IN THE COURT OF APPEAL OF NEW ZEALAND

I TE KŌTI PĪRA O AOTEAROA

CA454/2018
[2019] NZCA 389

BETWEEN	YUN ZHANG First Appellant
	ORION LIMITED AND ORION MARINE LIMITED Second Appellants
	SMUGGLER MARINE LIMITED Third Appellant
	DARREN LEYBOURNE Fourth Appellant
	VLADAN ZUBCIC Fifth Appellant
	DAVID PRINGLE Sixth Appellant
	STRYDA MARINE LIMITED Seventh Appellant
AND	SEALEGS INTERNATIONAL LIMITED Respondent

Hearing:	19 and 20 February 2019
Court:	French, Cooper and Brown JJ
Counsel:	J G Miles QC and A K Hyde for Appellants B P Henry, K M Elcoat and S S Singh for Respondent
Judgment:	27 August 2019 at 3.00 pm

JUDGMENT OF THE COURT

A The appeal is allowed. The orders in the High Court are set aside.

B The respondent must pay the appellants one set of costs for a complex appeal on a band B basis plus usual disbursements. We certify for second counsel.

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REASONS OF THE COURT

(Given by Brown J)

Introduction

[1] Sealegs International Ltd (Sealegs) asserts copyright in models[1] in the form of prototypes of its arrangement of known mechanical components comprising the wheel assemblies of its amphibious system externally located on the hulls of boats. The copyright is said to be the expression of the novel idea to place wheel assemblies on the exterior of a boat hull which are retractable to visible positions outside the hull form, thereby providing a solution to the problem of amphibious capability for small craft.

[2] Sealegs claimed that its collocation-based copyright was infringed by the amphibious system developed by the second appellants (Orion). It also contended that Orion had infringed Sealegs' registered design. However it elected not to sue for patent infringement.

[3] In the High Court Davison J held that the arrangement of components comprising the central core of the Sealegs amphibious boat system was highly original and was appropriated by the design of the Orion amphibious system.[2] Differences identified between the systems were discounted because they did not alter the leg assemblies' fundamental functionality. Sealegs' registered design claim was dismissed.

[4] The appellants challenge the High Court's findings of originality and objective similarity, and the rejection of their claimed independent design path. They contend that the judgment fundamentally misconceives the law of copyright with the consequence that Sealegs has been granted an unprecedented monopoly in a collocation of known functional components, untethered to any visual expression. While acknowledging that they adopted Sealegs' idea, they maintain that the Orion

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1 Within para (a)(i) of the definition of "artistic work" in s 2(1) of the Copyright Act 1994.

2 *Sealegs International Ltd v Zhang* [2018] NZHC 1724 [High Court judgment].

arrangement was not a copyright infringement but inevitably derived from functional constraints.

[5] Hence in the context of a collocation-based copyright claim comprising known functional components and the application of well-known engineering mechanisms and principles, the parties' cases trod the notoriously ill-defined boundary between ideas and their expression.

Relevant facts

Mr Bryham's idea

[6] Mr Maurice Bryham, an Auckland beachside resident, was inspired to design and construct an amphibious system comprising three supporting legs and powered wheels which when attached to a powerboat enabled it to be manoeuvred while on land, driven from the beach into the water and the legs then retracted when the boat was afloat. Such a product, 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 boat, was expected to appeal to the high end of the recreational boating market. He named the design "Sealegs" and incorporated the respondent on 10 May 2000. All his work on the prototypes for the Sealegs amphibious boat system was undertaken as its employee.

[7] Mr Bryham explained why he considered his idea was unique:

> 4 There are many, many ways to achieve a design of a three-legged amphibious boat system. These include the use of hull recesses with opening flap doors, vertically lifting and lowering wheels, or having wheels that deploy from the side of the hull. The decision I made was unique at the time, as the way I conceived to achieve the retraction of wheels from a boat is to have the wheels, the legs, the retraction actuator and the front steering actuator all located outside the hull leaving the boat streamlined in the water when underway.
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> 5 Other solutions are to have the wheels, legs, retraction actuator, and/or steering actuator partly inside and partly outside of the boat hull. The combinations available to a designer are many and varied.
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> 6 I thought it would be better to have the legs and retraction assembly attached to the outside of the hull with the legs and the retraction actuators all externally mounted. When the legs were retracted, the wheels would be lifted and stored above the boat waterline.

> This concept maintained the integrity of the hull, but resulted in the external attachments of the legs, wheels, retraction actuator and front steering actuator.

Hence his idea was not merely an amphibious boat, as the written submissions for Sealegs suggested, but rather, as his reply brief described, the unusual design decision to have "*all* the motorised wheels *and* amphibious assemblies located outside the watertight hull in *both* land and water positions".[3]

[8] Mr Bryham also experimented with another design in which the legs when retracted were substantially concealed and enclosed within recesses built into the hull of the boat. He obtained design registration 403199 in relation to that design. However he did not seek registration of the design which was the subject of the copyright claim.

Two concept boats

[9] The first stage in Mr Bryham's design endeavours was known as "concept boat 1". 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. He then had the pattern of his wooden mock-ups replicated by a stainless-steel fabricator. The front and rear legs on concept boat 1 were lifted out of the water manually and the rear wheels were electrically driven. The front wheel was steered by means of an external actuator. Having assembled the legs and attached the amphibious leg system onto the RIB in his home garage, he tested concept boat 1 by driving it from his garage to the nearby beach and into and out of the water.

[10] Mr Bryham and Sealegs further developed the design by means of "concept boat 2", again purchasing a standard RIB for modification. The fourth appellant, Mr Leybourne, then the owner and principal of Central Hydraulics Services Ltd, was engaged to provide advice regarding the hydraulics system required to power the

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[3] Emphasis in original.

actuators which would extend and retract the legs and to power the hydraulic motors used to drive the rear wheels.

[11] The modifications introduced by concept boat 2 were described in the High Court judgment in this way:

> [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.

[12] Informed by the development of concept boat 2, Sealegs and Mr Bryham proceeded to construct what became "prototype boat 1", the first of three prototypes which ultimately formed the basis of the copyright claim, the other two being prototype boat 136 and prototype IKA11. We will refer to them collectively as the three prototypes.

Prototype boat 1

[13] In the course of the development of prototype boat 1 Fulcrum Solutions Ltd was engaged to produce engineering drawings of alternative development pathways that could be adopted, including the partly internal steering arrangement used on concept boat 2. However Mr Bryham decided that that arrangement, which required a number of additional mechanical parts, was too complicated. He reverted to his original design employed in concept boat 1, with the front leg lifting actuator, steering actuator and rear leg lifting actuators all located external to the hull. Utilising Fulcrum's design computer, drawings were prepared to Mr Bryham's specifications which were then entered into the SolidWorks computer-aided design (CAD) program to produce a series of computer-generated images of the design showing what a manufactured boat would look like.

[14] Production drawings were prepared based on the prototype boat 1 and the first production boat was sold on 30 April 2004. A subsequent modification to the design of the front leg was described in the judgment in this way:[4]

> 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 and Mr Zubcic join Sealegs

[15] Mr Leybourne joined Sealegs in April 2004, initially becoming involved in the construction, repair and servicing of Sealegs boats but in 2006 shifting from day-to-day operational work to project management. This included managing the establishment of an in-house hull fabrication process. When 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 that new operation.

[16] In the course of that project Mr Leybourne worked closely with Mr Zubcic who joined Sealegs in February 2008 as a mechanical and design engineer. They recommended the purchase of a new computer-based material requirements planning (MRP) program to more efficiently control and manage the production operation.

[17] The Judge noted that throughout his employment Mr Leybourne was frequently critical of the general lack of quality control and assurance in the production of the Sealegs boats, particularly with reference to the sale of boats intended for use for commercial applications.[5] Mr Leybourne considered the boats and their amphibious systems had neither been designed nor proven suitable for such purposes.

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4 High Court judgment, above n 2, at [23].
5 At [28].

Prototype boat 136

[18] 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. Although initially resistant, holding the view that the production of quality hulls needed to be prioritised over the creation of a three-wheel drive system, Mr Leybourne ultimately acceded to management's request to take responsibility for the project.

[19] Prototype boat 136, so called because the boat used as the basis for development was Sealegs' 136th production boat, was a three-wheel drive version of the standard Sealegs production boat. The consequence of the introduction of power to the front leg was that, as the boat transitioned from floating to being supported on its legs when it made contact with the beach or ramp, it would be driven by the front wheel 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.

[20] The introduction of a hydraulic hub motor to power the front wheel required redevelopment of the hydraulic system and its controls. A further modification was a new differential lock system and a redesigned front steering arm. However apart from those features prototype boat 136 was substantially the same as prototype boat 1. Once approved for production the production drawings were prepared by Sealegs' own engineering and computer design staff, principally Mr Zubcic. The product was released to the market in 2010. The three-wheel drive system known as "System 60" became an option for customers to purchase. It proved very popular and the fiftieth System 60 was sold on 31 May 2011.

The SL100 project

[21] In mid-2010 Sealegs initiated a project to develop a new heavy-lift Sealegs system for use on larger craft of around 9 metres in length and weighing 5000 kilograms. It was initially known as "Project 100" but was subsequently named System 100 (SL100). One of the design engineers recruited for the project was Mr Andrew Percival whose manufacturing business had assisted in the design and manufacture of parts for prototype boats 1 and 136. Because of his hydraulics expertise Mr Leybourne became involved in Project 100, undertaking the calculations

of the hydraulic requirements and specifications for the proposed craft. These calculations dictated the choice of hydraulic components and those choices in turn dictated aspects of the design of the functional leg assemblies' components. However as noted below, Project 100 was a stop-start affair and in July 2011 it was suspended because of funding issues.

Mr Leybourne forms Orion Marine Ltd

[22] Mr Leybourne left Sealegs on 30 November 2011, he claimed with no plans for any other employment. However once back working in the hydraulics field it occurred to him that there were new concepts that could be applied to amphibious systems.

[23] Mr Leybourne deposed that in mid 2012 he received a surprise visit from Mr Zhang (the first appellant) who some years earlier as a student had lived with Mr Leybourne and his family on a homestay basis. Mr Zhang claimed to be a director of one of his family's companies in China formed in 2001 which manufactured and marketed amphibious craft known as "Surfcon". In the event on 28 September 2012 Mr Leybourne and Mr Zhang incorporated Orion Marine Ltd with the intention of designing and manufacturing a new amphibious system. Mr Zhang who provided the funding was the sole director and shareholder. He moved to New Zealand in 2015 and Mr Bryham provided a letter in support of his residence application.

[24] Mr Zubcic accepted Mr Leybourne's offer of employment at Orion and resigned from Sealegs on 2 February 2013. He commenced work on the design and development of Orion's new amphibious system project which became known as the S25-4WD. An early task was the preparation of sketches of a wheel with an off-set rim which would enable a hub motor to sit substantially within the wheel. This directed the effects of weight and force on the motor to the optimal position compared with the sub-optimal location of weight and forces upon a motor connected to a standard centre rim wheel.

[25] In early 2013 Mr Bryham, who by then knew that Mr Leybourne was setting up a new business, contacted Mr Leybourne and advised that Sealegs wanted to be Orion's first customer to assist with various projects including the SL100. A detailed

written design brief was negotiated whereby Orion was to design, manufacture, install and validate an amphibious system suitable for craft up to 6000 kilograms gross vehicle mass (GVM).

[26] The judgment describes the way in which Orion managed concurrently its own project and the Sealegs design brief:

> [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".
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> [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.

[27] Although by September 2013 Orion was making progress with the development of SL100, Sealegs suspended further development because of funding issues. The SL100 project was resumed in early 2014 and Orion continued to work on its development until around the end of July when work stopped again because of Sealegs' funding issues. In February 2015 Mr Bryham again contacted Mr Leybourne regarding the resumption of the SL100 project.

The 2015 Shanghai Boat Show

[28] At the April 2015 Shanghai Boat Show Mr Bryham viewed the Surfcon amphibious rescue craft equipped with a retractable three leg amphibious system. He considered it to be a substantial copy of the Sealegs system and a discussion took place between Mr Bryham and Messrs Leybourne and Zhang about whether the two

companies and their products could exist together in the market. Mr Bryham said Mr Leybourne told him that the Surfcon craft would not be sold outside the Chinese market. That information together with his view that the Surfcon craft looked inferior to the Sealegs system were factors leading to Mr Bryham's view that Sealegs should endeavour to negotiate a distribution agreement notwithstanding his concerns about copyright infringement. Later in April 2015 Sealegs forwarded a "Sealegs Intellectual Property Agreement" to Mr Leybourne and Orion Marine but it does not appear that it was executed or returned by Orion Marine.

Smuggler Marine and Sealegs

[29] Smuggler Marine Ltd (the third appellant, "Smuggler") owned and operated by Mr Pringle (the sixth appellant) and his wife is a successful boat manufacturing business whose product range includes RIB boats between four to 11 metres in length. In 2011 or 2012 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. As part of the unit purchase price of $65,000 plus GST Sealegs staff undertook the commissioning work to make the systems operative. Sealegs committed to supplying its system to Smuggler for a term of five years.

[30] There were difficulties in the companies' relationship and in early 2015 Sealegs proposed a significant change to the terms of trade including a price increase to $75,000, Smuggler being required to pay for the on-site installation support provided by Sealegs and Smuggler being required to purchase and pay for five kits immediately and a further five kits in six months' time. Smuggler was not willing to accept the proposed terms and began actively looking for an alternative to the Sealegs system.

[31] In around April 2015 Mr Pringle and Mr Leybourne discussed the possibility of Orion producing a three-wheel drive amphibious system for installation in the Smuggler boats in place of the Sealegs system. However Orion was not in a position to do so immediately because it was fully committed to the completion of the SL100 project.

Prototype IKA11

[32] SL100 was installed on a prototype craft known as "IKA11" and displayed at the Auckland On Water Boat show in September 2015. In October 2015 Orion finished working on SL100. 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 that month.

Orion provides its amphibious system to Smuggler

[33] Anticipating Orion's work on the SL100 coming to an end, in October 2015 Mr Leybourne resumed discussions with Mr Pringle regarding the three-wheel drive system Smuggler had sought. Mr Pringle provided Mr Leybourne and Mr Zubcic with a detailed drawing of Smuggler's 7.5 metre mid-cabin RIB craft. As the Judge explained:

> [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.
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> [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.
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> [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.

[34] Mr Zubcic proceeded with the design of a new single wheel front leg assembly and its component parts during November and December 2015. During this period there was regular communication between Mr Pringle and Mr Leybourne including a number of emails referring to obtaining advice from a patent lawyer with reference to the implications of a Sealegs patent.[6]

[35] The judgment traverses in detail the several communications involving Smuggler, Orion and Sealegs during 2016, noting that it was apparent that Mr Leybourne and Orion endeavoured to conceal from Sealegs their involvement with Smuggler and that they were developing an Orion amphibious system for Smuggler.[7] In July 2016 Orion issued its first tax invoice to Smuggler for the supply of a "S25-3WD Amphibious System" at a price of $65,000 plus GST. In August 2016 Smuggler accepted written orders for amphibious craft the specifications for which referred to "S25 wheels, engine, all systems for powering amphibious operation …".

[36] In its promotional material published in the September 2016 issue of *Boating New Zealand* magazine, Smuggler announced 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". Mr Allen of Pipers Patent Attorneys (Pipers) who had been engaged by Sealegs visited Smuggler purporting to be interested in purchasing a Sealegs type boat. Mr Pringle showed him photographs of a new Smuggler boat and boats under construction in the workshop. Mr Allen said that 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. He also said that Mrs Pringle told him that the Smuggler boats with the new amphibious system would be on display at the Auckland Boat Show in late September 2016.

[37] On 9 September 2016 Sealegs commenced proceedings for an injunction but its without notice application on a *Pickwick* basis seeking orders restraining the

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6 At [120]–[124].
7 At [130].

exhibition of the Orion amphibious products at the boat show was declined. Mr Bryham viewed the Orion S25-3WD and S25-4WD systems at the boat show and on the basis of his limited view considered the latter to be a copy of the Sealegs port and starboard rear leg assemblies.

[38] Our review of the facts is a summary of the very thorough record of events in the High Court judgment. Because of the conclusions we have reached, it is unnecessary to traverse in detail several other events such as the evidence of Mr Redpath concerning Mr Leybourne's possession of a USB stick containing Sealegs' files which the Judge took into account in coming to his credibility findings noted below.[8]

Sealegs' intellectual property rights

[39] Mr Bryham deposed that Sealegs had three different intellectual property rights protecting the design of the Sealegs three-legged amphibious boat system:

- NZ Patent 526705;
- Design registration 403199; and
- Copyright in various works including the three prototypes.

NZ Patent 526705

[40] During the design and development of concept boat 1 Sealegs engaged Pipers and on 17 December 2001 a first patent application was lodged for an invention for an amphibious vehicle. It appears that further applications were prepared in 2002 and 2003 (relating to the retractable leg system).[9] Although all the documentation relating to Sealegs' patent application was not before us, from the response of Mr Allen to questions from the High Court Judge we infer that patents were obtained in some jurisdictions.[10] As earlier noted the evidence demonstrates that Mr Leybourne and

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8 See [60]–[61] below.
9 High Court judgment, above n 2, at [180].
10 The drawing of the Sealegs yoke at page 89 of the document bundle has a reference to US Patent No 7,004,801.

Mr Pringle were aware of a Sealegs patent and that they had obtained advice from a patent attorney about its implications.[11]

[41] Included in the case on appeal was a Patent Cooperation Treaty International Preliminary Examination Report, which appeared to question the existence of an inventive step in Sealegs' claimed invention. Mr Allen was cross-examined with reference to that report and it was also referred to by Mr Miles QC in the course of argument before this Court.

[42] However issues concerning Sealegs' patents and their validity are not raised by this appeal. For, as Mr Bryham stated in evidence, while he believed the appellants' design was a patent infringement, because of the impending trial date Sealegs decided not to add a patent cause of action in the New Zealand claim but to pursue what he referred to as the simpler copyright infringements leaving the patent to be relied on in the United States, Australia and other jurisdictions should litigation arise there.

Design registration 403199

[43] On 23 December 2002 Sealegs lodged an application for a registered design which was published on 16 January 2003 and which following subsequent renewals had a final expiry date of 23 December 2017. The Statement of Novelty stated that the novelty:

> … 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.

[44] The accompanying representations were computer-generated images showing the boat as having a retractable undercarriage system and demonstrating both the wheels-up and wheels-down positions. When retracted the front wheel was almost entirely concealed within a recessed cavity located at the bow between the inflatable pontoons while the rear legs when retracted were almost fully covered and enclosed within a recessed cavity at the rear of each of the pontoons.

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[11] At [34] above.

[45] Sealegs' cause of action based on the registered design failed. The Judge concluded that, unlike the recessed rear legs and wheels shown in the registered design images, the wheels on the alleged infringing boat when retracted remained entirely visible and obvious. While the overall impression was one of broad similarity, the two craft were not substantially the same in appearance.[12]

Copyright

[46] The fifth amended statement of claim dated on 25 August 2017 and filed close to trial asserted ownership of copyright in a substantial number of artistic works which came into existence in the course of the history of the development of Sealegs' products. The works included both concept boat 1 and concept boat 2, artistic works comprising drawings and production drawings in respect of componentry for the three prototypes and the prototypes themselves, as well as other artistic works in the nature of models, namely a prototype single billet hydraulic lift cylinder, a prototype front arm for front retractable leg assembly, prototype "project X", prototype "electric Sealegs" and prototype "the barge". Given the course which this litigation took, it is necessary to focus in some detail on the copyright allegations in relation to the three prototypes.

The changes in the formulation of Sealegs' copyright claim

The pleaded claim

[47] The fifth amended statement of claim was a long and complex document comprising four parts:

(a) an orthodox statement of claim pleading four causes of action of copyright infringement;[13]

(b) seven schedules (A to G) under the heading "Particulars of model copyright features";

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12 High Court judgment, above n 2, at [470].

13 The second to fifth causes of action. The first cause of action was for infringement of the registered design.

(c) two schedules (1 and 2) under the heading "Particulars of features of the plaintiff's artistic works the defendants have substantially copied"; and

(d) 147 pages of drawings, production drawings, computer generated renderings and photo images, prefaced by a 13 page index headed "Particulars of Artistic Works and Models pages 1–147 attached to the fifth amended statement of claim" (the drawings bundle).

Various paragraphs in the pleading proper referred to the schedules and to particular pages in the drawings bundle.

[48] Schedules A and B listed the features of the front and rear leg assemblies respectively of prototype boat 1. Subsequent schedules similarly described the features of prototype boat 136 and prototype IKA11. The differences from schedules A and B reflected the changes made to the second and third prototypes as noted at [19]–[20] and [21] above.

[49] The tenor of the pleading was an assertion of copyright in relation to individual features of the front leg assemblies (in schedules A, C, E and F) and the rear leg assemblies (in schedules B, D and G), and an allegation that copyright in those several features had been infringed (in schedules 1 and 2).

Sealegs' case at trial

[50] However at trial the nature of Sealegs' copyright claim changed very significantly. Claims to copyright in individual components were not pursued. The claim was confined to one which had not been pleaded namely an arrangement or collocation of unoriginal features. Sealegs' written opening described the copyright work in this way:

> 4.1 The copyright work(s) are a combination of features that were placed in the combination by Maurice Bryham, an employee of the plaintiff. The combination of features were placed together after a series of models were made and tested.
>
> 4.2 The features are all known, but not in the combination the plaintiff achieved.

> 4.3 In this case the quality of the design is the original way Maurice Bryham combined the known features to develop retractable front and rear legs assemblies for an amphibian vessel. …
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> 4.4 The combination of the features are defined in the fifth amended statement of claim in schedules A, B, C, D, E, F and G.

[51] That the claim at trial was so confined is apparent from the Judge's observation in the context of his discussion of the subject of originality:[14]

> [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. This is because the work's originality lies in the skill and labour required to arrange or collocate those features.
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> (Footnotes omitted.)

[52] Thus the assertion of copyright was limited to the manifestation in the three prototypes of an arrangement or collocation of known features,[15] features which were not individually the subject of a copyright claim. As the Judge noted:

> [208] … 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.
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> [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 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.

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[14] In the course of addressing the appellants' submission that Sealegs could not claim copyright in an arrangement of individually unoriginal features.

[15] Of the nature recognised in *Bonz Group (Pty) Ltd v Cooke* [1994] 3 NZLR 216 (HC); and *Henkel KGaA v Holdfast New Zealand Ltd* [2006] NZSC 102, [2007] 1 NZLR 577.

The report of the conference of experts

[53] The reason why a litigant elects to adopt a particular or limited foundation for its claim is a matter for the litigant. The trial court and any appeal court must address the claim on the footing on which it is ultimately advanced. However we consider that the record contains material which provides context for the significant change in the way in which Sealegs' case was advanced at trial.

[54] Each side engaged a number of experts who gave evidence: for Sealegs, Mr Dippie, Mr Bellingham and Mr Allen;[16] for the appellants, Dr Field and Dr Gooch. A meeting was held in Auckland on 20 September 2017 attended by Mr Bellingham, Dr Field and Dr Gooch. Subsequently they compiled a joint report which responded to several questions which the parties had submitted to them. Question 4 asked whether the features in schedules 1 and 2 to the pleading appeared in the Orion amphibious system (comprising both S25-3WD and S25-4WD). Question 5 directed:

> 5. In relation to each of the features in Schedules 1 and 2 found to be present in the defendants' amphibious system, specify:
>
> (a) Whether such feature or features could have been derived from the plaintiff's Sealegs system;
>
> (b) Or, alternatively, could arise by reason of functional or other constraints.
>
> 6. In each case, specify reasons for the conclusions reached in relation to each of the features listed in Schedules 1 and 2. Specify reasons for any similarities and/or differences of opinion.

[55] Having identified many of the schedule 1 and 2 features as present in the Orion amphibious system, the report observed that most could have been derived from the Sealegs system. However the report also described them as functional. That description of the features may have led to the change in the way Sealegs' case was advanced at the trial.

[56] We refer to further aspects of the joint report in our consideration of the issue of dimensions and geometry.[17]

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[16] Mr Allen is the Pipers employee referred to at [36] above.

[17] See [150] below.

The High Court judgment

[57] The Judge accepted that prototype boat 1, prototype boat 136 and prototype IKA11 were "models".[18] He held that the combination and arrangement of the features comprised in the Sealegs amphibious system was the product of substantial skill and labour and hence an original work within s 14(1)(a) of the Copyright Act 1994.[19] Indeed the Judge considered that the Sealegs assembly pattern comprised a high degree of originality.[20] He rejected the appellants' contention that certain CAD computer models were in fact the original expression of the ideas in which copyright might subsist, rather than the prototypes themselves.[21]

[58] Turning to the matter of infringement the Judge considered that there was objective similarity between:

(a) the front leg assemblies on the Orion S25-3WD and the Sealegs S60-3WD (the production version of Sealegs prototype boat 136);[22]

(b) the rear leg assemblies on the Orion S25-3WD and the Sealegs S60-3WD and SL100;[23] and

(c) the Orion S25-4WD front leg assembly and the Sealegs S60-3WD and SL100;[24]

[59] As a result of their work at Sealegs the Judge concluded that Mr Leybourne and Mr Zubcic knew everything necessary to copy and reproduce the Sealegs system in their Orion system.[25] He explained that unlike most cases where a plaintiff needs to establish that the defendant has had opportunities to copy the copyright work, in this case Sealegs needed to do no more than prove that Mr Leybourne and Mr Zubcic possessed a detailed knowledge of the Sealegs system and then used that knowledge

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18 The Judge did not explicitly consider this issue, but referred to the prototypes as such, for example at the heading above [226]: "Ownership: Does the plaintiff own copyright in the three models?".
19 At [217].
20 At [218]–[219].
21 At [220]–[225]. The appellants argued that Sealegs had not pleaded its CAD models as being its original work, nor had the CAD models been produced in evidence. The Judge also made findings on ownership at [235]–[245].
22 At [270] and [284].
23 At [277] and [284].
24 At [283] and [284].
25 At [339].

to copy the Sealegs system.[26] Plainly in this case the opportunity to copy was available given the appellants' direct involvement with Sealegs' products during their employment and subsequently when Orion was engaged by Sealegs to assist in the development and manufacture of the SL100.

[60] The Judge found the evidence of Messrs Leybourne, Zubcic and Zhang regarding the timing and events that preceded the establishment of Orion to be unreliable. The Judge considered that finding was relevant to and informed his assessment of the reliability and credibility of the appellants' evidence regarding the key question of whether the Orion leg assemblies were copied from and derived from the Sealegs leg assembly pattern.[27]

[61] The Judge held that the Orion design was a copy of and directly derived from the Sealegs system and the arrangement of features comprised in the models for which copyright was claimed. As he explained in his concluding overview:

> [421] … 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 that 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 found 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.

Scope of appeal

[62] For the purposes of the appeal the appellants did not challenge the High Court's conclusion that the appellants were not credible or reliable witnesses based on the findings that:

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[26] At [339].
[27] At [337].

- The idea to start a new amphibious business had been formulated well before mid-2012 as claimed by Mr Leybourne;[28]

- Messrs Leybourne and Zubcic had discussed the new business venture by early 2012;[29] and

- Mr Leybourne retained Sealegs design files that came into his possession fortuitously towards the end of 2011.[30]

[63] Rather, the appellants' appeal was directed to the findings on the subsistence of copyright, originality, objective similarity and infringement. The agreed list of issues reflected that focus.

The relevant copyright work: identification

[64] A cause of action for breach of copyright necessarily involves clear and accurate identification of the copyright work in respect of which the defendant is said to have infringed.[31]

[65] The identification of the various artistic works in the fifth amended statement of claim was, despite its complexity, clear and explicit. However Sealegs' case became anything but clear when, as noted above, in opening Sealegs abandoned reliance on those pleaded artistic works. The claim proceeded solely by reference to the three prototypes. The closing address described them in this fashion:

> **Original works**
>
> 5. There are two key prototypes in the chain; firstly Prototype boat 1 (CB17), this prototype has a substantial number of improvements to the prototype single front arm (CB1057) and the prototype single billet hydraulic lift cylinder (CB185). Then there was another major step forward with prototype boat 136 which added front wheel drive (CB212). This adds a new and very significant feature of All Wheel drive. It is such a step forward it represents a new copyright. System 100, having an industrially engineered look, being a heavy lift expression of the copyright works and utilized the location of the top of the front lifting cylinder where it attached to the pivot on the hull and included an off-set front wheel rim.

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28 At [335]–[336].
29 At [335].
30 At [322]–[324].
31 *Henkel KGaA v Holdfast New Zealand Ltd*, above n 15, at [29].

[66] Neither the first nor the second prototype was still in existence but photographs of them were included in the drawings bundle annexed to the pleading. The role of the various "features" listed in schedules A to G was described in the closing in this way:

> It is prototype boat 1 that is the first copyright work of the plaintiff. The features of the model prototype boat 1 are defined in the particulars. Contrary to the defendants closing submissions, the copyright work is the model, the features is the quality of the model. It is submitted that the features, if substantially copied, form a breach of copyright. I will go to *Henkel* shortly.

[67] Although Sealegs accepted that the various features in the schedules were all known, there remained a degree of ambiguity as to their copyright status, as illustrated by the following paragraphs of its closing:

> 44. The plaintiff for the first time in the world's history developed a workable, commercially successful amphibious system. This system is protected by their copyright in the features of the front leg assemblies and the rear leg assemblies, which is the copyright claimed in the 5th ASOC and particularised for model-prototype boat 1, model prototype 136, model prototype IKA11.
>
> 45. On the evidence, it is submitted that the plaintiff has discharged the burden of proof to show on the balance of probabilities that its copyright models are a "collocation or an arrangement of features" with a very high degree of originality. …

[68] The precise boundaries of the copyright claim were explored in this Court in the course of argument on the issue of the appellants' claimed independent design path. After Mr Henry read through [343] to [347] of the judgment, the Court posed the question whether the use of hydraulic powered actuators for extension and retraction of the legs was rather an obvious thing to put on such a craft. In responding Mr Henry took the Court through [348]–[363]. In that part of [363] which Mr Henry read, the Judge addressed the fact that different methods were adopted by the appellants and Sealegs to mount the leg assemblies at the bow and transom, observing that this involved no change to the "fundamental functionality of the leg assemblies as innovated by Sealegs".[32]

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[32] See [158] below.

[69] Although it may have been implicit in the several terms by which the copyright work was described in the judgment, namely combination, arrangement, collocation and pattern, it became apparent from a further exchange between the Court and counsel that the asserted copyright related to the particular order in which the known components were assembled. In particular, Mr Henry referred to "the sequence of our pattern" and acknowledged that:

> … the pattern or the arrangement or the sequence comprises the following: one (or more) wheels at the front, two wheels at the back, where they are located with the leg mechanism incorporating the components identified in that sequence shown in Figure 1 [annexed to the High Court judgment].

[70] The implications of a copyright claim based solely on an arrangement or collocation of features not original in themselves were explored by the Supreme Court in *Henkel*:[33]

> [40] As this case involves copyright which derives from a collocation or arrangement of features which are not original in themselves, it is appropriate to refer to the decision of the High Court in *Bonz Group (Pty) Ltd v Cooke* which discussed that topic. A graphic work may qualify for copyright protection because its originality lies in the way in which a number of features, which have no originality in themselves, have been arranged or collocated. The following passage from the judgment in *Bonz* deals with that situation:
>
> > As Lord Reid emphasised, the correct approach is first to determine whether the plaintiff's work as a whole is original and protected by copyright. The second step is to see whether such part as may have been taken by the defendant is a substantial part of the plaintiff's work. It is not correct to subdivide the plaintiff's work into its component parts and ask whether copyright might attach to the individual parts. Copyright, if it exists at all, exists in relation to the work as a whole. For example, an author may have taken six different components for his work by copying from six different sources. The combination of the six components may nevertheless have sufficient originality to attract copyright in the whole.
> >
> > Where, as in this case, the plaintiff relies for its copyright on a collection of individual features, none of which on their own would attract copyright, this has ramifications when it comes to infringement. 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. Because the plaintiffs' copyright resides

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33 *Henkel KGaA v Holdfast New Zealand Ltd*, above n 15 (footnotes omitted).

> in the arrangement or colocation the defendant, to infringe, must have copied the arrangement or collocation or a substantial part thereof.
>
> [41] 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. This point is of significance in the present case. …
>
> (Footnotes omitted.)

[71] Despite the manner in which Sealegs' claim was confined at trial, the Judge proceeded to find that the Sealegs assembly pattern involved a high degree of originality,[34] perceiving it to be a counter-intuitive arrangement which yielded a novel solution to the problem of amphibious capability for small craft.[35] The appellants submitted that approach was wrong.[36] It is desirable in those circumstances to first discuss the conceptual distinction between ideas and their expression before turning to address the steps the copyright infringement analysis requires.

Ideas and their expression: patent vs copyright

[72] The appellants contended that the judgment fundamentally misconceives the law of copyright with the consequence that Sealegs has been granted an unprecedented monopoly in a collocation or arrangement of known functional components, untethered to any visual expression. Sealegs' rejoinder was that the appellants' submissions were crafted to distract from the real issue in the case, namely in the light of *Oraka Technologies Ltd v Oraka Graders Ltd*[37] to what extent the law of copyright in New Zealand protects the expression of an idea.

[73] The appellants' criticism of the judgment was framed in this way:

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34 High Court judgment, above n 2, at [218].
35 At [219], set out below at [113].
36 See at [4] above.
37 *Oraka Technologies Ltd v Geostel Vision Ltd* [2013] NZCA 111 [*Oraka*].

> 1.4 Overall, the respondent's claim must fail because it proceeds on a fundamentally flawed basis. The law of copyright does not, and cannot, afford the respondent a monopoly in the arrangement of common functional components, so as to encompass differing visual appearance and engineering design of those individual components.
>
> 1.5 By finding otherwise, the High Court in its judgment has extended the law of copyright in New Zealand beyond its traditional boundaries and, in doing so, blurred the otherwise clear conceptual differences in the monopolies granted by patent and by copyright. The protection afforded to the respondent in this case would not be available in any other Commonwealth jurisdiction, and there is no lawful or reasonable basis for New Zealand to be an outlier in this regard.

[74] The appellants' argument draws on the conventional distinction between ideas and the expression of those ideas. Ideas embodied in novel products are protected by the monopoly conferred by the patent legislation. Mr Bryham conceived what he considered was a unique idea,[38] one more complex than simply the abstraction of "an amphibious boat" as suggested in Sealegs' submissions. He sought to protect his idea by a number of patents.

[75] The claimed invention was expressed in this way in the first claim of Sealegs' international patent application:

> An amphibious vehicle having a boat hull which has at least three ground engagement means connected thereto, each ground engagement means capable of being disposed in an extended position in which the boat hull may be supported by the ground engagement means on a ground surface, and each ground engagement means capable of being disposed in a retracted position in which the amphibious vehicle may be used in water without substantial hydrodynamic interference from the ground engagement means, and wherein a forward leg assembly, comprises a first rigid elongate member, one end of the first member being pivotally attached to a point on the hull, and the other end being connected to a ground engagement means supported thereon, so that the ground engagement means can be moved between the retracted location adjacent to the bow of the vehicle and the extended location, in an arc, without passing through any of the primary structure of the hull of the amphibious vehicle.

Subsidiary claims included a powered ground engagement means and a claim:

> … wherein at least one of the ground engagement means comprises at least one wheel and tyre assembly, and said wheel and tyre assembly, when in the retracted position, protrudes from the hull of the amphibious vehicle in such a way that the tyre(s) act as a bumper.

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[38] At [7] above.

[76] But, patents aside, the appellants maintained that the idea there described is free for anyone to use. And they frankly acknowledged that in designing their own amphibious craft they had taken that idea. Hence there was similarity in the conceptual level of the two designs. Furthermore the appellants' design was underpinned by an arrangement which necessarily arose from functional constraints. However what they had not done was to replicate Sealegs' expression of that idea in its arrangement of the components comprising the leg assemblies.

[77] The authors of *Copinger & Skone James on Copyright* advocate the view that it is impossible to define the boundary between the mere taking of general concepts and ideas on the one hand and copying in the copyright sense on the other, and that wherever the line is drawn will often seem arbitrary.[39] Indeed in *Bleiman v News Media (Auckland) Ltd* this Court suggested that the conventional distinction between ideas and the expression of ideas is helpful only up to a point,[40] noting Lord Hailsham's reference to Professor Joad's observation that it all depends what you mean by "ideas".[41]

[78] *Bleiman* drew attention to the analysis by Prichard J in *Plix Products Ltd v Frank M Winstone (Merchants) Ltd* of two kinds of ideas:[42]

(a) the general idea or basic concept of a work formed or implanted in the mind of its author; and

(b) the transformation of the basic concept into a concrete form wherein the copyright resides.

[79] Noting the ill-defined boundary (a phrase coined by Professor Cornish) between general concept and expression, Prichard J went on:[43]

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39 Gillian Davies, Nicholas Caddick and Gwilym Harbottle *Copinger and Skone James on Copyright* (17th ed, Sweet & Maxwell, London, 2016) vol 1 at [7–15]. This Court in *Steelbro NZ Ltd v Tidd Ross Todd Ltd* [2007] NZCA 486 at [108] commented that there is a line between pure ideas and the expression of them but it is notoriously ill-defined.

40 *Bleiman v News Media (Auckland) Ltd* [1994] 2 NZLR 673 (CA) at 677.

41 At 677–678, citing Lord Hailsham's comments in *L B (Plastics) Ltd v Swish Products Ltd* [1979] RPC 551 (HL) at 629.

42 *Bleiman v News Media (Auckland) Ltd*, above n 40, at 678, referring to *Plix Products Ltd v Frank M Winstone (Merchants) Ltd* (1984) 3 IPR 390 (HC) at 418–419.

43 *Plix Products Ltd v Frank M Winstone (Merchants) Ltd*, above n 42, at 419.

> There can be no general formula by which to establish the line between the general idea and the author's expression of the idea. The basic idea (or concept) is not necessarily simple — it may be complex. It may be something innovative; or it may be commonplace, utilitarian or banal. The way the author treats the subject, the forms he uses to express the basic concept, may range from the crude and simplistic to the ornate, complicated — and involving the collation and application of a great number of constructive ideas. It is in this area that the author expends the skill and industry which (even though they may be slight) give the work its originality and entitle him to copyright. Anyone is free to use the basic idea — unless, of course, it is a novel invention which is protected by the grant of a patent. But no one can appropriate the forms or shapes evolved by the author in the process of giving expression to the basic idea. So he who seeks to make a product of the same description as that in which another owns copyright must tread with care. If he copies the details which properly belong to the expression and not to the basic concept, he will infringe the copyright. That is why, when the basic idea is expressed in a crude, or simplistic form, the potential plagiarist or business competitor can, without offending, come very close to an exact reproduction of the copyright work. But where the expression is ornate, complex or detailed, then he must keep his distance: the only product he can then make without infringing may bear little resemblance to the copyright work.

[80] The role of copyright in relation to functional designs has long been controversial. The tension was well described in *The Copyright Act 1962: Options for Reform*:[44]

> If a manufacturer has seen the existing products, it is very difficult to prove that there has been no copying (or even unconscious copying). This means, in practice, that the first product on the market obtains a virtual monopoly even though it is not sufficiently innovative or original to qualify for patent or registered design protection. The problems are exacerbated if the article in question is simple or if it is to perform a particular function. For example, an exhaust pipe must fit a particular car. This means that the owner of the drawing of the exhaust pipe enjoys monopoly rights for 16 years. It is questionable whether this is in the public interest.

[81] Sealegs correctly noted that the law in New Zealand on functionality in copyright is not the same as some other jurisdictions where a decision was made to exclude elements of functionality from copyright protection.[45] Similarly the appellants acknowledged that by reference to those usual comparative jurisdictions New Zealand is an "outlier" in terms of how our law governs protection for industrially applied copyright works.

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44 Department of Justice *The Copyright Act 1962: Options for Reform* (1989) at 12.6(3).

45 Reference was made to the United Kingdom, Australia and Canada.

[82] However, while recognising that unlike the United Kingdom, Australia and Canada the Copyright Act does not deal expressly with function and copyright, the appellants emphasised that the New Zealand courts have for many years acknowledged that similarities derived from functional constraints ought not to be relied on to establish infringement.[46] The point was made that the requirement for objective similarity has always been treated as requiring visual similarity while similarity in function has never previously formed the basis of a finding of copyright infringement in New Zealand or elsewhere.

[83] The appellants' submissions went on to state:

> Traditionally, mechanical functions have found protection under patent law. The claims contained in a patent, properly interpreted, define the scope of the monopoly conferred by the patent. Infringement of patents is assessed not by reference to visual similarity, or the manner in which an idea has been embodied, but rather to the adoption of the essential integers of an invention as outlined in the claims. Irrespective of visual appearance, it can be an infringement of a patent to substitute the parts described in the patent specification with obviously equivalent parts to create functional equivalence.

[84] It was the appellants' contention that that is essentially what the High Court had found the appellants to have done, citing by way of example the Judge's quotation of Dr Field's evidence at [363] of the judgment as signifying the Court's focus on equivalency.[47]

[85] The advantage of the first mover in the market was the flavour of Sealegs' rejoinder below to the appellants' argument that functional constraints in design may minimise the originality involved in the copyright work and the protection afforded to it. The judgment recorded Sealegs' response as follows:

> [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. …

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[46] Citing *Oraka*, above n 37, at [88] and the observations of Tipping J in *Carter Holt Harvey Roofing Aluminium & Glass Group Ltd v Trevor Bills Ltd* (1988) 2 TCLR 592 (HC) at 599.

[47] See [158] below.

[86] Where the copyright work is an artistic work in the form of a detailed drawing of a key component in a machine, the significance of the role performed by that component may have the effect of providing a de facto monopoly. We suggest that may be what Tipping J in *Bonz* had in mind when offering the following interpretation of this Court's comments in *Bleiman*:[48]

> Their Honours in *Bleiman* indicated that it was perhaps more helpful to consider whether the effort, skill and judgment of the copyright owner in the making of his original work had been appropriated in the making of what appeared, on a realistic assessment, to be a reproduction of a substantial part. I do not, with respect, consider that the Court of Appeal was advocating the total abandonment of the conventional ideas/expression dichotomy. What I think Their Honours were pointing out is that while ideas as such are not susceptible of copyright protection, an idea behind the method of expression can be protected if it is an integral part of the method of expression itself.

[87] While we agree that *Bleiman* was not espousing abandonment of the conventional dichotomy, we doubt that focussing on the "integral part of the method" of expression would be useful in practice, at least in the context of works of an utilitarian nature. In *Catnic Components Ltd v Hill & Smith Ltd* Buckley LJ observed:[49]

> What is protected is the skill and labour devoted to making the "artistic work" itself, not the skill and labour devoted to developing some idea or invention communicated or depicted by the "artistic work". The protection afforded by copyright is not, in my judgment, any broader, as counsel submitted, where the "artistic work" embodies a novel or inventive idea than it is where it represents a commonplace object or theme.

[88] Commenting on *Catnic* in *Billhöfer Maschinenfabrik GmbH v TH Dixon & Co Ltd* Hoffmann J discussed the significance of the "intrinsic importance" of the idea in this way:[50]

> The trial judge had found as a fact that the defendant had not copied the plaintiff's drawings of box girder lintels. All that the defendant had taken was "the idea of a box girder lintel." But the plaintiff said that the idea, "because of its intrinsic importance, had constituted a substantial part of the … drawings." In other words, the defendant had copied a kind of Platonic form of a box girder lintel which could be abstracted from the actual forms in the drawings. It was this argument which Buckley LJ rejected. Copyright does

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48 *Bonz Group (Pty) Ltd v Cooke*, above n 15, at [219].

49 *Catnic Components Ltd v Hill & Smith Ltd* [1982] RPC 183 (CA) at 223, cited with approval by Lord Oliver in *Interlego AG v Tyco Industries Inc* [1988] RPC 343 (PC) at 373–374.

50 *Billhöfer Maschinenfabrik GmbH v TH Dixon & Co Ltd* [1990] FSR 105 (Ch) at 121.

> not project ideas but only the actual forms in which the ideas are expressed. The citation in *Interlego* was used to meet a similar argument.

[89] Shortly thereafter the High Court of Australia in *Autodesk Inc v Dyason* suggested that the inseparability of an idea may serve to deprive its expression of copyright protection:[51]

> The protection of ideas, at all events when the subject of manufacture, is the province of patent law. There is a particular difficulty in distinguishing an idea from its expression in the case of a utilitarian work, such as a computer program, which, in contrast to literary works of an artistic kind, is intended to be useful rather than to please. But it has been held that the idea of a utilitarian work is its purpose or function and that the method of arriving at that purpose or function is the expression of the idea: see *Whelan Associates v Jaslow Dental Laboratory*, citing *Baker v Selden.* Thus, when the expression of an idea is inseparable from its function, it forms part of the idea and is not entitled to the protection of copyright.

[90] *Autodesk* is footnoted to the following discussion in *Copinger* of *Bezpečnostní softwarová asociace-Svaz softwarové ochrany v Ministerstvo kultury* which immediately follows the boundary definition discussion:[52]

> **Technical function.** In a development of this principle, the [Court of Justice of the European Union] has recently held that where a work consists of the arrangement or configuration of non-original components which is dictated by their technical function, the work is not original since the different methods of implementing an idea are so limited that the idea and the expression become indissociable.

[91] Referring to that aspect of *Bezpečnostní* Lewison LJ in *SAS Institute Inc v World Programming Ltd* observed:[53]

> What seems to me to be clear from this passage is (a) that if expression is dictated by technical function then the criterion of originality is not satisfied; and (b) that, where that is the case, the product is not an intellectual creation of the author at all.

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51 *Autodesk Inc v Dyason* [1992] RPC 575 (HCA) at 583 (footnotes omitted).

52 Davies, Caddick and Harbottle, above n 39, at [7–15] to [7–16], referring to Case C-393/09 *Bezpečnostní softwarová asociace-Svaz softwarové ochrany v Ministerstvo kultury* [2010] ECR I-13971 at [49].

53 *SAS Institute Inc v World Programming Ltd* [2013] EWCA Civ 1482, [2014] RPC 8 at [33]. Tomlinson and Vos LJJ concurred.

[92] However Lewison LJ went on to note that the creative element test may not be quite the same as the traditional test in English law. Reference was made to the distinction drawn by the Advocate-General in *Football Dataco Ltd v Yahoo! UK Ltd*:[54]

> It is common knowledge that, within the European Union, various standards apply as regards the level of originality generally required for copyright protection to be granted. In particular, in some EU countries which have common law traditions, the decisive criterion is traditionally the application of "labour, skills or effort". … On the other hand, in countries of the continental tradition, for a work to be protected by copyright it must generally possess a creative element, or in some way express its creator's personality, even though any assessment as to the quality or the "artistic" nature of the work is always excluded.

[93] As Lord Bingham observed in *Designers Guild Ltd v Russell Williams (Textiles) Ltd*, the law of copyright rests on a very clear principle: that anyone who by his or her own skill and effort creates an original work of whatever character has the exclusive right to copy it for a limited period.[55] So too in New Zealand the lower threshold applies. The recognition of originality and its extent will be a reflection of the skill and labour expended in the creation of the particular work. However originality is a question of degree. The greater the extent to which the creation of the copyright work is dictated by functional constraints, the less original the work is likely to be.

[94] Before turning to assess the issue of originality in this case, it is necessary to first address a preliminary question, namely whether the respondent's prototypes have the characteristics of and qualify as models for the purposes of s 2 of the Copyright Act.

Were the prototypes "models"?

[95] Section 14(1) of the Copyright Act provides that copyright exists in original works of various descriptions including artistic works. It was common ground that the three prototypes could qualify as artistic works only if they were models.[56] In the

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54 At [36], citing Case C-604/10 *Football Dataco Ltd v Yahoo! UK Ltd* [2013] FSR 1 (CJEU) at [36] (footnotes omitted).

55 *Designers Guild Ltd v Russell Williams (Textiles) Ltd* [2000] 1 WLR 2416 (HL) at 2418.

56 The first category of the definition of "artistic work" in s 2(1) of the Copyright Act is "a graphic work, photograph, sculpture, collage, or model, irrespective of artistic quality".

fifth amended statement of claim the three prototypes were described as models and the point now taken by the appellants does not appear to have been in issue below.

[96] The reference to "model" was introduced to the first limb of the definition of artistic work by the Copyright Amendment Act 1985.[57] The reason for the addition was explained in the Bill.[58]

> *Clause 2* amends the definition of "artistic work" in section 2(1) of the principal Act by inserting in paragraph (a), after the word "engravings", the word "models". A design expressed in 3 dimensional form (assuming it is not a sculpture or work of architecture) is not an "artistic work" and does not come within the scope of copyright protection unless it is a work of "artistic craftsmanship". A design expressed in the form of a drawing does, however, constitute an "artistic work" regardless of its artistic quality. Accordingly, whether a design is subject to the protection afforded by the Copyright Act 1962 depends on the form in which it is originally expressed. The insertion of the word "models" in paragraph (a) of the definition of the term "artistic work" means that copyright protection will be available in the case of all designs created in 3 dimensional form regardless of artistic quality.

[97] There is no definition of model in either the 1962 Act or the 1994 Act. However in *Thornton Hall Manufacturing Ltd v Shanton Apparel Ltd* which concerned a sample dress this Court noted in the context of that case the word in everyday usage was generally understood to mean:[59]

> 2. A representation in three dimensions of some projected … material object, showing the proportions and arrangement of its parts … (*The Shorter Oxford English Dictionary*, p 1268.)

The Court agreed with the High Court's finding that the sample dress was an artistic work, being a model with its own originality in the chain of creativity. The dress was made so that the design could be seen in three-dimensional form and was not produced from pattern pieces in a mechanical manner with no further original skill and labour.

[98] After reference to *Shanton*, Tipping J in *Bonz* remarked with reference to knitted woollen garments:[60]

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57 "Models" was already in para (b) of the definition of artistic work in relation to works of architecture.

58 Copyright Amendment Bill 1984 (31-1) (explanatory note), at i.

59 *Thornton Hall Manufacturing Ltd v Shanton Apparel Ltd* [1989] 3 NZLR 304 (CA) at 310.

60 *Bonz Group (Pty) Ltd v Cooke*, above n 15, at 221.

> While initially hesitant I now see the force of the conclusion that a true prototype garment can be regarded as a model. The medium in which the model is made can hardly be decisive. Models are often made of wood or clay or plasticine but there seems no reason in logic why for the purposes of the fashion industry, a model should not be made of some other material, ie the material with which the finished product is to be made. I therefore accept that a prototype garment is capable of being a model within the definition.

[99] We consider that the bow and stern wheel assemblies which were designed to be affixed to the standard RIBs adapted as prototype boats 1 and 136 were similar in concept to a prototype garment on a mannequin or tailor's dummy. Like the mannequin, the boats themselves, which were purchased by Sealegs, were not actually part of the prototype of the work in which copyright is claimed. Their role was as the medium for deploying and testing the componentry which enables the boats to become amphibious.

[100] The appellants submitted that neither prototype boat 136 nor prototype IKA11 could qualify as models because they were both sold to third parties. Reliance was placed on *Lakeland Steel Products Ltd v Stevens* as support for the proposition that "prototype" is not necessarily synonymous with "model", and to qualify as a model a prototype must have the characteristics of a model.[61] In particular it must be used as a representation or constructed for the primary purpose of being copied rather than for the purpose of being used. In relation to a prototype trimsaw blade Holland J there concluded:[62]

> In this case the plaintiff's prototypes were not manufactured in any way to be representations or for the primary purpose of their being used as copies. They were designed to fulfil an order for the provision of the actual article. They were never at any stage a representation of the article. On completion they were supplied and used as such articles but not as representations. I do not consider that anything that is manufactured primarily for the purpose of sale, and is supplied to be used rather than copied, is a model within the meaning of the Act.

[101] Subsequently in *Electroquip Ltd v Craigco Ltd* the issue arose whether a prototype electronic sensor for use with a sheep dip was a model.[63] While Rodney Hansen J did not differ from the limitation adopted by Holland J, he concluded that the sensor was a model in the sense of being a representation of the projected finished

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61 *Lakeland Steel Products Ltd v Stevens* (1995) 6 TCLR 745 (HC).
62 At 751.
63 *Electroquip Ltd v Craigco Ltd* HC Auckland CIV-2006-404-6719, 3 September 2008.

product. Although ultimately it was sold for scrap, it was not built for sale but was developed for trialling purposes.[64]

[102] We agree with the view of the authors of *James & Wells Intellectual Property Law in New Zealand* that *Electroquip* stands for the proposition that subsequent commercial dealing with or use of an item which has been genuinely produced as a prototype will not deprive it of the essential characteristics of a model under the Copyright Act.[65] The critical enquiry will be the purpose for which the item was created.

[103] The evidence indicates that prototype boat 1, prototype boat 136 and prototype IKA11 were all constructed as part of a process which would culminate in the production of the final product manufactured for sale. As noted earlier[66] prototype boat 136 was the 136th boat commercially produced by Sealegs. It was converted to three-wheel drive which involved redevelopments of the hydraulic system and was then tested. IKA11 was a prototype with the purpose of providing a heavy lift system for larger vessels. All three were created for the purpose of ultimately being copied.

[104] Although prototype boat 136 was sold after the testing process had been completed and IKA11 was sold in order to help recover development costs we accept that they both qualified as models and did not lose that status because they were ultimately disposed of by sale.

[105] Consequently we conclude that all three prototypes qualified as artistic works within s 14(1)(a) of the Copyright Act.

Was the arrangement of features original?

[106] The Judge did not approach the issue of originality by making an assessment of the extent of the skill and labour which had been expended in the creation of the identified copyright work, namely the sequence of the collocation of known

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64 At [24].

65 Ian Finch (ed) *James & Wells Intellectual Property Law in New Zealand* (3rd ed, Thomson Reuters, Wellington, 2017) at [4.4.1(4)(e)].

66 At [19] above.

components. Rather, apparently treating novelty and originality as synonymous, he seized on the description of the Sealegs design as "unique", the word used both in Mr Bryham's brief and Sealegs' opening. His analysis of the originality issue commenced in this way:

> [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 Seealegs 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.

[107] It should be noted that those observations of Dr Field were taken from his reply brief where he responded to Mr Bryham's reply brief. The quoted passage was preceded by an earlier statement in these terms:

> Mr Bryham appears to regard his design as unique, and by implication, worthy of protection, because his design has three distinctive legs attached to the exterior of a boat which pivotally retract outside of the boat's hull. In terms of modern design procedure, that is a design concept or idea, rather than an expression of a concept. … As I detailed in my primary brief, the idea of external legs attached to a boat retracting outside of the hull was well-established for years prior to Mr Bryham conceiving his design. This conflation of an idea and its expression would appear to underlie much of the evidence of Mr Bryham in his reply brief.

[108] The same conflation of idea and expression was revealed in the next paragraph of the judgment:

> [215] … 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.

[109] This passage was nothing more than a description of Mr Bryham's idea. Mr Dippie's evidence, to which the Judge had referred in his review of the several expert witnesses,[67] was that Sealegs had made bold decisions to keep the lifting mechanism external to the boat, a decision which he viewed as counter-intuitive. He described the boat as a radical design departure from what would seem intuitively most marketable.

[110] It was not until the next paragraph that the Judge made reference to the features identified in the schedules to the pleading:

> [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.

[111] Then, without reference to supporting evidence, the Judge formulated a conclusion in terms of the orthodox originality test:

> [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.

[112] The Judge then went further, expressing the view that there was a high degree of originality in the Sealegs assembly pattern:

> [218] … 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.

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[67] High Court judgment, above n 2, at [172].

[113] Indeed he went on to contrast the utility of the Sealegs system with aesthetic artistic works:

> [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.

As appears from extracts noted below[68] the Judge accorded considerable significance to the "solution" that Sealegs arrived at in the course of designing its system.

[114] Mr Miles criticised such reasoning as finding originality in the idea/function embodied in the Sealegs "system" rather than by reference to the effort and skill that went into the expression of the idea in the particular copyright work. He suggested that in works that are typically artistic, such as paintings, clothing designs as in *Bonz,* or even literary works such as the *Ladbroke* betting slip, the arrangement of components or features was more likely to be truly original because the intention is to enhance the visual appearance of the work, this being a product of the author's imagination, creativity and skill. By contrast, in his submission, the arrangement of components in a mechanism is entirely different, arising primarily from the function to be performed. Here the evidence demonstrated that the manner in which the mechanical components were arranged in the amphibious assemblies had no originality.

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[68] At [142] and [160] below.

[115] It is appropriate to emphasise the comparatively confined nature of the copyright interest which Sealegs ultimately invoked at trial. As we have noted above Sealegs abandoned reliance on any copyright in the several detailed drawings referred to in and annexed to the pleading, preferring instead to proceed solely in reliance on an unpleaded allegation of copyright in the collocation of unoriginal features appearing in the prototypes.

[116] Such an approach was quite different from that in *Oraka* on which Sealegs placed much emphasis.[69] With reference to *Oraka* Sealegs' written submission stated:

> At trial, the Appellants incorrectly based their case on *Bonz* in circumstances where it is clear that the factual matrix of *Bonz* is quite dissimilar to that currently before the Court. The Appellants have also persistently ignored *Oraka No 2*, the leading case relating to copyright in a work which is a combination of features.

[117] However *Oraka* was not a collocation case of the nature of *Bonz* and *Henkel*. The copyright claim in *Oraka* was based on four drawings: the first depicted an asparagus carriage in a grading machine constituting three assembled components, a chassis, a tilting cup and a trigger; the other three drawings each represented an individual component. In the High Court Allan J rejected a submission that only a low level of copyright subsisted in the drawings, finding that they were relatively sophisticated.[70]

[118] On appeal against the finding of no infringement this Court accepted that some aspects of the cup assembly were functional constraints in the true sense. Some others were dictated to a large degree by third party technology and, while not functional constraints in the true sense, had a low level of originality.[71] However certain interrelated dimensions shown in a drawing annexed to the judgment were not commonplace and were not due to functional constraints. As the Court observed in its finding of infringement:[72]

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69 *Oraka*, above n 37.

70 *Oraka Technologies Ltd v Geostel Vision Ltd (No 2)* HC Hamilton CIV-2005-419-809, 7 April 2011 at [126]. There was no cross-appeal on that issue. The appeal was against the finding that there was no infringement.

71 *Oraka*, above n 37, at [140]–[141].

72 At [146].

> Further, there is the requisite degree of originality in the dimensions A, B and C and they are central enough to the cup assembly for the copying of those dimensions to be the copying of a substantial part of the first appellant's work.

[119] In the present case there are no drawings to be considered. The prototypes themselves are no longer available. The claim was advanced on the basis of photographs of the prototypes together with the lists of componentry in the schedules, albeit no longer relied upon as individual copyright works as asserted in the pleading. The revised role of those lists of components is somewhat ambiguous. The descriptions of the various components are generic in expression and, as the appellants observed, appear akin to a list of integers[73] ordinarily specified in a patent. In particular we note components 1(i) and 2 in schedule A[74] which both refer to a range of positions, for example "in the range of 140–160 degrees".

[120] The lists which are said to "define"[75] the combination of features do not present as a precise description to facilitate the identification of particular Sealegs leg assemblies. For example the initial part of schedule A states:

> i) A front leg fixed at a pivot point external of the bow of the boat which locks down just short of vertical (the down locked position) when down and when raised, rotate away from the hull about the pivot point. When fully raised the front leg locks above the waterline of the boat between 90 to 130 degrees from the down locked position.
>
> ii) A pivot point for the front leg which is external of the hull and fixed on the front center line of the hull.
>
> iii) A leg attached to the pivot point at one end with an axle mount at the other end of the leg. The leg forming an axis from the pivot point to the axle at its opposite end.
>
> iv) A wheel or wheels attached to the axle mount.
>
> v) The leg has a steering pivot creating an upper leg part and a rotatable steerable lower leg part.
>
> vi) A hydraulic steering ram mounted on the face of the upper leg axis and attached to the face closest to the hull.
>
> vii) A hydraulic steering cylinder attached to the hull side of the upper leg with a steering pivot on the leg axis.

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73 Indeed the respondent employed that word in its opening in the High Court.

74 And the equivalent items in Schedules E and F.

75 See [50(4.4)] and [66] above.

viii) The steering cylinder being double ended but with one end only a steering link arm attached to the lower part of the leg.

ix) A wheel (or wheels) fixed at the axle end of the leg.

Rather the components referred to in the schedules are generic, not bespoke in the sense of being confined to the particular manifestation of that componentry as deployed in the Sealegs prototypes.

[121] We do not consider that the evidence demonstrated that the selection of the sequence of such generic known components required substantial skill and labour as the Judge ostensibly found. We agree with Mr Miles' submission that Sealegs' evidence focused on the testing of the components themselves, not on the order in which they were to be arranged. As Dr Gooch observed in the course of questions from the Judge (to which we refer below in the discussion of infringement)[76] with reference to the two assemblies shown in Figure 1 annexed to the judgment:

- … this is a pretty conventional way of putting a leg on the ground, all of these components.
- … if you need to put a leg on the ground and actually provide steering, you're going to have all of these basic components that will be required.

[122] Even to the untutored that seems an obvious point. Starting with the extremities, the connection with the hull must inevitably be at the top end of the leg while the wheel and tyre must be at the bottom end where contact will be made with the ground. Progressing upwards from the bottom, the wheel will need to be affixed to an axle.[77] Above that there would need to be a steering pivot if the leg is to have directional capacity.[78] No doubt there is potential for variation in the selection of lifting apparatus and its precise location. But in that regard the provision in the relevant schedules is anything but specific:[79]

> A forward pivoting alloy yoke with provision for a lift cylinder attachment; with

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76 At [142] below.

77 Answer 1(d) to questions 5 and 6 in the experts' joint report noted that in order to roll a wheel generally has an axle in a practical system.

78 Answer 1(e).

79 Schedules A, C, E and F.

> A front lift cylinder attaching to the hull and yoke to raise the wheel away from the front of the hull.

The same can be said for all the items listed in relation to the port and starboard rear assemblies. However the significant point is that the location of those components in terms of their sequence was dictated by the functional operability of the leg. In our view the degree of originality of the sequence of the various generic components in the leg assemblies is negligible.

[123] Constraints arising from the mechanical structure of a functional item do not tend to arise in the context of aesthetic artistic works, at least in their decoration as opposed to, for example, the basic structure of the sleeves and torso of a garment. The capacity for variation in the selection of figures (as in *Bonz*) or the types and colours of flowers (as in *Designers Guild*) is extensive. Of course, if a clothing designer chose as a form of decoration the numerals 0 to 9 in numerical order or the letters of the alphabet in their orthodox sequence or the colours of the rainbow in the pattern in which they naturally appear, there would be little if any originality reflected in such choice.

[124] On the face of it the Judge's analysis in contrasting artistic works involving the purely aesthetic assembly of known features with utilitarian mechanical designs is unconvincing.[80] However his comments need to be seen in the context of his evaluation of the so-called "Sealegs system" by reference to concepts of novelty and counter-intuition. In our view the Judge erroneously approached the issue of the originality in the collocation of common features by reference to the criteria for patentability, coupled with his assessment of the commercial success of Mr Bryham's invention. In doing so he fell victim to the confusion inherent in Sealegs asserting the copying of its "unique design" while confining its claim to copyright in an arrangement of known components.

[125] The point is made in the observations of Lord Hoffmann in *Designers Guild*:[81]

> The same is true of an inventive concept expressed in an artistic work. However striking or original it may be, others are (in the absence of patent

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80 High Court judgment, above n 2, at [219], set out at [113] above.

81 *Designers Guild Ltd v Russell Williams (Textiles) Ltd,* above n 55, at 2423.

> protection) free to express it in works of their own: see *Kleeneze Ltd v D R G (UK) Ltd* [1984] FSR 399. The other proposition is that certain ideas expressed by a copyright work may not be protected because, although they are ideas of a literary, dramatic or artistic nature, they are not original, or so commonplace as not to form a substantial part of the work. *Kenrick & Co v Lawrence & Co* (1890) 25 QBD 99 is a well known example. It is on this ground that the mere notion of combining stripes and flowers would not have amounted to a substantial part of the plaintiff's work. At that level of abstraction, the idea, though expressed in the design, would not have represented sufficient of the author's skill and labour as to attract copyright protection.

[126] We consider that the unjustified reach of the collocation-based claim is starkly demonstrated in an extract from the Judge's reasoning on the issue of an independent design path in the context of causality:

> [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.

[127] Although we find that there was negligible originality in the sequence of the generic components of the leg assemblies, we consider that Sealegs did expend some skill and labour in the choice of the shape and dimension of certain of the components in the arrangement which, to that extent, confers a degree of originality on the

arrangement itself. A conspicuous example is the yoke on the Sealegs front leg assembly. Another is the method of mounting both the front and rear assembly frames. However the originality in an arrangement which derived from the presence of those features would be modest and certainly very much less than the high degree found by the Judge.

Infringement — principles

[128] The judgment commenced the consideration of infringement by noting the three well-established *Wham-O* steps,[82] which the appellants accepted as a correct articulation of the test for infringement. In a footnote the Judge observed that this Court in *Oraka* had approved that test but had adjusted the ordering of the steps.[83] That observation was accurate so far as concerns the point at which the issue of substantiality, the first in the *Wham-O* formula, is considered.

[129] However in the discussion of objective similarity which followed, after referring to the submission of counsel for the appellants that functional constraints and common concepts and ideas should be put aside for the purpose of assessing similarity, the Judge said:

> [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*. 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.
>
> (Footnote omitted.)

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82 High Court judgment, above n 2, at [248], citing *Wham-O MFG Co v Lincoln Industries* [1984] 1 NZLR 641 (CA) at 666. The steps are set out below at [130].

83 At [248], n 40; citing *Oraka*, above n 37, at [85]–[86].

[130] The passages from *Oraka* referred to by the Judge in support of this approach stated:

> [85] The leading test for infringement by copying was established in *Wham-O MFG Co v Lincoln Industries Ltd*. In that case, this Court set out three main elements:
>
> (a) Substantiality: The reproduction must be either of the entire work or of a substantial part.
>
> (b) Objective similarity: There must be sufficient objective similarity between the infringing work and the copyright work, or a substantial part thereof.
>
> (c) Causal connection: There must be some causal connection between the copyright work and the infringing work. The copyright must be the source from which the infringing work is derived.
>
> [86] The Court in *Wham-O* was not, however, mandating the order in which the factors were to be considered in all cases. It seems to us that the most logical ordering will usually be first to examine whether there is objective similarity before turning to the question of causation and finally substantiality.
>
> [87] 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. The appropriate place to apply a practical test such as this is at the end, once the act of copying has been established. It also means that the issue of substantiality is decided on the basis of what is actually found to have been copied rather than on what may be wider allegations of copying. The High Court was incorrect to apply the substantiality test to the appellants' allegations, rather than to what was actually copied.
>
> [88] Evidence that there are functional constraints on a design can be evidence supporting an inference of an independent design path (and therefore no causation). It can also be important in assessing whether a substantial part has been copied as discussed below.
>
> (Footnotes omitted.)

[131] We consider the Judge was reading too much into those comments in concluding that the impact of functional constraints should not be considered at the first step. That is inconsistent with the dictum of Lord Millett in *Designers Guild* to which the Judge referred at the outset of his consideration of objective similarity.[84] After explaining that at the first step of identifying the features alleged to have been

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[84] High Court judgment, above n 2, at [250], referring to Lord Millett's statements in *Designers Guild Ltd v Russell Williams (Textiles) Ltd*, above n 55, at 2425.

copied the Court undertakes a visual comparison of the two designs, Lord Millett then noted:

> It is at this stage that similarities may be disregarded because they are commonplace, unoriginal, or consist of general ideas.

That proposition is expanded in *Copinger* to include "the result of common subject matter or external constraints, such as dimensions to which both works are subject".[85]

[132] We do not consider that this Court in *Oraka* was advocating any different approach. Indeed later in the judgment in the course of addressing the issue of substantiality the Court said:

> [131] 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.
>
> [132] 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. The situation has been described as follows:
>
> > If a number of designers working independently of one another in the same field produce very similar designs by coincidence the most likely explanation of the similarities is that there is only one way of designing that article. In those circumstances the design in question can fairly and reasonably be described as "commonplace". It would be a good reason for withholding the exclusive right to prevent the copying in the case of a design that, whether it has been copied or not, is bound to be substantially similar to other designs in the same field.
>
> [133] Although the existence or otherwise of functional constraints is primarily relevant to earlier questions regarding the originality of the work and whether copying has in fact occurred, functional constraints may also assist in determining the originality of the respective works and whether a substantial part of the claimant's labour and skill has been taken by the defendant.
>
> (Footnotes omitted.)

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85 Davies, Caddick and Harbottle, above n 39, at [7–104].

[133] It is apparent that the Judge considered that the objective similarity analysis in *Oraka* was "instructive".[86] We earlier noted the different nature of the claim in that case.[87] The circumstances of the objective similarity conclusion should also be noted. First, it was common ground that there was objective similarity between the length of the cups in the two assemblies. Secondly the experts on both sides were agreed that the Geostel cup assembly resembled a second generation model of the Schwarz cup assembly. This Court concluded that there was objective similarity between the two.[88]

[134] That Lord Millett's view reflects the orthodox New Zealand approach is apparent from *Beckmann v Mayceys Confectionary Ltd* where the High Court found that crocodile-shaped confectionary imported into and sold in New Zealand by Mr Beckmann infringed the copyright in Mayceys' plaster model or sculpture of a crocodile from which moulds had been made for its "Killer Crocs" jube product. Delivering this Court's judgment Gault J discussed the requisite degree of similarity:[89]

> Just what degree of similarity there must be before it amounts to reproduction is never an easy matter to determine. … Certainly something less than an exact replica is sufficient: *AHI v New Lynn Metalcraft Ltd (No 1)* (1982) 1 NZIPR 381, *British Northrop Ltd v Texteam Blackburn Ltd* [1974] RPC 57,72. If there is borne in mind the purpose for which the resemblance is assessed it is apparent that whether or not it is sufficient will depend in part on the originality and distinctiveness of the copyright work. If two artists sketch the same common object necessarily there will be close resemblance. Similarly in product design two designers will embody features dictated by known manufacturing constraints which necessarily will be similar.

[135] After undertaking a detailed comparison of the samples of the Beckmann product with the plaster model, the Court concluded that any similarities in the representations of crocodiles were not such as to suggest that each had not been devised independently. The Court explained:[90]

> We have given careful consideration to the reasons expressed by the trial Judge for his finding that there is significant objective similarity between the copyright work and the Beckmann Mark 2 product but because of the views we have expressed we are respectfully unable to agree with his conclusion. His comparison perhaps was made without giving sufficient consideration to

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86 High Court judgment, above n 2, at [252].

87 At [117]–[118] above.

88 *Oraka*, above n 37, at [112]. In his summary at [252] the Judge referred to this Court having concluded "overall" that there was objective similarity. However that word was not used by the Court of Appeal.

89 *Beckmann v Mayceys Confectionery Ltd* (1995) 33 IPR 543 (CA) at 546.

90 At 548.

> the fact that both articles are representations of a common animal the features of which are distinctive but not because of any creativity on the part of the copyright owner.

[136] In carrying out a visual comparison without taking into account the extent to which the claimed copyright work was commonplace or dictated by functional constraints we consider that the Judge adopted an erroneous approach inconsistent with both *Designers Guild* and *Beckmann.*

Objective similarity?

The High Court's finding

[137] The Judge first addressed the objective similarity between the front leg assemblies on the Orion S25-3WD and the Sealegs S60-3WD. Having conducted a view where both parties displayed their systems attached to a number of different craft and each separately demonstrated the functioning of their retractable leg systems, the Judge considered that "broadly speaking" the front leg assemblies of the two systems were visually similar, both in their appearance and functioning.[91] While noting differences which readily enabled the Orion system to be distinguished from the Sealegs system, he nevertheless considered that the Orion rear leg assemblies were objectively similar to the Sealegs rear legs.[92] He reached the same conclusion in relation to a visual comparison of the Orion S25-4WD and the Sealegs S60-3WD despite there being some obvious differences.[93]

Errors in approach

[138] We consider that the Judge's consideration of objective similarity was deficient in four respects. The first, which we have addressed above, was the failure to take into account the extent to which the claimed copyright work was commonplace or dictated by functional constraints.[94]

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91 High Court judgment, above n 2, at [265], set out below at [140].
92 At [277].
93 At [281]–[283].
94 At [136] above.

[139] The second error was the inevitable consequence of the Judge's evaluation of the degree of originality in Sealegs' relevant copyright work as high. The protection provided by copyright in an arrangement is proportionate to the work's originality. As the Supreme Court stated in *Henkel*,[95] if the skill and labour that has given rise to an arrangement 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. However because the Judge considered that there was a high degree of originality in what he described as the Sealegs assembly pattern, the Judge did not apportion much significance to those differences which he did identify.

[140] Both the first and second errors are evident in the Judge's conclusion as to overall similarity:

> [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. 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;
>
> (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;

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95 *Henkel KGaA v Holdfast New Zealand Ltd*, above n 15, at [41].

(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.

Functional resemblance — the third error

[141] The references to "functioning" signal the third error which was the significance the Judge accorded to the "functional resemblance" of the assemblies. The Judge's perception was discernible in his questioning of Dr Gooch about the Orion commission to produce an amphibious kit for Mr Pringle's Smuggler boats:

Q. So all of a sudden the big blank piece of paper becomes very focused, doesn't it, because the designers are no longer setting out to create something out of thin air but to create something that performs the same function as a Sealegs system, right?

A. Yes so, yes that's correct, so, and so that gets you back to the basic function —

Q. So much of what you have outlined in terms of the design methodology and sequence of rational development advances to go, if you like, because the designers are no longer starting with design something new, they're being asked to design something that does something, does the function just the way in which Sealegs leg did, is that right?

[142] Then with reference to the images of the two leg assemblies in Figure 1 the Judge questioned Dr Gooch in this way:[96]

Q. Just pause there then, the various features that have been identified on [Figure 1], the elements of the leg —

A. Yes.

Q. Apart from the obvious differences that you've pointed out, and the different dimensions and aspects, for example, of the —

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96 This sequence incorporates the answers of Dr Gooch referred to at [121] above.

A. Yes.

Q. — of the yoke, et cetera, the various components are all replicated, between one and the other, aren't they?

A. Yes, but the difference I'm talking about is like, if you take the yoke, for example, —

Q. I understand, just bear with me. The functional components of the Sealegs solution are all [evident] in the Orion solution too, am I right?

A. That's correct. All except one which is that bearing assembly which —

Q. The bearing assembly in the wheel?

A. Yes.

Q. So all of the components can be shown to have an equivalent in each product, is that right?

A. That's right.

Q. A functional equivalent?

A. Yes.

Q. They differ in number of respects as you've identified?

A. Yes.

Q. As to how they perform their function in some respects, but in essence they're performing the same function in each case, is that right?

A. Yes, but like —

Q. Just bear with me, please. Clearly the Orion system has engineering developments, if you like, taken solutions that Sealegs might have developed and have moved forward with, what might be regarded as an enhancement or more sophisticated solutions, would that be fair?

A. I don't necessarily agree with that.

Q. In some cases, but not in all?

A. Yes, I mean when I look at this, this is a pretty conventional way of putting a leg on the ground, all of these components. I mean the examples we've looked at and the prior art were not good examples. They're quite hard to match up but like I was showed the grain stacker, for example, you know. If you look at that, that's a much closer, you'll see the basic configuration. If you've got, if you need to put a leg on the ground and actually provide steering, you're going to have all of these basic components that will be required. But these components are applied to a hull which is the same shape, so you would probably expect them to be a greater level of similarity.

[143] The extent to which functional equivalence impacted on the Judge's evaluation is demonstrated in his conclusion on 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.

[144] The Judge considered that the differences that were visually apparent and the functional and internally located differences identified by the appellants were more appropriately considered in the context of causality and substantiality.[97] Several paragraphs in those subsequent discussions underscore the Judge's reliance on "fundamental functionality" as a justification for discounting the significance of the identified differences:

> [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.

[145] In our view such reasoning in effect recognises an exclusive right to a method of operability, which is the realm of patents not copyright. It imports the same reasoning evident in the analysis at [219] of the judgment[98] which led to the finding

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97 High Court judgment, above n 2, at [285].

98 At [113] above.

of a high degree of originality in the "Sealegs leg pattern". It is unsurprising that it provoked Mr Miles' criticism of "copyright heresy". As stated in *Copinger*:[99]

> Nevertheless, it must be borne in mind that what is protected is the intellectual creation expressed in the artistic work, not the intellectual creation devoted to developing the idea or invention communicated. The limit of protection in the case of an artistic work is its visual characteristics, not the technical ideas that it embodies.
>
> (Footnote omitted).

Dimensions and geometry — the fourth error

[146] After reciting the visual similarities in appearance and functioning in [265], the Judge proceeded to state that the two assemblies were also substantially similar in terms of "their dimensions and geometry".[100] However as the appellant observed, Sealegs' case at trial did not rely on similarity in dimensions and no mention of it was made in Sealegs' closing.[101] Similarly, save for a reference in an extract from *Oraka*, any reference to those factors was conspicuously absent from Sealegs' written submission on appeal. Nevertheless similarity in dimension and geometry appeared to assume significance in the finding of objective similarity:[102]

> [267] The plaintiff produced several further photographs of the two front leg assemblies as well as overlayed 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, nine features of the Sealegs assembly are drawn and identified in a diagrammatical presentation, which is then overlayed upon photographs of the Sealegs S60-3W and the Orion S25-3WD showing the features common to both.

[147] The Judge then said:

> [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 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 leg pivot point is exactly the same, 1.0 metres. The size of the wheels and tyres are exactly the same (0.3 metres and 0.6 metres respectively). The distance between the pivot point and the centre of the wheel hub is the

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99 Davies, Caddick and Harbottle, above n 39, at [7–106], citing the authorities discussed at n 49 above.

100 High Court judgment, above n 2, at [266].

101 In the written opening there was a single reference to geometry in support of the proposition that the facts were "akin to those in *Oraka*". However *Oraka* was a case which involved drawings in which dimension and geometry were actually in play.

102 The diagram referred to was Figure 2 in the appendix to the judgment.

> same (0.7 metres). Where the measurements and geometry are different between the two systems, those differences are minor. The difference in the arc of the movement between the assemblies' extended positions and retracted positions is 13 degrees (Sealegs 110 degrees, Orion 97 degrees). The greater arc of the Sealegs systems is due to its leg being closer to vertical when extended than is the case with the Orion leg when it is extended.

[148] On this issue the expert evidence was instructive. Taking issue with Mr Bryham's contention that there are no functional constraints on the development of a design for an amphibious boat, Dr Field explained that there were multiple constraints:

> 41. … important constraints for the Sealegs/Orion/Smuggler class were: boat's weight, space available for stowing retracted wheels, structural form of the hull, road surface characteristics, road speed required, incline limits, required speed of deployment, craft on-water dynamic characteristics, required ground clearance/depth of outboard motor and existing steering mechanism.
>
> 42. Because Orion decided to provide amphibious equipment to enter almost the same market as Sealegs, it was inevitable that most of their functional constraints would be identical, leading to similar optimal solutions, and in some cases, almost identical components (such as the hydraulic motors and tyres). …

[149] We do not use the expression functional constraints in the very limited way in which Mr Henry purported to define the term for the purposes of his cross-examination of Dr Field, namely as comprising the following three constraints:

- first, that the amphibian has to float and perform like a boat;
- second, it has to be able to travel across land; and
- third, and most importantly, it has to be able to traverse from land to water and water back to land in a mechanically suitable manner.

Unsurprisingly Dr Field did not view those criteria as constraints but rather as amounting to a definition of an amphibious vehicle.

[150] The appellants also emphasised the point that nowhere in the judgment was it acknowledged that the experts' joint report[103] explained that the dimensions were derived from the hull of the recipient boat. They were at best a neutral factor in

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[103] See [54]–[55] above.

ascertaining whether there had been copying. Having identified the two distinctly separate categories of geometry, kinematic and manufacturing, the report said:

> (i) One possible set of measurements that define the Kinematic Geometry is shown attached. There are seven dimensions associated with the front wheel, nine associated with the rear wheels (with two dimensions common to the front wheel if identical tyres are used), and four dimensions associated with the hydraulic power pack.
>
> Most of these dimensions are associated with either the functional requirements of the amphibious craft, or are constrained by the hull to which the amphibious equipment is attached. There are eight dimensions of the hull, waterline and the ground position during on-land travel that are also needed before the Kinematic Geometry can be properly determined. We note that both systems have been fitted to hulls with identical relevant geometries, made by the one manufacturer.

After discussing the potential for similarity in respect of each of most of the 20 dimensions[104] the report stated:

> Many of these dimensions are determined by the functional requirements of the type of craft. Others are determined by a combination of the functional requirements and the dimensional characteristics of the selected hull. All the Kinematic Dimensions except for the separate dimensions of the hydraulic power pack have ideal values when one particular hull is selected. No Kinematic Dimension of the front or rear retracting arm assemblies is independently selectable if its ideal, or near-ideal value is sought.
>
> (ii) There are dozens of manufacturing dimensions for each system. Most of the dimensions (and in particular those that determine strength) are interdependent, meaning that once one dimension has been selected, several others become determined in order to achieve a selected performance. For example, Sealegs utilises a wide yoke at the front leg, while Orion uses a leg that is about half the width. The ground contact forces that pass into the respective yokes create very different forces in the yokes, and the dispositions of metal in the respective yokes are therefore quite different in order to satisfactorily absorb those loads.

[151] The appellants observed that the judgment appears to view with suspicion the fact that the Orion kit was designed for a boat of 2500 kg weight and 6–7 metres in length.[105] But the appellants are correct to say that it is a perfectly legitimate design choice for a party to make. Absent the existence of patents or a restraint of trade of

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104 Only dimensions 19 and 20 were not specifically discussed.

105 High Court judgment, above n 2, at [346]–[347].

some kind, a party such as Orion is at liberty to design and construct an amphibious kit for a standard powerboat, provided it does not copy the copyright works of another.

[152] There was no reference to "geometry" in the identification of the copyright works at the commencement of the trial[106] or in any of the "defining" seven schedules. The only references in those schedules to any feature of a geometrical nature were the two items which provided for a range of angles discussed at [119] above. It follows that "geometry" was not a feature comprised in the collocation as claimed. While there are many references to geometry in that part of the judgment addressing causality, we do not consider that either geometry or dimensions were valid considerations in the objective similarity assessment.

[153] It was inevitable that a visual comparison which incorporated those four flawed perspectives would lead to a conclusion that the leg assemblies were objectively similar. It is necessary that we proceed to make our own assessment.

Our analysis

[154] The assessment involves a visual analysis of the copyright work and those features of a defendant's work which are alleged to have been copied from the copyright work. Given the nature of the claim in this case, that involves a comparison of the respective leg assemblies and the manner of their attachment to the boat hulls. As the Supreme Court explained in *Henkel*, none of the various known components are ignored for to do so in a claim founded on an arrangement of such components would result in a vacuum.[107]

[155] We commence the analysis by reference to the work in respect of which we have found there to be some degree of originality, namely the bespoke form of arrangement visible in the leg assemblies on the prototypes, not the generic arrangement comprising the non-specific integers in the schedules. In undertaking the visual comparison, as *Designers Guild* and *Beckmann* explained, certain types of similarities should be disregarded. In our view those similarities are two-fold: first

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106 At [50] above.
107 *Henkel KGaA v Holdfast New Zealand Ltd*, above n 15, at [47].

similarity arising from a commonplace leg structure;[108] secondly similarity as a consequence of the deployment of an amphibious kit to vessels of similar size and dimension.

[156] When approached in that manner the problem for Sealegs is that its bespoke leg assembly arrangement and the Orion leg assembly arrangement are not visually similar. Various differences were identified by the appellants' expert witnesses, several of which were recognised by the Judge, for example:

> [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.

[157] Similarly in the Judge's conclusion on 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,

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[108] At [121]–[122] above.

> also similar in function and general appearance to the front and rear assemblies of the Sealegs SL100 system.

[158] As in the conclusion to [277] so too in [285] the Judge went on to explain that the differences that were visually apparent and the functional and internally located differences were more appropriately considered in the context of considering causality and substantiality. However at that point in the judgment, the Judge then discounted the differences because of his view that they made no change to the fundamental functionality of the leg assemblies. As he said, immediately following the paragraph which Mr Miles criticised as wrong in principle:[109]

> [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 … 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…
>
> (Emphasis in original.)

[159] Hence the identified differences were excluded from any role in the Judge's objective similarity analysis. Such an omission would be significant if, as our discussion to this point assumes, the copyright work relied upon was the bespoke

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[109] See [145] above.

arrangement whose originality derived from the particular features of certain of the components in the combination such as the yoke.

[160] However, possibly mindful of the differences in the appearance of the two systems, Sealegs confined its claim squarely to what we have described as the generic arrangement. This was made explicit in the following excerpt from the judgment:[110]

> 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.

[161] However this is a blind alley for Sealegs. The reason for that lies in our conclusion that there was no originality in the sequence of the generic components. Having based its claim not only on a collocation of known components in a functional sequence but also on a collocation of such components of the generic nature described in the schedules, Sealegs' case must stumble at the objective similarity stage for want of a copyright comparator.

[162] That conclusion has the consequence that the appeal must succeed notwithstanding the fact that it could not be disputed that access to Sealegs' design and production processes had been available to Mr Leybourne and Mr Zubcic.

[163] We now briefly record our views on the remaining issues.

The relevance of an engineer's perspective

[164] As *Copinger* states, in the assessment of objective similarity "visually significant" means visually significant to a person to whom the work would normally be addressed.[111] At trial the appellants contended that the assessment of objective

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110 High Court judgment, above n 2, at [361].
111 Davies, Caddick and Harbottle, above n 39, at [7–106].

similarity in this case required the Court to consider and compare the relevant works through the eyes of an engineer, relying on the approach adopted in *Hammar Maskin AB v Steelbro New Zealand Limited.*[112] Panckhurst J there accepted that where the comparison involved engineering drawings it was the impact on the engineering eye which was important.[113]

[165] Davison J rejected the appellants' argument on the ground that the relevant items for comparison were not engineering drawings as in *Hammar Maskin* but the actual leg assemblies as manufactured.[114]

[166] In *Billhöfer*[115] (the authority cited for the *Copinger* proposition above) Hoffmann J discussed *British Leyland Motor Corp v Armstrong Patents Co Ltd*[116] which concerned an exhaust system for a Marina motorcar, the salient feature of which was the flow-line. Having noted that, although Armstrong had not copied the British Leyland drawing which it had never seen, it had nevertheless taken the crucial dimensions of the British Leyland product, Hoffmann J then set out the passage which the appellants relied upon in this Court:[117]

> To whom, one asks, would the flow-line have been the salient feature and the dimensions "crucial"? Not to a visitor observing the exhaust pipe mounted on a plinth at the Tate Gallery but to the engineer wanting to make an exhaust which would fit under a Marina. In my judgment, therefore, the question in this case is whether the particular dimensions and spatial arrangements taken by Mr Hardcastle from the *Billhöfer* design would to an engineer have been of sufficient importance to constitute a substantial part of the overall drawing.

[167] The appellants argued that in a case like the present concerning mechanisms designed by engineers, expert engineering evidence was highly relevant to the assessment of the claimed similarity between the copyright work and the alleged infringement. However the Judge failed to take into account not only the extensive expert evidence but also the experts' joint report.[118]

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112 *Hammar Maskin AB v Steelbro New Zealand Ltd* HC Christchurch CIV-2006-409-977, 8 October 2008.
113 At [182].
114 At [263].
115 *Billhöfer Maschinenfabrik GmbH v TH Dixon & Co Ltd*, above n 50, at 122.
116 *British Leyland Motor Corp v Armstrong Patents Co Ltd* [1986] RPC 279 (CA).
117 At 122.
118 At [54]–[55] above.

[168] As already noted[119] unlike *Billhöfer* the present case as revised in opening was not one which relied on particular dimensions and spatial arrangements. If the Judge had addressed the case on the footing it was advanced and by applying the orthodox approach to objective similarity reflected in *Designers Guild* and *Beckmann*, then the expert evidence may not have been of moment.

[169] However in addition to ignoring points of difference in the assessment of objective similarity, ironically the Judge in fact treated both dimension and geometry as being significant. In consequence the expert evidence was relevant as serving to explain why in the circumstances similarities in dimension and geometry were not informative.

[170] For this reason we agree with the appellants that the Judge erred in failing to have regard to the expert evidence as to the commonplace nature of the components, their functional nature and the factors which explained perceived similarities in dimension and geometry.

A failure to take account of the appellants' expert evidence?

[171] If a claimant demonstrates sufficient similarity between the copyright work and the features alleged to have been copied and establishes that a defendant had prior access to the copyright work, it is then for the defendant to satisfy the Judge that, despite the similarities, the alleged infringement did not result from copying.[120]

[172] The appellants argued that the Judge erroneously failed to take into account the evidence of their expert witnesses that:

- an independent design path was followed;

- none of Sealegs' design information would have been of assistance to, and was therefore not appropriated by, the appellants in their design; and

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119 At [152] above.
120 Davies, Caddick and Harbottle, above n 39, at [7–04].

- no significant time, effort or skill on Sealegs' part could have been, or was, appropriated by the appellants in their development of the S25-4WD and S25-3WD.

[173] The Judge's finding that the appellants failed to show that the Orion amphibious system did not result from copying the Sealegs system was based on two conclusions. First he found that the evidence of Messrs Leybourne, Zubcic and Zhang was unreliable. Secondly, while accepting that the appellants did independently design alternative engineering solutions for several aspects of the Orion leg assemblies,[121] he held the view that design overlap was unacceptable even at the early stage of a design process.

[174] The Judge described the appellants' experts' analysis of the design process in this way:

> [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.

The Judge rejected this approach holding that, provided the plaintiff has embodied an original idea into a work for which copyright may legitimately be claimed, it did not matter at what stage of the professional engineers' design path that process occurred.[122]

[175] The Judge thus concluded:

> [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.

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121 High Court judgment, above n 2, at [400].
122 At [361].

[176] We consider that the Judge's reasoning, in particular the implications of the embodiment of an "original idea" in a copyright work, stemmed from a conflation of Mr Bryham's idea with its expression in the leg assemblies. It was in that same paragraph[123] that the Judge went on to say that the same fundamental design decision and "solutions" developed by Sealegs had to have been adopted by Mr Zubcic.

[177] In our view the Judge's failure to distinguish between Mr Bryham's idea and such copyright as subsisted in its expression in the leg assemblies had the consequence that expert evidence as to independent design affording an explanation which might rebut the inference of copying was erroneously excluded from consideration.

Undue reliance on credibility issues?

[178] The appellants contended that the Judge placed undue reliance on credibility findings rather than on the expert evidence as to differences between systems and the pursuit of an independent design path. It necessarily follows from our conclusions as to the relevance of the appellants' expert evidence that such evidence was accorded relatively less significance than the Judge's conclusions on the credibility of the appellants' witnesses.

[179] However while the appellants' expert evidence was given less than proportionate significance by reason of the Judge's approach, that evidence was opinion evidence as to whether a conclusion of independent design was available in the circumstances. It was evidence which needed to be weighed with the other evidence which led the Judge to make credibility findings against the appellants. However those credibility findings are not challenged for the purpose of the appeal.

[180] So while we consider that the exclusion of the expert evidence resulted in there being undue reliance on the credibility findings, it does not follow that the Judge's conclusion would necessarily have been different if the expert evidence had been taken into account. Our conclusion on this issue is not to be read as suggesting otherwise.

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123 At [361].

Result

[181] The appeal is allowed. The orders in the High Court are set aside.

[182] The respondent must pay the appellants one set of costs for a complex appeal on a band B basis plus usual disbursements. We certify for second counsel.

Solicitors:
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