SUPREME COURT OF QUEENSLAND

CITATION:	*Woolnough & Anor v Isaac Regional Council* [2019] QSC 17
PARTIES:	**Timothy Earl Woolnough** **and** **Christeen Woolnough** (Plaintiffs) **v** **Isaac Regional Council ABN 39274142600** (Defendant)
FILE NO/S:	File No 12 of 2016
DIVISION:	Trial
PROCEEDING:	Claim
ORIGINATING COURT:	Supreme Court at Mackay
DELIVERED ON:	8 February 2019
DELIVERED AT:	Cairns
HEARING DATE:	27, 28, 29, 30, 31 August 2018 10, 11 December 2018
JUDGE:	Henry J
ORDERS:	**1. Claim dismissed.** **2. (a) Any party wishing to contend for a costs order other than that the plaintiffs should pay the defendant's costs to be assessed on the standard basis, is to file and serve written submissions not exceeding four pages and any relevant affidavit material in support of the costs order they seek by no later than 4.00 pm 22 February 2019;** **(b) any party wishing to respond to submissions or materials filed pursuant to order 2(a) above will file and serve written submissions not exceeding two pages and any relevant affidavit material by no later than 4.00 pm 29 February 2019.** **3. The publication of orders and reasons as to costs and any miscellaneous orders is listed at 9.15 am 13 March 2019 in the Mackay Supreme Court with Henry J presiding from Cairns by video link, out of town parties having leave to appear by telephone, and the parties generally being excused from appearing unless they wish to.**

CATCHWORDS: TORTS – TRESPASS – TRESPASS TO LAND AND RIGHTS OF REAL PROPERTY – WHAT CONSTITUTES TRESPASS AND DEFENCES THERETO – TRESPASS TO LAND – where the plaintiffs allege a sewer main was installed in 2007 without their consent – whether in fact the sewer main was installed in 2005 with the consent of the previous owners

TORTS – NUISANCE – WHAT CONSTITUTES – PRIVATE NUISANCE – where the plaintiffs allege there has been underground erosion around a sewer main resulting in its breach and the escape of sewage onto their property – whether there was such a breach – whether there was such leakage of sewage onto their property – where the defendant adduced expert evidence and the plaintiffs did not

DAMAGES – MEASURE AND REMOTENESS OF DAMAGES IN ACTIONS FOR TORT – MEASURE OF DAMAGES – DAMAGE TO LAND AND BUILDINGS – where the plaintiffs allege installation of a sewer main caused subsidence to their shed slab, house slab and fence – where the allegation of subsidence forms part of the generic claim of loss and damage – whether the installation did cause subsidence to the shed slab, house slab or rear fence

Local Government Act 1993 (Qld), s 1070(2)(b)

COUNSEL: P D Lane for the defendant

SOLICITORS: Plaintiffs Mr and Mrs Woolnough appeared self-represented
Barry Nilsson Lawyers for the defendant

[1] The plaintiffs have long been consumed by a wide ranging and evolving dispute with their local Council. These reasons are concerned with their allegations that the Council trespassed at their property in installing a sewer line and that the installation has caused subsidence problems and leaked sewage at their property.

[2] The vehemence of the plaintiffs' assertions of Council's wrongdoing was not supported at trial by persuasive evidence. The evidence advanced in contradiction of their allegations was comprehensive and convincing.

Background and issues

Introduction

[3] The plaintiffs, the Woolnoughs, became the registered owners of 23-25 Bovey Street, Nebo on 28 November 2006.[1] The property was within the Local Government area of what was Nebo Shire Council and is now Isaac Regional Council.

[4] The change in councils was a product of an amalgamation of some shire councils in 2008. In consequence of the amalgamation, the Isaac Regional Council effectively inherited the existing legal liabilities of Nebo Shire Council, including responsibility for sewerage services in Nebo. I will for convenience refer to either entity as "the Council".

[5] The Council progressively installed a reticulated sewerage system in Nebo. These works included the installation of underground sewer mains throughout the township. One such sewer main, line 118, traversed the rear of some properties in Bovey Street, including 23-25 Bovey St ("the property").

[6] The sewer main running through the property was installed nearby to and parallel with the back fence at the northern boundary of the property. This alignment also took the sewer main nearby to the rear shed and tank in the northwest corner of the property. The sewer was installed by excavation of a trench at a depth of around 3.5 metres below ground level. It consisted of a 150 millimetre diameter rubber ring jointed sewer pipe, embedded in sand with the trench backfilled to ground level. A manhole to the sewer – manhole 2/118 – was installed and capped by a manhole cover at ground level near the north east corner of the back yard of the property.

[7] The Woolnoughs, who are self-represented, harbour various grievances about the sewer main. The pleading of their case attracted an array of pre-trial arguments and rulings. Various paragraphs of their Amended Statement of Claim filed 26 August 2016 ("ASOC"), including those alleging a case in negligence, were struck out by North J on 25 November 2016. This had the consequence that their case at trial was confined to trespass and nuisance.

Trespass

[8] As to trespass, the Woolnoughs plead the sewer main was installed on their property unlawfully and without their consent or knowledge, in about July 2007.[2] The installation of the sewer main was thus alleged by the Woolnoughs to have been a trespass and therefore its continuing presence a continuing trespass by Council. The Council on the other hand pleads the installation occurred in 2005, well before the Woolnoughs bought the property, with the consent of the then owners, Karen and Kevin Smith. The installation is thus pleaded by the defendant as having been lawfully installed pursuant to s 1070(2)(b) *Local Government Act 1993* (Qld), that is, by reason of the owner's agreement.

[9] At first blush it is curious the Council did not plead more broadly as to other foundations for the continued lawfulness of its sewer main's presence on the property.

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1 Ex 46 p 59. Settlement occurred a week earlier on 21 November 2006, per ex 16.
2 ASOC [12] and [15].

However, Council was meeting a case of continuing trespass premised solely upon the initial unlawfulness of the installation. The pleaded premise of the Woolnoughs' allegation of continuing trespass was that the sewer main was installed unlawfully, at a time when they owned the property, without their knowledge or consent.[3]

[10] Their case as conducted was that the installation was unlawful because it occurred without their consent. They only sought to prove the continuing trespass by trying to prove the sewer main was installed without their consent in the first place. They did not advance an alternate case of continuing trespass on the basis that, even if the sewer main had been installed with the consent of the former owners, its continued presence once the Woolnoughs were owners became a continuing trespass because the Woolnoughs did not consent to its continued presence on their property. It is unnecessary to consider whether such an alternative foundation for an allegation of continuing trespass could have been potentially viable, indeed the evidence led at trial would be inadequate to the task.

[11] It follows the issue for determination in the case in trespass as advanced is when the installation of the sewer main occurred at the property and whether it occurred with the then owners' consent ("Trespass: When was the installation and was it consented to?").

Nuisance

[12] As to nuisance, the Woolnoughs plead that from 2010 untreated sewage began to surface and escape "the sewer and/or the sewerage system" onto the property and continued to so escape onto the property. While there is some ambiguity in the pleaded term, "the sewer and/or sewerage system", the Woolnoughs' pleaded allegation, as reflected in their case as conducted, is intended to mean that the alleged escape of sewage was and is from the sewer main underlying the rear of their property.[4] The particulars of that allegation are:

> "(a) Sewage is visible on the Property at the soil level, particularly:
> (1) in the vicinity of the Sewer; and
> (2) during and after rainfall.
>
> (b) A sewage odour is present on the Property, particularly during and after rainfall."[5]

[13] It is pleaded the escaped sewage has contaminated the soil on the property, is harmful to human health and emits an offensive sewage odour, particularly during and after moderate and heavy rainfall. This alleged nuisance is said to constitute an unreasonable interference in the plaintiffs' use and enjoyment of their interest in the property.[6] The Council denies there was any leakage of sewage onto the property.

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3 ASOC [15], [16] and [17].
4 As much was acknowledged by Mr Woolnough on day one of the trial – T1-88 LL1-26.
5 ASOC [18], [19].
6 ASOC [22], [23] and [24].

[14] It follows the determinative issue of fact in the nuisance case is whether sewage from time to time leaked onto the property from the sewer main ("Nuisance: Did the installation cause sewage leakage at the property?").

Subsidence

[15] A third issue of fact, of tenuous connection to the cases of trespass or nuisance, is the alleged subsidence of the property's rear fence and of the slabs of the property's shed and house ("Subsidence: Did the installation cause subsidence to the shed slab, house slab or rear fence?"). To the doubtful extent this issue arises in the ASOC, it arises as follows.

[16] The ASOC pleads loss and damage as being the cost of decontaminating and removing soil from the property (in the amount of $1,567,800), the loss of rental income from the dwelling on the property (accruing at $308 a week since March 2010) and the cost of rectifying alleged subsidence to the Woolnoughs' shed slab, house slab and fence.[7] The alleged loss and damage is pleaded as flowing in the alternative from the Council's alleged trespass and or nuisance and or negligence. That reference to negligence is otiose because the pleading of the case in negligence was struck out pre-trial. That struck out part of the pleading was the only aspect of the ASOC which alluded to the topic of subsidence and, even then, it did not identify the mechanism by which the installation or deficits in the method of installation caused the alleged subsidence.[8] While the case in negligence was struck out, the reference to subsidence in the generic allegation of loss and damage was not struck out.

[17] At trial each side treated the subsidence issue as a live issue. Perhaps the continued existence of the reference to subsidence in the pleading of loss and damage, notwithstanding the absence of any surviving pleading in support of it, was taken by both sides to mean that subsidence remained an issue for determination at trial. It might also have been thought that consideration of the subsidence issue would inform the resolution of the nuisance issue. In any event, the parties having joined issue on the topic, it is as well that these reasons deal with it. The subsidence issue will, for convenience, be addressed after the trespass issue but before the nuisance issue.

The issues for determination

[18] The issues in the case thus call for determination of matters of fact rather than complex legal principle. They are, to recap:

(1) Trespass: When was the installation and was it consented to?

(2) Subsidence: Did the installation cause subsidence to the shed slab, house slab or rear fence?

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7 ASOC [33].

8 It referred only to a risk of causing ground instability and structural damage, a failure to consider the stability of the shed and water tank, the foreseeability of subsidence and consequent damage to structures on the property and a failure to take adequate precaution against the risk of such damage – per ASOC struck out paragraphs [29(a)],[31(d)], [32(b)(c)], [33(c)].

(3) Nuisance: Did the installation cause sewage leakage at the property?

Pervasive problems

[19] In turning to those issues two pervasive problems with the Woolnoughs' approach to this litigation should be noted.

[20] Firstly, some of the evidence advanced by the Woolnoughs involved speculation or theorising and was of no or marginal relevance or probative value (those limitations were explained by me as the trial progressed and I do not intend below to repeat all of them or all of the purported evidence to which they related).

[21] Secondly, the evidence suggests a tendency in the history of this dispute for the Woolnoughs to seize upon pieces of information, contorting the piece of information's contextual significance or meaning in support of their view of things, while ignoring or dismissing surrounding information which does not conform to their view. The same tendency was exhibited in Mr Woolnough's testimony, questioning of witnesses and submissions at trial.

(1) Trespass: When was the installation and was it consented to?

[22] As will become apparent, there exists a compelling body of evidence in support of the conclusion that the installation of the sewer main through the property occurred in 2005, before the Woolnoughs bought the property, when it was still owned by Karen and Kevin Smith. How then could it be thought, as the Woolnoughs assert, that it was installed in mid-2007?

[23] The answer may lie, at least in part, in the fact that sewage related works also occurred in 2007. The Council pleads that in 2007 a connection pipe, also referred to as a "house drain", was connected from the pre-existing sewer main to the house on the property. Such a connection would have been via a rising main – a short pipe directed up towards ground level at each property from the sewer main to facilitate future connection of domestic premises to the sewer main. This pleading attracted no response and it was accepted at trial that some connection works occurred at the property in 2007. The occurrence of house drain connection works in 2007 heralds the possibility that one who witnessed such works from afar might wrongly have assumed, then or perhaps later, that the installation of the sewer main occurred in 2007.

[24] The Woolnoughs have not ever resided at the property since purchasing it from the Smiths in late 2006.[9] In 2007 they were living elsewhere in Nebo in a unit and an acquaintance of theirs called Steve was a tenant at the property. Steve was not called as a witness.

[25] Mr Woolnough testified that on one occasion in late July 2007 when he drove past the property, he saw "10 foot of dirt" piled from the shed across the back of the block.[10] On

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[9] T3-15 L37.

[10] T2-62 L34. The topic was revisited, eg: T4-67 – T4-70, T4-48 L12, T4-48 L38.

the Woolnoughs' case what Mr Woolnough saw from afar is assumed not to have been works to install the house connection to the sewer main but works to install the sewer main in the first place.

[26] It appears the Woolnoughs' case that the sewer main was installed in 2007, without their consent, must have come upon them very belatedly. There is no suggestion the Woolnoughs protested about any trespass by sewer main installation in the days, weeks, months and several years after Mr Woolnough made his drive by observation of July 2007.

[27] That was not for any lack of willingness or opportunity to complain. In 2007 they applied to reconfigure their property into two lots and were soon engaged in a dispute with Council about that. Despite the dispute including an issue about the installation of a second house connection riser to the sewer main it was not alleged then that the sewer main had been installed without consent. In due course they complained of the installation subsiding and leaking sewage onto their property but again trespass did not rate a mention. They did not even think to complain of the trespass when, on 5 November 2009, they wrote to Council specifically purporting to deny Council access to their property until various issues were resolved.[11] It seems it was not until 2010 that it occurred to them to complain that they did not consent to the installation of the sewer main in the first place. That occurred in a letter by them to the Council of 25 May 2010 about the subsidence dispute, where, seemingly as an aside, they wrote:

> "By the way our consent was never given to lay these pipes."[12]

To conform with this emerging view of things it was of course necessary for the Woolnoughs to also arrive at the view that they had been the property owners at the time of the sewer main installation.

[28] The Woolnoughs also adduced evidence from Denise McGrice, a friend and supporter, particularly of Mrs Woolnough. The relevance of her evidence to the trespass issue was not apparent. Mrs McGrice recalled moving to Nebo in mid-June 2007,[13] although her Facebook page suggests it was in 2008.[14] She lived three or four streets away from the property[15] and recalls the Council performing some sewerage related works at the back of her then residence in the second or third week of July 2007. The plan she drew of the works,[16] and her memory that it went "from the fence to the house actually",[17] suggests that work was house connection work, not the installation of the sewer main. In any event it sheds no light on what if any work occurred over at the property at Bovey Street at that time and she did not purport to give evidence of seeing any indicia of work near the property in that era. Her husband Allan McGrice was called as a witness by the Woolnoughs but he too shed no material light on the trespass issue.

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11 Ex 27.
12 Ex 31.
13 T4-77 L18.
14 T4-118 L36; Ex 35.
15 T4-78 L8.
16 Ex 34.
17 T4-88 L37.

[29] The Council called Karen Smith as a witness. She and her husband had been the previous owners of the property, having bought it as a vacant block of land before subsequently constructing the rear shed on it and later relocating a house onto the property. She testified they sold the property in November 2006 to Mr and Mrs Woolnough.

[30] Mrs Smith testified a sewer main was installed along the back fence of their property at a time before they sold the property to the Woolnoughs.[18] More specifically, she testified to witnessing the excavation of an open trench which ran the entire length of inside their rear fence line, continuing works which approached their property from one neighbour's side and continuing beyond it in the other direction. She did not specifically lay claim to seeing the pipe installed but the fact it was installed arises as a logical inference from the fact that she subsequently saw the trench backfilled.

[31] Mrs Smith was uncertain how long this was before the sale of the property, guessing it was "maybe six months, maybe 12 months".[19] She explained the installation occurred against a background where there had been discussions within the Nebo community about Council installing sewerage, something she was happy with because, as she put it, "We were sick of the septic".[20] She testified that she and her husband agreed to having a sewerage service to their property[21] and consented to the installation of the sewer main along the rear of their property.[22]

[32] Mrs Smith's account was unshaken by cross-examination, which ultimately only went so far as to suggest that her memory was wrong.[23] Witnessing the excavation and subsequent filling-in of a trench line running the entirety of the rear of a property she was living at is hardly likely to have been an event Mrs Smith was mistaken about. It was not put to Mrs Smith, as Mr Woolnough subsequently asserted, that she was deliberately lying or had in some way been made to lie by Council or its representatives.[24] In any event, Mrs Smith was a credible and reliable witness. Her evidence did not carry the remotest indication it was the product of dishonesty or some motivation to favour either side in the litigation.

[33] Importantly, Mrs Smith's testimony as to the timing of the installation was corroborated by a voluminous amount of documentary evidence unsurprisingly generated by those responsible for overseeing the installation.

[34] A substantial array of that documentary evidence was addressed during the incomplete evidence-in-chief of Thomas Sherley, who had been a civil engineer with Ullman & Nolan, the firm engaged by Council to plan and project manage the installation of the sewer reticulation system.[25] Mr Sherley explained that the installation of such a system included the installation of gravity operated reticulation sewer mains and associated

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18 T5-82 L15; T5-82 L28.
19 T5-82 LL20-26.
20 T5-80 LL30-37.
21 T5-80 L44.
22 T5-83 L45.
23 T5-89 L5.
24 T5-90.
25 T5-92.

manholes.[26] Mr Sherley confirmed that the sewer main which traversed the property was numbered 118, as is apparent from the plans of the works.[27] Mr Sherley explained that the contractor performing the physical works was G & M A Lemura Pty Ltd. A significant number of the documents referred to by Mr Sherley were documents generated either by Ullman & Nolan or G & M A Lemura Pty Ltd.

[35] Before Mr Sherley's evidence-in-chief could be completed, the five days initially allocated for the hearing of the trial were exhausted and the trial was necessarily adjourned to resume some months later. Mr Sherley died in the interim. I bear in mind Mr Sherley could not be cross-examined and, in fairness to the Woolnoughs, to the extent that any of his oral testimony in chief on matters in issue went beyond what appears in the tender documents, I give no weight to it. The reality, however, is that the material aspects of Mr Sherley's evidence were elicited by reference to two folders of project related documents which ultimately became Exhibit 42 in the trial and which are evidence in their own right.

[36] Their content universally supports the conclusion that the installation of the sewer main on the property occurred in 2005. As much is readily apparent from this summary of the content of some of the documents:

(a) 24 February 2005 – Council's letter of acceptance to G & M A Lemura Pty Ltd of their tender to perform construction of reticulation mains, manholes, pump stations and rising mains for stage one of the project.[28]

(b) 29 April 2005 – Facsimile letter from G & M A Lemura to Mr Sherley of Ullman & Nolan advising, inter alia:

> "Tom at the present time we are looking at a starting date the week commencing 16th of May 2005. …"[29]

(c) 5 May 2005 – Minutes of prestart meeting at Ullman & Nolan between John Lemura and Tom Sherley.[30]

(d) 8 June 2005 – Letter from Tom Sherley of Ullman & Nolan to John Lemura of G & M A Lemura Pty Ltd detailing various matters discussed on site the day before, including:[31]

> "Line 118 will be increased to 225 mm diameter between 1/103 and 1/118 to provide increased capacity for future development."[32]

(e) 16 June 2005 – Email from Reg Norman, Nebo Shire Council's technical officer to Tom Sherley detailing a number of safety concerns involving a crew undertaking the sewerage construction works in Nebo including proper shoring of the "very deep trenches".[33]

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26 T5-95 L27.
27 T5-97 L30.
28 Ex 42 Vol 1 p 1.
29 Ex 42 Vol 2 p 516.
30 Ex 42 Vol 1 p 8.
31 Ex 42 Vol 1 p 13.
32 Ex 42 Vol 2 p 524.
33 Ex 42 Vol 1 p 18.

(f) 20 June 2005 – Letter from Tom Sherley to G & M A Lemura attaching the first of what were to be multiple progress certificates in respect of the works being performed.[34]

(g) 24 June 2005 – Ullman & Nolan telephone record file note of call by Mr Sherley to Mr Cullen of Nebo Shire Council recording their discussion of potentially doglegging line 118 in the vicinity of the skate park.[35]

(h) 19 July 2005 – Letter from Tom Sherley to David Cullen of Nebo Shire Council regarding the need to dogleg sewer line 118 in the vicinity of the skate park, using so-called strategies A or B and concluding:

> "It would be appreciated if you could advise me today whether you prefer strategy A or B. This will enable work *to continue* on line 118 without interruption."[36] (emphasis added)

(i) 27 July 2005 – Ullman & Nolan file note by Tom Sherley of a call to Ted Hobson of G & M A Lemura noting, inter alia:

> "He is *currently working near shed and water tank* between 2/118 and 3/118. Tank is now full of water and can't be moved."[37] (emphasis added)

The file note detailed a number of levels and then continued:

> "I stipulated 40 mm drop (and not 80) through 3/118, 4/118, 5/118 and 6/118. He has received a copy of defects list … and had done some of the items"[38]

Mr Woolnough made the unconvincing submission that this file note could be referring to an act of taking measurements and not engaging in construction work on site. That is unlikely in light of the language used in the file note. In any event, the fact that Mr Hobson of G & M A Lemura was "currently working" at the property as at 27 July 2005, in an era when other documents also show line 118 was being installed, makes it obvious the installation of line 118 at the property would have occurred in that era.

(j) 4 August 2005 – Telephone record file note of Ullman & Nolan by a staff member whose initials are consistent with that person being Mr Sherley, recording a call to Ted Hobson of G & M A Lemura, noting "completed Oxford Street road crossing on line 118 yesterday including stabilised and backfill …"[39] The suburban block in which the property is located, fronting Bovey Street, is bordered to the west by Oxford Street, to the east by St Lawrence Street and to the north by Kemmis St. This contemporaneous record of the installation of line 118 across Oxford Street provides powerful support for the installation of line 118 having occurred through the property in that era.

(k) 5 December 2005 – Ullman & Nolan file note prepared by a staff member bearing the initials of Mr Sherley, recording a reconciliation of the various

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34 Ex 42 Vol 1 p 19.
35 Ex 42 Vol 2 p 526.
36 Ex 42 Vol 1 p 29.
37 Ex 42 Vol 1 p 34A.
38 Ex 42 Vol 1 p 34A.
39 Ex 42 Vol 1 p 39.

lines' built lengths and including a reference to line 118's built length being consistent with the amended design length. The file note is consistent with line 118 having been completely built by this time.[40]

(l) 9 January 2006 – Ullman & Nolan's progress payment certificate number 7 for work completed to 31 December 2005, the details of which specifically refer to an amount charged for the supply and installation of fittings for future connection of a rising main to a manhole in line 118.[41] The certificate records completion of a variety of other work in more generic terms, but the specific above reference to a manhole in line 118 is again consistent with the completion of line 118 having occurred during 2005.

[37] In the course of Mr Woolnough's closing submissions he addressed documents of the kind referenced above and highlighted some variations in writing attributed to Mr Sherley, presumably to raise suspicion about the documents. However, for reasons I identified at the time, the supposed variations were consistent with ordinary deviations in writing by the same author.[42] In the upshot Mr Woolnough conceded he did not think Mr Sherley was alone capable of conspiring to assemble such a body of supposedly false or misleading documents. His concession that a multi-player conspiracy would have to have been afoot was at least a concession of the force of the documentary evidence. I detected no hint of any such conspiracy.

[38] A selection of further documents held by the Council were exhibited by its financial compliance officer, Debbie Bromley.[43] Those documents further support the conclusion that the installation of the sewer main on the property occurred in 2005. They include a development application by the Woolnoughs, received by the Council on 27 March 2007,[44] along with other documents related to the application.

[39] The application was to reconfigure the property into two lots. To the extent the application would prompt future sewerage works, it was that an additional rising main would need to be connected with the sewer main because at the time of installation of the sewer main in 2005 only one rising main would have been installed at what was a single block property. For example in Council's exhibited materials, correspondence from Cardno Ullman & Nolan dated 12 April 2007, regarding the development application, noted:

> "<u>Sewerage</u>
>
> Each lot *has an existing sewer main*. An additional branch may be required."[45] (emphasis added)

This is yet another piece of evidence confirming the sewer main had been installed at an earlier time.

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40 Ex 42 Vol 2 p 553.
41 Ex 42 Vol 1 p 79.
42 T7-91 – T7-95.
43 Ex 46.
44 Ex 46 p 32 et seq.
45 Ex 46 p15.

[40] The development application appended a document addressing the detail of it by Pioneer Surveys Pty Ltd, surveyors, town planners and land development consultants, a company the Woolnoughs had obviously enlisted to assist them in making their application. In the "site characteristics" of that document it was noted of "Existing Services":

> "The site is connected to the councils reticulated water supply and sewage."[46]

[41] The application also annexed a "site development plan/detailed survey" of the property by Pioneer Surveys.[47] That plan, identical copies of which are to be found amongst a variety of other tendered documents, is dated 28 February 2007, months before when the Woolnoughs claim the sewer main was installed in 2007. On the plan, in the north-east corner of the back yard, is endorsed the words, "SEWER MH", next to a circle which matches the position of manhole 2/118 that appears in photographs of the property. Thus, a survey plan prepared on 28 February 2007 recorded the existence at the property of the sewer main's manhole at a time when, according to the Woolnoughs' case, the sewer main had not even been installed.

[42] Not even Mr Woolnough sought to argue there would be a manhole cover at the property without a manhole or sewer main under it. Rather he tried to explain away this contradiction by postulating that the drafter of the plan may have been including what was planned to be included in the future by Council.[48] However, there is nothing in the content of the application to suggest the sewer main was yet to be installed. The manhole obviously appeared in the plan of 28 February 2007 because the author of the plan saw it was in place at the property at the time of survey.

[43] It is also noteworthy that in the Council's decision notice in respect of the application, dated 1 June 2007, a month before the Woolnoughs claim the sewer main was installed, condition 5.A.10 noted:

> "10. A sewerage branch is to be provided to each lot from *the existing sewer* where not already existing at the applicants' expense."[49] (emphasis added)

[44] Further to all of this, evidence was adduced from Mr Patrick White, a former manager of the Council's technical services branch – the branch supervising service projects including sewerage. His payroll record confirms his evidence that he commenced employment with the Council on 28 May 2007.[50] From the outset he inherited responsibility for the town sewerage system project and thus became well aware of the stage that project was then at. He testified the main sewer lines had already been installed and that, by the time he commenced, it mainly remained to facilitate house connections to the main sewer line.[51] Indeed he recalled meeting with Mr Woolnough and Mr Sherley at the property within about a month of commencing work with Council

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46 Ex 46 p 51.
47 Ex 46 p 61.
48 T4-75 L26.
49 Ex 23 p 2 [5.A.10].
50 T7-7, ex 49.
51 T7-8.

discussing Mr Woolnough's request to have a second riser pipe installed, which was declined.[52] His recollection is that the request for a second riser pipe was associated with potential subdivision of the property.[53]

[45] Considered collectively the evidence adduced by the Council, especially the documentary evidence and the evidence of Mrs Smith, compels the conclusion the installation of the sewer main through the property occurred in 2005. It was installed with the consent of the Smiths. It follows the Woolnoughs' case in trespass as pleaded and conducted must fail.

(2) Subsidence: Did the installation cause subsidence to the shed slab, house slab or rear fence?

[46] Mr Woolnough believes the sewer main was poorly installed, the trench was too narrow, the backfill compaction was inadequate and the filled trench subsided. He also believes the penetration of water via a so called sinkhole near the north west corner of the shed eroded the bedding sand surrounding the pipe, resulting in the pipe sagging and breaching and sewage escaping. He believes there is likely a cavernous space extending under his shed slab.[54] What then of the evidence led in attempted proof of such beliefs and theories?

[47] Mr Woolnough did not witness the manner of installation of the trench, the width of trench or the manner of compaction and filling. Nor did he witness subterranean erosion under or a breach of the pipe.

[48] Mr Woolnough testified the first indication of a potential problem was in August 2008 when he noticed water running off the roof of his shed and from his rear neighbours' property into a hole in the ground.[55] He asserted the hole was about a metre from the fence and a metre and a half from the shed, although photographs of the sinkhole suggest it was closer to the shed than that.[56] He testified "a huge amount of water" disappeared down the hole.[57] He initially assumed it must have been entering an open riser to the sewer main until ascertaining there was no riser in that location.[58] He tried to fill the hole.

[49] The soil type at the property was dispersive. It is not unheard of for sink holes to form in dispersive soils or be eroded out by concentrated water flows.[59] However, the significance of this sinkhole to the Woolnoughs' case is the theory that it penetrated down over three metres below the property allowing water to flow about the pipes' bedding sand and erode the earth supporting the pipe, presumably carrying such eroded earth elsewhere underground. There is simply no evidence that there was any such depth or direction of penetration of water entering the sinkhole.

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52 T7-8 L40 – T7-9 L42. Mr Woolnough remembered this meeting – T4-61 L25.
53 T7-12 L38.
54 T3-101 LL40-45; T4-62 L22.
55 T2-64 LL1-14.
56 Ex 2, ex 4.
57 T2-66 L31; T3-84 L25.
58 T2-66 L36, T3-84 LL24-47.
59 Ex 36 p 178 [5.6.3].

[50] Shortly before the trial Mr Woolnough arranged to excavate parts of the ground above the sewer trench line, though not all the way down to the depth of the sewer pipe. This included a substantial excavation along the rear of the shed slab, including the vicinity of where the sink hole had been. The exercise did not expose any evidence of a subterranean cavern or hole.

[51] The excavation work revealed that some distance down, along the probable sewer main trench line, there was a strip of earth about two feet wide which had a different colour than the soil on either side of it.[60] From this Mr Woolnough theorised the trench as dug was only about two feet wide, contrary to requisite standards and not allowing for proper bedding and compaction.[61] The point of such a theory in the present case was presumably to provide circumstantial support for subsidence and a breach of the pipe on the basis such outcomes could result from flawed trenchwork. However, even if the trenchwork was flawed (and I make no such finding), it does not follow and would remain to be proved that there was subsidence and a breach of the pipe. Moreover, the fact that a soil profile about two feet wide was exposed by the excavation exercise does not mean that was the width of the trench. It is, for example, possible that the fill process occurred in such a way that when fill was layered in over and above the installation the contrasting profile of sections of the fill resulted in the narrow strip which so excited Mr Woolnough's attention.

[52] Mr Woolnough testified that subsequent to noticing the sink hole he noticed a gap up to three to four inches had opened up as between the shed slab and the ground beneath it.[62] While he referred to this as subsidence it is likely on the whole of the evidence that some sand or bedding material underlying the slab was eroded by water, thus giving rise to a gap near that edge of the shed slab.

[53] Mr Woolnough exhibited photographs of the house on the property showing a crack under a window.[63] He may have intended but neglected to testify about a few other similar defects.[64] The house had been transported from another location and installed at the property by the previous owners, the Smiths. Mrs Smith was not cross-examined about the efficacy of that process. There are many potential reasons why buildings may move slightly, causing cracks and the like. The Woolnoughs evidently arrived at the view such defects in the house were attributable to the consequences of the manner in which the sewer main was installed but adduced no probative evidence in support of such a conclusion.

[54] Mr Woolnough also noticed the ground was sinking along the rear fence line.[65] He testified it became more apparent after a cyclone in 2010.[66] I accept there was likely some degree of settlement of the trench backfill, with some consequent collapsing or subsidence of the surface along and near the edges of it. Indeed, the evidence shows

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60 Ex 13. The strip can just be made out in the photographs and was visible at the view of the property.
61 Eg T4-73 L25 – T4-74 L31.
62 T2-68 L41; T2-71 L27.
63 Ex 10.
64 Those being defects he pointed out during a view of the scene.
65 T2-70 L13.
66 T3-95 L20.

there was some modest lowering of the height of the property's east and west fence lines where they traversed the underlying sewer main.

[55] However, there was no credible evidence of trench settlement or side subsidence occurring to such an extreme extent as to make it inevitable that earth and structures beyond would have subsided. Mr Woolnough did exhibit photographs revealing some discrete spots of subsided or eroded ground[67] but the actual extent to which there was some overall sinking of the trench-line was not well explained by his evidence. His claim at one point that "the trenching literally started to collapse in on itself"[68] appeared exaggerated. He in due course interfered with the surface of the trench line, partially excavating it and creating a wall or bund to stop water flowing from the vicinity onto the rest of the property. This work had the consequence of depriving the Woolnoughs of further opportunity to better photograph the extent of settlement. The extent of this work and the likelihood of it damning and ponding large amounts of water, including runoff from next door, the shed roof and the tank overflow, was graphically illustrated in a photograph, exhibit 20.

[56] The alleged subsidence of the shed slab, house slab and rear fence was the subject of expert enquiry in evidence by Jeffrey Hills, an experienced and well qualified forensic engineer, and Dr Philip Shaw, an experienced and well qualified geotechnical engineer. They both examined the site on 23 March 2017. Beyond their measurement and analysis of surface features, Dr Shaw also oversaw the drilling of three bore holes which allowed for the extraction of soil layers for testing. Their reports, which were exhibited,[69] provided cogent foundational support for their conclusions, the credibility and reliability of which was not undermined by cross-examination.

[57] Rain fell during the expert inspection on 23 March 2017. It was noted that downpipes from the house were discharging beside its foundations which, Mr Hills explained, "can lead to differential foundation movement".[70] It was noted at the rear of the shed the owners had mounded dirt to create a bund, preventing water from flowing along the boundary to the street and thus "exacerbating the ponding of water near the foundations of the shed".[71] Dr Shaw's report noted in respect of this area:

> "4.1.4 … This mound had the effect of containing surface water in the area between the rear fence and the mound and allowing it to collect in the dish-shaped drain behind the shed. The water tank overflow also discharged into the area between the mound and the rear fence. …
>
> 4.1.5 It was raining on the day of the site visit and surface water runoff along with the water from the tank overflow was observed to flow into and pond in the dish-shaped drain between the shed and the rear fence. … There appeared to be no outlet to the dish-shaped drain and water which collected in the drain was simply allowed to evaporate or slowly infiltrate the ground.

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67 Eg ex 3.
68 T3-95 L20.
69 Ex 35, 43, 44.
70 Ex 43 p 3.
71 Ex 43 p 10.

> 4.1.6 The area between the shed and the fence was muddy and slippery due to the deposition of soil fines from water flowing into and ponding in the area. There was evidence of green algae on the soil surface at some locations indicating that the area remains in a wet condition for prolonged periods. There was an odour of damp soil but no odour of sewage."[72]

[58] Dr Shaw determined that the property's soil type was reactive with potential surface movement under normal seasonal moisture variations likely to be up to 48 millimetres.[73] While the integrity of the sewer main would not be affected by this, by reason of its depth being below the seasonal depth of moisture influence,[74] it could in the normal course cause movement in the level of a slab on the surface of such reactive soil.[75]

[59] The presence of trees can also influence moisture levels within soils and those levels can, in turn, be impacted by the removal of trees.[76] Dr Shaw's study of aerial photographs from 2003 to 2016 revealed there was significant vegetation in the vicinity of the rear of the shed and along the rear fence line, most of which had been removed by May 2011. He opined the presence of such vegetation in such close proximity to the rear of the shed "would have resulted in potential surface movements under the shed in excess of 45 mm".[77]

[60] Of the three bore holes used for dynamic cone penetrometer ("DCP") testing of soil profiles, two were directly above the alignment of where the excavation for the sewer main would have occurred. One such bore hole, SU1, was at the rear of the shed towards the north-west corner, and the second, SU2, was further along towards the middle expanse of the rear of the property.[78] The third bore hole, SU3, was further out into the middle of the back yard.

[61] In cross-examination of Dr Shaw, Mr Woolnough suggested that bore holes SU1 and SU2 may not in fact have been above the area where the excavation of the trench for the sewer main occurred. That suggestion was premised on his theory derived from his recent excavation work about the width of the excavation. As already discussed, his theory is unsupported by such evidence as was exposed by his excavation work. Dr Shaw would not concede that bore holes SU1 and SU2 were outside the range of what would have been the trench line.[79] By reference to the photograph location of where bore hole SU1 occurred,[80] I readily infer that the alignment would have been comfortably within the range of width of the excavation.

[62] The experts noted some minor consolidation settlement having occurred along the alignment of the backfilled sewer main excavation. This appeared to be associated with a slight sagging of the eastern and western boundary fences of the property where they

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72 Ex 36 p 7.
73 Ex 36 p 15.
74 Ex 36 p 14.
75 Ex 43 p 9.
76 Ex 43 p 10.
77 Ex 36 p 14.
78 Ex 36 p 24.
79 T5-72 L9.
80 Ex 36 p 24.

straddled the sewer trench.[81] Mr Hills opined that 90 per cent of the consolidation settlement along that line would have occurred within two to three years of the construction.[82] The tenor of the expert reports on this subject was that a minor degree of consolidation settlement was unremarkable. Furthermore, the results of the DCP testing noted that the DCP values in the trench backfill taken from bore holes SU1 and SU2 were similar to those encountered in the natural undisturbed alluvial soil sampled by SU3.[83] Dr Shaw opined that such "consistency could not have been achieved by self-weight alone and the backfill must have received some compaction at the time of construction".[84] Mr Hills noted by reference to Dr Shaw's DCP results that the fill material within the trench was more compacted and denser than the soil surrounding the trench, rendering it unlikely that there would have been movement closer to the trench by the surrounding soils.[85] Dr Shaw preferred to take the view that the DCP comparative values were similar,[86] a variation in opinion of no material significance.

[63] Dr Shaw's report explained the way in which trench excavations can result in settlement of ground surface somewhat beyond the trench line, it being "generally accepted that it is not possible to excavate a trench into sewers without some lateral movement of the sides of the excavation towards the trench and a corresponding vertical movement of the soil beyond the excavation".[87] He estimated that the settlement of the ground surface at the rear of the shed, due to the trench excavation, would likely have been in the order of three to nine millimetres.[88]

[64] Both experts were informed by Mr Woolnough at the time of the inspection about the gap he alleged had developed at the rear of the shed as between the slab and the ground. They did not witness it because soil was covering that vicinity. Photographs of this loss of fill material indicated that up to 50 millimetres of support under the slab was missing from the edges.[89] Mr Hills explained that sand commonly underlies constructed slabs and that a layer of sand can be readily washed away if the drainage is poor.[90] He did not consider the probable washaway of some underlying sand had affected the structural performance of the slab.[91]

[65] As to the shed slab itself, Mr Hills opined that such foundational movement as had occurred was inconsistent with it being caused by the installation of the sewer main. He noted there was a 30 millimetre fall in the slab in the front mid-left area, which is the opposite side of the slab from where the excavation occurred. He opined such fall was consistent with the close proximity of a large tree on the neighbouring fence line occasioning movement in that area.[92] Such cracks as appeared in the surface of the shed slab were consistent with normal shrinkage cracking as often occurs after a concrete

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81 Ex 36 p 7, Ex 43 p 23.
82 Ex 44 p 3.
83 Ex 36 p 12.
84 Ex 36 p 13.
85 Ex 43 p 20.
86 Ex 37.
87 Ex 36 pp 10-12.
88 Ex 36 p 12.
89 Ex 43 p 21.
90 Ex 43 p 21.
91 Ex 43 p 21.
92 Ex 43 pp 15-16.

slab has been laid.[93] Mr Hills opined the lack of cracking towards the rear was consistent with long-term differential movement as distinct from a short-term loss of foundational support of the kind that might occur following excavation of a trench.[94]

[66] Mr Hills considered that the maximum differential movement which had occurred towards the north side of the shed slab – the side closest to the excavation works – was only 18 millimetres,[95] which he noted could readily be accounted for by reason of the previous significant tree growth in that vicinity.[96] Mr Hills opined that the maximum differential movement which had occurred in the shed slab was 19 millimetres. Australian Standard AS2870 Residential Slabs and Footings provides for slab design to accommodate movement of up to 40 millimetres in reactive soils,[97] which is considerably greater than the maximum differential movement of the shed slab at the property.

[67] The upshot is that while the installation of the sewer main likely caused some modest degree of settlement of the ground beneath the rear of the shed, such movement of the shed slab as has occurred may also have been in response to a variety of naturally occurring conditions discussed above and, in any event, the overall degree of movement is well within normally expected performance tolerances for slabs constructed on reactive clay.[98] The evidence of Mr Hills and Dr Shaw, which I accept, leads inevitably to the conclusion that the installation of the sewer main did not cause any material degree of subsidence to the shed slab.

[68] It is convenient at this point to dispense with an issue which arose from the fact that Mr Hills reached his opinion by having regard not only to his inspection and Dr Shaw's geo-technical information but also to a level survey of the shed undertaken on 9 June 2014 by Mr Lowther, director and principal structural engineer of Forme Consulting Engineers Pty Ltd. This caused the Council to call Mr Lowther during its case to formally prove the 2014 survey to which Mr Hills had regard. This in turn allowed Mr Woolnough to cross-examine Mr Lowther and elicit Mr Lowther's evidently adverse view of the Council having installed the sewer line trench so close by to the shed and tank structures as to give rise to a risk of subsidence.[99] More particularly, it allowed him to adduce evidence from Mr Lowther that, in connection with his survey, persons he described as "we" did and believed the following:

> "We recorded that there was distinct roll-off or fall of – or a change in floor level that occurred at the second portal frame from the northern end with the slope of the floor falling down towards the sewer main installation. That same fall was not present elsewhere in the shed at the time of our inspection. The uniformity of the fall towards the sewer main suggests that there's been subsidence of the soil along the sewer main installation and behind the shed, resulting in the settlement of the floor slab in the direction of the sewer

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93 Ex 43 p 19.
94 Ex 43 pp 19-20.
95 Ex 43 p 7.
96 Ex 43 p 16.
97 Ex 43 p 22.
98 Ex 43 p 23, Ex 36 p 177.
99 T6-61 L27 – T6-62 L11.

> main. So we believe that the sewer main – the installation of the sewer main was defective and resulted in subsidence of the shed."[100]

[69] Mr Woolnough did not elicit any further material information from Mr Lowther in support of the conclusion there had been subsidence caused by the installation of the sewer main. In contrast, such information was provided in support of Mr Hills' and Dr Shaw's opinions. Moreover, Mr Hills' report specifically noted in respect of the shed and Mr Lowther's 2014 survey:

> "The zero point for the survey undertaken in March 2017 and the zero point for the survey undertaken by JHA in June 2014 were taken at the same point in the front right of the shed."[101]

In respect of the June 2014 survey the zero point was the same as the zero point for the survey undertaken in March 2017. When they were compared, Mr Hills opined, some levels have remained the same while "other levels have changed up to nine mm over the last three years".[102]

[70] He explained that the movement detected over time has not been consistent with the primary cause of settlement being attributed to sewer installation.[103] Given the absence of foundational material in support of Mr Lowther's opinion and more particularly that it did not include reference to further information relating to the movement of the slab over time, I prefer the opinion of Mr Hills over that of Mr Lowther.

[71] I note for completeness that Mr Hills' opinion regarding the tank stand, the four pillars of which had exhibited differential movement, was that there was "no real pattern as to the movement".[104]

[72] As to the house slab Dr Shaw opined, quite convincingly, that the installation of the sewer main would have had no effect on the house slab because it was "too far away to be within the zone of influence".[105] Mr Hills noted that the lowest point of the house slab was actually at the front, that is the side furthest from the rear of the property.[106] He attributed this to long-term differential settlement and noted that such tilt in the slab as there was, was positively inconsistent with it having been caused by the excavation works at the rear of the property.[107] Once again, the evidence of Mr Hills and Dr Shaw compels the conclusion that the installation of the sewer main did not cause any material subsidence to the house slab.

[73] The Woolnoughs tendered an engineering report by Aurecon Australia Pty Ltd[108] which had evidently been procured by the Council in 2013 and was disclosed in the present claim. They did not call the author of the report. It is tolerably clear the Woolnoughs

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[100] T6-52 L41 – T6-53 L2.
[101] Ex 43 p 12.
[102] Ex 43 p 12.
[103] Ex 43 p 15.
[104] Ex 43 p 8.
[105] Ex 36 p 167.
[106] Ex 43 p 14.
[107] Ex 43 p 14.
[108] Ex 50.

were not seeking in any event to rely upon the opinions expressed by the author and, rather, were interested in the forensic significance of an annexure which is discussed in dealing with the issue of nuisance below. In any event I note for completeness that the opinions expressed by the author of the Aurecon report provided no material support for the Woolnoughs' subsidence case.

[74] In the end result the only potentially relevant subsidence was some modest sagging of the east and western fence lines above the alignment of the trench. It is apparent from the photographic evidence that the consequential deviation in the fence line is minor. Mr Hills opined without challenge that the cost of its rectification would be about $800.[109] The difficulty remains, additional to the earlier discussed pleading issue, that this minor damage would have occurred within two to three years of the installation, that is to say by 2007 or 2008. The proceedings commenced on 19 May 2016 which was substantially more than six years after the accrual of any cause of action that could have been associated with this damage and beyond the relevant period of limitation.[110]

[75] It follows the Woolnoughs have failed to prove any compensable loss or damage resulting from subsidence.

(3) Nuisance: Did the installation cause sewage leakage at the property?

[76] Two obvious ways to seek to prove whether the installation caused sewage to repeatedly leak from it and up onto the ground of the property would be to:

(a) adduce expert evidence of inspection of the integrity of the sewer main under and near the property, to prove it leaks; and

(b) adduce expert evidence of testing of the content of the allegedly sewage contaminated ground, to prove the presence of sewage.

The Council did both and the Woolnoughs did neither.

[77] Instead the Woolnoughs settled for lay descriptions of what had been seen and smelt. Lay evidence on an issue of this kind is limited in its probative value by the imprecision and subjectivity of the senses in determining the composition of the source of a malodourous substance coming from the ground.

[78] It will be recalled Mr Woolnough created a bund which had the effect of damming water at the rear of the property. It is worth repeating part of Dr Shaw's above quoted description of this area after rain:

> "4.1.6 The area between the shed and the fence was muddy and slippery due to the deposition of soil fines from water flowing into and ponding in the area. There was evidence of green algae on the soil surface at some locations indicating that the area remains in a wet condition for prolonged periods. There was an odour of damp soil but no odour of sewage."

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[109] Ex 43 p 23.

[110] *Limitation of Actions Act 197*4 (Qld) s 10(1)(a).

[79] It is a matter of ordinary experience that the ground in areas where water has inundated or pooled can sometimes smell and look foul. Whether this naturally occurring phenomenon occurs doubtless depends on variables such as soil type and the presence of naturally occurring contaminants such as algae or other miniscule vegetative matter within or on the muddied surface. However, it does not require the leakage of sewage in order for a stench to develop or muddied liquid to pond or flow in such an area in connection with heavy rain. It is also relevant to bear in mind that to the subjective senses of one allied to the possibility of sewage's presence it would be a small step to mistakenly believe such a stench is caused by sewage or that such muddied flow contains sewage.

[80] Mr Woolnough testified a stench of sewage was particularly apparent in 2010.[111] He asserts that since then it has continued to escape during rain events by "coming out the soil" and flowing across the property.[112] His position about that seems to have been inconsistent in that in his written complaint to the Department of Environment of 15 April 2012 he wrote sewage had been leeching to the surface "24 hours a day", Monday to Sunday, for two and a half years.[113]

[81] Mr Woolnough introduced photographs,[114] taken in an area of the rear trenchline, of what he asserted was a shiny black veneer which is what is left when the remnants of effluent dry in a trench.[115] I place no weight on such an assertion – the drying out of muddied water can result a shiny black veneer without it necessarily containing sewage. On Mr Woolnough's own account, by the time the substance had dried it did not smell.[116] He testified the veneer like substance was apparent along the back fence and around the shed and down the driveway and along the street gutters.[117] He went so far as to assert the alleged sewage runs down the street and is contaminating the drinking supply of Nebo residents.[118]

[82] When Mr Woolnough introduced the photographs of the black veneer he testified they were taken within a couple of days of the Council's CEO, Terry Dodds, attending at the property when sewage "was everywhere".[119] He seized upon some annexed content of the Aurecon report, particularly these two passages, attributable in part to the Council's CEO, within "Appendix G Answers to CEO Questions":

> "*7. There is much evidence of sewage surcharge – not caused by the owner blocking the transportation system. How come or more importantly, where did it come from? (It didn't appear to have surcharged from the manhole).*
>
> **Response:** Refer to Plate 2 of Ground Environments Geotechnical Report in Appendix – D. This picture shows an open sewer manhole in the grounds of the property which would explain surcharging. …

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[111] T3-95 L34.
[112] T3-103 L1 – T3-104 L7.
[113] Ex 19.
[114] Ex 6.
[115] T3-18 L12; T3-19 L40; T3-20 L44.
[116] T3-20 L3.
[117] T3-96 LL3-13.
[118] T3-112 L44.
[119] T3-19 L27; T3-98 LL7-29.

> *11. The fact that sewage has surcharged from somewhere (recently) may indicate water infiltration of the underground transportation system during times of rain? Are any manhole lids below over-land flow paths where ingress of stormwater could occur – thus explaining this?*
>
> **Response:** As mentioned previously, we believe the surcharging is a result of the open sewer manhole evident in Plane 2 of Ground Environments Geotechnical Report."[120]

[83] The Woolnoughs rely upon these passages as evidence that as a matter of fact Mr Dodds witnessed the presence of sewage at their property on the occasion of his visit (a date which is not specified in the document but which might be around 22 April 2013[121]), thus helping to evidence that sewage up leaked repeatedly over the years from a breach in the sewer pipe beneath or near their property.[122] Two points demonstrate the passages fall well short of providing that kind of evidence.

[84] Firstly, for the following variety of reasons, the passages have limited probative value. The origin of Appendix G is not explained in the report which annexed it. Assuming Mr Dodds was the CEO to which it referred, Mr Dodds was not called as a witness. What the "much evidence of sewage surcharge" was, is not described. For example, it is not known if "much" means there were deposits of solid material inconsistent with the surcharge filtering up through soil and more consistent with direct flow from the sewerage system, such as out of a manhole. The surcharge is not said to be sewage based on the results of any scientific testing. Whether Mr Dodds was told the "surcharge" which his question related to was sewage (for example by Mr Woolnough) or whether he arrived at that conclusion based on something he actually witnessed for himself or whether it was a bit of both is unknown. The location of the surcharge is not described and it was seemingly not apparent where it had come from. While the drafter of question 7 did not favour the inference it had discharged from "the manhole", presumably the manhole on the Woolnoughs' property, the drafter of question 11 evidently suspected the cause was water infiltration of the system, perhaps via manhole lids below flow paths. The answers to both questions opined the surcharge was the result of the open sewer hole depicted in photograph plate 2 in Ground Environments Geotechnical report. That report is Appendix F to the Aurecon Report. The photograph at plate 2 depicts an open manhole cover nearby to pooled water at the rear of the property.[123]

[85] Secondly, even assuming that on the occasion referred to in questions 7 and 11 the surcharge witnessed was in fact sewage, that does not prove the sewage leaked from a breach in the sewer pipe at or near the property, as distinct from it flowing from some other source there or nearby. After all, it is not unheard of, albeit not common, for storm water to penetrate a sewerage system and result in an unfortunate outflow of sewage across ground. Such outflows might potentially come from open or part open manholes or incomplete house connection works at risers or incomplete repair points where some accidental damage has been done and not fixed before a rain event. The

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[120] Ex 50 pp 216, 217.
[121] See ex 33 first page paragraph (f).
[122] Eg T3-112 L5.
[123] Ex 50 p 196.

latter example comes to mind because there was passing reference in the evidence to works that were done at other nearby premises. For instance, a letter from the Woolnoughs' then solicitor to the Councils's CEO, dated 6 November 2009, stated in part:

> "We are further instructed that prior to the recent construction of a block of units on the adjoining property to the back boundary of our clients' property and the drainage works being carried out, our client had not experienced any stormwater drainage subsidence problems. Subsequent to the works, subsidence has occurred … We note that it is an obligation incumbent upon Council when Council undertakes easement drainage works, that the work be carried out to an adequate standard sufficient to cope with the amount of runoff caused by new building development undertaken on neighbouring property so the damage to existing property is prevented."[124]

[86] In any event, the point is that a once off event of actual sewage flow onto the property may have occurred without it being caused in the way theorised by the Woolnoughs. Ironically such an event may have erroneously fortified an erroneous assumption on other occasions at the property that the stench of muddied ground or flow must have been caused by sewage.

[87] Mr Woolnough also advanced a theory that some pink marks which appeared on the concrete slab floor of his shed was caused by salt leeching up through the concrete, which salt has come from dried out effluent.[125] I give no weight to this mere theory. It was unsupported by any scientific evidence. There may be many possible explanations for such marks on the floor of a shed which on his own account was used by him and sometimes others to perform work such as paint stripping by sandblasting and welding metal surfaces.[126]

[88] The other lay witnesses called by the Woolnoughs on this issue were Mr Woolnough's acquaintance of 46 years, Chris Muller, as well as the McGrices.

[89] Mr Muller, who lives a block away from the property, described having seen a liquid which smelt like and had the colour of sewage at the property.[127] His evidence was imprecise. He did not indicate when this occasion was or if there was more than one such occasion. He accepted he could not say for sure that it was sewage.[128] He also described having seen "dry caking" at the property from the tank, past the front of the shed, out to the gutter and down the street.[129] He did not mention when this was or whether it had any temporal association with the occasion when he saw the aforementioned liquid. He testified he was present at the property when the CEO of the Council said "it" was sewage.[130] It is unclear whether this was the same occasion when Mr Muller saw the aforementioned liquid.

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[124] Ex 17.
[125] Eg T3-23 LL27-46.
[126] T3-26 L11 - T3-27 L20.
[127] T5-23 L28 – T5-24 L35.
[128] T5-27 L28.
[129] T5-24 L42-46.
[130] T5-27 L17.

[90] Mr Muller volunteered that he had taken photographs of the liquid "running down".[131] An adjournment was granted to allow him an opportunity to fetch them – they were said to be on his computer at a local suburb. The court was informed by Mr Woolnough about an hour later that he had spoken by telephone with Mr Muller who told him the photographs were downloading and "that he had a – photos there of the sewerage actually coming out of the manhole".[132] In the end result, after another short adjournment, the Woolnoughs' case continued without Mr Muller being recalled. If the reference to the sewage "coming out of the manhole" was accurate then that would not have been consistent with the Woolnoughs' case about sewage leeching up through the ground and may have been one and the same event and mechanism discussed above in connection with "Appendix G Answers to CEO Questions".

[91] Mrs McGrice testified for the Woolnoughs that when she visited the property on one occasion after rain there was raw sewage on top of the ground at the rear and western side of the shed.[133] Mrs McGrice had discussed the Woolnoughs' complaints about sewage with them over the years and even came to and was present in court in support of Mrs Woolnough during a pre-trial hearing in this matter.[134] The prospect this may have influenced her subjective interpretation is self-evident. She conceded in cross-examination it was possible that what she witnessed was not raw sewage "but it stunk like it".[135] She claimed her opinion that what she witnessed was sewage was based on the "really horrible stench" and the "horrible dirty brownie, grey, blackie colour". She also said, "You could actually see some raw sewage up on top of the ground".[136] This latter comment, which might or might not have been an allusion to deposits of solid material, was not further explored. As already mentioned, deposits of solid material would be inconsistent with the Woolnoughs' theory sewage was leeching up through the ground and more likely to be the result of direct flow. Her memory was this event was in 2008[137] but it had to have been some years later given on the Woolnoughs' own case it was only since 2010 that sewage began to escape onto the property.[138]

[92] Mr McGrice also gave evidence of an occasion when he visited the property and Mr Woolnough showed him some dark liquid in the corner behind the shed which appeared to be and smelled like effluent.[139] He described it as a dark oozy fluid, that Mr Woolnough "has said about", and that it had an odour of effluent.[140] It is not apparent whether this was a different occasion than the one described by his wife and he did not testify what year it occurred in.

[93] Given the imprecision about timing in the evidence of the lay witnesses called by the Woolnoughs it may be the occasion described by each of the McGrices and Mr Muller was the same episode. There is also a real possibility it was the same episode as referred to in "Appendix G Answers to CEO Questions". If it was, that does not seem

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131 T5-23 L40.
132 T5-23 L40.
133 T4-91 L43 – T4-95 L42.
134 T4-118 L5; T4-121 L23 – T4-122 L5.
135 T4-128 L13.
136 T4-92 L27.
137 T4-92 L20.
138 ASOC [18]-[19].
139 T4-139 L44 – T4-140 L2.
140 T4-143 Ll35-43.

to have been an episode of sewage leeching upwards through earth. Even if it was not, the probative value of the evidence of all three is limited by the above discussed sensory subjectivity and the subjective influence of each being apparently aware the Woolnoughs complained the substance in question was sewage.

[94] It is also notable that none of them testified to witnessing repeat sewage events at the Woolnoughs' property. If the Woolnoughs' allegation of repeated sewage leakage at the property over many years is accurate it is surprising that locals, particularly those who live nearby, could not be found to testify to the repetitive nature of the alleged phenomenon. It is also surprising the Woolnoughs have never, after any of these repeated occasions, actually had a test sample of the suspect substance scientifically analysed.

[95] I record for completeness that the Council also adduced lay evidence of the presence or absence of scents. Ms Bromley, the Council officer who produced Council records, happens to have lived at 46 Kemmis St for four years. Her back yard abuts the back yard of the block next to the property to the west.[141] She therefore resides very close by to the property. She has never smelt sewage coming from the direction of the property.[142] Further, after heavy rain she has on occasion been next door to near the rear fence of the block directly behind the property[143] as well as on the property near the same rear fence.[144] She did not smell sewage on any of those occasions either.[145]

[96] Turning now to more objective evidence, the only witness called at trial who has inspected the integrity of the sewer main under and near the property was Damien Edwards, a sewer and stormwater inspector called by the Council. Mr Edwards works for a business trading as Morrison Civil Works and gained accreditation as a CCTV sewer and stormwater inspector in 2011.

[97] In Mr Edwards' years of inspecting sewerage lines he has never encountered sewage filtering up to the ground surface from a sewer main.[146] This is consistent with an aspect of Dr Shaw's testimony to the effect that if there were leakage from a sewer main it would follow the downhill gradient of whatever it can flow through and pressure would be required to push it upwards through earth to the surface instead.[147]

[98] Mr Woolnough advanced a theory such upwards pressure could come from water rising commensurate with the rising water level of the Nebo Creek overflow, forcing sewage which has leaked from the sewer main into surrounding bedding sand to the surface along with the rising water.[148] While Dr Shaw accepted water and sewage could rise together under pressure from water he emphasised it would be necessary for water to be in contact with the sewage.[149] This highlights an obvious difficulty for Mr

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[141] T6-42 L30.
[142] T6-42 L43.
[143] T6-42 L45 – T6-43 L33.
[144] T6-44 L5 – T6-45 L2.
[145] T6-43 L35, T6-45 L5.
[146] Ex 45.1 [81].
[147] T5-60 L20 – T5-61 L19.
[148] T4-17 L25; T5-61 L25 – T5-63 L2.
[149] T5-63 L1.

Woolnough's theory – the bedding sand surrounding the sewer main is itself likely buried under over three metres of earth. Mr Woolnough's theory would require water to penetrate down to that level in order to then flow laterally along bedding sand to underneath the property and then rise upwards through three metres of earth. Furthermore, the theory still requires there to have been a breach in the sewer main for sewage to leak into the bedding sand. Mr Edwards' inspections found no evidence of such a breach.

[99] Mr Edwards conducted CCTV inspections of line 118, the sewer main running beneath the property, on 22 April 2013, 16 April 2015 and 20 March 2017. He was able to access the sewer line via three manholes numbered 1/118, 2/118 and 3/118. Manhole 2/118 is the manhole topped by the manhole cover in the north-east corner of the back yard of the property, about 1.5 metres from the property's eastern fence and about 34 metres from the property's western fence.[150] Manhole 3/118 is to the west of the property in the direction of Oxford Street whereas manhole 1/118 is to the east of the property in the direction of St Lawrence Street. The flow within line 1/118 runs from the direction of Oxford Street to St Lawrence Street, that is from 3/118 towards 1/118.[151]

[100] Mr Edwards generated three inspection reports, one for each inspection.[152] His reports were not styled as expert reports for Court use. Unfortunately, the technical format of his reports meant the relative significance of some of their content was potentially unclear to a lay reader. However, the reports were helpfully supplemented by a lengthy file note of a conference in which he provided explanation of his technical reports, the conduct of his inspections and the relative significance of what he observed. He provided further such explanation when cross-examined.

[101] Mr Edwards found no evidence of breaches at o-ring joins in the line nor of damage which would allow sewage to escape.[153] Given the adverse significance of Mr Edwards' evidence to the Woolnoughs' case, and the seeming misinterpretation of some aspects of his evidence by Mr Woolnough, it is prudent to enlarge upon at least some of its detail.

[102] Mr Edwards' 2013 report[154] referred to five sets of CCTV inspections (described as "sections" in the report) conducted on 22 April 2013. In the first three inspections, which occurred before the line was jet-cleaned, the CCTV camera could not bypass some obstacles within the sewer line.[155] Mr Woolnough evidently considered this to be significant but it is not unusual. As Mr Edwards explained, it does not take much for a CCTV camera to bog and stop in a sewer line[156] and the mere fact that the camera could not get through prior to the jet-cleaning of the line did not mean the line was not functioning as it should. He explained it was not unusual or concerning to encounter silt, gravel or rubble to the extent of five to 10 per cent of the cross-sectional space

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150 Ex 45.1 [40]. It is noted at [69] of Ex 45.1 that the total width of the back yard is "about" 40 metres.
151 Ex 45.1 [13].
152 Ex 45.2, 45.3 and 45.4.
153 Ex 45.1 [77].
154 Ex 45.4.
155 Ex 45.1 [14].
156 Ex 45.1 [14].

within such a pipeline[157] and that while that may prevent the passage of a camera, it did not block up the flow of sewage through the sewer line. He explained had there been such blockages of actual flow he would have encountered stationary raw sewage when opening the manholes during each of his 2013, 2015 and 2017 inspections. However, he stated that in each of those years it was never like that and in each instance there had "always been a flow going through the sewer line".[158]

[103] Once the line was jet-cleaned, Mr Edwards was able to conduct CCTV inspections of the sewer line upstream of manhole 2/118 to manhole 3/118, a distance of 76.2 metres, and of the sewer line downstream of manhole 2/118 towards manhole 1/118, for a distance of 52.5 metres. In other words, the inspection was of the entirety of the section of sewer line under the property and extended along the line beyond the property in both directions for a very substantial distance.

[104] In the 2013 inspections Mr Edwards noted the presence of some fine roots reducing the cross-sectional area by 10 per cent in the 6 to 9 o'clock position located 30.9 metres upstream from manhole 1/118.[159] That is such a substantial distance to the east and downstream of the property as to be irrelevant. Mr Edwards appeared to regard the presence of tree roots in sewerage pipes as unremarkable and rejected Mr Woolnough's suggestion that the presence of tree roots meant water was "getting in and out" of the pipe.[160] Mr Woolnough theorised in his testimony that the presence of roots supports the possibility the pipe has sagged and the o-rings are leaking at the side[161] but Mr Edwards' testimony did not support that theory.

[105] Raised water levels were detected upstream of manhole 2/118 in the direction of manhole 3/118 at some locations within the area of pipe underlying the property.[162] Mr Edwards explained that despite pipes of this kind being gravitational, it "does not take much to have a little bit of 'backfill' on a pipe".[163] This can have the consequence, as was occurring in this instance, that some water or sewage may sit within the pipe but it does not block the flow and is not a cause for concern.[164] It is obvious that in the very gradual decline followed by such a pipe there is some potential for occasional slight flattening of the gradient so that some such pooling might occur. However, it is equally obvious from Mr Edwards' testimony that he did not detect evidence of such significant deviation as to likely breach the seal of the o-rings. Moreover, as already mentioned, he found no evidence of breaches at o-rings.

[106] Mr Edwards explained his inspections, even after jet-cleaning of the sewer line, ceased downstream of manhole 2/118 towards manhole 1/118 after traversing a distance of 52.5 metres. That is because at that point, which is about two properties downstream from the property in question, there was an intrusion of a junction pipe which was not obstructing the flow but which meant the CCTV camera could not progress further.[165]

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[157] Ex 45.1 [32]. To remove doubt, this is not a reference to crust deposits on the side walls.
[158] Ex 45.1 [29].
[159] Ex 45.4 p 94.
[160] T6-41 L2.
[161] T4-4 L12.
[162] Ex 45.4 p 95, p 96.
[163] Ex 45.1 [44].
[164] Ex 45.1 [42-44], T6-36 L33.
[165] Ex 45.1 [34-37].

[107] In short, in Mr Edwards' 2013 inspection no fault with the integrity of the pipeline was found.[166]

[108] Mr Edwards' report in respect of his inspections of 16 April 2015[167] records nothing of concern in respect of the inspection conducted for the entire pipe length from manhole 3/118 to manhole 2/118. It noted the presence of some raised water level in similar locations to those noted in 2013 but for reasons already explained this was not concerning.[168]

[109] The 2015 inspection from the direction of manhole 2/118 towards manhole 1/118, as in 2013, was unable to continue past 51.8 metres which is very close to the 52.5 metre termination point reached in 2013 and which in any event is substantially distant downstream from the property. The report noted of near that abandonment point, at 51.2 metres:

> "Breaking, all pieces are present but some of them are visibly displaced from position, length of break 100, from 11 to 1 o'clock".[169]

[110] The breaking noted above was a significant distance downstream of the property and could not logically be causative of the difficulties alleged by the Woolnoughs. In any event, Mr Edwards explained that at that point the pipe had "a bit of a crack through it" but the pieces were actually intact.[170] While Mr Edwards noted it was not far from where tree roots were penetrating, he was uncertain whether the crack penetrated the pipe's thickness.[171]

[111] The report also noted in the same area, at 51.6 metres:

> "A mass of mostly fine roots, which has developed into interwoven clump, Obstruction: 51-75% from 12 to 6 o'clock."[172]

The inspection in the same vicinity but progressing the other way, from manhole 1/118 in the direction of 2/118, encountered roots in a similar location as had occurred in 2013.

[112] Of the more substantial root mass, 51.6 metres downstream of manhole 2/118, Mr Edwards noted that it was not impeding the flow of sewage past it and that in any event it was well downstream of the property.[173]

[113] As in 2013, the 2015 inspections detected no defect which would cause leakage of sewage at the property.[174]

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166 Ex 45.1 [28].
167 Ex 45.3. In which manhole 1/118 is erroneously named MH3, manhole 2/118 is named MH2, and manhole 3/118 is erroneously named MH1 – Ex 45.1 [49].
168 Ex 45.1 [57].
169 Ex 45.3 p 74.
170 T6-33 L41.
171 T6-39 LL25-34.
172 Ex 45.3 p 74.
173 Ex 45.1 [59].
174 Ex 45.1 [57].

[114] The inspection report for 20 March 2017[175] refers to two inspections, emanating in each direction from manhole 2/118. It was not practicable to access the property where manhole 3/118 was located.[176]

[115] One inspection ran downstream from manhole 2/118 towards manhole 1/118 for 52.4 metres, which coincides with the same location of the junction pipe intrusion encountered previously. No material additional features were encountered.

[116] The other inspection of 20 March 2017 ran upstream from manhole 2/118 in the direction of manhole 3/118 but was abandoned after 22.3 metres when the passage of the CCTV camera was blocked by silt. This would still have been under the Woolnoughs' property, about a metre short of the eastern end of the shed.[177] This was simply another instance, of the kind earlier discussed, in which silt was preventing the camera from progressing. About 85 per cent of the pipe's cross-sectional area at this point was clear[178] and liquid was flowing through.[179] Evidently the pipe was not jet cleaned to allow further progress of the camera. In any event though, the entire stretch of sewer main beneath the property and well beyond it had been inspected in 2013 and 2015. Furthermore, in 2017, as previously, the pipe itself was not blocked and there was no evidence of any concerning defect in the sewer line or the o-ring joins.

[117] Mr Edwards is very familiar with the smell of sewage and detected no smell of it at the ground surface of the property during any of his inspections.

[118] Mr Edwards provided reliable evidence, uncontradicted by evidence of any similar expert inspections, that there is no apparent breach in the integrity of the sewer line under the property and for a substantial distance in either direction beyond it. I accept his evidence. I infer if there was a breach from which sewage leaks he would have detected it.

[119] Dr Shaw, whose evidence relevant to the topic of subsidence was canvassed earlier, subjected the soil from the three bore hole samples taken on site to laboratory testing for evidence of exposure to sewage in the vicinity of the sewer main trench.

[120] At the time of the taking of the samples, Dr Shaw detected no odour or visual evidence of sewage. Nor did the bore hole drilling encounter any groundwater seepage or groundwater table. None of his observations at the scene suggested that sewage was rising to the ground surface and he noted the measured moisture of the soils' depth below the ground surface was within the range expected for unsaturated soils above the water table.

[121] Turning more determinatively to the results of Dr Shaw's laboratory testing, he explained:

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[175] Ex 45.2.
[176] T6-30 L25.
[177] Ex 45.1 [68].
[178] Ex 45.2 p 9.
[179] Ex 45.1 [65].

> "If there was sewage contamination in the trench, it would be expected that the electrical conductivity (EC), sodium (N_a) and chloride (Cl) content of the contaminated soil would be elevated relative to the surrounding natural soils."[180]

[122] It will be recalled that bore holes SU1 and SU2 were taken from the area of the sewer line trench backfill and SU3 was a material distance away in the general yard area. Dr Shaw's report set out the detail of the laboratory testing results. Those results showed that the EC, N_a and Cl values obtained "were generally less in the trench backfill than in the adjacent natural soils".[181] Such results are inconsistent with sewage leaking from the sewer main onto the property. Further, the proportion of nitrogen was also within the normal range, indeed towards the lower end of that range, for soils in the area.

[123] The upshot is that none of Dr Shaw's laboratory tests of the bore samples taken from the property reveal exposure to sewage. Even allowing for the notion that the alleged sewage smell occurs sporadically and was not present at the time of the bore hole sampling, it is improbable that sewage filters up through the soil to the surface without leaving sewage behind in the soil. I readily conclude the scientific indicators of the presence of sewage tested for by Mr Shaw would likely have been present if the Woolnoughs' theory as to sewage repeatedly leaking up onto the property for years was correct.

[124] Even if I am wrong about that, the fact would remain the only scientific evidence of the soil content provides no support for the Woolnoughs' case. It needs to be borne in mind that the Woolnoughs carried the onus of proving, on the balance of probabilities, that the sewer main does cause sewage leakage on the property. They chose not to adduce any evidence of testing of samples taken from their property at a time when they allege the scent or sight of sewage was apparent. Nor did they choose to adduce expert evidence to rebut Mr Edwards' evidence of an absence of any breach to the sewer main in the vicinity of their property.

[125] Where does this leave their case? It is entirely possible there have on occasions been a foul smell triggered by excess water in the vicinity of the bund constructed by Mr Woolnough at the rear of the property. Its foul content may at times have overflowed. It may even have been that there was once a stage where sewage did flow onto the Woolnoughs' property from some source directly rather than indirectly via a subterranean leak in the sewer main pipe. However, the Woolnoughs have not proved that repeated leakage from the sewer main up through earth onto their property is the cause of the occasional alleged stench at the property, nor that sewage is contained in whatever smelly muddied water may on occasion appear and flow at their property after rain. The evidence of Mr Edwards and Dr Shaw reveals such a mechanism is inherently unlikely. Moreover, the evidence of Mr Edwards' repeat inspections and Dr Shaw's laboratory testing, which was left uncontradicted by any like expert evidence from the Woolnoughs, would likely have found evidence of sewage leakage if it was occurring as alleged by the Woolnoughs. They found no such evidence.

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[180] Ex 36 p 15 [5.5.6].
[181] Ex 36 p 16.

[126] The Woolnoughs have failed to prove on the balance of probabilities that sewage from time to time leaked onto their property from the sewer main. It follows that their case of nuisance must also fail.

Conclusion

[127] In light of the above conclusions in respect of each of the determinative issues in the case the Woolnoughs' claim must be dismissed.

[128] On the face of it, costs should follow the event and the Woolnoughs should be ordered to pay the defendant its costs to be assessed on the standard basis. Nonetheless I will allow the parties the opportunity to file submissions in writing should they wish to contend for a different order.

Orders

1. Claim dismissed.

2. (a) Any party wishing to contend for a costs order other than that the plaintiffs should pay the defendant's costs to be assessed on the standard basis, is to file and serve written submissions not exceeding four pages and any relevant affidavit material in support of the costs order they seek by no later than 4.00 pm 22 February 2019;

(b) any party wishing to respond to submissions or materials filed pursuant to order 2(a) above will file and serve written submissions not exceeding two pages and any relevant affidavit material by no later than 4.00 pm 29 February 2019.

3. The publication of orders and reasons as to costs and any miscellaneous orders is listed at 9.15 am 13 March 2019 in the Mackay Supreme Court with Henry J presiding from Cairns by video link, out of town parties having leave to appear by telephone, and the parties generally being excused from appearing unless they wish to.