

SUPREME COURT OF QUEENSLAND

CITATION: *Michael Vincent Baker Superannuation Fund Pty Ltd v Aurizon Operations Limited & Anor* [2017] QSC 26

PARTIES: **MICHAEL VINCENT BAKER SUPERANNUATION FUND
PTY LTD**
(ABN 26 589 018 610)
(plaintiff)
v
AURIZON OPERATIONS LIMITED
(first defendant)
STATE OF QUEENSLAND
(second defendant)

FILE NO: BS12854 of 2008

DIVISION: Trial Division

PROCEEDING: Trial

DELIVERED ON: 13 March 2017

DELIVERED AT: Brisbane

HEARING DATE: 5-9 September 2016

JUDGE: Mullins J

ORDER:

- 1. The second defendant by its servants and agents seal the two concrete box culverts identified in Figures 9 and 10 in the report of Cottrell Cameron & Steen Surveys Pty Ltd dated 20 December 2006 which were the subject of this proceeding to prevent the discharge of water from those culverts in the direction of the land described as Lot 12 on Survey Plan 268017 in the Shire of Esk.**
- 2. The preceding order be stayed for six months from the date of this order.**
- 3. Liberty to the second defendant and the plaintiff to apply on three days' notice in writing to the other in relation to the operation of orders 1 and 2.**
- 4. The first defendant pay to the plaintiff the sum of \$75,000 for damages for nuisance.**
- 5. The second defendant pay to the plaintiff the sum of \$75,000 for damages for nuisance.**

CATCHWORDS: TORTS – NUISANCE – WHAT CONSTITUTES – PRIVATE NUISANCE – IN GENERAL – where railway conducted on land adjoining lower grazing property – where culverts constructed and maintained under statutory authority in railway embankment to discharge water from the upstream catchment in the direction of the

grazing property along the natural watercourse – where property upstream from the railway property cleared and developed – where culverts concentrated water flows onto the grazing property causing erosion and subsidence – whether occupier of railway land liable for nuisance

TORTS – NUISANCE – DEFENCES – STATUTORY POWER OR DUTY – whether nuisance was the inevitable consequence of the construction and maintenance of the culverts in the railway embankment authorised by the legislation – whether the statutory body discharged the onus of disproving negligence in the exercise of its statutory powers

TORTS – NUISANCE – REMEDIES – DAMAGES – where the owner of the grazing property that sustained damage as a result of the nuisance caused by the defendants sought damages on the basis of the costs of the reinstatement of the eroded gully – whether in the absence of evidence of the diminution in value of the grazing property caused by the nuisance, it was reasonable for the award of damages to be calculated on the basis of the costs of reinstatement – where each defendant only liable for the portion of the costs of reinstatement that can be apportioned to the period during which that defendant caused the nuisance

Railways Act 1864 (Qld), s 11, s 46, s 94, s 95

Railways Act 1914 (Qld), s 52, s 73

Transport Infrastructure Act 1994 (Qld), s 150, s 215

Transport Infrastructure (Railways) Act 1991, s 6.5, s 6.12

Bankstown City Council v Alamo Holdings Pty Limited

(2005) 223 CLR 660; [2005] HCA 46, cited

Barbagallo v J & F Catelan Pty Ltd [1986] 1 Qd R 245, followed

Corbett v Pallas (1995) 86 LGERA 312, considered

Evans v Balog [1976] 1 NSWLR 36, considered

Goldman v Hargrave [1967] 1 AC 645, cited

Hunter v Canary Wharf Ltd [1997] AC 655, considered

Marcic v Thames Water Utilities Ltd [2004] 2 AC 42; [2003]

UKHL 66, cited

Marshall v Director General, Department of Transport (2001) 205

CLR 603; [2001] HCA 37, considered

Nalder v The Commissioner for Railways [1983] 1 Qd R 620, considered

Rudd v Hornsby Shire Council (1975) 31 LGRA 120, considered

Sedleigh-Denfield v O'Callaghan [1940] AC 880, considered

Wenkart v Pitman (1998) 46 NSWLR 502, cited

Winky Pop Pty Ltd v Mobil Refining Australia Pty Ltd [2015] VSC 348, considered

COUNSEL:

P W Hackett and D V Ferraro for the plaintiff

J M Horton QC and M A Eade for the first defendant

D M Favell for the second defendant

SOLICITORS: Qld Law Group -A New Direction Pty Ltd for the plaintiff
Gadens Lawyers for the first defendant
G R Cooper, Crown Solicitor for the second defendant

- [1] The plaintiff is the registered proprietor of Lot 12 on Survey Plan 268017 in the Parish of Esk (the plaintiff's land). It claims the first and second defendants have permitted and continue to permit the discharge of water from two culverts onto the plaintiff's land and seeks damages for nuisance, as a result of the erosion and subsidence caused to the plaintiff's land in the form of a gully that is between the point of discharge of the water from the culverts and Sandy Creek. The plaintiff also seeks injunctions against the defendants restraining them from permitting the discharge of water onto the plaintiff's land, and requiring the second defendant to permit access by the plaintiff over its land to facilitate the reinstatement of the plaintiff's land. The plaintiff's concern is to repair the erosion, regain its vehicular access to its land north of the gully, use the paddock divided by the gully for grazing cattle, and ensure that the erosion does not continue in the future.

Background facts

- [2] In about 1884 pursuant to s 11 of the *Railways Act 1864* (Qld) (the 1864 Act), the Commissioner for Railways purchased the land that became Lot 2 on RP20814 (the railway land) from Mr Henry Abbott who was a predecessor in title of the plaintiff. The Brisbane Valley railway line was surveyed, designed and constructed on an embankment by the Commissioner in about 1885 pursuant to the 1864 Act. The railway line abuts the eastern boundary of the plaintiff's land. Two timber box culverts (1.54m x 0.61m) were installed at mileage 36 mile 69.5 chains (shown on exhibit 15) to convey the flow of surface water upstream of the embankment under the railway in line with what is now identified by the eroded gully.
- [3] The railway line was maintained by the Commissioner pursuant to the 1864 Act and then pursuant to the *Railways Act 1914* (Qld) (the 1914 Act). In about 1956 the timber box culverts were replaced with concrete box culverts of identical dimensions. The Commissioner was replaced by a body corporate Queensland Railways from 1991 pursuant to the *Transport Infrastructure (Railways) Act 1991* (Qld) (the 1991 Act) and the railway line was maintained from 1991 by Queensland Railways. The railway line was closed in 1993. From 1 July 1995 Queensland Railways ceased to exist and was replaced by the government owned corporation known as Queensland Rail.
- [4] Between themselves, the defendants do not agree on the ownership of the railway land from 1 July 1995, but the first defendant accepts responsibility for the railway land from 1885 to June 2002 or April 2003. The railway land was declared non-rail corridor land in June 2002 pursuant to s 215 of the *Transport Infrastructure Act 1994* (Qld) (the 1994 Act) and was transferred from Queensland Rail to the second defendant on 9 April 2003. (In respect of the issue between the first and second defendants as to from which of the June 2002 or April 2003 dates the second defendant became liable for any damage caused by the culverts, that issue has little significance in light of the plaintiff's concession in submissions about the limitation defence.)

- [5] The rail corridor is now used for recreational purposes of cycling, horse riding and walking and is known as the Brisbane Valley Rail Trail (Rail Trail). In the vicinity of the plaintiff's land, the Brisbane Valley Rail Trail is overseen by the second defendant in conjunction with the Somerset Regional Council.
- [6] In conjunction with the construction of the railway line, two sets of box drains about 7 metres apart were constructed on either side of and within the embankment on the railway land that now incorporate the two box culverts that face directly towards the plaintiff's land. It is not in issue that the box culverts (and internal pipes within the embankment) collect water from a watershed that slopes down to the embankment from further east and that water is carried through the rail corridor and travels a distance of approximately 15 feet before it is discharged into the plaintiff's land and travels through the gully westward to Sandy Creek. Both defendants admit erosion and subsidence has occurred on the plaintiff's land.
- [7] The plaintiff bought the plaintiff's land in about 1995. It has an area of 246.2 hectares. The plaintiff and a related company acquired adjoining allotments. The total area of the plaintiff's property (including the plaintiff's land) is at least 317.579 hectares. The plaintiff's property is used mainly for cattle grazing and also for growing avocados, limes and the occasional crops.
- [8] Unfortunately there are no photographs of the gully and the plaintiff's land in the vicinity of the culverts at the time of the plaintiff's purchase. Mr Baker who is the sole director of the plaintiff visited the property on weekends after the plaintiff's purchase and over a period of about two years progressively moved around the property repairing fences and clearing timber regrowth. He recalls repairing the fence on the boundary of the railway land and that when he first attended the gully area, he could walk and drive his Toyota utility along the fence boundary parallel to where the culverts are, in order to travel to the northern boundary of the plaintiff's land that intersects with Sandy Creek at the railway bridge over Sandy Creek. The site contour plan which is attached to the report of engineer Mr Gerard Brennan (exhibit 1/1 at p 118) was used by Mr Baker to describe what he called the railway paddock as that part of the plaintiff's land that is bounded by Sandy Creek on the west and the rail corridor on the east and divided by the gully.
- [9] During 1999 Mr Baker observed that the gully was significantly more pronounced by erosion and difficult to traverse than it had been previously. He first wrote to Queensland Rail on 8 February 2000 and complained about the erosion of the gully. By the time that Mr Baker wrote this letter, he was no longer prepared to drive his vehicle along the fence boundary to the railway land adjacent to the box culverts, because he feared that the soil would collapse under the weight of the vehicle, due to the erosion moving along the gully towards the boundary with the railway land. In order to obtain alternative vehicular access to the northern section of the railway paddock, Mr Baker had a bulldozer put in a track through the gully, but it also eroded out and Mr Baker was no longer able to use it for vehicular access. As Mr Baker does not have vehicular access for the purpose of spraying weeds and maintaining fences north of the gully, he stopped using the railway paddock for grazing cattle for which it would be otherwise suitable. Mr Baker's evidence about this consequence of the erosion was not seriously challenged by the

defendants.

- [10] There are aerial photographs that show the rail corridor, the plaintiff's land and the upstream land (that is adjacent to the western boundary of the rail corridor) at various intervals between 1944 and 2009 (exhibit 2). As early as 1944, there appears to be a line in these photographs consistent with the location of the gully. These photographs also illustrate the degree of vegetation on either side of the rail corridor. It appears there had been some clearing of the plaintiff's land in 1963. Up until 1985 the upstream land appeared covered in trees. It is noteworthy that in 1988 the upstream land bordering the rail corridor from further south than the culverts and going north to the railway bridge was completely cleared. A farm dam was constructed on the south eastern property adjoining the rail corridor upstream of the entrance to the culverts. Surface water runoff from this south eastern property flows into a shallow drain along the south eastern side of the rail corridor and is directed into the two culverts. Extensive clearing also appears to have been undertaken on the plaintiff's land both north and south of the gully and to the east of Sandy Creek between 1997 and 2001.
- [11] By the letter dated 8 February 2000 to Queensland Rail, the plaintiff's solicitors alleged that the railway line as constructed constituted a dam and the placing of pipes under the line to remove the concentration of water subjected the plaintiff's property on the downside of the line to a torrent concentrated through those pipes which created "massive erosion". The plaintiff requested Queensland Rail to rectify and repair the environmental damage.
- [12] A site inspection was carried out on the property on 3 April 2000 on behalf of Queensland Rail. The plaintiff was advised by Queensland Rail on 19 May 2000 that Queensland Rail and Queensland Transport were then negotiating the ownership and associated future maintenance responsibilities of the Brisbane Valley decommissioned rail corridor.
- [13] By letter dated 29 May 2000, the plaintiff's solicitors put Queensland Rail on notice that, in the absence of a satisfactory response within 28 days, the plaintiff reserved the right to issue proceedings against Queensland Rail. A further inspection was carried out by Queensland Rail from the rail corridor on 21 June 2000. On 30 June 2000 Queensland Rail advised the plaintiff that the gully within the plaintiff's property was a natural feature distributing runoff from the catchment area to Sandy Creek, the current drainage conditions had existed for many years and there was little scope for Queensland Rail to improve those conditions, the gully was eroding back to a sandstone base from Sandy Creek to the rail corridor, and there were other examples of this erosion occurring in the area in similar type gullies away from the rail corridor. The plaintiff was therefore advised that Queensland Rail did not consider it had any liability to undertake any works on the plaintiff's property.
- [14] Further correspondence was exchanged between the parties, but ultimately this proceeding was commenced on 30 July 2004 in the District Court at Southport with the plaintiff seeking damages in the sum of \$250,000.
- [15] During the course of this proceeding the first defendant and then both defendants maintained the position that the plaintiff could not succeed in its claim against the defendants. The nature and quantum of the plaintiff's claim has fluctuated

considerably during the course of this proceeding. The plaintiff obtained engineering advice from Bornhorst & Ward on rectification proposals for the eroded gully in October 2007. The first report prepared by the quantity surveyor engaged by the plaintiff, Mr John Lowry, dated 18 April 2008 (exhibit 21) attached the Bornhorst & Ward proposals. The first option to fill the gully with imported rock fill over a stabilising geofabric to prevent further scour of the gully, but not to remediate the gully to a walkover condition, was costed at \$231,000. Option 2 added draining the overflow from the rail alignment to the creek in a pipe in the bottom of the existing gully to option 1 and was costed at \$334,000.

- [16] When the proceeding was transferred to this Court, the amount of the claim for damages increased to \$335,000. Along the way, the plaintiff claimed \$4,629,815.22 and then reduced the claim to \$2.5m. Ultimately the quantum of the damages sought in the statement of claim was \$1.8m. Although many factual matters did not remain in dispute, the parties' respective entrenched positions on the question of liability meant the focus of the respective cases on critical issues was markedly different. The implication of this will become clear as the issues are analysed.
- [17] By the time of the trial the erosion had continued headwards towards the culverts, passing the boundary between the plaintiff's land and the rail corridor. Mr Baker described (Transcript 1-53) that "It's back to the concrete apron, and the fence is hanging in mid-air". The photographs in evidence of the gully depict the substantial nature of the erosion.

Issues

[18] The following issues remain to be decided:

- (a) whether the injury to the plaintiff's land caused by the construction of the railway line was fully compensated under the statutory scheme by which the Commissioner acquired the railway land from the plaintiff's predecessor in title;
- (b) was there consultation with, or permission from, the plaintiff's predecessor in title regarding the construction and positioning of the culverts?
- (c) whether the culverts were built along the line of an existing channel traversing the plaintiff's land that connected to Sandy Creek and was a natural watercourse or whether the culverts altered the natural watercourse;
- (d) whether erosion and subsidence on the plaintiff's land commenced only with clearing of land within the watershed and on the plaintiff's land in proximity to the gully;
- (e) whether the first defendant's actions in the placement and maintenance of the culverts were reasonably necessary for the use of the rail corridor as railway land;
- (f) whether the defendants continued or adopted the nuisance by failing to remedy, abate or take steps to prevent the nuisance within a reasonable time with knowledge or constructive knowledge of the nuisance or risk of the nuisance;

- (g) is the conduct complained of an actionable nuisance?
- (h) does the defence of statutory authority apply?
- (i) whether the plaintiff has failed to mitigate its loss by taking action to remedy the erosion and subsidence in, or shortly after, 1995;
- (j) what remediation works are required to reinstate and rectify the erosion and subsidence on the plaintiff's land;
- (k) whether the cost of the remediation works is grossly disproportionate to the value of the part of the plaintiff's land affected by erosion and subsidence.

Compulsory acquisition of the railway land in 1884

[19] The resumption of the land from Mr Abbott for the railway line pursuant to s 11 of the 1864 Act divided Mr Abbott's land. A valuation was obtained by the Commissioner of the land that was resumed and compensation of £40 was offered to Mr Abbott which he accepted. Additional compensation of £3.5.0 was also paid, making a total compensation payment of £43.5.0.

[20] Section 46 of the 1864 Act regulated the payment of compensation for the resumption of land for the purposes of the Act:

"In estimating the purchase money or compensation to be paid under any of the provisions of this Act regard shall be had by the arbitrators jury or surveyor as the case may be not only to the value of the land purchased or taken by the Commissioner on behalf of Her Majesty as aforesaid but also to the damage (if any) to be sustained by the owner of the lands by reason of the severing of the lands taken from the other lands of such owner or otherwise injuriously affecting such other lands by the exercise of the powers of this Act and they shall assess the same according to what they shall find to have been the value of such lands estate or interest at the time notice was given of such lands being required and without reference to any alteration in such value arising from the establishment of such railway and other works."

[21] Section 94 of the 1864 Act regulated works for the benefit of owners of lands adjoining the railway:

"The Commissioner shall make and at all times thereafter maintain the following works for the accommodation of the owners and occupiers of lands adjoining the Railway (that is to say)-

Such and so many convenient gates bridges arches culverts and passages over under or by the sides of or leading to or from the Railway as shall be necessary for the purpose of making good any interruptions caused by the Railway to the use of the lands through which the Railway shall be made and such works shall be made forthwith after the part of the Railway passing over such lands shall have been laid out or formed or during the formation thereof

Also sufficient posts rails hedges ditches mounds or other

fences for separating the land taken for the use of the Railway from the adjoining lands not taken and protecting such lands from trespass or the cattle of the owners or occupiers thereof from straying thereout by reason of the Railway together with all necessary gates made to open towards such adjoining lands and not towards the Railway and all necessary styles and such posts rails and other fences shall be made forthwith after the taking of any such lands if the owners thereof shall so require and the said other works as soon as conveniently may be

Also all necessary arches tunnels culvelis drains or other passages either over or under or by the sides of the Railway of such dimensions as will be sufficient at all times to convey the water as clearly from the lands lying near or affected by the Railway as before the making of the Railway or as nearly so as may be and such works shall be made from time to time as the Railway works proceed

Provided always that the Commissioner shall not be required to make such accommodation works in such a manner as would prevent or obstruct the working or using of the Railway nor to make any accommodation works with respect to which the owners and occupiers of the lands shall have agreed to receive and shall have been paid compensation instead of the making them."

- [22] Section 95 of the 1864 Act provided for any difference in respect of the kind or nature of such accommodation works or the dimensions, sufficiency or the maintenance of the accommodation works to be determined by the Governor and Executive Council.
- [23] The defendants submit that the additional compensation paid to Mr Abbott was for injurious affection. The defendants rely on injurious affection extending to the damage caused by the exercise of any statutory powers by the constructing authority that injuriously affected the land remaining after the resumption was effected, as explained in *Marshall v Director General, Department of Transport* (2001) 205 CLR 603 at [20] and [46]. On the basis that s 46 of the 1864 Act did not relevantly differ from the statutory provision under consideration in *Marshall*, the defendants therefore submit that the effect of the compensation paid to Mr Abbott was to buy the right to cause damage to the plaintiff's land of the kind which might result from the railway, including the culverts at any time in the future.
- [24] The defendants' argument does not take into account that the Commissioner did install the subject culverts. If the argument were correct the payment in 1884 of compensation to Mr Abbott would have absolved the need for the Commissioner to construct the culverts. The fact the culverts were constructed and maintained allows for the inference that there was no agreement by Mr Abbott with the Commissioner to recover compensation instead of the accommodation works that allowed water from the upstream catchment to flow through the culverts onto the

plaintiff's land. As a matter of statutory construction, the proviso to s 94 of the 1864 Act could be given effect only if it were clear either from the manner of calculation of the compensation that specific accommodation works were not required or it were possible to identify from the agreement between the Commissioner and the owner of the resumed land as to what accommodation works were dispensed with.

- [25] I therefore reject the defendants' contention that the injury to the plaintiff's land caused by the construction of the railway line was fully compensated at the time of acquisition of the railway land from Mr Abbott. Although it is raised as an allegation in the first defendants' defence that there was consultation with, or permission from, Mr Abbott regarding the construction and positioning of the culverts, there is no evidence to conclude that was in fact the case and, even it were, it could not regulate the relationship between the first defendant and successors in title for all time with changing conditions in the lands upstream from the rail corridor.

Other relevant statutory provisions

- [26] The 1864 Act was repealed by the 1914 Act. Under s 4(i) of the 1914 Act all railways, structures and works constructed, maintained or used for the purposes of any State railway were deemed to have been lawfully constructed, worked and used and were to be subject to the 1914 Act. Sections 94 and 95 of the 1864 Act had equivalent provisions in subsections (1) to (4) of s 73 of the 1914 Act:

"(1) **Accommodation works. 1863, s. 94.** The following provisions shall apply to works for the accommodation of the owners and occupiers of lands adjoining a railway:-

(2) The Commissioner shall make and at all times thereafter maintain the following works, that is to say,-

- (i) **Gates, bridges, etc.** Such and so many convenient gates, bridges, arches, culverts, and passages over, under, or by the sides of or leading to or from the railway as are necessary for making good any interruptions caused by the railway to the use of the lands through which the railway is constructed;

Such works shall be made forthwith after the part of the railway passing over such lands has been laid out or formed or during the formation thereof;

- (ii) **Fences, etc.** Sufficient posts, rails, hedges, ditches, mounds, or other fences for separating the land taken for the use of the railway from the adjoining lands not taken, and protecting such lands from trespass or the stock of the owners or occupiers thereof from straying thereout by reason of the railway, together with all necessary gates made to open towards such adjoining lands and not towards the railway, and all necessary stiles;

Such posts, rails, and other fences shall be made forthwith after the taking of any such lands if the owners thereof so require, and the said other works as soon as conveniently may be;

The obligation of the Commissioner under this paragraph with respect to any such fence shall be deemed to be discharged at all times during which such fence is equal in state and kind to the fence bounding the land adjoining the land taken for the use of the railway when such land was so taken;

- (iii) **Drains.** Necessary arches, tunnels, culverts, drains, or other passages, either over or under or by the sides of the railway, of such dimensions as will be sufficient at all times to convey the water as clearly from the lands lying near or affected by the railway as before the construction of the railway, or as nearly so as may be;

Such works shall be made from time to time as the railway works proceed.

(3) **Proviso.** But the Commissioner shall not be required to make such accommodation works in such a manner as would prevent or obstruct the working or using of the railway, nor to make any accommodation works with respect to which the owners and occupiers of the lands have agreed to receive and have paid compensation in lieu of making them.

(4) **Difference as to accommodation works. 1863, s. 95.** If any difference arises respecting any kind or number of any such accommodation works or the dimensions or sufficiency thereof, or respecting the maintaining thereof, the same shall be determined by the Governor in Council, who shall also appoint the time within which such works shall be commenced and executed.”

[27] Section 73 of the 1914 Act was in force when the timber box culverts were replaced with the concrete box culverts.

[28] The 1914 Act was repealed by the 1991 Act. Subsections (1) to (4) of s 73 the 1914 Act were re-enacted in subsections (1) to (5) of s 6.5 of the 1991 Act:

"Accommodation works. (1) This section applies to works for the accommodation of the owners and occupiers of lands adjoining a railway.

(2) Subject to subsection (3), Queensland Railways is to construct and at all times thereafter maintain such works-

- (a) as are necessary for making good any interruptions caused by the railway to the use of the lands through which the railway is constructed;

- (b) as are necessary for separating the land taken for the use of the railway from the adjoining lands not taken, and protecting those lands from trespass or the stock of the owners or occupiers of those lands from straying from those lands because of the railway;
- (c) as will be sufficient at all times to convey the water as clearly from the lands lying near or affected by the railway as before the construction of the railway, or as nearly so as is possible.

(3) Queensland Railways' obligations under subsection (2)(b) are to be taken to be discharged at all times during which a fence equal in state and kind to any fence bounding the land adjoining the land taken for the use of the railway when that land was taken, exists or is erected.

(4) Queensland Railways is not required to construct accommodation works in a manner that would prevent or obstruct the working or using of the railway, nor to construct any accommodation works where the owners and occupiers of the lands have agreed to receive and have been paid compensation instead of having accommodation works constructed.

(5) If any difference arises in respect of any kind or number of such accommodation works or the dimensions or sufficiency of them, or in respect of their maintenance, the difference is to be determined by the Land Court, which is also to appoint the time within which those works are to be commenced and completed.”

[29] Although the defendants had made submissions that the relevant statutory power relied on by the first defendant at the time of the plaintiff's notification of the erosion was s 150 of the 1994 Act, it is apparent that that provision had no application, as according to its terms, it applied only while a railway existing at the commencement of the 1994 Act (1 July 1995) continued to be operated as a railway which was not the case in respect of this rail corridor.

[30] It therefore appears that from the time that the plaintiff acquired the plaintiff's land, the first defendant was no longer subject to a statutory obligation in relation to accommodation works for the benefit of adjoining owners to the rail corridor, because the railway was closed.

[31] Even though the culverts were installed and maintained by the first defendant respectively under the 1864 Act, the 1914 Act and the 1991 Act in which there were provisions for resolving disputes between the first defendant and the adjoining owners in respect of the nature and extent of accommodation works and also provisions for compensation to persons with an interest in land prejudicially affected by the exercise of powers conferred by the Acts (s 11 of the 1864 Act, s 52 of the 1914 Act and s 6.12 of the 1991 Act), none of these Acts approached the “elaborate statutory scheme” that was found in *Marcic v Thames Water Utilities Ltd* [2004] 2 AC 42 at [33]-[35] to be inconsistent with a common law action of nuisance.

Mr Kleis' evidence

- [32] Mr Kleis is employed by the Department of Transport and Main Roads as a ranger for the Rail Trail. He is responsible for general maintenance such as arranging for slashing as required and for safety such as fallen trees and ensures all signs remain in place and are not damaged. He was first employed by Queensland Rail in 1979 as a fettler which involved maintenance along the Brisbane Valley railway line. He recalled that the railway line was "mothballed" in 1988 and officially closed in 1993 and thereafter the railway track was removed in sections. The railway track was built in the center of the rail corridor on an elevated foundation and after removal of the track the elevated foundation remains, although it is "not as elevated". Mr Kleis was still employed by Queensland Rail between 1996 and 2003 to do maintenance on the railway line or along the rail corridor, liaising with adjoining property owners about fences and drainage.
- [33] Mr Kleis first became aware of the eroded gully on the plaintiff's property in early 2000, when it was brought to his attention when he was asked to guide people to that area. He recalls that he met Mr Baker. He acted as the liaison officer between the contractor who pulled up the railway line and Queensland Transport as the owner of the corridor. Between 2003 and 2011 Mr Kleis was working with Queensland Rail (but sometimes on secondment to Queensland Transport) and would attend the Rail Trail from time to time to attend to any issues that would come up, including liaising with property owners about fences. Between February 2011 and 30 June 2016 Mr Kleis was employed by the Department of Infrastructure, Local Government and Planning. His employment with the Department of Transport and Main Roads commenced on 1 July 2016.
- [34] Mr Kleis identified the brochure (exhibit 11) that is made available for the Coominya to Esk section of the Rail Trail which includes the section that adjoins the plaintiff's land. Mr Kleis considers that the Rail Trail is increasing in popularity, as he meets people on the Rail Trail during the week and not just on weekends. He explained (Transcript 2-34) that the Rail Trail is intended to extend from Wulkuraka to Yarraman (a distance of 161 kilometres) and the majority of it has been developed into the Rail Trail.
- [35] The Somerset Region Planning Scheme which covers that part of the Rail Trail in the Somerset Region including the section that adjoins the plaintiff's land specifically refers to the Rail Trail:
- "The function of the Brisbane Valley Rail Trail as an important tourism and recreational asset to Somerset Region is promoted. The Brisbane Valley Rail Trail and surrounds is protected from land uses that have the potential to conflict on its use and context. Development of allied accommodation, transport and food and drink uses are encouraged, particularly at nodes along the Brisbane Valley Rail Trail to benefit users and promote the trail."

Elements of nuisance

[36] The elements of the tort of nuisance are:

- a. a substantial or an unreasonable interference with the use or enjoyment of the plaintiff's land;
- b. interference caused by the unreasonable use of the defendant's land;
- c. where the act alleged to have caused the nuisance was authorised by statute, a statutory body will only be liable if:
 - i. the nuisance was not an inevitable consequence of the authorised undertaking; and
 - ii. the exercise of (or failure to exercise) the statutory powers was negligent.

[37] Negligence in the context of a statutory body's liability for negligence is used in a "special sense" and is not the same as in a tortious duty of care, but is measured by the reasonable capabilities and circumstances of the defendant: *Goldman v Hargrave* [1967] 1 AC 645, 663.

[38] The onus is on the statutory body to establish the defence, including that it was not negligent in the exercise of its statutory duty or power, as was noted: In *Rudd v Hornsby Shire Council* (1975) 31 LGRA 120, 137:

"A nuisance is justified if it is the 'inevitable consequence' of the exercise by a council of statutory duties or powers because then it is implicitly made lawful by the statute and no legal redress is available other than such redress, if any, as is given by the statute. The onus of proving 'inevitable consequence' is on the council: *Manchester Corporation v Farnworth*. The concept of 'inevitable consequence' has caused difficulty. If a particular work and its location is precisely defined and specified in a statute and the statute either requires or permits the council to perform that work, the problem is simpler to solve because little or no choice as to the work to be done or the manner of its performance may be left to the council, with the result that damage necessarily occasioned by the performance of works so defined would have to be regarded as inevitable. The problem is more complex where the duty or power is conferred in general terms so that it remains open to the council to perform a variety of works in a variety of ways, some of which would and some of which would not cause a nuisance: see Fleming, *The Law of Torts*, 4th ed., pp 366, 377." (footnote omitted)

[39] That approach to the onus on the statutory body to disprove negligence in the performance of its statutory duty was followed in *Nalder v The Commissioner for Railways* [1983] 1 Qd R 620, 634-641. Different decisions on the liability of the council to a private owner for flooding due to inadequate drainage works were reached in *Bankstown City Council v Alamo Holdings Pty Limited* (2005) 223 CLR 660 and *Nudd*, but that was due to the different protective provisions under consideration and the above quoted statement in *Nudd* remains authoritative.

[40] Liability for nuisance may arise out of the continuation or adoption of a nuisance and something which is not initially actionable as a nuisance may become a nuisance over time by reason of natural or other causes: *Sedleigh-Denfield v O'Callaghan* [1940] AC 880,904-905.

[41] The decision in *Gartner v Kidman* (1962) 108 CLR 12 was concerned with facts that are almost the reverse of this case in that there was blockage of water by Mr Gartner (who owned the lower land) that would have flowed away from Mr Kidman's higher land, depriving Mr Kidman of a considerable area of grazing land. After introducing the following propositions on the basis they concerned surface waters which came naturally upon the land from which the water flowed, as distinct from water artificially brought or concentrated there and allowed to escape as in *Rylands v Fletcher* (1828) 3 Bligh NS 414, Windeyer J (with whom Dixon CJ agreed) stated at 48-49:

"With the above limitations in mind, the rights and obligations of the proprietors of contiguous closes, one on a higher level than the other, may be stated as follows: -

The higher proprietor: He is not liable merely because surface water flows naturally from his land on to lower land.

He may be liable if such water is caused to flow in a more concentrated form than it naturally would.

It flows in a more concentrated form than it naturally would if, by the discernible work of man, the levels or conformations of land have been altered, and as a result the flow of surface water is increased at any particular point.

If a more concentrated flow occurs simply as the result of the 'natural' use of his land by the higher proprietor, he is, generally speaking, not liable. What is a natural use is a question to be determined reasonably having regard to all the circumstances, including the purposes for which the land is being used and the manner in which the flow of water was increased: as for example whether it is agricultural land drained in the ordinary course of agriculture, whether it is timbered land cleared for grazing, whether it is a mining tenement, or is used for buildings and so forth.

The proprietor of higher land is not liable for a more concentrated flow from his land if it is the result of work done outside his land by someone else, and for the doing of which he is not responsible, as for example by the paving and guttering of public roads by municipal authorities.

The above statements concerning the concentration of surface waters relate to cases when the increased flow results from work done when the higher land and the lower land were held by separate proprietors. Different considerations apply when the lower land receives a concentrated flow as the result of work which was done when it and the higher land were in the same ownership and

possession.

The lower proprietor: He may recover damages from, or in appropriate cases obtain an injunction against, the proprietor of the higher land who is, for any of the reasons given above, liable to an action because he has concentrated or altered the natural flow."
(footnotes omitted)

- [42] These propositions and those from other authorities were adapted by Priestley JA (with whom the other members of the court agreed) in *Corbett v Pallas* (1995) 86 LGERA 312, 317.
- [43] The basis for an award of damages in nuisance is the loss of the amenity of the use and enjoyment of the land: *Hunter v Canary Wharf Ltd* [1997] AC 655, 696. As for other torts which result in physical damage to land, the measure for damages for nuisance is ordinarily either the diminution in the value of the land resulting from the damage or the cost of reinstatement where the plaintiff's proposal for reinstatement is reasonable in the circumstances and provided the cost of reinstatement is not disproportionate to the amount of the diminution in the value of the land: *Evans v Balog* [1976] 1 NSWLR 36, 40; *Barbagallo v J & F Catelan Pty Ltd* [1986] 1 Qd R 245, 258, 268-269; *Winky Pop Pty Ltd v Mobil Refining Australia Pty Ltd* [2015] VSC 348 at [182]. In *Winky Pop*, Digby J analysed many Australian authorities before concluding that the appropriate measure of damages for injury done to land is the diminution in value of the land or the costs of reinstatement and that "courts will start with what the plaintiff has asked for, and then consider whether that measure of damages is fair and reasonable in light of the injury suffered, the difference between the diminution of value on the one hand and reinstatement costs on the other, and any special value in the land".
- [44] *Evans* illustrates the assessment of damages where the subject matter of the claim was a dwelling house that had been built in 1900, described as "a large dwelling, of some distinction" and maintained in excellent condition by Mr and Mrs Evans. The neighbouring developer demolished the adjoining house and commenced excavating the site to provide a basement car parking area for the new premises to be built on that site. The ground subsided along the boundary of Mr and Mrs Evans' property and the fabric of their home cracked, a portion of the ceilings fell and the living room and an extension then split completely away from the building, causing Mr and Mrs Evans eventually to vacate their home. The developer accepted liability for the damage, but the issue was whether it was appropriate to assess damages as the sum reasonably necessary to restore the property to the condition in which it had been prior to the developer's tortious intervention.
- [45] At first instance and on appeal in *Evans* it was confirmed that was the appropriate measure of damages. It was expressly noted by Samuels JA (with whom the other members of the Court of Appeal agreed) at 39 that it is not the case that the normal measure of damages is the amount of diminution in the value of the land in improvements where there is tortious damage to a building. Samuels JA stated at 40:

"The question is whether it was reasonable for the plaintiffs to desire to reinstate their property. In my opinion, there is only one answer. It undoubtedly was. They had, in effect, lost their family home. That is the nature of their damage, and not some diminution in the value of their land. Fair compensation requires that they be given back what they had before; and the only way in which that purpose can be achieved is to award them the sum reasonably necessary to restore their property to the condition in which it was before the defendants effectively destroyed it. This the learned judge did; and, in my opinion, he was right. It is not to the point that the diminution in value basis might on one view produce no damages, while the reinstatement basis produces a substantial sum. The disproportion in question in cases of this kind are not always to be revealed by arithmetical comparison. The cost to a defendant of competing measures is a significant factor. But it is but one ingredient in the calculation of whether the plaintiffs' claim is reasonable or not. There are cases, and this, in my opinion, is one, where the nature of the plaintiffs' loss is such that there is only one mode of fairly repairing it. If that turns out to be more expensive than another, the wrongdoer has no one but himself to blame."

Photogrammetric evidence

- [46] Mr Gillinder of Helimetrex Pty Ltd prepared a report dated April 2016 of a survey of the eroded gully using photogrammetric data collection. Mr Gillinder explained (Transcript 1-70) that photogrammetry is the science within survey to take multiple images that are overlapping to form a three-dimensional model and relating that to the ground with ground control.
- [47] On the basis of the model that was produced, Mr Gillinder calculated that the volume of the gully was 4911.216 cubic metres.
- [48] Mr Gillinder prepared a further report on 31 August 2016 (exhibit 3) for the purpose of providing volume reports between 2006, 2012, 2016 and pre-erosion surfaces. That report showed cross-sections at various points along the gully using 2006 survey data, 2012 LiDAR data and 2016 data from Mr Gillinder's April 2016 report.
- [49] There were 10 cross-sections analysed for the purpose of the comparison data. To assist in the cross-examination of Mr Gillinder, the defendants prepared enlarged copies of printouts from the original files for Mr Gillinder's report. Exhibit 8 contains enlargements of the cross-section report comparing 2012 LiDAR data and the 2016 survey data. Exhibit 9 is an enlarged version of the cross-sections taken from exhibit 3.

Whether the culverts were built along an existing drainage line

- [50] Mr Tannock of Cottrell Cameron & Steen Surveys Pty Ltd who is a registered engineering and cadastral surveyor prepared a report dated 20 December 2006 on

his survey of the watercourse undertaken in December 2006.

[51] Mr Tannock describes the watercourse as commencing abruptly at the boundary fence with the railway reserve and that is marked "by a severely eroded bank that drops vertically from ground level at the fence to the bed of the stream". Mr Tannock estimates the watercourse extends for about 170 metres before it terminates at Sandy Creek.

[52] Mr Tannock's observations of the railway reserve at p 2 of his report were:

"The embankment supporting the rail track appears to act as a dam wall and channels upstream overland flow into two concrete box culverts via table drains ... located beside the embankment. The box culverts are located opposite the head of the watercourse in question.

Downstream of the embankment, there are two separate channels which take the discharge from the culverts. These channels appear to have been constructed at the time the rail line was built. They extend from the culverts to the property fence line."

[53] Mr Tannock took sections at four points in the course of his survey. Section D was taken on the fence line between the plaintiff's land and the rail corridor. Mr Tannock concluded that section D generally approximated the profile of the natural ground surface-at the time the rail was built and concluded that the regular shape and position of the two channels in this cross-section appear to be consistent with their being excavated. Mr Tannock concluded that most of the water flowing into the culverts is a result of overland flow being directed by the rail embankment, rather than by a naturally occurring watercourse. In expressing this conclusion, Mr Tannock had not had regard to the original surveys and plans for the railway. When shown them in Dr Johnson's report, he accepted that they showed a natural drainage line where the gully is, but also upstream from the gully on the higher land (Transcript 1-66).

[54] Dr Johnson, a director of Cardno Pty Ltd, is a civil engineer with particular experience in water engineering who was engaged by the defendants prepared a report dated 26 February 2016 that considered the original design drawings and extracts from the survey books for the Brisbane Valley Railway which were drawn in 1884. Dr Johnson noted the plans show a depression in the railway longitudinal section at the point where the culverts were installed and there is a note on the drawing (exhibit 15) stating "Gully. Watershed area 50ac.". The original 1884 survey book also contains the note for the point at which the two culverts were installed (36 mile 69.5 chains) in these terms "Gully, drains 50ac.". Dr Johnson noted at paragraph 12 of his report:

"The plans also confirm the existence, prior to the construction of the railway line, of a channel at the nominated location, by the requisite designation which is a hand-drawn line with an arrow showing the direction of flow, which in this case is from east to west."

[55] Dr Johnson set out his conclusion in paragraph 21 of his report:

"I conclude from all of this information that a natural channel traversed the land prior to the construction of the railway, and that the culverts designated for installation at this location corresponded to the location of the channel, or channels, which were present at that time. However, site inspection indicates that the construction of the railway embankment and associated earthworks has had an impact on the catchment area which is mobilised upstream of the culverts. This construction has effectively resulted in a bund, or wall, somewhat higher than the existing natural surface being formed on the upstream (eastern) side of the rail alignment. There are good operational reasons for this bund, in that the construction collects and diverts overland flow which would otherwise have flowed onto the railway itself; and potentially caused damage. However, the net effect of the bund is to increase the upstream catchment area contributing to the culverts, such that the total upstream catchment area now delivers to the channel at a point immediately upstream of the culverts rather than at the point of confluence with Sandy Creek. This will result in an increase in flow rate at the culverts themselves, but no change at the downstream point of confluence."

[56] Environmental scientist Mr Holland of Gilbert & Sutherland prepared a report in December 2011 on the erosion of the gully at the plaintiff's request. Mr Holland inspected the site, reviewed historical aerial photography and undertook a desktop assessment reviewing available information in the form of regional geological and soils mapping and topographical data.

[57] Mr Holland did not inspect the original plans or survey books for the railway line, but agreed (Transcript 2-88) with Dr Johnson's conclusion that the subject culverts lie along the pre-existing drainage line.

[58] Dr Philip Shaw is a geotechnical engineer who prepared a report dated 29 February 2016, at the request of the first defendant after visiting the site. Based on his site observations, he concluded at paragraph 5.2.1 of his report that "there was a pre-existing drainage feature that collected and discharged surface runoff across the subject land to Sandy Creek".

[59] Mr Brennan of GenEng Solutions Pty Ltd who was engaged by the plaintiff to prepare an engineering and hydrology report dated 16 May 2016 is a registered agricultural and civil engineer. He also was of the view (Transcript 3-22) that the culverts were placed where there was a gully.

[60] It is therefore appropriate to conclude that the culverts were built along the line of an existing channel traversing the plaintiff's land that connected to Sandy Creek which was a natural watercourse.

Causes of the erosion

- [61] Dr Shaw's report described the extent of the erosion shown in the photographs included in his report. He noted at around 8m to 10m downstream of the two culverts that the severe erosion has resulted in "two bowl-shaped areas of erosion with a protruding area between the two channels" and the erosion of the southern bowl shaped area has resulted in a "distinct, concave, curved, vertical cliff line around 2.3m to 2.7m high".
- [62] Dr Shaw did laboratory tests on soil samples from the erosion sites that showed that the soils were highly to moderately dispersive. He concluded at paragraph 5.1.1 that "the erosion has been caused by the action of flowing water as a combination of mechanical erosion due to the sandy nature of some of the soils and chemical erosion due to the high to moderate potential of the soils to disperse".
- [63] Mr Holland noted that the site soils are predominantly comprised of sandy loams and loams with a general increase in clay content at depth. These soils are underlain by Helidon sandstone. The soils are highly susceptible to sheet and gully erosion. The subject gully drains an upstream catchment area of approximately 13 hectares.
- [64] Mr Holland noted:
- "Removal of the vegetation in the upstream catchment leads to increased runoff volume, increased flow velocities and destabilisation of the underlying soil material. In the case of this site, extensive land clearing in the catchment upstream of (and adjacent to) the gully has contributed to accelerated erosion within the gully, in our view.
- The railway embankment has intercepted and concentrated overland flow to a defined discharge point at the culverts. By intercepting the overland flow from the entire catchment upstream of the site and directing it through the culverts and into the head of the gully, the embankment effectively concentrates increased flow into the gully, causing increased erosion."
- [65] In the joint statement of experts, Dr Johnson and Mr Holland set out their agreement that "the observed erosion has two fundamental causes, namely the concentration of flow resulting from the installation of the culverts, and the clearing of the local catchment which has led to increased rate and volume of runoff. On the basis of the written statement of Mr Baker, as well as historical aerial photographs, Dr Johnson and Mr Holland also agreed that "the significant erosion observed on site commenced predominantly sometime after clearing of the land took place in the late 1980s".
- [66] Dr Johnson relied on Mr Baker's evidence that when he first visited the site, the erosion was significantly less than it currently is to conclude (Transcript 2-55) that "there are two potential causes of the erosion, but for at least 100 years after the railway line was constructed, ... the concentration of flow ... as an effect of the railway line did not appear to have exacerbated the erosion dramatically". Dr Johnson also considered (Transcript 2-58) that the clearing of the plaintiff's land on the north-western side of the railway would have changed the run off

characteristics from that part of the site as well, but accepted (Transcript 2-76) that the largest catchment was from the upstream area.

- [67] Mr Holland noted (Transcript 2-57) that "without the railway embankment concentrating the flows, the degree of erosion wouldn't have been as high" and "with the clearing of the upper catchment, that the catchment size directing flows to those two culverts has increased, so that two working in concert ... have increased the erosion".
- [68] These experts were asked to express an opinion on the impact of the crossing across the gully made by Mr Baker on the erosion in the gully. Mr Holland considered (Transcript 2-76) the impact of that crossing on the erosion in the gully upstream or downstream was minimal. Dr Johnson did not respond to the question directly, but noted (Transcript 2-76) that the track had caused some local erosion and confirmed (Transcript 2-77) that the dominant cause of the erosion in the gully was the catchment upstream with the railway.
- [69] Dr Johnson and Mr Holland were asked to express an opinion about the stabilisation of the erosion and to consider the comparative cross-sections of the gully prepared by Mr Gillinder in exhibit 9.
- [70] Dr Johnson explained (Transcript 2-109) the widening of the gully was due to the deepening and what happened was that as it cut further down, the steepness of the banks became greater and made the sides of the gully more prone to tumble in. Mr Holland expressed (Transcript 2-109) that "gullies tend to stabilise over time" and that it may take 20 or 30 years, but would be decelerating over time.
- [71] Dr Johnson noted (Transcript 2-111) that there was virtually no difference between the cross-sections in the 2012 data compared to the 2016 data in Mr Gillinder's work which indicated that the rate of erosion had slowed dramatically. Dr Johnson noted further that when the 2006 survey was compared to the 2016 data that showed the erosion had slowed dramatically since 2006.
- [72] Mr Holland had not seen Mr Gillinder's work previously and was of the opinion that there had not been stabilisation, although he conceded (Transcript 2-114) that it may have slowed down.
- [73] Mr Holland accepted (Transcript 2-115) that the presence of mature trees on the downstream side of the crossing of the gully put in by Mr Baker would be consistent with a lack of widening of the channel in the area of the mature trees.
- [74] On the basis of the opinions expressed by both Dr Johnson and Mr Holland and the aerial photographs, it is more likely than not that the erosion commenced prior to the clearing of the upstream land, but was exacerbated dramatically by increased surface flow of water from the clearing of that upstream land that was concentrated through the culverts. Those experts also support the conclusion that the clearing of the plaintiff's land and the crossing across the gully made by Mr Baker were minimal contributors to the erosion in the gully.
- [75] Much was made by the defendants in submissions and in cross-examination of

witnesses that for 115 of the years after the construction of the culverts, there were no complaints. That does not answer the question, however, as to whether the culverts were a cause of the erosion in the gully. The fact that two causes of the erosion were identified by the experts does not mean the role of the culverts in concentrating the flows that then caused the erosion can be ignored.

Mr Brennan's hydrological modelling

- [76] Mr Brennan inspected the site on 28 April 2016 and considered the likely catchment boundaries taking into account the existing rail corridor, what may have been the catchment boundaries prior to the rail construction and the mechanism of erosion and its impact on the dimensions of the gully. Mr Brennan used a detailed contour map of the catchment using the earthworks modelling package 12D which was based on LiDAR data for the site. Digital terrain models and subsequent hydrological models were generated for four scenarios: Scenario 1 modelled the operation of the existing box culverts with the rail line in operation. Scenario 2 modelled velocities in the gully downstream of the culverts to assess the impact on velocities immediately following construction of the railway and culverts. Scenario 3 assessed velocities in the natural state prior to construction of the railway embankment and culverts. Scenario 4 assessed the Rail Trail formation hydrology and its impact on peak velocities in the gully. For all the scenarios the dam immediately upstream of the rail culverts was removed. The assumption was made for scenarios 1, 2 and 4 that all other dams were presumed full. For scenario 3, the rail formation and culverts and localised excavations were removed.
- [77] Mr Brennan used a 2D TUFLOW model to analyse and predict hydraulic behaviour. His report details the other assumptions and modelling parameters that were used. The entire catchment was assumed to be heavily vegetated for the purpose of scenario 1. In scenario 2 assumptions were made based on the profile of the surface beyond the eroded surface of the gully to model an assumed shape of the depression prior to erosion. Scenario 3 used the presumed gully profile across the plaintiff's land and a uniform surface grading from boundary to boundary across the railway land from the adjacent lots was also modelled. Scenario 4 provided gully velocities anticipated with the rail ballast removed and previous rail catch drains in their current condition.
- [78] The details of the modelled peak velocities are set out in the attachments to Mr Brennan's report. A comparison of scenarios 1 and 2 demonstrated reduction in velocities in the eroded gully as it widened over time compared to the assumed natural state. Mr Brennan noted that, in comparing scenarios 2 and 3 for both the one year average interval storm and the 10 year storm, modelling demonstrated a significant increase in velocities caused by concentration of water by the rail formation to the culverts causing increased flows to the gully.
- [79] Dr Johnson's employees checked the operation of Mr Brennan's modelling and Dr Johnson had no issues with the modelling or the results (Transcript 2-82).

Has the plaintiff proved actionable nuisance?

- [80] The plaintiff has proved the ongoing erosion in the gully that has continued from 1999 and that it is unable to use the paddock around the gully for grazing cattle which is the obvious and reasonable use for the plaintiff's land and has therefore shown that the erosion of the gully has resulted in a substantial or an unreasonable interference with the use or enjoyment of the plaintiff's land. Although the railway land compared to the plaintiff's land is the "higher" land applying the approach in *Gartner* to the rights and obligations of the higher and lower proprietors concerning water flow in a natural watercourse, the defendants cannot take the benefit of being the higher proprietor when they have permitted the water to flow in a concentrated way through the culverts.
- [81] There was no evidence called on behalf of the defendants to show that there was no other way to disperse the surface flow of water from the lands upstream of the railway corridor in the vicinity of the culverts by any means other than the culverts. It is not apparent that the nuisance was an inevitable consequence of the first defendant's statutory duty.
- [82] The onus is on the first defendant to establish the statutory authority defence, including that it was not negligent in the exercise of its statutory duty or power: *Rudd* at 137. There can be no challenge to the first defendant's assertion that its actions in the placement and maintenance of the culverts were reasonably necessary for the use of the rail corridor as a railway line at least until the land to the east of the rail corridor was cleared and developed. That circumstance resulted in accelerated flows of water through the subject box culverts that is largely the cause of the erosion in the gully. The effect of the concentration of the flows as the upstream land was cleared and developed should have been addressed by the first defendant as that circumstance affected the plaintiff's land in a significant and observable way and certainly upon notification of the erosion. The first defendant has not discharged its onus of disproving negligence.
- [83] There is an issue as to whether the defendants continued or adopted the nuisance by failing to remedy the nuisance within a reasonable time of knowing of the nuisance or having constructive knowledge of the nuisance. Although the first defendant denied liability for the erosion from the first notification by the plaintiff in 2000, it had the relevant knowledge from at least that time. The plaintiff seeks to impute constructive knowledge to the second defendant on the basis of work Mr Kreis may have done for the second defendant in maintaining the rail corridor after 2003. The plaintiff does not need to rely on that route, as it must be a matter of inference that the second defendant had constructive knowledge of the plaintiff's claim of nuisance from the time it became responsible for the rail corridor.
- [84] The plaintiff has proved actionable nuisance against both defendants.

Limitation defence

- [85] The second defendant was joined to this proceeding on 30 September 2014 on the express basis that the joinder was effective only from 30 September 2014. To the extent that erosion was caused prior to 1 October 2008, the second defendant defends the plaintiff's claim on the basis that pursuant to s 10 of the *Limitation of Actions Act* 1974 (Qld) it is statute barred. The plaintiff concedes that its claim

against the second defendant for any loss or damage that occurred prior to 1 October 2008 is statute barred.

Remediation works

- [86] It became apparent during the course of the trial that the remediation works which the plaintiff was seeking were based on removal of the embankment in the rail corridor where it abuts the plaintiff's land and restoration of the gully to the levels before the construction of the railway. This was a surprising approach to the remediation works, as the land was not purchased by the plaintiff until at least 1995 when the gully was established on the land. The plaintiff's purchase price for the land must have reflected the existence of that gully in that paddock. Mr Hackett of counsel who appeared with Mr Ferraro of counsel on behalf of the plaintiff conceded (Transcript 4-33) that the plaintiff could not recover any damages for erosion that occurred prior to 1995. Submissions were made on behalf of the defendants that the plaintiff's claim was actionable only from the time the plaintiff complained of the erosion (Transcript 4-5). As damage is an essential element of the cause of action in nuisance (*Barbagallo* at 248), the cause of action did not accrue until the erosion had reached the stage where damage was suffered by the plaintiff which was during the year leading up to the plaintiff sending its first letter of complaint to the first defendant in February 2000. The damages suffered by the plaintiff are therefore reflected by the degree of erosion from 1999 onwards.
- [87] The mere fact that the contour levels in the area of the gully and its vicinity before the construction of the railway can be determined with some accuracy, because of the availability of historic records and technological aids does not make those levels relevant to this proceeding. The plaintiff's case based on remediation to the levels before the construction of the railway missed the point that the plaintiff purchased the land with an existing gully in the railway paddock. During cross-examination of some witnesses, Mr Horton of Queen's Counsel who appeared with Mr Eade of Counsel for the first defendant used the description of "farm gully remediation" that makes the point that, unlike remediation works for a family home that was the subject of *Evans*, the subject matter of this dispute was a gully in a paddock that was a small portion of a larger rural property.
- [88] Mr Holland expressed the opinion (Transcript 2-82) that the best form of remediation of the problem would be to remove the source of the concentrated flow. Mr Holland considered that to remediate the gully, but not remove the source of the concentrated flow, would leave open the possibility of something similar happening again. Mr Holland also expressed the view that the culverts probably could remain, if something else was put in place to divert the flow of water. Dr Johnson expressed the view (Transcript 2-83) that "the best outcome to prevent the problem would be the removal of all the manmade objects from the location, including the railway corridor and the culverts themselves, because that would return it back to the condition that it was most like before the railway came along". Dr Johnson also expressed the view that, if the gully were remediated, the culverts could be kept in place, if the flow from the upstream catchment was diverted in another direction, which appears support Mr Holland's view that the culverts should be removed to eliminate the concentration of water flows.

[89] On the basis of the comparison of the scenarios modelled for the site hydrology, Mr Brennan expressed at paragraph 24 of his report that "diversion of flows away from the site has significant impact in reducing velocities achieved in the gully" and therefore proposes that treatment requires complete removal of cuttings, embankments and structures in the rail corridor to return the contours to their original profile and remove the concentration of water to the gully. He suggests that the eroded gully should be filled with select fill sourced offsite of suitable non-dispersive characteristics, in order to protect the underlined dispersive layers. He states at paragraph 27 of his report:

"Suitable treatment of the rehabilitated gully will include the selection and importing of suitable top soil, appropriate treatment with fertilisers and amendments to ensure the restoration of appropriate vegetation on the surface is effective. Temporary fencing of the rehabilitated area will 'be required to exclude stock, ongoing maintenance across two growing seasons including the provision of irrigation when required. Provision of a suitable surface treatment will also include organic blanket seeding and rock check dams to allow re-establishment of vegetation cover in the bottom of the gully."

[90] Mr Brennan was of the opinion (Transcript 3-22) that avoiding the concentration of the water flows was essential to preventing the worsening of the erosion. Mr Brennan acknowledged (Transcript 3-27) that "there would be a very large number of engineering solutions" and that an appropriately designed stormwater pipeline, delivering the water from the culverts to the creek, would seem a good option to investigate.

[91] Dr Johnson proposed repair works for the erosion damage in paragraph 43 of his report:

"I believe that it would be more economic and appropriate to repair the erosion by placing a suitable rock blanket in the bed of the channel to prevent further undercutting of the banks, and to carry out appropriate earthworks on the banks to smooth the surfaces and flatten the grade to a consistent value of say 1 in 6. The banks could then be vegetated and stabilised using imported topsoil, at a significantly reduced overall cost. This solution also has the benefit of making the affected land potentially accessible to stock. An alternative to the rock blanket would be to install a large pipe in the bed of the channel to carry the majority of flows generated, as per part of Option 2 put forward by Mr Lowry. It would be necessary to also construct a rock-lined stilling basin in the location where the vertical transition in the bed occurs just downstream of the railway corridor."

[92] In paragraph 28 of his report, Mr Brennan set out the bill of estimated quantities for his proposed remediation works. The items in the bill of estimated quantities were based on Main Roads specifications. His explanation (Transcript 3-21) for using these specifications that they are standards well accepted in the industry

and easy to cost was unconvincing in the context of the nature of the remediation project for this gully which, as a matter of common sense, is not equivalent to a trafficked public road. This approach coupled with the use of quantities based on restoring the level of the gully to 1884 levels which is not justifiable as remediation for erosion sustained from 1999 onwards suggests caution in considering the scope of Mr Brennan's remediation works.

- [93] Mr Lowry's amended supplementary expert report dated 1 September 2016 (exhibit 20) costed Mr Brennan's proposal at \$1.8m. The plaintiff's counsel in their written submissions adapted Mr Lowry's costings to confine them to the remediation work on the plaintiff's land with allowance for additional fill being brought in rather than taken from the railway land. This reduced the costs of Mr Brennan's remediation works to \$997,045. It was earlier costings of Mr Lowry that had resulted in the plaintiff's claim increasing at one stage to around \$4.6m. The reliability of Mr Lowry's costings was diminished by the widely varying costings that he provided throughout this proceeding, when the aim of the remediation works to reinstate an eroded gully on a grazing property was a constant factor.
- [94] The defendants obtained a report from quantity surveyor Mr Malcolm Davidson dated 8 July 2016 to prepare an independent estimate based on Mr Brennan's bill of estimated quantities and review the report prepared by Mr Lowry dated 14 June 2016. Mr Davidson's estimate was \$514,761. The plaintiff's counsel in their written submissions also helpfully adapted Mr Davidson's costings to confine them to the remediation work on the plaintiff's land which reduced Mr Davidson's estimate to \$198,679.
- [95] The plaintiff submitted that the approach of Mr Lowry should be preferred to the approach of Mr Davidson, as Mr Lowry had visited the site, whereas Mr Davidson had not and Mr Lowry had applied first hand principles rather than published rates, as Mr Davidson had done. In addition Mr Davidson had made an error in one aspect of interpretation of Mr Brennan's design, assuming the length of the check dams to be 600mm, when they were considerably wider. I found Mr Lowry's approach over-generous to the plaintiff in all aspects of his costings, when consideration is given to the nature of the works being undertaken. A couple of examples will suffice. Mr Lowry went for the 75mm thick organic blanket which had been supplied by the supplier for Main Roads projects, whereas Mr Davidson contacted another supplier that advised a 50mm organic blanket would be sufficient and that it would not require the layer of topsoil specified by Mr Brennan. There are then significant variations in the costings between Mr Lowry and Mr Davidson on embankment fill and imported topsoil, as well as the supply and installation of the special embankment. Although Mr Lowry described the Bornhorst & Ward proposal as preliminary, option 1 of that proposal was to place a geofabric in the bottom of the gully to stabilize the base and to remediate the site by filling around the rock with low grade road-base and to add topsoil and seed the area. The level of that quote from 2008 is much more in line with Mr Davidson's costings, as modified by counsel for the plaintiff to limit the scope of the works to those undertaken on the plaintiff's land. I am therefore unpersuaded by the plaintiff's submissions about rejecting Mr Davidson's costings and propose to adopt Mr Davidson's adjusted figure of \$200,000 in round terms as the overall cost of remediating the erosion on the plaintiff's land to enable the railway paddock to be useable.

- [96] The onus is on the plaintiff to prove its damages in accordance with the measure that applies to the cause of action. It was apparent from the formulation of its claim that it was claiming as the measure of damages the cost to reinstate and rectify the erosion and subsidence of the plaintiff's land. The first defendant expressly raised in its defence (paragraph 16f) that the reinstatement cost claimed by the plaintiff was grossly disproportionate to the value of the part of the plaintiff's land affected by the erosion and subsidence. Although the second defendant raised a defence (also raised by the first defendant) on the basis that the plaintiff's reinstatement costs were based on a scope of works that was inappropriate and excessive, the second defendant on its pleadings did not dispute the plaintiff's choice of reinstatement costs as the appropriate measure of damages.
- [97] No party called expert evidence of the effect of the erosion on the value of the plaintiff's land. The first defendant did not do so, as the plaintiff's reply to paragraph 16f of its defence amounted to a deemed admission, until the plaintiff was given leave to withdraw the deemed admission and to file an amended reply to the first defendant's defence. The plaintiff did not call expert valuation evidence, as the inference could be drawn from its claim for reinstatement costs that it was asserting it was reasonable to rectify the erosion in order to regain use of the relevant paddock.
- [98] Mr Baker gave evidence of obtaining a letter from a real estate agent for the purpose of satisfying a query from the Taxation Office in relation to the plaintiff. A letter from the Taxation Office (exhibit 25) recited that the plaintiff had provided a valuation dated 25 January 2012 of the Esk farm property stating that its value was estimated to be \$4.5m which it appears the plaintiff's accountants arbitrarily apportioned equally among the three allotments making up the plaintiff's land (exhibit 26). The defendants tendered a rate notice (exhibit 24) sent to the plaintiff in August 2015 in which three properties were rated (including the plaintiff's land) and the unimproved valuation was shown as \$610,000. This general type of valuation evidence is unhelpful in being able to gauge the market value of the land affected by the nuisance, namely the railway paddock, at any relevant point in time. All it does is confirm that the land had real value.
- [99] What *Evans* shows is that even if the cost of reinstatement of the land affected by the nuisance is greater than the diminution in the value of that land as a result of that nuisance, that will not preclude damages calculated as the cost of reinstatement, if that is appropriate in the circumstances. Provided the cost of reinstatement of the gully is confined to what is necessary to make it useable again, what the plaintiff has in its favour is that the railway paddock must have a special value to the plaintiff, as it adjoins the balance of the plaintiff's property, making it convenient for the plaintiff to use in conjunction with the balance of its property. Reinstatement of a gully in a farm paddock does not warrant reinstatement to accord with what was there before the acceleration of the erosion. It can be contrasted with reinstatement of a family home. Reinstatement in this farm context must be sufficient to facilitate the fencing of the boundary with the railway land and vehicular access across the gully, but it does not have to be in the same place that the plaintiff used when he acquired the

plaintiff's land. On that basis, in the circumstances of confining the costs of the remediation works to what is essential to overcome the damage to the gully caused by nuisance, the plaintiffs are not precluding from having damages assessed as the costs of reinstatement, in the absence of proving the reasonableness of those costs by reference to evidence of diminution of value.

[100] The preponderance of the engineering evidence favors the removal of the culverts to prevent a continuing nuisance, even if the gully is remediated. There was no offer made throughout this trial by the second defendant to mitigate the concentration of the water flows through the two boxed culverts. It is the obvious solution to stop the continuation of the nuisance. The second defendant will need some time to design alternative drainage on the eastern side of the railway land when the two culverts are blocked. I therefore propose to grant the injunction the plaintiff seeks against the second defendant, but to stay that injunction for a period of six months to enable the second defendant to implement an alternative drainage plan.

Failure to mitigate

[101] The defendants rely on the plaintiff's duty to mitigate its loss. The defendants bear the onus of showing that the plaintiff ought reasonably to have taken certain mitigating steps: *Wenkart v Pitman* (1998) 46 NSWLR 502, 523.

[102] Mr Baker conceded that the plaintiff did nothing to mitigate its loss, apart from making demands on Queensland Rail to remove the culverts and repair the damage (Transcript 1- 53). The difficulty for the defendants to discharge the onus they bear on the issue of litigation was illustrated by the lack of mitigating steps that were suggested to Mr Baker in cross-examination. The suggestions put in cross-examination were "the placement of hay bales and other things" to disperse the water flowing from the culverts onto the plaintiff's land, the use of a geofabric blanket, or taking advice from "someone in land management about the steps ... to prevent the erosion becoming worse". In response Mr Baker made the point that the first defendant had built a concrete apron about a metre wide beneath the culverts right up to the fence line that protected the railway land and disputed that hay bales would be of any use in a heavy downpour with the water concentrated through the culverts flowing straight through onto the plaintiff's land or that any of the suggestions would make any difference, if the culverts were not removed, and Queensland Rail did not offer to do anything to help.

[103] In light of the gap between where the culverts discharge water and the commencement of the plaintiff's land, it was difficult for the plaintiff to do anything unilaterally on the plaintiff's land about mitigating the effect of the discharge of the water onto the plaintiff's land from the culverts. In the correspondence between the first defendant and the plaintiff's solicitors that took place between 2000 and the commencement of the proceeding, no suggestion came from the first defendant as to how the plaintiff should deal with the problem.

[104] The defendants have failed to discharge the onus they bear to show in the circumstances the plaintiff failed to mitigate its loss by abating the nuisance.

Orders

[105] Each of the first and second defendants are liable for nuisance occurring at different times: the first defendant from 1999 until it ceased to be the occupier of the railway land from around 2002 to 2003 and the second defendant from 1 October 2008 to the present. The plaintiff cannot attribute damages to either party for the cost of reinstating the gully to the state it was in before the plaintiff's land suffered damage in 1999, particularly as it purchased the land in 1995 with the pre-existing gully. The plaintiff cannot be compensated for the additional erosion that occurred during the time the plaintiff ceased to be liable for it around 2002 to 2003 and before the second defendant can be held liable for the nuisance as from 1 October 2008. There is an element of arbitrariness in dividing the costs of reinstatement. I will quarantine \$50,000 of the costs of the reinstatement for that portion for what the plaintiff should not be compensated. On the basis that the erosion was more severe from the time it was noticed in 1999 until the first defendant ceased to be liable for it, but has been stabilising in the longer period in recent years for which the second defendant is liable for it, I would apportion the balance of the costs of reinstatement to be borne by the defendants equally.

[106] Subject to any submissions that the parties wish to make on the terms of the injunction and the stay, the orders I propose to make are:

1. The second defendant by its servants and agents seal the two concrete box culverts identified in Figures 9 and 10 in the report of Cottrell Cameron & Steen Surveys Pty Ltd dated 20 December 2006 which were the subject of this proceeding to prevent the discharge of water from those culverts in the direction of the land described as Lot 12 on Survey Plan 268017 in the Shire of Esk.
2. The preceding order be stayed for six months from the date of this order.
3. Liberty to the second defendant and the plaintiff to apply on three days' notice in writing to the other in relation to the operation of orders 1 and 2.
4. The first defendant pay to the plaintiff the sum of \$75,000 for damages for nuisance.
5. The second defendant pay to the plaintiff the sum of \$75,000 for damages for nuisance.

[107] I will hear submissions on the question of costs.