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**SPECIFICATION**  
**FOR THE CONSTRUCTION**  
**OF**  
**PROPOSED ALTERATIONS TO EXISTING BUILDING**  
**AT**  
**77 LETHBRIDGE STREET, PENRITH**  
**FOR**  
**UDL DEVELOPMENTS PTY LTD**

29.06.2015

This specification applies to construction of proposed alterations to an existing building at 77 Lethbridge St, Penrith. The works shall be completed in accordance with this specification and the following drawings:

Architectural plans: No	01	Existing Site Plan;
	02	Existing Floor Plan
	03	Existing Section AA
	04	Existing South Elevation & North Elevation
	05	Existing East Elevation & West Elevation
	06	Proposed Site Plan
	07	Proposed Floor Plan
	08	Proposed Section AA
	09	Proposed South Elevation & North Elevation
	10	Proposed East Elevation & West Elevation

## 1. GENERAL PROVISIONS

- 1.1 REGULATIONS AND NOTICES: The Builder shall comply with all requirements of the Building Code of Australia and the requirements of the Principal Certifying Authority. The Builder shall arrange for all necessary inspections and obtain all necessary Permits.
- 1.2 INSURANCE: The Builder shall take out Builder's All-Risks insurance cover for the works. The Builder shall take out adequate Public Liability insurance and Workers' Compensation insurance as required under the Workers' Compensation Act and by the NSW Department of Fair Trading.
- 1.3 LABOUR AND MATERIALS: All labour, materials, fittings and plant required to construct and complete the alterations are to be provided by the Builder. Materials are to be new, unless the use of recycled materials is authorised by the Architect and/or Owner, and of the standard specified. Defective or unsuitable materials shall not be used. All work shall be performed in a good workmanlike manner and in accordance with current Australian Standards.
- 1.4 TEMPORARY TOILET: The Builder shall provide temporary toilet accommodation for the workers.
- 1.5 SETTING OUT: The Builder is to set out and maintain the works accordance with the drawings with figured dimensions to be taken in preference to scaled.
- 1.6 ELECTRICITY: The Builder is to make arrangements for any electric power to be used in the erection of the works and is to pay fees and costs incurred therein. Should additional poles, wiring, service risers or underground wiring, etc, be required by the Electricity Supply Authority, this additional cost plus Builder's margin shall be borne by the Owner.
- 1.7 PLANS AND SPECIFICATIONS: Any work indicated on the drawings but not in the specification or vice versa, and any item not shown in either drawings or specification but which is obviously necessary as part of proper construction and/or finish, is to be done as part of the contract. Variations to plans and/or specifications may not be made without the written consent of the Owner.
- 1.8 ON SITE PLANS: A legible copy of the plans and specifications, bearing the approval of the Certifying Authority, must be maintained on site by the Builder at all times.
- 1.9 AUSTRALIAN STANDARDS: Carry out all work in accordance with the requirements of the relevant current Australian Standards.
- 1.10 MANUFACTURERS' RECOMMENDATIONS: Fix all products in accordance with the recommendations of the respective Manufacturer.
- 1.11 ROOFS, WALLS & FLOORS GENERALLY: Roofs, external walls, external floors and window and door openings in walls shall be constructed to minimize air leakage in accordance with the requirements of BCA Clause 3.12.3. All such junctions are to be sealed by internal lining systems that are close fitting at ceiling, wall and floor junctions, or otherwise sealed by caulking, skirting, architraves or cornices.

## 2. EXCAVATOR

- 2.1 SITE: The Builder shall clear the site of the existing Garage / Granny Flat and remove all stumps, roots, etc, to a minimum distance of 3m outside the building line or to the boundaries of the allotment, whichever is the less. Any depressions within the area covered by the building are to be filled.
- 2.2 TRENCHES: All footings for walls, piers, etc, to be excavated to a minimum depth of 250mm or to a depth necessary to secure solid foundations and even bearings throughout, bottoms to be level and stepped as necessary. At completion of foundation walls and piers, etc, all excavations are to be filled, well rammed to ground level and surplus soil spread.
- 2.3 ROCK OR SHALE: Excavation in rock or shale and removal from site, or relocation, grading and compaction on site, as required by the Owner, shall be by the Builder.

## 3. DEMOLITION

- 3.1 SCOPE: Demolish existing existing Garage / Granny Flat. Demolish existing internal walls where shown on the plans.
- 3.2 STANDARD: All demolition works shall be undertaken in accordance with the requirements of AS 2601, and in accordance with all relevant requirements of WorkCover.
- 3.3 TEMPORARY SUPPORT: Provide temporary support for those sections of the existing building to be altered and which rely for support on those sections to be demolished.
- 3.4 DEMOLISHED MATERIALS: Except for those materials to be salvaged and re-used on site, remove demolished materials from the site.

## 4. CONCRETER

- 4.1 MATERIALS: Concrete is to consist of 4 parts 20mm gauge blue metal or other approved aggregate, 2 parts clean sharp sand, 1 part fresh Portland cement, a sufficiency of water, all well mixed mechanically and placed in position immediately after mixing. The slump of the concrete is not to exceed 100mm. Ready mixed concrete shall have a minimum compressive strength of 20MPa tested in accordance with code AS 3600 SAA *Concrete Structures Code*. After pouring, the concrete is to be kept damp, covered and allowed to stand at least four days for footings, and seven days for beams etc, before being built on all subject to Engineer's specifications.
- 4.2 REINFORCED CONCRETE SLABS AND FOOTINGS: Provide reinforced concrete footings to the new driveway and car parking area, all to AS 2870 or to Engineer's design as applicable. Provide vapour barrier of 0.2mm polyethylene film throughout to underside of the slab, all to AS 2870. Overlap vapour barrier not less than 200mm at any joins.

## 5. CARPENTER

- 5.1 GENERALLY: Comply in all respects with the Building Code of Australia (BCA). All carpentry timbers to be Cypress Pine, or H2 treated pine, unless otherwise approved. All structural timbers to be sized to meet the requirements of AS 1684 – *National light timber framing code*. Timber shall be of the grade specified reasonably straight grained and free from those defects which might affect its durability and/or strength. Scantlings shall be long lengths, accurately cut and fitted, well spiked and securely fixed. For the exercise of this specification (unless specifically stated elsewhere) hardwood is to be of a stress grade and not less than F8 and softwood not less than F7. Timber shall be graded to the appropriate Standards Australia grading specification. Allowable tolerances as to size are permitted as outlined by AS 1684 *National Timber Framing Code*. Timber is NOT to be weakened by any method such as cutting, planing, chipping, or etc.

- 5.2 FLOOR FRAMING: All new floors shown on plan as timber are to be framed at the level shown. Bearers shall be laid true and level. Packing shall not be permitted. Provide 100 x 75mm bearers, set on edge at maximum 1.8m centres. Provide 100 x 50mm joists set on edge at maximum 450mm centres and fix to bearers by double nailing at each crossing. Underside of joists to be checked out as necessary over bearers to enable tops of joists to be finished true and level. Provide joists of minimum stress grade F8. Unsupported spans exceeding 2.7m to have 50 x 50 herringbone strutting spaced at maximum of 1.8m centres. No span shall exceed 4.8m. Timber walls shall have double joists under.
- 5.3 WOOD PRESERVATIVE: All new hardwood plates, bearers and joists in the ground floor are to be treated with one coat of pest resisting and wood preserving oil or approved chemical treatment, before fixing, on all faces and ends, except tops of joists.
- 5.4 WALLS: all new walls shall be framed with 100 x 50mm studs and noggings of minimum stress grade F8.
- 5.5 WALL PLATES: (Top and Bottom) For 100mm studs—100 x 50mm. Plates may be checked approximately 10mm to provide uniform thickness where studs occur. Where plates are machine gauged to a uniform thickness, checking may be omitted. Studs are to be checked for diagonal braces to give a flat face to studs.
- 5.6 STUDS: (Not more than 3m long) Studs to walls, external and internal, shall be spaced at maximum 450mm centres. Where openings occur, provide studs as follows:  
At each side of openings up to 1.8 wide .....100 x 50mm or 75 x 50mm  
At other openings.....100 x 75mm or 75 x 75mm  
Three studs are provided at each wall angle and intersection, well blocked and securely fastened together. With corner windows, the angle studs are to be cut away to suit frame. 100 x 100mm or 75 x 75mm posts shall be framed in corner mullions of windows, or galvanised pipe may be used.
- 5.7 TIMBER ROOF TRUSSES: To be fabricated to Manufacturer's certified detail or Engineer's detail, and fixed strictly in accordance with their drawings or instructions. Keep the bottom chord clear of internal walls with a minimum clearance of 13mm at the point of maximum deflection after loading. Fix truss chord to top plate with self-adjusting fasteners. Fix trusses at maximum ... centres.
- 5.8 NOGGING (BRIDGING): To be fixed between studs at 1.35m maximum height, where wall cladding is joined, 38mm thick, where not joined 25mm thick and finished not more than 7mm behind the face of the frame. Skirting blocks of the same section as bottom plates and not less than 225mm long to be spiked to plates. Skirting blocks are not required if wall linings extend below the top of the bottom plate and skirtings are less than 75mm high.

## 6. FLASHING & INSULATION

- 6.1 FLASHING: Provide compatible flashings to all penetrations. Lead flashing shall not be used with Colorbond or galvanized steel.
- 6.2 CEILING INSULATION: Provide R3.5 insulation blanket to full extent of the roof.
- 6.3 NOTE RE INSULATION: Install all insulation in accordance with the requirements of BCA Part 3.12.1.1.

## 7. JOINER

- 7.1 GENERALLY: All joinery shall comply with AS 1288 and AS 1289. All timber sizes are nominal with tolerances allowable as provided by the appropriate Australian Standards for door frames, doors, windows and jamb linings. Frames to be properly fitted and joined together with linings, mouldings and trimmings properly mitred or scribed. All defects and marks shall be filled ready for painting with red lead and white lead mixed, 50/50, approved primer or priming oil including a wood preservative.

- 7.2 JAMB LININGS: Lining to be a minimum of 38mm thick solid rebated to all door openings. Where return plaster reveals occur, linings are to be 75 x 50mm rebated. Linings to openings not having doors, or to have swing doors, are to be 25mm thick timber securely fixed.
- 7.3 DOORS: Fit accurately to door frames, hang front and rear doors with three 88mm steel butts and other doors unless otherwise specified with two 88mm steel butts. Height of doors to be 2040mm.  
Internal doors to be 2040mm x 820mm x 35mm flush panel with selected lock and furniture.  
Fit sliding doors and tracks where shown on plans.  
All new units to be supplied with flyscreens and furniture.
- 7.4 DOORS TO TOILETS: All doors to toilets shall be fitted with latch sets that enable the doors to be readily opened from the outside of the compartment in an emergency.
- 7.5 ARCHITRAVES: Provide architraves of standard section to all door, window and other openings internally.
- 7.6 SKIRTINGS: Provide skirtings of standard section.
- 7.7 KITCHEN CUPBOARDS: Provide properly constructed floor and wall cupboards in position and to dimensions indicated on plan. Floor cupboards to have raised floors with toe space under front face. Cover top of floor cupboards with materials as selected. Provide doors as selected. Doors to be accurately fitted and hung and finished with selected catches and handles. All cupboards are to be securely fixed in position and neatly finished at wall and floor sections.
- 7.8 BUILT-IN CUPBOARDS: Frame up and fix cupboards in position and to dimensions shown on plan. Provide doors and door furniture as selected.

## 8. DRAINER

- 8.1 GENERAL: Drain pipes shall not be taken through the footings of the buildings. All seepage and soakage water shall be effectively dealt with and diverted clear of the building. Trenches for drains must not be within 600mm of footings of buildings where running parallel to same.
- 8.2 SEWER CONNECTION: Provide a drainage system from WC pans and from wastes of all fittings and connect to the sewer main, all in accordance with the requirements of Sydney Water. Yard gully at rear of building to be provided.
- 8.3 DRAINAGE: A drainage system to be provided from all fittings in accordance with the requirements of the Certifying Authority. Drains must be excavated to provide even falls throughout and with a minimum cover of 300mm. Lay 100mm socketed stoneware pipes or approved PVC pipe to take soilwater from wastes of bath, shower, wash basin and wet area floors. All drains shall be laid so that water is discharged or adequately absorbed and joint all pipes. All work is to comply with AS 3500, *Plumbing and drainage* code. Provide all drainage work from fittings to the drainage line outside the building in accordance with the rules and requirements of Sydney Water. Provide certificate from Sydney Water in respect of this work.

## 9. PLUMBER

- 9.1 SANITARY PLUMBER: Provide WC pans, wash basins and floor grates to proposed toilets, as shown on the drawings. Provide waste traps flush with finished floor and connect to drainage in accordance with the requirements of Sydney Water.
- 9.2 WATER SERVICE: Extend water line with a 15mm copper pipe to new bathroom, cistern, bath shower and water heater. All piping in walls is to be copper. Properly secure all piping and provide flanges at internal wall faces. Fix approved high pressure taps internally.
- 9.3 HOT WATER SERVICE: Provide from hot water unit pre-insulated copper tubing to points over basins and kitchen sink. Terminate with taps as required. Provide inlet stop cock to hot water unit and lag as required.
- 9.4 THERMOSTATIC MIXING VALVE Provide thermostatic mixing valve to limit hot water temperature at outlets to 50 degrees Celsius.

## 14. PAINTER

- 14.1 **GENERALLY:** All paints, stains and varnishes shall be properly mixed, be of approved brands and brought to the job in unopened containers. Material used for priming shall be as recommended by the Manufacturers of the paints to be used. All finishing colours are to be chosen by the Owner. Do all necessary stopping after priming has been applied. Rub down all surfaces to a reasonably smooth finish prior to the application of each successive coat of paint.
- 14.2 **INTERNAL WOODWORK:** All exposed woodwork shall be prepared and given one undercoat and finished with two coats of approved paint or wood stain to the Manufacturer's recommendations.
- 14.3 **PLASTER BOARD:** To be prepared and given two coats of approved washable acrylic paint.
- 14.4 **TIMBER FLOORING:** Sand and finish with 2 coats clear polyurethane applied to Manufacturer's recommendations.

## 15. COMPLETION

- 15.1 The building is to be completed in every trade. Sashes and doors to be eased, locks oiled and all plant, surplus building materials and rubbish removed from the site. Gutters and drains are to be cleared and the building generally to be left clean and fit for occupation. The Builder is to furnish the Owner with:
1. Notification of Completion.
  2. Certificate from Sewerage Authority re sanitary drainage.
  3. All keys for all doors
- It is the responsibility of the Builder to arrange all inspections necessary by the Principal Certifying Authority, Sydney Water, Integral Energy, Gas authority or Lending Authorities.

## 10. ELECTRICIAN

- 10.1 **ELECTRICITY SERVICE:** Provide all labour and materials necessary for the proper installation of electricity service in accordance with the SAA Wiring Rules, AS/NZS 3000-2000, the requirements of Integral Energy, and the Insurance Council of Australia.
- 10.2 **SUPPLY:** Arrange with Integral Energy for connection from mains to meter boards for general and off-peak hot water supply.
- 10.3 **LIGHT POINTS:** Provide light points in positions to be determined. Approved switch for each point is to be mounted in positions to be indicated.
- 10.4 **POWER POINTS:** Provide power points of flush type with 10amp. Switches in positions as shown on plan or to be determined.
- 10.5 **RESIDUAL CURRENT DEVICE:** Provide a residual current device.
- 10.6 **SMOKE ALARM:** Provide smoke alarms complying with AS 3786-1993 / Amendment 4 – 2004. Install on the ceiling and connect to 240V mains power; include a battery backup power supply.

## 11. CEILING AND WALL FIXER

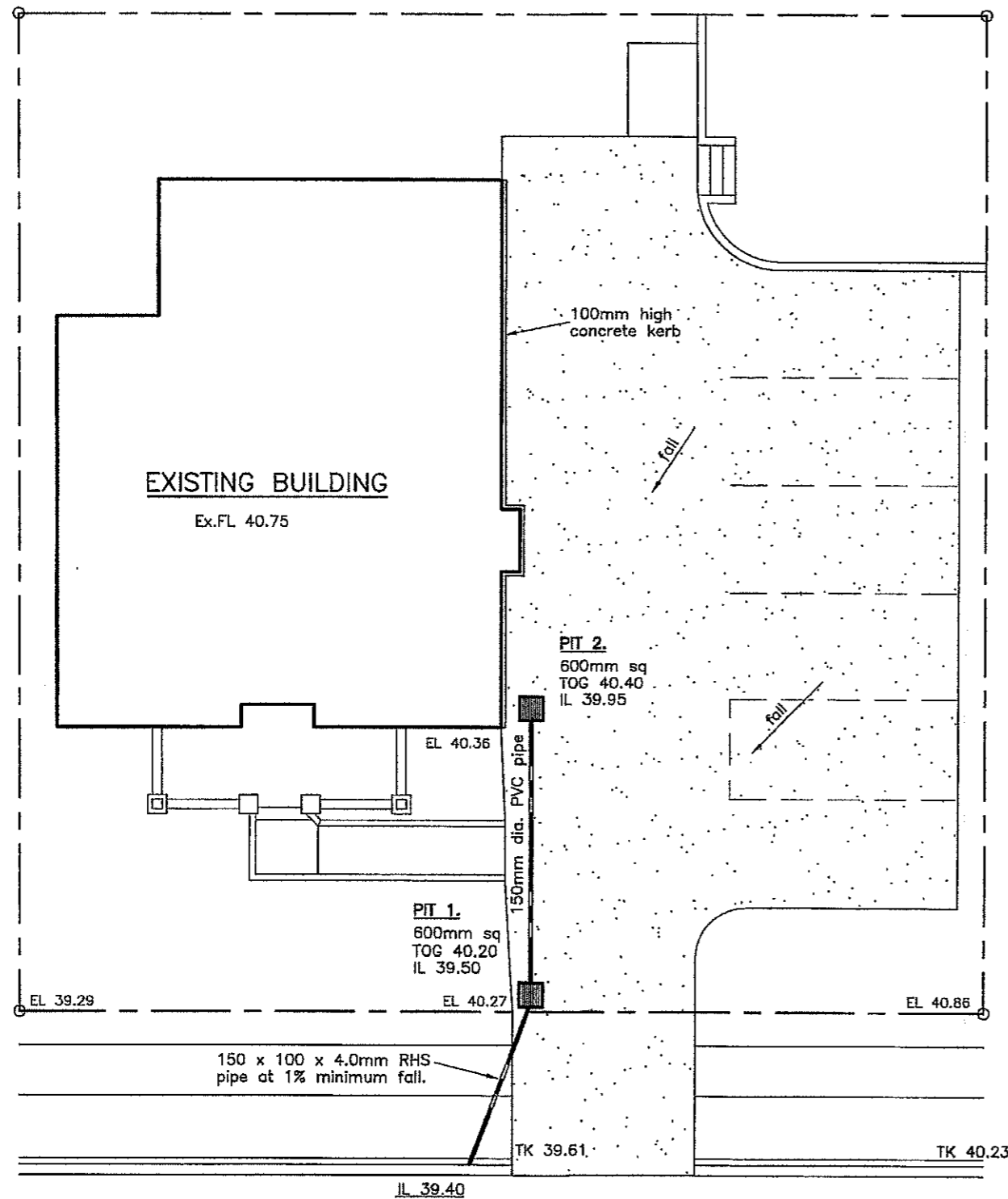
- 11.1 **GYPSUM PLASTER BOARD:** Provide plasterboard of nominal thickness of 10mm thick to studs at 450mm centres, or 13mm thick to studs at 600mm centres, fixed with galvanised clouts or approved adhesive. To ceilings provide plasterboard of nominal thickness of 13mm fixed to rafters at 600mm centres. Clout head to be sunk and stopped with special cement. Jointing and fixing to be strictly to Manufacturer's recommendations. Provide plasterboard to internal walls of bedrooms and hall, etc. Provide all necessary vents and set flush with wall surface. Provide with full length sheets horizontally or staggered end joints to ceiling heights in accordance with Manufacturer's instructions. Fix with galvanised clouts or approved adhesives at 225mm centres to studs. Punch heads of clouts below surface and finish as for 'ceiling'. Internal angles from floor to ceiling to be set.
- 11.2 **CORNICES:** Provide cornices to ceilings, neatly, mitred (scrimmed and set) at all angles in full wall lengths where possible.
- 11.3 **GENERAL:** All walls to wet areas approved water resistant sheets shall be used. All internal wet areas shall be completely waterproofed by a licensed applicator in accordance with AS 3740 *Waterproofing of wet areas within residential buildings*.

## 12. WATERPROOFER

- 12.1 **INTERNAL WET AREAS:** Comply in all respects with the Building Code of Australia (BCA) 2015. All internal wet areas shall be completely waterproofed by a licensed applicator using a proprietary accredited product designed for wet areas, all to comply with AS 3740 *Waterproofing of wet areas in residential buildings*. The membrane shall be waterproof, not water resistant. The area to be waterproofed shall be clear of all obstructions and thoroughly cleaned prior to application of product. The system shall include upstands and angles; a turn up shall be provided at door thresholds. Membranes should be dressed into floor waste outlets. For concrete floors the full shower base shall be sealed. Where sheet flooring is in use the whole area should be waterproofed. Metal or other approved shower trays may be used in lieu of waterproof membranes to shower areas.

## 13. TILELAYER

- 13.1 **FLOORS:** Provide bathroom and shower recess with tiles as selected.
- 13.2 **WALLS:** Provide wall tiles to bathroom, as required by the Owner. Fix fittings as selected.
- 13.3 **TILE FIXING:** Fix tiles to the requirements of AS3958.1 *Guide to the installation of ceramic tiles*. Lay tiles with adequate falls for drainage and to prevent water pooling on wet areas.



**STORMWATER DRAINAGE NOTES:**

1. This drawing to be read in conjunction with the Architectural drawings, specifications and the remainder of the engineers drawings. Refer any discrepancies to the Architect before proceeding with construction.
2. ALL LEVELS SHOWN ON DRAWING ARE TO BE CHECKED ON SITE BEFORE EXCAVATION OF INSTALLATION OF PIPEWORK TO ENSURE CORRECT COVER AND FALL.
3. All levels as detailed on Architectural drawing and are to be confirmed on site before the commencement of any work.
4. All pipes and discharge have been calculated on the following design parameters:  
  
20 Year Recurrence Interval  
6 minute storm duration.  
Rainfall Intensity 156 mm/hour
5. Number and location of downpipes to be confirmed by builder.
6. Pits 1 & 2 to be 600mm square with heavy duty metal grates.
7. Do not cover or conceal from view under ground or enclosed work until it has been inspected and approved by council.
8. Concrete in pits and elsewhere in the drainage system to have a characteristic compressive strength in accordance with AS3600 of 20MPa.
9. Trenches for drain pipes shall be of sufficient width to allow for backfilling firmly around pipes.
10. Pipes shall be laid true to grade and alignment on firm, well rammed and compacted foundation.
11. Any pipe which is not true alignment or grade or which shows any settlement after laying or which is damaged during laying or the operation of rolling the formation shall be taken up and replaced.
12. Pits shall be formed at the depths indicated on the drawings or as necessary to give the required grades and falls to the drainage system. All soft, yielding and unsuitable material shall be removed from under the pits and the bed thoroughly compacted and finished to a firm surface of uniform bearing value.

Existing Impervious Area from driveway and fibro building = 115m<sup>2</sup>  
 New Impervious Area from carpark = 195m<sup>2</sup>  
 Increase in Impervious Area = 80m<sup>2</sup>

**NOTE:**

Location of Sydney Water's sewer main, sewer connection lines, water pipes, stormwater drains, underground electricity lines and other services must be obtained prior to commencement of any work on site.  
DIAL BEFORE YOU DIG 1100

**LETHBRIDGE STREET  
 PLAN – STORMWATER DRAINAGE**

Issue	Date	App'd	DESCRIPTION
REVISIONS			



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SCALE	1:100
DATE	25-8-15
DRAWN	P.Martin.
DESIGNED	P.Andresen.
APPROVED	<i>P. Andresen C.P. Eng.</i>

CLIENT: UDL DEVELOPMENTS
PROPOSED ALTERATIONS AT 77 LETHBRIDGE STREET, PENRITH
STORMWATER DRAINAGE DETAILS

DRAWING NUMBER	102236-1
ISSUE	