SOUTH-EAST SCANNING

GPR Structural Investigation Site Report for Capital Consulting Engineers
Anna Creek Bridge, Burton QLD

Ground penetrating radar, structural analysis, and utility detection specialists.

QR code
Scan here to visit our website.

SOUTH-EAST SCANNING PTY LTD
www.southeastscanning.com.au

Contents

Anna Creek Bridge GPR and Profometer Inspection Report

Executive Summary

This report presents the results of a Ground Penetrating Radar (GPR) and Profometer survey conducted on 06/05/2025 at the Anna Creek Bridge in Burton, QLD. The survey was performed for Capital Consulting Engineers to non-destructively inspect the internal reinforcement of the bridge's concrete elements. Key findings indicate that the bridge is a conventionally reinforced concrete structure with no evidence of pre-tensioned or post-tensioned tendons. GPR scans revealed regularly spaced stirrups (vertical reinforcement) in the bridge beams at approximately 200 mm intervals (with a denser ~100 mm spacing in a central region of each span), and a concrete cover of roughly 50 mm over the beam reinforcement. Two layers of longitudinal steel were identified in the outer beams, and the deck slab was found to be ~200 mm thick with distinct top and bottom reinforcement layers. Scans of the supporting plinth (pier headstock) confirmed a grid of reinforcement (horizontal and vertical bars at ~150 mm spacing). Profometer (eddy-current cover meter) readings corroborated the shallow cover. They suggested large-diameter bars (around 40 mm) in many locations, although exact bar sizes could not be definitively determined without physical exposure. Overall, the bridge's reinforcement layout is consistent with standard design practices for a structure of this type, with robust reinforcement provided in critical areas. No significant structural concerns were observed from the survey, and the findings align with the expectations from the provided plan drawings. Minor recommendations include considering a confirmatory inspection (e.g., small core samples) to verify rebar diameters if required for design assessments, due to the inherent limitations of non-destructive estimation methods.

Introduction


Figure 1: Anna Creek Bridge

The Anna Creek Bridge in Burton, QLD, is a rural creek crossing with concrete spans supported by a central pier and abutments. Capital Consulting Engineers commissioned a GPR and Profometer survey of this bridge on 06 May 2025. The purpose of the survey was to determine the internal reinforcement configuration of the bridge (including rebar spacing, depth/cover, and presence of any prestressing) and to visually assess the condition of the concrete to inform structural evaluation and future maintenance or upgrade designs. The investigation was partly prompted by limited existing documentation on the bridge's as-built reinforcement details. Structural plan sketches provided to the survey team indicated the general layout of reinforcement (showing expected top and bottom steel in the beams and deck, as well as stirrup spacing patterns). Still, exact bar sizes and spacing were unknown from records. Through on-site non-destructive testing, this survey aims to fill in those details. In addition to the GPR and Profometer scans, a visual inspection was performed: the concrete girders, deck soffit, and supports were examined for signs of distress. Overall, the bridge's concrete appeared to be in sound condition with no apparent cracks or spalling; only superficial water staining and some debris caught on the guardrails (from creek flows) were noted, indicating the bridge had been overtopped by water without apparent structural damage.

Methodology

Equipment and Calibration


Figure 2: Proceq GP8000

The survey was conducted using a Proceq GP8000 GPR unit and a Proceq Profometer PM8000 cover meter. The Proceq GP8000 is a high-resolution ground penetrating radar device designed for concrete inspection, which emits radio frequency pulses into the concrete and records reflections from embedded objects or interfaces. The GPR system self-calibrates each time it is powered on, so no factory calibration was needed on-site. However, the team performed on-site calibration checks for depth accuracy: the concrete's dielectric constant was adjusted in the GPR software by comparing radar reflections to a known thickness (the deck slab) and known reinforcement depth, to ensure the depth scale on the radargrams was accurate. The Proceq PM8000 Profometer uses an electromagnetic (eddy current) principle to locate rebar and measure cover. It was zeroed and reference-checked on a test rebar before use. Bar diameters were left as a variable in the device during initial scanning, and the instrument's innovative coil balance feature was used to centre over bars for diameter estimation. (As discussed in a subsequent section, the Profometer's diameter estimates would later be interpreted with caution due to the technology's limitations.)

Scanning Procedure

All critical structural elements of the bridge were scanned: the sides of the concrete bridge beams, the exterior (outer) beam faces (which carry the guardrail), the underside of the bridge deck slab, and the sides of the supporting plinth at the central pier. Scans were performed in two primary orientations, referred to as the X- and Y-axis directions. The X-axis (longitudinal) scans involve moving the GPR probe along the length of a member (for example, horizontally along a beam or along the span of the deck), effectively detecting reinforcement that runs transverse to that direction. The Y-axis (vertical or transverse) scans involve moving the GPR perpendicularly or vertically across a member's section (for example, up and down the height of a beam web, or across the width of the slab), to catch reinforcement oriented along the member's length.

In practice, this means that for a given beam, the team scanned along the beam (X-axis) to find stirrups crossing the beam, and attempted scans vertically up the beam's side (Y-axis) to find any longitudinal bars. For the deck slab, scans were done longitudinally (parallel to traffic flow) to reveal transverse deck reinforcement, and transversely (across the slab width) to find reinforcement running longitudinally. This two-directional approach ensured that rebars of different orientations could be detected, since GPR reflections are strongest when the antenna passes perpendicular to a rebar. (If the radar antenna moves parallel to a rebar, the rebar's reflection is much weaker or absent, so multiple scan directions are essential for a complete picture.)

Scanning was executed by moving the GP8000 device steadily along the concrete surfaces while monitoring the live radar data on a connected tablet. Before complete data acquisition, the GPR was used in a calibration pass on a known feature: a short scan over a visible beam edge to pick up the back face reflection, allowing calibration of radar wave speed (depth correction). The GPR's time-depth profiles (radargrams) were recorded for each scan line. Periodic reference markers were placed in the data via the tablet to correlate radar positions with physical locations on the structure (e.g., midspan of beam, quarter points, etc.). The Profometer was used after GPR scanning on those surfaces to pinpoint rebar locations and measure cover directly. For each spot where the Profometer was used, the sensor was aligned until the device indicated maximal signal (centre of a bar) and a cover reading was recorded. The instrument's diameter mode was engaged to get an approximate bar size reading. Multiple readings were taken at each location to ensure consistency.

Data Processing

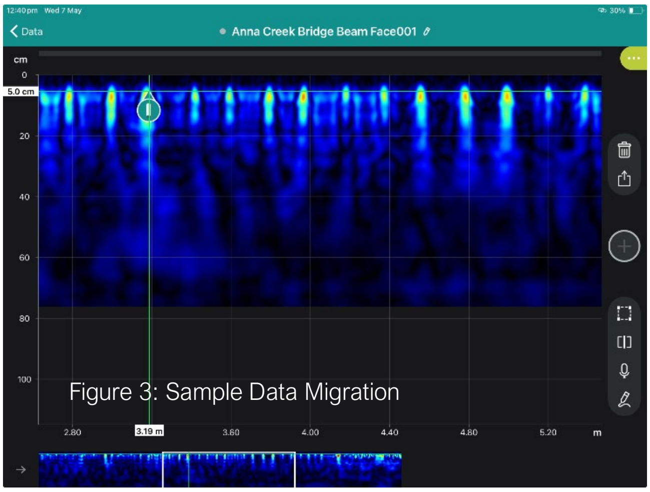


Figure 3: Sample Data Migration

After field collection, the GPR data underwent processing to enhance interpretability. Raw radargrams often show hyperbolic reflection shapes for each piece of rebar; therefore, a migration process was applied to the data. Migration is a signal processing technique that collapses the hyperbolas into more precise point targets at the correct locations, which helps accurately position the rebars and estimate their depth. We applied appropriate gain adjustments (amplifying deeper signals) so that deeper rebar echoes in the thicker sections (like the beam) could be visualised alongside the shallower ones. The software refined Depth calibration by using the known slab thickness (approximately 200 mm) as a reference: the radar reflection from the slab bottom was aligned to 200 mm depth in the profile, which adjusted the dielectric constant for all scans to yield correct depth readings. Combining these steps (gain, migration, and calibrated depth scaling) allowed for confident interpretation of rebar depths and spacing from the GPR profiles.

Survey Limitations and Challenges

Some practical limitations were encountered during the scan. The exterior beam faces had steel guardrail posts and bolts protruding (as seen in the images), which interfered with GPR scanning in their immediate vicinity. It was impossible to scan continuously along the exact midpoint of the outer beam's face because the anchor bolts for the guardrail are spaced periodically; the device had to be manoeuvred around them. This created small blind zones directly behind the metal fixtures where the radar could not be placed (these zones were later interpolated based on adjacent data and known symmetry of reinforcement).

Additionally, access to certain parts of the underside was limited. The bridge is low over the creek, and water was present during the survey, so reaching the bottom of the outer edges of the deck and beams required working in shallow water, which could only be done where safe. We could not easily scan vertically up the full depth of the beam from below (to capture a cross-section view) because the creek bed and water made positioning the device at the bottom of the beam difficult.

Despite these challenges, the team employed creative methods to maximise coverage. For example, as shown above, the GPR unit was attached to a telescopic pole to scan the soffit of the deck slab between the beams. This allowed data collection on slab thickness and reinforcement even above the water flow. The underside scanning image also illustrates the bridge's structural configuration: a concrete slab supported by two main girders on either side. During scanning, the technician compensated by taking multiple scans at slight offsets or angles whenever physical obstructions or alignment issues arose. The data from overlapping scans were compared later to ensure no major reinforcement features were missed. In summary, while a few localised areas could not be directly scanned, these did not substantially affect the overall findings, and the collected data was sufficient to map the bridge's internal reinforcement confidently.

Findings

GPR Results – Internal Reinforcement Layout

Absence of Prestressing

The GPR survey found no indication of pre-tensioned or post-tensioned tendons in any of the bridge components. Typically, a prestressed concrete beam or slab would contain metal ducts or cables that produce distinct radar reflections or hyperbolic groups; no such signatures were observed. This confirms that the Anna Creek Bridge is constructed as a conventionally reinforced concrete structure (reinforced only with rebar, not with any steel cables under tension).

Bridge Beams (Main Girders)

The bridge has longitudinal concrete beams (girders) supporting the deck. GPR scans of the beam webs (the vertical sides of the beams) revealed a pattern of closely spaced vertical reinforcement along the length of each beam. These are interpreted to be stirrups (shear reinforcement) or the vertical legs of a shear cage. The stirrups are generally spaced at roughly 200 mm intervals along the beam (with a tolerance of about ±10% as some variance was noted). Notably, a denser stirrup spacing zone is near the bridge's centre. For approximately 1.5 m to either side of the bridge centre (a ~3 m wide central segment of each span), the stirrup spacing tightens to around 100 mm. This effectively means every second stirrup is closely paired in that centre zone. In design terms, such a pattern is somewhat unusual when considering a supported span (since shear demand is typically highest near the supports); however, in this case, the bridge's "mid-span" corresponds to the area over the central support (for a two-span continuous deck, the centre of the bridge is at the pier). Therefore, the dense stirrup region likely correlates with the high shear and negative moment region over the central pier (support). Outside of this central zone, towards the end supports/abutments, the stirrup spacing is the standard ~200 mm. The concrete cover to the stirrups on the beam sides was measured to be approximately 50 mm, meaning the outermost rebar is about 50 mm beneath the concrete surface, a cover depth typical for an external beam in a corrosive environment (and consistent with durability requirements).

It should be noted that directly imaging the beams' longitudinal (horizontal) bars (the primary flexural reinforcement running along the span) was more challenging. Because these bars run lengthwise, a GPR scan along the beam is parallel to them and thus does not strongly capture them, and a vertical scan on the side only grazes them at best. However, the radar data provided indirect evidence of these longitudinal bars. In some cross-sectional radargrams, a characteristic three-hyperbola pattern was observed within a ~600 mm width of the beam's cross-section. This pattern corresponds to a U-shaped stirrup or cage: essentially, the radar picks up the two vertical legs and the bottom horizontal segment of a stirrup. This indicates that the longitudinal bottom bars are present and enclosed by these stirrups (since the bottom of the stirrup would typically loop under or around the bottom longitudinal bars).

In summary, while we did not get a direct, clear image of the main bottom bars (due to orientation and access limitations), the presence of a well-defined stirrup cage strongly implies that the primary tension reinforcement (bottom bars) and any top bars in the beam are in place as expected. Additionally, where the GPR scans were done near the beam bottoms (at an angle), there were faint reflections consistent with two layers of longitudinal bars, which are likely the bottom layer of steel and an upper layer (possibly at the top of the web or as part of a flange). This ties in with the findings on the outer beams, described next.

Exterior Beams

The two outermost beams, which form the sides of the bridge and support the edges of the deck and railings, were a focus of scanning because one face of each is fully accessible. The GPR results for these exterior girders showed that each has two layers of primary reinforcement at different depths from the outer face. Specifically, one layer of steel is located at about 50 mm cover from the outside face of the beam, while a second layer is deeper, at roughly 220 mm cover. Along the exterior beams' length, the reinforcement spacing, presumably the stirrups and possibly the longitudinal bars if they are in pairs, was like the interior beams: approximately 200 mm apart generally, with closer spacing (about 100 mm) near the centre of the bridge. The GPR hyperbola patterns on the outer beam scans indicated closed stirrups, evidenced by multiple reflections at the cross-section, confirming that a shear cage is present. Thus, the outer beams are reinforced with closed stirrup cages and at least two layers of longitudinal rebar, which matches typical beam design for carrying both bending (top and bottom steel) and shear (stirrups) loads. No evidence of any steel other than rebar was seen, again confirming no tensioning cables or ducts in these members.

Bridge Deck (Slab)

The bridge deck was found to be a reinforced concrete slab ~200 mm thick, spanning between the main girders. Scans of the underside of the slab provided a precise measurement of this thickness (the radar showed the concrete-to-air interface at ~200 mm depth across the deck). Within the slab, two layers of reinforcement were detected: one near the bottom and one near the top. The longitudinal GPR scans (running along the length of the bridge, i.e., parallel to traffic) primarily intersected the transverse deck reinforcement (the bars running perpendicular to traffic, which are often the primary reinforcement in the slab). These scans showed reflections corresponding to a top layer at 70 mm and a bottom layer at 130 mm. This two-layer configuration in the slab is consistent with typical bridge deck design (top steel to handle negative moments over supports, bottom steel for mid-span positive moments, or simply top steel for shrinkage and temperature if continuous).

Interestingly, the spacing of the slab bars (particularly the bottom layer as seen from below) did not appear perfectly uniform. The GPR intensity and spacing between hyperbolas varied, which suggests the deck likely uses individual rebar placed at designed spacings rather than a standard welded wire mesh. If mesh were used, one would expect very evenly spaced signals. Instead, the slight irregularity (some gaps slightly larger or smaller) points to manually placed rebar, which is common in cast-in-place bridge decks for flexibility in positioning. Crosswise scans (transverse to the bridge's length) were also performed on the deck soffit in a few locations. These scans (essentially looking for longitudinal running bars in the slab) predominantly picked up one layer of reinforcement at about 90 mm cover from the scanned face. The observed depth and spacing align with the anticipated design specifications. No anomalies (such as large voids or missing bars) were noted in the slab; its construction seems consistent throughout.

Supporting Plinth (Pier Headstock)

The supporting plinth refers to the concrete block or headstock atop the central pier columns on which the bridge spans rest (as visible in the photographs of the mid-span support). This element was also scanned on its accessible faces. The GPR results for the plinth indicate a dense mesh of reinforcement within. In the horizontal direction (along the length of the headstock), approximately four parallel reinforcement bars were detected within the depth range of the GPR on each scanned face. These appear as four distinct hyperbolas, suggesting roughly 150 mm spacing between each bar (since the plinth's face likely covers around 450 mm to 500 mm of depth where four bars were seen). The cover for these horizontal bars was about 100 mm from the surface of the plinth.

In the vertical direction (scanning up the side of the plinth), similarly frequent reflections were observed, indicating vertical bars spaced roughly 150 mm apart (likely the dowels or stirrups within the plinth), with a cover of around 90 mm from the top of the plinth surface to the first bar (or from the side surface to side vertical bars, if any). The plinth contains a rebar grid at approximately 150 mm centre-to-centre spacing in both directions. The slightly larger cover on the horizontal bars (100 mm) compared to the vertical bars (90 mm) could be due to orientation or measurement tolerance. Still, it shows the rebar is well embedded (3-4 inches cover, which is reasonable for a significant structural element to protect the steel). This heavy reinforcement in the plinth is expected because it has to distribute the column loads to the beams and vice versa. The scan of the plinth did not show any unusual features; the reinforcement layout there is typical of a heavily reinforced support block (with likely a cage of rebars forming a mat in both directions).

Proceq PM8000 Profometer Findings


Figure 4: PM8000 Profometer

After completing the GPR scanning, the Proceq PM8000 Profometer was used to gather additional data, particularly the concrete cover measurements and estimate bar diameters at various accessible locations. The Profometer operates on an eddy-current (pulse induction) principle, whereby a coil in the device induces eddy currents in nearby steel and detects the magnetic response. The strength of this response correlates with the distance (cover) and size of the rebar. In general, we found the Profometer's cover readings consistent with the GPR findings. For example, on the beam sides, it typically measured around 45–55 mm of cover to the rebar, which matches the ~50 mm inferred from GPR. Cover readings of ~60–70 mm were common on the deck soffit, aligning with the slab's bottom steel cover. This cross-validation gave confidence that the cover depths observed by radar were accurate.

Regarding rebar diameter estimation, the Profometer results must be viewed with caution. The device attempts to estimate bar size by analysing the signal amplitude at a known cover, but this process is susceptible to field conditions. During our survey, the Profometer's coil balance indicator (which shows whether the sensor is perfectly centred and oriented over a single bar) often displayed imbalance or could not be maintained in the optimal (green) zone. This was especially true in areas where bars are closely spaced or arranged in two layers (for instance, the deck slab or near the mid-span of beams where stirrups are dense). In such scenarios, the electromagnetic field from multiple bars can overlap, confusing the sensor.

According to literature and manufacturer guidance, estimating rebar diameter is challenging, with several influencing factors, and one should not rely on a single measurement. Our procedure was to take multiple readings at one spot and try slightly adjusting the sensor position to isolate a single bar as much as possible. Despite the difficulties, the Profometer provided some indicative values. Many readings consistently suggested a bar diameter of around 40 mm (i.e., the device often displayed an estimated Ø40 mm when properly aligned over a bar). This was true for the main beam bars and some slab bars where the cover was relatively small (<60 mm). In other areas, the device showed values ranging from 25 mm to 32 mm, particularly if it picked up a smaller bar or was influenced by adjacent steel. The tendency for the Profometer to read on the higher end (40 mm, which is a quite large rebar size) could indicate that the primary reinforcement in the beams consists of large bars (perhaps 32 mm or 36 mm in diameter), and the device, influenced by nearby steel, registers it as ~40 mm. It's also possible that multiple bars (for example, two 20 mm bars in close proximity) could be perceived as one larger bar by the instrument. With this known limitation, minimum bar spacing affects the accuracy of the diameter measurement. The consistent coil imbalance we observed suggests that, in many locations, the sensor detected the influence of more than one bar at a time.

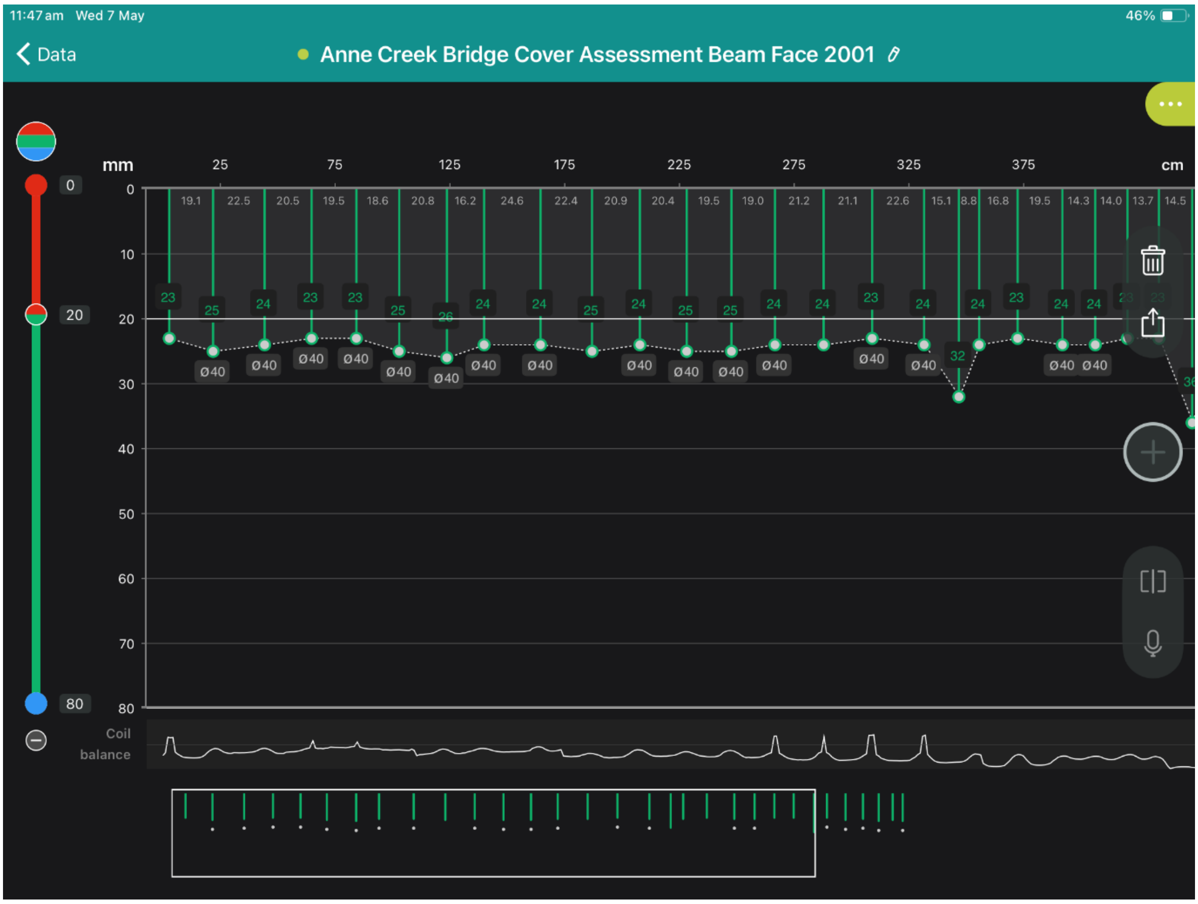


Figure 5: Sample Profometer Data

Given these factors, we interpret the Profometer's diameter readings as suggesting "large diameter" rebars are present (likely the main longitudinal bars of the beams are relatively thick). Still, we avoid pinpointing an exact size solely from the device. The instrument's 25–40 mm range covers typical bar sizes from #8 (25 mm) up to about #12 (40 mm) in imperial gauge terms, or roughly 20M to 36M in metric.

The main beam bars may be around 32 mm, and the instrument read a bit high due to neighbouring bars. Non-destructive methods like the PM8000 cannot conclusively determine bar diameters in congested structures. The Profometer's user manual notes that many factors (cover depth, bar spacing, interference from ties, etc.) affect diameter estimation, and it recommends verifying through an inspection hole if exact diameter is needed. In our case, no destructive verification was performed as it was beyond the scope, so we report the likely bar size indications with the caveat that they are approximate. If engineering analysis requires precise bar sizing, core sampling or exposure of a couple of bars is recommended to identify the diameter and steel grade positively.

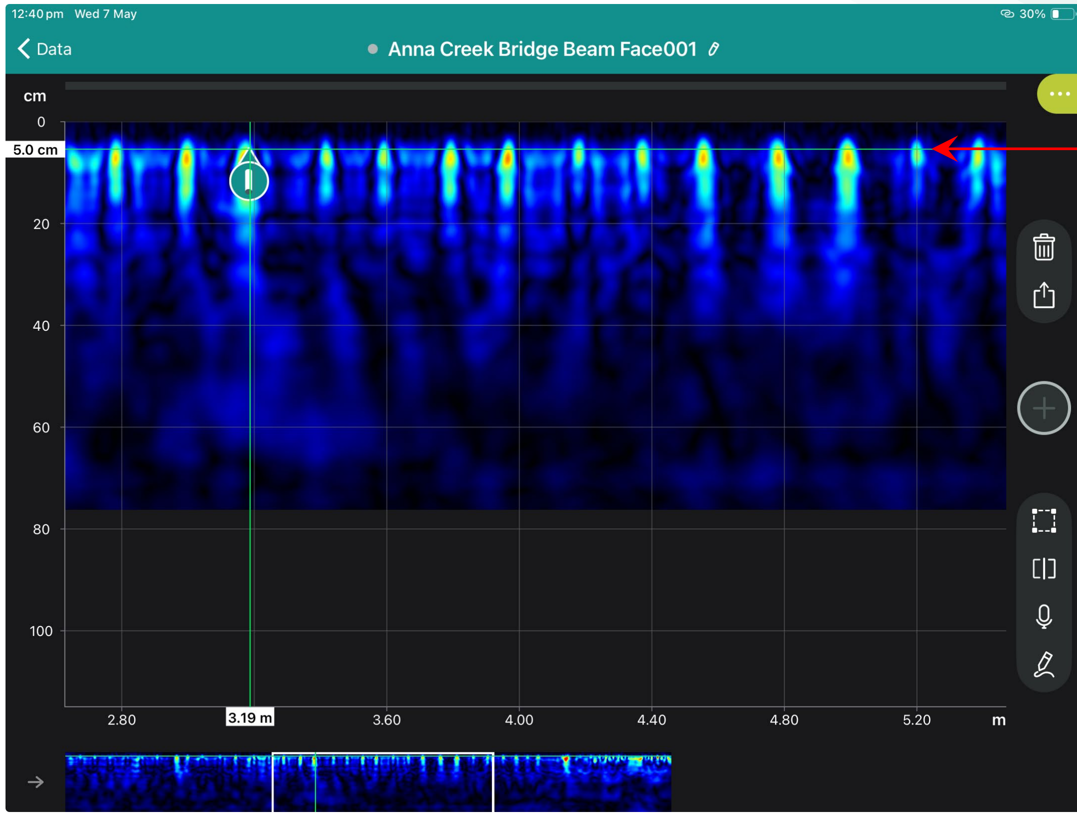
Concluding Remarks

The GPR and Profometer survey of Anna Creek Bridge has successfully mapped out the internal reinforcement details of the structure and provided insights into its construction. The bridge is built as a reinforced concrete structure without prestressing, featuring well-distributed rebar in its beams, deck, and supports. The main girders contain a robust shear reinforcement system (stirrups at ~200 mm spacing, tightened to ~100 mm in high-stress regions) and at least two layers of longitudinal steel, indicative of a design catering to significant bending moments and shear forces. The deck slab is adequately reinforced with top and bottom steel mats, roughly symmetrically placed to help control cracking and distribute loads. The supporting plinth (pier headstock) is heavily reinforced in both directions, ensuring it can safely transfer loads from the spans into the columns. These reinforcement layouts correspond well with standard design practice for short-span bridges – for example, the concentration of stirrups near supports (observed around the central pier area) and two layers of steel in both beams and slab for handling positive and negative moments. The findings align with what one would expect from the bridge plans, even though exact bar sizes were not documented. The non-destructive survey has validated the expected reinforcement configuration: nothing unusual or out-of-place was detected, and the structure appears to have the intended rebar in all critical sections.

From a structural assessment perspective, the bridge's reinforcement detailing appears sufficient and appropriately arranged for the likely loading conditions. No sections were found to lack reinforcement, and the cover depths are generally within a healthy range (providing corrosion protection). The fact that no prestressing is present means the bridge relies solely on this reinforcement for strength, which, given the observed bar spacing and probable bar sizes, should be adequate for a bridge of this span and type. No evidence of distress (such as GPR-detectable voids or significant concrete degradation) was found in the surveyed elements. The visual inspection noted no serious issues – only minor surface wear and water marks. This suggests that the bridge, as of the survey date, is in good structural condition internally.

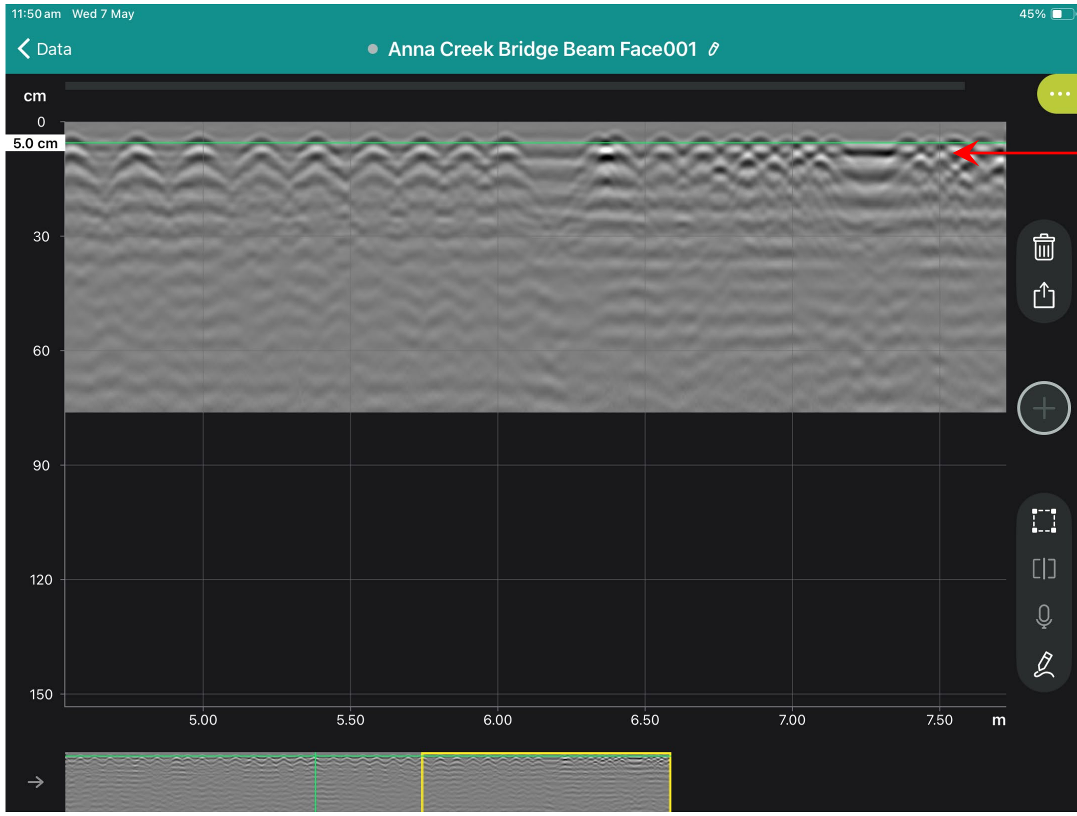
It is worth noting that while GPR and cover meter techniques can identify the layout and cover of reinforcement quite reliably, exact quantification of bar diameters and grades was beyond the non-invasive scope. The indications are that large diameter bars (likely 30–40 mm) were used for the primary reinforcement, consistent with a design requiring high capacity (for example, bridging a creek with possibly heavy vehicles). If future analysis or retrofit design requires knowing the precise bar diameters or material properties, targeted small-scale invasive verification (such as drilling to expose a bar) is recommended to supplement these findings. Nonetheless, to confirm structural details, this survey provides a comprehensive picture: the Anna Creek Bridge contains conventional rebar reinforcement in a pattern that matches engineering expectations for a safe, load-bearing design. The reinforcement density in mid-span regions (particularly around the central support) underscores that the original designers anticipated and provided for the critical forces, and the uniformity of spacing elsewhere indicates good construction practice.

This report and the provided structural drawings can now serve as a reliable reference for Capital Consulting Engineers in their assessment and planning for the bridge's management and future works.



Main Girder – Vertical Rebar

This scan shows clear vertical rebar (stirrups) spaced approximately every 200 mm along the beam, with a concrete cover of ~50 mm. The regularity of spacing demonstrates consistent construction, and the radar intensity supports the presence of standard shear reinforcement.



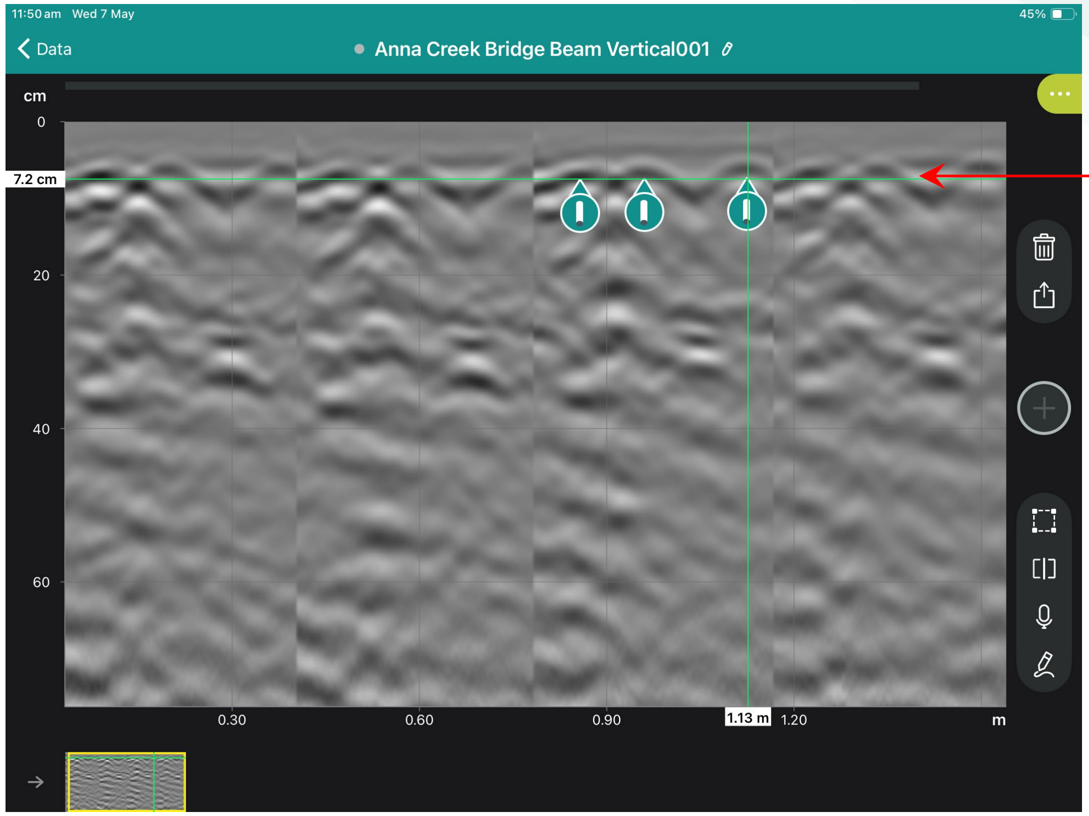
Main Girder – 100 mm Stirrup Spacing at Centre

The radargram shows dense, evenly spaced hyperbolas at ~100 mm intervals, confirming tighter stirrup spacing in the mid-span region over the support plinth. This reinforcement pattern matches expected detailing in high shear and negative moment zones.

FIGURE 8: SAMPLE TEXT

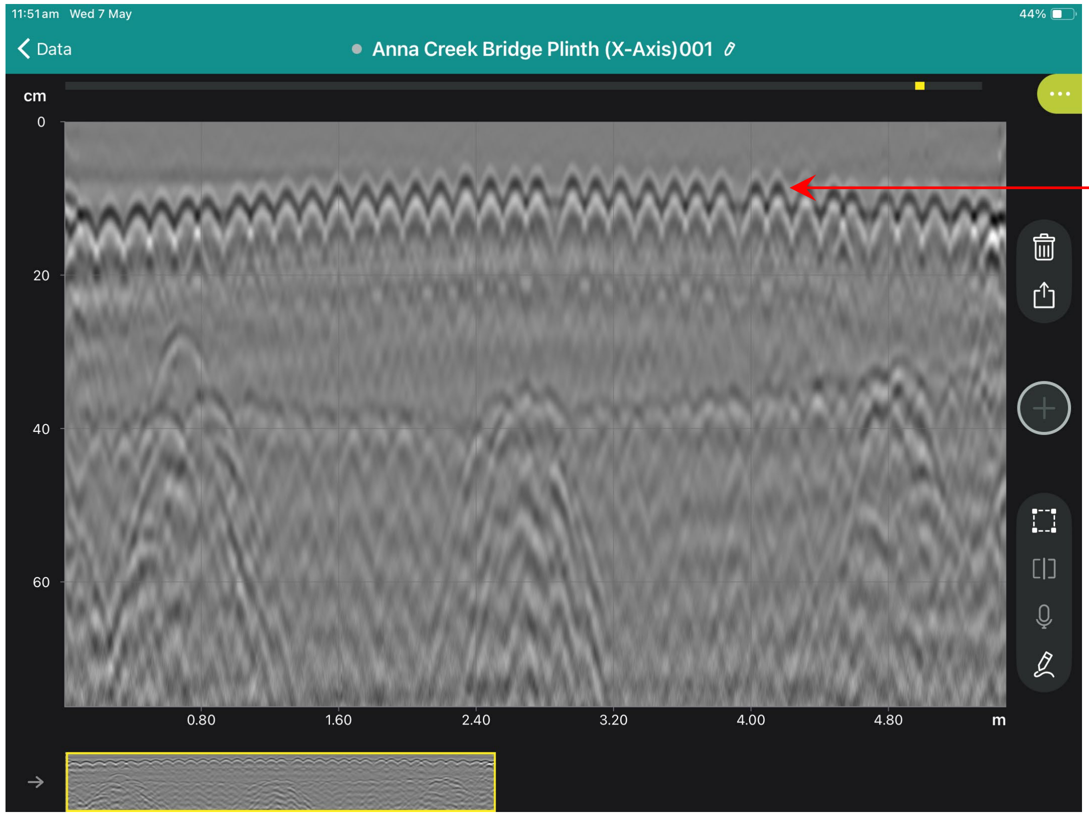
SAMPLE DATA 1 & 2

PROJECT:	ANNA CREEK BRIDGE ASSESSMENT
CLIENT:	CAPITAL CONSULTING ENGINEERS
ADDRESS:	ELLENSFIELD ROAD, BURTON QLD
TECHNICIAN:	AIDAN WASZAJ
DATE(S):	06/05/25
DRAWING:	1/8



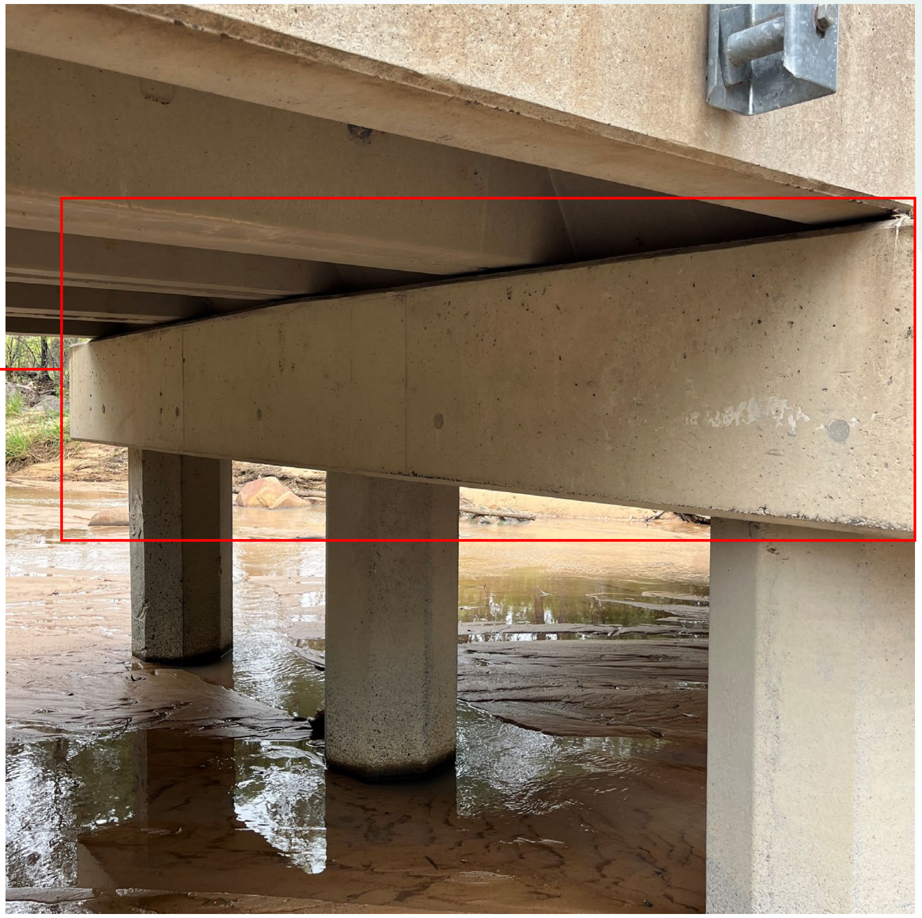
Girder – Horizontal Rebar Scan

This vertical scan up the beam face captures three distinct radar reflections in a U-shaped pattern, typical of stirrup or shear cage configurations. The depth and pattern of these signals indirectly confirm the presence of longitudinal reinforcement enclosed by stirrups.



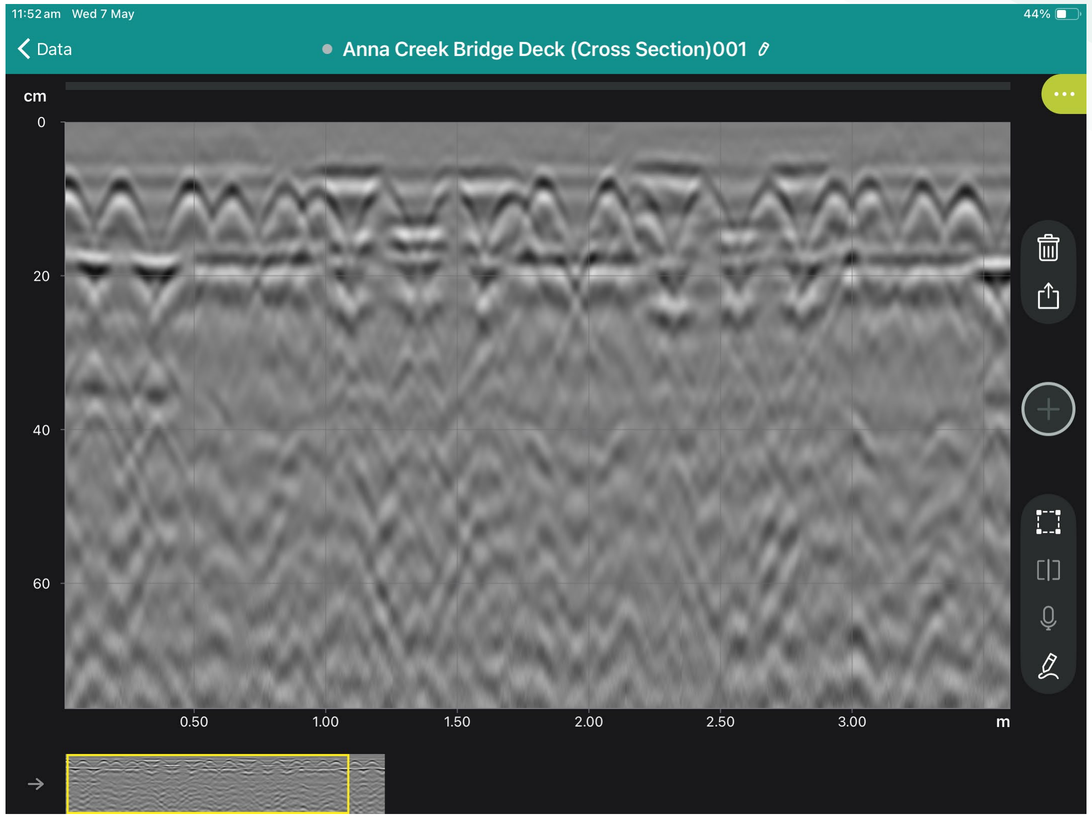
Plinth Scan

This scan of the supporting plinth reveals multiple hyperbolic reflections in both X– and Y–axes, indicative of a rebar grid at ~150 mm spacing. The signal intensity and spacing confirm the presence of a dense reinforcement mat designed to distribute support loads from the superstructure.



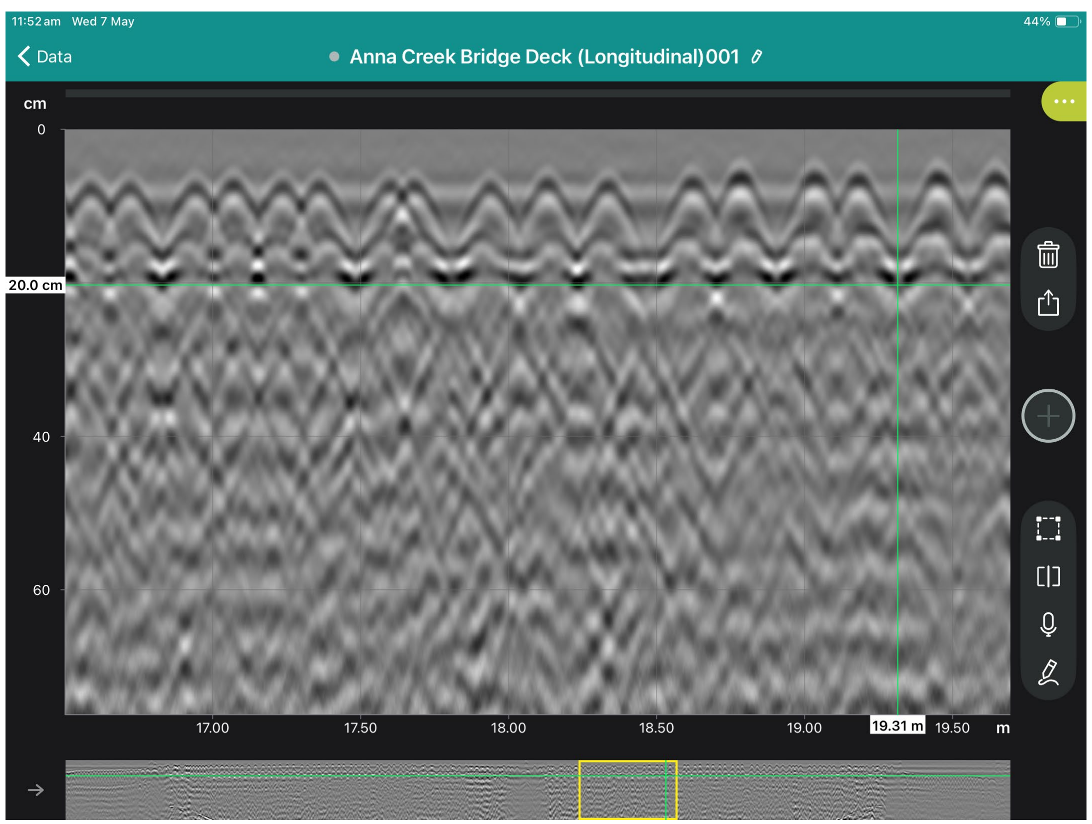
SAMPLE DATA 3 & 4

PROJECT:	ANNA CREEK BRIDGE ASSESSMENT
CLIENT:	CAPITAL CONSULTING ENGINEERS
ADDRESS:	ELLENSFIELD ROAD, BURTON QLD
TECHNICIAN:	AIDAN WASZAJ
DATE(S):	06/05/25
DRAWING:	2/8



Bridge Deck – Cross Section

This cross-sectional scan of the bridge deck reveals two clear layers of reinforcement, with the upper layer at approximately 70 mm depth and the lower around 130 mm, consistent with a 200 mm slab thickness. The spacing and pattern indicate individual rebar placement rather than mesh, confirming the slab's reinforcement arrangement from the underside.

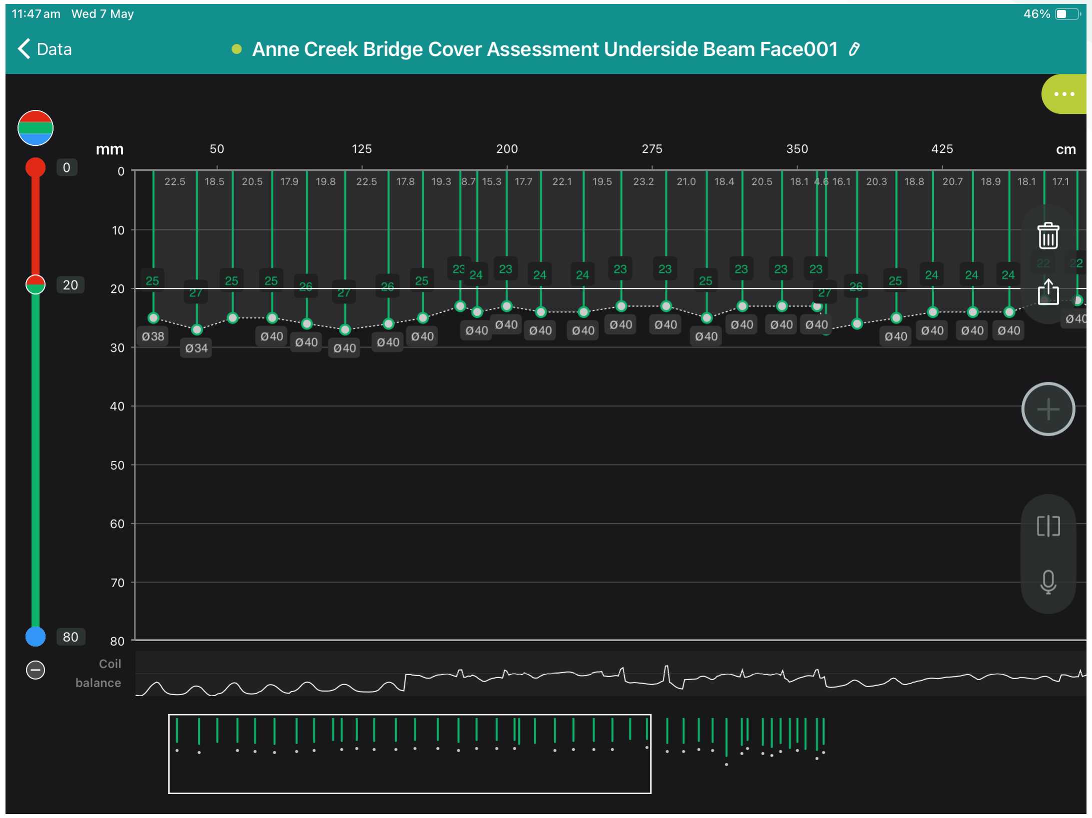


Bridge Deck – Longitudinal Scan

The longitudinal GPR scan shows a consistent series of hyperbolas representing transversely oriented bars at approximately 70 mm and 130 mm depths, validating the presence of two reinforcement layers. The relatively even spacing and depth align with manual bar placement, and no anomalies such as voids or delamination were detected.

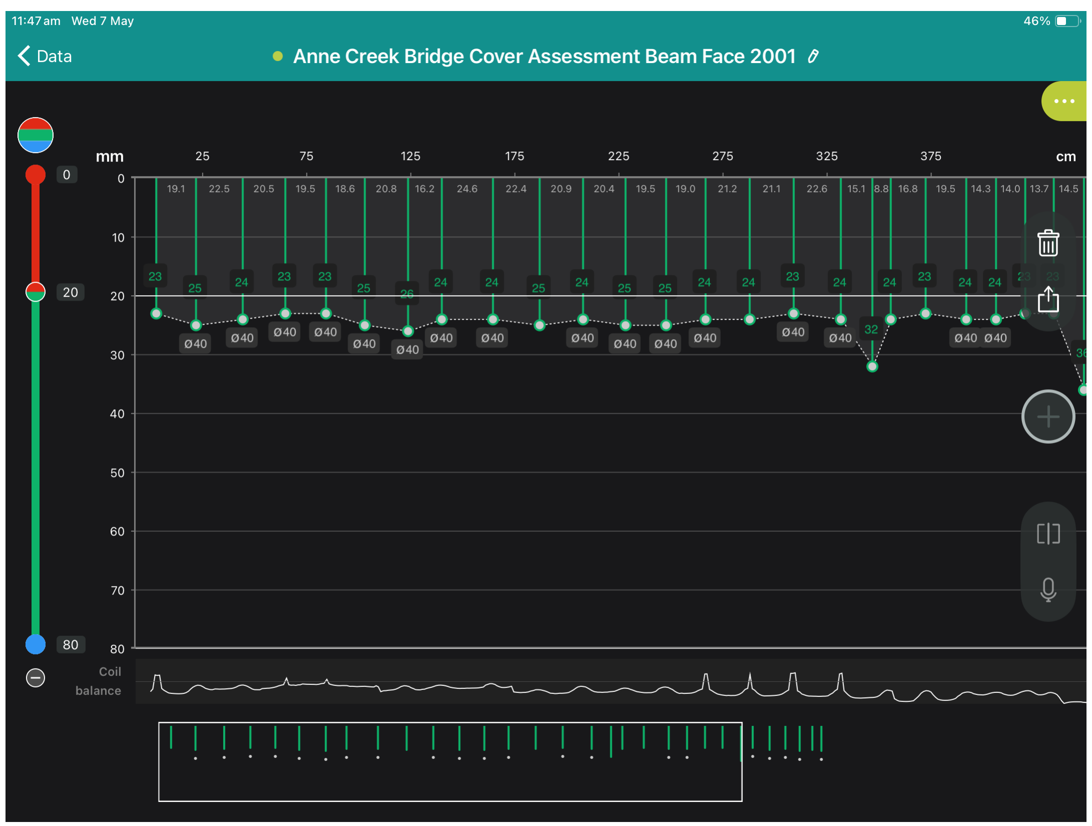
SAMPLE DATA 5 & 6

PROJECT:	ANNA CREEK BRIDGE ASSESSMENT
CLIENT:	CAPITAL CONSULTING ENGINEERS
ADDRESS:	ELLENSFIELD ROAD, BURTON QLD
TECHNICIAN:	AIDAN WASZAJ
DATE(S):	06/05/25
DRAWING:	3/8



Profometer Data – Underside Beam Face

Consistent cover depths between 17–40 mm were recorded on the underside of the beam, again with diameter estimates centering around Ø36 mm. These results support the GPR findings and suggest robust, high–capacity reinforcement throughout the structure.



Profometer Data – Beam Face

Cover readings on the beam face ranged from 18–40 mm, with the Profometer estimating most bar diameters as Ø36 mm. While coil balance was inconsistent due to steel congestion, the results indicate using large–diameter bars in the beam's main reinforcement layer.

SAMPLE PROFOMETER DATA

PROJECT:	ANNA CREEK BRIDGE ASSESSMENT
CLIENT:	CAPITAL CONSULTING ENGINEERS
ADDRESS:	ELLENSFIELD ROAD, BURTON QLD
TECHNICIAN:	AIDAN WASZAJ
DATE(S):	06/05/25

DRAWING: 4/8

SOUTH EAST SCANNING — GPR & UTILITY DETECTION SPECIALISTS

ABN: 8466 2239 581
southeastscanning.com.au

If you have any queries about this report or its contents, don't hesitate to contact South-East Scanning.

DOCUMENT PREPARED BY

South-East Scanning Pty Ltd
Specialists in Utility Locating, GPR Concrete Scanning & Structural Diagnostics
1 Mitaro Rise, Pacific Pines QLD 4211
T: 1300 175 543
E: info@southeastscanning.com.au
W: www.southeastscanning.com.au

Prepared by: Aidan Waszaj
Operations Manager
aidan@southeastscanning.com.au
T: 0421 193 439
LinkedIn: https://www.linkedin.com/in/aidan-waszaj/

A.Waszaj