



MACEDON RANGES LOCATING SERVICE

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AUS CERTLOC CERTIFIED LOCATING ORGANISATION

BEFORE YOU DIG
 www.byda.com.au
 Zero Damage - Zero Harm

ACCURACY OF UNDERGROUND SERVICES INFORMATION
 UNDERGROUND SERVICES SHOWN ON THIS PLAN HAVE BEEN LOCATED TO THE QUALITY LEVEL INDICATED IN THE LINE TYPE DESCRIBED. THE LOCATION AND DEPTHS STATED SHOULD BE TREATED AS APPROXIMATE AND CAN ONLY BE VERIFIED VIA PRObing METHODS (MANUAL EXPOSURE/NON-DESTRUCTIVE DIGGING, GL-A) OF WHICH UNLESS OTHERWISE AGREED UPON IS THE RESPONSIBILITY OF THE CONTRACTOR.
 THERE IS NO GUARANTEE ALL SERVICES THAT EXIST IN THE AREA COVERED ON THIS PLAN ARE SHOWN.
 THIS PLAN DOES NOT REPLACE BEFORE YOU DIG PLANS.

LEGEND

—(CB)—	COMMUNICATIONS	—(PW)(B)—	POTABLE WATER
—(FAC)(B)—	FIRE ALARM CABLE	—(TW)(B)—	TANK WATER
—(FO)(B)—	FIBRE OPTIC	—(BW)(B)—	BORE WATER
—(NB)(B)—	NBN	—(DW)(B)—	DAM WATER
—(OPT)(B)—	OPTUS	—(PF)(B)—	POOL FILTRATION
—(T)(B)—	TESLTRA	—(RW)(B)—	RECYCLED WATER
—(VRC)(B)—	VICROADS COMMS	—(IW)(B)—	IRRIGATION WATER
—(VTR)(B)—	VICTRACK COMMS	—(FS)(B)—	FIRE SERVICE
—(AGD)(B)—	AGG DRINK	—(C)—	COMMUNICATIONS FEATURE
—(CSW)(B)—	CHARGED STORM WATER	●	STORM WATER FEATURE
—(PSW)(B)—	PUMPED STORM WATER	●	ELECTRICAL FEATURE
—(SW)(B)—	STORM WATER	●	HYDROCARBONS FEATURE
—(CP)(B)—	CATHODIC PROTECTION	●	UNKNOWN FEATURE
—(EM)(B)—	EARTH WIRE	●	SEWER FEATURE
—(EF)(B)—	ELECTRIC FENCE	●	POTABLE WATER FEATURE
—(ELV)(B)—	EXTRA LOW VOLTAGE	●	TANK WATER FEATURE
—(HV)(B)—	HIGH VOLTAGE ELECTRICITY	●	BORE WATER FEATURE
—(HVO)—	HIGH VOLTAGE OVERHEAD	●	DAM WATER FEATURE
—(ICW)(B)—	IRRIGATION CONTROL WIRE	●	POOL FILTRATION FEATURE
—(LV)(B)—	LOW VOLTAGE ELECTRICITY	●	RECYCLED WATER FEATURE
—(LVO)—	LOW VOLTAGE OVERHEAD	●	IRRIGATION WATER FEATURE
—(SG)(B)—	RAIL SIGNALS	●	FIRE SERVICE FEATURE
—(VRC)(B)—	VICROADS ELECTRICITY	●	SURVEY MARK / TBM
—(CA)(B)—	COMPRESSED AIR	●	PIPE DIAMETER IN MM
—(F)(B)—	FUEL	●	COVER LEVEL
—(G)(B)—	GAS	●	INVERT LEVEL
—(GT)(B)(X)—	GAS TRANSMISSION	●	DEPTH TO COVER
—(O)(B)—	OIL	●	DEPTH TO INVERT
—(SL)(B)—	STEAM LINE	●	BELOW SURFACE LEVEL
—(GPR)—	GROUND PENETRATING RADAR	●	AUSTRALIAN HEIGHT DATUM
—(UNK)—	UNKNOWN	●	BACK OF CURB
—(EFF)(B)—	EFFLUENT	●	END OF TRACE
—(PS)(B)—	PUMPED SEWER	●	NOT TRACED FURTHER
—(S)(B)—	SEWER	●	UNABLE TO LOCATE
—(SR)(B)(I)—	SEWER RISING MAIN	●	UNABLE TO OPEN
—(TRW)(B)—	TRADE WASTE	●	DEPTH BELOW SURFACE (m)
		●	POINT LEVEL (AHD)

Notes

- TRACEABILITY OF SERVICE MATERIAL TYPES:** The ability to locate underground services using electronic /radar detection is heavily dependent on the type of material a given underground service is made from. To summarise, metallic pipes and electrical cables can often be identified as these are conductive materials suitable for locating using electronic detection. Conducts including non-conductive cables (e.g. fibre optic), sewer pipes and storm water pipes do not themselves conduct electricity. To locate these types of materials a conductive tracing rod is fed into the underground service and the signal emitted from the rod or tracing head (sonde) is then located. A limitation of electronic detection is when an underground service is made from non conductive material such as polyvinyl chloride (pvc) or polyethylene (poly) etc. and where the service is also under pressure. It cannot be opened or accessed like a conduit or drainage pipe. Examples of these are pvc water pipes, poly irrigation pipes, poly gas pipes, sealed and flooded gravity fed storm water harvesting systems and pressurised rising sewer mains. Without the presence of an accessible trace wire, accurate plans or capability to isolate and access the service, ability to locate these services is limited.
- INFORMATION REGARDING UNDERGROUND SERVICE DEPTHS:** Depths of services provided on this drawing are obtained using electronic detection (L-B) unless otherwise stated. Accuracy of these readings is highly dependent on the environment. Depths should be taken as a guide only and service depths should be proven manually on site when excavating within the vicinity of the service.
- INFORMATION REGARDING DEPTHS OF STORM WATER AND SEWER PIPES:** Depths of storm water and sewer pipes are provided in various manors on this plan. Unless otherwise stated, depths of pipes measured from pit access points/man holes) are noted from top of pit to pipe invert level (m) in mm. In some cases australian height datum (ahd) levels are provided. This can be used to derive the L/Ahd of the pipe in some cases this may already be calculated and noted as L/Ahd.
- METHODS OF OBTAINING DEPTHS FOR STORM WATER & SEWER:**
 depth measured using electronic detection: the method of determining the L at specific points along any given pipe is obtained using electronic detection.
 An in-depth explanation of how this is achieved is as follows: a tracing rod is fed into the pipe from an access point, for example a junction pit or manhole. The tracing rod has a locating sonde attached to the head. The rod is fed into the pipe so the head is directly below the specific point with the transmitting sonde sitting on the bottom of the inside of the pipe. Electronic depth is obtained and noted at approximately 50mm below the surface level. Additionally if required and if not already provided, surface levels are then measured using a topcon roving surveyor's gns. Electronic depth is then subtracted from the measured gns surface level and to ascertain an approximate invert level and depth measured using inferred depth: this method assumes consistent and linear fall on a pipe. First, depth is obtained using depths measured at access points for the pipe, for example at 2 separate junction pits or manholes. Approximate depth can then be derived for a particular point along the pipe by considering calculated grade, invert levels and surface level and at the given point.
- We are not licensed surveyors, therefore certified levels can only be obtained by exposing the utility by excavation and having it surveyed by a licensed surveyor.
- Depending on the nature of the works, reason for survey and field conditions determines if and what method will be used and how much information is provided. Every attempt will be made to provide all relevant information however, should additional information be required subsequent site visits and/or techniques may be needed.

Notes regarding quality levels, taken from as/nzs 5488:2015
 quality level is defined as "a classification reflecting the precision and accuracy of utility location and attribute information"
 quality levels will be represented on the line type as a single letter (a,b) or in brackets preceding the utility descriptor. See below.

- (LV)(A)— Quality Level A – probing to prove a utility location.
- (LV)(B)— Quality Level B – use of locating equipment/electronic detection to locate a utility.
- (LV)(C)— Quality Level C – using features above the surface to make alignments. For example, fire hydrants, utility pits.
- (LV)(D)— Quality Level D – from plans, anecdotal evidence.

Where the whole line segment cannot be verified by line of sight, quality Level A shall not be attributed to the line segment between validated points. Quality levels may vary on separate sections of a single subsurface utility, depending on the source information available for each section.

NOTE
 This master plan is based on data collected from various surveys conducted across the college over an extended period. While an area may indicate the presence of certain services, it may not necessarily reflect all the services present in that area – there may be additional services not shown.
 The focus should be on the idea that "this service has been located and mapped," rather than thinking "this area has been scanned."

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UNDERGROUND SERVICES (PARTIAL)
 SITE ADDRESS
SALESIAN COLLEGE SUNBURY
 1 MACEDON ST,
 SUNBURY VIC 3429

PROJECTION: MGA2020 MGA ZONE 55
 HEIGHT DATUM: AHD
 FIELD WORK: JAKE SUTHERLAND
 DRAWN: JAKE SUTHERLAND
 DATE: VARIOUS - SEE COVERSHEET

SCALE 1:50 @ A1