JURISDICTION	:	STATE ADMINISTRATIVE TRIBUNAL
ACT	:	BUILDING SERVICES (COMPLAINT RESOLUTION AND ADMINISTRATION) ACT 2011 (WA)
CITATION	:	MARSH OUTDOOR PTY LTD and SCHNURIGER [2021] WASAT 108
MEMBER	:	DR B MCGIVERN, MEMBER MR R WOODFORDE, SESSIONAL MEMBER
HEARD	:	19 MAY 2021
DELIVERED	:	17 AUGUST 2021
FILE NO/S	:	CC 1482 of 2020
BETWEEN	:	MARSH OUTDOOR PTY LTD Applicant AND BARRY SCHNURIGER First Respondent LOUISE SCHNURIGER Second Respondent

Catchwords:

Building Services (Complaint Resolution and Administration) Act 2011 (WA) - Review of decision of Building Commissioner to issue building remedy order for remedial work - Corrosion of patio roof panels - Whether corrosion the result of moisture or deposits - Non-compliance with manufacturer's installation guide - Whether regulated building service was not carried out in a proper and

proficient manner or is faulty or unsatisfactory - Whether decision of Building Commissioner should be confirmed, varied or set aside

Legislation:

Building Services (Complaint Resolution and Administration) Act 2011 (WA), s 3, s 5, s 5(1), s 5(2), s 9, s 11(1), s 17, s 20, s 36, s 37, s 37(1), s 37(1)(a), s 49, s 57(1)
Home Building Contracts Act 1991 (WA), s 3(1), Sch 1, cl 5
Home Building Contracts Regulations 1992 (WA), reg 2A
State Administrative Tribunal Act 2004 (WA), s 17, s 27(1), s 27(2), s 29(1), s 29(3)

Result:

Decision of the Building Commissioner varied

Category: B

Representation:

Counsel:

Applicant	:	In Person
First Respondent	:	In Person
Second Respondent	:	In Person

Solicitors:

Applicant	:	N/A
First Respondent	:	N/A
Second Respondent	:	N/A

Case(s) referred to in decision(s):

Diploma Construction (WA) Pty Ltd v South Central WA Pty Ltd [2015] WASC 289
Gemmill Homes Pty Ltd and Sanders [2018] WASC 179
Holman and W&D Moffatt Pty Ltd [2016] WASAT 105
Northcott and Realgold Corporation Pty Ltd (CAN 117 580 560) [2020] WASAT 72

REASONS FOR DECISION OF THE TRIBUNAL:

Introduction

1 In broad terms, this dispute concerns a patio constructed by the applicant, Marsh Outdoor Pty Ltd (**Marsh**), at the respondents' property in 2017. Having accepted and investigated a complaint from the respondents about the patio, on the Building Commissioner (**BC**) issued a building remedy order (**BRO**) against Marsh. In its application to the Tribunal, Marsh seeks review of the BRO, arguing that the BC did not adequately consider the evidence or arguments it raised. The respondents continue to assert that the patio is deficient and that a BRO is warranted.

Issues

2 The following issues are addressed in the reasons that follow:

a) What is the nature and basis of the review to be undertaken by the Tribunal?

b) Is there a proper basis upon which to make a BRO? That is, in building the patio, did Marsh provide a regulated building service that was not carried out in a proper and proficient manner or is faulty or unsatisfactory?

c) If so, what is the appropriate remedy?

Evidence and material facts

3 A final hearing of the application was held on 19 May 2021.

4 The Tribunal prepared a hearing book containing the materials filed in the Tribunal before the hearing. That hearing book was taken into evidence (**Exhibit 1**) and includes:

a) the application filed by Marsh dated 9 November 2020;[1]

b) documents provided to the Tribunal by the BC,[2] including:

[1] Exhibit 1, tab 1.
[2] Exhibit 1, tab 3.

(i) the complaint filed by the respondents with the BC dated 15 July 2019 (**Complaint**);

(ii) the investigation report of the BC's authorised investigator dated 12 October 2020 (**Investigation Report**) and supporting documents;

(iii) the BRO the subject of the application, dated 14 October 2020, and the BC's written reasons for making it dated 18 January 2021 (**BC's Reasons**); and

c) bundles of documents submitted by each of the applicant and respondents,[3] including a USB containing video footage and further documents filed by the applicant.[4]

5 At the hearing, each of the parties gave oral evidence (Mr Peter Marsh and Mr Laurence Marsh gave evidence for the applicant) and in addition:

a) the respondents called Mr Richard Machell as an expert witness; and

b) Marsh was permitted to play video footage which was filmed at the respondents' property, but did not call any other witnesses.

6 All of the above evidence has been considered by the Tribunal in making our findings on material questions of fact and in arriving at our decision.

Background facts

7 The following facts are found by the Tribunal and, except as otherwise stated, were not contentious.

8 In 2017, the respondents engaged Marsh (trading under Marsh Outdoor Living Centres) to construct an outdoor patio to abut their

[3] Exhibit 1, tab 4 and tab 5 respectively.
[4] Exhibit 1, tab 6.

dwelling at 3 Combs Court, Wellard in Western Australia, for a contracted sum of $8,000.[5]

9 Marsh:

a) submitted an application for a building permit, together with supporting plans, to the City of Kwinana on 11 July 2017 (**Building Permit Application**), which permit was granted on 8 August 2017;

b) commenced construction of the patio on 30 September 2017 and completed it on 5 October 2017.

10 As appears from the Building Permit Application, the patio is:

a) 5300 millimetres wide, abutting and fixed to the dwelling at the rear;

b) 8000 millimetres long along the northern aspect, and 1050 millimetres long along the southern aspect (to accommodate the angle of the dwelling wall);

c) constructed of a steel frame, with a single-pitch roof comprising steel battens and insulated steel panels, with the pitch falling north to south.

11 The insulated steel roofing panels used in the construction of the patio are marketed under the name SolarSpan and are manufactured and distributed by a company called Bondor. As appears from the product installation guide[6] (**Installation Guide**), SolarSpan panels have outer pre-painted skins of Colorbond steel (which is in turn produced by BlueScope Steel), and an EPS-FR foam core (which may range from 50 millimetres to 200 millimetres in thickness).

12 At the time of its construction, three sides of the patio (those not abutting the dwelling) were open. Subsequent to its construction, the respondents engaged a different contractor to enclose two further sides of the patio.

13 The respondents have a swimming pool which is located along the northern (unwalled) aspect of the patio.

[5] Although the building permit application cites the estimated value of the project as $9,000, the Complaint states the contract value as $8,000 and the parties agreed at the hearing that the latter sum was correct.
[6] SolarSpan Patio Design and Install Guide: Exhibit 1, tab 3, pages 251-268.

14 Around a year after the patio was constructed, in November 2018, the respondents contacted Marsh expressing concern about 'the roof sheets rusting'.[7]

15 We accept from the documentary evidence that, over the ensuing months (to June 2019), the respondents sought to have Marsh attend the property to inspect and 'help rectify' the issue.[8]

16 In the meantime, in January 2019, the respondents sought the advice of a representative of Bondor WA, Mr Joe Roque, who attended the respondents' property to inspect the patio on 8 January 2019. In an email he sent to the respondents (and copied to Marsh) the same day (**Roque Email**), Mr Roque attached and made reference to the Installation Guide in making the following observations and recommendations:

a) there was corrosion to the ceiling skin at adjoins 500 millimetres from the gutter;

b) the roof appeared to have installed with the correct amount of fall (minimum 2°) and generally in a neat manner, but there were 'few details that need[ed] to be addressed'. He recommended that:

(i) the polystyrene foam be removed from the cutback of the sheets (by removing the gutters, scraping off the foam and reinstalling the gutters);

(ii) the underlay rib of every sheet to be trimmed back approximately 20 millimetres to prevent water draw back via capillary action;

(iii) the pans to be turned down 20° at the gutter end; and

(iv) the use of Multiseal tek screws (which Bondor recommends, particularly when pan fixing as they are less likely to leak); and

c) as the corrosion was only minor at that stage, he suggested the loose paint could be carefully removed

[7] Exhibit 1, tab 3, page 26.
[8] Exhibit 1, tab 3, pages 27-28.

and touch-up applied with a small artist's brush, making sure to only apply paint to the exposed areas.

17 On 6 June 2019, the respondents lodged a notice of proposed complaint with the BC in which:

a) they referred to and attached the Roque Email; and

b) sought, by way of remedy, for Marsh to attend site and liaise with the manufacturer to rectify the 'rusting'.

18 The respondents subsequently lodged the Complaint on 15 July 2019, which identified a single complaint item described as 'rust forming on insulated alfresco roofing'. The respondents effectively amended the Complaint by lodging a further notice of proposed complaint on 30 July 2019, identifying the following five items of complaint (which were accepted as the Complaint items by the BC):[9]

1. Water falling back into the roofing causing rust to form and paint to peel.

2. Water level remains in the guttering after rain. Not falling towards the downpipe.

3. Corner guttering where it meets the house roof needs to be appropriately secured.

4. Additional downpipe needs to be installed once guttering levels are rectified to accommodate water run-off.

5. Rusting around lighting.

19 The BC issued the BRO on 14 October 2020. In the Reasons, the BC notes that, at the time of issuing the BRO:

a) some remedial works had been undertaken by Marsh;

b) the respondents had withdrawn all complaint items other than item 1;[10]

c) there was evidence that water was entering into the roof panels and running along the panel joints to the site of the downlights (and there was no evidence to show the installation of the downlights caused the ingress of water); and

[9] Exhibit 1, tab 3, pages 1-3 and 59-60.

[10] This is significant because, as explained below, the Tribunal is engaged only with the review of the decision made by the BC (and is therefore confined to dealing with item 1 of the Complaint).

d) there was substantial evidence to show that the roof panels had not been installed correctly.

20 The BRO is relevantly in terms that:

> Action Required [in relation to Complaint item 1]
>
> The respondent is to remedy the corrosion to sheet surface in a proper and proficient manner, making good all affected surfaces.
>
> The respondent is to remedy the roof drainage system so that surface water is prevented from damaging the roof sheeting panels in accordance with P2.2.1(b) of the NCC Volume 2 in a proper and proficient manner, making good all affected surfaces.
>
> The respondent is to reinstall the screw fixing to the roof sheeting in a proper and proficient manner, making good all affected surfaces.
>
> …
>
> In consideration of costs claimed the following order is made in accordance with the provisions of sections [sic] 49 of the Act.
>
> • The respondent is to pay the complainant the amount of $1,250.00 as reimbursement of the inspection report from Prescient Consulting Pty Ltd.
>
> This order is to be complied with within 28 days of the date of this order.

What is the nature and basis of the review?

21 The Tribunal's power to deal with disputes derives from statute; relevantly in this case, the *Building **Services** (Complaint Resolution and Administration) Act 2011* (WA) (**BSCRA Act**). In these reasons, unless otherwise specified, a reference to a legislative provision is a reference to a provision of the BSCRA Act.

22 The present application is brought under s 57(1) which provides that a person aggrieved by a BRO made by the BC may apply to the Tribunal for a review of the order. Such an application falls within the Tribunal's review jurisdiction for the purposes the *State Administrative Tribunal Act 2004* (WA) (**SAT Act**).[11]

23 In the exercise of its review jurisdiction, the Tribunal does not determine the validity or otherwise of the reviewable decision, but

[11] Section 17, SAT Act.

rather undertakes a hearing *de novo*,[12] meaning that the Tribunal must make the reviewable decision afresh.

24 In this case:

a) the reviewable decision is that of the BC, being:

(i) whether there is a proper basis for making a BRO against Marsh (in respect of Complaint item 1); and

(ii) if so, the terms of the BRO; and

b) in doing so, the Tribunal:

(i) has the same jurisdiction, functions and discretions as those of the original decision-maker, being the BC;[13]

(ii) may consider, but is not limited by, the reasons given by the BC,[14] and may take into account any new or additional information which was not provided to the BC at the time that the BRO was made;[15] and

(iii) may affirm, vary or set aside the reviewable decision, and in the latter case my substitute its own decision,[16] to arrive at the correct and preferable decision.[17]

25 Relevantly, the BSCRA Act provides that:

a) a person may make a complaint to the BC under s 5(1) about a regulated building service not being carried out in a proper and proficient manner or being faulty or unsatisfactory; and

b) an owner or builder under a home building work contract may make a complaint to the BC under s 5(2)

[12] Section 27(1), SAT Act.
[13] Section 29(1), SAT Act.
[14] Section 29(3), SAT Act.
[15] Section 27(1), SAT Act.
[16] Section 29(3), SAT Act.
[17] Section 27(2), SAT Act.

> about a matter referred to in s 17 or s 20 or Sch 1 cl 5 of the *Home Building Contracts Act 1991* (**HBC Act**).

26 Having accepted a complaint made under s 5, the BC is required by s 9 to cause an investigation to be carried out by an authorised officer. After having regard to a report of the authorised officer, the BC may determine that one of the alternative courses of action available under s 11(1) is to apply.

a) One such course, is to deal with the complaint by making a BRO under s 37, which requires the BC to be satisfied that the regulated building service the subject of complaint 'has not been carried out in a proper and proficient manner or is faulty or unsatisfactory'.

b) Further, pursuant to s 49, the BC may, if 'it is fair to do so', make orders for such costs as they think fit arising from a complaint.

27 Pursuant to s 36, a BRO may consist of one of the following:

…

> (a) an order that a person who carried out a regulated building service remedy the building service as specified in the order;
>
> (b) an order that a person who carried out a regulated building service pay to an aggrieved person such costs of remedying the building service as the Building Commissioner or State Administrative Tribunal, as the case requires, considers reasonable and specifies in the order;
>
> (c) an order that a person who carried out a regulated building service pay to an aggrieved person a sum of money specified in the order to compensate the aggrieved person for the failure to carry out the building service in a proper and proficient manner or for faulty or unsatisfactory building work[.]

Is there a proper basis upon which to make a BRO?

28 As noted above, there will be a proper basis to make a BRO under s 37 if the Tribunal (in the BC's stead) is satisfied that:

a) in building the patio, Marsh provided a regulated building service; and

b) the regulated service was not carried out in a proper and proficient manner or is faulty or unsatisfactory.

Regulated building service

29 A 'regulated building service' is defined in s 3 to be any of the following:

(a) a building service carried out by a registered building service provider or an approved owner-builder;

(b) home building work that is -

(i) carried out by a person for another person under a home building work contract or other contract or arrangement for gain or reward; and

(ii) not carried out for a person who is in turn obliged to perform the work under another contract;

(c) any other service or work prescribed for the purposes of this definition[.]

Under the same provision, 'home building work' has the meaning given in the HBC Act.

30 Pursuant to s 3(1) of the HBC Act:

…

home building work means the whole or part of the work of -

(a) constructing or re-constructing a dwelling including an existing dwelling and/or strata-titled dwelling; or

(b) placing a dwelling on land; or

(c) altering, improving or repairing a dwelling, including a strata-titled dwelling; or

(d) constructing or carrying out any associated work in connection with -

(i) any work referred to in paragraph (a) or (b); or

(ii) an existing dwelling, including a strata-titled dwelling

31 The definition of 'associated work' under the HBC Act:

> … includes site works, swimming pools, spas, pergolas, carports, garages, sheds, fencing, retaining walls, paving, driveways, landscaping and other like works.

By its terms, that definition is inclusive. It's language, taking particular account of the nature of the non-exhaustive list of works expressly included (notably including pergolas), is consistent with an outdoor patio falling within its scope.

32 Accordingly, we find that the construction by Marsh of the patio was associated work in connection with an existing dwelling and therefore constitutes a regulated building service, being home building work carried out under a home building work contract.[18]

33 It follows that if the patio was not constructed in a proper and proficient manner, or is faulty or unsatisfactory, then there will be a proper basis for making a building remedy order under s 37.

'Proper and proficient manner' and/or 'faulty or unsatisfactory'

34 As discussed in ***Northcott and Realgold Corporation Pty Ltd (CAN 117 580 560)*** [2020] WASAT 72 (***Northcott***),[19] the phrase 'has not been carried out in a proper and proficient manner or is faulty or unsatisfactory' is a broad expression[20] which incorporates two distinct limbs, such that:

a) the description 'in a proper and proficient' attaches to the *manner* in which the regulated building service *has been carried out*;

b) the phrase 'is faulty or unsatisfactory' makes it clear that this element attaches to *the regulated building service itself* ... ;

[18] Pursuant to s 3(1) of the HBC Act, a 'home building work contract' means a contract between a builder and an owner for the performance by the builder of home building work, subject to the contract value falling within the amounts prescribed under reg 2A of the *Home Building Contracts Regulations 1992* (WA) - currently $7,500 to $500,000. In this case, the contracted sum of $8,000 falls within the requisite definitional parameters.

[19] ***Northcott*** at [44]-[48], [59], [63]. See also ***Holman and W&D Moffatt Pty Ltd*** [2016] WASAT 105 at [40] (***Holman***).

[20] See ***Diploma Construction (WA) Pty Ltd v South Central WA Pty Ltd*** [2015] WASC 289 (***Diploma Construction***) at [31].

c) those limbs are not exclusive, with the result that deficiencies in a regulated building service may in certain circumstances fall under both limbs; and

d) whether either limb is engaged is to be determined on an objective basis.

35 Because a review of a BRO made by the BC is a hearing *de novo*, the onus remains on the complainant (in this case, the respondents) to establish that either limb applies to the regulated building service.[21]

Inspections and opinions

36 In addition to the input of Mr Roque,[22] each of the parties has at various times sought and have tendered (to the BC and the Tribunal) written materials containing the opinion of others in connection with the Complaint. Insofar as they are relevant to item 1 of the Complaint,[23] those materials are summarised below.

37 The applicant tendered a letter dated 19 March 2021 from Mr Michael Waterford, a technical manager at BlueScope Steel, which includes the following:

a) Mr Peter Marsh had advised Mr Waterford that the roofing panels of the patio were experiencing corrosion of the pre-painted steel skin on the ceiling surface;

b) Mr Waterford noted that, in his experience, there are several mechanisms by which corrosion can occur on ceiling skins of insulated panel roofs, and that an indication of the relevant mechanism may be provided by the specific areas in which the corrosion has occurred;

c) where inundation of an insulated panel has occurred by top-down moisture entry, moisture may be retained at the interface of the insulating foam and the bottom steel skin. In these instances, corrosion will initiate on the foam facing surface of the ceiling skin, prior to presenting on the visible, exterior surface;

[21] ***Holman*** at [46].
[22] See [16] above.
[23] By reason of the matters outlined at [19] to [21] above.

d) where corrosion is not present on the internal faces, but present on the external faces of the steel skin, it is unlikely that trapped moisture from inundation of the foam cell is the likely cause of corrosion;

e) as an alternative mechanism, surfaces that are exposed to the exterior environment but do not receive the washing benefit of natural rainfall may develop an accumulation of potentially corrosive airborne salts and other detritus. Combined with overnight dew cycles or periods of substantial humidity, accumulated salts and detritus can initiate and accelerate corrosion in seemingly isolated areas. Such corrosion is more likely where the painted film is broken or where substantial deformation of the material has occurred (including around penetrations and cut edges);

f) corrosion of unwashed surfaces can be prevented or mitigated through regular maintenance, usually only requiring washing with fresh water on a regular basis (typically recommended at six monthly intervals); and

g) while photographs of the patio had been provided to him, Mr Waterford had not carried out a physical inspection, and he cautioned that the information provided in the letter was 'of a general nature only and its applicability to the specific circumstances in question may or may not be relevant'.

38 The respondents engaged Mr Christian Rees-Mogg of SHS Building Consultants to provide an independent opinion, and tendered his report dated 31 September 2019 and supplementary report dated 19 October 2019 in support of the Complaint. Those reports include the following observations and opinions:

a) Mr Rees-Mogg carried out a physical inspection of the patio and observed that:

(i) approximately 500 millimetres from the low ends, every sheet lap was affected by loose and peeling paint as well as white powdery residue;

(ii) at the sheets joins and downlight penetrations the paint was peeled in places, exposing the

sacrificial zinc layer, which was producing aluminium oxide, a white powdery material the result of oxidation of the sacrificial layer;

(iii) the sides of the sheets, where the sheets had been cut to size, were not powder coated (which is expected and acceptable);

(iv) where recess downlights had been installed, the cut-outs were not painted after installation which had exposed the sacrificial zincalume coating (which is expected and acceptable); and

(v) there was a single roof screw midway along the end of the sheets which had a gap between the roof sheet and the neoprene washer;

(b) he opined that:

(i) rainwater overflowing the back of the patio gutter is causing water to deposit between the outer and inner surface of the SolarSpan panels, causing moisture to react with the Colorbond sheets at the unpainted sides and penetrations, in turn resulting in the oxidation of the sacrificial zincalume layer;

(ii) the omission of overflow to the gutter, and the lack of fall towards the outlet, is contributing to the moisture damage and constitutes defective building work;

(iii) the loose roof screw was allowing rainwater to enter between the sheets, contributing to the moisture damage, and constituting defective workmanship;

c) he further observed and opined that the construction of the patio was non-compliant with the Installation Guide:

(i) in that the polystyrene foam had not been cut back from the ends of the sheets (contrary to page 10 of the Installation Guide), allowing

moisture overflowing the gutter to wick upwards, contributing to the moisture damage;

(ii) in that the underlay ribs of the roof sheets had not been trimmed back 20 millimetres as recommended, allowing moisture to enter between the sheets, contributing to the moisture damage; and

(iii) that non-compliance constitutes defective work;

d) he considered the Roque Email and generally agreed with the observations and opinions therein, save that:

(i) he did not consider the number of downpipes to be relevant; and

(ii) disagreed that rectification by painting the affected surfaces would be sufficient, because 'powdercoating is baked on and handpainting (or spray painting) is not a proper substitute or match' (citing Technical Bulletin 38 issued by BlueScope Lysacht, in which the use of touch-up paint to repair damage is 'not recommended');

e) he recommended the following remedial work:

(i) remove and replace the patio roof cover and reinstall similar colour and quality in accordance with the manufacturer installation requirements;

(ii) prepare and paint the texture coated walls affected by the removal of the roof cover by repainting from architectural break to architectural break;

(iii) install overflow to the existing gutter, ensuring the overflow slots are lower than the back of the gutter; and

(iv) adjust the existing gutter so that it has fall towards the existing outlet.

39 The respondents subsequently engaged Mr Richard Machell of Prescient Consulting to provide a further independent expert opinion, and tendered his report dated 8 April 2020 (**Prescient Report**) in support of the Complaint. As noted previously, Mr Machell was also called to give oral evidence at the hearing. The Prescient Report and Mr Machell's oral evidence is to the following effect:

a) the patio is a class 10(a) structure for the purposes of the National Construction Code of Australia (**NCC**);

b) Mr Machell undertook a physical inspection of the property on 7 April 2020;

c) the underside of the roof cladding showed evidence of spalling paint and some minor white powdering was found within 15 millimetres of the roof panel seamed joints;

d) four downlights are installed to the underside of the roof cladding, coinciding with two roof panel joints. One downlight was removed, revealing evidence of rust on the high side of the seam of the roof panel, suggesting moisture from both the high and low sides of the roof;

e) in the course of the inspection, water was gently sprayed onto the roof cladding from a hose, simulating windblown stormwater, resulting in water dripping:

   (i) from behind the edge flashing on the underside of the roof, and also from a hole formed to accommodate the adjacent downlight; and

   (ii) from the underside of the roof between the rear face of the gutter and the foam edge of the roof panel and at a downlight penetration in the underside sheeting (with water passing over the end of the roof sheet, and being able to track back under the roof sheet to the foam behind the gutter).

f) a flashing is installed at the edge of the high side of the roof panel; the flashing is not turned down into the roof

sheet valleys, although a crease on the edge of the flashing minimises distortion of the flashing;

g) it is apparent that the turnouts of the ends of the roof sheets were not achieved with a proprietary tool and as a result do little, in conjunction with the roof flashing that is not turned down, to prevent stormwater from being blown up over the turnouts of the top of the roof panel;

h) the low side of the roof at the gutter was inspected; the valleys in the roof panels have not been turned down with a proprietary tool by 20° and instead it appeared that the valleys have been struck with perhaps a mallet which has deformed approximately 100 millimetres of roof sheeting downwards in the centre of the valleys, but has not achieved the objective of creating a drip point so as to prevent water from tracking below the underside of the upper level roofing on the roof panel;

i) as a result of the deformed roof sheeting:

   (i) some screws securing the rear of the gutter to the roof sheeting were pushed downward and some were unable to be tightened; and

   (ii) the deformation translated to a deformation in the eaves gutter;

j) the foam fill between the trapezoidal top-sheet and flat underside of the roof panel is cut back only as far as the rear of the gutter, and not at an angle;

k) the roof level was measured and calculated to be pitched at 1.38°;

l) the bottom sheet of the roof panel has been turned up slightly behind the gutter (as evidenced by the curved edge on the end of the roof sheet) instead of a cut edge;

m) the underside of the roof panels is degraded adjacent to roof panel seams. Mr Machell opined that the degradation is directly associated with water ingress from above at the seamed joints and will increase over

time to the point where the sacrificial coating will be exhausted, and the steel will revert to its oxide form;

n) Mr Machell concluded that there are a number of locations which represent significant potential for leaking water below the upper surface of the roof panel, any of which may be a source of the moisture in question, resulting from:

   (i) a failure to turn up the roof valleys on the high side of the roof (with the result that windblown stormwater is able to pass over the edge of the roof panel and enter into the services void in the edge of the foam);

   (ii) a failure to install a suitable flashing on the high side of the roof edge (so that stormwater is not able to track along the underside of the roof sheets), and instead, the installation of a flashing designed for an alternate position (apron);

   (iii) a failure to install the roof sheeting at the minimum pitch of 2°, combined with the failure to adequately turn down the valleys and the roof sheeting on the low side and a failure to cut back the foam insulation at the low side of the roof adjacent to the rear of the gutter (with the result that water is able to track along the underside of the roof sheeting and enter the seams in the bottom sheet). Capillary action may account for the flow of water, given the low pitch of the roof; and

   (iv) a failure to install foam infill pieces to the exposed and open ends of the crests in the roof profile (to prevent windblown stormwater, or water that is able to track along the underside of the roof crest, from entering).

o) he also assessed that:

   (i) works subsequent to the construction of the patio (encasing the steel posts and enclosing

two of the three open sides with rendered masonry walls) do not appear to have affected the relevant parts of the patio structure; and

(ii) the roof panels are appropriately screw fixed (and this may be discounted as contributing to the issue).

40 Mr Machell also:

a) noted that:

(i) the NCC provides that the minimum pitch of trapezoidal roof sheets is 3° (fig 3.5.1.5), and the SolarSpan Technical Data Sheet provides for a minimum pitch of 2°;

(ii) the NCC provides that each valley of the roof sheeting must be turned up at 60° to be stop ended (3.5.1.3(e)), and the Installation Guide provides that valleys are to be turned up by the full height of the roof profile;

(iii) the Installation Guide includes recommended flashings and requires turn down of valleys at the low side of the roof by 20°, and the NCC provides that over flashings must be turned down into the valleys of roof sheeting (fig 3.5.1.7); and

(iv) AS 1562-1992 (Design and installation of roof and wall cladding – Metal) requires compliance with a manufacturer's specifications.

b) observed that whilst it may be acceptable to adopt an alternate approach to that recommended by the manufacturer, any such alternative should result in an equivalent level of performance. In this instance, the alternate approaches adopted by Marsh have not resulted in an equivalent performance, and have resulted in the underside of the roof panel degrading prematurely;

c) opined that in relation to:

(i) turning up and turning down the roof valleys at the ends;

(ii) installing alternate flashings;

(iii) not cutting back the foam at the low side of the roof edge; and

(iv) not achieving a roof pitch of at least 2°,

Marsh has failed to comply with acceptable construction standards.

41 In relation to weatherproofing and drainage, Mr Machell:

a) referred to P2.2.2(b) of the NCC, which requires roofs to prevent the penetration of water that could cause 'undue dampness or deterioration of building elements';

b) opined that the roof panel is a 'building element' for this purpose and that, as a result of the matters identified at [39](n) above, the patio does not comply with P2.2.2(b) of the NCC;

c) referred to P2.2.1(c) of the NCC, which requires drainage of surface water (resulting from an average recurrence interval of 20 years) to an appropriate outfall, and to avoid surface water damaging the building; and

d) opined that the non-compliance with P2.2.2(b) also constituted non-compliance with P2.2.1(c).

42 In summary, Mr Machell opined that Marsh's non-compliance with the NCC in the construction of the patio roof represents faulty work. He recommended remedial work:

a) to meet the requirements of the NCC and Installation Guide; and

b) to repair the damaged roof panels to achieve a consistent and uniform appearance (either by repainting the whole underside or replacing all panels).

Parties' contentions

43 The respondents made very few submissions, but:

a) relied on the evidence and opinions of Mr Machell; and

b) urged the Tribunal to vary the BRO by ordering Marsh to replace the patio roof and to reimburse their costs of obtaining expert evidence.

44 The applicant contended that:

a) the Complaint and ensuing BRO were not based on factual evidence, but based on hypotheticals;

b) the opinion evidence of Mr Rees-Mogg and Mr Machell should not be accepted because:

(i) they were inconsistent with one another;

(ii) neither performed an invasive inspection, and both identified moisture as the cause of the degradation of the ceiling surface;

(iii) invasive tests performed by the applicant (as shown on the video footage played in the hearing) showed that the foam insulation in the roof panels was dry, and this is contrary to water traveling from the upper to the lower surface of the panels;

(iv) the corrosion appears most marked towards the southern aspect of the patio, away from the open side, and this suggests a cause other than water (because water cannot run 'uphill' or 'jump' the holes cut for the downlights);

(v) the product is Colorbond which is water resistant and designed for outdoor use (and the outer surface which is exposed to water is not affected); and

(vi) running water from a hose across a roof does not accurately replicate rain conditions;

c) the more likely cause of the corrosion evident on the patio ceiling (**Alternate Theory**) is that salt and/or chemical build up on the steel surface has caused the surface to corrode (in line with the 'alternative

mechanism' discussed in Mr Waterford's letter).[24] This explanation is consistent with:

(i) the lack of observable moisture in the panel insulation;

(ii) the location of the respondents' pool, being adjacent to the open side of the patio;

(iii) corrosion appearing at the site of the downlights (where holes were cut in the roof panels after installation of the patio);

(iv) air containing pollutants passing through the open side and the patio being enclosed (after construction) on the other three sides, with one large window on the southern wall, causing 'condensed air pressure'[25] to deposit salt or detritus on the ceiling surface in that area; and

(v) the patio ceiling either not being regularly washed, or being washed with a chemical;

d) further, the applicant had measured the gradient of the roof at the time of construction and was satisfied that it achieved a pitch of 2°.

45 In the course of the applicant's cross-examination of Mr Machell:

a) the applicant put the above views and contentions to Mr Machell;

b) Mr Machell maintained the opinions he expressed in the Prescient Report and his evidence in chief, explaining that:

(i) moisture entering and being held in the seams of the panels would cause an electrolytic reaction which would, over time, deplete the sacrificial layer and cause corrosion;

[24] See [37] above.
[25] Exhibit 1, tab 6, page 25.

(ii) water may be held in the seams for longer periods compared with surface water which may evaporate (and this accounts for corrosion on the ceiling surface but not on the outer surfaces of the roof);

(iii) as to the location of the corrosion, capillary action and the low pitch accounted for moisture being able to travel up the slight gradient. Further, the downlight cut outs are not open holes, but are filled by the downlights around which moisture is able to travel;

(iv) he had not observed any evidence of chemical or salt deposits at the time of his inspection. In any event, it was very unlikely that salt laden air being compressed through a window was causing deposits on the nearby roof sheets,[26] since deposits were more likely to result from no airflow;

(v) he did not perform an invasive inspection because to do so would cause damage to the structure (but the video footage of the sheet core did not cause him to resile from his opinion); and

(vi) he calculated the pitch of the roof using trigonometry which is 'much more reliable than using a digital level on the top of the roof'.[27]

Consideration and findings

46 As noted above, the Tribunal does not need to address the question of whether the BC had a proper basis upon which to make a BRO. Rather, we are required to consider afresh whether, on the evidence before us, there is a proper basis for doing so.

47 On balance, we accept the evidence and opinion of Mr Machell and, insofar as it pertains to the construction of the patio and the likely cause of corrosion, we prefer his evidence to the competing views and contentions put to us because:

[26] He opined in relation to the Alternate Theory that: 'That logic is just not sustainable' - ts 79, 19 May 2021.
[27] ts 82, 19 May 2021.

a) we accept Mr Machell's expertise in the area of construction, as well as his independence;

b) Mr Machell was the only independent expert to give oral evidence and be cross-examined;

c) although we accept the industry experience of Mr Peter Marsh and Mr Laurence Marsh, their evidence in relation to matters of opinion cannot be independent;

d) to the extent that the applicant seeks to support its contentions and the Alternate Theory by reference to Mr Waterford's opinion, we note that his letter expressly disavows that purpose (stating that no inspection of the structure was undertaken and the comments in the letter are general in nature);

e) Mr Machell's evidence is broadly consistent with the views expressed by of each of Mr Rees-Mogg and Mr Roque, and all three of them:

   (i) inspected the patio in question; and

   (ii) although there were some minor differences of opinion between them, were of the view that there were deficiencies in the construction of the patio, and that the corrosion evident on the roof sheets was likely the result of corrosion;

f) in any event, Mr Machell's explanations in cross-examination were persuasive and consistent with the physical and material evidence before the Tribunal (we note, for example, that moisture entering, being held in, and travelling up, the panel seams is not inconsistent with the video evidence of the foam being dry).

48 We find that:

a) the patio ceiling panels are affected by corrosion which on the balance of probabilities is caused by moisture entering the panel seams; and

b) by reason of the matters in identified in [39](n) above, the patio's construction makes it vulnerable to

corrosion from moisture, and the patio is faulty and unsatisfactory; and

c) by reason of the matters in [40] and [41] above, the construction of the patio was not carried out in a proper and proficient manner.

Remedy

49 Being satisfied that:

a) the dispute concerns a complaint about a regulated building service carried out by the applicant; and

b) the regulated building is was not carried out in a proper and proficient manner, and is faulty and unsatisfactory,

the Tribunal (acting in the BC's stead) may, pursuant to s 37(1), deal with the matter by making a BRO.

50 As noted in ***Gemmill Homes Pty Ltd and Sanders*** [2018] WASC 179 (***Gemmill and Sanders***):[28]

a) the provisions of the BSCRA Act require the BC and the Tribunal to exercise a discretion in relation to the grant of any statutory remedy, rather than to be directed by the election of the innocent party;

b) however, the willingness of an owner to grant access to their property is a relevant consideration to the exercise of that discretion.

51 Noting that the respondents indicated that they would be content for Marsh to carry out work to remedy the patio, we consider that it is appropriate to make a BRO under s 37(1). However, in light of the findings we have made, we consider that the BRO made by the BC should be varied to make it clear that:

a) in light of the evidence regarding painting Colorbond surfaces, and noting that we are satisfied that there has been water ingress into the panel seams, we do not consider that painting the existing roof panels to be an adequate or appropriate remedy;

[28] ***Gemmill and Sanders*** at [131]-[135].

b) further, the deficiencies in pitch, turning up and turning down, and flashings are appropriately dealt with by replacing the affected building elements;

c) accordingly, we consider that to remedy the deficiencies in the patio roof, the existing roof panels, gutters and downpipe must be removed and replaced with new roof panels, gutters and downpipe in a manner that complies with the Installation Guide and with P2.2.2(b) and P2.2.1(c) of the NCC.

52 Further, we also consider it fair to make an order under s 49 in relation to the costs incurred by the respondents in obtaining Mr Machell's evidence, in both his written report and his attendance at the hearing. Accordingly, the amount awarded by the BC should be varied to make allowance for the latter.

53 In summary, we find on review that the correct and preferable decision is that the orders made by the BC on 14 October 2019 are to be varied in terms of the orders that follow.

Orders

The Tribunal Orders:

1. The applicant is to remove the existing and install new roof panels, gutters and downpipe to the patio the subject of dispute:

   (a) in accordance with the installation provisions contained in the SolarSpan Patio Design and Install Guide; and

   (b) in accordance with the National Construction Code as it pertains to weatherproofing and drainage.

(Remedial Work)

2. The Remedial Work is to be completed by the applicant:

   (a) by a date specified by further order of the Tribunal;

(b) in a proper and proficient manner; and

(c) such as to make good any affected surfaces. This includes (but is not limited to) making good any texture coated walls affected by the removal of the roof panels, gutters and downpipe by preparing and repainting them from architectural break to architectural break, with the finished colour and texture to match adjacent surfaces.

3. The applicant is to pay the respondents costs incurred in obtaining the expert evidence of Mr R Machell of Prescient Consulting in an amount fixed, and by a date specified, by further order of the Tribunal.

4. The parties are to attend a further hearing of 1 hour on 8 September 2021 at 10am for the purposes of fixing the costs and dates contemplated by orders 2 and 3 above.

(a) By not later than 4 pm on 6 September 2021 the respondents must file with the Tribunal, and provide copies to the applicant, any invoices rendered to them by Mr R Machell or Prescient Consulting in relation to the preparation of any expert report and attendance to give evidence at the hearing in the proceeding.

(b) It is the intention of the Tribunal to conduct the hearing by telephone. Any party wishing to attend the hearing must provide in writing to the Tribunal a contact telephone number no later than 7 days prior to 8 September 2021.

I certify that the preceding paragraph(s) comprise the reasons for decision of the State Administrative Tribunal.

DR B MCGIVERN, MEMBER

17 AUGUST 2021