



## BY EMAIL ONLY

Innovus Technology Transfer (Pty) Ltd  
Stellenbosch University  
PO Box 3135  
Matieland  
7602

Date: 20 February 2019  
Our Ref: **PL1156ZA00-CA9NE/LD**  
Your Ref: **SU-Disc-2015-0037**

Attention: Ms Anita Nel

Dear Anita

### **Re: Memorandum on ownership of intellectual property pertaining to the Sharksafe Barrier technology**

1. You have informed us that Dr Craig O'Connell is accusing Stellenbosch University of misappropriating his intellectual property by filing patent applications in fraud of his rights.
2. In light of this, you have requested our views on whether the respective inventors cited on two international patent applications pertaining to your Sharksafe Barrier technology are correctly cited. You also instructed us to determine the rightful proprietors of these applications.

#### **Executive Summary**

3. Stellenbosch University is the rightful proprietor of international patent application numbers PCT/IB2013/060446 ("the 2013 application) and PCT/IB2017/051701 ("the 2017 application"), both entitled "A Shark Barrier".
4. Dr O'Connell is correctly cited as co-inventor on the 2013 application. Dr O'Connell will share in any financial proceeds from successful commercialisation of the shark barrier disclosed in the 2013 application. This arrangement was confirmed in a written agreement entered into between Dr O'Connell and Stellenbosch University. This was never disputed by either Dr O'Connell or Stellenbosch University.
5. Information available to us shows that Dr O'Connell did not contribute to conceptualisation of the 2017 application. He is therefore correctly not cited as a co-inventor on the 2017 application.
6. Correspondence in our possession show that Stellenbosch University has been acting within its rights in commercialising the intellectual property originating from the Sharksafe Barrier project.

*Africa's first ISO 9001 Certified Firm*

---

Postal Address: PO Box 440, Century City (Cape Town) 7446, South Africa  
Physical Address: 4 East Park, Central Park on Park Lane, Century City (Cape Town)  
7441, South Africa (couriers, deliveries & visits only)  
Document Exchange: Docex 16, Century City  
Tel: +27 21 526 2800 | Fax: +27 21 526 2801 | E-mail: [service@vonseidels.com](mailto:service@vonseidels.com) | [www.vonseidels.com](http://www.vonseidels.com)

**Von Seidels**  
Intellectual Property  
Attorneys

Partners: [www.vonseidels.com/partners](http://www.vonseidels.com/partners)



### **The 2013 patent application**

7. In 2013, the 2013 application was filed by Stellenbosch University. Dr O'Connell was cited as a co-inventor on the application with Mr Mike Rutzen, Dr Sara Andreotti and Prof Conrad Matthee.
8. The invention is a shark barrier having a specific physical structure which includes multiple resiliently flexible, elongate members arranged to mimic a kelp forest. The elongate members are provided with magnets which over-stimulate the electro-sensory systems of sharks, thereby repelling them.
9. It is important to appreciate that the invention is not merely the use of magnets in a shark barrier to repel sharks. Although the magnets form part of the invention, this is by no means the sole essential feature of the shark barrier.
10. In light of Dr O'Connell's accusations that he was the sole inventor of the invention, we considered several papers published by him between 2008 and 2011. Each of these papers focuses on the use of magnets as an avoidance mechanism to reduce shark attacks. No reference is made to any particular physical structure that can be used to form a shark barrier.
11. We also considered published work relating to shark barriers conducted by Mr Rutzen, Dr Andreotti and Prof Matthee during the same time. It became apparent from their work that they have (either individually, or in collaboration) been experimenting with different physical shark barrier structures since before 2008.
12. In 2009 Dr Andreotti and Mr Rutzen submitted a confidential research project proposal pertaining to shark barriers to the University of Aberdeen ("the 2009 proposal"). The 2009 proposal included a drawing of a proposed shark barrier. Upon comparison, it is apparent that the shark barrier of the 2009 proposal has the same basic structure as the shark barrier claimed in the 2013 application.
13. Email correspondence between Dr O'Connell and Dr Andreotti shows that Dr O'Connell collaborated with Dr Andreotti, Mr Rutzen and Prof Matthee on the shark barrier of the 2013 application between approximately 2011 and 2013. The correspondence further shows that the inventors cited on the 2013 application collaborated as part of Stellenbosch University's Shark Safe team.
14. It is evident that the shark barrier of the 2013 application was a collaborative effort between the inventors cited on the 2013 application. Each of the inventors concluded an assignment agreement with Stellenbosch University in terms of which their rights, titles and interests in and to the invention were assigned to the university. Stellenbosch University is thus the rightful proprietor of the 2013 application.
15. For his contribution as an inventor on 2013 application, Dr O'Connell will receive a share of the royalties resulting from successful installations of the shark barrier. This was formally arranged in a written agreement entered into between Dr O'Connell and Stellenbosch University.



### **The 2017 patent application**

16. In 2017, the 2017 application was filed by Stellenbosch University.
17. The 2017 application is a result of ongoing research conducted by Stellenbosch University after filing the 2013 application. The invention pertains to a shark barrier having, among other things, a novel anchoring assembly and a specific mechanism of linking elongate members forming part of the shark barrier.
18. The presence of magnets is not an essential feature of the shark barrier disclosed in the 2017 application as this formed part of the prior art (i.e. the 2013 application). As evidenced by Dr O'Connell's papers and videos, his research did not extend beyond the effect of magnets on sharks. Further, none of the essential features of the shark barrier disclosed in the 2017 application were disclosed in any of his papers or videos.
19. Based on correspondence in our possession, Dr O'Connell left South Africa by the first quarter of 2014. He was not involved in any research pertaining to the shark barrier of the 2017 application. He only returned to South Africa to test the implementation of the shark barrier of the 2013 application (which cites him as co-inventor) and to produce documentary-style films of his interactions with sharks. From the films, it is apparent that the shark barrier used during his research is not the shark barrier disclosed in the 2017 application.
20. Dr O'Connell's decision not to be involved with the Shark Safe Barrier project after the 2013 application was filed is further evidenced by an email he sent to Dr Andreotti in which he states "*I will edit the kelp videos and write the paper and we will proceed as normal; however, after that I do not think I want to be part of this team... I suggest we get this paper out of the way and move on*".
21. In light of the above, we are of the view that it is correct that Dr O'Connell was not cited as an inventor on the 2017 application.
22. As with the 2013 application, all the inventors cited as such in the 2017 application assigned their rights, titles and interests in and to the invention disclosed in the 2017 application to Stellenbosch University.
23. Correspondence in our possession show that the other members of the Shark Safe team explained to Dr O'Connell that the monopoly claimed in the 2017 application is for the incremental inventive features disclosed therein. Stellenbosch University clearly communicated to him that inventorship is a matter of fact and that he would still benefit from his contribution to the 2013 application.

### **Conclusion**

24. We are of the view that the inventors cited in the 2013 and 2017 applications, respectively, are factually correct.
25. We are also of the view that Stellenbosch University is the rightful proprietor of all rights, titles and interests in the intellectual property disclosed in the 2013 and 2017 applications by virtue of assignment agreements entered into with the inventors of the respective applications.



26. By virtue of having assigned all his rights in the Shark Safe Barrier to Stellenbosch University in return for payments obtained from commercially successful installations, Dr O'Connell has no outstanding rights in the Shark Safe Barrier.

Kind regards

A handwritten signature in black ink, appearing to be 'L. Du Toit', located below the text 'Kind regards'.

**LLEWELLYN DU TOIT**  
**(Assisted by Cronje Jackson)**  
VON SEIDELS