Federal Court  Cour fédérale

Date: 20220512

Docket: T-954-18

Citation: 2022 FC 709

Ottawa, Ontario, May 12, 2022

PRESENT: Madam Justice McDonald

BETWEEN:

DEEPROOT GREEN INFRASTRUCTURE, LLC AND DEEPROOT CANADA CORP.

Plaintiffs/
Defendants By Counterclaim

and

GREENBLUE URBAN NORTH AMERICA INC.

Defendant/
Plaintiff by Counterclaim

JUDGMENT AND REASONS

I. Overview

[1] These are the reasons following a contempt hearing, where the Plaintiffs (DeepRoot) allege that the Defendant (GreenBlue) is in contempt of the Court's Judgment in *Deeproot Green Infrastructure, LLC v Greenblue Urban North America Inc*, 2021 FC 501 (Judgment).

[2] In the underlying Judgment, the Court held that GreenBlue's RootSpace structural cells infringed various claims of DeepRoot's patents: Canadian Patent Number 2,552,348 (348 patent) and Canadian Patent Number 2,829,599 (599 patent). The Judgment also enjoined GreenBlue, by injunction, from infringing DeepRoot's 348 and 599 patents.

[3] GreenBlue denies that it is in contempt of the Court's Judgment and claims that its RootSpace AirForm package is a "design-around" of the 348 and 599 patents, and, therefore, outside the Court's injunction.

[4] For the reasons that follow, based upon the evidence, I am not satisfied that DeepRoot has established beyond a reasonable doubt that GreenBlue is in contempt of the Court's Judgment. This contempt proceeding is, therefore, dismissed.

II. Background

[5] DeepRoot's 348 patent and 599 patent are both titled "Integrated tree root and storm water system". The field of the invention is the same for both patents, and states as follows:

> This disclosure relates generally to a system for the management of tree roots and storm water runoff in urban areas, and more particularly to integrated cells used in a structural system for supporting sidewalks and other paved areas that enables tree root growth and accommodates filtering, retention, storage and infiltration of storm water while preventing hardscape damage.

[6] Relevant to this proceeding are the following summary descriptions of the inventions of the patents.

[7] The 348 patent states:

> According to one particular aspect of the invention, there is provided a structural cell system for supporting hardscape areas that enables tree root growth and accommodates filtering, retention, storage and infiltration of storm water while preventing hardscape damage, comprising; a plurality of structural cells positioned below a hardscape substantially covering the structural cells, the structural cells each comprising: a base, a top, and structural members positioned therebetween so as to maintain the base and the top at least approximately 8 inches apart, the base, top, and structural members collectively defining a volume that includes the base, top, and structural members, <u>wherein at least approximately 85% of the volume</u> can be filled with soil; wherein the structural cell bears substantially the entire load of both the hardscape and commercial vehicle traffic directed thereover, while maintaining the soil within the volume in a low compacted state accommodating natural growth of structural roots of a tree within the volume; one or more permeable barriers around the structural cells; water ingress into the plurality of structural cells; and water egress from the plurality of structural cells. (Emphasis added.)

[8] The 599 patent states:

> According to one particular aspect, there is provided a structural cell for supporting hardscape, the cell comprising: a base; and periphery support members engaging the base and extending

> outwardly from said base, for attaching to a base of another cell or a lid and for supporting said hardscape, said support members being sized and arranged so that at least approximately eighty five percent of a volume defined by outer edges of said cell is a void space. (Emphasis added.)

[9] In construing the claims, I accepted that "85% of the volume", as referred to above, was a measurement tolerance meaning 84.5% or greater (Judgment at para 117).

[10] In the Court's Judgment, I concluded that GreenBlue's RootSpace product, shown below, infringed both patents:

[11] The Judgment states that:

> Claims 1-5, 7-8, 11-14, 16-20, 22-24 of Canada Patent 2,552,348 are valid and are infringed by the Defendant's RootSpace;

> Claims 1-4 of Canada Patent 2,829,599 are valid and are infringed by the Defendant's RootSpace;
>
> The Defendant is permanently enjoined from infringing these claims of Canada Patent 2,552,348 and these claims of Canada Patent 2,829,599 until the expiry of the patents;

[12] According to Mr. Ray, the CEO of DeepRoot, obtaining the Court's injunction against GreenBlue was an important part of the Judgment, as they are close competitors in the same niche market.

[13] After receipt of the Court's Judgment dated May 28, 2021, GreenBlue issued a press release. Mr. Ray explained that he was infuriated when he saw the press release of GreenBlue which stated that "(DeepRoot) entered the market and started using GreenBlue's concept" and that "DeepRoot has since used its patents to bully competitors and pressure them to remove unique and superior products solely for its commercial gain". The press release also indicated that GreenBlue would be introducing the RootSpace AirForm package to comply with the Court's injunction.

[14] It is DeepRoot's position that GreenBlue's RootSpace AirForm package infringes their patents and GreenBlue is, therefore, in contempt of the Court's injunction.

III. Show Cause Order

[15] This hearing was held pursuant to Rule 467 of the *Federal Court Rules*, SOR/98-106 [*Rules*] following a Show Cause Order issued on October 7, 2021, requiring:

> 1. A representative of GreenBlue shall appear before the Court on a date to be set and be prepared to hear proof of the acts with which GreenBlue is charged, namely, breaching the Court's injunction granted in 2021 FC 501 by:
>
> a) Selling or offering for sale in Canada the RootSpace structural cells as part of the RootSpace AirForm package;
>
> b) Importing or exporting RootSpace structural cells for commercial sale;
>
> c) Stockpiling RootSpace structural cells in Canada for commercial purposes;

[16] Following an adjournment of the original hearing dates for the contempt hearing, GreenBlue undertook not to sell the RootSpace AirForm system until the determination of the contempt motion. There is no allegation that they have not abided by this undertaking.

IV. The Evidence

A. *The Witnesses*

[17] At the contempt hearing, DeepRoot presented evidence from the following witnesses:

- Charles Graham Ray, CEO of DeepRoot;

- Marc Crans, Technical Manager at Infinity Testing Solutions, who provided a report dated December 9, 2021; and
- Dr. Richard leBrasseur, Assistant Professor in Landscape Architecture at Dalhousie University, who was previously qualified as an expert witness at the trial, and who prepared a report dated December 10, 2021.

[18] GreenBlue called evidence from the following witnesses:

- Dean Bowie, CEO of GreenBlue Urban Limited (UK) and President of GreenBlue Urban North America;
- Jeremy Bailey, a consultant and former General Manager for GreenBlue Urban North America;
- Dr. Jennifer Drake, an associate Professor at the University of Toronto, Faculty of Engineering and Applied Science, Department of Civil and Mineral Engineering, who provided a report dated January 21, 2022;
- Michael Hoffman, P.E., who provided a report dated January 21, 2022; and
- Dr. Barrett L. Kays, a professional landscape architect and soil scientist, who was previously qualified as an expert witness at the trial, and who prepared a report dated January 21, 2022.

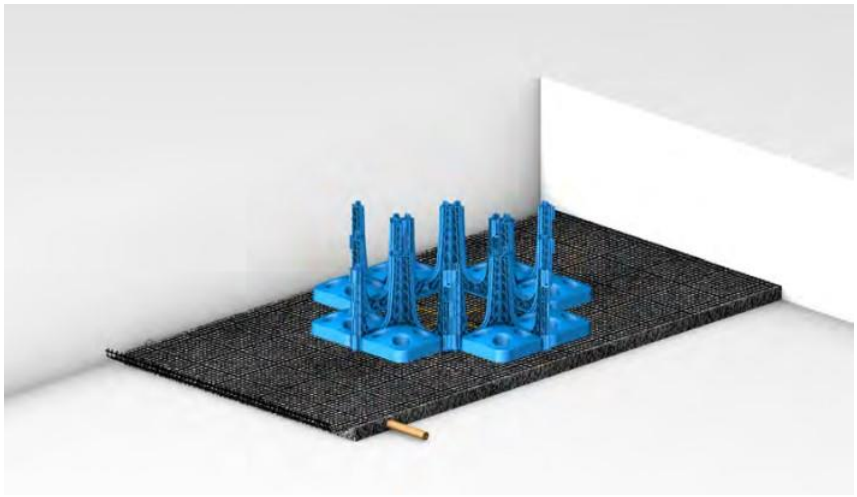
B. *GreenBlue's RootSpace AirForm*

[19] Mr. Bowie, the President of GreenBlue, testified that planning for a design-around of the 348 and 599 patents started during the infringement trial in preparation for the "worst-case scenario". Mr. Bowie testified that the Court's Judgment "drew a line in the sand" by construing the patents as consisting of a structural cell with at least 84.5% available volume. GreenBlue says it intentionally designed the AirForm to achieve less than 84.5% soil volume. In fact, he says they aimed for the structural cell to have a soil volume of 82%. According to Mr. Bowie, while less soil volume is a drawback, the addition of the AirForm which is installed at the bottom of the structural cell has the benefit of increasing the aeration in the tree pit. Additionally, he claims that the AirForm helped with the installation process by keeping the structure square and providing rigidity.

[20] GreenBlue started to sell the RootSpace AirForm package in July 2021. Mr. Bowie confirmed that the AirForm package is sold in components as it would be too expensive to ship as an assembled product. The AirForm component is manufactured in Ontario while the rest of the components are manufactured in the United Kingdom. He explained that the AirForm as a standalone product has no utility and is only sold as part of the RootSpace AirForm package.

[21] The RootSpace AirForm product and components are shown in the image below:

[22] According to GreenBlue's installation instructions, the RootSpace AirForm is made of three components: the AirFlow Lid, Upright panels, and the AirForm. There is also an optional fourth element of an infill panel (which is shown in the above image) for increased lateral stability. The instructions are to install the upright panels together, then the AirForm panel. Soil is then placed on top, followed by the AirFlow lid. A partial construction is shown in the installation instructions, reproduced below:



V. Issue

[23] On this contempt proceeding, the issue is whether DeepRoot has established beyond a reasonable doubt that GreenBlue's sale of the RootSpace AirForm contravenes the Court's Judgment dated May 28, 2021.

VI. Analysis

A. *Legal Principles*

[24] Pursuant to Rule 469 of the *Rules*, contempt of court must be established beyond a reasonable doubt.

[25] In *Carey v Laiken*, 2015 SCC 17 [*Carey*], the Supreme Court confirmed the test for civil contempt has the following three elements that must be established beyond a reasonable doubt:

(1) The order alleged to have been breached must state clearly and unequivocally what should and should not be done;

(2) The alleged contemnor must have had knowledge of the order; and

(3) The alleged contemnor must have intentionally carried out the act that the order prohibits or failed to carry out the act that the order requires (at para 33-35).

[26] *Carey* also notes that "[t]he contempt power is discretionary and courts have consistently discouraged its routine use to obtain compliance with court orders" (at para 36). The court in

Carey states that "where an alleged contemnor acted in good faith in taking reasonable steps to comply with the order, the judge entertaining a contempt motion generally retains some discretion to decline to make a finding of contempt" and may "decline to impose a contempt finding where it would work an injustice in the circumstances of the case" (at para 37).

[27] In order to make a finding of contempt, it is not necessary to establish an intention to disobey a court order, or an intention to act with contempt (*Canadian Standards Association v P.S. Knight Co Ltd*, 2021 FC 770 at para 46 [*Canadian Standards Association*].

B. *Was the Order Clear and did GreenBlue have Knowledge of the Order?*

[28] It is not disputed that GreenBlue had knowledge of the Judgment and the Court's injunction, and understood that they were enjoined from selling the RootSpace product. This was confirmed by both Mr. Bowie and Mr. Bailey in their testimony. Mr. Bailey testified that after receipt of the Court's Judgment, they informed their clients that the RootSpace was not available, and a new product was being developed. He also testified that some RootSpace orders were cancelled.

[29] The evidence is that GreenBlue had knowledge of the Court's Judgment and understood the terms of the Court's injunction, therefore, I am satisfied that the first two elements of the *Carey* test have been established.

C. *Did GreenBlue Intentionally Carry Out the Act the Order Prohibits?*

[30] I now turn to consider the third part of the *Carey* test – whether the sale of the RootSpace AirForm by GreenBlue is an act prohibited by the Court's injunction.

[31] This is not an infringement action; however, some consideration must be given to the features of the RootSpace AirForm to assess if the sale of this package by GreenBlue puts it in contempt of the Court's Judgment. This will be assessed in relation to the following topics:

(i) What is the available volume of the RootSpace AirForm?

(ii) Does the AirForm contribute to the structure?

(i) What is the Available Volume of the RootSpace AirForm?

[32] The evidence of DeepRoot's expert, Dr. leBrasseur, is that the available volume in the RootSpace AirForm is likely over 85% when the void space both above and below the AirForm insert is considered. Dr. leBrasseur, who observed the testing done by Mr. Crans, concluded that the AirForm is likely to deform if exposed to the weight of soil, thereby increasing the volume available above the AirForm beyond the claimed 82%.

[33] However, Dr. leBrasseur confirmed that he did not perform any volume measurements himself, and during cross-examination, he agreed that when the AirForm is used with the soil system, the available volume is reduced.

[34] GreenBlue's expert, Dr. Kays, undertook an analysis of the RootSpace AirForm system, to consider whether it is within the scope of the 348 and 599 patents as construed in the Court's Judgment. In Dr. Kays' opinion, the AirForm system is missing the essential element of the 348 and 599 patents that the cell volume be "at least approximately 85%". According to Dr. Kays, the AirForm component reduces the cell volume below 84.5% open space available for the soil and is, therefore, outside the 348 patent and the 599 patent.

[35] Dr. Drake testified on behalf of GreenBlue. In her report, she outlines the testing she undertook to measure the available volume for soil and storm water of the RootSpace AirForm. During her evidence, she explained that her preferred method to measure volume was a displacement measurement; however, there was difficulty with this method as water leaked around the plastic wrap used to isolate the product during testing. She, therefore, measured the bulk volume of the unit by measuring the unit height, width and depth. In her report, she states at paragraph 29, "based on the laboratory work that we completed, and subject to the qualifications and assumptions noted above, the Available Volume for the AirForm System modules that we tested ranged from 82% - 83%, even if the lid was omitted".

[36] During cross-examination, Dr. Drake was taken through a series of calculations suggesting that her measurements were an underestimate and that the available volume actually exceeds 84.5%. She acknowledged that the lid only covers 50% of each of the four uprights that it sits atop of and she acknowledged that her bulk volume measurement did not include 50% of the plastic of the uprights. However, while she acknowledged her calculations might be an

underestimate, her opinion was that her measurements were closer to the true volume than counsel's measurements, and were reasonable.

[37] Despite the challenge to Dr. Drake's measurements, she is the only expert who undertook measurements of the volume of the RootSpace AirForm. Her evidence is that the volume of the structural cell is reduced by the presence of the AirForm; and while the precise percentage of reduction is not clear, I accept her opinion that it is reduced.

[38] Accordingly, on this issue, there is not evidence – beyond a reasonable doubt – that the RootSpace AirForm has available volume space of at least 84.5%.

(ii) Does the AirForm Contribute to the Structure?

[39] DeepRoot's trial expert, Dr. leBrasseur, concludes as follows in his report:

> GreenBlue has not modified the RootSpace Upright Panel and AirFlow Lid used in the RootSpace AirForm System and these are the same components that were found to infringe the 348 Patent and the 599 Patent in the Trial Judgment. Rather, the only difference between the infringing RootSpace Structural Cells and the RootSpace AirForm System is that GreenBlue now provides the RootSpace AirForm as an additional component (at para 63).

[40] Dr. leBrasseur describes the AirForm as a lightweight product that slides down into the structural cell. He says the AirForm is not attached to the base or the uprights, and if you turn the structural cell over, the AirForm would fall out. As well, in his opinion, it was necessary to fully assemble the structural cell before adding the AirForm; therefore, the AirForm is simply an

add-on and does not form part of the structural cell. According to Dr. leBrasseur, it would not provide any structural assistance in keeping the RootSpace Upright Panels square and rigid during installation and use.

[41] In support of his opinion, Dr. leBrasseur relies upon the load testing completed by Mr. Crans to conclude in his report that "the AirForm Insert is not strong enough to withstand or manage the significant loads associated with the weight of hardscape and commercial vehicles" and "is likely to deform or may even fail if exposed to the weight of soil within the structural cell above it or during loading" (at paras 117-118).

[42] On cross-examination, Dr. leBrasseur conceded that he cannot give an opinion with regard to load-bearing capacity as he is not a civil engineer and the Court's Judgment held that the skilled person would include a civil engineer for expertise on load-bearing capacity (Judgment at para 69).

[43] Mr. Crans completed load testing on the AirForm insert and concluded "it does not appear that the AirForm materially contributes to the structural integrity of the RootSpace Airform system" (at para 22). On cross-examination, Mr. Crans confirmed that he did not understand how the AirForm worked in the field, and that no testing was done on the AirForm with soil loads. He confirmed that the force in the field would be different than the force he applied in the lab, which was directly over the full flat surface of the AirForm. Finally, he confirmed that he did not undertake any side or rotational testing.

[44] Mr. Bowie of GreenBlue testified that the AirForm helps with installation and claims that the grooves on the sides of the AirForm interlock with the uprights. When challenged on his claim, he explained that in situations where they do not interlock, that is the result of slight differences in sizes of the AirForm owing to manufacturing tolerances. He pointed to the photograph attached to his affidavit, which shows the AirForm being held in place in an inverted RootSpace structural cell.

[45] Mr. Hoffman, a professional engineer, states in his report that "the AirForm panel should be considered a part of the system's structure, since it does contribute to lateral and vertical loads in the overall system. AirForm panels aid in keeping the vertical panels square and provide rigidity contribution laterally" (at para 13). In his opinion, the AirForm provides support perpendicularly and provides horizontal diaphragm assistance to the RootSpace AirForm system. He claims that with downward pressure, the AirForm moves outward and engages the uprights. He disagrees with the testing done by Mr. Crans, saying his testing does not replicate the use of the product in the field.

[46] On cross-examination, Mr. Hoffman clarified that although the AirForm is not attached in the sense of being fastened, it becomes attached when it is loaded with soil because of the interconnection between the AirForm and the other components. In other words, there is a structural reaction which creates the attachment.

[47] When the AirForm should or could be placed during the installation process was a topic of disagreement. Mr. Hoffman disagrees with Dr. leBrasseur when he states that all four uprights must be in place in order to properly install the AirForm. However, when he was asked to demonstrate that the structural cell could be assembled with the AirForm and with only three uprights in place, Mr. Hoffman had to turn the AirForm on its side to install the fourth upright. By contrast, Dr. Kays demonstrated that it was possible to simultaneously insert the AirForm and the fourth upright and he claims that the RootSpace AirForm can be assembled with two, three, or four uprights in place.

[48] The evidence on whether the AirForm adds an element to the structural cell remains unclear. Accordingly, it is not possible for the Court to make a definitive finding on this issue. As the Court is left with doubts on this issue, GreenBlue gets the benefit of the doubt.

D. *Are the Photographs of Installation Evidence of Contempt?*

[49] DeepRoot argues that the photographs introduced into evidence showing partial installation of the RootSpace AirForm system constitute direct evidence of the use of the RootSpace product and thus direct proof of contempt of Court.

[50] Mr. Bailey was questioned on the photographs he took (Exhibit 36) in August 2021 which show a partial installation at a Minto project in Ottawa. He was on-site for the installation to provide support to the contractor. He explained that the photographs were taken as the installation progressed. According to Mr. Bailey, the AirForm is normally inserted after two or

three uprights are in place. He says the AirForm is inserted in sequence with the fourth upright but acknowledged that the four uprights must be in place for the AirForm to properly function.

[51] The photographic evidence depicts various stages of an installation. In some pictures the structural cells do not contain the AirForm insert. However, the AirForms are clearly shown in the pictures and GreenBlue's installation instructions tell installers to use the AirForm and to install them before filling the structures with soil.

[52] Thus, I cannot conclude that the photographic evidence depicts the use of RootSpace in contravention of the Court's injunction as it is clear that AirForm inserts are shown in the photographs. In any event, photographs depicting that the installation "could" possibly infringe the Court's injunction if the AirForm is not installed does not constitute evidence, beyond a reasonable doubt, of infringement.

E. Did GreenBlue Induce Infringement?

[53] Even if GreenBlue did not directly contravene the Court's injunction, the Court may nonetheless find they are in contempt of the injunction if they induced infringement (*Corlac Inc v Weatherford Canada Inc*, 2011 FCA 228 at para 162 [*Corlac*]). The test for induced infringement was set out in *Corlac* as follows:

> First, the act of infringement must have been completed by the direct infringer. Second, the completion of the acts of infringement must be influenced by the acts of the alleged inducer to the point that, without the influence, direct infringement would not take place. Third, the influence must knowingly be exercised by the

> inducer, that is, the inducer knows that this influence will result in the completion of the act of infringement (at para 162).

[54] DeepRoot argues that every assembly of the RootSpace AirForm is an act of infringement of at least the 599 patent, as it constitutes an assembly of the RootSpace structural cell. They argue that GreenBlue is, therefore, liable for inducing infringement.

[55] There is evidence of the sale and assembly of the RootSpace AirForm package, but there is no evidence of the sale or assembly of the original RootSpace product since the Court's Judgment. There is also no evidence that GreenBlue has marketed or promoted the original RootSpace product since the Judgment.

[56] In the circumstances, as I am not satisfied that there is evidence beyond a reasonable doubt that the RootSpace AirForm is an infringing product, I cannot accept that the evidence showing the installation of the AirForm product amounts to an inducement to infringe.

VII. Conclusion

[57] On this contempt proceeding, the burden of proof is on DeepRoot to establish with evidence beyond a reasonable doubt, that GreenBlue's RootSpace AirForm infringes the Court's injunction granted in the Judgment. The evidence with respect to the available volume and whether the AirForm forms part of the structural cell is sufficient to raise a doubt as to whether it is an infringing product. In the circumstances of a contempt of Court proceeding, GreenBlue

gets the benefit of that doubt. Accordingly, the Court is not convinced by the evidence that GreenBlue's RootSpace AirForm infringes DeepRoot's patents.

[58] The contempt motion is, therefore, dismissed with costs to GreenBlue.

JUDGMENT IN T-954-18

THIS COURT'S JUDGMENT is that:

1. The motion is dismissed; and

2. With costs payable to the Defendant.

"Ann Marie McDonald"
Judge

FEDERAL COURT

SOLICITORS OF RECORD

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DATED:	MAY 12, 2022

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