

DELAY ANALYSIS REPORT

Valencia Distribution Centre — Automated Conveyor and Sortation System

Tidewell Fabrication Ltd v. Brisamar Logistics SA

Prepared by: Dr Helena Voss, BSc PhD FCI Arb, Meridian Forensic Scheduling Ltd, 14 Scrivener Row, London ZZ9 4ED

Instructed by: Calloway Price LLP on behalf of Tidewell Fabrication Ltd

Report reference: MFS/2025/118 | **Date:** 30 June 2025

Executive summary

ES.1 I have been instructed by Calloway Price LLP, solicitors for Tidewell Fabrication Ltd ("Tidewell"), to analyse the causes of delay to Practical Completion of the automated conveyor and sortation system supplied by Tidewell to Brisamar Logistics SA ("Brisamar") at Paterna, Valencia, under a Supply and Installation Agreement dated 4 November 2024 as amended and restated on 20 January 2025 (the "Agreement").

ES.2 Using a time impact analysis against the re-baselined programme HFL-VAL-P01 rev C, I have identified five delay events (DE-1 to DE-5). My conclusions are:

(a) The total critical delay to Practical Completion, measured from the re-baselined Practical Completion Milestone Date of 25 April 2025 to the earliest date on which Practical Completion could have been achieved absent termination (29 May 2025), is **34 calendar days**.

(b) Of those 34 days, **23 days** are attributable to events for which Brisamar is responsible under the Agreement: the Bay 3 floor slab being outside the clause 6.2 tolerance (DE-2, 14 days critical) and the late provision of the permanent 400A power supply under clause 6.4 (DE-3, 9 days critical after accounting for concurrency with DE-2).

(c) **11 days** are attributable to Tidewell: late Delivery of the sorter modules (DE-1, 6 days) and defects in the controls software identified during dry-run testing (DE-4, 5 days).

(d) Tidewell's exposure to liquidated damages under clause 10 is therefore limited to 11 days, which at 0.5% of the Contract Price

(€1,288,000) per week, pro rata, is approximately **€10,120**, against the €45,080 claimed by Brisamar in its notice of 2 May 2025.

(e) Tidewell was entitled to an extension of time of 23 days to 18 May 2025 under clause 9, having given notice of DE-2 on 21 February 2025 and of DE-3 on 9 March 2025, both within the 14-day period required by clause 9.2.

1. Introduction and instructions

1.1 I am a delay analyst with 19 years' experience in the forensic analysis of construction and engineering programmes. I hold a PhD in project scheduling from the University of Reading and I am a Fellow of the Chartered Institute of Arbitrators. I have given expert evidence in the Technology and Construction Court and in ICC and LCIA arbitrations. My CV is at Appendix C.

1.2 I was instructed by Sarah Adeyemi of Calloway Price LLP by letter dated 20 May 2025 to answer the following questions:

(a) What was the critical delay to Practical Completion of the System as at 2 May 2025?

(b) What were the causes of that delay and to which party are they attributable under the Agreement?

(c) What extension of time was Tidewell entitled to under clause 9?

1.3 I understand my duty is to the tribunal and that this duty overrides any obligation to the party instructing me. I have complied with that duty.

2. Documents reviewed

2.1 I have reviewed the following documents, which were provided to me by Calloway Price LLP:

Ref	Document	Date
D1	Tidewell tender response HFL-P-2411	18 September 2024
D2	Supply and Installation Agreement (original)	4 November 2024
D3	Kick-off meeting minutes	19 November 2024
D4	Programme HFL-VAL-P01 rev B and rev C	28 October 2024 / 20 January 2025
D5	Change Order register CO-1 to CO-4	various
D6	Amended and Restated Agreement (Amendment No. 1)	20 January 2025

Ref	Document	Date
D7	Delay notice e-mail chain (four messages)	21 February – 11 March 2025
D8	Levantina Topografía floor survey LT-2025-0218	19 February 2025
D9	Site photographs, Bay 3	14 March 2025
D10	Tidewell fortnightly progress reports 1–11	6 December 2024 – 25 April 2025
D11	Delivery notes and CMR consignment notes	17–20 February 2025
D12	Velden Controls commissioning log	24 March – 30 April 2025
D13	Brisamar notice of termination	2 May 2025
D14	Tidewell site diary	11 November 2024 – 9 May 2025

2.2 I have not interviewed any witness. Where I rely on a factual statement I identify its documentary source.

3. Methodology

3.1 I have used a **time impact analysis** (TIA), which is a prospective method recognised in the Society of Construction Law Delay and Disruption Protocol (2nd edition, 2017) as method 3.1 in its table of methods. For each delay event, in chronological order, I insert a fragnet representing the event into the programme updated to the date immediately before the event, and measure the change in the forecast Practical Completion date.

3.2 The baseline is programme HFL-VAL-P01 rev C dated 20 January 2025, which the parties adopted when they re-baselined the Milestone Dates in Amendment No. 1. Rev C shows Delivery on 14 February 2025, Mechanical Completion on 21 March 2025 and Practical Completion on 25 April 2025, with the Bay 3 sorter installation and the commissioning sequence on the critical path.

3.3 I verified the rev C logic and found it reasonable. The critical path runs: sorter modules delivered → Bay 3 supports set and levelled → sorter sections installed and aligned → controls cabinets energised → dry-run testing → Acceptance Tests → Practical Completion.

3.4 Where two delay events overlap in time and each would independently have delayed Practical Completion, I have treated the delay as concurrent and have attributed it to the first event in time, in accordance with the approach in the Protocol. This is relevant to DE-2 and DE-3.

3.5 Dates are calendar days. Working days on site were Monday to Friday with Saturday working from 24 March 2025.

4. Summary of the project history

4.1 Tidewell tendered on 18 September 2024 (D1) and the Agreement was signed on 4 November 2024 (D2). The kick-off meeting took place at the Valencia site on 19 November 2024 (D3). At that meeting Tidewell's lead installation engineer, Mr Tomasz Wójcik, raised a concern about undulation in the Bay 3 slab near grid line C5, and risk R-04 was opened with Brisamar's site manager, Mr Marc Pujol, as owner. Brisamar undertook to provide the main contractor's slab survey by 29 November 2024. The site diary (D14) records that no survey was received.

4.2 The Design Pack was issued on 6 December 2024 and approved on 13 December 2024. Change Orders CO-1 (19 December 2024, second sorter outfeed, +7 days) and CO-2 (10 January 2025, redundant PLC pair, no time effect) were agreed, and on 20 January 2025 the parties signed Amendment No. 1 (D6), increasing the Contract Price to €1,288,000, re-baselining the Milestones and inserting clause 6.4, under which Brisamar was to energise a permanent 400A supply by 7 February 2025.

4.3 Delivery of the sorter modules was late: the last consignment arrived on 20 February 2025 against the re-baselined date of 14 February 2025 (D11). Tidewell's progress report 6 attributes this to a fabrication sub-supplier.

4.4 On 18 February 2025, while setting out the Bay 3 supports, Tidewell found the slab out of tolerance. Levantina Topografía surveyed the slab on 19 February 2025 (D8) and reported a maximum deviation of 18 mm over 3 m between grid lines C4 and C7. Tidewell gave notice of a Delay Event under clause 9.2 on 21 February 2025 and issued CO-3 for re-levelling (D7, D5). On 24 February 2025 Ms Lucía Ortega of Brisamar replied that Brisamar's own survey showed the slab within tolerance and instructed Tidewell to proceed at risk.

4.5 The permanent 400A power supply was not energised on 7 February 2025. Tidewell gave a second notice on 9 March 2025 claiming 21 days' extension, which Brisamar rejected on 11 March 2025, stating that the supply would be available "by the end of the week" and that liquidated damages would run from 21 March 2025. The supply was in fact energised on 18 March 2025 (D12, D14).

4.6 On 14 March 2025 Tidewell suspended installation of conveyor line 2 in Bay 3 between C4 and C7 pending a decision on re-levelling (D9, D14). Brisamar did not countersign CO-3. Tidewell proceeded with a steel sub-frame solution at its own initiative from 24 March 2025, completing it on 4 April 2025.

4.7 Mechanical Completion of Bays 1 and 2 and of the sorter outside zone C4–C7 was notified on 21 March 2025. Dry-run testing started on 7 April 2025. Velden's commissioning log (D12) records software defects in the divert timing logic on 9–14 April 2025, resolved on 14 April 2025.

4.8 CO-4 (additional safety fencing, +3 days) was agreed on 28 March 2025.

4.9 Brisamar terminated the Agreement on 2 May 2025 (D13), citing failure to achieve Practical Completion by 25 April 2025. Tidewell left the site on 9 May 2025. At that date the Acceptance Tests had not been run; Tidewell's progress report 11 forecast Practical Completion on 29 May 2025.

5. Delay events

5.1 I have identified five delay events:

Ref	Event	Period	Responsible party	Contract basis
DE-1	Late delivery of sorter modules	14–20 Feb 2025	Tidewell	clause 7.1
DE-2	Bay 3 floor slab outside tolerance; suspension and sub-frame	18 Feb – 4 Apr 2025	Brisamar	clauses 6.2, 9.1(b)

Ref	Event	Period	Responsible party	Contract basis
DE-3	Late energisation of 400A supply	7 Feb – 18 Mar 2025	Brisamar	clauses 6.4, 8.5, 9.1(b)
DE-4	Controls software defects in dry-run testing	9–14 Apr 2025	Tidewell	clause 2.4
DE-5	Additional safety fencing (CO-4)	28–31 Mar 2025	Brisamar (variation)	clause 9.1(a)

6. Analysis

6.1 DE-1 — Late delivery (Tidewell)

6.1.1 The rev C programme shows sorter installation in Bay 3 starting on 17 February 2025, the first working day after Delivery. The last consignment arrived on 20 February 2025. Inserting a six-day delay to the start of Bay 3 installation moves forecast Practical Completion from 25 April to 1 May 2025. **Critical delay: 6 days, attributable to Tidewell.**

6.2 DE-2 — Floor slab (Brisamar)

6.2.1 The slab survey (D8) shows an 18 mm deviation against a contractual tolerance of 5 mm. I accept the survey as reliable; Brisamar has not produced the survey on which Ms Ortega's e-mail of 24 February 2025 relied, and the kick-off minutes record that the main contractor's survey was never provided. Under clause 6.2 the slab was Brisamar's responsibility, and failure to comply with clause 6 is a Delay Event under clause 9.1(b).

6.2.2 The fragnet for DE-2 comprises: survey and notice (18–21 February), awaiting instruction (21 February – 14 March), suspension of zone C4–C7 (14–24 March), sub-frame fabrication and installation (24 March – 4 April). Supports in zone C4–C7 could not be set until 4 April 2025 against a programmed date of 24 February 2025. Not all of that period is critical, because Tidewell was able to continue installation outside zone C4–C7 and in Bays 1 and 2. Inserting the fragnet into the programme updated to 17 February 2025 moves forecast Practical Completion from 1 May to 15 May 2025. **Critical delay: 14 days, attributable to Brisamar.**

6.2.3 I note that Tidewell could have started the sub-frame solution earlier than 24 March 2025. Had it done so immediately after Brisamar's "proceed at risk" instruction of 24 February, the critical delay from DE-2 would in my opinion have been about 9 days rather than 14. However, Tidewell was entitled under clause 5.3 to await a signed Change Order before carrying out varied work, and I have not reduced the DE-2 delay on this account. I flag the point for the tribunal.

6.3 DE-3 — Power supply (Brisamar)

6.3.1 Clause 6.4 required the 400A supply by 7 February 2025. It was energised on 18 March 2025, 39 days late. Clause 8.5 provides that testing and commissioning cannot commence until the permanent supply is energised.

6.3.2 In the programme as updated after DE-1 and DE-2, controls energisation was forecast for 7 April 2025. The supply was available from 18 March 2025, so DE-3 would not on its own have delayed energisation. However, the Mechanical Completion milestone, partial energisation of Bays 1 and 2 and the start of controls loop checks were programmed from 10 March 2025 and could not proceed until 18 March 2025. The DE-3 fragnet delays the loop-check and software-load sequence, which is partly in parallel with the Bay 3 sub-frame work. Inserting the fragnet moves forecast Practical Completion from 15 May to 24 May 2025.

Critical delay: 9 days, attributable to Brisamar. The remainder of the 39-day lateness is absorbed by concurrency with DE-2 and is not critical.

6.4 DE-4 — Controls software defects (Tidewell)

6.4.1 Velden's log records that the divert timing logic mis-sorted cartons above 4,000 cartons per hour during dry-run testing from 9 April 2025 and that a corrected software release was loaded on 14 April 2025.

Tidewell is responsible for Velden under clause 2.4. Inserting a five-day fragnet moves forecast Practical Completion from 24 May to 29 May 2025. **Critical delay: 5 days, attributable to Tidewell.**

6.5 DE-5 — CO-4 fencing (Brisamar variation)

6.5.1 CO-4 added three days to the fencing activity, which had float of eleven days at the time. **No critical delay.** CO-4 nonetheless records an agreed extension of three days which I have not added to the entitlement below, to avoid double counting with DE-2.

6.6 Summary of results

Step	Event	Forecast Practical Completion	Critical delay	Cumulative	Attributable to
0	Baseline rev C	25 Apr 2025	—	0	—
1	DE-1	1 May 2025	6	6	Tidewell
2	DE-2	15 May 2025	14	20	Brisamar
3	DE-3	24 May 2025	9	29	Brisamar
4	DE-4	29 May 2025	5	34	Tidewell
5	DE-5	29 May 2025	0	34	—

6.6.1 Total critical delay: 34 days. Brisamar: 23 days. Tidewell: 11 days.

7. Extension of time and liquidated damages

7.1 Tidewell notified DE-2 on 21 February 2025, three days after becoming aware of it on 18 February 2025, and DE-3 on 9 March 2025, within 14 days of the point at which, on the progress reports, the lack of permanent supply began to affect the programme (the loop checks programmed from 10 March 2025). Both notices were within the 14-day period in clause 9.2. Even if they were not, clause 9.4 preserves

entitlement save for avoidable delay.

7.2 In my opinion Tidewell was entitled under clause 9.3 to an extension of the Practical Completion Milestone Date of 23 days, from 25 April 2025 to 18 May 2025.

7.3 Had the Agreement not been terminated, Practical Completion would have been achieved on 29 May 2025, 11 days after the extended date. At 0.5% of €1,288,000 per week, pro rata (€6,440 per week; €920 per day), the liquidated damages for 11 days are **€10,120**. Brisamar's claim of €45,080 corresponds to seven weeks and does not allow for any extension of time.

8. Conclusions

8.1 The critical delay to Practical Completion as at the date of termination was 34 days, to a forecast completion date of 29 May 2025.

8.2 Of those 34 days, 23 days were caused by matters for which Brisamar was responsible under the Agreement: the non-compliant Bay 3 floor slab (14 days) and the late permanent power supply (9 days). The remaining 11 days were caused by Tidewell's late delivery (6 days) and controls software defects (5 days).

8.3 Tidewell was entitled to an extension of time of 23 days to 18 May 2025. Its liquidated damages exposure is limited to 11 days, approximately €10,120.

8.4 I reserve the right to revise my opinion if further documents, in particular Brisamar's own floor survey or utility correspondence on the switchboard upgrade, are disclosed.

9. Statement of truth

I confirm that I have made clear which facts and matters referred to in this report are within my own knowledge and which are not. Those that are within my own knowledge I confirm to be true. The opinions I have expressed represent my true and complete professional opinions on the matters to which they refer.

Dr Helena Voss — Meridian Forensic Scheduling Ltd — 30 June 2025

Appendix A — Chronology

Date	Event	Source
18 Sep 2024	Tidewell tender response submitted (€1,195,000)	D1
4 Nov 2024	Agreement signed (€1,240,000)	D2
19 Nov 2024	Kick-off meeting; Bay 3 slab risk R-04 opened	D3
6 Dec 2024	Design Pack issued	D10
13 Dec 2024	Design approved	D10
19 Dec 2024	CO-1 agreed	D5
10 Jan 2025	CO-2 agreed	D5
20 Jan 2025	Amendment No. 1 signed; price €1,288,000; new Milestone Dates	D6
7 Feb 2025	Clause 6.4 date for 400A supply; not met	D6, D14
14 Feb 2025	Re-baselined Delivery date	D6
18 Feb 2025	Bay 3 slab found out of tolerance	D14
19 Feb 2025	Levantina survey: 18 mm over 3 m at C4–C7	D8
20 Feb 2025	Last consignment delivered (6 days late)	D11
21 Feb 2025	First delay notice (clause 9.2); CO-3 issued	D7, D5
24 Feb 2025	Brisamar: slab within tolerance, proceed at risk	D7
9 Mar 2025	Second delay notice (power supply); 21 days claimed	D7
11 Mar 2025	Brisamar rejects extension; LDs from 21 Mar 2025	D7
14 Mar 2025	Installation suspended in Bay 3 zone C4–C7	D9, D14

Date	Event	Source
18 Mar 2025	400A supply energised	D12, D14
21 Mar 2025	Mechanical Completion notified (Bays 1–2, sorter outside C4–C7)	D10
24 Mar 2025	Invoice 0417 issued; sub-frame work starts	D10, D14
28 Mar 2025	CO-4 agreed	D5
4 Apr 2025	Sub-frame complete; zone C4–C7 supports set	D14
7 Apr 2025	Dry-run testing starts	D12
9–14 Apr 2025	Divert timing software defects; fixed 14 Apr	D12
25 Apr 2025	Re-baselined Practical Completion date	D6
2 May 2025	Brisamar notice of termination	D13
9 May 2025	Tidewell leaves site	D14
29 May 2025	Forecast Practical Completion absent termination	D10

Appendix B — Programme extracts

B.1 Programme HFL-VAL-P01 rev C, critical path activities (baseline):

Activity	Start	Finish	Duration (days)
Sorter modules delivered	—	14 Feb 2025	—
Bay 3 supports set and levelled	17 Feb 2025	28 Feb 2025	12
Sorter sections installed and aligned	3 Mar 2025	21 Mar 2025	19
Controls cabinets energised, loop checks	10 Mar 2025	28 Mar 2025	19
Software load and dry-run testing	31 Mar 2025	11 Apr 2025	12
Acceptance Tests	14 Apr 2025	24 Apr 2025	11
Practical Completion	—	25 Apr 2025	—

B.2 Programme as impacted (after DE-4):

Activity	Start	Finish
Sorter modules delivered	—	20 Feb 2025
Bay 3 supports set (outside C4–C7)	24 Feb 2025	7 Mar 2025
Bay 3 supports set (C4–C7, on sub-frame)	24 Mar 2025	4 Apr 2025
Sorter sections installed and aligned	10 Mar 2025	16 Apr 2025
Controls energised, loop checks	18 Mar 2025	4 Apr 2025
Software load and dry-run testing	7 Apr 2025	14 Apr 2025
Acceptance Tests (forecast)	19 May 2025	28 May 2025
Practical Completion (forecast)	—	29 May 2025

Appendix C — Curriculum vitae of Dr Helena Voss

C.1 PhD Project Scheduling, University of Reading (2009); BSc Civil Engineering, TU Delft (2003).

C.2 Director, Meridian Forensic Scheduling Ltd (2016–present); Senior Consultant, Driver Trett (2010–2016); Planning Engineer, BAM Nuttall (2003–2010).

C.3 Expert appointments: 31 matters, including 7 in the Technology and Construction Court and 12 in international arbitration; cross-examined on 9 occasions.

C.4 Publications: "Concurrency and the time impact method", Construction Law Journal (2019); co-author, SCL Protocol 2nd edition drafting sub-committee (2017).