LATENT CONDITIONS AND THE EXPERIENCED CONTRACTOR TEST

GORDON SMITH

Barrister & Solicitor*
Independent, Chartered Arbitrator

“Determining whether a condition could ‘reasonably’ have been foreseen habitually gives rise to the greatest difficulty of interpretation in civil engineering arbitration. The words of the sub-clause seem to defy precise analysis and it is thought that little is to be gained from analysing the works in terms of probability … It is indeed unfortunate that there is virtually no authority on the application of this difficult test.”

I. INTRODUCTION

Latent conditions are those physical conditions on or underlying the site that could not be identified by the contractor by reasonable observations or investigations of the site or site information. Encountering latent conditions in major civil engineering projects can give rise to challenging technical and commercial consequences. In the absence of contract provisions to the contrary, contractors are responsible for all ground conditions actually encountered, with the rationale being that the principal selects the contractor for its expertise and experience, and the contractor is, therefore, more likely to be able to assess and make allowance for ground conditions likely to be encountered, by means of a price contingency or other measures.

In modern tenders for major civil engineering works, contractors have little or no opportunity to carry out site investigations, and may not have included any price contingency for latent conditions, which if encountered,

---

* LLB (Hons), BE (Civil), MBA, FCIArb, CArb, FSIArb, AIAMA, FIEAust, CPEng (Ret).
2 In the absence of a definition of “latent conditions”, the courts have assisted in defining a “latent defect” in terms of a “defect which could not be discovered by a person of competent skill and using ordinary care”, The Dimitrios N Rallias (CA) (1922) 13 LR Rep 363 at p366, per Lord Atkin.
3 In the absence of a definition of “latent conditions”, the courts have assisted in defining a “latent defect” in terms of a “defect which could not be discovered by a person of competent skill and using ordinary care”, The Dimitrios N Rallias (CA) (1922) 13 LR Rep 363 at p366, per Lord Atkin.
4 In the United States Court of Claims’ decision in Ruff v United States 96 Ct Cl 148, 164 (1952), the court stated that the alternative to a latent condition clause is that “the bidders must, in order to be safe, set their estimates on the basis of the worst possible conditions that might be encountered.”
can result in protracted and technically complex disputes. This has led to the inclusion of latent condition clauses in most standard forms of contract to reallocate the risk for latent conditions from the contractor to the principal. The rationale for this approach is that the principal only pays for ground conditions actually encountered, and not the contractor’s price contingency for conditions which may not be encountered.\(^5\)

**II. FORMULATIONS OF THE EXPERIENCED CONTRACTOR TEST**

Standard forms of construction contract use different variants of the test for establishing liability for a latent condition. However, most have the common feature of assessing conditions actually encountered against a standard of what could reasonably have been foreseen or anticipated by an experienced (or competent) contractor at the time of tender, which the author refers to as "the experienced contractor test". The enquiry occasioned by the provisions requires a determination of questions of fact; namely, what physical conditions were encountered, and whether they differed materially from those which could reasonably have been foreseen by an experienced contractor.

**FIDIC and ICE Conditions**

The FIDIC *Conditions of Contract for Plant and Design-Build* (1st Edition, 1999) ("Yellow Book") and *Conditions of Contract for Construction* (1st Edition, 1999) ("Red Book"), pursuant to clause 4.12 in each case, allow the contractor an extension of time and cost if the contractor encounters: "Unforeseeable" "Physical conditions". "Unforeseeable" is defined as “not reasonably foreseeable by an experienced Contractor by the date of submission of the Tender" and “Physical conditions” are defined as:

> “natural physical conditions and man-made other physical obstructions and pollutants, which the Contractor encounters at the Site when executing the Works, including subsurface and hydrological conditions but excluding climatic conditions”.

The FIDIC *Conditions of Contract for Works of Civil Engineering Construction* (4th Edition, 1987) ("Old Red Book") and the ICE Conditions similarly allows the contractor an extension of time and cost if the contractor encounters a latent condition, and contains a similar formulation of the experienced contractor test, expressed in the following terms.\(^6\)

---


\(^6\) Clause 12 of the Old Red Book and clause 12 of the ICE Conditions (7th Edition). The ICE Conditions of Contract are no longer published by the ICE, and the Association of Consultancy and
“If during the execution of the Works the Contractor shall encounter physical conditions (other than weather conditions or conditions due to weather conditions) or artificial obstructions which conditions or obstructions he considers could not reasonably have been foreseen by an experienced contractor … .”

**Australian Standard Conditions**

The Australian Standard suite of contracts, including AS2124-1992 and AS4000-1997, contain latent condition clauses allowing an extension of time and cost if the contractor encounters “Latent Conditions”, defined in clause 12.1(a) of AS2124-1992 as:

“physical conditions on the Site or its surroundings, including artificial things but excluding weather conditions, which differ materially from the physical conditions which should reasonably have been anticipated by the Contractor at the time of the Contractor’s tender if the Contractor had:

(i) examined all information made available in writing by the Principal to the Contractor for the purpose of tendering;
(ii) examined all information relevant to the risks, contingencies and other circumstances having an effect on the tender and obtainable by the making of reasonable enquiries; and
(iii) inspected the Site and its surroundings.”

Clause 25.1 of AS4000-1997 defines “Latent Conditions” in almost identical terms to AS2124-1992, except that the expression “should reasonably have been anticipated by the Contractor” has been amended to “should reasonably have been anticipated by a competent Contractor”, the category of information in paragraph (ii) is described in narrower terms as “all information influencing the risk allocation in the Contractor’s tender and reasonably obtainable by the making of reasonable enquiries”, and the contractor’s obligation is to have “inspected”, rather than “examined” the information, which suggests a lesser burden on the competent contractor.

Commentators have criticised the experienced contractor test, describing the test as one which “probably gives rise to the most frequent disputes of fact which come before engineering arbitrators in the United Kingdom”, and the “application of the words to a given set of circumstances can be extraordinary difficult”. As the author has noted in the title quotation to this article, Dr Uff QC describes the test as defying “precise analysis”.

Max Abrahamson refers to the test as ambiguous as to the degree of risk required for a contractor to satisfy the test, and suggests that a claim is barred only if an experienced contractor could have foreseen a “substantial risk”.

Engineering now publishes the Infrastructure Conditions of Contract, which is based on the former ICE Conditions.


Although latent condition claims are common, there has been little Commonwealth authority on the application of the experienced contractor test. This article examines two recent decisions of the English Technology and Construction Court ("TCC"), in Obrascon Huarte Lain SA v Her Majesty’s Attorney General for Gibraltar ("Obrascon")\(^9\) and Van Oord UK Ltd and SICIM Roadbridge Ltd v Allseas UK Ltd ("Van Oord"),\(^10\) in which the TCC applied the experienced contractor test, together with three significant Australian decisions on the application of the test, being the Supreme Court of Tasmania’s decision in Glenorchy City Council v Tacon Pty Ltd ("Glenorchy"),\(^11\) the Supreme Court of Victoria’s decision in BMD Major Projects Pty Ltd v Victorian Urban Development Authority ("BMD")\(^12\) and the Supreme Court of New South Wales’ decision in Walton Construction Pty Ltd v Illawarra Hotel Company Pty Ltd ("Walton").\(^13\)

In light of the criticisms of the experienced contractor test, the author assesses the decisions as guidance for contractors and principals in assessing liability for latent conditions.

III. RECENT ENGLISH DECISIONS

**Obrascon**

In Akenhead J’s decision in *Obrascon*, Obrascon Huarte Lain SA ("OHL"), a Spanish civil engineering contractor, brought proceedings against the Government of Gibraltar ("GOG") arising from its contract with GOG to design and construct a road and tunnel under the runway of the Gibraltar Airport for a contract price of £30.231 million. The Yellow Book was adopted as the general conditions of contract. GOG terminated the contract two-and-a-half years into the two-year contract, with OHL having completed only 25% of the work.

As a consequence of previous military and airport activities on the site, the soil had a degree of contamination from heavy metals and organic pollutants. The main issue involved whether the extent and amount of contaminated materials were reasonably foreseeable by an experienced contractor at the time of tender under clause 4.12 of the Yellow Book.

Akenhead J commenced by reviewing the information made available to tenderers, principally, the environmental statement ("ES"), the site investigation report, and the contaminated land desk study. Akenhead J noted that the ES was primarily provided as a planning requirement, but that this does not mean that tenderers should not have considered it

\(^9\) [2014] EWHC 1028 (TCC); [2014] BLR 484.
\(^10\) [2015] EWHC 3074 (TCC).
\(^12\) [2007] VSC 409.
\(^13\) [2011] NSWSC 534.
carefully. The ES addressed environmental impacts, both during and after construction, including “land contamination”, and contained the following information:

- a low risk of exposing contaminated soil during excavation that may prove a hazard to human health;
- predicted 200,000 m³ of total waste from excavation, most of which is unlikely to be contaminated;
- low levels of contamination, with limited areas which may give rise to potential risks to human health;
- exceedances of threshold values for heavy metals, and organic contaminants, which may give rise to potential health hazards;
- further unsuspected contaminated ground could be discovered during the works, potentially exposing ground workers to unacceptable levels of contamination; and
- an assessment of 10,000 m³ of contaminated land.

The site investigation report contained a number of borehole log and trial pit results, which indicated “made ground”, that is, man-made ground, of varying depths between 1.0 m and 5.4 m, and non-uniform soil contamination results.

Akenhead J referred to the known limitations of boreholes, being that the hole is only 100 mm to 150 mm wide, and samples taken are not necessarily representative of material either between boreholes, which may be hundreds of metres, or even immediately adjacent to the sample being taken. He noted that once boreholes are taken down into the natural, undisturbed strata, engineers are better able to interpolate what materials at what levels are likely to exist between boreholes. He noted that trial pits suffer from the same limitation.

Akenhead J noted that there was a particular problem with relying upon borehole and test pit samples for contaminated material, because contaminants are likely to be randomly located, and borehole samples and test pits would only fortuitously locate contaminants.

Akenhead J considered experienced contractors would not limit themselves to a study of the ES, but would have carried out an intelligent assessment and analysis of why there was contamination, and the prospects of encountering more than had been revealed by the pre-contract investigations. He noted that the “very obvious” question any experienced contractor would ask is what was this site used for before, and the answer would have been a runway, fuel farm, and rifle range, and therefore, “there would be an expectation of a very real risk that there could be extensive lead and hydrocarbon residues from these activities in the made ground”.

---

15 Ibid, paragraph 211.
16 Ibid, paragraph 212.
17 Ibid, paragraph 213.
Akenhead J also noted that an experienced contractor would not limit itself to the soil investigation, and would have referred to the ES containing references to the history and various historical maps, and the contaminated land desk study showing “earthwork rifle butts” present in 1869 along the tunnel alignment, and foreseeably there would have been lead within the made ground.\textsuperscript{18} Similarly, he referred to aircraft fuelling activities on the site for over 70 years, and the location of a previous fuel farm and oil pipes close to the tunnel alignment, with such information leading experienced contractors to have appreciated that there “could well be” hydrocarbon or other oil derivatives in the soil.\textsuperscript{19}

Akenhead J stated that if these factors were coupled with the tender requirement to allow for 10,000 m\textsuperscript{3} of contaminated material, in his judgment, any experienced contractor tendering for the works would foresee that there would or at least could realistically be substantial quantities of contaminated material, and that the allowance of 10,000 m\textsuperscript{3} was only a “say” figure.\textsuperscript{20}

Akenhead J had misgivings regarding the parties’ experts’ assessment of contaminated material that an experienced contractor would have allowed for, and considered an experienced contractor would have to budget on treating much more than the 10,000 m\textsuperscript{3} estimate because by the time it was extracted it would be mixed with other material.\textsuperscript{21} He noted that the problem for tenderers was the foreseeable uncertainty of precisely what and where, and at what depths, in terms of quantity and location the contaminated soil would be, concluding that there was “a very real prospect” of encountering substantial quantities anywhere within the made ground, and this was “eminently foreseeable by an experienced contractor”.\textsuperscript{22}

Akenhead J also set out the measures by which a reasonable contractor could have addressed the foreseeable risk, including an allowance in the tender price, planning a post-contract investigation to determine the location of contaminants, establishing a working method for dealing with contaminants, planning to remove all made ground having a “good chance” of containing contaminants, and planning the tunnel design and construction on the basis that “there was an unacceptable risk of there being significant quantities of contaminants”.\textsuperscript{23}

\textsuperscript{18} Ibid, paragraph 216.
\textsuperscript{19} Ibid, paragraph 216.
\textsuperscript{20} Ibid, paragraph 219.
\textsuperscript{21} The English Court of Appeal in \textit{Obrascon Huarte Lain SA v Her Majesty’s Attorney General for Gibraltar (CA)} [2015] EWCA Civ 712; [2015] BLR 521, in OHL’s subsequent appeal, agreed that Akenhead J misread the 10,000 m\textsuperscript{3} estimate in the ES as an \textit{insitu} quantity, but that this finding did not invalidate Akenhead J’s conclusions because he also held that OHL was obliged to make its own independent assessment of the quantities, paragraph 99.
\textsuperscript{22} [2014] EWHC 1028 (TCC); [2014] BLR 484, paragraph 223.
\textsuperscript{23} Ibid, paragraph 223(d).
Akenhead J concluded that he was satisfied that OHL did not encounter physical conditions over and above that which an experienced contractor could reasonably have foreseen. In terms of quantities, he found it difficult to put a precise figure on what should have been foreseen, but would be “very substantially above 10,000 m³”. He similarly considered it impossible to determine with precision the quantities of contaminated materials actually present, but was not satisfied on the balance of probabilities that OHL in fact encountered either in terms of type or quantities “Unforeseeable” physical conditions.

Akenhead J also considered OHL’s latent condition claim for contaminated groundwater. He noted that groundwater was foreseeable from the ES, and that dewatering was foreseeably required for the tunnel excavations. He concluded that competent tendering contractors should reasonably have foreseen that there was “a very real risk and prospect of significantly contaminated groundwater being encountered”, which would need to be addressed by appropriate methods.

Akenhead J also assessed OHL’s claim that it encountered rock excavating for the tunnel walls at higher levels than an experienced contractor would reasonably have foreseen, which OHL argued resulted in it having to adopt more costly methods to excavate the rock.

Both parties’ geotechnical experts agreed that limestone was encountered above the tender toe levels in a number of places, and agreed that there would be a need for some chiselling of rock, and use of a clamshell for rock excavation. The site investigation report contained borehole logs of the descriptions of the materials together with the results of in-situ standard penetration tests (“SPT”). Except at one location, described as “strong fractured marly limestone formed a big gravel”, limestone was not encountered in the investigation within the depth of the walls. The experts differed as to the extent to which an experienced contractor would have regard to the soil descriptions compared to the SPT values.

Akenhead J described the material descriptions as useful, but that experienced contractors would attach importance to the SPT results because material descriptions can be wrong or misleading, and that the higher the SPT results, the more likely an experienced contractor would consider there was a “real risk” there was something harder in the material, which may require special measures to remove. Akenhead J described this as a “significant risk” that OHL should have appreciated from the SPT results.

Akenhead J assessed an amount of 500 m³ of limestone as unforeseeable, compared to 1,383 m³ claimed by OHL, reasoning that no reasonable
Akenhead J found that GOG was justified in terminating the contract as a consequence of a number of breaches by OHL, including OHL’s delay in progressing with the works.

OHL appealed the decision to the English Court of Appeal, which upheld Akenhead J’s decision. OHL argued that the judge failed to make findings about the amount of contamination present and the amount which was foreseeable. The court disagreed, and considered that the expert evidence formed a basis for holding the amount of contamination actually present did not exceed that which was foreseeable, and that the judge gave good reasons for his reluctance to put precise figures on the actual and foreseeable quantities of contamination.

With respect to the estimate of 10,000 m$^3$ of contaminated materials contained in the ES, the court stated that this was one person’s interpretation of the data, and tenderers were bound to take that assessment into account, but they remained under a duty to make their own independent assessment of the physical conditions likely to be encountered.

In Coulson J’s decision in Van Oord, the claimants, Van Oord UK Ltd and Sicim Roadbridge Ltd (“OSR”), made three disruption and prolongation claims against Allseas UK Ltd (“AUK”), the principal contractor for construction of gas pipelines for a gas field development in the Shetland Islands. OSR, under a contract with AUK, carried out the procurement, supply, and construction of pipelines, and certain on-shore works. The dispute concerned only the onshore works for the gas export pipeline.

One of OSR’s claims was for delay and disruption arising from latent conditions. OSR contended that it originally intended to construct part of the pipeline by forming a stone road 8 m wide, and laying the pipe in a trench excavated into the adjacent untreated ground. OSR claimed that because peat was encountered at greater depths than it could reasonably have foreseen, it was obliged to build a 13.5 m wide stone embankment, and lay the pipe within the embankment.

Article 12 of the general conditions stipulated that OSR warranted that it had fully acquainted itself with all site conditions, subject to the conditions related to geology and subsurface being based on the information in the contract documents. OSR was entitled, pursuant to Article 12.2.3 of the contract, to a change order if the subsurface conditions were different to

---

30 Ibid, paragraph 94.
31 Ibid, paragraph 97.
those described in the contract, and “which an experienced Contractor could not reasonably have expected to foresee”.

Coulson J commenced by approving Akenhead J’s dicta in Obrascon that an experienced contractor at tender stage would not limit itself to information provided by the principal. OSR relied on a pre-contract Mackintosh probe survey, a commonly used test to measure the depth of soft soils, including peat. The survey was not a contract document, and showed similar depths of peat along the pipeline, varying up to 2 m in depth. OSR contended that where the actual conditions were different to the survey, it was entitled to a latent condition claim under Article 12.

AUK also carried out pre-contract trial pit logs, which showed peat at various depths at various locations, with some of greater depth than the Mackintosh survey. Shortly after the contract was concluded AUK provided a full topographic and geophysical survey, including a resistivity survey, the results of which were consistent with the pre-contract trial pit information.

With respect to the requirement that sub-surface conditions must be different from those described in the contract documents, Coulson J found that the only contract documents which referred to the sub-surface conditions were the contract drawings, the purpose of which was to identify the path of the pipeline. However, the drawings also referred to “the approximate depth of peat strata”, and showed many areas of peat greater than 1.0 m or 1.5 m, and an area of peat 140 m in length of depth between 3.0 m and 5.0 m. Coulson J concluded the sub-surface conditions were not different from those described in the contract documents, and therefore, OSR’s latent condition claim failed.

Coulson J also found that an experienced contractor would reasonably have expected to foresee many pockets of deep peat along the section of pipeline claimed. He rejected the assumption that OSR was entitled to treat the Mackintosh survey as a type of guarantee, and stated that it is a matter for contractors’ judgment as to the extent to which they rely on the information, referring to the decision in Obrascon, and as a matter of common sense. Akenhead J stated that every contractor knows that ground investigations are only 100% accurate in the precise locations in which they are carried out, and that it is for an experienced contractor to fill in the gaps and take an informed decision as to what was not greater than 1.5 m in depth.33

IV. AUSTRALIAN DECISIONS

The experienced contractor test has been considered in only a few Australian decisions, with the three most significant being Cox CJ’s decision in Glenorchy, Pagone J’s decision BMD, and Einstein J’s decision in Walton.

32 [2015] EWHC 3074 (TCC), paragraph 156.
33 Ibid, paragraph 193.
In Glenorchy, the Glenorchy City Council (“GCC”) sought leave to appeal an arbitrator’s award on a question of law. The arbitrator had issued an award in favour of Tacon Pty Ltd (“Tacon”) that a claim for latent conditions existed in relation to construction of piles by Tacon for a sewer outfall pipeline. AS2124-1992 was adopted as the general conditions of contract. GCC had provided tenderers with access to the “Oceaneering Report”, which the arbitrator found had drawn conclusions regarding depths to sub-strata from inaccurate and unconfirmed information. Tacon had allowed 1.5 m to 2 m additional length per pile, which the arbitrator found was reasonable on the information available. He concluded that Tacon had met the qualifying requirements of clauses 12.1(a)(i)(ii) and (iii) of AS2124-1992 in that the actual penetration of the piles could not have been reasonably anticipated on the information available at tender.

GCC contended that the Oceaneering Report had not been provided to Tacon until several months after tender, and therefore, the arbitrator’s finding was not supported by evidence. Cox CJ referred to the definition of “latent conditions” in clause 12.1(a) of AS2124-1992, and stated that the definition contemplates a difference of conditions between what are in fact encountered and what the contractor should reasonably have expected if he had examined the relevant information, rather than between what are encountered and what the contractor, having actually examined the information, did reasonably expect. He stated that whether the contractor examines the relevant documents or not is irrelevant, and if he fails to do so, he “takes the risk that an examination of them would have alerted him to conditions other than those he inspected”, but this does not preclude him from asserting a latent condition claim under clause 12.1.

Pagone J’s decision in BMD concerned the development of a quarry by Victorian Urban Development Authority (“VicUrb”) under its contract with BMD Major Projects Pty Ltd (“BMD”), which incorporated AS2124-1992. BMD made two latent condition claims; first, that it was required to carry out additional quantities of overburden materials, and secondly, that it was required to crush oversized rocks.

VicUrb contended that BMD made reasonable enquires at the time of tender but that it did not examine the information in a file referred to as the “Boral file”, and had BMD done so, it would have been alerted to the possible discrepancy in the depth of the natural surface level shown in the plans.

Pagone J noted that the conditions upon which clause 12.1 operates are to be determined objectively, rather than by what the particular contractor may have done or not have done. Pagone J found that VicUrb “was not able

34 The new Commercial Arbitration Act 2011 (Tas), based on the UNCITRAL Model Law, came into effect on 1 October 2012, and there is now no right to appeal an award on a question of law, unless the parties agree otherwise.
to point to any particular fact or matter on the face of the Boral file which would cause a non-expert in the position of a contractor to seek the assistance of a geotechnical engineer, and concluded that BMD should not have been expected to anticipate the information which might be found in, or deduced from, the Boral file after expert investigation. The Tasmanian Court of Appeal upheld Pagone J’s decision, and approved his reasoning.

In Walton, Illawarra Hotel Company Pty Ltd (“Illawarra”) and Walton Construction Pty Ltd (“Walton”) entered into a contract for Walton to carry out the renovation and refurbishment of Illawarra’s hotel at Wollongong, pursuant to which practical completion was to be achieved on 5 August 2006. Walton did not achieve practical completion of the works until 9 July 2007. A number of matters were referred for determination by a referee, an architect by profession, one of which was to identify the adjusted date for practical completion, taking account of variations to the scope of work.

One of Walton’s alleged variations related to the unexpected discovery of a deep void in the foundation to the floor slab which required the construction of a suspended floor slab, rather than a slab on ground, as indicated on the drawings. The referee found that the void was a latent condition under the terms of clause 12.1(a) of AS2124-1992, and Illawarra challenged the referee’s finding on this issue.

Einstein J set out the terms of clause 12.1(a) of AS2124-1992, and was of the view that the provision did not require an investigation of all potential aspects of physical conditions on the site, but is limited in paragraph (iii) to “inspect the Site and its surroundings”. He was of the view that what is reasonable in terms of inspection of the site is to be informed by the degree of information otherwise available to the tenderer, which in this case, included the engineering drawings prepared by Illawarra’s structural engineer, depicting a slab on ground. Illawarra’s representative’s evidence was that he inspected the site, but did not get under the building and inspect the sub-floor conditions, since he believed that the architect and the engineer would have done this, resulting in the selection of the slab on ground design.

Einstein J found that Illawarra’s representative did precisely what was required, examined the drawings and inspected the site, and that the drawings did not show the void, rather, to the contrary, and concluded that an experienced contractor would not expect to find physical conditions in the nature of the void, having regard to the very drawings which clause 12.1(a)(i) of AS2124-1992 requires a contractor to examine.

36 [2007] VSC 409, paragraph 17.
38 Ibid, paragraph 131.
Objective nature of experienced contractor test

It is clear from the phrases “not reasonably foreseeable by an experienced Contractor” in the Red and Yellow Books, and “could not reasonably have been foreseen by an experienced contractor” in the old Red Book and ICE Conditions, that the experienced contractor test is an objective one, confirmed in the decisions in both Obrascon and Van Oord.\(^\text{39}\) That is, what should have been reasonably foreseen by an experienced contractor at the time of tender is determined by an objective assessment of the facts, rather than by the conduct of the actual contractor. The enquiry occasioned by the test requires a determination of questions of fact; namely, what physical conditions or artificial obstructions had been encountered, and whether they differed materially from those which could have been reasonably foreseen by an experienced contractor at the time of tender.

The objective nature of the test is also supported by commentators. For example, the learned authors of Keating on Construction Contracts (“Keating”), referring to the test in clause 12 of the ICE Conditions, consider the test to be objective, by attributing to the actual contractor an objective degree of foresight.\(^\text{40}\)

The definition of “physical conditions” in AS2124-1992 refers to conditions that “could reasonably have been anticipated by the Contractor”, rather than by “an experienced Contractor” or “experienced contractor”, as in the FIDIC and ICE conditions respectively, which suggests the test is what could have been anticipated by the actual contractor, rather than an objective standard. This led commentators to conclude that the test is subjective, and therefore favours inexperienced contractors.\(^\text{41}\)

However, Pagone J in BMD made it clear that the test under clause 12.1(a) of AS2124-1992 is an objective one, that is, “to be determined by an objective assessment of the facts rather than by what the particular contractor may have done or not have done.”\(^\text{42}\) Similarly, Einstein J in Walton, referred to the objective nature of the test in clause 12.1(a) in terms of “by what a competent and suitably qualified contractor would expect to encounter by way of physical conditions in the execution of the works”.\(^\text{43}\)

\(^{39}\) Van Oord UK Ltd v Allseas UK Ltd [2015] EWHC 3074 (TCC), Coulson J referred to the test as “... an objective rather than a subjective test ...”, paragraph 79, and described his task as being to “decide objectively whether or not an experienced contractor could not reasonably have been expected to have foreseen areas of deeper peat in the Southern section”, paragraph 190.


\(^{42}\) [2007] VSC 409, paragraph 24.

\(^{43}\) [2011] NSWSC 554, paragraph 137.
As noted by Cox CJ in *Glenorchy*, the objective nature of the test means the contractor is not obliged to have examined the relevant information to satisfy the test. Einstein J in *Walton* appeared to be of the view that the terms of clause 12.1(a) required the actual contractor to have examined the relevant information and to have inspected the site. However, with respect, this appears contrary to the objective nature of the test, contrary to Einstein J’s own description of the test referred to above, and contrary to Cox CJ’s dicta in *Glenorchy*. The author respectfully submits that the actual contractor is not obliged to have either examined the relevant information or to have inspected the site to satisfy the test.

As noted earlier, clause 25.1 of AS4000-1997 includes amended wording, with the test expressed as “should reasonably have been anticipated by a competent Contractor”. The author submits this is an objective test similar to the Red and Yellow Book provisions, by overlaying an objective standard upon the actual contractor.\(^44\)

The author submits the objective nature of the experienced contractor test is consistent with the purpose of the test, that is, to reallocate the economic burden of latent conditions from the contractor to the principal, which should be based on independently objective criteria, rather than by reference to the conduct of the parties.\(^45\)

### Burden of proof

The courts do not expressly discuss the issue of burden of proof, but it is clear from the terms of the latent condition clause providing a benefit to the contractor, and the principle that the contractor would otherwise be responsible for all site conditions actually encountered, that the contractor has the burden of satisfying the experienced contractor test on the balance of probabilities, and this is implicit from the decisions discussed in this article.\(^46\)

### Effect of disclaimers and conflicting contract provisions

Principals commonly provide tenderers with geotechnical information which contain disclaimers stipulating that the information is not guaranteed or cannot be relied upon. Similarly, contract provisions, construed in isolation, can be viewed as negating the latent condition clause by deeming the contractor to have satisfied itself as to the nature of the site, for example, clause 4.10 of the Red and Yellow Books, which refers to, amongst other

---


\(^{45}\) Referred to by Pagone J in *BMD Major Projects Pty Ltd v Victorian Urban Development Authority* [2007] VSC 409, paragraph 24.

\(^{46}\) See also Max Abrahamson, *Engineering Law and the ICE Contracts* (E&FP Spon, 2005), 76.
matters, the contractor having been deemed to have “inspected and examined the Site … and to have been satisfied … as to all relevant matters, including … the form and nature of the Site including sub-surface conditions”, albeit qualified by the introductory words “[T]o the extent which was practicable (taking account of cost and time) …”.

Principals sometimes argue that such disclaimers and provisions have the effect that contractors cannot rely on the information for the purpose of the latent condition clause. There is a tension between such disclaimers and provisions on the one hand, and the latent condition clause on the other, because clearly, the more thorough the principal’s investigation, the less likely contractors will carry out their own pre-contract investigation, and the more reasonable it is for experienced contractors to rely on such information.

The author submits that the better view is that the effect of such disclaimers and contract provisions, construed in the context of the latent condition clause, is that whilst the principal does not warrant the information, the latent condition clause operates as an independent test under which such information is relevant. If this were not the case, disclaimers and/or conflicting contract provisions would restrict or nullify the latent condition clause, and this could not have been the intention of the parties. 47

Akenhead J, in *Obrascon*, set out in his judgment the entirety of clause 4 of the Yellow Book, including clause 4.10, but otherwise made no reference to clause 4.10 in his analysis of the application of the experienced contractor test under clause 4.12. The author submits this indicates Akenhead J applied clause 4.12 as an independent test, unaffected by the language of clause 4.10 deeming the contractor to have satisfied itself as to the “form and nature of the Site including sub-surface conditions”.

Pagone J, in *BMD*, with respect, correctly construed the relevant disclaimers in that case as not affecting the latent condition clause in AS2124-1992. VicUrb provided to tenderers detailed geotechnical information, but made it clear that it did not proffer the information as accurate or reliable, and that it was for tenderers to satisfy themselves about the accuracy of the information. Pagone J reasoned that the contractor’s entitlement to a latent condition does not depend upon establishing error in the information provided by the principal, fault on the part of the principal, or the information being warranted as accurate or reliable. 49


The Australian Standard suites of contracts have addressed the issue of principals’ disclaimers by expressly stipulating in the latent condition clause that information provided by the principal for the purpose of tendering is considered as part of the assessment, for example, clause 12.1(a)(i) of AS2124-1992. Clause 4.10 of the Red and Yellow Books obliges the principal to have made available to the contactor for its information, prior to the base date, all relevant data in its possession on subsurface and hydrological conditions at the site, including environmental aspects, and under clause 4.11(b), the contractor is deemed to have based the accepted contract amount on such data. The author submits that these provisions negate the application of any disclaimer or statement of non-reliance in site information provided by the principal for the purpose of the experienced contractor test under clause 4.12.

Content of the experienced contractor test

In BMD, having made reasonable enquiries to source the Boral file, BMD’s estimators reviewed the file to assist with its tender. Pagone J accepted that an experienced contractor would have been unable to find something of geotechnical significance in the file, but that a contractor who engaged a geotechnical engineer may have found something of geotechnical significance. Consequently, Pagone J concluded that he did not consider that BMD should reasonably have anticipated that the natural surface levels were different from those shown on the plans provided by VicUrb.

Pagone J was influenced by VicUrb, post contract, having not considered the Boral file to be useful, and VicUrb having provided to BMD plans and geotechnical information Pagone J described as “voluminous, detailed and prepared by reputable and experienced experts, and at considerable cost”. 50

The author respectfully submits that the decision in BMD should not be relied upon as authority for the principle that the content of the experienced contractor test does not involve examination of information by suitably qualified geotechnical engineers. The experienced contractor test should be construed in the context of the works being tendered. In circumstances involving complex civil works, as was the case in Obrascon and Van Oord, requiring interpretation of extensive site information, the content of the experienced contractor test would include the judgment of an experienced geotechnical engineer. The author submits that this is implicit in the decisions in Obrascon and Van Oord, and from Akenhead J’s dicta that an experienced contractor is obliged to examine all available information and “also to understand it”. 51

50 [2007] VSC 409, paragraph 29.
51 [2014] EWHC 1028 (TCC); [2014] BLR 484, paragraph 221(a).
Einstein J, in Walton, also expressly referred to this principle when he described the objective test in terms of “by what a competent and suitably qualified contractor would expect to encounter by way of physical conditions in the execution of the works”.\(^{52}\) The author submits that Einstein J’s reference to a “qualified contractor” is a reference to an experienced contractor suitably qualified to undertake the particular works.

The requirement in clause 12.1(a)(iii) of AS2124-1992 and clause 25.1(iii) of AS4000-1997 is for the experienced contractor to have “inspected” the site, rather than to have “examined”, or “investigated” the site. Einstein J, in Walton, in assessing the terms of clause 12.1(a)(iii) of AS2124-1992, noted that the requirement to have “inspected” the site is a lesser standard than a requirement to “examine” or “investigate” the Site.\(^{53}\)

Einstein J, in Walton, was of the view that an experienced contractor’s inspection of the site is to be “informed by the degree of information otherwise available to the Builder”,\(^{54}\) and it is implicit from Einstein J’s reasoning that he considered an experienced contractor would not have accessed below the building and inspected the sub-floor conditions, in light of having examined the principal’s drawings showing a slab on ground. The author respectfully submits that this is inconsistent with the terms of clause 12.1(a)(iii) of AS2124-1992, which specifies as an independent requirement that the experienced contractor is to have “inspected the Site”, with the term “Site” defined widely as “the lands and other places to be made available and any other lands and places made available to the Contractor by the Principal for the purpose of the Contract”. The author respectfully submits that the decision in Walton should not therefore be relied upon as authority for the principle that the content of the experienced contractor test does not involve inspection of the entire site, in light of having “examined” the information specified in clause 12.1(a)(i) and (ii) of AS2124-1992.

As a broader principle, the author submits that the fact that the principal’s (or engineer’s) design shows that the principal did not foresee the latent condition actually encountered does not mean that an experienced contractor should not have foreseen the condition.\(^{55}\)

The author submits that the requirement to have only “inspected” the site is also implicit from the FIDIC and ICE formulation of the experienced contractor test. Akenhead J, in Obrascon, in assessing the content of the experienced contractor test under clause 4.12 of the Yellow Book, referred

\(^{52}\) [2011] NSWSC 534, paragraph 137.

\(^{53}\) Ibid, paragraph 135.

\(^{54}\) Ibid, paragraph 131.

\(^{55}\) Max Abrahamson describes these circumstances in the context of clause 11 of the ICE Conditions as “… the contractor has no right to use the engineer’s failure to perform his duty to his client as an excuse for his own failure to fulfil his independent duties under cl 11.”, and in the author’s view, Mr Abrahamson’s comments are equally applicable to the experienced contractor test under clause 12 of the ICE Conditions. Mr Abrahamson also notes that in many cases, in these circumstances the design will require amendment, justifying a variation under clause 51 of the ICE Conditions, rather than under clause 11.
only to the information made available by GOG to tenderers and other information available to an experienced contractor at the time of tender, and made no suggestion that the content of the experienced contractor test under clause 4.12 included any investigation of the site.

Degree of risk required

As noted earlier, Mr Abrahamson suggests that a claim is barred only if an experienced contractor could have foreseen a "substantial risk". A "substantial risk" is likely to be construed as a strong probability of occurrence, and therefore, a level of risk greater than on the balance of probabilities. Akenhead J in Obrascon described the risk barring a claim variously as “a significant risk”, a “very real prospect”, “likely to be encountered”, “could well be”, and a “very real risk”,56 and Coulson J in Van Oord described the risk of encountering peat of greater depth than revealed by the Mackintosh survey as ‘likely’,57 described the peat layers in terms of “likely to be variable”,58 and the experienced contractor test in terms of “what the likely conditions would be overall”.59

The author submits, on balance, the courts in both Obrascon and Van Oord applied a test equivalent to a balance of probabilities to bar the latent condition claim in each case, rather than the higher standard of a “substantial risk” suggested by Mr Abrahamson, and principals and contractors should apply a balance of probabilities standard in assessing whether the experienced contractor test has been satisfied.

Latent conditions in made ground

Made ground can arise from previous earthworks including reclamation works, and gives rise to particular risks for contractors, as noted by Akenhead J in Obrascon. If there is information available at the tender stage which indicates the presence of made ground, and that previous activity has resulted in contamination or physical obstructions, it is likely to be difficult to satisfy the experienced contractor test, as was the case in Obrascon, due to the foreseeable random nature of contaminants and obstructions in made ground. The only exception to this principle, as indicated by Akenhead J in Obrascon, is where available records show the deliberate and planned deposition of contaminated material,60 since in those circumstances, the extent and volume of contaminated material should be evident from the pre-contract records.

57 [2015] EWHC 3074 (TCC), paragraph 159.
58 Ibid, paragraph 195.
59 Ibid, paragraph 194.
60 Ibid, paragraph 217.
Information available to actual contractor

Pagone J made it clear in BMD that the reasonable enquiries an experienced contractor is expected to make is judged by reference to the information which the actual contractor has in its possession, even if such information was obtained other than by having made reasonable enquiries. The implication of this principle is that although the test is an objective one, the content of the test may differ between tenderers depending upon the information in possession of the actual contractor. Pagone J described this principle as “… knowing something – however, it came to be known – may carry the consequence of an obligation to make enquiries about it”. Pagone J’s view is consistent with the learned authors of Keating, who are of the view, referring to the test in the ICE Conditions, that the test must include the knowledge of the actual contractor, as follows (emphasis added).

“Thus, the assessment of what could or could not reasonably have been foreseen must take into account all the available sources of information. This must include the actual knowledge of the real contractor, even if this goes beyond what an experienced contractor would know, otherwise there would be recovery for conditions which the real contractor should have foreseen or even did foresee ….”

The learned authors’ opinion in the above passage that the actual contractor is not entitled to recovery for a latent condition which it had foreseen is a principle applied by Coulson J in Van Oord, when Coulson J, after referring to OSR’s witness’ admission that he anticipated many pockets of deep peat, stated that “it is impossible to see how this could give rise to a claim for reasonably unforeseeable ground conditions.” Akenhead J, in Obrascon, noted that OHL “surprisingly” did not provide any evidence from witnesses or documentary evidence as to what OHL actually foresaw, and stated that the court does not infer that OHL itself did not in fact prior to the contract foresee the adverse conditions actually encountered, and that “that probably in itself does not prevent a Clause 4.12 claim from being established”. The author respectfully submits lack of foresight of the latent condition by the actual contractor, in light of the objective nature of the test, does not prevent satisfaction of the experienced contractor test. However, foresight by the actual contractor would clearly do so, as suggested by Coulson J.

A tribunal will determine whether the actual contractor anticipated the latent condition encountered by assessing the content of the evidence of

---

62 Ibid.
64 [2015] EWHC 3074 (TCC), paragraph 191.
the contractor’s factual witnesses, and the witnesses’ credibility. Coulson J in *Van Oord* referred to this latter factor when he stated that although the experienced contractor test is an objective one, if OSR’s factual witnesses who claimed they could not have foreseen something are witnesses whose credibility the court doubts, this “important element of the ground conditions claim is inevitably weakened.”67

Contractors cannot rely solely on information provided by principals at the tender stage. Akenhead J was of the view that information in documents such as historical maps would be considered as part of the assessment of the reasonable contractor test. Similarly, pre-tender documents prepared for purposes other than assessment of ground conditions, such as environmental statements and land use studies, if they contain information relating to ground conditions, will be considered as part of the assessment of the reasonable contractor test.

**Limitation of borehole and test pit information**

In light of the limitation of borehole and test pit information referred to in the judgments that samples taken are representative only of the material at the particular location, and not necessarily representative of material between boreholes and test pits, such information is unlikely to be determinative in satisfying the experienced contractor test. The exception to this limitation is perhaps where the results show consistent underlying, natural, undisturbed strata, circumstances which Akenhead J described as where “geotechnical and even civil engineers are better able to interpolate in relation to such strata what materials at what levels are likely to exist between boreholes”.68

In relation to the presence of random contaminants or obstructions in made ground, borehole and test pit information is unlikely to be of assistance in satisfying the experienced contractor test if there are indications of such conditions in other available documents.

**Materiality of latent condition**

Ground conditions are inherently variable, and the experienced contractor test, in light of the requirement for “materially different physical conditions”, is likely to be judged in the context of such variability. For example, Coulson J in *Van Oord* rejected the proposition that peat at average depth of 1.5 m is reasonably foreseeable, but peat at an average depth of 1.71 m is not, referring to the margin as “just too small”.69

---

69 [2015] EWHC 3074 (TCC), paragraph 193.
Inaccuracies or inconsistencies in soil information

Contractors often assume that if there are inaccuracies or inconsistencies in soil information, this provides an avenue for a latent condition claim. However, contractors should be aware of the limitations of tender site information, and the likely treatment by tribunals of any inaccuracies or inconsistencies in the information. The court in Obrascon considered that GOG’s request for tenderers to allow for 10,000 m$^3$ of contaminated ground could not be relied upon. Akenhead J described the allowance as a “say” figure, and the Court of Appeal stated that tenderers had a duty to make their own independent assessment.

Similarly, Akenhead J in Obrascon considered an experienced contractor would have placed greater weight on the SPT results than the inconsistent borehole descriptions in assessing the likely presence of rock.

Alternative design and construction methods

A contractor’s obligation, having foreseen a real risk of encountering latent conditions, may be extensive. For example, Akenhead J in Obrascon considered an experienced contractor’s obligations as to what reasonably could have been done, in the context of a design and build contract, included not only allowing a price contingency for dealing with latent conditions, but extended to considering alternative design or construction methods to deal with or lessen the impact of latent conditions, if encountered. These measures included planning a post-contract investigation to determine the location of contaminants, establishing a working method for dealing with contaminants, planning to remove all made ground having a “good chance” of containing contaminants, and planning the tunnel design and construction on the basis that “there was an unacceptable risk of there being significant quantities of contaminants”.

Dealing with latent conditions

It is important for contractors to comply with their obligation to deal with latent conditions, once encountered, in a competent manner, and in doing so, the onus is upon the contractor to determine appropriate measures. For example, clause 4.12 of the Red and Yellow Books expressly provides that the contractor, having encountered the latent condition, is obliged to continue executing the works, “using such proper and reasonable measures as are appropriate for the physical conditions.”

---

71 [CA] [2015] EWCA Civ 712; [2015] BLR 521, paragraph 97.
72 [2014] EWHC 1028 (TCC); [2014] BLR 484, paragraph 233(d).
It is clear from Akenhead J’s analysis in Obrascon that OHL was slow to appreciate the soil and water contamination problems, and slow in formulating methods to deal with the problems, including measures to minimise the extent of contamination. This led to a greater volume of soil and water requiring disposal or treatment than otherwise would have been the case, and also made Akenhead J’s assessment of the volumes of contaminated material encountered by OHL difficult, which was reflected in Akenhead J’s assessment of OHL’s claim.

**Latent conditions involving groundwater**

Akenhead J, in Obrascon, described the vertical and lateral movement of groundwater within the ground, the effect of which he referred to as “contaminants can in their soluble form be transferred upwards, downwards or sideways as the water itself moves”, which Akenhead J referred to as “standard knowledge for experienced contractors”. With respect to a claim involving contaminated groundwater, in light of the likely flow of groundwater underlying the site, together with likely random contamination results within groundwater, if pre-tender information indicates contaminated groundwater, a claim for unforeseen contaminated groundwater is likely to fail.

**Expert evidence**

Geotechnical expert evidence is usually essential to support or defend a latent condition claim. The parties must proffer the best expert evidence available, preferably from experts familiar with local ground conditions. Further, the expert must be able to provide his or her opinion as to what an experienced contractor would objectively have foreseen by reference to the information available at the time of tender. Any failure to do so is likely to be fatal. For example, in Obrascon, Akenhead J described OHL’s contamination expert as having “adopted a very blinkered view as to what was foreseeable, particularly in effectively ignoring the history of the site”, which clearly influenced the weight Akenhead J placed on the expert’s evidence.

Geotechnical experts should take particular care in giving opinion evidence concerning both the quantity of latent conditions an experienced contractor would have allowed for and the quantity actually present, by extrapolating sample results from limited boreholes or test pits. In Obrascon, 73

71 Ibid. Akenhead J described the assessment of both foreseeable and actual quantities as having been “complicated by what actually happened on site in circumstances in which OHL took no real measures prior to the end of 2010 to anticipate the presence of contaminants or to take steps to segregate or to avoid mixing all the soils (both contaminated and not).” paragraph 220.

74 Ibid, paragraph 230.

75 Ibid.

76 Ibid, paragraph 32(c).
Akenhead J found that expert evidence extrapolating from or interpolating between samples to provide an assessment of the amount of contamination was “no more than guesswork and essentially unreliable”. 77 Akenhead J’s noted that it might be different if excessive hydrocarbon was found at the same depth over 10 samples within a 400 m² area. 78

The lesson for contractors is that the more random the samples indicating latent conditions, the less likely an experienced contractor would be able to assess reliable quantities, and the more likely a tribunal will conclude that an experienced contractor would have allowed for a greater quantity of the relevant latent condition.

**Additional requirements**

Satisfying the experienced contractor test is only part of establishing a principal’s liability for latent conditions, and contractors must also satisfy requirements such as compliance with notice provisions, and that the ground conditions caused claimed delay or additional costs. In Obrascon and Van Oord, OHL and OSR respectively failed both the notice and causation requirements. 79

**VI. CONCLUSION**

The experienced contractor test, as noted by commentators in the introduction to this article, is difficult to apply. This difficulty arises from the inherent variability of ground conditions on a particular site, and the application of the judgment of a hypothetical experienced contractor to the site information available at the time of tender compared to conditions actually encountered. The test is a factual inquiry, and application of the test will often involve difficult assessments of relevance and degree.

As noted in the introduction to this article, the rationale for latent condition clauses is that the principal only pays for ground conditions actually encountered, and not the contractor’s price contingency for conditions which may not be encountered. However, contractors should be clear on tribunals’ likely application of the experienced contractor test to assess whether the latent condition clause provides them with sufficient protection not to include in their tenders any contingency for encountering

---

77 Ibid, paragraph 220.
78 Ibid, paragraph 220.
79 Ibid. Akenhead J found that OHL was entitled to a total of seven days extension of time caused by unforeseen rock and for weather, in circumstances where there was at least 730 days delay, subject to compliance with the notice requirements of clause 20, paragraph 311. Akenhead J found that OHL was entitled to only one day extension of time due to OHL’s failure to give timely notice in accordance with clause 20.1, paragraph 316.
latent conditions, and if such conditions are encountered, the relevant factors tribunals will take into account in applying the test.

Whilst the factual nature of the experienced contractor test makes it difficult to lay down general principles,\footnote{As noted by Judge Bowsher in Ceredigion County Council v Thyssen Construction Ltd (1999, unreported) in relation to clause 12 of the ICE Conditions.} the decisions in Obrascon, Van Oord, Glenorchy, BMD, and Walton, as a body of authority, now provide valuable guidance to contractors and principals on the application of the test in an international context.