree to be decided against the background of relevant facts.

[456] Here the plaintiff says that the defendants were well aware of its copyright interest in the composition and arrangement of features of its amphibious legs and, despite that knowledge, proceeded to deliberately copy the arrangement in the

⁹⁹ *Wellington Newspapers Ltd v Dealers Guide Ltd* CA47/83, 17 August 1984.

development of the Orion product. The plaintiff refers to an email sent by Mr Leybourne to Mr Bryham and Mr McKee-Wright on 3 May 2016 in which he proposed as a compromise to the differences that were by then arising over Orion's development of a competitive amphibious product that Orion would pay Sealegs a "no fight fee" of \$5,000.00 for each Orion system used or sold into markets protected by Sealegs patent, until 100 systems were sold or the Sealegs patent expired. In exchange for the payment of the 'no fight fee', Mr Leybourne sought full freedom for Orion to operate without restraints. Mr Leybourne further said that the defendants believed that they were avoiding patent infringement by using their own "core technology", and that should infringement be a possibility, they would "simply adjust the design."

[457] The plaintiff says that Mr Leybourne's emailed proposal shows that he and the defendants were well aware of the plaintiff's copyright and they had proceeded to produce their product and subsequently sell it in the full knowledge that by doing so they were acting in breach of the plaintiff's copyright.

[458] It is clear from the evidence that the defendants had been careful to maintain confidentiality of the work they were doing to develop the S25-4WD system until it was seen by Sealegs CEO Mr David Glen in October 2014, on the Surfcon ARC600 craft being transported on a truck. The next day Mr Leybourne sent an email to Sealegs in which he referred to Sealegs CEO Mr David Glen's sighting of the Orion system, wherein he said Mr Glen had taken "spy photos", and said that if asked, Orion would be prepared to show the craft to them.

[459] Mr Bryham and Mr McKee-Wright subsequently saw the Orion S25-4WD at the Shanghai boat show in April 2015, and in an email sent to Mr Bryham soon thereafter, Mr Leybourne again said that although the Orion system and products would "... occupy similar space, we are complementary not competitive businesses."

[460] Those comments by Mr Leybourne, while misleading insofar as they describe Orion as not intending to compete in the same market as Sealegs, are nevertheless consistent with a belief that the leg assemblies that Orion was producing at that time did not infringe Sealegs' intellectual property interests.

[461] I consider that the comments made by Mr Leybourne in his email of 3 May 2016 in which he referred to the Sealegs patent, while consistent with him knowing about the Sealegs patent, do not indicate an appreciation of Sealegs' copyright in the composition and arrangement of the features of its leg assembly. The focus of Mr Leybourne's attention as regards possible infringement relates to the Sealegs patent, and he suggests that Orion could avoid infringing by making design adjustments. Mr Pringle similarly referred to the Sealegs patent in his email communications with Mr Leybourne regarding the design and production of the S25-3WD, and he and Mr Zubcic proceeded to design and construct a new bow section for the Smuggler craft to create a recessed cowling into which the front wheel would retract, in order to avoid the Sealegs patent by not having the tyre on the front leg wheel acting as a bumper when the leg was retracted.

[462] In my view, the understanding upon which Mr Leybourne and the other defendants proceeded was that the only restriction on the scope of the Orion design was the Sealegs patent and the need to avoid infringing it. Accordingly, I consider that the defendants proceeded without an appreciation of the existence and significance of the Sealegs copyright interest in the composition and arrangement of the features of its leg assembly. In such circumstances the defendants have not been shown by the plaintiff to have acted in a flagrant manner in disregarding its copyright interest, of which they appear to have had no appreciation.

Design registration

Submissions

[463] In its first cause of action the plaintiff alleged that the first to ninth defendants that they had jointly infringed the plaintiff's rights pursuant to its registered design number 403199, dated 16 January 2003, by manufacturing and displaying for sale at the Auckland Boat Show in 2016 a boat fitted with an Orion S25-3WD system that is not substantially different from the plaintiff's registered design. The plaintiff sought a permanent injunction restraining the first to ninth defendants from infringing the plaintiff's exclusive right pursuant to the registered design, by sale or sales of infringing amphibious boat systems attached to boats.

[464] The plaintiff further alleges that prior to the interim injunction granted on 19 December 2016 the defendants caused the plaintiff damage by means of the manufacture of five Orion S25-3WD systems which were installed onto RIB craft sold to the public. The plaintiff seeks an inquiry as to the damage it has incurred due to the sales by the defendants of the S25-3WD systems, or alternatively at its election an account for the profits derived by the defendants from the sales.

Analysis

[465] The final expiry date of the registered design was on 23 December 2017, and consequently the plaintiff's rights in the registered design have now expired, and the plaintiff can no longer maintain its claim for relief by way of an injunction.

[466] The plaintiff's registered design includes 3-D computer drawings of an RIB boat with three retractable legs, one at the bow, and two at the stern. The computer drawings of the boat with the legs retracted show the front leg retracted by being swung forward, with the wheel located within an enclosed recess in the pontoons at the bow so that only part of the wheel and tyre extends beyond the pontoons. Similarly, the images show that when the stern legs are retracted, the wheels are swung to the rear and into a position in which they too are substantially enclosed within recesses at the rear of the port and starboard pontoons when fully retracted, so as to only partly extend beyond the pontoon. The novelty in the design:

...resides in the features of shape and configuration of the boat as shown in the accompanying representations. The boat has a retractable undercarriage system, and the accompanying representations show the appearance of the boat with its wheels up, and the appearance of the same boat with its wheels down.

[467] Section 11(1) of the Designs Act 1953 sets out the right given by registration of a design. It provides:

The registration of a design under this Act shall give to the registered proprietor the copyright in the design, that is to say, the exclusive right in New Zealand to make or import for sale or for use for the purposes of any trade or business, or to sell, hire, or offer for sale or hire, any article in respect of which the design is registered, being an article to which the registered design or a design not substantially different from the registered design has been applied, and to make anything for enabling any such article to be made as aforesaid, whether in New Zealand or elsewhere.

[468] In *UPL Group Ltd v Dux Engineers Ltd*, Somers J for the Court said:¹⁰⁰

Whether there is an infringement of copyright in a registered design is a question of fact of which the eye is the Judge ... It is not necessary for a plaintiff to establish a causal connection between the design and the infringing article as it is in the case of infringement of copyright under the Copyright Act. That emerges from the provisions of s 11 of the Designs Act 1953, set out above.

The test is whether the article alleged to be an infringement has substantially the same appearance as the registered design. This involves a comparison between the article complained of and the representations of the article contained in the application for registration. It is not always easy to compare a two-dimensional design with a three-dimensional object ...

There is also a relationship between the degree of novelty or originality of a registered design and the issue of infringement. If there is substantial novelty or originality small variations in the article alleged to infringe will be unlikely to save the defendant. On the other hand if the features of novelty or originality are but little removed from prior art small differences may avoid an infringement.

[469] The plaintiff says that the registered design has substantial novelty as shown by the prior art searches produced in evidence which show nothing visually similar. The plaintiff says that the appearance of the registered design RIB boat as shown with the legs down and the Smuggler 770 craft produced by Smuggler Marine is identical. The plaintiff accepts that there are some minor differences; for example, in the wheels-up position all wheels on the registered design are covered, while on the Smuggler craft only the front wheel is covered by the enclosed pod at the bow. However, the plaintiff says that given the degree of novelty at the time of registration, the Court should conclude that the Smuggler RIB is visually substantially the same as shown in the computer drawings of the registered design.

[470] I consider however that while there is some similarity between the images of the registered design RIB and the Smuggler RIB fitted with amphibious retractable legs (in particular the use of three legs retracted by swinging fore and aft of the craft), there are also sufficient dissimilarities to lead me to conclude that when comparing the two they do not share substantially the same design. When retracted, the front leg of the registered design craft lifts the front wheel to an enclosed recess within the pontoons at the bow in a similar manner (in terms of appearance) to that of the

¹⁰⁰ *UPL Group Ltd v Dux Engineers Ltd* [1989] 3 NZLR 135 (CA) at 139.

Smuggler RIB. However, when the rear legs and wheels of the registered design are retracted they are each located within a recess in the inflatable pontoon where they are substantially covered and enclosed. By comparison, the Smuggler wheels when retracted remain entirely visible and obvious. The overall impression is one of broad similarity but not such as to give the two craft substantially the same appearance.

[471] Accordingly, I find that the plaintiff's first cause of action based upon its registered design fails.

Result

[472] The plaintiff has established that the first, second, third, fourth, sixth, ninth (Mr Pringle only) and tenth defendants have all infringed the plaintiff's copyright works as described in paragraphs [193] – [196].

[473] The plaintiff's claim against the seventh defendant and the ninth defendant (Pauline Pringle) is dismissed.

[474] Pending further order of the Court, the first to fourth, sixth, ninth (Mr Pringle only) and tenth defendants are restrained from infringing the plaintiff's copyright in the pattern or arrangement of features outlined in paragraphs [193]–[196] of this judgment, as contained in the external amphibious assemblies on the prototypes known as Boat 1, Boat 136 and IKA11.

[475] In particular, pending further order of the Court, the first to fourth, sixth, ninth (Mr Pringle only) and tenth defendants are restrained from manufacturing, displaying, offering for sale, or selling substantial copies of, or completing the sale of, the external amphibious assemblies of the Orion S25-4WD and/or the external amphibious assemblies of the Orion S25-3WD either as a separate kit or installed on the hull of a craft.

[476] I make an order for an inquiry as to damages incurred by the plaintiff due to all or any sale or sales by the second and third defendants of the Orion S25-3WD system, and in the alternative at the election of the plaintiff an account for any profit

derived and obtained by the second or third defendants from the sale or sales of the Orion S25-3WD system.

[477] The duration of injunctive relief comprised in the orders at [474] and [475] is to be determined following a hearing to ascertain the duration of the plaintiff's copyright. I order that the interim injunction made by Peters J on 19 December 2016 is no longer in force.

[478] The plaintiff also seeks an order directing the defendants to deliver all and any infringing items and products in their possession or control to the plaintiff for destruction. The defendants request that they be heard in relation to that matter. Accordingly, I direct that the matter of delivery and destruction of any infringing items in the defendants' possession shall also be heard together with the plaintiff's application for an inquiry as to damages.

Costs

[479] The plaintiff has succeeded and is entitled to costs. I direct the plaintiff to file and serve a memorandum as to costs within 15 working days from delivery of this judgment.

[480] The defendants are to file their memorandum as to costs within a further 10 working days following their receipt of service of the plaintiff's memorandum.

[481] The costs memoranda are not to exceed five pages in length, apart from any attached schedules and addenda comprising material relating to disbursements.

Paul Davison J

APPENDIX

Figure 1

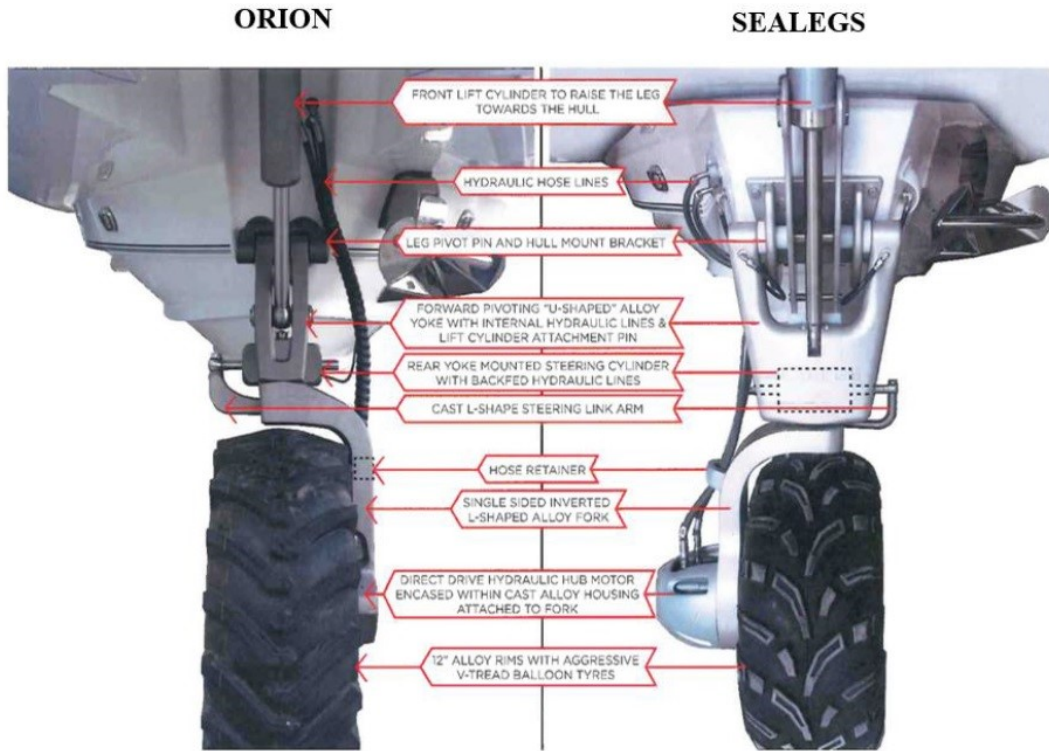
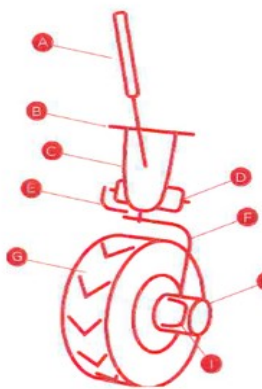


Figure 2

**SEALEGS System
Front design assembly**

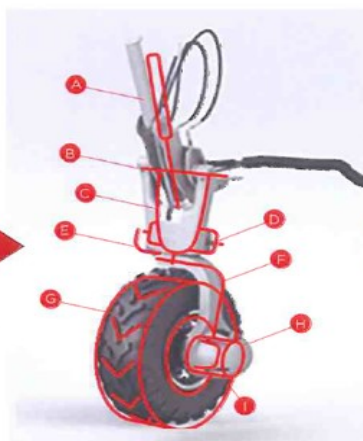
**Design expression in
Sealegs S60-3WD**

**Design expression in
Orion S25-3WD**



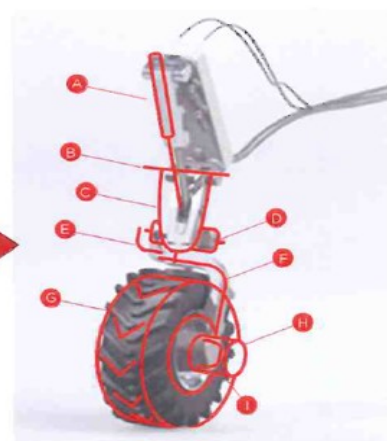
Line Drawing of Sealegs unique external front assembly

- A - Hydraulic lift cylinder
- B - Leg pivot pin
- C - Forward pivoting U-shaped yoke
- D - Rear mounted steering cylinder
- E - Cast L-shaped steering link arm
- F - Single sided fork
- G - V-tread balloon tyre on 12" rim
- H - Hydraulic hub motor
- I - Cast alloy housing cover



**Untouched Render with Overlay
From Sealegs CAD model**

- A - Hydraulic lift cylinder
- B - Leg pivot pin
- C - Forward pivoting U-shaped yoke
- D - Rear mounted steering cylinder
- E - Cast L-shaped steering link arm
- F - Single sided fork
- G - V-tread balloon tyre on 12" rim
- H - Hydraulic hub motor
- I - Cast alloy housing cover



**Untouched Render with Overlay
As shown in sales brochure for Orion S25-3WD**

- A - Hydraulic lift cylinder
- B - Leg pivot pin
- C - Forward pivoting U-shaped yoke
- D - Rear mounted steering cylinder
- E - Cast L-shaped steering link arm
- F - Single sided fork
- G - V-tread balloon tyre on 12" rim
- H - Hydraulic hub motor
- I - Cast alloy housing cover

Figure 3

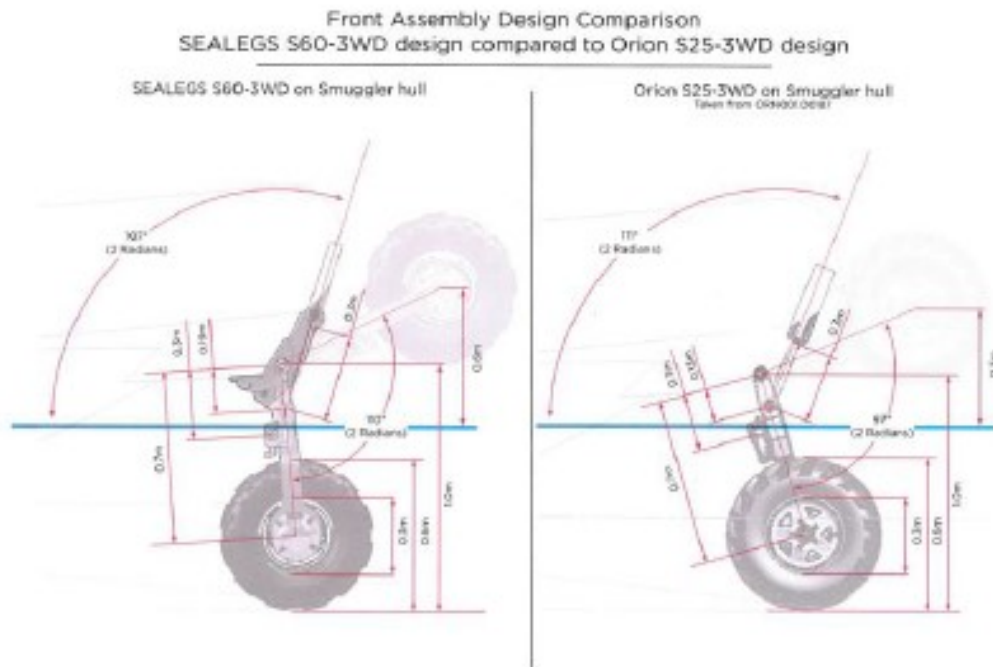


Figure 4

Orion S25-3WD rear leg assembly



Sealegs S60-3WD rear leg assembly



Figure 5

Orion S25-4WD front leg assembly



Figure 6

SEALEGS SL100

Front leg assembly



Rear leg assembly

