

Survey Assistant interview questions

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What to expect

Survey Assistant interviews are practical and grounded. Employers are checking whether you can be trusted with expensive instruments, whether you record data accurately, and whether you will stay safe and productive on a site where the surveyor may be some distance away from you.

- **Technical and equipment:** Questions about total stations, GNSS receivers, automatic levels and data collectors, and what you do when a reading does not look right.
- **Field process:** Walk-through questions about how you set up, level, backsight and record during a normal day on site.
- **Behavioural:** Tell me about a time questions about accuracy, mistakes, working in poor conditions and getting along with a crew.
- **Scenario and problem solving:** Judgement questions where equipment fails, conditions change or the numbers stop matching, and they want to hear how you react in the moment.
- **Safety:** Questions about hazards near live traffic, earthmoving plant, remote terrain and working alone, and how you escalate concerns.
- **Teamwork and client-facing:** Questions about working with surveyors, machine operators, site supervisors and clients who may question your work.

A typical process starts with a short phone screen covering availability, tickets and willingness to travel or stay away on remote jobs. The main interview is usually held at the office or on a site with a survey team leader or party leader, and often includes a practical walk-through of equipment or a short field familiarisation. Some employers add a second conversation with the operations manager, and a pre-employment medical or fitness check is common for roles with heavy field work.

1. Walk me through how you would set up a total station on a new site and get it ready for the day's work.

Why they ask

This is the core technical task of the role, and interviewers want to hear a safe, ordered routine rather than a memorised definition.

How to structure your answer

Give a step-by-step walk-through in the order you would actually do it. Cover the site check first, then positioning, setup and levelling, then backsight and check shot, then recording. Finish by naming the checks you would make before trusting the instrument.

Example answer

"First I would walk the area and check for hazards and for anything that could cause vibration, like plant working nearby or soft ground under where I plan to stand. I would pick a position with a clear line of sight to the control points and set the tripod legs firmly, roughly level, with the head about chest height. Then I would mount the instrument, secure it, and level it properly with the foot screws, checking the plate bubble and the optical plummet over the mark. Once it is level I would turn to a known control point for the backsight, take the reading and compare it with the recorded value. If it matches within tolerance I would set the horizontal angle and take a check shot on a second known point before starting the day's work. Everything goes into the field book or the data collector as I go, with the point codes and a note of the conditions."

2. Tell me about a time you noticed a measurement or a record did not look right. What did you do?

Why they ask

Accuracy is the whole point of the role, and they want evidence that you speak up rather than push on and hope the office catches it.

How to structure your answer

Use STAR: the situation and site, the task you were doing, the action you took when the discrepancy appeared, and the result. Keep the result about time saved, rework avoided or the problem corrected, not about money.

Example answer

"I was assisting on a set out job for a residential subdivision, holding the staff and pegging lot corners along a new boundary. About halfway through the run the level readings started to drift slightly from what I expected compared to the earlier pegs. I stopped and told the surveyor rather than continuing down the line. We went back and re-checked the setup and found the tripod had shifted a little on soft ground after a piece of plant passed close by. He re-levelled and we repeated the run from the last good control point. It cost us about twenty minutes at the time, but it meant none of the pegs had to be pulled and re-driven the next day, and the as-constructed set was clean."

3. You are on a remote site and the GNSS receiver loses its fix halfway through a run. What do you do?

Why they ask

Equipment and signal problems are routine in the field, and they want to see calm judgement rather than a call to the office for every issue.

How to structure your answer

Talk through your judgement under pressure: stop and assess, work through the likely causes in order, decide whether you can recover the fix with a known method, and know when to stop and escalate.

Name the point at which you would call the surveyor.

Example answer

"I would stop recording straight away so I am not logging bad points into the job. Then I would work through the obvious causes. First the sky view, so I would look for whether I have moved into tree cover or beside a building or a stockpile that is blocking satellites. Then the receiver itself, checking the battery level, the antenna connection and whether the pole is still plumb. If it is a sky view issue I would shift to a more open position and re-initialise, and if the fix comes back I would re-occupy the last good point and check it against the recorded coordinates before carrying on. If it keeps dropping out and I cannot get a reliable fix, I would stop, record what I have done and how far I got, and call the surveyor to work out whether we switch to the total station or re-schedule that part of the job. I would rather come back with a clean partial set than a full set I cannot trust."

4. What is the difference between how you use an automatic level and how you use a total station on a normal day?

Why they ask

Interviewers use this to check you understand the equipment in context, not just that you can name the models.

How to structure your answer

Answer in three parts: what each instrument is actually for, how the setup and use differ in the field, and a short example of when you would reach for one over the other.

Example answer

"The automatic level is for heights. I use it mostly for levelling runs, checking reduce levels, setting out levels for drainage or kerbs and confirming that a peg is at the right height. It only measures elevation difference, so the setup is simpler and faster, and I am usually working with a staff and an assistant. The total station gives me angles and distances together, so it is for set out, boundary work, control

and picking up detail. Setup takes longer because I need a proper backsight and orientation, and I am usually recording into the data collector rather than a field book. On a typical day I might use the total station to set out the corners of a lot, then bring out the level to transfer the design height to the pegs."

5. How do you manage your own safety when you are working near live traffic or moving plant?

Why they ask

Survey assistants are often the most exposed person on site, and employers need to know you will not cut corners to save time.

How to structure your answer

Use a hazard and control structure. Name the hazard, the control you would put in place, how you communicate it, and when you would stop work. Keep it about your own decisions, not a recitation of the safety manual.

Example answer

"Before I start I would make sure I understand the traffic management plan and where I am allowed to be, and I would check my high visibility gear and that I am not relying on a single point of visibility. If I am working near live traffic I would position myself so I can see and be seen, keep the instrument off the road where possible, and never turn my back on a lane of moving vehicles. Around plant I would make eye contact with the operator before stepping anywhere near a swing zone or a reversing path, and I would stay out of the blind spot behind the machine. If the traffic plan changes or plant starts working somewhere I did not expect, I would stop, move clear and speak to the supervisor before continuing. There is no set out worth standing in the wrong spot for."

6. A site supervisor questions a peg you have just set out and says it is in the wrong place. How do you handle it?

Why they ask

This tests how you handle pressure and criticism in front of other trades, which happens regularly with set out work.

How to structure your answer

Show a calm, evidence-based response. Acknowledge the concern, avoid arguing on the spot, verify the work against the control and the plan, and loop in the surveyor rather than defending the peg alone.

Example answer

"I would not argue about it on the spot, because that just wastes everyone's time. I would thank them for raising it and ask what they are seeing, so I understand whether it is the position, the offset or the level that looks wrong. Then I would go back to the control points and re-check the setup and the reading, and compare what I set against the plan and the surveyor's notes. If my work checks out, I would show them the readings and explain where the peg sits relative to the design. If it does not check out, I would say so straight away and let the surveyor know before anything is built off it. Either way the surveyor makes the call on re-setting the peg, not me, and I would rather have that conversation than have a machine dig to the wrong line."