



OUTER HOUSE, COURT OF SESSION

[2023] CSOH 53

CA117/21

OPINION OF LORD HARROWER

In the cause

TILBURY DOUGLAS CONSTRUCTION LIMITED

Pursuer

against

OVE ARUP & PARTNERS SCOTLAND LIMITED

Defender

Pursuer: MacColl KC, McKinlay; Brodies LLP
Defender: Dean of Faculty, Steel; Clyde & Co (Scotland) LLP

16 August 2023

The issue

[1] This action concerns the development of a former railway yard located to the east of Edinburgh's Haymarket station, and in close proximity to two railway tunnels running between Haymarket and Waverley. Before the development could begin, the ground level of the development site required to be lowered, by removing up to 6m of soil. This required certain enabling works to be carried out, to ensure that the material could be safely unloaded without compromising the integrity of the tunnels and in order that piling could take place in their vicinity. In addition, the design of the enabling works required to ensure

that any movement of the tunnels would be predictable, and within a tolerance that Network Rail would accept.

[2] In November 2013, the pursuer was employed to carry out the enabling works. The defender was appointed to provide related engineering services, including the preparation of the Network Rail approved design. In this action, the pursuer complains that the defender, in preparing the design for the enabling works for the north tunnel, was in breach of its contractual and delictual obligations to exercise the relevant standard of care and skill. It alleges that the defender's design adopted erroneous assumptions for the strength and stiffness of tunnel brickwork, failed to take account of the likely presence of voids within and behind the lining of the north tunnel, and failed to make allowance for the need for annular and interstitial grouting to address those matters. As a result, the pursuer complains, the defender's design required to be resubmitted with revised brickwork characteristics and amended to include annular and full interstitial grouting of the north tunnel, all at considerable additional expense to the pursuer.

[3] The case called before me at a preliminary proof before answer restricted to the question of prescription. It was conceded, on behalf of the pursuer, that it had suffered loss and damage, for the purposes of section 11(1) of the Prescription and Limitation (Scotland) Act 1973 ("the 1973 Act"), as at 27 November 2013, when the pursuer entered into the enabling works contract in reliance on the defender's design. As at that date, the pursuer argued, unbeknownst to it, materially more work was required in order to deliver the enabling works, the cost of which it would be unable to recover from its employer. As a matter of objective fact, therefore, and with the benefit of hindsight, the pursuer's contract was, already on that date, worth less to it than it would have been but for the defender's alleged breaches of duty.

[4] The summons not having been served on the defender until 30 July 2019, by which time the pursuer's rights would ordinarily have prescribed under the usual five-year prescriptive period, the sole issue for proof was whether the start of that period should be postponed on either of the following grounds. According to the pursuer, it should be postponed until November 2014, at the earliest, since that was the date when it first became aware, and could with reasonable diligence have become aware, that it had suffered loss (section 11(3) of the 1973 Act). Alternatively, the pursuer argued, the whole of the period between November 2013 and November 2014 should not be reckoned as part of the prescriptive period, since it was throughout induced to refrain from making a claim by reason of error, induced by words or conduct of the defender, which the pursuer could not itself have discovered by exercising reasonable diligence (section 6(4) of the 1973 Act).

Preliminary matters

[5] I heard evidence from four witnesses to fact. The pursuer lead Mr Tim Shepherd (the pursuer's project director), Mr Robert Brindley (the pursuer's construction manager), and Mr Michael Pratt (the pursuer's senior project manager). The defender led Dr Jeremy Grant (an associate director of the defender, and the principal engineer involved in providing engineering services to the pursuer). I also heard expert evidence from Mr Guy Lance and Mr Alex Warrender. Unless specifically noted elsewhere in this opinion, I had no concerns regarding the credibility and reliability of any of the witnesses, all of whom were doing their best to assist the court.

[6] The defender urged caution in relation to Mr Lance's evidence, based on alleged selective reporting in his CV of his involvement in a previous case and his having already been instructed by the pursuer to provide a report in relation to the enabling works (written

submissions, para 51.1). However, I was not informed of the circumstances of Mr Lance's alleged earlier instruction, or the content of any report. As for the previous case referred to in Mr Lance's CV, this related to a prosecution brought by the Health and Safety Executive following the tunnel collapses in the Heathrow Express line. Mr Lance's alleged selective reporting of his involvement in that case had been the subject of comment by Wilcox, HHJ, when discussing Mr Lance's expert evidence in a later case (*Thames Water Utilities Ltd v London Regional Transport* [2004] EWHC 2021 (TCC), 95 Con LR 127). However, the issue concerning Mr Lance's CV should be seen as collateral to the court's reservations regarding the substantive merits of Mr Lance's evidence (at least in part (para 139); other parts it accepted without difficulty (paras 141, 142)). By contrast, I had no concerns regarding the substance of Mr Lance's evidence, at least insofar as it was relevant to the present proceedings.

Notes of objections to evidence

[7] As is usual in commercial actions, written statements lodged in advance of the commencement of the proof were to be taken as representing witnesses' evidence in chief. Each party lodged notes of objections to certain passages in the witness statements lodged by the other. Parties invited me to admit all of the evidence subject to relevance and competency.

[8] The defender's note of objections, extending to some 50 paragraphs, objected to the admissibility of certain passages of evidence to be found in the statements of Messrs Shepherd, Brindley and Pratt. In each case the objections proceeded on the basis that the witness was offering opinion rather than factual evidence, or opinion evidence on technical matters beyond his area of competence. In the case of Mr Shepherd, his evidence

was objected to on the additional basis that it related to matters that largely pre-dated his involvement in the project.

[9] Dealing with the last objection first, Mr Shepherd's direct involvement in the enabling works did not begin until December 2014. However, from April 2014 he began to acquire an awareness of the issues that had been encountered during the enabling works, based on his discussions on site with both Mr Pratt and the site manager. These discussions continued throughout the remainder of 2014. To the extent that Mr Shepherd's evidence was based on such indirectly acquired, second-hand, knowledge, I regarded the defender's objection as going to weight rather than admissibility. However, in some passages Mr Shepherd appeared to be offering a running commentary on, for example, what "would" have been the pursuer's awareness of states of affairs at various points in time. This seemed to be based more on Mr Shepherd's no doubt considerable expertise in civil engineering, and his review of the documentation, rather than any knowledge he had acquired either directly or indirectly on site at the relevant time. To that extent, I would sustain the defender's objection, since Mr Shepherd was not being offered as a skilled witness, but as a witness to fact. *Quoad ultra* I would repel the defender's objections. As regards Mr Brindley and Mr Pratt, in particular, they tended towards the exegetical, and ignored the fact that the evidence of these witnesses was based on their direct, contemporaneous involvement in the enabling works. If there were anything of substance in these objections, it went to weight rather than admissibility.

[10] For its part, the pursuer's note objected to the relevancy of certain passages in Dr Grant's witness statements where he maintained that the defender was not in breach of any duty, and that any alleged breach did not cause the losses in respect of which the pursuer sought to recover damages. This being a preliminary proof on prescription, the

pursuer's averments regarding breach of duty and causation, which I have summarised above, all required to be taken *pro veritate* (*Huntaven Properties Ltd v Hunter Construction (Aberdeen) Ltd* [2017] CSOH 57). Since the defender accepted this restriction on the scope of the proof (written submissions, paragraph 8), I will sustain the objection, insofar as it may be necessary to do so.

Pursuer's failure to call key witnesses

[11] This is a convenient place to note the defender's complaint that the pursuer failed to call Mr David Ewing and Mr Brian Reid, each of whom had appeared on the pursuer's original list of witnesses. The former was to speak to "pre-contract discussions and the requirement for tactile surveys", while the latter was to speak to "pre-tender stage and progress of the project during part of 2014". In addition, the defender complained that the pursuer failed to call its senior quantity surveyor, Mr Craig Adams, whose evidence might have been relevant to whether the pursuer was aware of having sustained a loss, for the purposes of section 11(3) of the 1973 Act, and also to whether the pursuer was in error or induced to refrain from making a claim (section 6(4) of the 1973 Act). The defender submitted that where these witnesses might reasonably have been expected to provide relevant evidence on a central point over which the court was in some doubt, then the court would be entitled to draw inferences favourable to the defender (written submissions, paras 55-7, under reference to *O'Donnell v Murdoch McKenzie* 1967 SC (HL) 63. at pp71, 73, and *Royal Bank of Scotland v Carlyle* 2010 CSOH 3, para 36). As a generality I have no difficulty in accepting that proposition, but, except where otherwise noted in what follows, my decision did not turn on any doubts I may have had arising from the evidence.

Background

[12] The development had a long gestation period. As far back as 2007, a company called Tiger Developments Limited appointed the defender to provide civil and structural engineering services in relation to the development, and by 2008, the defender had already prepared a design for the enabling works. However, in 2009 the development was put on hold due to the global financial crisis. Between 2009 and 2012 both tunnels were electrified by Network Rail, which involved the installation of overhead line equipment and the lowering of the tracks. During the course of the electrification project in the north tunnel, Carillion was employed to carry out remedial works to the brickwork including large areas of render repairs. Eventually, the original developer entered into a joint venture with a development company from within the Interserve group of companies, as a result of which Edinburgh Haymarket Developments Limited (“EHDL”) was formed. By agreements dated 26 and 27 November 2013, EHDL employed the pursuer (then registered under the name of Interserve Construction Limited) to carry out the enabling works, and appointed the defender to provide related engineering services, including the preparation of a Network Rail approved design. At the same time the defender’s appointment was novated to the pursuer.

[13] One of the problems faced by the designer was the limited information available at the time the design was being prepared. No agreement had yet been entered into with Network Rail that would have allowed a contemporary inspection or intrusive investigation of the condition of the lining. Of course, the defender did have a certain amount of information, for example, regarding the manner of construction of the tunnels. In particular, while each tunnel was just over 900m in length, had an arch profile, and was lined with bricks and masonry, they had been constructed at different times using quite different

methods. The south tunnel was constructed in around 1890 and was mostly bored. The north tunnel was constructed in around 1849 using predominately “cut and cover” techniques. In addition, such intrusive works as had been carried out at the design stage had not identified any significant voiding behind the brick lining of the north tunnel. As a result, the defender’s design, issued in terms of Network Rail’s standard form, assumed that there would be no need for so-called “annular” grouting of the north tunnel, that is grouting between the extrados of the tunnel lining and the surrounding bedrock (Form B, para 7.1.1.1). By contrast, the defender specified annular grouting for the south tunnel.

[14] A second feature of the north tunnel construction was that one to two courses of “blue” engineering bricks had been added at some point between around 1920 and 1945. Such investigations as had been carried out in the north tunnel were undertaken “with the aim of identifying brickwork separations [sic] issues between the old and new brickwork”. Only a “limited area of separation was interpreted to be present”, behind the second brick ring between chainages 41 and 42, though several other “minor delaminations” were also noted (Form B, para 3.3.3.1). No significant deeper voiding within the tunnel lining had been identified at the design stage.

[15] While the parties are in dispute over whether the defender made sufficient use of the information available to it, certainly the design intention was to predict the behaviour of the tunnel lining once unloaded, on the basis of certain assumptions or parameters, for example, for brickwork strength and stiffness. The defender calculated that, while the maximum stress reductions would be in the haunches and the crown, nevertheless the tunnel lining would remain in compression throughout its whole profile during each stage of the overburden removal (Form B, para 7.1.1.2). Moreover, while generally the unloading of the tunnel would lead to a stress reduction, the crown was predicted to experience an increase

in compressive stress at the intrados. Therefore, to prevent damage to rolling stock in what it described as the “unlikely event” of bricks being dislodged there, the defender proposed a safety net (a “geogrid fall arrest system”) to the tunnel crown (Form B, para 7.1.2). Since the largest reductions in stress were predicted to occur at the intrados of the upper sidewalls and haunches, the uncertain bonding of the inner brickwork to the original tunnel construction created a risk of brickwork failure in these locations. To that end, reinforcement was to be provided, principally by the technique of “stitch grouting” or stitch pinning of certain known critical areas (the mechanical bonding of brickwork rings by inserting pins, and the grouting of the stitch pins to keep them in place).

[16] While, therefore, on the basis of its model, the defender was able to stipulate in advance certain defined works, it was always acknowledged that additional works might also ultimately prove necessary. These additional works would include stitch grouting, re-pointing, brick replacement and the repairing of previously carried out failed render repairs where these were necessary to allow stitch grouting to take place. The final scope of these additional works was inherently uncertain, being dependent on what was identified once access had been gained to the north tunnel, and following a “tactile survey” to be undertaken as the works progressed (Form B, para 7.6.1).

[17] The tactile survey was intended to include a physical inspection of each and every area of the brickwork at close proximity in order to establish spalling or delamination. It included carrying out a “hammer test” to identify areas of delamination between the first and second rings of brickwork. When struck with a geological hammer, areas that ‘sound[ed] “drummy”’ were to be identified (Form B, Appendix A, para 2.1). The hammer test was not suited to establishing deeper voids located within the lining or between the lining and the bedrock (Dr Grant’s email dated 17 September 2014). In addition, the purpose

of the tactile survey was to identify water seepage, insufficient mortar to joints, misalignment of brickwork and loose brickwork. The tactile survey required full access to all parts of the tunnel lining and would take several weeks to complete.

[18] The information available to the defender at the design preparation stage included the results from tests previously carried out on brickwork cores. 18 results, deemed sufficiently representative of composite brickwork, were available from the south tunnel, but only 5 from the north tunnel. Due to the small sample size taken from the north tunnel, the defender proposed to test further brickwork cores from the north tunnel to ensure the design values for unconfined compressive strength were representative (Form B, para 4.1).

Timeline

[19] Designs relating to infrastructure managed by Network Rail required to be issued in Network Rail's standard form. Form A set out the design concept, on which approval in principle would be sought from Network Rail. Form B contained the detailed design. The defender's design for the enabling works was contained in Form A, Issue 6, July 2013 and Form B, Issue 4b, dated 19 August 2013. It was approved by Donaldsons Associates Limited ("Donaldsons"), appointed to represent Network Rail in relation to engineering aspects of the enabling works, and Mott MacDonald Limited (Mott MacDonald), appointed as "Category III" checker. Network Rail's approval of Form B was qualified by certain comments contained in "Part 4: Acceptance on behalf of Network Rail". The completed Forms A and B were part of the employer's requirements under the enabling works contract.

[20] On 2 September 2013, in relation to the design parameter for unconfined compressive strength of 8.0 MPa, Dr Grant advised Mr Ewing by email that, since the removal of the overburden actually reduced the brickwork stresses, then the maximum stress condition

would be for the tunnel in its then current condition, ie with the overburden still in place.

“In other words, a reduced brickwork strength is going to highlight an existing problem for the tunnel rather than alter our approach”. In relation to the proposed additional cores to be taken from the north tunnel, he added, “Testing involves taking further cores (say 13no [sic] to bring number in line with the South Tunnel) and lab testing of these”.

[21] On 15 November 2013, EHDL entered into an asset protection agreement with Network Rail, the purpose of which was to ensure the protection of Network Rail’s infrastructure, and to establish a procedure according to which the design was to be submitted, and if necessary resubmitted, to Network Rail for approval. The events triggering an obligation on EHDL to resubmit the design included the event that either party, acting reasonably, believed the design, or the information upon which it was based, was incorrect or insufficient.

[22] On 5 December 2013, the pursuer subcontracted the carrying out of certain of the enabling works to BAM Nuttall Limited (“BAM”).

[23] Around 6 January 2014, preliminary work began on site. Dr Grant issued a full method statement for the tactile survey on 16 January 2014, and shortly thereafter, the tactile survey commenced.

[24] In late January 2014, BAM workers carrying out drilling in preparation for the stitch grouting of the tunnel lining began to report concerns about the condition of the brickwork in the north tunnel. The minutes of the weekly progress meeting on 30 January 2014 recorded that “some of the tunnel walls appear to be softer than others/thin bricks, therefore there must be a review of the model”, and that “[the defender] will expect a core from the soft bricks and thin walls”. In a request for further information dated 3 February 2014, BAM noted that drilling had “potentially identified” brickwork of variable thickness and

condition “throughout the tunnel”, and asked for confirmation that cores would be required, and if they were, their location and specification.

[25] The tactile survey carried out in January/February 2014 identified a “substantial amount of defects (hollows in the crown)” (see the minutes of the site meeting on 13 February 2014) and the need for additional brick repair works. These included repairs to the defectively undertaken Carillion render repairs that were wider in scope than had been anticipated (compare Dr Grant’s email of 30 September 2013 (“we did [following a visual inspection of the tunnel linings in December 2012] identify some [Carillion] repairs which had not been properly undertaken”) with that of 25 February 2014 (“the tactile survey now undertaken identifies that large areas of the render repairs are defective (hollow)”).

[26] On 19 February 2014, Dr Grant issued a plan showing proposed locations for cores to be taken from the north tunnel lining, and on 24 February 2014, a technical note, increasing the number of proposed cores to 21 (HM-TN-03).

[27] On 28 February 2014 the defender issued drawings illustrating the works required as a result of the tactile survey findings.

[28] On 8 March, the pursuer instructed BAM to carry out investigative coring of the north tunnel. Investigative coring of the north tunnel was carried out in March 2014. On 24 March 2014, BAM submitted an application for payment which included the sum of £12,455.20 for north tunnel coring.

[29] On 19 March 2014 Dr Grant issued further drawings showing proposed brickwork repair techniques 1-4 for the north tunnel masonry repairs. Repair technique 4 showed a form of stitch grouting similar to that set out in Form B. Though differing in matters of detail, the primary purpose of the grouting was to hold the stitch pins in place. A secondary purpose was to fill any voids in the immediate vicinity.

[30] In its report dated 17 March 2014, while noting various defects that had been identified following the tactile survey, the defender reported that the “tunnel lining was observed to be performing adequately throughout the length inspected”. There was “no bulging or deformation of the tunnel lining that gave cause for structural concern”. The report noted possible soft brickwork, possible areas where the lining was less than 500mm thick, and possible voids within the brickwork and between the lining and the rockhead/soil behind. It noted that coring had been instructed, and that subject to the results of that exercise, there was nothing arising from coring to date that would cause it to alter its “analysis assumptions”. In particular, the coring exercise to date had found that, with the exception of “HM136 where a small void was identified above the crown”, the brickwork was found to be “tightly constructed to the bedrock/superficial materials throughout”. It further stated that compressive strength was not an issue, and that “with the current lining not showing any signs of movement or distress the unloading of this brickwork will often be beneficial to these areas of the lining”.

[31] By March 2014 at the latest, the pursuer expressed concern over the “serious commercial implications” arising from the additional brick repair works (email from the pursuer’s Craig Adams dated 26 March 2014). Emails exchanged between Mr Adams and Dr Grant highlighted an anticipated £300,000 increased payment to BAM for carrying out brickwork repairs to the north tunnel.

[32] On 1 April 2014, Dr Grant reported by email that, although the coring investigation was ongoing, the defender was “generally encouraged by the findings ... although Donaldsons were not so positive”. Donaldsons were insisting on stiffness testing of the cores in addition to strength testing. The defender warned that “in the worst-case scenario

this could lead to the analysis needing to be revisited if the testing [gave] poor results”, and that further coring/testing might also be required.

[33] At the site meeting on 8 May 2014, Donaldsons requested that “the void at [Chainage] 120 be the first area of cross pinning and grout repair”.

[34] On 23 May 2014, following a progress review meeting on 20 May 2014, the defender reported the results of the investigative coring in the north tunnel to the pursuer. It confirmed that soft brick had been found in the cores. The defender presented their re-analysis of their model using revised parameters for brickwork strength and lining thickness. This showed “no significant change to predicted movement”. The defender’s report did however confirm that the soft brick that had been found in the cores, had made Network Rail more “nervous” than at the Form B stage, resulting in their providing slower approvals.

[35] On 27 May 2014, BAM sought payment of £924,820.99 in respect of “additional brickwork and other repairs” (BAM’s application for payment number 5).

[36] By June 2014, following a second tactile survey, Network Rail required brickwork repairs to be undertaken to the lower sidewall (from cess level to 1.2m in height) of the north tunnel. This had not been anticipated in the Form B design which, as noted above, envisaged maximum stress reductions only at the crown and haunches.

[37] By 5 June 2014, the defender was reporting a delay of 6 weeks to the enabling works.

[38] On 24 June 2014, BAM sought a payment to account from the pursuer of £100,000 in respect of work carried out to implement brickwork repair techniques 1, 3 and 4 (BAM’s application for payment number 6).

[39] In August 2014, BAM experienced larger than anticipated volumes of grout being taken up while carrying out repair technique 4 (as described by BAM in their email of 22

August 2014). In an email dated 26 August 2014, Donaldsons raised the possibility of the need for grouting throughout the north tunnel in order to produce the desired continuum (“ie no gaps, voids or cracks in the model which is being used to managed the risk to the railway”). While “minor deviations” from the analysis could be monitored and mitigated, the reported excessive uptake in grout was stated to represent “20% voiding”.

[40] On 29 August 2014, Dr Grant emailed Mr Pratt, mentioning high grout uptake at Chainage HM137. Dr Grant proposed further investigative coring at that location (Dr Grant’s email of 1 September 2014).

[41] On 17 September 2014 the defender updated its report on brickwork repairs, an earlier version of which had been issued on 17 March 2014. It recommended that the unconfined compressive strength parameter be reduced from 8.0 N/mm² to 3.5N/m² and that the parameter for lining thickness be reduced from 500mm to 400mm in the area of the lower sidewalls.

[42] On 25 November 2014, Mr Pratt reported internally within the pursuer that “the whole tunnel lining” might now require to be grouted.

[43] On 28 November 2014, Mott MacDonald raised concerns over the design assumptions or parameters, and whether they adequately represented the “apparent variability” of the tunnel lining. On the same day, following high grout uptakes that morning, Dr Grant advised the pursuer by email that full grouting of the north tunnel was now required.

[44] On 10 December 2014, the pursuer informed the defender that it might hold it liable for the costs associated with the defender’s substantial alterations to its design.

[45] On 15 December 2014, the defender issued a preliminary issue drawing for grouting the north tunnel.

[46] At a meeting on 18 December 2014, attended by the parties, Donaldsons, Network Rail, Mott MacDonald and EHDL, the need for annular grouting was agreed. Minutes for the meeting prepared by the defender referred to “the recent evidence of voiding being present within and behind the brickwork lining and the resulting concerns that a brickwork continuum [did] not exist as per the analysis assumption”. The grouting would not involve any further stitch pinning. The aim was to “remove voiding and produce a more homogeneous mass – not to improve the properties of the brickwork”. Further coring and testing would also be carried out.

[47] The defender produced updated drawings for grouting the north tunnel in February, March and again in June 2015, showing a two-stage process. The first stage was “to encourage flow paths to interstitial voids towards the rear of the lining and to also permeate annular voids behind the lining”. The second stage was to target interstitial voids within the front 350mm depth of lining. The strength of the grout was weaker than that used for stitch grouting (11N/mm² compared to 40N/mm²).

[48] Annular and, what the defender’s drawing referred to as, “interstitial” grouting was carried out between June and October 2015.

Pleadings

[49] As already noted, the pursuer’s pleaded case of fault and causation requires to be taken *pro veritate* for the purposes of a preliminary proof on prescription.

[50] Having plead the defender’s breach of a general duty of care, in article 7 of condescence, the pursuer set out to particularise in articles 7.1 to 7.7 the various specific ways in which it alleged that the defender was in breach of that duty. These can be summarised as follows: a failure to carry out a sufficient number of test samples to derive a

meaningful characteristic strength and stiffness for the tunnel brickwork (7.1); a failure to note that such limited surveys as were available at the design stage indicated defects that were indicative of potential gaps and voids, including voids at the tunnel/lining interface (7.2); a failure to adopt a more conservative design methodology that would have reflected the unreliability of available data and be more representative of the variable condition of the tunnel lining (7.3); erroneously basing its design on a model that provided for full contact between the lining and the bedrock behind it (7.4); a failure to make provision for full tunnel grouting, including “back grouting” (ie annular grouting) and “interstitial grouting” (ie grouting that was not merely ancillary to stitch grouting); erroneously relying on data from the south tunnel when deriving parameters for strength and stiffness for the north tunnel (7.6); and a failure to take into account the data that was available to the defender in relation to the north tunnel brickwork and the gaps in that data (7.7).

[51] In article 10, the pursuer avers, “As a direct and natural result of the defenders’ breach of their obligations under the Contract, the pursuer has suffered loss and damage”. It then avers, “Extensive re-design of the enabling works was required, which resulted in a significant increase to the nature, time and cost of the enabling works”.

Submissions

[52] Both parties lodged lengthy, detailed written submissions, supplemented by brief oral submissions.

[53] So far as section 11(1) of the 1973 Act was concerned, as previously noted, the pursuer accepted that loss occurred as soon as its defective design had been submitted.

Already at that stage, unbeknownst to it, the pursuer’s contract with EHDL was worth less

to it than it would have been but for the defender's breach of duty (written submissions, paras 2, 61).

[54] However, so far as section 11(3) of the 1973 Act was concerned, the pursuer submitted that it was not aware until November 2014 that the design for the enabling works was negligent and therefore that its contract with EHDL was less valuable than it had thought. It conceded that the need for additional brickwork repairs – brick replacement, repointing, render repairs and stitch grouting – going beyond what had been anticipated in the Form B design, had been identified between January and April 2014, and that the pursuer incurred associated additional costs that would not be recoverable from EHDL. However, the need for these works to be carried out, together with their associated costs, was not caused or otherwise related to the defender's breach of duty. The pursuer's claim related to the design for the fixed rather than the *ad hoc* aspects of the enabling works. Similar arguments could be made in relation to the additional works required to the lower side walls. So far as the additional coring tests were concerned, these would have been required even if the defender had specified a materially lower figure for brick strength in its Form B. Nor was there any evidential basis for concluding that the project would not have been in delay by May 2014, even had there been no breach of contract on the part of the defender. In any event, the cost of the additional coring – no more than about £12,500 – was *de minimis* in the context of the project as a whole.

[55] So far as section 6(4) of the 1973 Act was concerned, the pursuer was induced to refrain from making a claim as a result of its erroneous belief, induced by the words and conduct of the defender, that it had produced a competent design, and that there was no need for grouting, other than stitch grouting, in the north tunnel. The pursuer relied on the defender's presentation of its design and its claiming payment therefor, as well as its

ongoing assurances from August 2013 until around September 2014. It was only in late November 2014 that the defender advised that full grouting would be required. The pursuer could not, exercising reasonable diligence, have discovered its errors any sooner.

[56] On that basis, the pursuer moved the court to repel the defender's third plea in law, and allow a proof before answer on the parties' "remaining" averments, which I understood as meaning all the averments on record with the exception of those relating to prescription.

[57] In its written submissions, the defender proceeded upon the basis that loss did not occur until March/April 2014, when the pursuer incurred costs and/or delays on the project (written submissions, paras 66, 81-83). Accordingly, and leaving section 6(4) to one side, where the pursuer's submissions focussed on actual and constructive awareness of loss, under section 11(3), the defender's written submissions were restricted to section 11(1) and failed to address section 11(3) at all. This deficit was remedied to some extent by the Dean of Faculty in his oral submissions, which noted that the pursuer had accepted that *prima facie* prescription started to run in August 2013, when the pursuer relied on the defender's design. The only question therefore was whether the start of prescription should be postponed beyond 30 July 2014, on the basis of either section 11(3) or section 6(4).

[58] Firstly, the defender submitted that it was only on 2 September 2021, by way of adjustment of its pleadings, that the pursuer first made averments regarding the defender having made over-optimistic assumptions of lining stiffness. Prior to that its complaint had been about brickwork strength. Since the pursuer itself treated prescription as having started to run in December 2014, it followed that any claim relating to lining stiffness must have been extinguished in December 2019. Since the whole of the sum sued for related to the additional works "prompted by the stiffness issues", the pursuer's entire case collapsed.

[59] Secondly, the pursuer's case, properly analysed, rested upon a single allegation of fault, namely, the provision of a defective design. It was therefore sufficient to ask when the pursuer had suffered *any* loss, or had actual or constructive knowledge of *any* loss arising from breach of that obligation. The pursuer had actual knowledge of costs and/or delays in March/April 2014. The summons having been served only on 30 July 2019, more than five years later, the pursuer's right of action in respect of *all* such losses had prescribed. There could be no distinction between "additional brick repair works to the tunnel lining" and "extensive re-design of the enabling works".

[60] Thirdly, and in any event, the additional works that actually took place in March/April 2014 were not restricted to brick repair work to the tunnel lining. These included additional coring, render repairs, the stitch grouting of voids, and repairs to the lower side walls. The pursuer's position, that it was always aware that there were going to be unquantifiable works the cost of which would remain with the pursuer, was commercially unrealistic.

[61] Fourthly, the pursuer incurred costs and delays associated with these additional works from March/April 2014. The proposed additional repair works required to be checked by Mott MacDonald, and approved by Network Rail. Mr Pratt and Mr Brindley had expressed concerns over the potential for resulting delay in March and April 2014. On 24 March 2014, BAM issued its application for payment number 3, which sought payment of £12,455.20 in respect of variation 39A, north tunnel coring. On 27 May 2014, BAM issued its application for payment number 5, which sought payment of £924,820.99 in respect of variation 37, additional brickwork and other repairs. On 24 June 2014, BAM issued its application for payment number 6, which sought a payment to account of £100,000 in respect of variation 49, "brickwork repair techniques 1. 3 & 4". The pursuer was aware of

these applications at or around the time they were made. These were costs and delays “connected” to what the pursuer referred to as “extensive re-design”.

[62] Fifthly, the enabling works contract was for a guaranteed maximum price. There was no contractual mechanism by which the costs associated with the additional works could be passed on to the employer. It followed that the cost to the pursuer of the variations identified above were loss, injury and damage for the purposes of the 1973 Act. This was true whether the works to which such costs related were classified as “brick repair work to the tunnel lining” or “extensive redesign”.

[63] Sixthly, there was concurrence of *iniuria* and *damnum* no later than 24 June 2014, when BAM submitted its application for payment number 6. On the pursuer’s hypothesis, *iniuria* was the deficient design, and *damnum* was the significant increase to the nature, time and cost of the enabling works. Prescription had operated by the time the summons was served on 30 July 2019.

[64] Finally, the pursuer could not be rescued by the application of section 6(4). The notion that any words or conduct of the defender might have induced error on the part of the pursuer overlooked the fact that it was Network Rail that had the “casting vote” in relation to design. The defender’s design was always liable to change as a result of additional demands that Network Rail was entitled to make by virtue of the asset protection agreement. In any event, any error could have been discovered by the pursuer by the application of reasonable diligence. The pursuer could not be relieved of the obligation to exercise reasonable diligence merely by virtue of the fact that defender continued to endorse the validity of its own design. It was sufficient that the pursuer was, or ought to have been, aware of the circumstances which disclosed deficiencies in the design: *Glasgow City Council and West Dunbartonshire Council v VFS Financial Services Limited* [2022] CSIH 1, para 55. The

pursuer was aware of Network Rail's concerns from an early stage of the works. It was aware by April 2014 that additional expense had been incurred. By June 2014, these were greater than £1million. That was more than enough to trigger investigation, and the running of time against the pursuer.

[65] For all of these reasons, the defender moved the court to sustain its third plea in law and grant decree of absolvitor.

Decision

Section 11(1) of the 1973 Act

[66] Time starts to run on an obligation to make reparation for loss, injury and damage when the obligation becomes enforceable (section 6(3), Sch 1, 1973 Act). In terms of section 11(1) of the 1973 Act, any such obligation becomes enforceable when the loss, injury or damage occurred. The pursuer sues in respect of the need for extensive redesign of the enabling works, and the resulting delay and costs. I agree with the pursuer that the primary component of that loss, the need for the enabling works, occurred as soon as the pursuer relied upon the defender's design, that is, in August 2013. Already, as at that date – albeit, the pursuer says, unbeknownst to it - extensive redesign of the enabling works would have been required, with consequential costs to the pursuer. For the purposes of section 11(1), therefore, this is when time started to run.

Section 11(3) of the 1973 Act

[67] For the purposes of section 11(3), time is postponed until the pursuer first became aware or could with reasonable diligence have become aware, of the occurrence of loss caused by the breach or breaches of which it complains. In order for time to start running,

the pursuer does not also require to be aware *that* the loss was caused by the breach or breaches of duty of which it complains (*David T Morrison & Co Ltd v ICL Plastics Ltd* 2014 SC (UKSC) 222; *Gordon's Trustees v Campbell Riddell Breeze Paterson LLP* 2017 SLT 1287). The pursuer correctly stated the position when it said that, for the purposes of section 11(3) the prescriptive period will commence when the creditor is aware of "the objective facts which constitute his loss" (written submissions, para 47). I have therefore disregarded those parts of its submissions where it pleads its own lack of awareness of the defender's negligence (written submissions, para 62).

[68] Obviously, the loss, the occurrence of which the pursuer must actually or constructively be aware, will still require to be one that is connected to the cause of action, even if the pursuer need not also be aware that it is so connected (*Gordon's Trustees*, para 17; *Midlothian Council v Raeburn Drilling and Geotechnical Ltd* 2019 SLT 1327, para 25; *WPH Developments Ltd v Young and Gault LLP (in liquidation)* [2021] CSIH 39, para 36). Depending on the circumstances of the individual case, therefore, much is likely to turn on the proper characterisation of the pursuer's cause of action. Generally speaking, the more broadly it is conceived, the more likely it will be that particular costs and delays that have been incurred will be said to be attributable to the pursuer's complaint. Conversely, the more narrowly it is defined, the less likely it is that the pursuer's awareness of particular costs and delays will start time running against his claim.

[69] In this action, the defender complains that the pursuer has drawn an artificial distinction between "additional brick repair works" and "extensive redesign". "[A]t its heart", it says, the pursuer's complaint is about "Form B fail[ing] ... to reflect the actual condition of the tunnel", or the "scope of works envisaged by Form B [being] ... insufficient to enable unloading of the tunnel in a manner which satisfied the requirements of Network

Rail" (written submissions, para 65.7). Properly understood, it asserted, there is a "single fault" alleged against the defender, namely, "the provision of the deficient design", from which all the losses suffered by the pursuer "must flow" (written submissions, para 65.7).

Whether it be additional brick repair works or repairs required by Network Rail to the lower side walls, since none of these were anticipated in the Form B design, they must all be losses caused by the allegedly defective design. Furthermore, since costs and delays associated with these failures had been identified between January and April 2014, they were losses of which the pursuer was aware more than 5 years before the action was raised.

[70] The problem with this approach is that it conflates the pursuer's several complaints into one single ground of fault. I prefer the approach of Lord Eassie, in *Musselburgh and Fisherrow Co-operative Society Ltd v Mowlem Scotland Ltd* 2004 SCLR 412, where he stated that, "although a contractual relationship will often contain general provisions such as a general duty of care or a general duty to construct in a workmanlike manner, for the purposes of the running of the five-year prescription it is necessary to identify the particular respect in which the general duty is breached and which leads to the causing of the particular defect in question" (para 50). Citing *Sinclair v MacDougall Estates Ltd* 1994 SLT 76, and *Cole v Lonie* 2001 SLT 608, Lord Eassie went on to make it clear that it matters not that the defect be one of design or construction, or that the defect may not be of great magnitude, albeit he acknowledged that difficulties may arise in practice when determining whether defects are truly distinct and discrete (para 50, p430C-D).

[71] Thus, while in this case, it may be true to say that the defender was under a general duty of care in respect of the provision of engineering services, for the purposes of the running of the five-year prescription it is necessary to identify the particular respects in which the general duty is said to have been breached. Although there may be a degree of

overlap between and among the several breaches plead by the pursuer in article 7.1 to 7.7 of condescence, in my opinion, the pursuer's pleaded case of fault should at least have represented the starting point for the defender's analysis.

[72] What the pursuer may not do, of course, as the pursuer itself conceded (written submissions, para 60), is artificially restrict the loss claimed. As I have already noted, the pursuer limits the loss for which it claims reparation to the need for an extensive redesign of the enabling works together with the resulting delay and costs. However, should any of the breaches of which it complains have given rise to an earlier material loss, of which it was or ought to have been aware more than 5 years before the action was raised, then its cause of action in respect of that particular breach will not be saved by section 11(3). This is so even if the pursuer can establish that it was unaware of the need for an extensive redesign caused by that alleged breach until much later. Against that background, I now turn to what the defender identified as earlier established losses of which the pursuer had actual or constructive knowledge.

"Additional" cores

[73] In article 7.1, the pursuer avers that the defender failed to carry out a sufficient number of test samples in order to determine the characteristic strength and stiffness of brickwork in the north tunnel. At the design stage, only 5 brickwork test results were available in respect of the north tunnel, with 18 being available from the south tunnel. With that in mind, the defender stated in its Form B that, "Due to the small sample size taken from the North Tunnel it is proposed to test further brickwork cores from this tunnel to ensure [the design values for unconfined compressive strength were] representative". The Form B was never specific as to how many further cores would be required. Certainly, in his

2 September 2013 email to David Ewing, Dr Grant proposed to take a further 13 cores to bring the number of test results into line with those available for the south tunnel. But in my judgment this did not alter the fundamental design proposal, which was to take sufficient further cores, however many might be required, to ensure the strength values were representative. Apart from anything, there was always a risk, particularly with smaller diameter cores, that they would fail to extract a sufficient cross-section of brickwork (the Form B recorded at paragraph 4.1 that, of the 34 cores taken in 2002, only 23 contained a combination of bricks and mortar). But more fundamentally, it had always been known that the north tunnel brickwork was “variable” in condition (Form B, paragraph 3.3.3.3). If, therefore, following the reports of soft bricks in January 2014, it was decided to increase the number of cores to be taken, this was done in implement of the Form B design rather than as a modification of or variation to the design. I would therefore reject the defender’s submission that the cost of coring of £12,455.20 itself constituted a loss to the pursuer (written submissions, para 75). Rather it was no more than a cost, which had always been anticipated as part of the enabling works, even if its precise amount was uncertain at the time the design was proposed.

[74] I note in passing that BAM’s application for payment number 3, dated 24 March 2014, seeking payment of £12,455.20 in respect of variation 39A, did so in implement of the pursuer’s instruction number 16 which itself related to all 21 cores proposed by Dr Grant in his technical note, HM-TN-03, dated 24 February 2014, rather than just the 7 smaller 50mm cores identified as being required in response to the drillers’ reports. Further, the technical note increased to 14 the number of further cores suggested in September 2013 for reasons that appear to have had nothing to do with the drillers’ reports.

Additional brickwork repairs

[75] Similar comments can be made about the additional brick repair works. I take these to include the identification, following the tactile survey, of the need to carry out greater quantities of masonry repairs over greater areas than had been anticipated at the Form B stage, and of the need to repair defective Carillion repairs, the scope of which was greater than had been anticipated at the Form B stage. The additional brick repair works also included the need to repair the lower sidewalls of the tunnel, in order to comply with the request from Network Rail.

[76] The defender argued that the additional brick repair works were not something to be regarded as separate from the enabling works. When, therefore, the pursuer claims in respect of the “extensive redesign” of the enabling works, it should be understood as including the need to carry out these significant additional brick repair works. But just because the additional brick repair works might conceivably be understood, in one sense, as an “extensive redesign” of the enabling works, it doesn’t follow that they are that part of the extensive redesign in respect of which the present claim is framed. The defender appeared to make something of the fact that they were included in the pursuer’s claim as originally framed, but this in itself is obviously irrelevant to the resolution of what is now in issue.

[77] The defender further objected that the pursuer did not offer to prove that it “always knew” that the scope of works might expand to include the lower sidewalls (written submissions, para 70). It then generalised this objection, arguing that there was no evidence that the pursuer was aware that “additional brick repair works m[ight] be required to the tunnel lining” (written submissions, para 71). Rather, it pointed to email correspondence, such as the email from the pursuer’s Craig Adams dated 26 March 2014, addressing the potential for the additional brick repair works to raise “serious commercial implications”.

As I understood the defender's argument, it was that the pursuer must have become aware of having suffered a degree of commercial exposure, and therefore of having incurred a loss, starting the prescription clock running by March 2014 at the latest.

[78] However, if it is a loss, it is not obviously one arising from any of the grounds of fault plead by the pursuer. For example, the pursuer does not specifically plead negligence on the part of the defender in leaving any part of the enabling works undefined until such time as the tactile survey had been carried out. Nor does it plead negligence on the part of the defender in allowing Network Rail to determine the ultimate scope of the works.

Assuming for the purposes of argument that such averments might have been relevantly plead, then conceivably the expansion in the scope of the additional works beyond what had been anticipated at the design stage might be capable of being described as a loss. However, if so, it would not obviously be one arising from the present cause of action.

[79] The pursuer may very well have become concerned about the degree to which it had become commercially exposed to its subcontractor for the cost of these additional works, whether arising as a result of the tactile survey or the need to gain Network Rail's approval. However, I do not necessarily interpret that concern as evidence of a belief that these were costs, for which the defender must be liable, or that they were somehow inseparable from the cost of the extensive redesign for which the pursuer now claims. If they were evidence of such a belief, then it was an erroneous belief. In my judgment, the additional works should be seen as within the risk of the contractual arrangements the pursuer entered into, rather than being a consequence of any breach of duty by the defender. In *Midlothian Council v Raeburn Drilling and Geotechnical Ltd* 2019 SLT 1327, at para 25, Lord Doherty drew what I would regard as an analogous distinction between the consideration paid for services, and loss caused as a result of breach in the performance of these services. I take it

that the UK Supreme Court has not obliterated the distinction between cost and loss, and it is still necessary to ask oneself whether the costs and delays which the pursuer must have been aware that it had incurred in March/April 2014 were losses caused as a result of the breaches of obligation of which the pursuer complains.

Voids

[80] The pursuer's case, as developed in its written submissions, is that the defender failed to make allowance for the need for annular and full interstitial grouting. Article 7.2 of condescence alleges that the defender failed to carry out sufficient investigations at the design stage in relation to "voids and potential voids". However, there was no dispute that the defender's design acknowledged a "known issue regarding possible separation between the original brickwork and layer(s) of blue engineering bricks" (pursuer's written submission, para 15). Rather, the pursuer's complaint was that the design assumed that there was little or no significant evidence of deeper voiding, whether within the lining itself (Form B, para 3.3.3.1) or between the lining and the rockhead/soil behind (Form B, paras 3.3.2 and 7.1.1.1).

[81] The defender's argument, summarised in particular at paragraph 69.3 of its written submissions, and spoken to at length by Dr Grant throughout his evidence, was that there was no material difference, certainly none in an engineering sense, between voids, delaminations, hollows or gaps of any kind within the tunnel lining or even between the lining and the rockbed. It followed that, as soon as voids of any kind were discovered, and repairs carried out, at a cost to the pursuer, then it had suffered loss.

[82] I am not persuaded by this argument. It was not the purpose of the tactile survey to identify the presence of these deeper voids. Tactile surveys involve a full inspection of the

intrados, and the use of a geological hammer to detect hollowness. I have noted what Dr Grant said in his supplementary witness statement, at paragraph 23, where he discussed the relevant Network Rail standard in accordance with which the tactile survey was undertaken (NR/L3/CIV/006/4C). The standard instructed the use of two defect codes for types of hollowness: HS for “hollow with no evidence of lining distortion – caused by incipient spalling” and HN for “hollow with no evidence of lining distortion – cause not determinate”. Dr Grant observed that, on its tactile survey drawing dated 28 February 2014, the defender had used the code HS for spalling brickwork between chainage HM130 and HM143. However, he also noted that, according to the standard, the defect denoted by the code HN was more serious, “as it implic[d] ring separation or voiding behind the lining” (the standard actually uses the word “element”, but it is clear from the overall context that in doing so, it is referring to the tunnel lining). Dr Grant concluded that, “According to Network Rail’s own handbook therefore, one potential defect which might be identified in a tactile survey is the existence of voids”. However, the key word here is “potential”: it is only a potential defect, rather than a defect, and it is only a potential defect in the sense that the tactile survey cannot exclude it. Dr Grant’s own view, clearly expressed in his email to Michael Purkis of Donaldsons sent on 17 September 2014, was that, “Hammer tapping is done to try and establish a possible ring separation between the first and second brickwork ring only. *It cannot be used to establish any deeper defect*” (emphasis supplied). In my judgment, therefore, it was not the purpose of the tactile survey to establish the presence of deeper voids.

[83] The defender conceded that the stitch drillers had identified only “potential” voiding (written submissions, para 69.3). It went on to suggest that the tactile survey “confirmed the position”. But what it confirmed was a “substantial amount of defects (hollows in the

crown)". Because, as discussed, the hammer test cannot reveal deeper voids, this note could not be referring to anything other than delamination between the first and second rings of brickwork (or possibly between the engineering bricks and the red bricks). Further, stitch pinning or stitch grouting was a technique adopted to deal with certain problems identified through the tactile survey. Since the tactile survey could not establish the presence of deeper voids, it could not have been the purpose of stitch pinning or stitch grouting to repair or grout deeper voids. As was stated in the Form B, "the purpose of the stitch grouting [was] to provide mechanical bonding between the brick courses where stress reductions *at the tunnel intrados* are considered to be significant. This is particularly relevant to providing a bond *between the re-cased inner brick rings and the original brickwork*" (emphasis supplied). Repair technique 4 was not materially different from the form of stitch grouting identified in the Form B. The defender's drawing C1T-ARU-S-NT(48)CD075 (issue C3) showed in section the mischief at which repair technique 4 was directed, namely, a delamination between the innermost brickwork ring and the brick course behind it, adding the words, "Lining ring separation void to be grouted". A further section, showing the arrangement of stitch pins, showed delamination between the first and second and the second and third innermost brick courses.

[84] I have noted what Dr Grant says at paragraph 26 of his supplementary witness statement, that the defender had specified that repair technique 4 had "the aim of ensuring that grout flow[ed] and permeat[ed] brickwork". Here he was referring to technical note 15 to the drawing with reference number C1T-ARU-S-NT(48)CD075 (Dr Grant in fact referred to C1T-ARU-S-NT(48)CD074, but that drawing appears to relate only to repair techniques 1 to 3). However, note 15 has to do with the pressure at which grout was to be injected, rather than the locations or areas to be grouted. I can see no suggestion that this repair technique

was to be used to permeate what I have referred to as deeper voids, or voids other than those that might require to be filled as a by-product of stitch pinning.

[85] I have also noted what Dr Grant says at paragraph 17 of his supplementary witness statement that, “The only difference between [repair technique 4] and the full tunnel grouting done after December 2014, was that the later grouting did not involve the insertion of bars, and was much wider in scope as it involved the entire tunnel at Network Rail’s insistence”. However, this is incorrect, since, in addition to the insertion of bars, the defender specified a lower strength of grout for stitch grouting compared to that specified for what Dr Grants calls “full tunnel grouting”.

[86] I have also noted Dr Grant’s evidence that the defender never said that there would be “absolutely no voids” in the north tunnel, and that the defender’s drawing of the tunnel in section “highlighted” the presence of voids behind the lining (supplementary witness statement, para 19). “Depending on whether there was a direct linkage to the voiding providing a pathway through the brickwork,” Dr Grant added, “there would be some back grouting to the rear involved in the exercise” (*Ibid*, para 19). However, the pursuer’s case is not premised on any absolute guarantee by the defender that there would be no voids in the north tunnel. To suggest that the tunnel section shown in drawing C1T-ARU-S-NT(48)CD075 “highlighted” voids behind the lining is misleading or, at best, an exaggeration. The drawing was about stitch pinning and stitch grouting. It contained no note drawing attention to the void behind the lining. It showed no pathway through which injected grout might reach any deeper void, including the void behind the lining. I reject any suggestion that this drawing would have made the pursuer aware of the significant presence of deeper voids, including voids behind the lining, or that repair technique 4 represented any systematic design solution for the grouting of such voids.

[87] I do accept that the loss of very significant quantities of grout, while carrying out stitch grouting, might provide a basis for an awareness of deeper voids, and in particular, voiding behind the tunnel lining. However, it seems not to have been disputed that this only occurred for the first time in August 2014. In my judgment the pursuer has established that he was not aware and could not with reasonable diligence have been aware of the presence of deeper voids until this time.

Delay

[88] In its written submissions, the pursuer noted the defender's position that the north tunnel works were in delay by May 2014 when the programme target for the north tunnel enabling works was not met. However they went on to state that "there [was] no evidence from which the Court could conclude that that date would have been met but for the breaches of contract upon which the present action is based" (para 63(d)). I would accept that proposition so far as what I have referred to as the additional works are concerned, since I have accepted that the need for these works did not arise from any breach of contract on the part of the defender. However, the position regarding delay and the north tunnel coring is more complicated.

[89] The critical document here is the defender's minutes of progress review meeting of 20 May 2014, sent to the pursuer on 23 May 2014. The purpose of the meeting was to "review progress on Network Rail approvals". The defender reported that, "The soft brick found in the recent cores through the north tunnel lining has made [Network Rail/Donaldsons] more nervous than at Form B sign off. This has resulted in slower approvals and NR requesting an internal review from their chief UK tunnel engineer Colin Simms. This review is not due to take place for a further two weeks". As Dr Grant

noted at paragraph 10 of his supplementary witness statement, while this statement was included in a section titled, "Extent of repair work", it was perfectly clear that Network Rail's concerns arose from the coring, and in particular, the soft brick. By 5 June 2014, the defender was reporting a delay of 6 weeks. Some of this delay is likely to have been caused by other factors, such as the additional works, the need for which I have accepted was not attributable to any pleaded fault on the part of the defender. However, it is inconceivable that at least some of this delay was not also due at least in part to the discovery, after the enabling works had started, of soft bricks, slowing down the approval process. By this I mean that the delay was not simply the result of the taking of additional cores, including an increase in the number of additional cores compared to that envisaged by Dr Grant in September 2013. Rather, Dr Grant was attributing the delay to the particular stage at which soft brick was confirmed, that is, after the Form B had been issued and after the enabling works had started, with the resulting "nervousness" on the part of Network Rail.

[90] This question of the timing of test sampling was the focus of the pursuer's pleaded case at article 7.1 of condescendence. So, by May/June 2014 at the latest, the pursuer was aware that it had suffered loss as a result of its alleged failure "to carry out a sufficient number of test samples to derive a meaningful characteristic strength and stiffness for the tunnel brickwork" (article 7.1). This is obviously not changed by the fact that the pursuer may have restricted its claim to the need for an extensive redesign of the enabling works and the resulting delay and costs. For the purposes of section 11(3) of the 1973 Act, therefore, time started to run against the pursuer's article 7.1 complaint as soon as it was aware of the fact that the enabling works were in delay as a result of the impact that the results from the cores had on Network Rail. In arriving at this conclusion, I would note that it is not enough for the pursuer, upon whom the onus of proof lies in order to make out a section 11(3) case,

to point to an absence of evidence. Moreover, insofar as there may be any doubt about the cause of delay, in the absence of Mr Adams, or any other key witness who might have been able to give evidence for the pursuer, I consider that I am entitled to draw an inference favourable to the defender. Even if the pursuer were not actually aware of such a delay as at May/June 2014, then I would hold that the pursuer could with reasonable diligence have been so aware by that stage.

[91] For the avoidance of doubt, the delay, of which I have held the pursuer to be both actually and constructively aware as at May/June 2014, does not obviously appear to me to have been a consequence of any of the other breaches complained of by the pursuer. There is a complaint in article 7.6 that the defender “failed to see to it that testing of a sufficient sample of bricks had been undertaken”. However, that complaint is essentially that the defender adopted “erroneous assumptions” for strength and stiffness based on data from the south tunnel, rather than one of failing to carry out sufficient test sampling at the design stage.

Section 6(4) of the 1973 Act

[92] In order to rely on section 6(4)(a)(ii) of the 1973 Act, the pursuer must establish, in respect of any obligation upon which it relies, that, by reason of error induced by words or conduct of the defender it was induced to refrain from making a claim. It must establish the period during which it was so induced, and no account shall be taken of any period during which the pursuer could, with reasonable diligence, have discovered the error.

[93] The errors upon which the pursuer founded were (1) that the defender had produced a competent design, and (2) that there was no need for grouting, other than stitch grouting, in the north tunnel. It argued that it was induced to refrain from making a claim by the

words and conduct of the defender, including the preparation and presentation of its design, the defender claiming payment for its services, the absence of any warning that its design was not competent or that any material changes would be required, and the ongoing assurances from the defender regarding its design in the period from the issue of its Form B in August 2013 until around September 2013. The pursuer claims it could not with reasonable diligence have discovered its error prior to December 2014, when the defender advised that full grouting of the north tunnel would be required.

[94] The defender argued that the pursuer was not in error “as to the scope of [its] remedies” (written submissions, paras 85, 86, under reference to *Adams v Thorntons WS* 2005 1 SC 30). I reject that submission. Although the defender advised the pursuer on 23 May 2023 that the north tunnel cores had confirmed the presence of soft brick, it reassured the pursuer, having reviewed the impact this discovery had on its model, that its design remained valid. On the basis of that reassurance, and others noted in the above timeline, the pursuer had no cause to believe it had any remedy against the defender in respect of the need for any extensive redesign or its resulting delay and costs. Had the defender advised the pursuer at that stage that full grouting of the tunnel was necessary, I have no doubt that the pursuer would have promptly responded to the defender, holding it liable for the resulting costs. After all, this is precisely what happened in December 2014, following Dr Grant’s email of 28 November 2014. In that sense, the pursuer can legitimately be said to have “refrained” from taking legal action as a result of error induced by the defender. In reaching that conclusion, I consider it is unnecessary to identify a “conscious and deliberate decision” on the part of the pursuer or anyone representing the pursuer (*BP Exploration Operating Company Ltd v Chevron Transport (Scotland)* 2002 SC (HL), Lord Hope, para 30; cf Lord Clyde, para 66, and Lord Millett, paras 102-109). I am not

persuaded, therefore, that the pursuer's case was fatally undermined, as the defender contended it was, by its decision not to call Mr Adams.

[95] The defender argued that the pursuer could not rely on the defender having insisted on the validity of its design. It figured the following example, "Suppose that the roof of a house blows off in the wind. The architect who designed the house claims that there was nothing wrong with the design. On the pursuer's approach, ... [t]he simple act of denying liability is apparently enough to prevent a claim ever from prescribing" (written submissions, para 84.3). I reject that argument. The analogy is not exact. Here we are not dealing with a designer who digs his heels in after an entirely new construction has already been completed and an obvious problem has arisen. The present case involves an antique Victorian tunnel, in less than perfect condition, and where the defender's assurances were given during the course of the enabling works and at a time when the pursuer continued to rely upon its specialist engineering services. The pursuer does not rely upon a "simple act of denying liability", but a practical context in which it continued to rely upon the defender's services. In these circumstances, it can properly be said to have been "induced" to refrain from raising proceedings. No one would argue that a simple denial of liability could operate as an inducement. In effect, the defender's reassurances operated as a renewal and a restatement of its design, one on which the pursuer relied.

[96] The defender argued that the pursuer was aware of the concerns being expressed by Donaldsons and Mott MacDonald. Moreover, since Network Rail had the "casting vote" in relation to design, it was "nonsensical to suggest that the defender's production of the design (coupled with its receipt of payment in respect thereof) was enough to lead the pursuer into error" (written submission, para 84.1). However, the fact that others – Donaldsons, Mott MacDonald – may have been appointed to check the defender's design

does not necessarily undermine the pursuer's case that it was induced into error in reliance on the defender. It would be enough that the pursuer relied on the defender to some extent, even if it also relied on others. The pursuer does not require to argue that the words or conduct of the defender was the sole cause of its error; it is enough that it contributed to that error (*Heather Capital v Levy & McRae* 2017 SLT 376, para 63). In any event, taking the pursuer's averments *pro veritate*, as I must do at this stage, I proceed on the basis that the pursuer was entitled to rely on the defender's design and the assurances given to it by the defender.

[97] I have accepted, of course, that the pursuer was aware in May/June 2014 that the discovery of soft brick had caused the enabling works to be already delayed. But I do not accept that there is a sufficient basis for concluding that the pursuer, exercising reasonable diligence, could have discovered the error that induced it to refrain from raising proceedings. Of course, there is no requirement that the pursuer should have acquired, actually or constructively, "knowledge of all the facts relevant to the matter" (*Glasgow City Council v VFS Financial Services Ltd* 2022 SC 133, para 55). And, were it not for the reassurances given by the defender, the pursuer's awareness of delay having been caused by the discovery of soft brick might have led it, with reasonable diligence, to discover the alleged failure to take sufficient test samples at the Form B stage. However, that is not the relevant error under which the pursuer was labouring. Rather, its errors were in respect of the need for an extensive redesign and the need for grouting. These were the errors that induced it to refrain from taking legal action, and standing the words and conduct of the defender, in particular, the reassurances given, the pursuer could not, even by exercising reasonable diligence, have discovered them. In my judgment, therefore, the pursuer is entitled to rely on section 6(4) in relation to all its pleaded grounds of complaint, by

discounting the period up until the end of November 2014 as part of the prescriptive period. There is no conflict here with what I have already held in relation to the pursuer's constructive awareness of delay. Reasonable diligence, for the purposes of section 11(3), relates to the awareness of loss. Reasonable diligence, for the purposes of section 6(4), relates to the discovery of error. They are different tests.

Strength and stiffness

[98] I deal finally with the defender's argument that the pursuer's averments introducing a complaint of over-optimistic assumptions of lining stiffness, adjusted into the pleadings on 2 September 2021, came too late to interrupt prescription.

[99] The problem here for the defender is that the strength and stiffness of materials, while analytically separate properties, are clearly related. In any event, taking the pursuer's averments *pro veritate*, this is what is plead. In article 7.1 of condescence, the pursuer explains that "strength of brickwork was not irrelevant (as the defender now asserts). While removal of overburden would reduce thrust loading, *it would also induce movements in the tunnel structure that would be related to the long-term stiffness of the brick*. On that basis, it was necessary for an engineer acting to the appropriate standard to check that the magnitude of these movements, derived from a potential range of long-term moduli, fell within specified trigger levels. It was also necessary for the *compressive and tensile stresses* induced by the range of movements to be determined *as the thrust compressive stress had been reduced*. The potential for *a combination of high tensile stresses and low compressive stresses* inducing local brick failures also required to be considered" (emphasis supplied). And again at article 7.6, "The defender did not properly consider the effect on long term modulus *arising from a lower compressive strength* of the bricks (as it should have done)" (emphasis supplied). As the

pursuer explains in article 10, the modulus of elasticity is in essence a measure of the stiffness of a material, and its earlier averments make it clear that strength and stiffness are separate but related properties.

[100] Properly understood, the pursuer's averments regarding over-optimistic assumptions of lining stiffness are a development or a modification of the existing grounds of fault, rather than the introduction of a fundamentally different ground of fault. Applying the appropriate test (*Assuranceforeningen Skuld v International Oil Pollution Compensation Fund (No 2)* 2000 SLT 1348, at 1351L), the defender's objection falls to be repelled.

Disposal

[101] I will repel the defender's third plea in law and allow a proof before answer on all averments on record other than those relating to prescription. I will reserve meantime any question of expenses.