Statement of Environmental Effects In Support of a Development Application		
Proposal		• DEMOLITION – Remove recent additions not to Owner's satisfaction (workmanship and layout) • DWELLING ADDS/ALTS – new, incorporating Master Bed, Bathroom, Family & Carport wing extending from the Existing School Masters Residence Hallway
Subject Land Address		Lot 351 DP 753624
		116 Burley Griffin Way, MURRUMBURRAH 2587
Applicant/Owner		Mrs Amanda Sachs for TICA Investments Pty Ltd
		0418 214 704
Appn Prepared By		DA Busters – Development Assistance Services Ph: 0466 722 869 Email: Craig@DAbusters.com
LGA		**Hilltops Council** – former Harden Shire Council area

Feature School House Plaque Stone

DA assisted by:

DA BUSTERS P/L
Craig Filmer Craig@DAbusters.com 0466 722 869
DEVELOPMENT ASSISTANCE SERVICE

DA
BUSTERS P/L
Craig Filmer – 1/91 Boorowa St YOUNG 2594
Ph: 0466 722 869 E: Craig@DAbusters.com

10 April 2024

Director Planning
HILLTOPS Regional Council
Locked Bag 5
YOUNG NSW 2594

Att: Manager Planning & Development
Senior Planner

Dear Jamie, Alexandra & Andrew,

Re: Dev Appn – Dwelling Adds & Alts – Heritage Item – Murrumburrah School House (former)
Lot 351 DP 753624, No 116 Burley Griffin Way Murrumburrah – A Sachs for TICA Investments

Please find attached the appropriate application forms for the above, along with all supporting documentation and plans. This document forms the Statement of Environmental Effects demonstrating compliance or giving appropriate justification for performance based assessment under Council's LEP, DCP and Policy Environment.

The Building was subject to an application in 2019 whereby the Heritage Item (considered beyond repair at that time) was proposed under DA 2019/0044, to be restored and appended to with fixtures and service rooms to achieve a desirable result. Unfortunately through poor workmanship and questionable design, the result was underwhelming. The Owner has made the hard decision to remove most of that work, recontemplate design and family/occupant needs to now deliver the present design proposal for consideration.

No variations are sought per se as Harden was without a DCP at the time of Merger and to date, and the work to bring back the original heritage item will be maintained and improved, this is more about the finishing of the building with contemporary additions to meet the particular family members needs and also respect the heritage values of the item. To the Draft DCP on exhibition presently, the side boundary setback to the co-owned lot that has no building entitlement, is small at 694mm. The owners do not seek a boundary adjustment and will look to party wall 60/60/60 this lead wall to the east of the carport due to its reduced setback. Council's lenient assessment of this issue is sought as it offers no real impact to any party now or in future.

Whilst Mrs Sachs. will be the applicants/primary contacts, should any technical enquiry arise, please forward these to myself, the contact information is in the letterhead above.

K Craig Filmer
Development & Environmental Health Specialist

A. DESCRIPTION OF DEVELOPMENT:

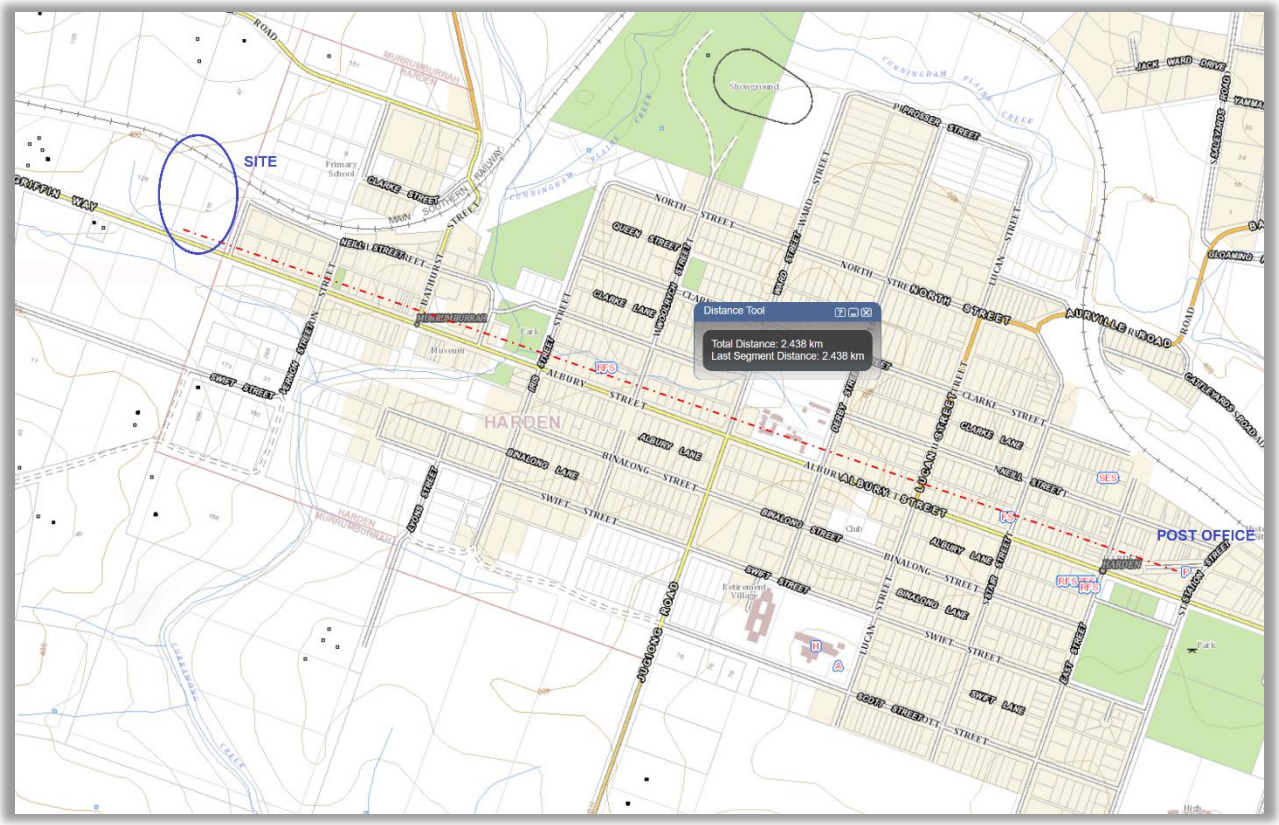
Property address	**Lots 351 DP 754632 (Parcel to be consolidated prior to OC)** **Cemetery Rd MURRUMBURRAH**	
Proposed structures or works	**Dwelling** – The dwelling as exists is a merger of the former School & the former School House which was erected as a United Building in 1879. Some 6 years later the school was moved to the current Primary School site in upper Murrumburrah. The structure will have a homestead appeal but be set near the higher part of the land, with the intent by design of enjoying the expansive views to the north and west across their land and beyond whilst maximising the area available for running some livestock/horses or the occasional livestock feed pasture crop to enjoy the rural use of the property. The enclosed Living Areas will be approximately 207 sq.m with 30 sq.m al fresco and 14 sq.m Porch. The house will be founded on a slab in a saddle in the locality shown on the plans, leading to minimal cut/fill.	
Nature of use	**Rural Dwelling**	
Particulars	**Shown on plans**	**Description** (written details if not clearly shown on plan)
Building materials (e.g. brick, hardiplank, colorbond, zincalume, etc)	Yes	**Dwelling –** The dwelling has walls of mid tones mixed brick trimmed with a contrasting colour. The roof is retained galvanised sheet and will be married on the new with the mid tone windspray colorbond.
Colours	Yes	**Colours -** The dwelling wall, trim & roof colours under consideration by the clients are demonstrated on plan. Existing building colors being retained whilst contemporary additions will have a dominant windspray theme.
		Existing work  **School side of development**

		 **View from rear at site of additions (not complete)**
Demolition	No	The rear additions being the bath and back passage are being removed and made good with the focus being on the new connection to the new work. All materials and building work removed will be transported to the local waste management facility.
Earthworks (location, extent and depth of all cut and fill proposed)	Yes	**Extent of earthworks –**the plans demonstrate an existing pre levelled area on a saddle in the location chosen for the site. This area is characterised as being relatively level or of an indicative area to minimise cut/fill. The bulk of earthworks have been done yet will be graded, drained and retained per the attached civil design focussing heavily on site drainage and finishes.
Tree removal (identify location, size and species of tree/s)	No	**No tree removal on site nor in position of dwelling** – the site has occasional perimeter trees yet will see more provided once dwelling curtilage established at approval. No trees at proposed site.
Wall and roof height	Yes	**Dwelling** – When measured from the height of the building pad, the eave height will be 3.1m from finished surround ground level, the dominant ridge line to the additions will be approximately 5.891m above finished ground level, and still be marginally lower than the existing built form roof ridge. There will be a soffit of slab at approx. 150mm relief to Yard Gully on the drainage.
Gross floor area (m^2)	Yes	The roof footprint will be approximately 280.24 sq.m for the completed project incorporating new and old sections. The new work comprises habitable of 85.38 sq.m and also the Carport of 44.99 sq.m. Coupled with the existing of 149.87 sq.m this gives us the total area quoted above.
Open space (m^2)	N/A	**Not applicable** – The holding is over 20,000 sq.m with Lot 351 being 8094 sq.m itself in size. After a roofed footprint of max 260 sq.m (dwelling) is deducted, a large amount of land exists for rural living, small scale farming, running horses/livestock and enjoying the rural vista.
Landscaping (type and location)	Yes	The applicant will begin plantings to the driveway areas, adjacent the proposed dwelling and along fencelines throughout the property, shortly.

Setbacks from each boundary	Yes	North: 44.1m to Rail corridor South: 106.2m to Burley Griffin Way frontage West: 29.07m addition to side boundary with Owner 19.6m existing building to side bdy East: 694mm to side bdy with co-owned allotment 9.2m to existing (note an FRL wall of 60/60/60 will be pplied to the eastern wall in a CSR Redbook approved system. See site plan as attached to main drawing set.

Topographic Map and key features (NSW SIX)

Neighbourhood Aerial (NSW SIX)



Locality Map – SIX MAPS (2.44km from Harden PO)

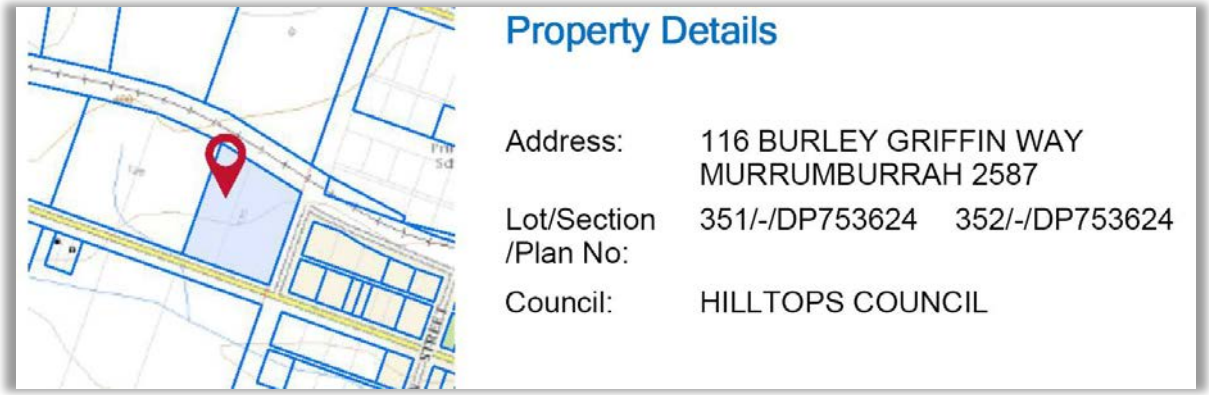
Recent google aerial image

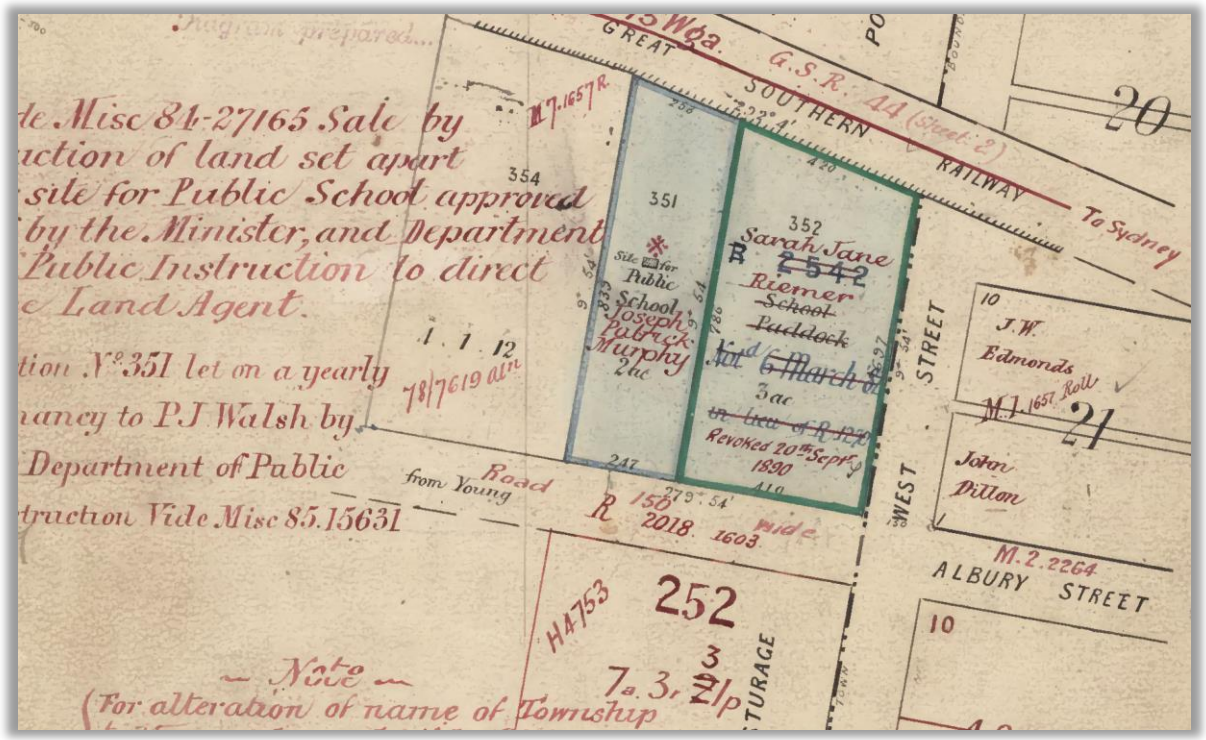
B. SITE & LOCALITY DESCRIPTION:

The following details have been shown on the site plan,

☑ site dimensions ☑ site area ☑ north point ☑ scale
☑ existing buildings ☑ proposed buildings ☑ easements ☑ BASIX

Issue	Details
Present use of the site	The current use of the land is residential with occasional agistment. The land (Lot 351) was created in 1878 and from that time has been in ownership ranging from School to housing some prominent businessmen and storage for same.

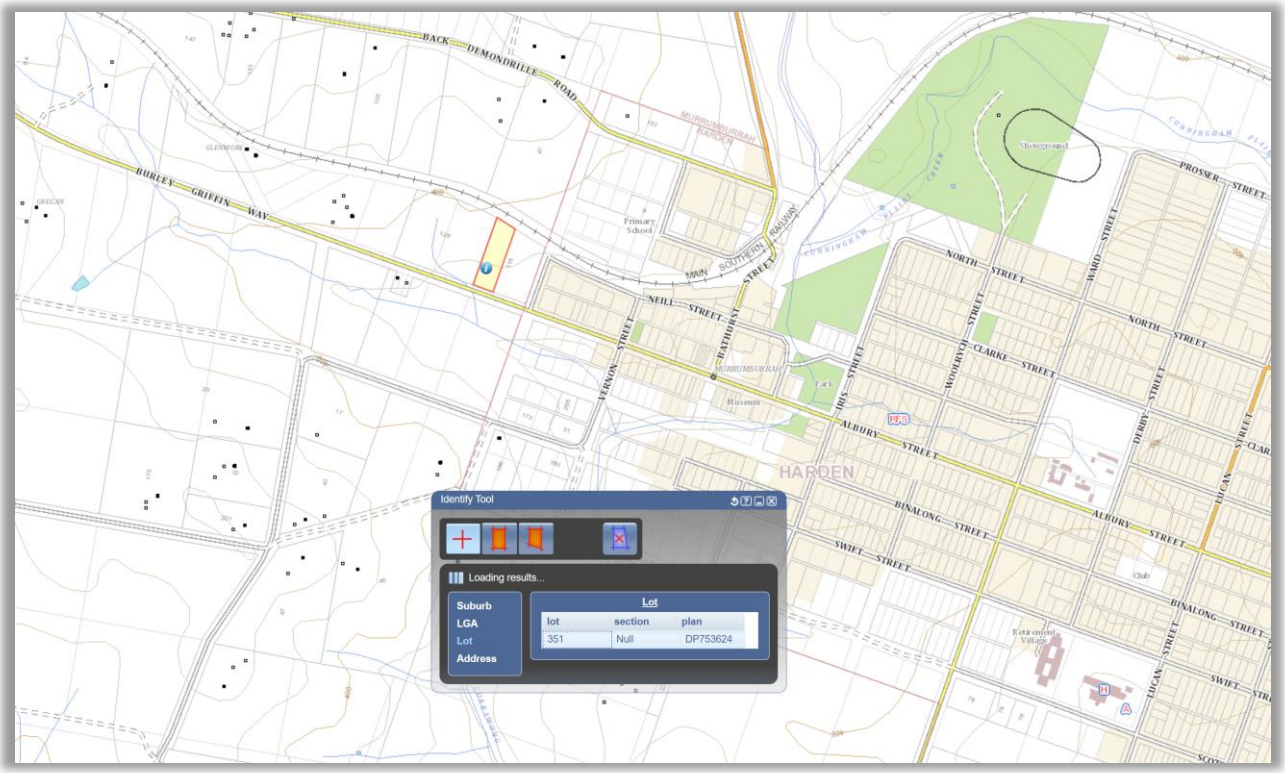




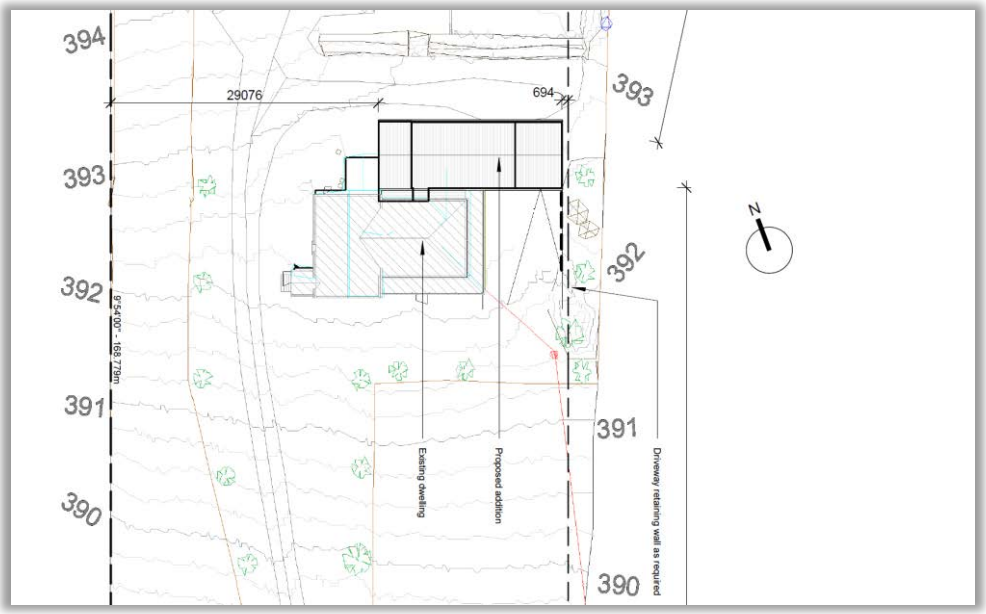
Owner's Holding – 351/352 = 5 acres total (2.02343ha)
Lot 351 = 2 acres (0.809ha)

Past use/s of the site	The dwelling as exists is a merger of the former School & the former School House which was erected as a United Building in 1879. The building was in the style of Romaesque Architecture displaying Victorian Italianate themes. Some 6 years later the school was moved to the current Primary School site in upper Murrumburrah. In 1886 the School Building was leased to T & G Barnes (Local General & Rural Merchant of the time) for a rental of 10 shillings per week, wheat sacks were stored in the school house and Mr Barnes lived in the residence. Mr Ayres (private citizen) lived there from September 1892 – November 1893. The Police then rented the premises until 1896. Mr Ellen (private citizen) then became the tenant. In 1908 Mr TP Murphy, who had been renting the premises since 1904, purchased the building at auction for 202.15.0 pounds, interestingly the underlying land was originally owned by the Murphy family before being acquired for the purpose of the School. The property remained owned by the Murphy family until early 1980's when it was purchased by William Gleeson who named the property "Gleehaven". The property was purchased by the Sachs family (current owners through their holding Company) in July 2018. In recent years it was free market rented before recent restoration intended for family member and new family.
Describe any existing dwellings or built structures on the land	The School & Residence building as is being restored and also a large shed built approximately 5 years ago behind, exist on the property.
Describe the key physical features of the site (e.g. shape, slope, significant trees or vegetation, dams, waterways, drainage lines, etc)	The site is located approximately 2.44km WNW of the Harden Post Office 3 and 590m from the centre of Murrumburrah. The land is the first property beside the Township on the western entrance to Murrumburrah, north side of the road. As described the site has a grade mostly from north to northsouth at the adjacent road at a modest grade. The land has power adjacent, lands owned by the current owner on 2 sides and is fronted at the rear by the Rail Line. Reticulated water is available however reticulated sewage is not available to this locality. The existing structure is to be appended to after removing recent unsuccessful additions, and representing a change in Architectural direction – still respectful of the heritage value of the main item, yet contemporary and behind in its appeal and visage.
Is the land classified as bushfire prone?	No – This has been reviewed at the RFS web page utilising the search tool.

Locality characteristics Describe the type and nature of adjacent land uses, ▪	Whilst the predominant land use in the area is rural - quite a number of smaller holdings also with residences, there is a surprisingly high number of dwelling houses in close proximity to the subject site, all pursuing semi-rural activities of varying scales (west of West Street) with urban Murrumburrah, east of West Street. A settlement pattern aerial image is again reproduced below with features labelled.



Lot in question shaded yellow – west of Township



Site plan extract

C. COMPLIANCE WITH PLANNING CONTROLS

GENERAL REQUIREMENTS OF THE ENVIRONMENTAL PLANNING AND ASSESSMENT ACT, 1979

1.7 Application of Part 7 of Biodiversity Conservation Act 2016 and Part 7A of Fisheries Management Act 1994

As per these sections of the above Acts, it is not considered that the development is likely to significantly affect threatened species, populations or ecological communities, because:

Biodiversity Conservation Act 2016

- the development will not significantly affect threatened species or ecological communities, or their habitats, according to the test in section 7.3, as there no threatened ecological communities on the site, the development will not adversely impact the life cycle or habitat of any of the threatened species that may occur in the region, and the development is not a key threatening process. [7.2(1)(a)],
- the development does not exceed the biodiversity offsets scheme thresholds (is not mapped as high biodiversity value on the Biodiversity Values Map and does not exceed the clearing threshold) [7.2(1)(b)],
- the site has not been declared as an area of outstanding biodiversity value [7.2(1)(c)].

Fisheries Management Act 1994

- as per the seven-part test under section 221ZV of the Act, there are no threatened species, populations or ecological communities, occurring on-site, or are known to be in the area, there is no declared critical habitat in the region and the development is not a key threatening process.

4.10 Designated development

This development is not a category of designated development, under Schedule 3 of the *Environmental Planning and Assessment Regulation 2021*.

4.14 Consultation and development consent—certain bush fire prone land

The land is not mapped as bushfire prone so consideration of the requirements of *Planning for Bush Fire Protection* is not required.

4.36 Development that is State significant development

The development is not State significant development, as it is not identified in *State Environmental Planning Policy (Planning Systems) 2021*.

4.46 Integrated development

The development is not integrated development, with the only relevant consideration being proximity to watercourses and State heritage items. The proposed dwelling is greater than 40 metres from any watercourse in the area and there are no heritage items on the site.

SECTION 4.15 CONSIDERATIONS UNDER THE ENVIRONMENTAL PLANNING & ASSESSMENT ACT 1979:

State Environmental Planning Policies (SEPPs)

A number of SEPPs apply to the land, however, only the following have any relevance to the proposed development:

- *State Environmental Planning Policy (Biodiversity and Conservation) 2021: Subject Land (pub. 2-12-2021)* ***OK – BMAT report attached and no triggers for BOSET***
- *State Environmental Planning Policy (Building Sustainability Index: BASIX) 2004: Land Application (pub. 25-6-2004)* ***Certif attached***
- *State Environmental Planning Policy (Exempt and Complying Development Codes) 2008: Land Application (pub. 12-12-2008)* ***CDC – pathway not available - Heritage***
- *State Environmental Planning Policy (Housing) 2021: Land Application (pub. 26-11-2021)* ***not applicable***
- *State Environmental Planning Policy (Industry and Employment) 2021: Land Application (pub. 2-12-2021)* ***not applicable***
- *State Environmental Planning Policy (Planning Systems) 2021: Land Application (pub. 2-12- 2021)* ***not applicable***
- *State Environmental Planning Policy (Primary Production) 2021: Land Application (pub. 2-12- 2021)* ***not applicable – existing dwelling plus 5.10 controls may apply***
- *State Environmental Planning Policy (Resilience and Hazards) 2021: Land Application (pub. 2 -12-2021)* ***not applicable as no contaminants or otherwise known, or expected***
- *State Environmental Planning Policy (Resources and Energy) 2021: Land Application (pub. 2- 12-2021)* ***no impact on infrastructure nor referral required***
- *State Environmental Planning Policy (Transport and Infrastructure) 2021: Land Application (pub. 2-12-2021)* ***no impact expected***
- *State Environmental Planning Policy No 65—Design Quality of Residential Apartment Development: Land Application (pub. 26-7-2002)* ***not applicable***

Essential Energy Mapping

LEP MATTERS FOR CONSIDERATION

Clause	Complies	Comments
1.2 Aims of plan	Yes	The development is consistent with the following aims of the LEP: (b) to provide for the lifestyles sought by current and future residents of Hilltops, including by providing for the following— (i) the rural lifestyle and liveability of Hilltops communities, (ii) connected, safe and accessible communities, (iii) diverse and affordable housing options, (iv) timely and efficient provision of infrastructure, (v) sustainable building design and energy efficiency, (c) to build and sustain healthy, diverse and empowered communities that actively participate in planning and managing their future, including by providing for the following— (i) social infrastructure that is appropriately planned and located in response to demand and demographic change, (ii) the protection and enhancement of cultural heritage values, (iii) land management practices that support sustainable outcomes, including water efficiency, (iv) the siting and arrangement of land uses for development in response to climate change, (v) the planning of development to manage emissions, (vi) planning decisions that recognise the basic needs and expectations of diverse community members, (e) to recognise and sustain the diverse natural environment and natural resources that support the liveability and economic productivity of Hilltops, including by providing for the following— (i) the avoidance of further development in areas with a high exposure to natural hazards, (ii) the minimisation of alterations to natural systems, including natural flow regimes and floodplain connectivity, through effective management of riparian environments, (iii) the retention and protection of remnant vegetation, (iv) the revegetation of endemic vegetation to sustain natural resource values, reduce the impact of invasive weeds and increase biodiversity, (v) buffers and setbacks to minimise the impact of conflicting land uses and environmental values, including potential impacts on noise, water, biosecurity and air quality, (vi) the management of water on a sustainable and total water cycle basis to provide sufficient quantity and quality of water for consumption, while protecting biodiversity and the health of ecosystems The remainder of the aims are not relevant to this proposal, or are not impacted by the proposal.
1.4 Definitions	N/A	The proposed development is defined as additions to a ***dwelling house*** which means, *a building containing only one dwelling*.
1.9A Suspension of covenants, etc	Yes	No restrictions as to user / covenants apply to the site.
2.2 Zoning	N/A	The site is zoned RU1 – Primary Production

Clause	Complies	Comments
2.3 Zone objectives and land use table	Yes	The development is permitted with consent, in accordance with the land use table, and it is consistent with the objectives of the zone as stated below; • To encourage sustainable primary industry production by maintaining and enhancing the natural resource base. ***Consistent - Ability to undertake smaller scale agriculture*** • To encourage diversity in primary industry enterprises and systems appropriate for the area. ***Not Inconsistent – ability remains yet smaller lot/s*** • To minimise the fragmentation and alienation of resource lands. ***Land is already fragmented, in separate titles and uniquely bound on 2-3 sides by roads and rail, with other residential uses adjacent*** • To minimise conflict between land uses within this zone and land uses within adjoining zones. ***Consistent – land surrounding is in RU1 zone and this proposal will not impact due to topography, soil, slope, rocks, roads, landform*** • To encourage competitive rural production and associated economic development by maintaining and enhancing— ***Not inconsistent*** (a) local and regional transport and communications connectivity, and (b) accessibility to national and global supply chains. • To maintain areas of high conservation value vegetation. ***Consistent – no impact*** • To encourage development that is in accordance with sound management and land capability practices, and that takes into account the natural resources of the locality. ***Consistent – location and siting allows maximum ag use of land as possible*** • To protect and enhance the water quality of receiving watercourses and groundwater systems and to reduce land degradation. ***Consistent – no impact*** • To encourage the development of non-agricultural land uses that are compatible with the character of the zone and sustain high quality rural amenity. ***Consistent – intent of this application due to neighbouring residential uses making real zoned use dubious***
2.7 Demolition	N/A	Minor demolition proposed. Removal of prior additions in bathroom and rear sun room area
2.8 Temporary use of land	N/A	The application is not for the temporary use of land.
4.1 Min Subdiv Lot Size	Complies	Per mapping below, minimum lot size in zone is 40ha yet existing dwelling since late 1880's so use continuing
4.1A Dual Occupancy Lot sizes	Complies	n/a
4.2A Dwellings in RU1, RU4 & C3	Lot sizes	Existing dwelling
4.6 Exceptions to development standards	N/A	Development permissible so no variation sought
5.10 Heritage Conservation	N/A	The allotment & its building is listed as Heritage and work done for restoration with oversight by Council's Heritage Advisor.
5.16 Subdivision of, or dwellings on, land in certain rural, residential or	N/A	Nil proposed – retention of 351 & 352 proposed Dwelling exists

Clause	Complies	Comments
environment protection zones		
6.1 Earthworks	OK	No gross earthworks – minor levelling in and around a saddle between rock outcrops is the proposal.
6.2 Essential Services	Complies	Development consent must not be granted to development unless the consent authority is satisfied the following services that are essential for the development are available or that adequate arrangements have been made to make them available when required— (a) the supply of water, ***Water per BASIX and retic available.*** (b) the supply of electricity, ***available on site*** (c) the disposal and management of sewage, ***OSM new exists*** (d) stormwater drainage or on-site conservation, ***disposal on site and away from effluent area as overflow after BASIX tank*** (e) suitable road access ***exists – Burley Griffin Way access***
6.3 Terrestrial Biodiversity	N/A	Not mapped as affected this lot
6.4 Water - Riparian	N/A	Not mapped as affected this lot
6.5 Water – Groundwater Vulnerability	N/A	Not mapped as affected this lot
6.6 Salinity	N/A	Not mapped as affected
6.7 Highly Erodible Soils	N/A	Not mapped as affected
6.8 Drinking Water Catchments	N/A	N/A
6.9 Development along Lachlan & Boorowa Rivers & Lake Wyangla	N/A	N/A
6.10 Development on Carinya Estate	N/A	N/A
6.11 DCP for Urban Release Areas	N/A	N/A

DEVELOPMENT CONTROL PLAN / LOCAL APPROVALS POLICY

Presently no DCP applies to the former Harden Shire Council.

DRAFT 2025 DEVELOPMENT CONTROL PLAN

2025 HILLTOPS DRAFT DCP		
SECTION 2.1 - RURAL DWELLING		
SECTION/OBJECTIVE	**PERFORMANCE REQUIREMENT**	**COMMENT THIS APPLICATION**
BROADER OBJECTIVES - RURAL DWELLINGS		
a) Located and designed in a manner appropriate to the rural character and amenity;		
b) Respond and minimize conflict on agricultural activities and productive potential of the surrounding rural lands;		
c) Responsive to the existing development pattern.		
OPERATING PROVISIONS		
PR1: Dwelling's are provided with safe connection to the public road network and are identifiable.	**AR1.1** Access to the dwelling from the public road network complies with the provisions of this DCP relating to access to rural properties and Transport for NSW requirements.	Existing access and safe connection
	AR1.2 Signage for the residential address for a dwelling is to be provided and be clearly identifiable from the public road.	Existing
PR2: A) Visual and amenity impacts on neighbours and the rural landscape are minimised; and B) Development does not adversely affect the environment or agricultural pursuits on the subject or neighbouring lands;	**AR2.1** The dwelling is not located within the following distances to any road boundary: RU1 Primary Production - 30m C3 Environmental Management. - 30m RU4 Primary Production Small Lots - 30m	Dwelling existing and extensions proposed exceed 30m from road
	AR2.2 The dwelling is not within the following distances to any side or rear boundary: RU1 Primary Production - 20m C3 Environmental Management. - 20m RU4 Primary Production Small Lots - 20m	Dwelling existing and extensions proposed exceed 20m from west side and rear. Existing setback inside 20m to dwelling as is. Extensions proposed to 694mm to 1m (dependent upon final survey) from side boundary in co-ownership. Exception sought on several grounds – • Co-ownership of adjoining properties; • Additions to heritage building not to dominate visage • Logical additions from a heritage viewpoint are as per design. • No impact to larger neighbouring allotment (even if sold) as that lot would not have

		its own building entitlement presently.
	AR2.3A The dwelling is not located within 50m of a ridge line; nor is it visible above a ridgeline.	Existing and lower than any ridge line in area > 1km away
	AR2.3B The dwelling is not located within 50m of a waterway/ 40m from the bank of any perennial watercourse.	Not within range of perennial water course
	AR2.4 The dwelling is not located within the distances of the land uses outlined in Table 2.1.	No adjacent farming of any extensive nature
	Setbacks per adjacent landuse: Insert applic -	See above
	AR2.5 Reflective materials are selectively used so that a glare nuisance is not caused to surrounding neighbours or public roads.	None proposed – sympathetic heritage colourings proposed (windspray and the like)
	AR2.6 Dwellings are to be designed so that the elevation facing the street has a residential appearance or nature.	Existing building of dominance and exhibits these attributes
PR3: Adequate area exists for on-site waste disposal;	**AR3.1** The drainage field of the On-Site Sewerage Management System is appropriately designed in accordance with Hilltops On-site Sewerage Management Policy and considers the cumulative impact of an additional system in the locality.	Existing recent AWTS OSM approved and installed
PR4: Dwellings are supplied with potable water and water for fire fighting reserves.	**AR4.1** The on-site water capture and storage for domestic purposes complies with the NSW BASIX scheme and any Certificate issued.	Proposed – see BASIX
	AR4.2 The total water storage on site is to be compliant with the following: • guidelines in Council's Development Assessment Guide • include a firefighting reserve of 20,000 L, over and above any BASIX minimum; and • fitted with a 65mm Stortz fitting. The above may mean a total volume in excess of Council's Development Assessment Guide in some circumstances.	Retic water to site so BASIX supplementary

PR5: Land for erection of a dwelling is safe and suitable for the purpose.	**AR5** On lands identified as former orchard lands: a) Soil testing for pesticide residue is required; and b) Such testing is to demonstrate the land is suitable for the intended use.	Not previously orchard
PR6: No structures are adversely affected by stormwater egress.	**AR6** All stormwater from the property is to be designed disposed of without causing nuisance. This may involve connection to Council's existing drainage system or other suitable arrangements such as easements.	Disposed below OSM area to on site measures
PR7: Residential development is to: ***a) Be designed to reflect vehicle and occupant safety principles; and*** ***b) Ensure safe vehicle and occupant interaction within residential properties.***	**AR7** PR7 is satisfied if a means, manual or electronic, is put in place to restrict a dwelling's occupant or visitor from bringing into potential harm and occupant of that dwelling, whilst parking the motor vehicle. This may be done by any or a combination of the means contained in Section 2.4 Vehicle and Occupant Safety for Residential Development. This provision applies to all Class 1, 2 and 10 buildings. See Section 2.4 Vehicle and Occupant Safety for Residential Development for further details.	Door to Carport swings inward to dwelling.
Section 2.1C Design Cues and Suggestions for Rural Residential Development		
Residential development involves numerous alternatives. In this respect, full compliance with all controls outlined may not be possible. Where a control is not achieved, the specific alternative made should be described in the Statement of Environmental Effects. Council will consider alternative designs provided the performance outcomes are achieved. For Rural Residential Development consider: • Examine at passive solar and orientation. • Address separation distances from neighbours. • Respect the slope of the site. • Address separation distances from agriculture on subject property.		Incorporated along with heritage principles in design.

Streetview - isolated Country Farm house appeal.

D. ASSESSMENT OF THE LIKELY IMPACTS OF THE DEVELOPMENT

Construction – How will construction noise, rubbish removal and sedimentation and erosion controls be managed during construction?

Comments

As the site is well pasture grassed and the impacted area will be adjacent the existing dwelling, there is a greatly reduced risk of sedimentation and erosion. Notwithstanding this, sedimentation and erosion fencing can be employed during building phase.

No construction will occur outside of daylight hours nor on a Sunday or Public Holiday. Setbacks from other dwellings will also assist noise management. All construction rubbish will be contained within a wire fenced area and be removed regularly to the Murrumburrah Waste Management Station.

Context and setting – Will the development be …

- visually prominent in the area? ❑ No – the development is set well back from the street
- out of character with the area? ❑ No – as described earlier, rural setting yet almost immediately adjacent town
- inconsistent with the streetscape? ❑ No – not directly visible from adjacent public roads due to generous setback of existing
- ▪ inconsistent with adjacent land uses? ❑ No – see above comment

Privacy - Will the development result in any …

- privacy issues between adjoining properties, as a result of the placement of windows, decks,

  ❑ No as a result of the building's placement, vegetation to curtilage of land (existing neighbours and the proposed development) – closer proximity to Lot 352 addressed above yet it has no building entitlement so no or little impact.

- acoustic issues between adjoining properties as a result of the placement of outdoor areas,

  ❑ No for the same reasons in previous answer

Overshadowing

- Will the development result in the overshadowing of adjoining properties, resulting in an adverse impact?

  ❑ No there will be no adverse impact on solar access for neighbours.

Views

- Will the development result in the loss of views enjoyed from neighbouring properties or nearby properties?

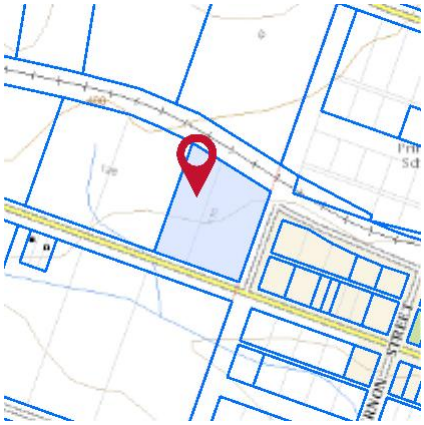
  ❑ No views will not be lost as a result of this development

APPENDIX # 1

NSW eSpatial Portal Report

Property Report

116 BURLEY GRIFFIN WAY MURRUMBURRAH 2587



Property Details

Address:	116 BURLEY GRIFFIN WAY MURRUMBURRAH 2587
Lot/Section /Plan No:	351/-/DP753624 352/-/DP753624
Council:	HILLTOPS COUNCIL

Summary of planning controls

Planning controls held within the Planning Database are summarised below. The property may be affected by additional planning controls not outlined in this report. Please contact your council for more information.

Local Environmental Plans	Hilltops Local Environmental Plan 2022 (pub. 23-12-2022)
Land Zoning	RU1 - Primary Production: (pub. 23-12-2022)
Height Of Building	NA
Floor Space Ratio	NA
Minimum Lot Size	2.5 ha
Heritage	Murrumburrah Public School (former) Significance: Local
Land Reservation Acquisition	NA
Foreshore Building Line	NA

Detailed planning information

State Environmental Planning Policies which apply to this property

State Environmental Planning Policies can specify planning controls for certain areas and/or types of development. They can also identify the development assessment system that applies and the type of environmental assessment that is required.

- State Environmental Planning Policy (Biodiversity and Conservation) 2021: Allowable Clearing Area (pub. 21-10-2022)
- State Environmental Planning Policy (Biodiversity and Conservation) 2021: Land Application (pub. 2-12-2021)
- State Environmental Planning Policy (Exempt and Complying Development Codes) 2008: Land Application (pub. 12-12-2008)
- State Environmental Planning Policy (Housing) 2021: Land Application (pub. 26-11-2021)
- State Environmental Planning Policy (Industry and Employment) 2021: Land Application (pub. 2-12-2021)
- State Environmental Planning Policy (Planning Systems) 2021: Land Application (pub. 2-12-2021)
- State Environmental Planning Policy (Primary Production) 2021: Land Application (pub. 2-12-2021)
- State Environmental Planning Policy (Resilience and Hazards) 2021: Land Application (pub. 2 -12-2021)
- State Environmental Planning Policy (Resources and Energy) 2021: Land Application (pub. 2-12-2021)
- State Environmental Planning Policy (Sustainable Buildings) 2022: Land Application (pub. 29-8-2022)
- State Environmental Planning Policy (Transport and Infrastructure) 2021: Land Application (pub. 2-12-2021)

Other matters affecting the property

Information held in the Planning Database about other matters affecting the property appears below. The property may also be affected by additional planning controls not outlined in this report. Please speak to your council for more information

1.5 m Buffer around Classified Roads	Classified Road Adjacent
Land near Electrical Infrastructure	This property may be located near electrical infrastructure and could be subject to requirements listed under Transport and Infrastructure SEPP 2021 Clause 2.48. Please contact Essential Energy for more information.
Local Aboriginal Land Council	YOUNG
Regional Plan Boundary	South East and Tablelands

APPENDIX # 2

Crown Plan

&

Title

NEW SOUTH WALES LAND REGISTRY SERVICES - TITLE SEARCH

FOLIO: AUTO CONSOL 14460-230

SEARCH DATE	TIME	EDITION NO	DATE
17/3/2025	8:40 PM	1	19/7/2018

LAND

LAND DESCRIBED IN SCHEDULE OF PARCELS
LOCAL GOVERNMENT AREA HILLTOPS
PARISH OF MURRIMBOOLA COUNTY OF HARDEN
TITLE DIAGRAM CROWN PLAN 474.1978

FIRST SCHEDULE

TICA INVESTMENTS PTY LIMITED (T AN517367)

SECOND SCHEDULE (1 NOTIFICATION)

---

1 LAND EXCLUDES MINERALS AND IS SUBJECT TO RESERVATIONS AND CONDITIONS IN FAVOUR OF THE CROWN - SEE CROWN GRANT(S)

NOTATIONS

UNREGISTERED DEALINGS: NIL

SCHEDULE OF PARCELS

LOTS 351-352 IN DP753624.

*** END OF SEARCH ***

11629

2 OCT 1878 LANDS DEPARTMENT

PLAN

of Suburban Allotments No 351, 352 Town of ~~Murrumboola~~ Murrumburrah

Parish of Murrumboola

COUNTY OF HARDEN

~~Applied for under the clause of the Public Schools Act of 18 by~~

The Board at Murrumboola

Within the Suburban boundaries Town of Murrumburrah Notified 23rd Nov 1895

To be in lieu of land shewn on P 315 1978 and dedicated 30 Nov 1877

Approved 19th of December 1878 vide 78.11629 Misc.

*Dedicated 21st Oct 83 ~~Gazette 1879~~ Revoked 24th Oct 82

Vide Misc 82.2429 land set apart as site for Public School.

Vide Misc 84-27165 Sale by Auction of land set apart as site for Public School approved of by the Minister, and Department of Public Instruction to direct the Land Agent.

Portion No 351 let on a yearly Tenancy to P.J Walsh by the Department of Public Instruction Vide Misc 85.15631

~ Note ~

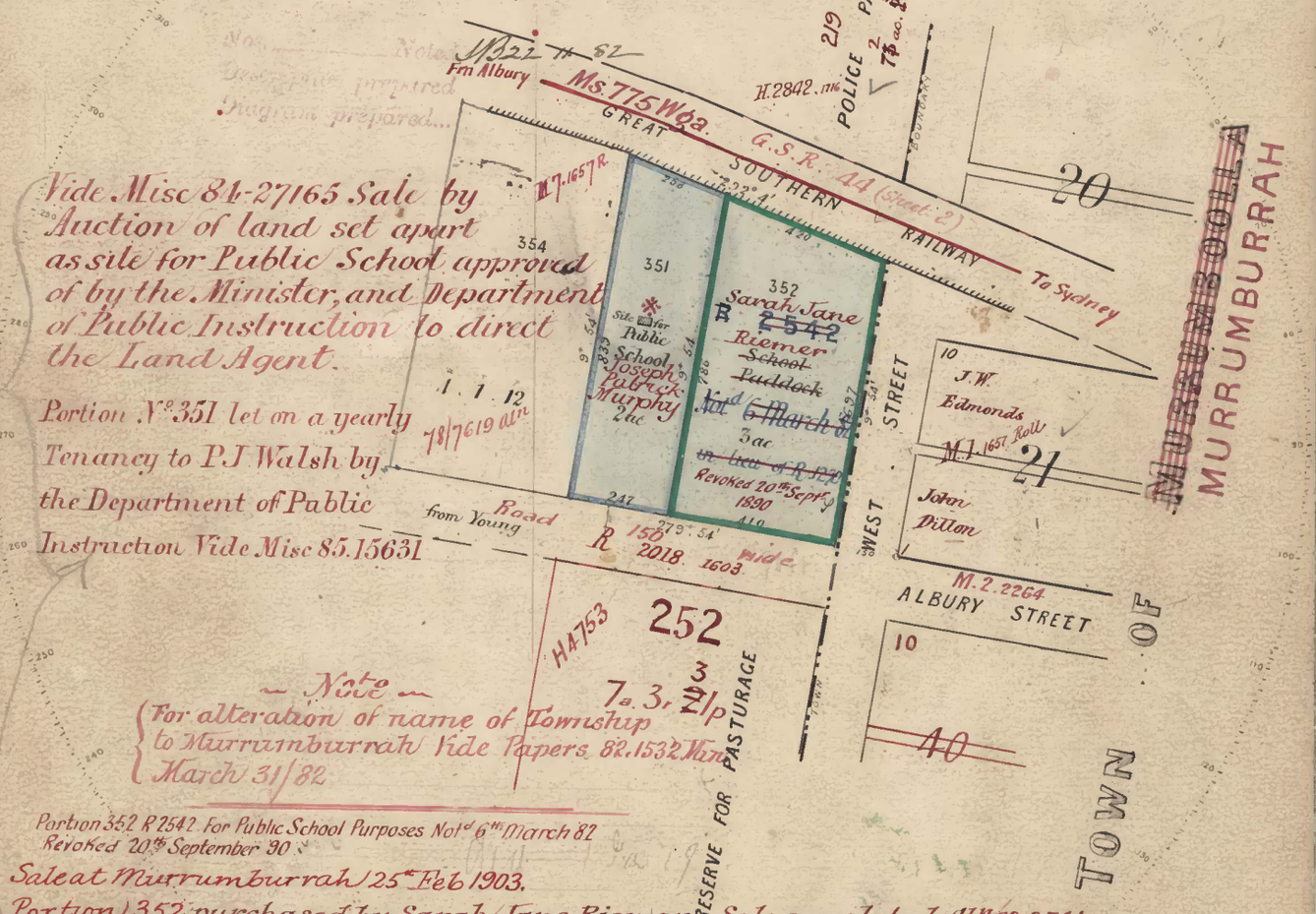
{For alteration of name of Township to Murrumburrah Vide Papers 82.1532 Murr March 31/82

Portion 352 R 2542 for Public School Purposes Notd 6th March 82 Revoked 20th September 90

Sale at Murrumburrah 25th Feb 1903.

Portion 352 purchased by Sarah Jane Riemer. Sale completed Alln 03.3541

Por 351 sold to Joseph Patrick Murphy Sale Completed Alln 09.1512



PLAN MICROFILMED

NO ADDITIONS OR AMENDMENTS TO BE MADE

Exmd for Descpn 6.1.4.83

REFERENCE TO CORNERS

Corner	Bearing	From	Dist	No on Tree
Numbered Stakes and Lockspits at all Corners				

SCALE 4 CHAINS TO AN INCH

Marked in accordance with regulations

Instrument used in Survey — Theodolite

Date of Survey 8th July 1878

Value of Improvements

Situated in the

Plan accepted

Vouch 78.38 1 Sept 1 con 20.11.78

Transmitted to the Surveyor General with my letter of the 23rd September 18/8 No 78/87

E Sawtell

Licensed Surveyor

474-1978

P.474.1978

InfoTrack
1800 738 524

ASIC
Current Organisation Extract

ASIC Data Extracted 08/11/2019 at 15:51

This extract contains information derived from the AustralianSecurities and Investment Commission's (ASIC) database undersection 1274A of the Corporations Act 2001.Please advise ASIC of any error or omission which you may identify.

No changes to the company information have been detected since last extracted.

- 055 785 898 TICA INVESTMENTS PTY. LIMITED -

ACN (Australian Company Number):	055 785 898	**Document No.**
ABN:	21 055 785 898	
Current Name:	TICA INVESTMENTS PTY. LIMITED	
Registered in:	New South Wales	
Registration Date:	09/04/1992	
Review Date:	09/04/2020	
Company Bounded By:		

- Current Organisation Details -

Name:	TICA INVESTMENTS PTY. LIMITED	001853494
Name Start Date:	09/04/1992	
Status:	Registered	
Type:	Australian Proprietary Company	
Class:	Limited By Shares	
Sub Class:	Proprietary Company	

- Company Addresses -

- Registered Office		05578589E
Address:	C/- SKY & CO SERVICES PTY LEVEL 2 14 EASTERN ROAD TURRAMURRA NSW 2074	(AR 1994)
Start Date:	17/04/1992	

- Principal Place of Business		05578589E
Address:	ALBURY STREET MURRUMBURRAH NSW 2587	(AR 1994)
Start Date:	30/06/1994	

- Company Officers -

Note:
A date or address shown as UNKNOWN has not been updated since ASIC took over the records in 1991. For details, order the appropriate historical state or territory documents, available in microfiche or paper format.
* Check documents listed under ASIC Documents Received for recent changes.

Director

Name:	AMANDA JANE SACHS	002492788
Address:	ALBURY STREET MURRUMBURRAH NSW 2587	
Birth Details:	30/12/1954 SYDNEY NSW	
Appointment Date:	09/04/1992	
Cease Date:		

Name:	PETER HUGO SACHS	002492788
Address:	ALBURY STREET MURRUMBURRAH NSW 2587	
Birth Details:	13/04/1956 SYDNEY NSW	
Appointment Date:	09/04/1992	
Cease Date:		

Secretary

Name:	AMANDA JANE SACHS	002492788
Address:	ALBURY STREET MURRUMBURRAH NSW 2587	
Birth Details:	30/12/1954 SYDNEY NSW	
Appointment Date:	09/04/1992	
Cease Date:		

Appointed Auditor

Name:	PAUL MANNING SKY	003486903
Address:	N M SKY & CO LEVEL 2 14 EASTERN ROAD TURRAMURRA NSW 2074	(AR 1992)
Birth Details:		
Appointment Date:	13/04/1992	
Cease Date:		

- Share Structure -

Current

Class:	ORDINARY SHARES	003486903
Number of Shares Issued:	2	(AR 1992)
Total Amount Paid / Taken to be Paid:	$2.00	
Total Amount Due and Payable:	$0.00	

Note:
For each class of shares issued by a company, ASIC records the details of the twenty members of the class (based on

shareholdings). The details of any other members holding the same number of shares as the twentieth ranked member will also be recorded by ASIC on the database. Where available, historical records show that a member has ceased to be ranked amongst the twenty members. This may, but does not necessarily mean, that they have ceased to be a member of the company.

- Share/Interest Holding -

Current

- Holding -

Class:	ORD	**Number Held:**	1	003486903
Beneficially Owned:	Yes	**Fully Paid:**	Yes	(AR 1992)

- Members -

Name:	AMANDA JANE SACHS
Address:	ALBURY STREET MURRUMBURRAH NSW 2587
Joint Holding:	No

- Holding -

Class:	ORD	**Number Held:**	1	003486903
Beneficially Owned:	Yes	**Fully Paid:**	Yes	(AR 1992)

- Members -

Name:	PETER HUGO SACHS
Address:	ALBURY STREET MURRUMBURRAH NSW 2587
Joint Holding:	No

- External Administration Documents -

There are no external administration documents held for this organisation.

- Charges -

There are no charges held for this organisation.

Notes:
On 30 January 2012, the Personal Property Securities Register (PPS Register) commenced.
At that time ASIC transferred all details of current charges to the PPS Registrar.
ASIC can only provide details of satisfied charges prior to that date.
Details of current charges, or charge satisfied since 30 January 2012 can be found on the PPS Register, www.ppsr.gov.au.
InfoTrack may cap documents for on-file searches to 250.

- Document List -

Notes:
* Documents already listed under Registered Charges are not repeated here.

* Data from Documents with no Date Processed are not included in this Extract.
* Documents with '0' pages have not yet been imaged and are not available via DOCIMAGE. Imaging takes approximately 2 weeks from date of lodgement.
* The document list for a current/historical extract will be limited unless you requested ALL documents for this extract.
* In certain circumstances documents may be capped at 250.

Form Type	Date Received	Date Processed	No. Pages	Effective Date	Document No.
316	17/01/2003	20/01/2003	3	15/01/2003	05578589M
316L	Annual Return Annual Return - Proprietary Company				
316	25/01/2002	26/02/2002	3	22/12/2001	05578589L
316L	Annual Return Annual Return - Proprietary Company				
316	22/12/2000	22/01/2001	3	06/12/2000	05578589K
316L	Annual Return Annual Return - Proprietary Company				
316	29/11/1999	14/12/1999	3	12/11/1999	05578589J
316L	Annual Return Annual Return - Proprietary Company				
316	09/09/1998	14/09/1998	3	27/08/1998	05578589I
316L	Annual Return Annual Return - Proprietary Company				
316	18/12/1997	23/12/1997	4	15/12/1997	05578589H
316L	Annual Return Annual Return - Proprietary Company				
316	13/01/1997	23/01/1997	4	23/12/1996	05578589G
316L	Annual Return Annual Return - Proprietary Company				
316	29/12/1995	10/01/1996	4	20/12/1995	05578589F
316L	Annual Return Annual Return - Proprietary Company				
316	29/12/1994	17/01/1995	4	14/12/1994	05578589E
316L	Annual Return Annual Return - Proprietary Company				
316	14/02/1994	03/03/1994	4	31/12/1993	05578589D
316L	Annual Return Annual Return				
316	13/01/1993	25/01/1993	4	15/12/1992	003486903
316L	Annual Return Annual Return				
207	27/04/1992	05/05/1992	2	09/04/1992	002492783
207B	Notification of Allotment of Shares Regarding Subsequent Allotment				
304	27/04/1992	11/05/1992	2	09/04/1992	002492788
304A	Notification of Change to Officeholders of Australian Company				
356	10/04/1992	22/04/1992	1	09/04/1992	001854091
356	Notice of Retirement of Director				
209	10/04/1992	13/04/1992	1	09/04/1992	001854085
209	Notice of Redemption of Redeemable Preference Shares				

203	10/04/1992	13/04/1992	1	09/04/1992	001854079
203A	Notification of Change of Address				
215	10/04/1992	21/04/1992	1	09/04/1992	001854073
215	Notification of Initial Appointment of Officeholders				
204	09/04/1992	09/04/1992	1	09/04/1992	001853484
204	Certificate of Registration Division 1 Pt 2.2				
201	09/04/1992	09/04/1992	3	09/04/1992	001853494
201C	Application For Registration as a Proprietary Company				
410	09/04/1992	09/04/1992	1	09/04/1992	001853482
410A	Application For Reservation of a Name of a New Australian Company				

- Company Contact Addresses -

- <u>Contact Address for ASIC use only</u>
Address: PO BOX 749 TURRAMURRA NSW 2074
Start Date: 28/06/2003

*** End of Document ***

APPENDIX # 3

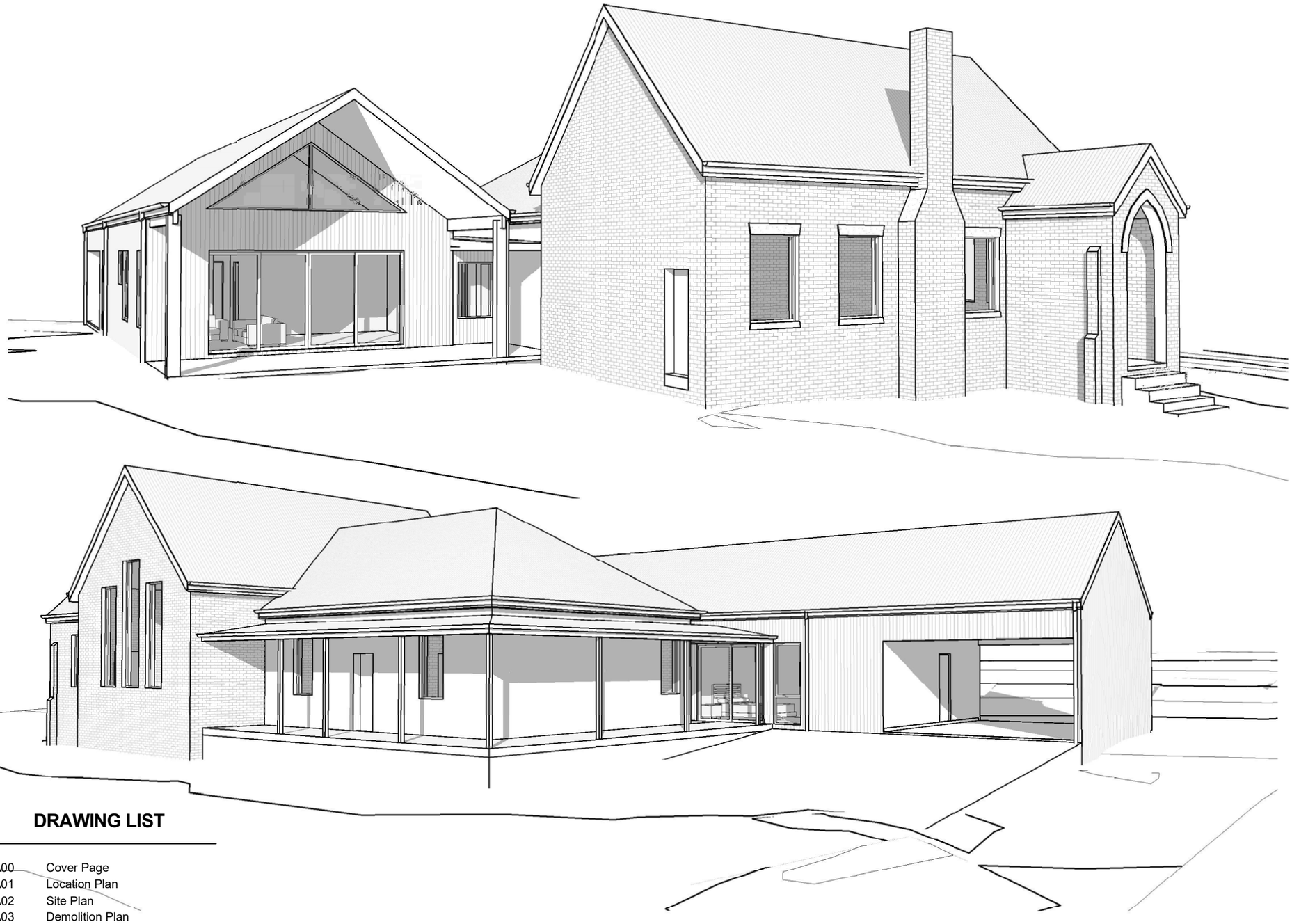
Development Plans

GENERAL CONDITIONS

*COMPLETE THE WORKS WITHIN THE CONTRACT PERIOD IN ACCORDANCE WITH DRAWINGS.
*COMPLY WITH REGULATIONS AND BY-LAWS OF AUTHORITIES WITH JURISDICTION OVER THE WORKS AND INCLUDING THOSE RELATING TO WATER SUPPLY, GAS, SEWERAGE, HEALTH AND ELECTRICITY GIVE ALL NOTICES AND PAY ALL FESS REQUIRED BY THE AUTHORITIES.
*THE CONDITIONS OF THE DEVELOPMENT APPROVAL FROM COUNCIL ARE ADHERED TO.
*ALL WORK TO COMPLY WITH THE BUILDING CODE OF AUSTRALIA AND RELEVANT AUSTRALIAN STANDARDS AND BUILDING REGULATIONS.
*WORK SHOWN OR DESCRIBED ON THE DRAWINGS OR VICE VERSA. THE REQUIREMENTS OF REGULATIONS TAKE PRECEDENCE OVER DRAWINGS. WRITTEN DIMENSIONS TAKE PRECEDENCE OVER SCALED. DETAIL DRAWINGS TAKE PRECEDENCE OVER GENERAL DRAWINGS.
*THE WINDOW SCHEDULE IS A REFERENCE DOCUMENT AND ALL WINDOWS ARE TO BE CHECKED ON SITE FOR SIZES, INSTALLATION REQUIREMENTS PRIOR TO MANUFACTURE BY THE WINDOW MANUFACTURER.
*GROUND LINES INDICATIVE AND SHOULD BE VERIFIED ON SITE.
*DO NOT SCALE PLANS, USE WRITTEN DIMENSIONS ONLY. IF IN DOUBT, ASK.
*THE OWNER/BUILDER SUBCONTRACTOR SHALL VERIFY ALL DIMENSIONS, LEVELS, SETBACKS AND SPECIFICATIONS PRIOR TO COMMENCING WORKS OR ORDERING MATERIALS AND SHALL BE RESPONSIBLE FOR ENSURING THAT ALL BUILDING WORKS CONFORM TO CURRENT NCC (NATIONAL CONSTRUCTION CODE), AS (AUSTRALIAN STANDARDS), BUILDING REGULATIONS AND TOWN PLANNING REQUIREMENTS, REPORT ANY DISCREPANCIES TO THIS OFFICE.
*ALL WORKS SHALL COMPLY WITH BUT NOT LIMITED TO THE CURRENT NATIONAL CONSTRUCTION CODE OF AUSTRALIA AND THE AUSTRALIAN STANDARDS LISTED IN NOTE 4.
AS 1288 - 2006 GLASS IN BUILDINGS - SELECTION AND INSTALLATION
AS 1562 - DESIGN AND INSTALLATION OF SHEET ROOF AND WALL CLADDING AS
1684.2 - 2010 NATIONAL TIMBER FRAMING CODE
AS 2049 - 2002 ROOF TILES
AS 2050 - 2002 INSTALLATION OF ROOF TILES
AS 2870 - 2011 RESIDENTIAL SLAB AND FOOTINGS - CONSTRUCTION AS/NZS 2904 : 1995 DAMP-PROOF COURSES AND FLASHINGS
AS 3600 : 2009 CONCRETE STRUCTURES AS 3660 - TERMITE MANAGEMENT
AS 3700 - 2011 MASONRY IN BUILDINGS
AS 3740 - 2010 WATERPROOFING OF WET AREAS IN RESIDENTIAL BUILDINGS AS 3786 : 2014 SMOKE ALARMS
AS 4055 - 2012 WIND LOADINGS FOR HOUSING AS 4100 - 2012 STEEL STRUCTURES
AS 4654 - 2012 WATERPROOFING FOR EXTERNAL ABOVE GROUND USE
THESE PLANS SHALL BE READ IN CONJUNCTION WITH ANY SOIL, STRUCTURAL AND CIVIL ENGINEERING COMPUTATIONS AND DRAWINGS. SOIL CLASSIFICATION - REFER TO STRUCTURAL ENGINEERS SOIL TEST.
ALL BUILDINGS SHALL BE PROTECTED AGAINST TERMITE ATTACK IN ACCORDANCE WITH AS 3660.1 AND NCC 3.1.3 STANDARDS A DURABLE NOTICE SHALL BE PLACED IN THE METER BOX INDICATING TYPE OF BARRIER AND REQUIRED PERIODICAL INSPECTIONS.

*NATURAL LIGHT AS PER BCA 3.8.4, NATURAL VENTILATION AS PER BCA 3.8.5
ABOVE GROUND WINDOW OPENING PROTECTION (FALL PROTECTION) AS PER BCA V2 3.9.2.5 & V1 D2.24 GLASS IN BUILDINGS / GLAZING AS PER AS 1288 AND NCC 3.6 STANDARDS SAFETY GLAZING TO BE USED IN THE FOLLOWINGS CASES -
1. ALL ROOMS - WITHIN 500mm VERTICAL OF THE FLOOR
2. BATHROOMS - WITHIN 1500mm VERTICAL OF THE BATH BASE iii) FULLY GLAZED DOORS
iv) SHOWER SCREENS v) WITHIN 300mm OF A DOOR AND <1200mm ABOVE FLOOR LEVEL
vi) WINDOW SIZES ARE NOMINAL ONLY, ACTUAL SIZES WILL VARY
WITH MANUFACTURER, AND ARE TO BE VERIFIED WITH SAME. FLASHING ALL ROUND. STORMWATER TO BE TAKEN TO ON SITE STORAGE OF PROVIDED, THEN THE LEGAL POINT OF DISCHARGE AS DETERMINED BY THE RELEVANT AUTHORITY.
TILED DECKS OVER LIVABLE AREAS: THE WATER-PROOFING SYSTEM IS TO ONLY BE INSTALLED AND CERTIFIED BY A LICENCED WATER-PROOFING CONTRACTOR TO AS 4654.1&2 STANDARDS.
*FOOTINGS ARE TO BE WHOLLY WITHIN TITLE BOUNDARIES AND ARE NOT TO ENCROACH EASEMENTS. IT IS RECOMMENDED THAT WHERE BUILDINGS ARE TO BE LOCATED IN CLOSE PROXIMITY OF BOUNDARIES, A CHECK SURVEY BE CONDUCTED BY A LICENSED SURVEYOR.
*ALL STEELWORK IN MASONRY TO BE HOT DIP GALVANISED.
*ALL WET AREAS TO COMPLY WITH BCA 3.8.1.2 AND AS 3740. SPLASH BACKS SHALL BE IMPERVIOUS FOR 150mm ABOVE SINKS, TROUGHS AND HAND BASINS WITHIN 75mm OF THE WALL.
PROVIDE WALL TIES AT 600mm SPACINGS BOTH VERTICAL AND HORIZONTAL AND WITHIN 300mm OF ARTICULATION JOINTS. BRICK TIES TO BE STAINLESS STEEL.
*SUB-FLOOR VENTILATION MINIMUM 7500mm/sq FOR EXTERNAL WALLS AND 1500mm/sq FOR INTERNAL WALLS BELOW BEARER.

*ENERGY EFFICIENCY RATING SHALL BE IN ACCORDANCE WITH THE REQUIREMENTS OF THE LOCAL AUTHORITY REGULATIONS. THERMAL INSULATION TO BE PROVIDED TO ACHIEVE MINIMUM REQUIREMENTS. AS SPECIFIED BY LICENSED ASSESSOR.
*STAIR REQUIREMENTS : MIN. TREAD 240mm, MIN. RISER 115mm, MAX. RISER 190mm, SPACE BETWEEN OPEN TREADS MAX. 125mm. AS PER BCA 3.9.1
*PROVIDE SLIP RESISTANCE TO TREADS AS PER NCC 3.9.1.4
*BALUSTRADES : MIN. 1000mm ABOVE LANDINGS WITH MAX. OPENING OF 125mm AND IN ACCORDANCE WITH BCA 3.9.2 STANDARDS
*FOR STAINLESS STEEL BALUSTRADE, REFER TO Table 3.9.2.1 (WIRE BALUSTRADE CONSTRUCTION - REQUIRED WIRE TENSION AMD MAXIMUM PERMISSIBLE DEFLECTION) OF THE NCC.
*THE BUILDER SHALL TAKE ALL STEPS NECESSARY TO ENSURE THE STABILITY OF EXISTING AND NEW STRUCTURES THROUGH-OUT CONSTRUCTION.
DENOTES LOCATION OF SMOKE DETECTORS (refer electrical layout plans), TO BE HARD WIRED WITH EMERGENCY BACK-UP AND COMPLY WITH NCC 3.7.2 AND AS 3786 STANDARDS.
*PROVIDE LIFT OFF HINGES, OPEN OUT DOOR OR MIN 1200mm CLEARANCE FROM DOOR TO PAN IN WATER CLOSETS.
*EXHAUST FANS FROM SANITARY COMPARTMENTS ARE TO BE DUCTED EXTERNALLY OR TO A VENTED ROOF SPACE IN COMPLIANCE WITH AS 1668.2
*THESE NOTES ARE NEITHER EXHAUSTIVE NOR A SUBSTITUTE FOR REGULATIONS, STATUTORY REQUIREMENTS, BUILDING PRACTICE OR CONTRACTUAL OBLIGATIONS.
*ALL CONSTRUCTION MATERIALS SUPPLIED MUST TAKE INTO ACCOUNT PROXIMITY TO COASTAL OR INDUSTRIAL ENVIRONMENTS, IN ACCORDANCE WITH MANUFACTURERS SPECIFICATIONS



DRAWING LIST

Proposed Additions

36 Burley Griffin Way, Murrumburrah

Cover Page
LOT: 351 D.P..: 753624

Page: DA00
Scale: 1 : 1
date: 25/03/25
REV DA02a

DESIGN BY RABBIT

mail: 358 Widgiewa Road, Carwoola nsw 2620 - ph: 0431 402 829 - email: clinton@designbyrabbit.com - abn: 56 070 577 568

Proposed Additions

36 Burley Griffin Way, Murrumburrah

Location Plan

LOT: 351 D.P..: 753624

Page:	Scale:	REV
DA01	1 : 1000	DA02a
	date: 25/03/25	

DESIGN BY RABBIT

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AREAS	
Name	Area
Existing Dwelling	149.87
Proposed Addition	85.38
Proposed Carport	37.68
Grand total	272.93

NOTE: EXT WALL AT 698mm FROM BOUNDARY - PER H3D3 OF THE NCC BCA VOL 2 (2022) & SEC 9.2.1 OF THE HOUSING PROVISIONS THEREUNDER, THE WALL SHALL BE CONSTRUCTED OF AN APPROVED CSR PARTY WALL SYSTEM DELIBVERING 60/60/60 FRL - SPECS TO CERTIFIER AT CC

Train Line

N

44307

106230

Driveway retaining wall as required

694

Proposed addition

Existing dwelling

Existing farmbuilding

262°41'00" - 50.830m

279°54'00" - 49.680m

29076

Existing driveway access to remain

9°54'00" - 168.779m

Burley Griffin Way

25

20

395 394 393 392 391 390 389 388 387 386 386

396 397 396 395 394 393 392 391 390 389 388 387 386 386 386

Proposed Additions

36 Burley Griffin Way, Murrumburrah

Site Plan

LOT: 351 D.P..: 753624

Page:	Scale:	1 : 500	REV
DA02	date:	25/03/25	DA02a

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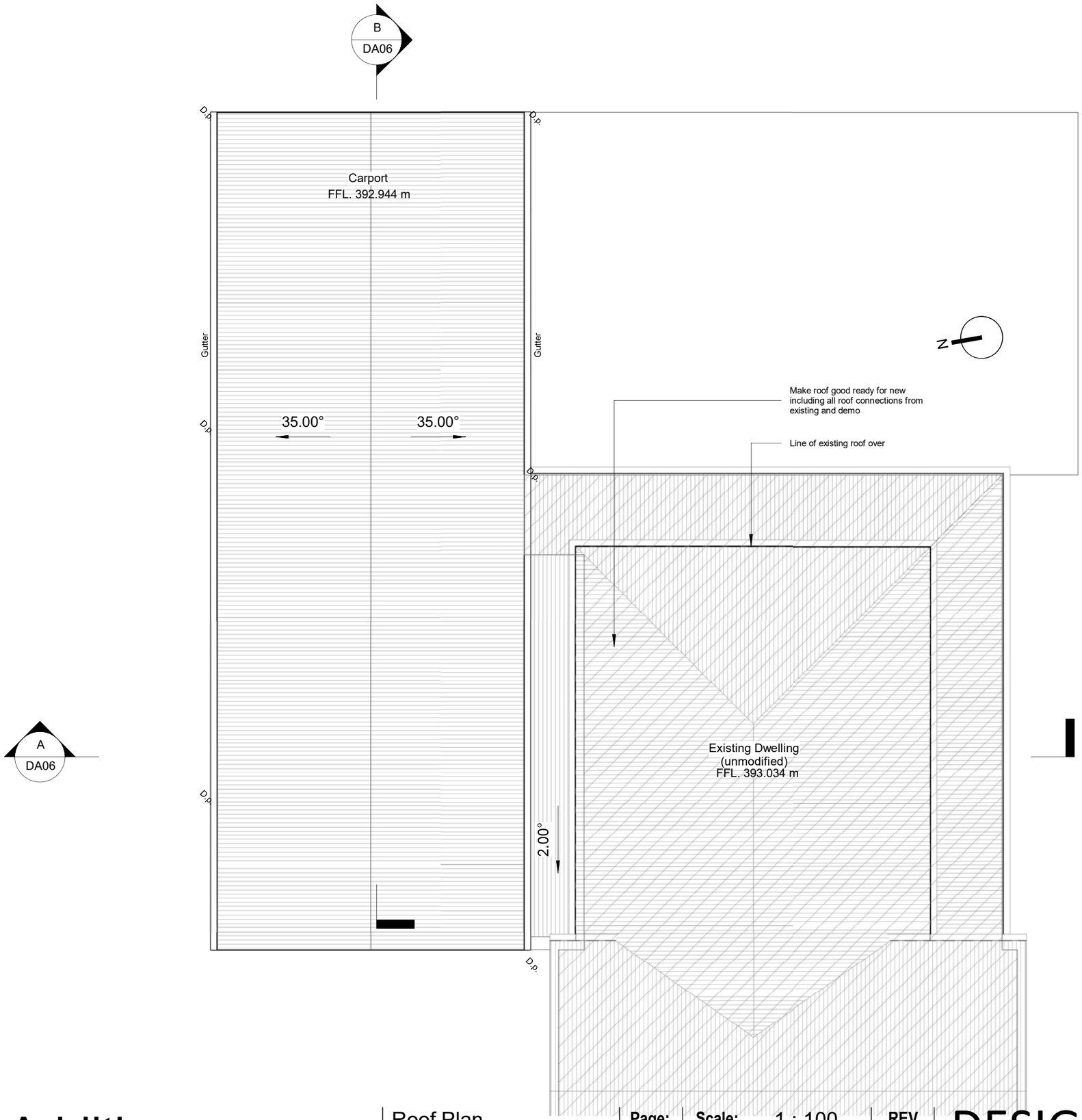
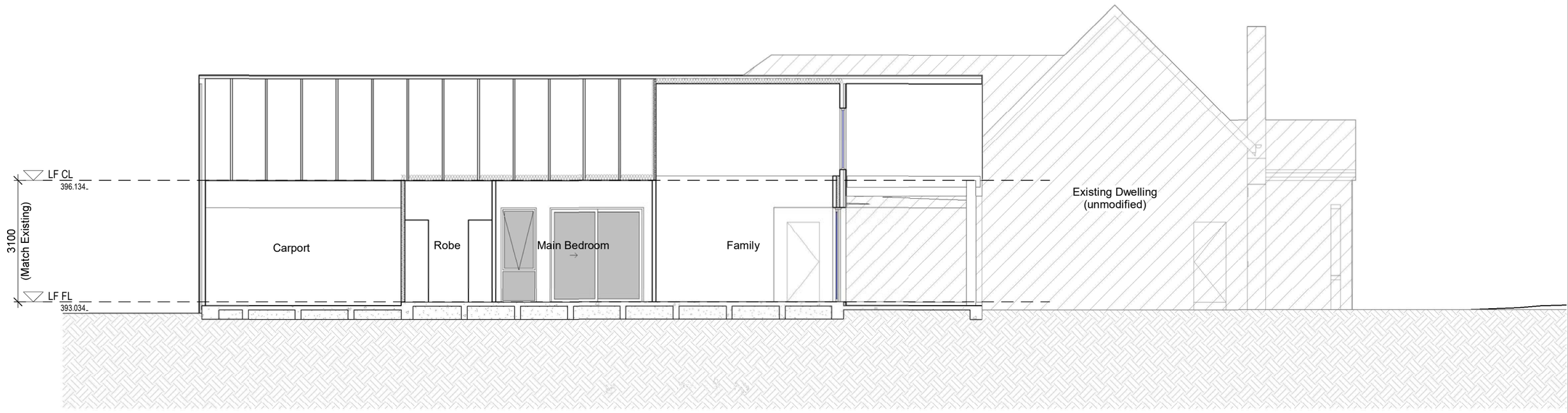


Proposed Additions

36 Burley Griffin Way, Murrumburrah

Roof Plan	Page:	Scale: 1 : 100	REV	DESIGN BY RABBIT
LOT: 351 D.P..: 753624	DA05	date: 25/03/25	DA02a	

mail: 358 Widgiewa Road, Carwoola nsw 2620 - ph: 0431 402 829 - email: clinton@designbyrabbit.com - abn: 56 070 577 568



Section B

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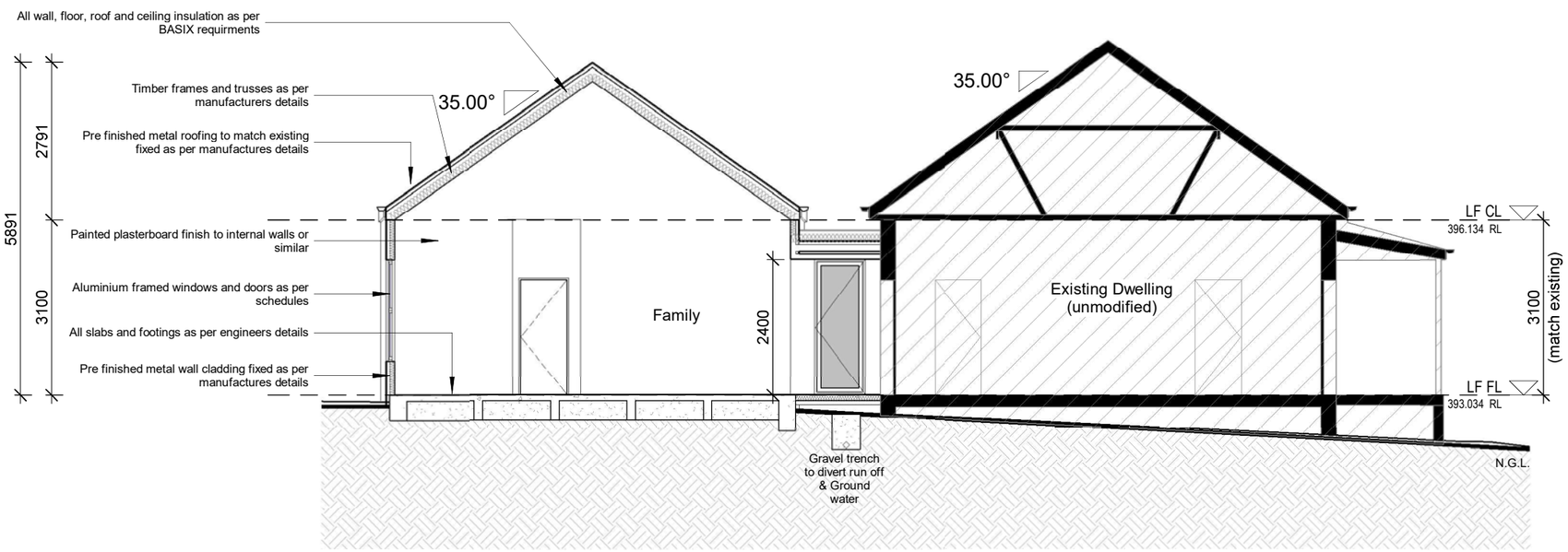

Section A

SCALE: 1 : 100

NOTE;
THE WINDOW SCHEDULE IS A REFERENCE DOCUMENT AND ALL WINDOWS ARE TO BE CHECKED ON SITE FOR SIZES, INSTALLATION REQUIREMENTS PRIOR TO MANUFACTURE BY THE WINDOW MANUFACTURER.

WINDOW SCHEDULE

MARK	LOCATION	HEIGHT	WIDTH	WINDOW STYLE	GLAZING	FRAME MATERIAL	REMARKS	Area
2	Main Bedroom	2400	900	Awning	Double	Aluminium		2.16
7	Link	1500	1000	Fixed	Double	Aluminium		1.50
8a	Family Upper	2100	2400	Fixed	Double	Aluminium		5.04
8b	Family Upper	2100	2400	Fixed	Double	Aluminium		5.04
9	Family	1800	1200	Awning	Double	Aluminium		2.16
10	Family	1800	1200	Awning	Double	Aluminium		2.16
11	Bath	900	900	Awning	Double	Aluminium		0.81

DOOR SCHEDULE

MARK	Count	LOCATION	HEIGHT	WIDTH	FRAME MATERIAL	COMMENTS	Area
3	1	Main Bedroom	2400	2400	Aluminium		5.76
5	1	Link	2400	900	Aluminium		2.16
8	1	Family	2400	7000	Aluminium		16.80
12	1	Mud/L'dry	2400	900	Aluminium		2.16
101	3	Internal Varies	2040	820	Timber		1.67
102	1	Carport/Mud	2040	820	Timber	grade 2 self closer and have the latch at 1500mm from FL	1.67

Proposed Additions

36 Burley Griffin Way, Murrumburrah

Sections

LOT: 351 D.P..: 753624

Page: DA06

Scale: 1 : 100

date: 25/03/25

REV DA02a

DESIGN BY RABBIT

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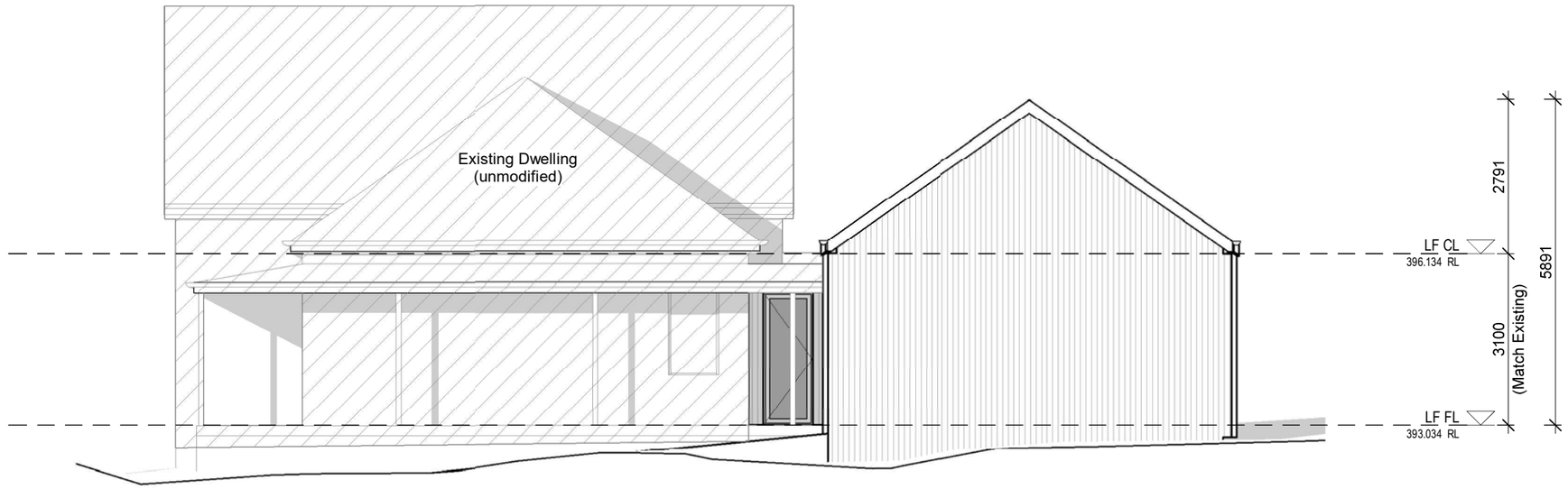
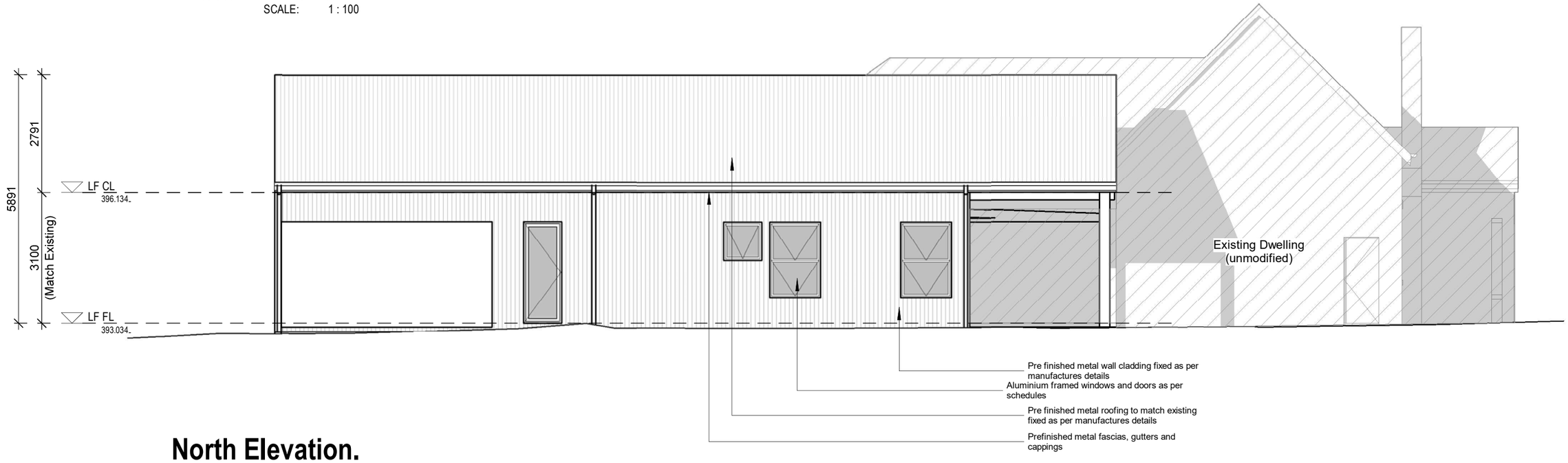


East Elevation.

SCALE: 1 : 100



North Elevation.

SCALE: 1 : 100

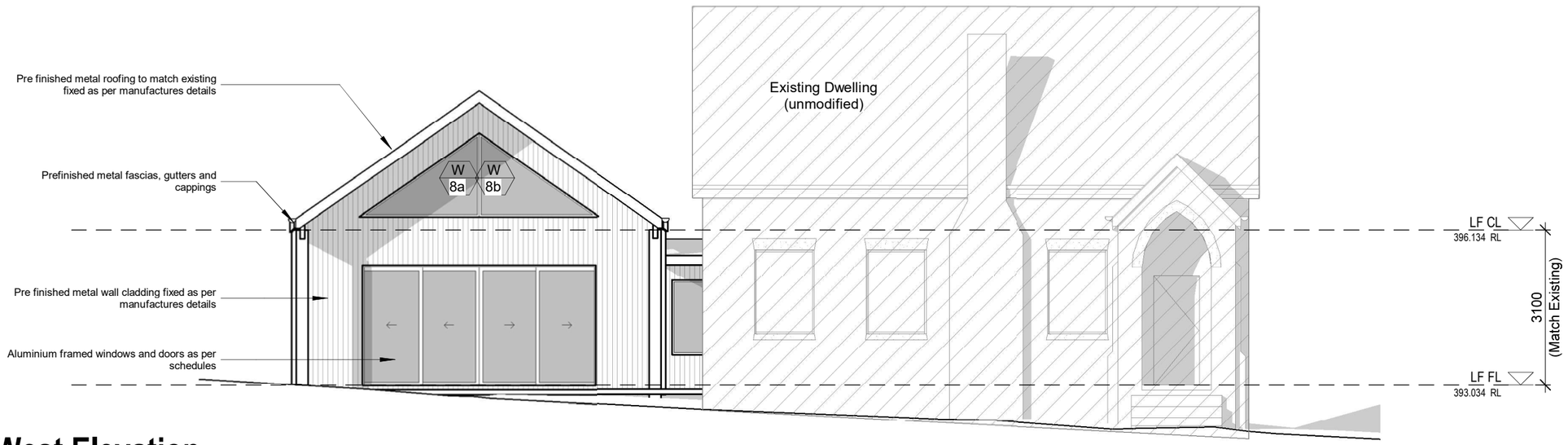
Proposed Additions

36 Burley Griffin Way, Murrumburrah

Elevations	Page:	Scale: 1 : 100	REV
LOT: 351 D.P..: 753624	DA07	date: 25/03/25	DA02a

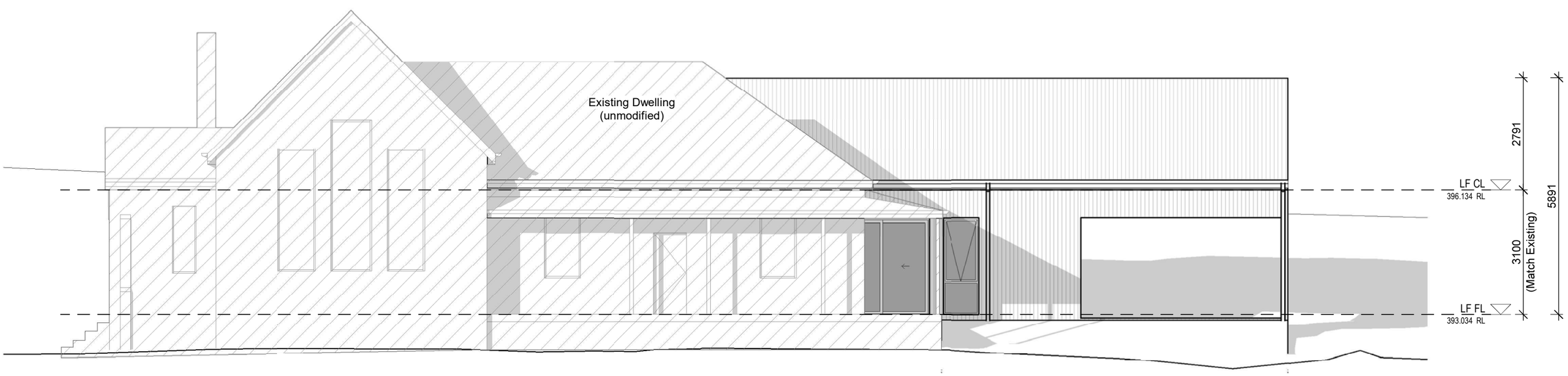
DESIGN BY RABBIT

mail: 358 Widgiewa Road, Carwoola nsw 2620 - ph: 0431 402 829 - email: clinton@designbyrabbit.com - abn: 56 070 577 568



West Elevation

SCALE: 1 : 100



South Elevation.

SCALE: 1 : 100

Proposed Additions

36 Burley Griffin Way, Murrumburrah

Elevations

LOT: 351 D.P..: 753624

Page:	Scale:	REV
DA08	1 : 100	DA02a
	date: 25/03/25	

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Proposed Additions

36 Burley Griffin Way, Murrumburrah

3d Image/Materials	Page:	Scale:		REV
LOT: 351 D.P..: 753624	DA09	date:	25/03/25	DA02a

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Proposed Additions

36 Burley Griffin Way, Murrumburrah

3d Image/Materials	Page:	Scale:		REV
LOT: 351 D.P..: 753624	DA10	date:	25/03/25	DA02a

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Note:
All Site cut & fill levels are to be confirmed on site.

Proposed Additions

36 Burley Griffin Way, Murrumburrah

Cut & Fill Plan

LOT: 351 D.P..: 753624

Page:	Scale:	REV
DA11	1 : 200	DA02a
	date: 25/03/25	

DESIGN BY RABBIT

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Fixtures and systems	Show on DA Plans	Show on CC/CDC Plans & specs	Certifier Check
Hot water			
The applicant must install the following hot water system in the development: electric heat pump system that is eligible to create Renewable Energy Certificates under the (Commonwealth) Renewable Energy (Electricity) Regulations 2001 (incorporating Amendment Regulations 2005 (No. 2)).	✔	✔	✔

Construction	Show on DA Plans	Show on CC/CDC Plans & specs	Certifier Check
Insulation requirements			
The applicant must construct the new or altered construction (floor(s), walls, and ceilings/roofs) in accordance with the specifications listed in the table below, except that a) additional insulation is not required where the area of new construction is less than 2m2, b) insulation specified is not required for parts of altered construction where insulation already exists.	✔	✔	✔

Construction	Additional insulation required (R-value)	Other specifications
concrete slab on ground floor.	nil	N/A
external wall: framed (weatherboard, fibro, metal clad)	R1.70 (or R2.10 including construction)	
internal wall shared with garage: plasterboard (R0.36)	R0.84 (or R1.20 including construction)	
flat ceiling, pitched roof	ceiling: R1.45 (up), roof: foil backed blanket (75 mm)	medium (solar absorptance 0.475 - 0.70)
raked ceiling, pitched/skillion roof: framed	ceiling: R1.74 (up), roof: foil backed blanket (75 mm)	medium (solar absorptance 0.475 - 0.70)

Glazing requirements	Show on DA Plans	Show on CC/CDC Plans & specs	Certifier Check
Windows and glazed doors			
The applicant must install the windows, glazed doors and shading devices, in accordance with the specifications listed in the table below. Relevant overshadowing specifications must be satisfied for each window and glazed door.	✔	✔	✔
The following requirements must also be satisfied in relation to each window and glazed door:		✔	✔
Each window or glazed door with improved frames, or pyrolytic low-e glass, or clear/air gap/clear glazing, or toned/air gap/clear glazing must have a U-value and a Solar Heat Gain Coefficient (SHGC) no greater than that listed in the table below. Total system U-values and SHGCs must be calculated in accordance with National Fenestration Rating Council (NFRC) conditions. The description is provided for information only. Alternative systems with complying U-value and SHGC may be substituted.		✔	✔
For projections described in millimetres, the leading edge of each eave, pergola, verandah, balcony or awning must be no more than 500 mm above the head of the window or glazed door and no more than 2400 mm above the sill.	✔	✔	✔
Pergolas with polycarbonate roof or similar translucent material must have a shading coefficient of less than 0.35.		✔	✔
External louvres and blinds must fully shade the window or glazed door beside which they are situated when fully drawn or closed.		✔	✔
Pergolas with fixed battens must have battens parallel to the window or glazed door above which they are situated, unless the pergola also shades a perpendicular window. The spacing between battens must not be more than 50 mm.		✔	✔

Glazing requirements	Show on DA Plans	Show on CC/CDC Plans & specs	Certifier Check
Windows and glazed doors glazing requirements			

Window/door number	Orientation	Area of glass including frame (m2)	Overshadowing height (m)	Overshadowing distance (m)	Shading device	Frame and glass type
W9	N	2.16	0	0	external louvre/blind (adjustable)	standard aluminium, clear/air gap/ clear, (U-value: 5.34, SHGC: 0.67)
W10	N	2.16	0	0	external louvre/blind (adjustable)	standard aluminium, clear/air gap/ clear, (U-value: 5.34, SHGC: 0.67)
W11	N	0.81	0	0	none	standard aluminium, clear/air gap/ clear, (U-value: 5.34, SHGC: 0.67)
D12	N	2.16	0	0	external louvre/blind (adjustable)	standard aluminium, clear/air gap/ clear, (U-value: 5.34, SHGC: 0.67)
W3	S	5.76	0	0	eave/ verandah/ pergola/balcony >=900 mm	standard aluminium, clear/air gap/ clear, (U-value: 5.34, SHGC: 0.67)

Glazing requirements	Show on DA Plans	Show on CC/CDC Plans & specs	Certifier Check

Window/door number	Orientation	Area of glass including frame (m2)	Overshadowing height (m)	Overshadowing distance (m)	Shading device	Frame and glass type
W2	S	2.16	0	0	eave/ verandah/ pergola/balcony >=900 mm	standard aluminium, clear/air gap/ clear, (U-value: 5.34, SHGC: 0.67)
W7	W	1.5	0	0	eave/ verandah/ pergola/balcony >=900 mm	standard aluminium, clear/air gap/ clear, (U-value: 5.34, SHGC: 0.67)
W8	W	15	0	0	eave/ verandah/ pergola/balcony >=900 mm	standard aluminium, clear/air gap/ clear, (U-value: 5.34, SHGC: 0.67)
W8a	W	6.3	0	0	eave/ verandah/ pergola/balcony >=900 mm	standard aluminium, clear/air gap/ clear, (U-value: 5.34, SHGC: 0.67)
D5	E	2.16	0	0	eave/ verandah/ pergola/balcony >=900 mm	standard aluminium, clear/air gap/ clear, (U-value: 5.34, SHGC: 0.67)

Proposed Additions

36 Burley Griffin Way, Murrumburrah

BASIX Commitments

LOT: 351 D.P..: 753624

Page: DA12

Scale:

date: 25/03/25

REV DA02a

DESIGN BY RABBIT

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APPENDIX # 4

BASIX

BASIX® Certificate

Building Sustainability Index www.basix.nsw.gov.au

Alterations and Additions

Certificate number: A1777163

This certificate confirms that the proposed development will meet the NSW government's requirements for sustainability, if it is built in accordance with the commitments set out below. Terms used in this certificate, or in the commitments, have the meaning given by the document entitled "BASIX Definitions" dated 10/09/2020 published by the Department. This document is available at www.basix.nsw.gov.au

Secretary
Date of issue: Wednesday, 11 December 2024
To be valid, this certificate must be lodged within 3 months of the date of issue.

NSW GOVERNMENT

Project address	
Project name	36 Burley Griffin Way
Street address	36 BURLEY GRIFFIN WAY - MURRUMBURRAH 2587
Local Government Area	Hilltops Council
Plan type and number	Deposited Plan -
Lot number	351
Section number	753624

Project type	
Dwelling type	Dwelling house (detached)
Type of alteration and addition	The estimated development cost for my renovation work is $50,000 or more, and does not include a pool (and/or spa).
N/A	N/A

Certificate Prepared by (please complete before submitting to Council or PCA)

Name / Company Name: CLINTON ATKINS

ABN (if applicable): 56070577568

Fixtures and systems	Show on DA Plans	Show on CC/CDC Plans & specs	Certifier Check
Hot water			
The applicant must install the following hot water system in the development: electric heat pump system that is eligible to create Renewable Energy Certificates under the (Commonwealth) Renewable Energy (Electricity) Regulations 2001 (incorporating Amendment Regulations 2005 (No. 2)).	✔	✔	✔

Construction	Show on DA Plans	Show on CC/CDC Plans & specs	Certifier Check
Insulation requirements			
The applicant must construct the new or altered construction (floor(s), walls, and ceilings/roofs) in accordance with the specifications listed in the table below, except that a) additional insulation is not required where the area of new construction is less than 2m2, b) insulation specified is not required for parts of altered construction where insulation already exists.	✔	✔	✔

Construction	Additional insulation required (R-value)	Other specifications
concrete slab on ground floor.	nil	N/A
external wall: framed (weatherboard, fibro, metal clad)	R1.70 (or R2.10 including construction)	
internal wall shared with garage: plasterboard (R0.36)	R0.84 (or R1.20 including construction)	
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raked ceiling, pitched/skillion roof: framed	ceiling: R1.74 (up), roof: foil backed blanket (75 mm)	medium (solar absorptance 0.475 - 0.70)

Glazing requirements	Show on DA Plans	Show on CC/CDC Plans & specs	Certifier Check
Windows and glazed doors			
The applicant must install the windows, glazed doors and shading devices, in accordance with the specifications listed in the table below. Relevant overshadowing specifications must be satisfied for each window and glazed door.	✔	✔	✔
The following requirements must also be satisfied in relation to each window and glazed door:		✔	✔
Each window or glazed door with improved frames, or pyrolytic low-e glass, or clear/air gap/clear glazing, or toned/air gap/clear glazing must have a U-value and a Solar Heat Gain Coefficient (SHGC) no greater than that listed in the table below. Total system U-values and SHGCs must be calculated in accordance with National Fenestration Rating Council (NFRC) conditions. The description is provided for information only. Alternative systems with complying U-value and SHGC may be substituted.		✔	✔
For projections described in millimetres, the leading edge of each eave, pergola, verandah, balcony or awning must be no more than 500 mm above the head of the window or glazed door and no more than 2400 mm above the sill.	✔	✔	✔
Pergolas with polycarbonate roof or similar translucent material must have a shading coefficient of less than 0.35.		✔	✔
External louvres and blinds must fully shade the window or glazed door beside which they are situated when fully drawn or closed.		✔	✔
Pergolas with fixed battens must have battens parallel to the window or glazed door above which they are situated, unless the pergola also shades a perpendicular window. The spacing between battens must not be more than 50 mm.		✔	✔

Glazing requirements	Show on DA Plans	Show on CC/CDC Plans & specs	Certifier Check

Windows and glazed doors glazing requirements

Window/door number	Orientation	Area of glass including frame (m2)	Overshadowing height (m)	Overshadowing distance (m)	Shading device	Frame and glass type
W9	N	2.16	0	0	external louvre/blind (adjustable)	standard aluminium, clear/air gap/ clear, (U-value: 5.34, SHGC: 0.67)
W10	N	2.16	0	0	external louvre/blind (adjustable)	standard aluminium, clear/air gap/ clear, (U-value: 5.34, SHGC: 0.67)
W11	N	0.81	0	0	none	standard aluminium, clear/air gap/ clear, (U-value: 5.34, SHGC: 0.67)
D12	N	2.16	0	0	external louvre/blind (adjustable)	standard aluminium, clear/air gap/ clear, (U-value: 5.34, SHGC: 0.67)
W3	S	5.76	0	0	eave/ verandah/ pergola/balcony >=900 mm	standard aluminium, clear/air gap/ clear, (U-value: 5.34, SHGC: 0.67)

Glazing requirements

Window/door number	Orientation	Area of glass including frame (m2)	Overshadowing height (m)	Overshadowing distance (m)	Shading device	Frame and glass type
W2	S	2.16	0	0	eave/ verandah/ pergola/balcony >=900 mm	standard aluminium, clear/air gap/ clear, (U-value: 5.34, SHGC: 0.67)
W7	W	1.5	0	0	eave/ verandah/ pergola/balcony >=900 mm	standard aluminium, clear/air gap/ clear, (U-value: 5.34, SHGC: 0.67)
W8	W	15	0	0	eave/ verandah/ pergola/balcony >=900 mm	standard aluminium, clear/air gap/ clear, (U-value: 5.34, SHGC: 0.67)
W8a	W	6.3	0	0	eave/ verandah/ pergola/balcony >=900 mm	standard aluminium, clear/air gap/ clear, (U-value: 5.34, SHGC: 0.67)
D5	E	2.16	0	0	eave/ verandah/ pergola/balcony >=900 mm	standard aluminium, clear/air gap/ clear, (U-value: 5.34, SHGC: 0.67)

Show on DA Plans	Show on CC/CDC Plans & specs	Certifier Check

Legend
In these commitments, "applicant" means the person carrying out the development.
Commitments identified with a ✔ in the "Show on DA plans" column must be shown on the plans accompanying the development application for the proposed development (if a development application is to be lodged for the proposed development).
Commitments identified with a ✔ in the "Show on CC/CDC plans & specs" column must be shown in the plans and specifications accompanying the application for a construction certificate / complying development certificate for the proposed development.
Commitments identified with a ✔ in the "Certifier check" column must be certified by a certifying authority as having been fulfilled, before a final occupation certificate for the development may be issued.

APPENDIX # 5

AHIMS SEARCH

BMAT SEARCH

AHIMS Web Services (AWS)
Search Result

Your Ref/PO Number : SACHS TICA

Client Service ID : 989068

Kenneth Filmer

18 Pineview Cct 91 Boorowa Street Young
Young New South Wales 2594

Attention: Kenneth Filmer

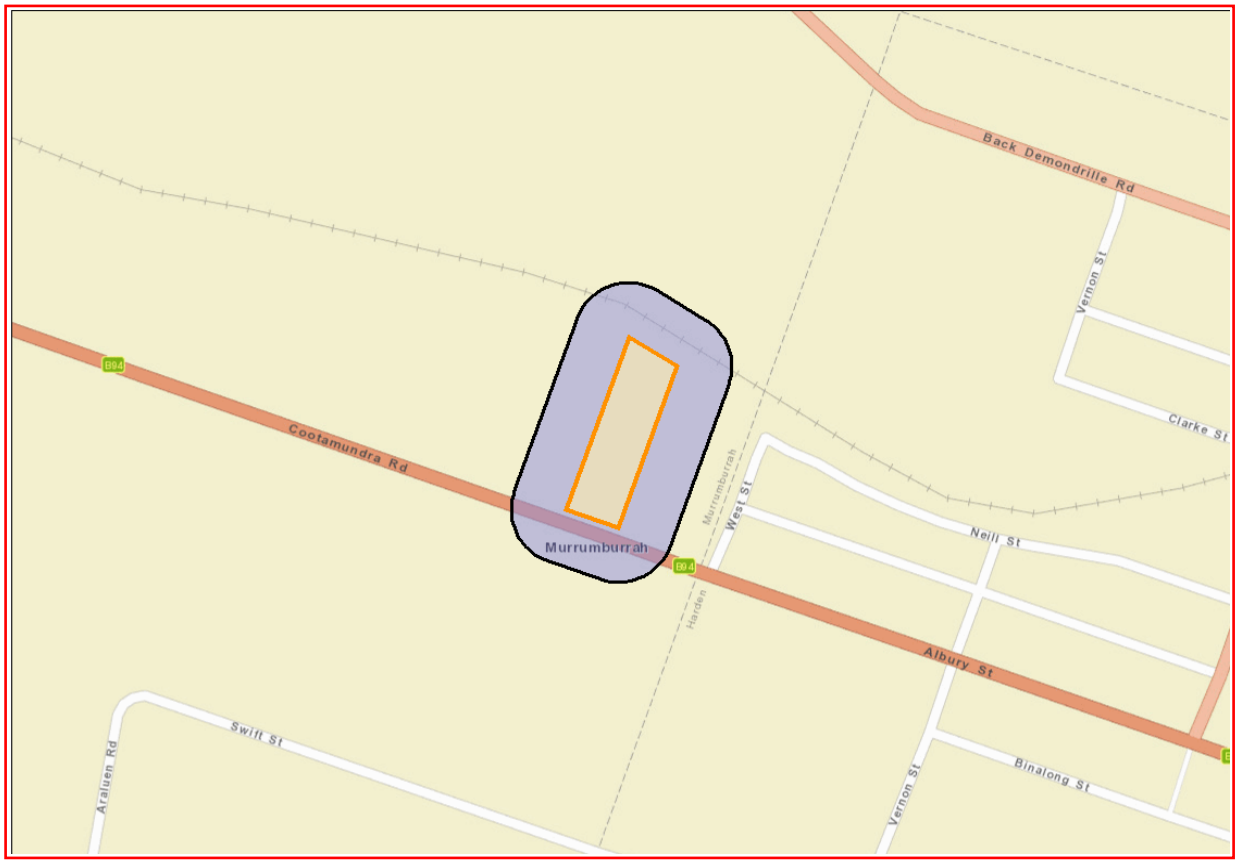
Email: craig@dabusters.com

Date: 26 March 2025

Dear Sir or Madam:

AHIMS Web Service search for the following area at Lot : 351, DP:DP753624, Section : - with a Buffer of 50 meters, conducted by Kenneth Filmer on 26 March 2025.

The context area of your search is shown in the map below. Please note that the map does not accurately display the exact boundaries of the search as defined in the paragraph above. The map is to be used for general reference purposes only.



A search of Heritage NSW AHIMS Web Services (Aboriginal Heritage Information Management System) has shown that:

0	**Aboriginal sites are recorded in or near the above location.**
0	**Aboriginal places have been declared in or near the above location. ***

If your search shows Aboriginal sites or places what should you do?

- You must do an extensive search if AHIMS has shown that there are Aboriginal sites or places recorded in the search area.
- If you are checking AHIMS as a part of your due diligence, refer to the next steps of the Due Diligence Code of practice.
- You can get further information about Aboriginal places by looking at the gazettal notice that declared it. Aboriginal places gazetted after 2001 are available on the NSW Government Gazette (https://www.legislation.nsw.gov.au/gazette) website. Gazettal notices published prior to 2001 can be obtained from Heritage NSW upon request

Important information about your AHIMS search

- The information derived from the AHIMS search is only to be used for the purpose for which it was requested. It is not be made available to the public.
- AHIMS records information about Aboriginal sites that have been provided to Heritage NSW and Aboriginal places that have been declared by the Minister;
- Information recorded on AHIMS may vary in its accuracy and may not be up to date. Location details are recorded as grid references and it is important to note that there may be errors or omissions in these recordings,
- Some parts of New South Wales have not been investigated in detail and there may be fewer records of Aboriginal sites in those areas. These areas may contain Aboriginal sites which are not recorded on AHIMS.
- Aboriginal objects are protected under the National Parks and Wildlife Act 1974 even if they are not recorded as a site on AHIMS.
- This search can form part of your due diligence and remains valid for 12 months.

Level 6, 10 Valentine Ave, Parramatta 2150
Locked Bag 5020 Parramatta NSW 2124
Tel: (02) 9585 6345

ABN 34 945 244 274
Email: ahims@environment.nsw.gov.au
Web: www.heritage.nsw.gov.au

Department of Planning and Environment

Biodiversity Values Map and Threshold Report

This report is generated using the Biodiversity Values Map and Threshold (BMAT) tool. The BMAT tool is used by proponents to supply evidence to your local council to determine whether or not a Biodiversity Development Assessment Report (BDAR) is required under the Biodiversity Conservation Regulation 2017 (Cl. 7.2 & 7.3).

The report provides results for the proposed development footprint area identified by the user and displayed within the blue boundary on the map.

There are two pathways for determining whether a BDAR is required for the proposed development:

1. Is there Biodiversity Values Mapping?
2. Is the 'clearing of native vegetation area threshold' exceeded?

Biodiversity Values Map and Threshold Report

Date of Report Generation		26/03/2025 3:45 PM
1. Biodiversity Values (BV) Map - Results Summary (Biodiversity Conservation Regulation Section 7.3)		
1.1	**Does the development Footprint intersect with BV mapping?**	no
1.2	Was ALL BV Mapping within the development footprinted added in the last 90 days? (dark purple mapping only, no light purple mapping present)	no
1.3	**Date of expiry of dark purple 90 day mapping**	N/A
1.4	**Is the Biodiversity Values Map threshold exceeded?**	no
2. Area Clearing Threshold - Results Summary (Biodiversity Conservation Regulation Section 7.2)		
2.1	**Size of the development or clearing footprint**	125.8 sqm
2.2	**Native Vegetation Area Clearing Estimate (NVACE)** (within development/clearing footprint)	18.6 sqm
2.3	**Method for determining Minimum Lot Size**	LEP
2.4	**Minimum Lot Size** (10,000sqm = 1ha)	25,000 sqm
2.5	**Area Clearing Threshold** (10,000sqm = 1ha)	5,000 sqm
2.6	**Does the estimate exceed the Area Clearing Threshold?** (NVACE results are an estimate and can be reviewed using the Guidance)	no

REPORT RESULT: Is the Biodiversity Offset Scheme (BOS) Threshold exceeded for the proposed development footprint area? (Your local council will determine if a BDAR is required)	**no**

What do I do with this report?

• If the result above indicates the BOS Threshold has been exceeded, your local council may require a Biodiversity Development Assessment Report with your development application. Seek further advice from Council. An accredited assessor can apply the Biodiversity Assessment Method and prepare a BDAR for you. For a list of accredited assessors go to: https://customer.lmbc.nsw.gov.au/assessment/AccreditedAssessor.

• If the result above indicates the BOS Threshold has not been exceeded, you may not require a Biodiversity Development Assessment Report. This BMAT report can be provided to Council to support your development application. Council can advise how the area clearing threshold results should be considered. Council will review these results and make a determination if a BDAR is required. Council may ask you to review the area clearing threshold results. You may also be required to assess whether the development is '"likely to significantly affect threatened species" as determined under the test in Section 7.3 of the *Biodiversity Conservation Act 2016*.

• If a BDAR is not required by Council, you may still require a permit to clear vegetation from your local council.

• If all Biodiversity Values mapping within your development footprint was less than 90 days old, i.e. areas are displayed as dark purple on the BV map, a BDAR may not be required if your Development Application is submitted within that 90 day period. Any BV mapping less than 90 days old on this report will expire on the date provided in Line item 1.3 above.

For more detailed advice about actions required, refer to the Interpreting the evaluation report section of the Biodiversity Values Map Threshold Tool User Guide .

Review Options:

• If you believe the Biodiversity Values mapping is incorrect please refer to our BV Map Review webpage for further information.

• If you or Council disagree with the area clearing threshold estimate results from the NVACE in Line Item 2.6 above (i.e. area of Native Vegetation within the Development footprint proposed to be cleared), review the results using the Guide for reviewing area clearing threshold results from the BMAT Tool.

Acknowledgement

I, as the applicant for this development, submit that I have correctly depicted the area that will be impacted or likely to be impacted as a result of the proposed development.

Signature: _____ Date: _____

(Typing your name in the signature field will be considered as your signature for the purposes of this form)

26/03/2025 03:45 PM

Biodiversity Values Map and Threshold Tool

The Biodiversity Values (BV) Map and Threshold Tool identifies land with high biodiversity value, particularly sensitive to impacts from development and clearing.

The BV map forms part of the Biodiversity Offsets Scheme threshold, which is one of the factors for determining whether the Scheme applies to a clearing or development proposal. You have used the Threshold Tool in the map viewer to generate this BV Threshold Report for your nominated area. This report calculates results for your proposed development footprint and indicates whether Council may require you to engage an accredited assessor to prepare a Biodiversity Development Assessment Report (BDAR) for your development.

This report may be used as evidence for development applications submitted to councils. You may also use this report when considering native vegetation clearing under the State Environmental Planning Policy (Biodiversity and Conservation) 2021 - Chapter 2 vegetation in non-rural areas.

What's new? For more information about the latest updates to the Biodiversity Values Map and Threshold Tool go to the updates section on the Biodiversity Values Map webpage.

Map Review: Landholders can request a review of the BV Map where they consider there is an error in the mapping on their property. For more information about the map review process and an application form for a review go to the Biodiversity Values Map Review webpage.

If you need help using this map tool see our Biodiversity Values Map and Threshold Tool User Guide or contact the Map Review Team at map.review@environment.nsw.gov.au or on 1800 001 490.

Biodiversity Values Map

195.3 0 97.66 195.3 Metres

WGS_1984_Web_Mercator_Auxiliary_Sphere

This map is a user generated static output from an Internet mapping site and is for reference only. Data layers that appear on this map may or may not be accurate, current, or otherwise reliable.

Legend

- Biodiversity Values that have been mapped for more than 90 days
- Biodiversity Values added within last 90 days
- Native Vegetation Area Clearing Estimate (NVACE)
- Development area selected by proponent

26/03/2025 03:45 PM

The results provided in this tool are generated using the best available mapping and knowledge of species habitat requirements.

This map is valid as at the date the report was generated. Checking the Biodiversity Values Map viewer for mapping updates is recommended.

APPENDIX # 7

Engineering

&

GEOTECH Report

3004 Cargo Road
CARGO NSW 2800
ABN: 57 021 223 814
P: 0428 619 282
E: info@enviroseer.com.au
http://www.enviroseer.com.au/

Services completed for this site

☒ Lot Classifications ☐ Contamination Report ☐ Wastewater Management Report

LOT CLASSIFICATION REPORT

Revision: 01/07/2021
Site Test: 24/10/2024
Lab Test: 30/10/2024
Customer Job: S116M
Job Number: 24132
Technician: JM

Prepared for: AMANDA SACHS

Site Address: LOT 351 DP 753624 116 BURLEY GRIFFIN WAY MURRUMBURRAH NSW 2587

Site Classification

A

Soil Classification

A

Ys 0-10 mm

Standards

Test results completed in this report are in accordance with the following standards:

- AS 2870-2011 Residential slabs and footings
- AS 1726-1993 Geotechnical site investigations
- AS 3798-2007 Guidelines on earthworks for commercial and residential developments
- AS 1289.6.3.2-1997 Dynamic Cone Penetrometer
- ASNZS 1547-2012 On-Site Domestic Wastewater Management

1.0 BACKGROUND

Site is the BE for the N extension to an existing brick and stone dwelling, that was formerly a village schoolhouse on a 0.8 ha residential lot which is 820 m WNW of the Murrumburrah Cunningham Plains Creek bridge. Geology is granodiorite. Soil depth is 200 mm. Slope is 11% toward the SSE. Site and soil classification is ‘A’ with a net vertical ground movement of 10 mm.

2.0 SITE ANALYSIS

Is there current evidence of the following that would likely affect this site?

NB: * denotes relevant to PROBLEM SITE

2.1*	Existing fill (>400 mm onsite)	No
2.2*	Fill containing wood, metal, plastic, or other deleterious materials	No
2.3*	Residential allotment (<1000 m^2) with over 1.6 m fill	No
2.4*	Rural allotment (>1000 m^2) with over 2.4 m fill	No
2.5*	Soft or collapsing soils	No
2.6*	Are there any trees (or removed trees) on site or adjoining site?	
	If yes, show locations at 6.0	No
2.7	Is the project a knock down re-build?	No
2.8	Floating boulders	No
2.9	Rock (difficult excavation)	No
2.10	Underground flowing water and/or seepage evidence	No
2.11	Marine environment or other risk of corrosion (within 1km from water with surf)	No
2.12	Erosion	No

3.0 INSPECTION OF SITE

3.1 Site status - platform slope is:

Slope: 11 Degrees **Fall direction:** SSE

3.2	Slope stability assessment recommended (> 11 Degrees)	No
3.3	Are there any Retaining Walls supporting this site?	
	(if yes, see attached plan drawing 6.0)	No

4.0 VISUAL OBSERVATION OF NEIGHBOURHOOD

4.1	Presence of rock	
	Is near-surface rock visible on this site? or on adjoining lots? in nearby excavations?	Yes
4.2	Existing masonry buildings	
	Is there significant cracking of existing masonry walls?	Yes
	Building Type:	
4.3	Indicators of movement in the following:	No
	Roads, Kerbs, Pavements, Masonry Fences, and/or Ground Surfaces.	
	Is there significant movement in any of the above?	

5.1 FIELD LOG

Clayey gravelly silt,	24/10/2024	**Borehole:**	**DCP1BH1**
Customer Job:	S116M	**Surface RL:**	427.7
Job Number:	24132	**Latitude:**	34°54.647
Site Address:	LOT 1529 DP 754611 21 KELLYS ROAD YOUNG	**Longitude:**	148°34.456

Water	Depth (m)	DCP (blows)	PP (kPa)	Sample	Classification Code	Material Description	Moisture	Linear Shrinkage (%)	Liquid Limit (%)	Density Consistency	Fill
	0.15	24				Sandy gravelly clay. strong brown, co.ag. 1-3 mm 50%	Da			H	
	0.30	15					6.9	7.5	27		
	0.45	24									
	0.60	24									
	0.75	10bb				Clayey gravel, strong brown co.ag. 1-9 mm 70%	Da			H	
	0.9										
	1.05										
	1.20										
	1.35										
	1.50										
	1.65					End of Borehole 1.6 m bgsl					
	1.80										
	1.95										
	2.10										
	2.25										
	2.40										
	2.55										
	2.70										
	2.85										
	3.00										
	3.15										
	3.30										
	3.45										
	3.60										
	3.75										
	3.90										
	4.05										
	4.20										
	4.35										
	4.50										

WT – Water Table **UTP** – Unable to pernitrate **DCP** – 9kg Dynamic Cone Penetrometer **PP**- Pocket Penetrometer

AND – Density Index vs Approx. Penetrometer results			SILTS & CLAY – Cu vs Approx. Penetrometer results				
DENSITY	Density Index	DCP Blow Count (blows/100mm)	CONSISTENCY	Undrained Shear Strength (kPa)	DCP Blow Count (blows/100mm)	PP Dial Indicator	MOISTURE
VL - Very Loose	< 15 %	< 1	VS – Very Soft	0 – 12	< 1	0 - 0.2	D – Dry
L – Loose	15 – 35 %	1 – 3	S – Soft	12 - 25	1 - 2	0.2 - 0.5	Da- Damp
MD – Medium Dense	35 – 65 %	3 – 9	F – Firm	25 – 50	2 – 3	0.5 - 1.0	M – Moist
D – Dense	65 – 85 %	9 – 15	St – Stiff	50 - 100	3 – 5	1.0 - 2.0	W – Wet
VD - Very Dense	> 65 – 85 %	> 15	VSt – Very Stiff	100 – 200	5 – 8	3.0 - 4.0	W_P - Plastic Limit
			H – Hard	> 200	> 8	> 4.0	W_L – Liquid Limit

5.1 FIELD LOG

Clayey gravelly silt, 24/10/2024
Customer Job: S116M
Job Number: 24132
Site Address: LOT 1529 DP 754611 21 KELLYS ROAD YOUNG

Borehole: DCP2BH2
Surface RL: 428.5
Latitude: 34°54.647
Longitude: 148°34.475

Water	Depth (m)	DCP (blows)	PP (kPa)	Sample	Classification Code	Material Description	Moisture	Linear Shrinkage (%)	Liquid Limit (%)	Density Consistency	Fill
	0.15 0.30 0.45 0.60 0.75					Clayey gravel, strong brown, co.ag. 0-0.8 mm 70%	Dy 10.4	8.5	31	H	
	0.9 1.05 1.20 1.35 1.50					End of borehole 1.6 m bgsl					
	1.65 1.80 1.95 2.10 2.25										
	2.40 2.55 2.70 2.85 3.00										
	3.15 3.30 3.45 3.60 3.75										
	3.90 4.05 4.20 4.35 4.50										

WT – Water Table **UTP** – Unable to pernitrate **DCP** – 9kg Dynamic Cone Penetrometer **PP**- Pocket Penetrometer

AND – Density Index vs Approx. Penetrometer results			SILTS & CLAY – Cu vs Approx. Penetrometer results				
DENSITY	Density Index	DCP Blow Count (blows/100mm)	CONSISTENCY	Undrained Shear Strength (kPa)	DCP Blow Count (blows/100mm)	PP Dial Indicator	MOISTURE
VL - Very Loose	< 15 %	< 1	VS – Very Soft	0 – 12	< 1	0 - 0.2	D – Dry
L – Loose	15 – 35 %	1 – 3	S – Soft	12 - 25	1 - 2	0.2 - 0.5	Da- Damp
MD – Medium Dense	35 – 65 %	3 – 9	F – Firm	25 – 50	2 – 3	0.5 - 1.0	M – Moist
D – Dense	65 – 85 %	9 – 15	St – Stiff	50 - 100	3 – 5	1.0 - 2.0	W – Wet
VD - Very Dense	> 65 – 85 %	> 15	VSt – Very Stiff	100 – 200	5 – 8	3.0 - 4.0	W_P - Plastic Limit
			H – Hard	> 200	> 8	> 4.0	W_L – Liquid Limit

6.0 LOCATION SKETCH

Depth mmbgsl	Pressure Kpa
-75	>300
-225	250
-375	>300
-525	>300
-675	>300

Depth mmbgsl	Pressure Kpa
-75	>300
-225	>300

7.0 COMMENTS & RECOMMENDATIONS

Site and soil classification is ‘A’ The depth to 100 kPa is in the range of 0-200 mm bgsl. Soil is minimally reactive with a net vertical ground surface movement of 10 mm.

8.0 CERTIFICATION

The attachment of the signature below is to certify that this report has been compiled in accordance with Australian Standards AS2870-2011, AS1726-1993 and AS3798-2007.

9.0 REPORT CONDITIONS & LIMITATIONS

CONDITIONS OF THE RECOMMENDATIONS

- This is a site classification report generally in accordance with AS-2870-2011 and should be sufficient for a qualified person to design footings for structures covered under the scope of this standard.

- This site classification was completed by an experienced soil technician and does not make any allowance for any possible mine subsidence within the building envelope.

- The advice given in this report assumes that the test results are representative of the overall subsurface conditions. However, it should be noted that actual conditions in some parts of the building site may differ from those found in the boreholes. If excavations reveal soil conditions significantly different from those shown in our attached Borehole Log(s), Enviroseer must be consulted, and excavations stopped immediately.

- Any sketches in this report should be considered as only approximate pictorial evidence of our work. Therefore, unless otherwise stated, any dimensions or slope information should not be used for any building cost calculations and/or positioning of the building. Dimensions on logs are correct.

REPORT LIMITATIONS

The investigations addressed in this report are not intended nor designed to locate all possible ground conditions on the site. It is not possible to identify all possible ground conditions. Further, one site may have a variety of ground conditions and, the ground conditions identified by the testing articulated in this report may change, even over noticeably short periods of time.

The advice and recommendations contained in this report are based on the test results obtained from the samples tested, and on the assumption that those test results are representative of the overall ground conditions of the entire site. The actual conditions in some parts of the site might differ from those tested. If excavation reveals ground conditions that vary from those outlined in our findings in this report and the advice contained in this report may differ significantly and must be revisited. If this occurs, Enviroseer must be consulted before any further work is carried out on the site, Enviroseer should be engaged for a supplementary report and updated recommendations.

The scope and relevance of the advice provided in the report is subject to restrictions and limitations. Enviroseer did not perform a complete assessment of all possible conditions or circumstances that may exist on the site. If a service is not expressly indicated that means it has not been provided, and the reader should not assume that it has been. If a matter is not specifically addressed then Enviroseer has not decided in relation to it, and the reader should not assume that it has.

Where data and information has been supplied by the client or a third party, the accuracy of the advice and recommendations in this report is dependent upon the accuracy of that data and information. Enviroseer is not responsible for verifying the accuracy of data or information provided to it by third parties. Enviroseer is not liable nor responsible for inaccurate advice provided upon reliance of incomplete or inaccurate data supplied by third parties.

Foundation Maintenance and Footing Performance:
A Homeowner's Guide

CSIRO

BTF 18
replaces
Information
Sheet 10/91

Buildings can and often do move. This movement can be up, down, lateral or rotational. The fundamental cause of movement in buildings can usually be related to one or more problems in the foundation soil. It is important for the homeowner to identify the soil type in order to ascertain the measures that should be put in place in order to ensure that problems in the foundation soil can be prevented, thus protecting against building movement.

This Building Technology File is designed to identify causes of soil-related building movement, and to suggest methods of prevention of resultant cracking in buildings.

Soil Types

The types of soils usually present under the topsoil in land zoned for residential buildings can be split into two approximate groups – granular and clay. Quite often, foundation soil is a mixture of both types. The general problems associated with soils having granular content are usually caused by erosion. Clay soils are subject to saturation and swell/shrink problems.

Classifications for a given area can generally be obtained by application to the local authority, but these are sometimes unreliable and if there is doubt, a geotechnical report should be commissioned. As most buildings suffering movement problems are founded on clay soils, there is an emphasis on classification of soils according to the amount of swell and shrinkage they experience with variations of water content. The table below is Table 2.1 from AS 2870, the Residential Slab and Footing Code.

Causes of Movement

Settlement due to construction
There are two types of settlement that occur as a result of construction:

- Immediate settlement occurs when a building is first placed on its foundation soil, as a result of compaction of the soil under the weight of the structure. The cohesive quality of clay soil mitigates against this, but granular (particularly sandy) soil is susceptible.
- Consolidation settlement is a feature of clay soil and may take place because of the expulsion of moisture from the soil or because of the soil's lack of resistance to local compressive or shear stresses. This will usually take place during the first few months after construction, but has been known to take many years in exceptional cases.

These problems are the province of the builder and should be taken into consideration as part of the preparation of the site for construction. Building Technology File 19 (BTF 19) deals with these problems.

Erosion
All soils are prone to erosion, but sandy soil is particularly susceptible to being washed away. Even clay with a sand component of say 10% or more can suffer from erosion.

Saturation
This is particularly a problem in clay soils. Saturation creates a bog-like suspension of the soil that causes it to lose virtually all of its bearing capacity. To a lesser degree, sand is affected by saturation because saturated sand may undergo a reduction in volume – particularly imported sand fill for bedding and blinding layers. However, this usually occurs as immediate settlement and should normally be the province of the builder.

Seasonal swelling and shrinkage of soil
All clays react to the presence of water by slowly absorbing it, making the soil increase in volume (see table below). The degree of increase varies considerably between different clays, as does the degree of decrease during the subsequent drying out caused by fair weather periods. Because of the low absorption and expulsion rate, this phenomenon will not usually be noticeable unless there are prolonged rainy or dry periods, usually of weeks or months, depending on the land and soil characteristics.

The swelling of soil creates an upward force on the footings of the building, and shrinkage creates subsidence that takes away the support needed by the footing to retain equilibrium.

Shear failure
This phenomenon occurs when the foundation soil does not have sufficient strength to support the weight of the footing. There are two major post-construction causes:

- Significant load increase.
- Reduction of lateral support of the soil under the footing due to erosion or excavation.
- In clay soil, shear failure can be caused by saturation of the soil adjacent to or under the footing.

GENERAL DEFINITIONS OF SITE CLASSES

Class	Foundation
A	Most sand and rock sites with little or no ground movement from moisture changes
S	Slightly reactive clay sites with only slight ground movement from moisture changes
M	Moderately reactive clay or silt sites, which can experience moderate ground movement from moisture changes
H	Highly reactive clay sites, which can experience high ground movement from moisture changes
E	Extremely reactive sites, which can experience extreme ground movement from moisture changes
A to P	Filled sites
P	Sites which include soft soils, such as soft clay or silt or loose sands; landslip; mine subsidence; collapsing soils; soils subject to erosion; reactive sites subject to abnormal moisture conditions or sites which cannot be classified otherwise

Tree root growth
Trees and shrubs that are allowed to grow in the vicinity of footings can cause foundation soil movement in two ways:

- Roots that grow under footings may increase in cross-sectional size, exerting upward pressure on footings.
- Roots in the vicinity of footings will absorb much of the moisture in the foundation soil, causing shrinkage or subsidence.

Unevenness of Movement

The types of ground movement described above usually occur unevenly throughout the building's foundation soil. Settlement due to construction tends to be uneven because of:

- Differing compaction of foundation soil prior to construction.
- Differing moisture content of foundation soil prior to construction.

Movement due to non-construction causes is usually more uneven still. Erosion can undermine a footing that traverses the flow or can create the conditions for shear failure by eroding soil adjacent to a footing that runs in the same direction as the flow.

Saturation of clay foundation soil may occur where subfloor walls create a dam that makes water pond. It can also occur wherever there is a source of water near footings in clay soil. This leads to a severe reduction in the strength of the soil which may create local shear failure.

Seasonal swelling and shrinkage of clay soil affects the perimeter of the building first, then gradually spreads to the interior. The swelling process will usually begin at the uphill extreme of the building, or on the weather side where the land is flat. Swelling gradually reaches the interior soil as absorption continues. Shrinkage usually begins where the sun's heat is greatest.

Effects of Uneven Soil Movement on Structures

Erosion and saturation
Erosion removes the support from under footings, tending to create subsidence of the part of the structure under which it occurs. Brickwork walls will resist the stress created by this removal of support by bridging the gap or cantilevering until the bricks or the mortar bedding fail. Older masonry has little resistance. Evidence of failure varies according to circumstances and symptoms may include:

- Step cracking in the mortar beds in the body of the wall or above/below openings such as doors or windows.
- Vertical cracking in the bricks (usually but not necessarily in line with the vertical beds or perpends).

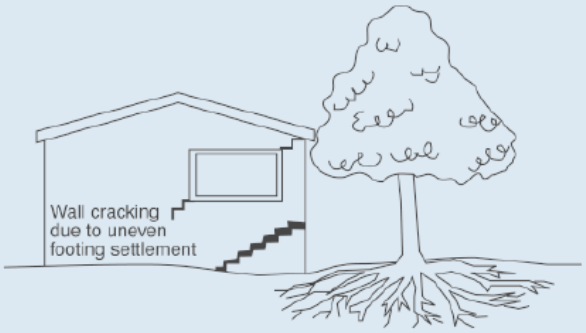
Isolated piers affected by erosion or saturation of foundations will eventually lose contact with the bearers they support and may tilt or fall over. The floors that have lost this support will become bouncy, sometimes rattling ornaments etc.

Seasonal swelling/shrinkage in clay
Swelling foundation soil due to rainy periods first lifts the most exposed extremities of the footing system, then the remainder of the perimeter footings while gradually permeating inside the building footprint to lift internal footings. This swelling first tends to create a dish effect, because the external footings are pushed higher than the internal ones.

The first noticeable symptom may be that the floor appears slightly dished. This is often accompanied by some doors binding on the floor or the door head, together with some cracking of cornice mitres. In buildings with timber flooring supported by bearers and joists, the floor can be bouncy. Externally there may be visible dishing of the hip or ridge lines.

As the moisture absorption process completes its journey to the innermost areas of the building, the internal footings will rise. If the spread of moisture is roughly even, it may be that the symptoms will temporarily disappear, but it is more likely that swelling will be uneven, creating a difference rather than a disappearance in symptoms. In buildings with timber flooring supported by bearers and joists, the isolated piers will rise more easily than the strip footings or piers under walls, creating noticeable doming of flooring.

Trees can cause shrinkage and damage



As the weather pattern changes and the soil begins to dry out, the external footings will be first affected, beginning with the locations where the sun's effect is strongest. This has the effect of lowering the external footings. The doming is accentuated and cracking reduces or disappears where it occurred because of dishing, but other cracks open up. The roof lines may become convex.

Doming and dishing are also affected by weather in other ways. In areas where warm, wet summers and cooler dry winters prevail, water migration tends to be toward the interior and doming will be accentuated, whereas where summers are dry and winters are cold and wet, migration tends to be toward the exterior and the underlying propensity is toward dishing.

Movement caused by tree roots
In general, growing roots will exert an upward pressure on footings, whereas soil subject to drying because of tree or shrub roots will tend to remove support from under footings by inducing shrinkage.

Complications caused by the structure itself
Most forces that the soil causes to be exerted on structures are vertical – i.e. either up or down. However, because these forces are seldom spread evenly around the footings, and because the building resists uneven movement because of its rigidity, forces are exerted from one part of the building to another. The net result of all these forces is usually rotational. This resultant force often complicates the diagnosis because the visible symptoms do not simply reflect the original cause. A common symptom is binding of doors on the vertical member of the frame.

Effects on full masonry structures
Brickwork will resist cracking where it can. It will attempt to span areas that lose support because of subsided foundations or raised points. It is therefore usual to see cracking at weak points, such as openings for windows or doors.

In the event of construction settlement, cracking will usually remain unchanged after the process of settlement has ceased.

With local shear or erosion, cracking will usually continue to develop until the original cause has been remedied, or until the subsidence has completely neutralised the affected portion of footing and the structure has stabilised on other footings that remain effective.

In the case of swell/shrink effects, the brickwork will in some cases return to its original position after completion of a cycle, however it is more likely that the rotational effect will not be exactly reversed, and it is also usual that brickwork will settle in its new position and will resist the forces trying to return it to its original position. This means that in a case where swelling takes place after construction and cracking occurs, the cracking is likely to at least partly remain after the shrink segment of the cycle is complete. Thus, each time the cycle is repeated, the likelihood is that the cracking will become wider until the sections of brickwork become virtually independent.

With repeated cycles, once the cracking is established, if there is no other complication, it is normal for the incidence of cracking to stabilise, as the building has the articulation it needs to cope with the problem. This is by no means always the case, however, and monitoring of cracks in walls and floors should always be treated seriously.

Upheaval caused by growth of tree roots under footings is not a simple vertical shear stress. There is a tendency for the root to also exert lateral forces that attempt to separate sections of brickwork after initial cracking has occurred.

The normal structural arrangement is that the inner leaf of brickwork in the external walls and at least some of the internal walls (depending on the roof type) comprise the load-bearing structure on which any upper floors, ceilings and the roof are supported. In these cases, it is internally visible cracking that should be the main focus of attention, however there are a few examples of dwellings whose external leaf of masonry plays some supporting role, so this should be checked if there is any doubt. In any case, externally visible cracking is important as a guide to stresses on the structure generally, and it should also be remembered that the external walls must be capable of supporting themselves.

Effects on framed structures
Timber or steel framed buildings are less likely to exhibit cracking due to swell/shrink than masonry buildings because of their flexibility. Also, the doming/dishing effects tend to be lower because of the lighter weight of walls. The main risks to framed buildings are encountered because of the isolated pier footings used under walls. Where erosion or saturation cause a footing to fall away, this can double the span which a wall must bridge. This additional stress can create cracking in wall linings, particularly where there is a weak point in the structure caused by a door or window opening. It is, however, unlikely that framed structures will be so stressed as to suffer serious damage without first exhibiting some or all of the above symptoms for a considerable period. The same warning period should apply in the case of upheaval. It should be noted, however, that where framed buildings are supported by strip footings there is only one leaf of brickwork and therefore the externally visible walls are the supporting structure for the building. In this case, the subfloor masonry walls can be expected to behave as full brickwork walls.

Effects on brick veneer structures
Because the load-bearing structure of a brick veneer building is the frame that makes up the interior leaf of the external walls plus perhaps the internal walls, depending on the type of roof, the building can be expected to behave as a framed structure, except that the external masonry will behave in a similar way to the external leaf of a full masonry structure.

Water Service and Drainage

Where a water service pipe, a sewer or stormwater drainage pipe is in the vicinity of a building, a water leak can cause erosion, swelling or saturation of susceptible soil. Even a minuscule leak can be enough to saturate a clay foundation. A leaking tap near a building can have the same effect. In addition, trenches containing pipes can become watercourses even though backfilled, particularly where broken rubble is used as fill. Water that runs along these trenches can be responsible for serious erosion, interstrata seepage into subfloor areas and saturation.

Pipe leakage and trench water flows also encourage tree and shrub roots to the source of water, complicating and exacerbating the problem.
Poor roof plumbing can result in large volumes of rainwater being concentrated in a small area of soil:

- Incorrect falls in roof guttering may result in overflows, as may gutters blocked with leaves etc.
- Corroded guttering or downpipes can spill water to ground.
- Downpipes not positively connected to a proper stormwater collection system will direct a concentration of water to soil that is directly adjacent to footings, sometimes causing large-scale problems such as erosion, saturation and migration of water under the building.

Seriousness of Cracking

In general, most cracking found in masonry walls is a cosmetic nuisance only and can be kept in repair or even ignored. The table below is a reproduction of Table C1 of AS 2870.

AS 2870 also publishes figures relating to cracking in concrete floors, however because wall cracking will usually reach the critical point significantly earlier than cracking in slabs, this table is not reproduced here.

Prevention/Cure

Plumbing
Where building movement is caused by water service, roof plumbing, sewer or stormwater failure, the remedy is to repair the problem. It is prudent, however, to consider also rerouting pipes away from the building where possible, and relocating taps to positions where any leakage will not direct water to the building vicinity. Even where gully traps are present, there is sometimes sufficient spill to create erosion or saturation, particularly in modern installations using smaller diameter PVC fixtures. Indeed, some gully traps are not situated directly under the taps that are installed to charge them, with the result that water from the tap may enter the backfilled trench that houses the sewer piping. If the trench has been poorly backfilled, the water will either pond or flow along the bottom of the trench. As these trenches usually run alongside the footings and can be at a similar depth, it is not hard to see how any water that is thus directed into a trench can easily affect the foundation's ability to support footings or even gain entry to the subfloor area.

Ground drainage
In all soils there is the capacity for water to travel on the surface and below it. Surface water flows can be established by inspection during and after heavy or prolonged rain. If necessary, a grated drain system connected to the stormwater collection system is usually an easy solution.

It is, however, sometimes necessary when attempting to prevent water migration that testing be carried out to establish watertable height and subsoil water flows. This subject is referred to in BTF 19 and may properly be regarded as an area for an expert consultant.

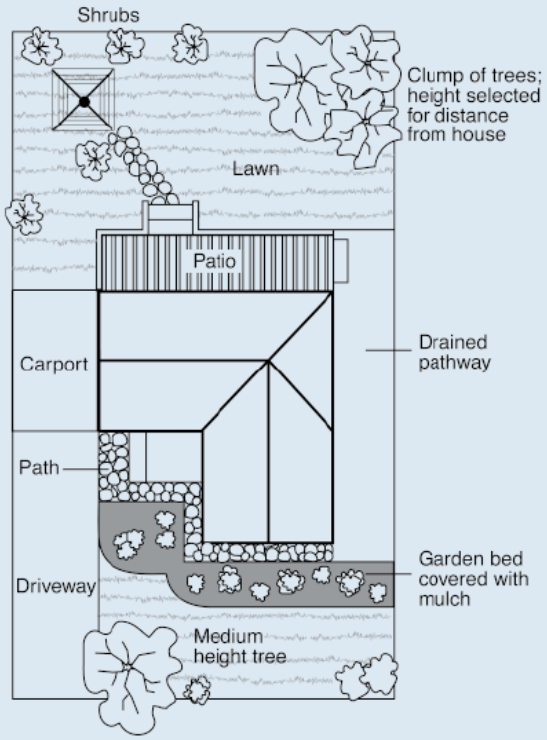
Protection of the building perimeter
It is essential to remember that the soil that affects footings extends well beyond the actual building line. Watering of garden plants, shrubs and trees causes some of the most serious water problems.

For this reason, particularly where problems exist or are likely to occur, it is recommended that an apron of paving be installed around as much of the building perimeter as necessary. This paving

CLASSIFICATION OF DAMAGE WITH REFERENCE TO WALLS

Description of typical damage and required repair	Approximate crack width limit (see Note 3)	Damage category
Hairline cracks	<0.1 mm	0
Fine cracks which do not need repair	<1 mm	1
Cracks noticeable but easily filled. Doors and windows stick slightly	<5 mm	2
Cracks can be repaired and possibly a small amount of wall will need to be replaced. Doors and windows stick. Service pipes can fracture. Weathertightness often impaired	5–15 mm (or a number of cracks 3 mm or more in one group)	3
Extensive repair work involving breaking-out and replacing sections of walls, especially over doors and windows. Window and door frames distort. Walls lean or bulge noticeably, some loss of bearing in beams. Service pipes disrupted	15–25 mm but also depend on number of cracks	4

Gardens for a reactive site



should extend outwards a minimum of 900 mm (more in highly reactive soil) and should have a minimum fall away from the building of 1:60. The finished paving should be no less than 100 mm below brick vent bases.

It is prudent to relocate drainage pipes away from this paving, if possible, to avoid complications from future leakage. If this is not practical, earthenware pipes should be replaced by PVC and backfilling should be of the same soil type as the surrounding soil and compacted to the same density.

Except in areas where freezing of water is an issue, it is wise to remove taps in the building area and relocate them well away from the building – preferably not uphill from it (see BTF 19).

It may be desirable to install a grated drain at the outside edge of the paving on the uphill side of the building. If subsoil drainage is needed this can be installed under the surface drain.

Condensation
In buildings with a subfloor void such as where bearers and joists support flooring, insufficient ventilation creates ideal conditions for condensation, particularly where there is little clearance between the floor and the ground. Condensation adds to the moisture already present in the subfloor and significantly slows the process of drying out. Installation of an adequate subfloor ventilation system, either natural or mechanical, is desirable.

Warning: Although this Building Technology File deals with cracking in buildings, it should be said that subfloor moisture can result in the development of other problems, notably:

- Water that is transmitted into masonry, metal or timber building elements causes damage and/or decay to those elements.
- High subfloor humidity and moisture content create an ideal environment for various pests, including termites and spiders.
- Where high moisture levels are transmitted to the flooring and walls, an increase in the dust mite count can ensue within the living areas. Dust mites, as well as dampness in general, can be a health hazard to inhabitants, particularly those who are abnormally susceptible to respiratory ailments.

The garden
The ideal vegetation layout is to have lawn or plants that require only light watering immediately adjacent to the drainage or paving edge, then more demanding plants, shrubs and trees spread out in that order.

Overwatering due to misuse of automatic watering systems is a common cause of saturation and water migration under footings. If it is necessary to use these systems, it is important to remove garden beds to a completely safe distance from buildings.

Existing trees
Where a tree is causing a problem of soil drying or there is the existence or threat of upheaval of footings, if the offending roots are subsidiary and their removal will not significantly damage the tree, they should be severed and a concrete or metal barrier placed vertically in the soil to prevent future root growth in the direction of the building. If it is not possible to remove the relevant roots without damage to the tree, an application to remove the tree should be made to the local authority. A prudent plan is to transplant likely offenders before they become a problem.

Information on trees, plants and shrubs
State departments overseeing agriculture can give information regarding root patterns, volume of water needed and safe distance from buildings of most species. Botanic gardens are also sources of information. For information on plant roots and drains, see Building Technology File 17.

Excavation
Excavation around footings must be properly engineered. Soil supporting footings can only be safely excavated at an angle that allows the soil under the footing to remain stable. This angle is called the angle of repose (or friction) and varies significantly between soil types and conditions. Removal of soil within the angle of repose will cause subsidence.

Remediation

Where erosion has occurred that has washed away soil adjacent to footings, soil of the same classification should be introduced and compacted to the same density. Where footings have been undermined, augmentation or other specialist work may be required. Remediation of footings and foundations is generally the realm of a specialist consultant.

Where isolated footings rise and fall because of swell/shrink effect, the homeowner may be tempted to alleviate floor bounce by filling the gap that has appeared between the bearer and the pier with blocking. The danger here is that when the next swell segment of the cycle occurs, the extra blocking will push the floor up into an accentuated dome and may also cause local shear failure in the soil. If it is necessary to use blocking, it should be by a pair of fine wedges and monitoring should be carried out fortnightly.

This BTF was prepared by John Lewer FAIB, MIAMA, Partner, Construction Diagnosis.

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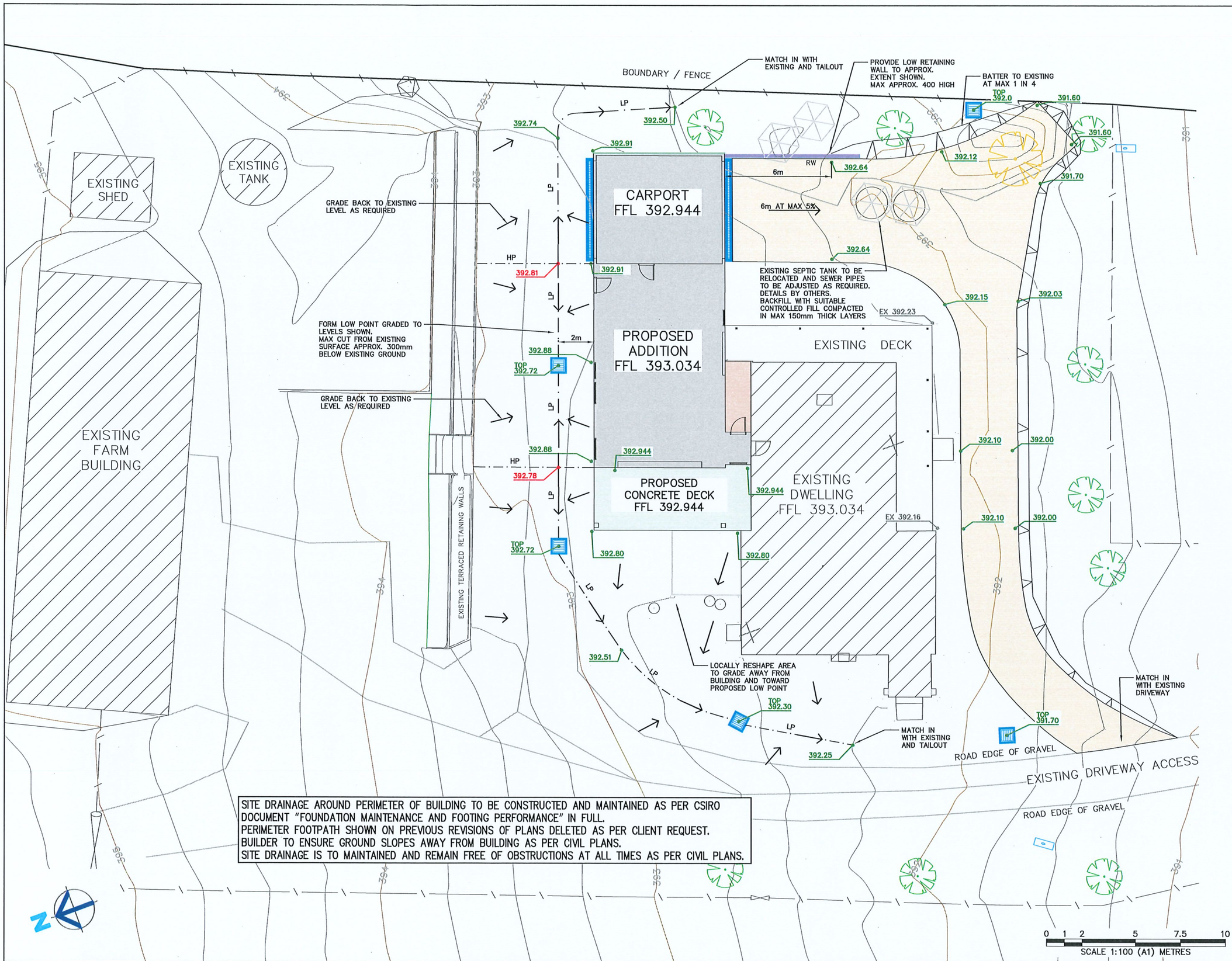

LEGEND

MARK	ITEM
270.0	PROPOSED DESIGN LEVELS
270.0	PROPOSED CRITICAL OVERLAND FLOW LEVELS
HP	PROPOSED HIGH POINT
LP	PROPOSED LOW POINT
	PROPOSED BUILDING REFER TO ARCHITECTURAL DRAWINGS
	PROPOSED DECK REFER TO ARCHITECTURAL DRAWINGS
	PROPOSED DRIVEWAY PAVEMENT REFER DETAIL PV1
	EXISTING BUILDING
RW	PROPOSED RETAINING WALL DETAILS BY OTHERS MAX 600mm HIGH
OR	PROPOSED STORMWATER PIT REFER TO SWP DETAILS
	PROPOSED STORMWATER STRIP DRAIN REFER TO DETAIL AC1
	EXISTING FENCE LINE
	PROPOSED DIRECTION OF FALL
	EXISTING TREE
	EXISTING MAJOR CONTOURS AT 1.0m INCREMENTS
	EXISTING MINOR CONTOURS AT 0.25m INCREMENTS

SITE DRAINAGE AROUND PERIMETER OF BUILDING TO BE CONSTRUCTED AND MAINTAINED AS PER CSIRO DOCUMENT "FOUNDATION MAINTENANCE AND FOOTING PERFORMANCE" IN FULL.
PERIMETER FOOTPATH SHOWN ON PREVIOUS REVISIONS OF PLANS DELETED AS PER CLIENT REQUEST.
BUILDER TO ENSURE GROUND SLOPES AWAY FROM BUILDING AS PER CIVIL PLANS.
SITE DRAINAGE IS TO MAINTAINED AND REMAIN FREE OF OBSTRUCTIONS AT ALL TIMES AS PER CIVIL PLANS.

NOTES

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2) DO NOT SCALE OFF DRAWINGS. DRAWINGS ARE FOR ENGINEERING PURPOSES ONLY. REFER TO ARCHITECTURALS FOR SETOUT OF BUILDING AND RELEVANT REGULATORY PLANS FOR RELEVANT INFORMATION.
3) ALL EARTHWORKS TO COMPLY WITH AS3798.
4) ALL DRAINAGE AND PLUMBING WORKS TO COMPLY WITH AS3500.
5) LEVELS ARE FINISHED PAVEMENT LEVELS AND NOT TOP OF KERB UNLESS NOTED OTHERWISE.
6) ALL PITS GREATER THAN 900mm DEEP ARE TO BE MINIMUM 900x900 CONCRETE PITS.
7) OVERLAND ESCAPE FLOW PATHS TO BE MAINTAINED FOR THE LIFE OF THE DEVELOPMENT. OBSTRUCTIONS ARE NOT TO BE PLACED IN THE OVERLAND ESCAPE FLOW PATH. MINIMUM 150mm TO BE PROVIDED FROM FLOOR LEVELS TO OVERLAND FLOW ESCAPE BREAK-OUT POINTS.
8) ALL LANDSCAPING DETAILS BY OTHERS. ENSURE LANDSCAPING DOES NOT BLOCK OVERLAND FLOW ESCAPE

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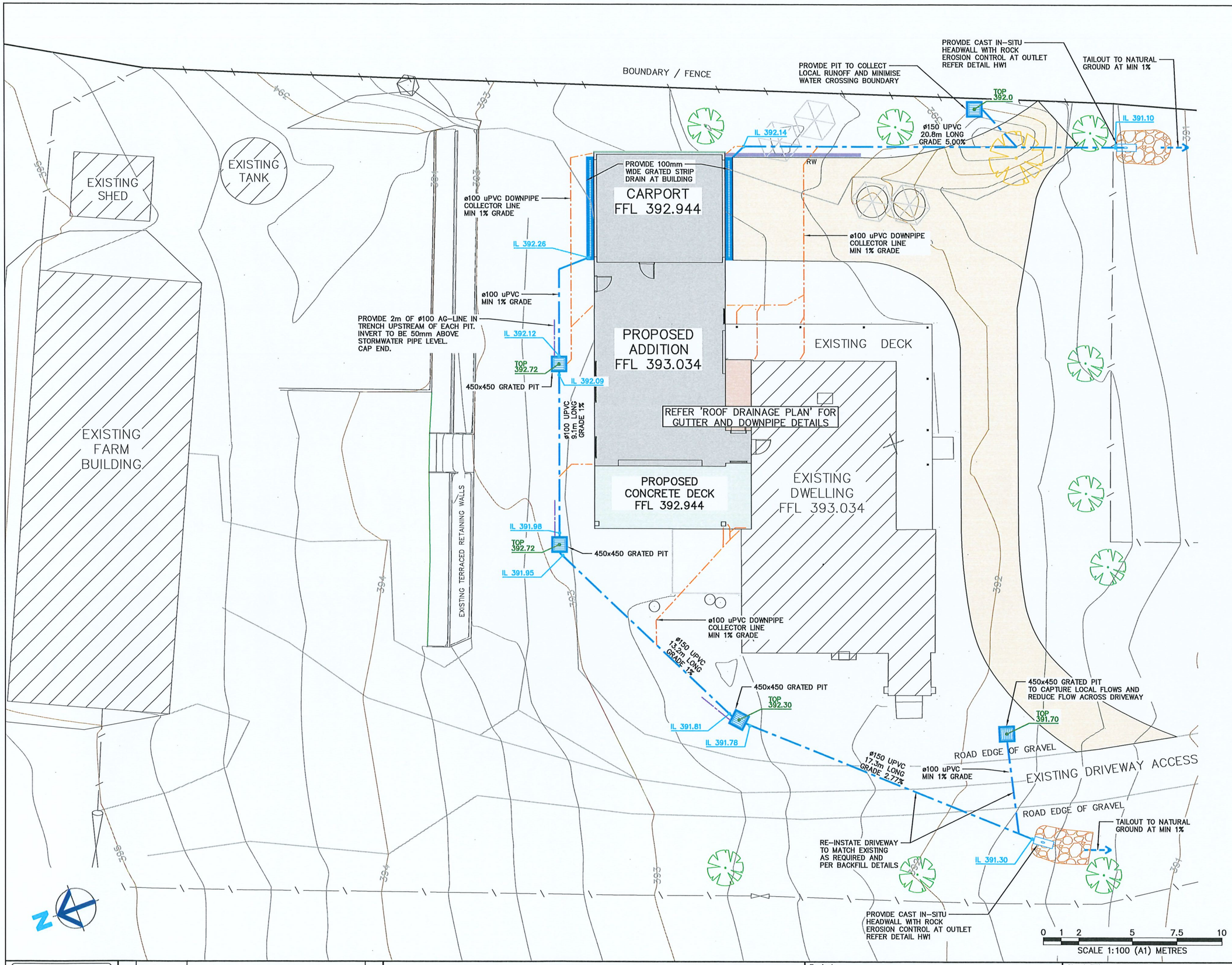
Project:
PROPOSED CIVIL WORKS FOR ADDITIONS TO RESIDENCE
LOT 351 DP 753624, 116 BURLEY GRIFFIN WAY, MURRUMBURRAH NSW 2587

Sheet Title: LAYOUT PLAN
Client: AMANDA SACHS
Checked:
Scale: 1:100 (A1) 1:200 (A3)
Approved:
Design: S.X | Drawn: C.A | Date: AUG 2024

Project Number: 240406
Sheet Number: C1 | Revision Number: B | Sheets In Set: 5



LEGEND

MARK	ITEM
270.0	PROPOSED TOP OF PIT LEVELS
IL 270.0	PROPOSED DRAINAGE LINE INVERT LEVELS
	PROPOSED BUILDING REFER TO ARCHITECTURAL DRAWINGS
	PROPOSED DECK REFER TO ARCHITECTURAL DRAWINGS
	PROPOSED DRIVEWAY PAVEMENT REFER DETAIL PV1
	EXISTING BUILDING
	PROPOSED DOWNPIPE COLLECTOR LINE UNDERGROUND – ø100 UPVC U.N.O REFER 'ROOF DRAINAGE PLAN'
	PROPOSED STORMWATER LINE
	PROPOSED ø100 AG-LINE
OR	PROPOSED STORMWATER PIT REFER TO SWP DETAILS
	PROPOSED STORMWATER STRIP DRAIN REFER TO DETAIL AC1
	EXISTING FENCE LINE
	EXISTING TREE
	EXISTING MAJOR CONTOURS AT 1.0m INCREMENTS
	EXISTING MINOR CONTOURS AT 0.25m INCREMENTS

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Project:
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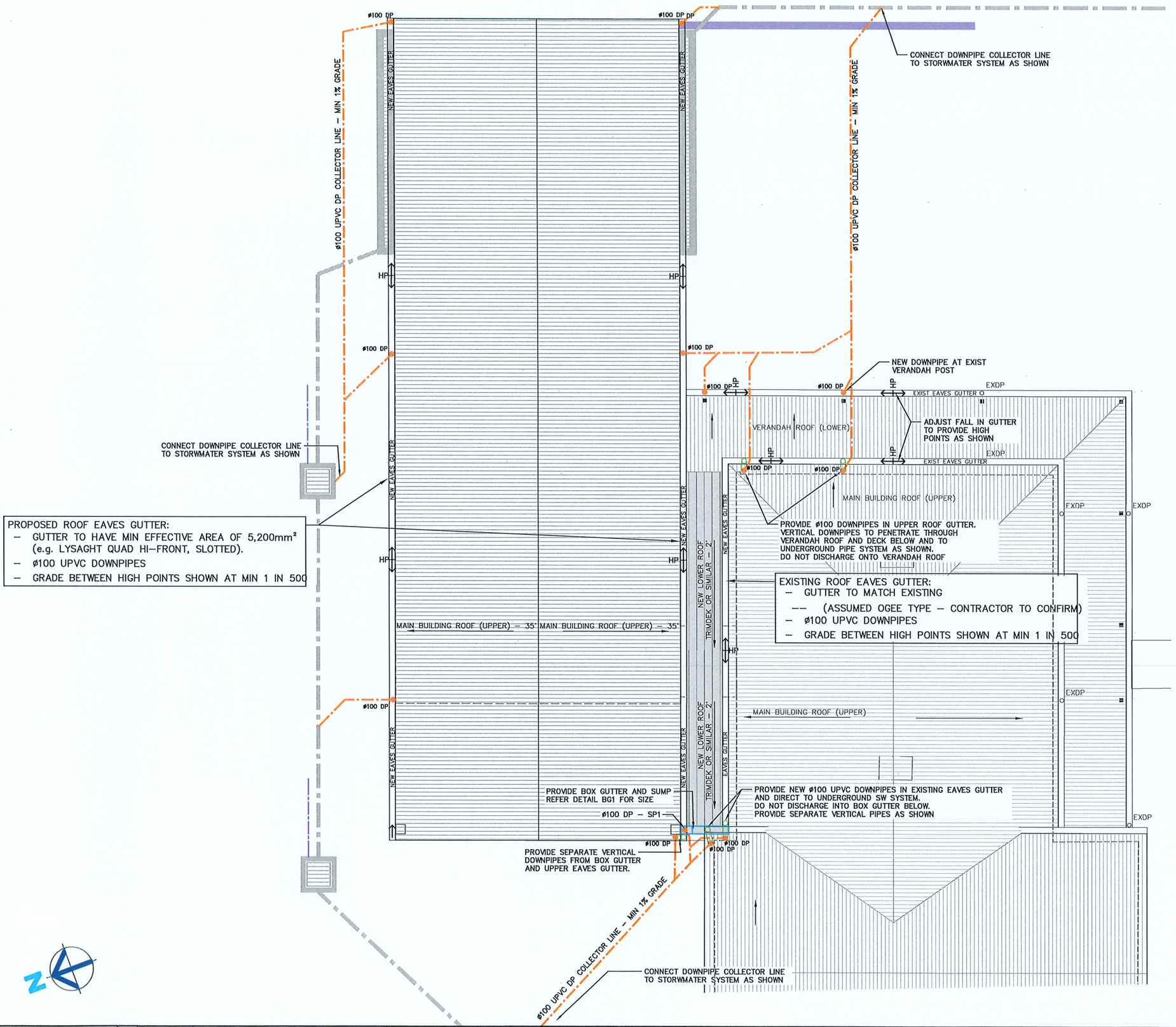
LOT 351 DP 753624, 116 BURLEY GRIFFIN WAY, MURRUMBURRAH NSW 2587

Sheet Title: STORMWATER PLAN
Client: AMANDA SACHS
Checked:
Scale: 1:100 (A1) 1:200 (A3)
Approved:
Design: S.X | Drawn: C.A | Date: AUG 2024

Project Number:	Sheet Number:	Revision Number:	Sheets In Set:
240406	C2	B	5



LEGEND

MARK	ITEM
HP	PROPOSED HIGH POINTS IN GUTTER
	PROPOSED BOX GUTTER REFER BOX GUTTER DETAILS
ø100 DP – SP1	PROPOSED SUMP AND DOWNPIPE FOR BOX GUTTER REFER BOX GUTTER DETAILS
ø100 DP	PROPOSED VERTICAL DOWNPIPE
	PROPOSED ABOVEGROUND PIPES FROM GUTTER TO VERTICAL DOWNPIPE
	PROPOSED DOWNPIPE COLLECTOR LINE UNDERGROUND ø100 UPVC U.N.O
	PROPOSED STORMWATER LINE REFER STORMWATER PLAN
OR	PROPOSED STORMWATER PIT REFER TO SWP DETAILS
	PROPOSED STORMWATER STRIP DRAIN REFER TO DETAIL AC1

EAVES GUTTER NOTES

1) PROVIDE NEW EAVES GUTTERS AS NOTED ON PLANS.
2) ON EXISTING BUILDING, EAVES GUTTER TO MATCH EXITING TYPE (SLOTTED OGEE TBC ON SITE)
3) ALL GUTTERS AND DOWNPIPES TO BE TO AS3500.3 AND NCC REQUIREMENTS
4) GUTTERS TO BE GRADED AT MIN. 1 IN 500
5) GUTTERS TO HAVE OVERFLOW MEASURES TO AS3500.3 AND NCC REQUIREMENTS
6) THIS DESIGN DOES NOT ADDRESS ANY ISSUES OR NON–COMPLIANCE INHERENT IN THE EXISTING ROOF DRAINAGE SYSTEM
7) OWNER TO REGULARLY MAINTAIN AND CLEAN OUT ALL GUTTERS AND DOWNPIPES AS REQUIRED

BOX GUTTER NOTES

1) PROVIDE NEW BOX GUTTERS AS NOTED ON PLANS AND IN ACCORDANCE WITH DETAILS PROVIDED
2) ALL GUTTERS AND DOWNPIPES TO BE TO AS3500.3 AND NCC REQUIREMENTS
3) GUTTERS TO BE GRADED AT MIN. 1 IN 200
4) SUMPS AND DOWNPIPES TO BE PROVIDED AT LOCATIONS SHOWN
5) OWNER TO REGULARLY MAINTAIN AND CLEAN OUT ALL GUTTERS AND DOWNPIPES AS REQUIRED

NOTES

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Sheet Title: ROOF DRAINAGE PLAN
Client: AMANDA SACHS
Checked:
Scale: 1:50 (A1) 1:100 (A3)
Approved:
Design: S.X | Drawn: C.A | Date: AUG 2024

Project Number: 240406
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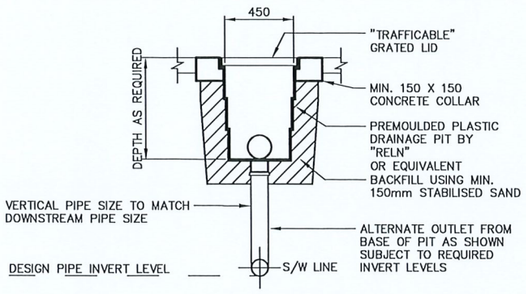
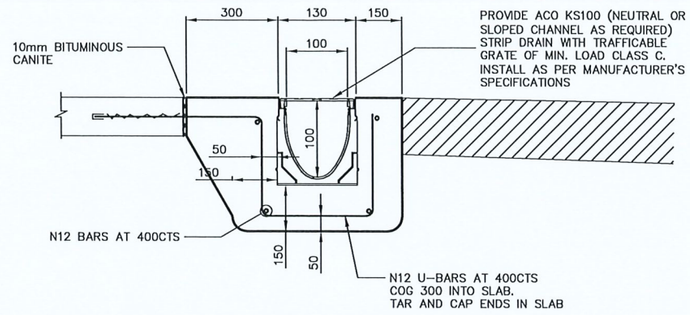


DETAIL SWP1
TYP. PLASTIC PIT DETAIL
(450 X 450)



DETAIL AC1
ACO KS100 GRATED STRIP DRAIN
(TRAFFICABLE)

SCALE: 1:10 (A1) 1:20 (A3)

NOTES:
1) STRIP DRAIN DIMENSIONS ARE AS PER MANUFACTURER'S DETAILS
2) INSTALL STRIP DRAIN AS PER MANUFACTURER'S SPECIFICATIONS
3) GRATE TO HAVE MINIMUM LOAD CLASS OF CLASS C AS PER AS3996
4) A STRIP DRAIN OF EQUIVALENT SIZE AND LOAD CLASS MAY BE USED IF NECESSARY

CONCRETE NOTES:

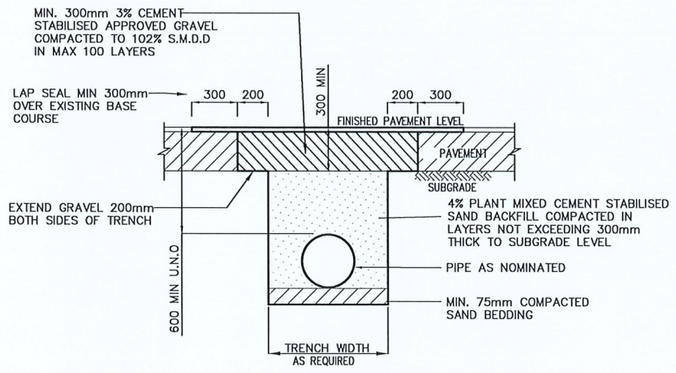
1. WORKMANSHIP AND MATERIALS TO BE IN ACCORDANCE WITH AS 3600 CONCRETE STRUCTURES AND CURRENT SAA CODES.
2. CONCRETE CHARACTERISTICS:

ELEMENT	GRADE (MPa 28 DAYS)	SLUMP (mm)	MAX. AGG. (mm)	ADDITIVES
SLAB	N32	80	20	NIL

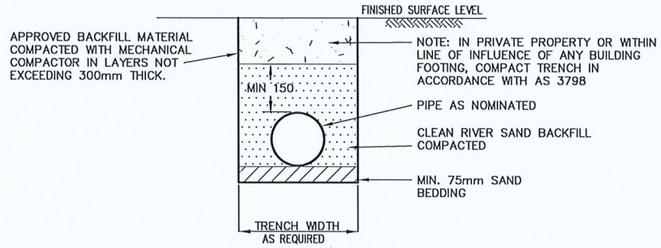
3. CONCRETE TO BE PLACED USING MECHANICAL VIBRATORS.
4. SLAB THICKNESS' DO NOT INCLUDE FINISH.
5. REINFORCING BARS AND REINFORCING FABRIC TO BE IN ACCORDANCE WITH RESPECTIVE SAA CODES.
(i) AS 1302 STEEL REINFORCING BARS FOR CONCRETE:
– R DENOTES PLAIN ROUND STRUCTURAL GRADE BARS, fsy=250MPa
– N DENOTES TEMPCORE STRUCTURAL GRADE DEFORMED BARS, fsy=500MPa
(ii) AS 1304 WELDED WIRE REINFORCING FABRIC FOR CONCRETE:
– RF DENOTES HIGH TENSILE WELDED WIRE FABRIC, fsy=500MPa
6. CLEAR CONCRETE COVER TO REINFORCEMENT TO BE:

ELEMENT		COVER (mm)
SURFACES IN CONTACT WITH GROUND		
– WITHOUT MEMBRANE		50
– WITH MEMBRANE	SLAB	30
	FOOTING	50
ABOVE GROUND INTERIOR		30
ABOVE GROUND EXTERIOR		30

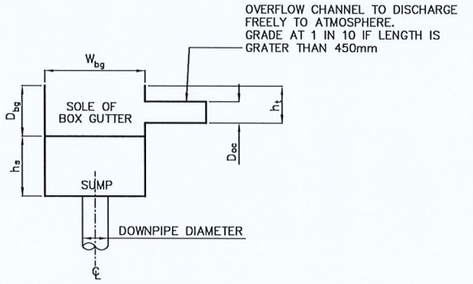
7. MASONRY SUPPORTING SLABS TO HAVE 2 LAYERS ALCOR "SLIP JOINT" BETWEEN THE TWO SURFACES.
8. SLABS ABUTTING MASONRY OR CONCRETE TO HAVE 10mm ZIPPED ABELFLEX BETWEEN THE SURFACES AND ARE TO BE SEALED WITH NITOSEAL SC800 SEALANT OR EQUIVALENT



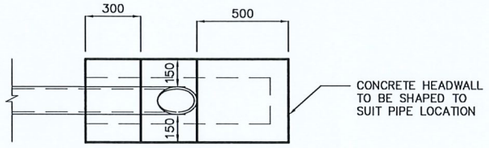
DETAIL BF1
STORMWATER PIPELINE BACKFILL
TRAFFICABLE AREAS



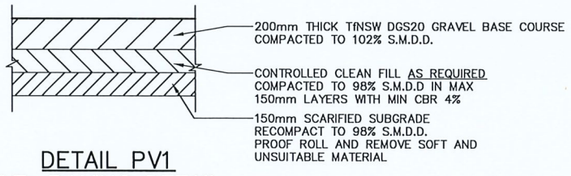
DETAIL BF2
TRENCH BACKFILL FOR PIPELINE
IN NON-TRAFFICABLE AREAS



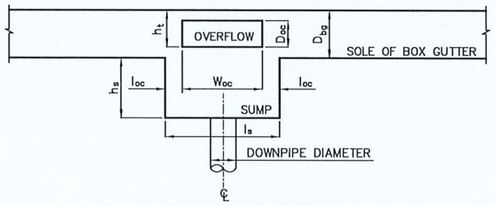
SIDE ELEVATION



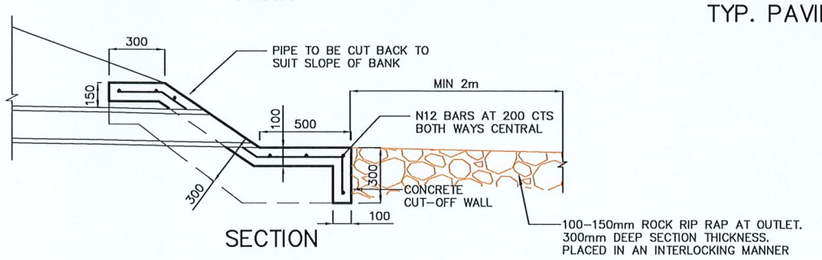
PLAN



DETAIL PV1
TYP. PAVING DETAIL



FRONT ELEVATION
STANDARD SUMP DETAIL



SECTION

DETAIL HW1
CAST-INSITU HEADWALL

DISCHARGE DEVICE No.	DISCHARGE DEVICE TYPE	BOX GUTTER SIZE WIDTH x DEPTH (mm)	SUMP SIZE: h_s x l_s (mm)	OVERFLOW CHANNEL SIZE: D_{oc} x W_{oc} (mm)	OVERFLOW SIDE CLEARANCE: l_{oc} (mm)	TOP OF GUTTER TO BASE OF OVERFLOW WEIR: h_t (mm)	DOWNPIPE DIAMETER (mm)
SP1	STANDARD SUMP	200 x 170	150 x 290	95 x 200	45	139	MIN ø100

DETAIL BG1
TYPICAL BOX GUTTER AND SUMP DETAIL

NOTES
1) ALL GUTTER AND DOWNPIPE SYSTEMS TO BE IN ACCORDANCE WITH AS3500
2) PROVIDE APPROPRIATE FLASHING AND SEALANT FOR JOINS
3) OVERFLOW CHANNEL TO BE DIRECTED TO DISCHARGE FREELY TO ATMOSPHERE AWAY FROM BUILDINGS

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SITE MANAGEMENT NOTES

1. CONTRACTOR TO PLAN DAYS ACTIVITIES TO ENSURE THAT TRENCHES EXCAVATED ARE BACKFILLED ON THE SAME DAY AND THE FINISHED SURFACE TOPSOILED AND SEEDED ETC AS SPECIFIED. CONTRACTOR TO ENSURE THAT ALL TRENCHES ARE WHEEL ROLLED TO PREVENT SETTLEMENT
2. WORKS THAT DON'T COMPLY WITH THE LAND AND WATER MANAGEMENT PLAN MAY RESULT IN A STOP WORK ORDER ON THE PROJECT. THIS STOP WORK ORDER WILL NOT BE LIFTED UNTIL THE NOMINATED WORKS HAVE BEEN RECTIFIED. NO EXTENSION TO THE CONTRACT PERIOD WILL BE ALLOWED FOR FOLLOWING THE STOP WORK ORDER.
3. IF SITE CONDITIONS ARE SUCH THAT VEHICLE MOVEMENTS WILL DAMAGE THE EXISTING LAND COVER, REFER TO THE SUPERINTENDENT FOR INSTRUCTION.
4. ALL DISTURBED AREAS TO HAVE 75 MIN TOPSOIL. IF COMPACTED, RIP TO LOOSEN AND SEED AS SPECIFIED.
5. WHERE CONTRACTOR DISTURBS AREAS WHICH ARE NOT REQUIRED FOR THE EXECUTION OF THE WORKS, THE CONTRACTOR WILL STABILIZE THE AREAS AT HIS OWN COST TO THE SATISFACTION OF THE SUPERINTENDENT. LIMIT OF WORKS 3m FROM BATTER LINE OR 5m FROM PIPE TRENCH.
6. EROSION CONTROL
   - 6.1. CONTRACTOR TO CONSIDER POTENTIAL FUTURE EROSION PROBLEMS IN ALL STAGES OF WORKS. IF THERE IS A POTENTIAL PROBLEM THAT HAS NOT ALREADY BEEN ACCOUNTED FOR, XEROS PICCOLO CONSULTING ENGINEERS ARE TO BE CONTACTED
   - 6.2. VEGETATION TO BE PRESERVED AS MUCH AS POSSIBLE. WHERE SEEDLINGS ARE GROWING ON STEEP BATTERS PROVIDE MULCHES TO CONSERVE MOISTURE AND PROMOTE GROWTH.
   - 6.3. PROVIDE SILT FENCES OR STRAW BALES AS SHOWN ON PLANS OR AS NOMINATED BY THE SUPERINTENDENT
   - 6.4. SILT FENCES TO BE MOVED DURING CONSTRUCTION TO SUIT LOCATION OF CURRENT WORKS
7. TOPSOIL STOCKPILES SITES TO BE SEEDED WITH PERENNIAL RYE GRASS AT 25KG/HA AND RYE CORN AT 5KG/HA TO PREVENT SOIL MIGRATION.
8. ALL COMPLETED BATTERS, SWALE DRAINS, DEFLECTION BANKS ETC TO BE LIGHTLY RIPPED 50mm DEEP, COVERED WITH 75 MIN TOPSOIL AND SEEDED AS SPECIFIED. ON COMPLETION PROVIDE 1 PASS WITH PAD FOOT ROLLER.
9. AS ASPECTS OF WORK ARE COMPLETED, TOPSOIL AND SEED AS DETAILED WITHIN 3 WORKING DAYS
10. SURPLUS SPOIL STOCKPILE LOCATION TO BE DETERMINED ON SITE.

CONSTRUCTION SEQUENCE

1. BEFORE/DURING STRIPPING OF TOPSOIL
   - 1.1. CONSTRUCT DEFLECTION BANKS AROUND TOPSOIL STOCKPILE AND ASSOCIATED SILT FENCES.
   - 1.2. CONSTRUCT 200 HIGH PUSH UP BANKS AND ASSOCIATED SILT FENCES.
2. CONSTRUCTION OF 300 HIGH DEFLECTION BANKS AND BUNDING FORMED FROM BULK EARTHWORKS AND ASSOCIATED SILT FENCES CONSTRUCTED AS DETAILED.
3. STOCKPILE TO BE SEEDED AS SPECIFIED WITHIN 7 WORKING DAYS.
4. AFTER CONSTRUCTION OF DRAINAGE LINES DISTURBED AREAS TO BE RECTIFIED AS DETAILED WITHIN 7 DAYS OF BACKFILLING.
5. REMOVABLE STRAW BALE SILT FENCE TO BE AVAILABLE ON SITE FOR PROTECTION OF THE SITE IF RAIN IMMINENT.
6. SERVICES TO BE INSTALLED PRIOR TO TOPSOILING AND SEEDING OF BATTERS AND FOOTPATHS.

REHABILITATION & REGENERATION NOTES

PREPARE AREA TO BE REHABILITATED AND REGENERATED AS PER SPECIFICATIONS

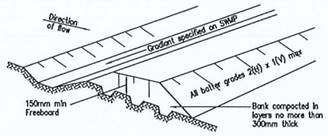
7. AREAS SHOULD BE RESHAPED TO BLEND IN WITH NATURAL LANDSCAPE AS MUCH AS POSSIBLE. STABILIZE WHERE REQUIRED
8. SITE TO BE SHAPED TO BE FREE DRAINING WHERE POSSIBLE.
9. TYNE COMPACTED AREAS TO IMPROVE 'ROUGHNESS' AT THE SEED BED IN PREPARATION FOR TOPSOIL. DEEP RIPPING MAY BE REQUIRED FOR HARD PAVEMENTS.
10. REDUCE ALL SLOPES TO A GRADIENT OF 1:3 OR LESS. BENCH IN THE AREAS WHERE SLOPE LENGTHS EXCEED 15m. WHERE BENCHING IS NOT PRACTICAL PROVIDE CONTOUR BANK MIN 500mm HIGH.
11. SPREAD TOP SOIL AND LEAVE WITH ROUGH SURFACE. CARE TO BE TAKEN TO ENSURE THAT TOP SOIL IS NOT TOO WET AS THIS WILL NOT PERFORM ADEQUATELY.
12. IF ADDITIONAL CHUTES ARE REQUIRED CONTACT XEROS PICCOLO.

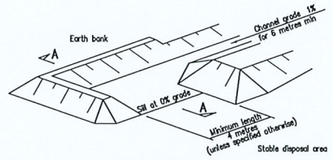
SEEDING NOTES

1. SEEDING TO PROVIDED AS SPECIFIED ON PLANS
2. SEED IS TO BE PLANTED AS PER STANDARD PRACTICE IN REGARDS TO WATERING AND PLANTING SEASON. USE HIGH QUALITY SEEDS THAT DON'T CONTAIN NOXIOUS WEEDS.
3. CONTRACTOR TO TAKE INTO ACCOUNT SEASON AND WEATHER PRIOR TO SEEDING TO ALLOW SEED THE BEST OPPORTUNITY TO GERMINATE.
4. ALL DISTURBED AREAS THAT ARE NOT BEING USED FOR A TRACK OF OTHER PURPOSES ARE TO BE TOPSOILED AND SEEDED.
5. PREPARE A SMOOTH SEEDBED AND APPROX. 75mm – 100mm OF TOPSOIL. GRADE SMOOTHLY TO REMOVE IRREGULARITIES AND FOOT PRINTS. SEED, FERTILIZE AND WATER.
6. WATERING SHOULD START IMMEDIATELY AFTER PLANTING. WATERING SHOULD COMPLY WITH SPECIFICATIONS SUPPLIED WITH APPROVED SEED. WATERING SHOULD VARY DEPENDING ON WEATHER, SEASON AND SOIL CONDITIONS. BUT AS A MINIMUM THE FOLLOWING SHOULD BE DONE.
   - 25mm EVERY SECOND DAY FOR THE FIRST THREE WATERINGS
   - 25mm TWICE A WEEK FOOR THE NEXT THREE WEEKS
   - 25mm OUNCE WEEKLY FOR A FURTHER TWO WEEKS.
6. IF BATTER SLOPE OF DISTURBED AREA IS 1 IN 4 OR GREATER PROVIDE JUTE LINING. ALL DEDICATED DRAINAGE PATHS SHALL BE JUTE LINED. REFER JUTE LINING NOTES AND DETAILS

TURFING NOTES

1. TURFING TO BE PROVIDED AS SPECIFIED ON PLANS
2. PREPARATION
   - 2.1. REMOVE ANY EXISTING TURF, WEEDS AND DEBRIS FROM ALL AREAS TO BE TURFED. CULTIVATE EXISTING SUBGRADE TO 100mm DEPTH
3. TOPSOIL
   - 3.1. ALL TOPSOIL SHALL COMPLY WITH AS4419 'SOILS FOR LANDSCAPING AND GARDEN USE'.
   - 3.2. TOPSOIL SHALL BE A SOIL BLEND WITH MAX. 30% SCREENED COMPOSTED ORGANIC MATTER, HYDRAULIC CONDUCTIVITY 15–30cm/hr. PH RANGE TO BE 5–6.5.
   - 3.3. AFTER APPROVAL OF THE PROPOSED TOPSOIL, DEPOSIT AND SPREAD TOPSOIL TO ACHIEVE 100mm THICKNESS TO ALL DISTURBED AREAS
4. TURFING
   - 4.1. TURF SHALL BE 'KIKUYU' UNLESS OTHERWISE DIRECTED BY A LANDSCAPE ARCHITECT OR SUPERINTENDENT. TURF SHALL BE 'A' GRADE, TYPICAL OF THE SPECIES, FREE FROM ALL PESTS, DISEASES, WEEDS AND OTHER PLANT MATTER.
   - 4.2. TURF SHALL BE GUARANTEED FREE FROM NUT GRASS, 'CYPERUS ROTUNDUS',
   - 4.3. TURF SHALL BE CUT TO A MINIMUM 25mm THICK IN LONG 300m WIDE STRIPS.
5. LAYING
   - 5.1. LAY PIECES OF TURF IN STRAIGHT LINES RUNNING PERPENDICULAR TO THE SLOPE, WITH CROSS JOINTS STAGGERED, AND CLOSE BUTTING.
   - 5.2. LAY TURF WITH AN EVEN GRADIENT, FREE FROM LUMPS AND DEPRESSIONS AND NOT ABLE TO POND WATER. ENSURE THAT NEW TURF FINISHES FLUSH WITH EXISTING GRASS OR TURF.
   - 5.3. TAMP DOWN AND FILL ALL JOINTS WITH TOP DRESSING. TOP DRESSING IS TO BE PIT SAND TO COMPLY WITH AS 4419. SPREAD SAND EVENLY OVER SURFACE OF GRASS IN LAYERS OF NOT MORE THAN 10mm. DO NOT BURY GRASS.
6. TOP DRESSING
   - 6.1. WHEN TURFED AREAS HAVE BECOME ESTABLISHED AND IMMEDIATELY AFTER THE FIRST CUT, TOP DRESS TURF WITH 10mm LAYER OF TOP DRESSING TO AS4419.
   - 6.2. DO NOT TOP DRESS DURING WINTER MONTHS UNLESS DIRECTED BY SUPERINTENDENT
7. PROTECTION – ALL NEW TURF SHALL BE PROTECTED FROM TRAMPLING BY THE ERECTION OF BARRIERS.

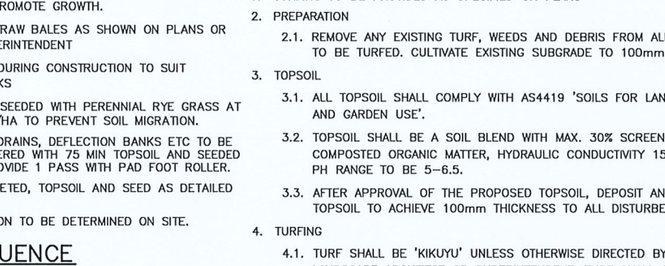




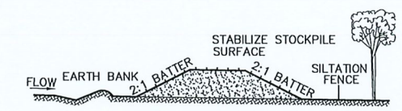
LEVEL SPREADER (OR SILL)

JUTE LINING NOTES

1. JUTE LINING TO BE PROVIDED AS SPECIFIED ON PLANS
2. CONTRACTOR TO COMPLY WITH ALL MANUFACTURES REQUIREMENTS OF THE SELECTED PRODUCT BUT MUST MEET THE BELOW REQUIREMENTS AS A MINIMUM.
3. REFER TO APPROVED PLANS AND NOTES FOR THE LOCATION AND EXTENT OF WORKS REQUIRED.
4. SOIL SURFACE IRREGULARITIES AND ROCKS ON SURFACE ARE TO BE REMOVED.
5. PREPARE A SMOOTH SEEDBED AND APPROX. 75mm OF TOPSOIL. GRADE SMOOTHLY TO REMOVE IRREGULARITIES AND FOOT PRINTS. COMPLETE ALL SEEDING, FERTILIZING AND WATERING PRIOR TO LAYING MATTING
6. PREFERABLY STARTING AT THE DOWN STREAM END, ALIGN FABRIC ROLLS IN THE DIRECTION OF THE FLOW. IF THE AREA IS SUBJECT TO MULTIPLE FLOWS, ALIGN WITH DOMINANT FLOW.
7. WHEN SPREADING THE FABRIC DO NOT STRETCH THE TEXTILE MESH. THE BLANKETS MUST BE IN GOOD CONTACT WITH GROUND AT ALL POINTS.
8. FABRIC BLANKETS TO BE STAPLED AT 1m CTS IN EXPOSED AREAS AND 0.5m CTS ALONG ALL EDGES
10. THE UPSTREAM END OF TOP MOST SHEETS SHALL BE PLACED IN A 300mm DEEP TRENCH, STAPLED AT 0.15m CTS, BURIED AND TAMPED. REFER DETAIL
11. MINIMUM EVERY THIRD SHEET TO BE PLACED IN A 300mm DEEP TRENCH, STAPLED AT 0.15m CTS, BURIED AND TAMPED. REFER DETAIL
12. OVERLAP ENDS BY 300mm WITH THE UPSTREAM SHEET PLACED OVER THE DOWNSTREAM SHEET. STAPLE AT 0.5m CTS
13. STAPLES SHOULD BE A "U" SHAPE 8 GAUGE WIRE 100mm WIDE WITH 150–300mm PENETRATION LENGTH
14. WHEREVER THE BLANKET DOES NOT TOUCH THE GROUND ADDITIONAL STAPLES MUST BE PLACED.

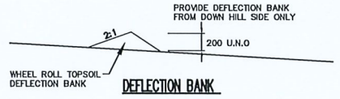


STABILIZED ACCESS POINT SD 6–14

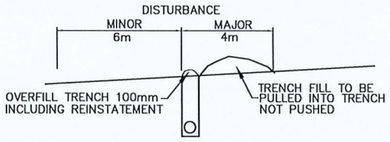


STOCKPILE SD 4–1

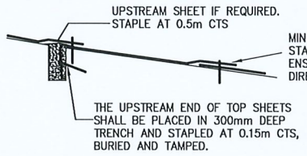
CONSTRUCTION NOTES
1. LOCATE STOCKPILE AT LEAST 5 METRES FROM EXISTING VEGETATION, CONCENTRATED WATER FLOWS, ROADS & HAZARD AREAS.
2. CONSTRUCT ON THE CONTOUR AS A LOW, FLAT, ELONGATED MOUND.
3. WHERE THERE IS SUFFICIENT AREA TOPSOIL STOCKPILES SHALL BE LESS THAN 2 METRES IN HEIGHT.
4. REHABILITATE IN ACCORDANCE WITH THE SWMP/ESCP.
5. CONSTRUCT EARTH BANK (STANDARD DRAWING 5–2) ON THE UPSLOPE SIDE TO DIVERT RUN OFF AROUND THE STOCKPILE & A SEDIMENT FENCE (STANDARD DRAWING 6–8) 1 TO 2 METRES DOWNSLOPE OF STOCKPILE.



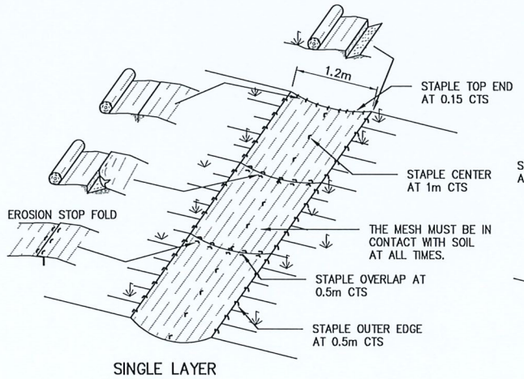
DEFLECTION BANK



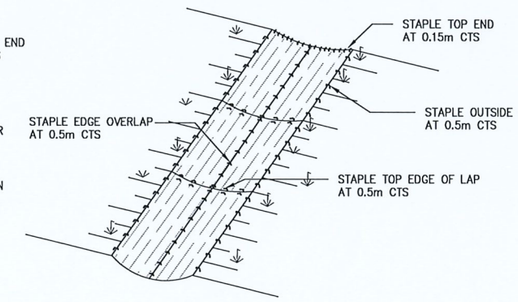
TRENCH DISTURBANCE



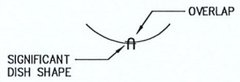
TRANSVERSE OVERLAP DETAIL



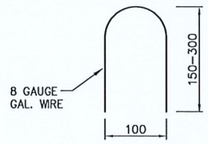
SINGLE LAYER



MULTIPLE LAYERS

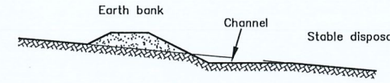


LONGITUDINAL OVERLAP DETAIL



STAPLE DETAIL

JUTE LINING DETAIL

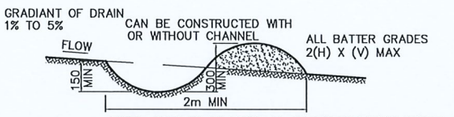


SECTION A–A

EARTH BANK(HIGH FLOW) SD 5–3

FOR CATCHMENT > 2ha

CONSTRUCTION NOTES
1. CONSTRUCT ALONG GRADIANT AS SPECIFIED.
2. AVOID REMOVING TREES & SHRUBS IF POSSIBLE.
3. DRAINS TO BE OF PARABOLIC OR TRAPEZOIDAL CROSS SECTION AS OPPOSED TO V–SHAPE.
4. EARTH BANKS TO BE ADEQUATELY COMPACTED IN ORDER TO PREVENT FAILURE.
5. PERMANENT OR TEMPORARY STABILISATION OF THE EARTH BANK TO BE COMPLETED WITHIN 10 DAYS OF CONSTRUCTION.
6. ALL OUTLETS FROM DISTURBED LANDS ARE TO FEED INTO A SEDIMENT BASIN OR SIMILAR.
7. DISCHARGE RUNOFF COLLECTED FROM UNDISTURBED LANDS ONTO EITHER A STABILISED OR AN UNDISTURBED DISPOSAL SITE WITHIN THE SAME SUBCATCHMENT AREA FROM WHICH THE WATER ORIGINATED
8. COMPACT BANK WITH A SUITABLE IMPLEMENT IN SITUATIONS WHERE THEY ARE REQUIRED TO FUNCTION FOR MORE THAN FIVE DAYS.
9. EARTH BANKS TO BE FREE OF PROJECTIONS OR OTHER IRREGULARITES THAT WILL IMPEDE NORMAL FLOW.

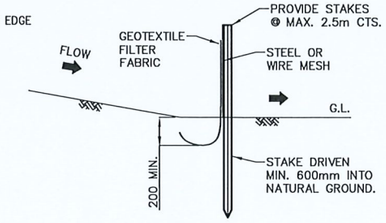


NOTE: ONLY TO BE USED AS TEMPORARY BANK WHERE MAXIMUM UPSLOPE LENGTH IS 80 METRES

EARTH BANK(LOW FLOW) SD 5–5

FOR CATCHMENT <2ha

CONSTRUCTION NOTES
1. CONSTRUCT WITH GRADIANT OF 1 PER CENT TO 5 PER CENT.
2. AVOID REMOVING TREES & SHRUBS IF POSSIBLE.
3. DRAINS TO BE OF CIRCULAR, PARABOLIC OR TRAPEZOIDAL CROSS SECTION NOT V–SHAPED.
4. EARTH BANKS TO BE ADEQUATELY COMPACTED IN ORDER TO PREVENT FAILURE.
5. PERMANENT OR TEMPORARY STABILISATION OF THE EARTH BANK TO BE COMPLETED WITHIN 10 DAYS OF CONSTRUCTION.
6. ALL OUTLETS FROM DISTURBED LANDS ARE TO FEED INTO A SEDIMENT BASIN OR SIMILAR.
7. DISCHARGE RUNOFF COLLECTED FROM UNDISTURBED LANDS ONTO EITHER A STABILISED OR AN UNDISTURBED DISPOSAL SITE WITHIN THE SAME SUBCATCHMENT AREA FROM WHICH THE WATER ORIGINATED
8. COMPACT BANK WITH A SUITABLE IMPLEMENT IN SITUATIONS WHERE THEY ARE REQUIRED TO FUNCTION FOR MORE THAN FIVE DAYS.
9. EARTH BANKS TO BE FREE OF PROJECTIONS OR OTHER IRREGULARITES THAT WILL IMPEDE NORMAL FLOW.



TYP. SEDIMENT CONTROL FENCE DETAIL SD 6–8

NOTE: THE FOLLOWING CONDITIONS MUST NOT BE EXCEEDED WITHIN THE CONTRIBUTING AREA:
DRAINAGE AREA = 0.6ha
SLOPE GRADIENT = 1:2
SLOPE LENGTH = 60m

BEFORE YOU DIG www.byda.com.au
UNDER GROUND SERVICES ARE APPROXIMATE ONLY. CONTACT RELEVANT AUTHORITY PRIOR TO ANY EXCAVATION OR CONSTRUCTION.

No.	DATE	DETAILS	BY
B	30.01.2025	RE–ISSUED FOR CONSTRUCTION	S.X
A	16.12.2024	ISSUED FOR CONSTRUCTION	S.X
P1	22.11.2024	ISSUED FOR REVIEW	S.X

XEROS PICCOLO CONSULTING ENGINEERS
5 BYE STREET
WAGGA WAGGA, NSW, 2650
P (02) 6925 5855
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E WAGGA@XEROSPICCOLO.COM.AU
A.C.N. 137 881 853

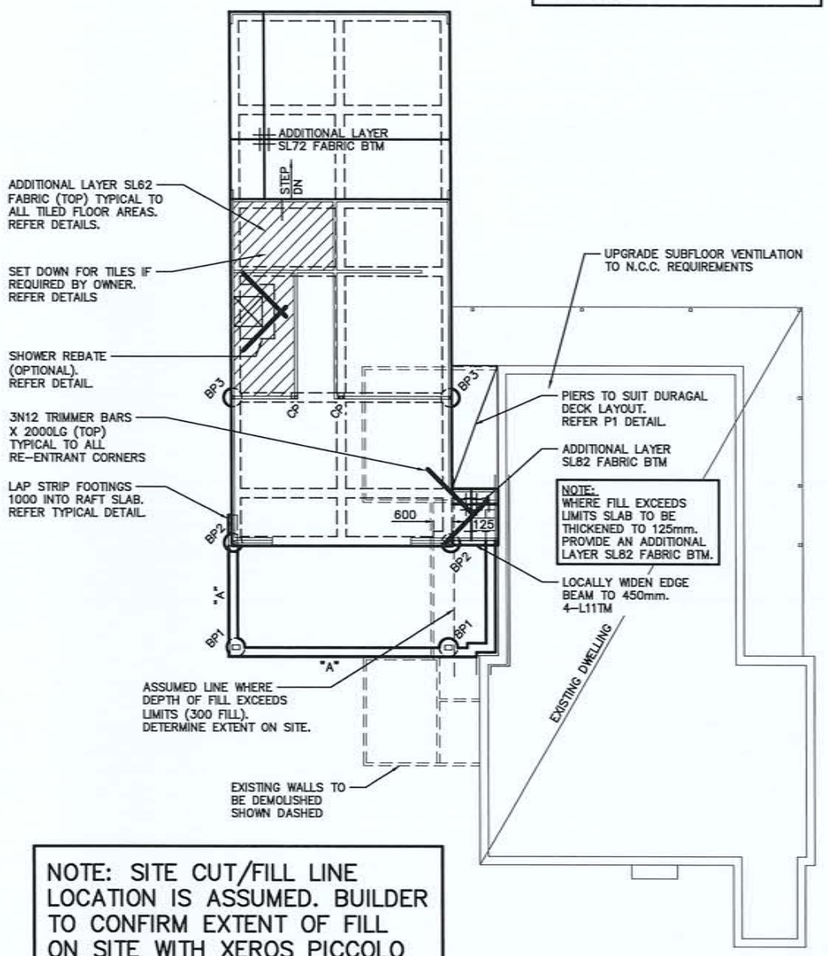
Project: PROPOSED CIVIL WORKS FOR ADDITIONS TO RESIDENCE
LOT 351 DP 753624, 116 BURLEY GRIFFIN WAY, MURRUMBURRAH NSW 2587

Sheet Title: EROSION AND SEDIMENTATION CONTROL DETAILS
Client: AMANDA SACHS
Scale: N/A
Design: S.X | Drawn: C.A | Date: AUG 2024
Checked:
Approved:

Project Number: 240406
Sheet Number: C5 | Revision Number: B | Sheets in Set: 5

NOTE: DURING EXCAVATION TRENCHES ARE TO BE CAREFULLY EXAMINED FOR THE PRESENCE OF ANY FILL.
IF ANY FILL IS DETECTED OR IN DOUBT CONTACT XEROS PICCOLO ENGINEERS.

NOTE: WALL FRAME BRACING AND TIE DOWN TO BE IN ACCORDANCE WITH AS.1684.
TO DETAILS BY OTHERS.
THIS SLAB DESIGN HAS NO PROVISION FOR INTERNAL LOAD BEARING WALLS AND THEREFORE IS TO BE CONFIRMED WITH TRUSS MANUFACTURERS LAYOUT PRIOR TO CONSTRUCTION.



NOTE: SITE CUT/FILL LINE LOCATION IS ASSUMED. BUILDER TO CONFIRM EXTENT OF FILL ON SITE WITH XEROS PICCOLO PRIOR TO CONSTRUCTION.

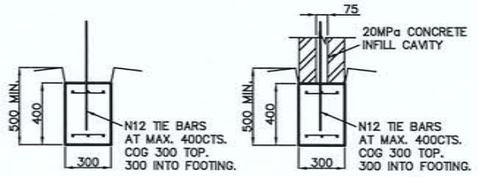
RAFT SLAB PLAN

1. SITE TO BE STRIPPED OF VEGETATION AND EXPOSED SURFACE PROOF ROLLED. ANY SOFT OR HEAVING AREAS SHALL BE EXCAVATED AND REPLACED AND COMPACTED WITH GRANULAR SELECT FILL AS REQUIRED.
2. WHERE FILL IS REQUIRED UNDER SLABS ROLLED FILL IS TO BE USED– ROLLED FILL CONSISTS OF MATERIAL COMPACTED IN LAYERS BY REPEATED ROLLING WITH AN EXCAVATOR. ROLLED FILL SHALL NOT EXCEED 600 COMPACTED IN LAYERS NOT MORE THAN 300 THICK FOR SAND MATERIAL OR 300 COMPACTED IN LAYERS NOT MORE THAN 150 THICK FOR OTHER MATERIAL.
3. DEPTH OF FILL IS NOT TO EXCEED THESE LIMITS WITHOUT PRIOR APPROVAL FROM XEROS PICCOLO CONSULTING ENGINEERS.
4. UNLESS NOTED OTHERWISE, SLAB TO BE MINIMUM 100mm THICK ON 50mm SAND BLINDING AND REINFORCED WITH 1 LAYER SL72 FABRIC PLACED 30mm FROM TOP OF SLAB WITH ADDITIONAL REINFORCEMENT AS INDICATED.
5. INTERNAL AND EXTERNAL BEAMS ARE TO BEAR ONTO NATURAL BROWN SANDY GRAVELLY CLAY, APPROXIMATELY 200mm BELOW NATURAL SURFACE.
6. PROVIDE A 0.2mm THICK HIGH IMPACT RESISTANT DAMP PROOFING MEMBRANE TO THE UNDERSIDE OF SLAB.

NOTE: THIS DESIGN IS BASED ON NEW RESIDENTIAL SLABS AND FOOTINGS CODE AS.2870–2011

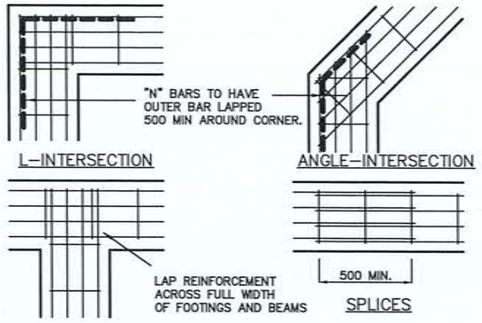
FOOTING PLAN

FOOTINGS ARE TO BE FOUNDED BELOW THE TOPSOIL AND INTO THE UNDISTURBED NATURAL MATERIAL APPROXIMATELY 500 BELOW NATURAL SURFACE WITH AN ALLOWABLE BEARING CAPACITY OF 100kPa



STRIP FOOTING DETAILS

UNLESS NOTED OTHERWISE, STRIP FOOTINGS ARE TO BE REINFORCED WITH L11TM TOP AND BOTTOM AND TIED WITH (300mm) BOGAR CLIPS OR EQUIVALENT AT MAXIMUM 900CTS.

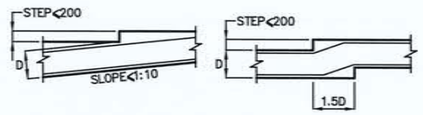


REINFORCEMENT LAPPING DETAILS

DETAILS ARE TYPICAL FOR TOP AND BOTTOM OF STRIP FOOTINGS AND BOTTOM OF RAFT SLAB BEAMS.

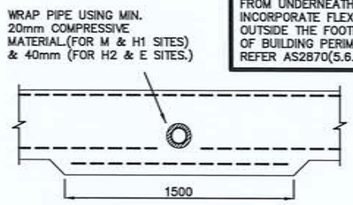
MINIMUM LAP REQUIREMENT

REINFORCEMENT	MIN SPLICES	MIN LAP AT "T" INTERSECTIONS	MIN LAP AT "L" INTERSECTIONS
REINFORCING BAR(N BARS)	500	FULL WIDTH ACROSS JUNCTION	L–BAR LAPPED 500 MIN
TRENCH MESH	500	FULL WIDTH ACROSS JUNCTION	FULL WIDTH ACROSS JUNCTION



ACCEPTABLE METHODS OF STEPPING STRIP FOOTINGS

NOTE: FOR "H" & "E" SITES
ALL DRAINS ATTACHED TO OR EMERGING FROM UNDERNEATH THE BUILDING SHALL INCORPORATE FLEXIBLE JOINTS IMMEDIATELY OUTSIDE THE FOOTING AND WITHIN 1m OF BUILDING PERIMETER.
REFER AS2870(5.6.4(b))

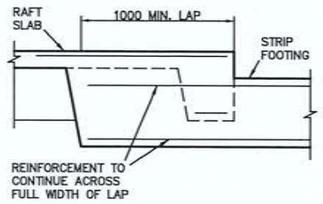


PIPE PENETRATION DETAIL

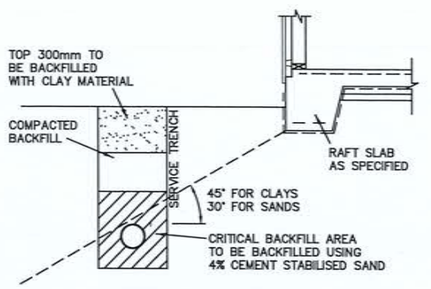
PENETRATIONS THRU BEAMS TO OCCUR IN THE MIDDLE THIRD OF THE BEAM DEPTH. LOCALLY DEEPEN BEAM AS REQUIRED & PROVIDE AN ADDITIONAL LAYER TRENCH MESH IN THIS AREA.

NOTE: WHERE PIPES PASS UNDER THE FOOTING SYSTEM. THE TRENCH SHALL BE BACKFILLED FULL DEPTH WITH CLAY TO ACT AS A BARRIER TO THE INGRESS OF WATER BENEATH THE FOOTINGS.

THE BASE OF ALL TRENCHES SHALL BE SLOPED AWAY FROM THE BUILDING.

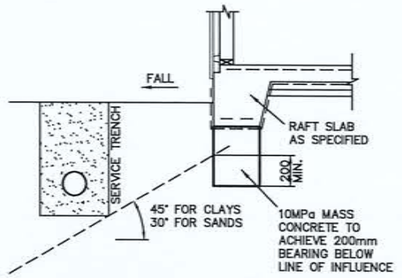


STRIP FOOTING TO RAFT SLAB LAPPING DETAIL

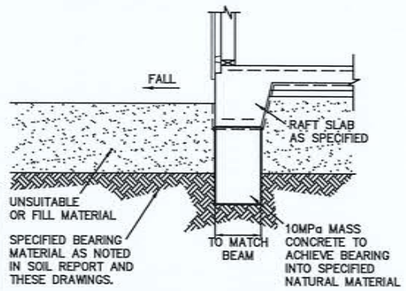


SERVICE TRENCH

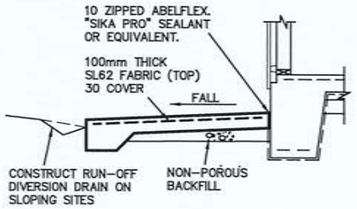
STABILITY OF SERVICE TRENCHES TO BE MAINTAINED DURING CONSTRUCTION



UNDERPIN DETAIL AT EXISTING SERVICE TRENCH

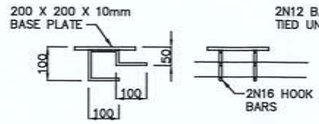


UNDERPIN DETAIL TO ACHIEVE MINIMUM BEARING



TYPICAL PATHWAY DETAIL

PATHWAY WITH FALL AWAY FROM BUILDING RECOMMENDED TO PERIMETER OF BUILDING. PROVIDE CONTROL JOINTS AT MAX. 3000CTS.



TYPICAL CAST IN PLATE DETAIL "CP"

GENERAL NOTES:

1. THESE DRAWINGS SHALL BE READ IN CONJUNCTION WITH THE APPROVED BUILDING DESIGNER AND CONSULTANT'S DRAWINGS AND SPECIFICATION AND WITH WRITTEN INSTRUCTION ISSUED DURING THE CONTRACT PERIOD.
2. DISCREPANCIES SHALL BE REFERRED TO THE BUILDING DESIGNER AND XEROS PICCOLO PRIOR TO CONSTRUCTION.
3. DO NOT SCALE OFF THESE DRAWINGS. SETTING OUT DIMENSIONS MUST BE VERIFIED BY THE BUILDING CONTRACTOR ON SITE.

SITE SUPERVISION:

1. THE ADEQUACY OF DESIGN DETAILS ON THESE DRAWINGS HAS BEEN DETERMINED BY PRE DESIGN SITE INVESTIGATION AND MUST BE VERIFIED DURING CONSTRUCTION BY XEROS PICCOLO.

SITE CLASSIFICATION:

IN ACCORDANCE WITH AS 2870 RESIDENTIAL SLABS AND FOOTINGS:

TYPE OF CONSTRUCTION	CLAD FRAME
SITE CLASSIFICATION	"M"
CLASSIFIED BY	ENVIROSEER
SELECTED FOOTING SYSTEM	SR

SALT AFFECTED AREAS:

MINIMUM REQUIREMENTS IN SALT AFFECTED AREAS:
- 25MPa CONCRETE (W/C = 0.45)
- 50mm COVER
- MECHANICAL VIBRATION
- 0.2mm HIGH IMPACT RESISTANT DAMP–PROOFING MEMBRANE
- TYPE SR CEMENT
- DAMP CURE FOR 3 DAYS
- EXPOSURE CATEGORY BRICKS BELOW DAMP PROOF COURSE

CONCRETE NOTES:

1. WORKMANSHIP AND MATERIALS TO BE IN ACCORDANCE WITH AS 3600 CONCRETE STRUCTURES AND CURRENT SAA CODES.
2. CONCRETE CHARACTERISTICS:

ELEMENT	GRADE (MPa 28 DAYS)	SLUMP (mm)	MAX. AGG. (mm)	ADDITIVES
FOOTING	N20	80	20	NIL
SLAB	N25	80	20	NIL

3. CONCRETE TO BE PLACED USING MECHANICAL VIBRATORS.
4. SLAB THICKNESS' DO NOT INCLUDE FINISH.
5. REINFORCING BARS AND REINFORCING FABRIC TO BE IN ACCORDANCE WITH RESPECTIVE SAA CODES.
(I) AS 4671 STEEL REINFORCING BARS FOR CONCRETE:
– R DENOTES PLAIN ROUND STRUCTURAL GRADE BARS, fsy=250MPa
– N DENOTES STRUCTURAL GRADE DEFORMED BARS, fsy=500MPa
(II) AS 4671 WELDED WIRE REINFORCING FABRIC FOR CONCRETE:
– L DENOTES HIGH TENSILE WELDED WIRE FABRIC, fsy=500MPa
6. CLEAR CONCRETE COVER TO REINFORCEMENT TO BE:

ELEMENT		COVER (mm)
SURFACES IN CONTACT WITH GROUND		
– WITHOUT MEMBRANE		50
– WITH MEMBRANE	SLAB	30
	FOOTING	50
ABOVE GROUND INTERIOR		30
ABOVE GROUND EXTERIOR		30

7. MASONRY SUPPORTING SLABS TO HAVE 2 LAYERS ALCOR "SLIP JOINT" BETWEEN THE TWO SURFACES.
8. SLABS ABUTTING MASONRY OR CONCRETE TO HAVE 10mm ZIPPED ABELFLEX BETWEEN THE SURFACE AND SEALED WITH AN APPROVED EXTERNAL GRADE POLYURETHANE SEALANT "SIKA PRO" OR SIMILAR.
9. ALL CONCRETE TO BE CURED CONTINUOUSLY FOR 3 DAYS

TERMITE AND DAMP PROOFING:

1. TERMITE PROTECTION TO BE IN ACCORDANCE WITH NCC REQUIREMENTS AND AS 3660 PROTECTION OF BUILDINGS FROM SUBTERRANEAN TERMITES.
2. DAMP PROOFING TO BE IN ACCORDANCE WITH NCC. REQUIREMENTS.

FOUNDATION MAINTENANCE AND FOOTING PERFORMANCE:

1. THE OWNER'S ATTENTION IS DRAWN TO APPENDIX B OF AS 2870 PERFORMANCE CRITERIA AND FOUNDATION MAINTENANCE AND CSIRO INFORMATION SHEET NO.BTF 18(2011) – GUIDE TO HOME OWNERS ON FOUNDATION MAINTENANCE AND FOOTING PERFORMANCE WHICH HAS BEEN ATTACHED TO THIS DOCUMENTATION AND IS AVAILABLE IN THE OFFICES OF XEROS PICCOLO CONSULTING ENGINEERS FOR PERUSAL.
2. ATTENTION IS DRAWN IN PARTICULAR TO THE EXISTENCE OF TREES ON CLAY SITES AND PROVISION OF SURFACE DRAINAGE.

No.	DATE	AMENDMENTS	
B	DEC 2024	ISSUED FOR CONSTRUCTION	BX
A	SEPT 2024	ISSUED FOR CLIENT REVIEW	BX

Project:
PROPOSED ALTERATIONS & ADDITIONS
116 BURLEY GRIFFIN WAY
MURRUMBURRAH NSW 2587

Sheet Subject:
RAFT SLAB PLAN & DETAILS

Client: AMANDA SACHS

Scale: 1:100,1:20,1:10(A1)
Design: J.G.
Drawn: A.B.X.
Date: SEPT 2024
Chk'd:
SHEETS IN SET 7

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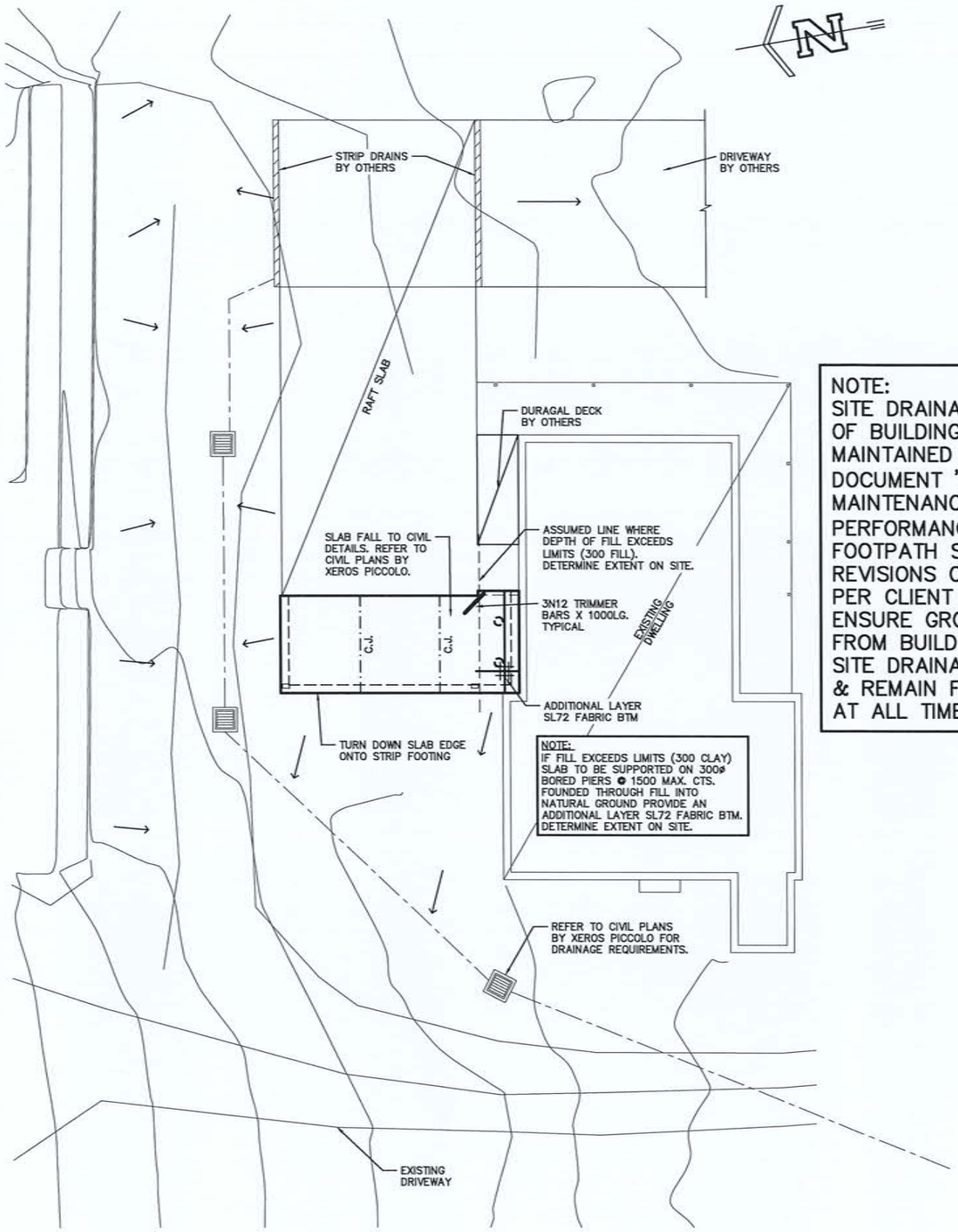
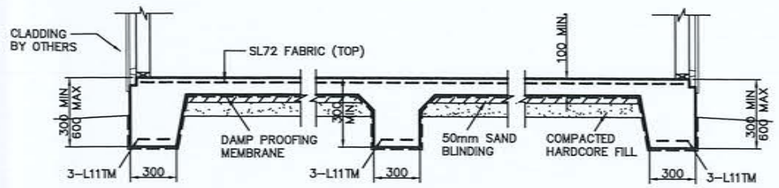
S 240406–1 B



NOTE:
SITE DRAINAGE AROUND PERIMETER OF BUILDING TO BE CONSTRUCTED & MAINTAINED AS PER CSIRO DOCUMENT "FOUNDATION MAINTENANCE & FOOTING PERFORMANCE" IN FULL. PERIMETER FOOTPATH SHOWN ON PREVIOUS REVISIONS OF PLANS DELETED AS PER CLIENT REQUEST. BUILDER TO ENSURE GROUND SLOPES AWAY FROM BUILDING AS PER CIVIL PLANS. SITE DRAINAGE IS TO BE MAINTAINED & REMAIN FREE OF OBSTRUCTIONS AT ALL TIMES AS PER CIVIL PLANS.



TYPICAL SECTION THRU RESIDENCE

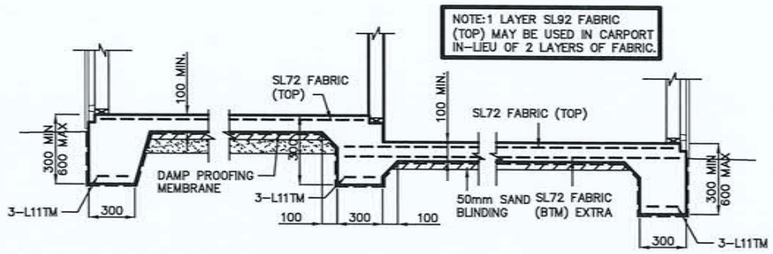
WHERE BEAM DEPTH EXCEEDS LIMITS REFER TABLE FOR ADDITIONAL REINFORCEMENT.

ADDITIONAL REINFORCEMENT TABLE (BOTTOM STEEL)

BEAM DEPTH	BEAM REINFORCEMENT
<600	3-L11TM
600-850	3-L11TM +1N12
850-1200	3-L11TM +2N16
>1200	CONSULT ENGINEER

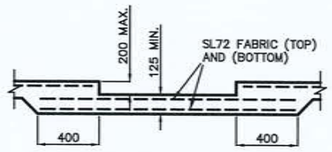
FOR BEAM DEPTHS >600 PROVIDE MINIMUM 2N12 BARS TOP TO BEAMS

NOTE: WHERE EXTERNAL BEAMS ARE RETAINING >750 PROVIDE ADDITIONAL SL82 FABRIC VERTICAL OR N12 BARS AT 400 CTS BOTH WAYS. (VERTICAL BARS TO BE COGGED 300 INTO SLAB)



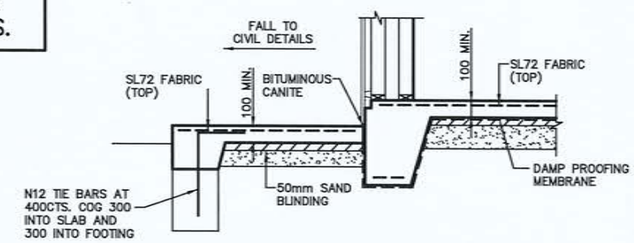
TYPICAL SECTION THRU CARPORT

WHERE BEAM DEPTH EXCEEDS LIMITS REFER TABLE FOR ADDITIONAL REINFORCEMENT.

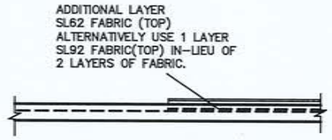


SHOWER REBATE DETAIL

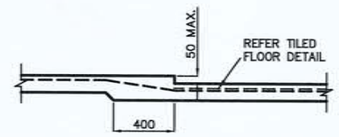
NOTE: REBATE DEPTH TO BE CONFIRMED WITH THE "BUILDING DESIGNER" PRIOR TO CONSTRUCTION.



TYPICAL SECTION THRU ALFRESCO

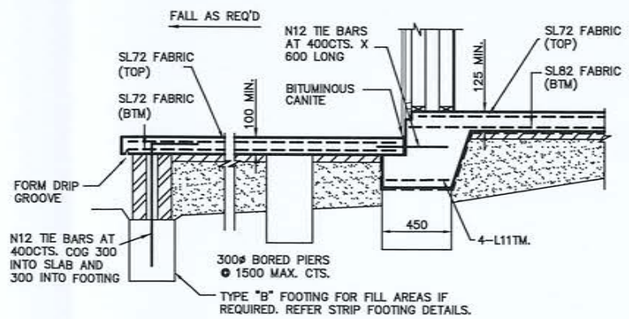


TILED FLOOR DETAIL

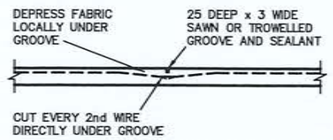


TILED FLOOR SETDOWN DETAIL

NOTE: SETDOWN DEPTH TO BE CONFIRMED WITH THE "BUILDING DESIGNER" PRIOR TO CONSTRUCTION.



TYPICAL SECTION THRU ALFRESCO ON FILL (IF REQUIRED)



CONTROL JOINT DETAIL CJ

NOTE: SAWCUT TO BE MADE WITHIN 24 HOURS OF CASTING SLAB.

ALFRESCO SLAB PLAN

1. SITE TO BE STRIPPED OF VEGETATION AND EXPOSED SURFACE PROOF ROLLED.
2. WHERE FILL IS REQUIRED UNDER SLABS ROLLED FILL IS TO BE USED- ROLLED FILL CONSISTS OF MATERIAL COMPACTED IN LAYERS BY REPEATED ROLLING WITH AN EXCAVATOR. ROLLED FILL SHALL NOT EXCEED 600 COMPACTED IN LAYERS NOT MORE THAN 300 THICK FOR SAND MATERIAL OR 300 COMPACTED IN LAYERS NOT MORE THAN 150 THICK FOR OTHER MATERIAL.
3. DEPTH OF FILL IS NOT TO EXCEED THESE LIMITS WITHOUT PRIOR APPROVAL FROM XEROS PICCOLO CONSULTING ENGINEERS.
4. UNLESS NOTED OTHERWISE, SLAB TO BE MINIMUM 100mm THICK ON 50mm SAND BLINDING AND REINFORCED WITH 1 LAYER SL72 FABRIC PLACED 30mm FROM TOP OF SLAB WITH ADDITIONAL REINFORCEMENT AS INDICATED.
5. PROVIDE A 0.2mm THICK HIGH IMPACT RESISTANT DAMP PROOFING MEMBRANE TO THE UNDERSIDE OF SLABS.

IMPORTANT NOTE:
SITE DRAINAGE IS CRITICAL.
REFER TO CIVIL PLANS BY XEROS PICCOLO.

SITE DRAINAGE TO BE INSTALLED PRIOR TO CONSTRUCTION TO DIVERT STORMWATER & SITE RUN-OFF AWAY FROM BUILDING PAD.

GOOD SITE DRAINAGE & OVERLAND FLOW TO BE MAINTAINED DURING & AFTER CONSTRUCTION.

No.	DATE	AMENDMENTS	
C	JAN 2025	FOOTPATH REMOVED	BX
B	DEC 2024	ISSUED FOR CONSTRUCTION	BX
A	SEPT 2024	ISSUED FOR CLIENT REVIEW	BX

Project:
PROPOSED ALTERATIONS & ADDITIONS
116 BURLEY GRIFFIN WAY
MURRUMBURRAH NSW 2587

Sheet Subject:
SLAB PLAN & DETAILS

Client: AMANDA SACHS

Scale: 1:100,1:20(A1)

Design: J.G.

Drawn: A.B.X.

Date: SEPT 2024

Chk'd:

XEROS PICCOLO CONSULTING ENGINEERS
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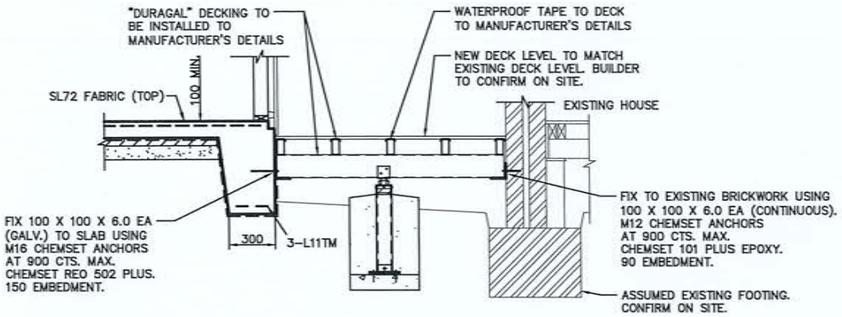
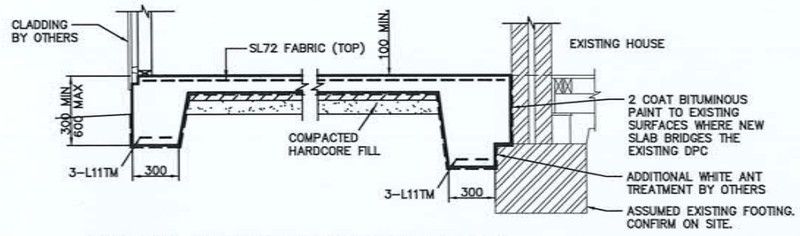
SHEETS IN SET: 7

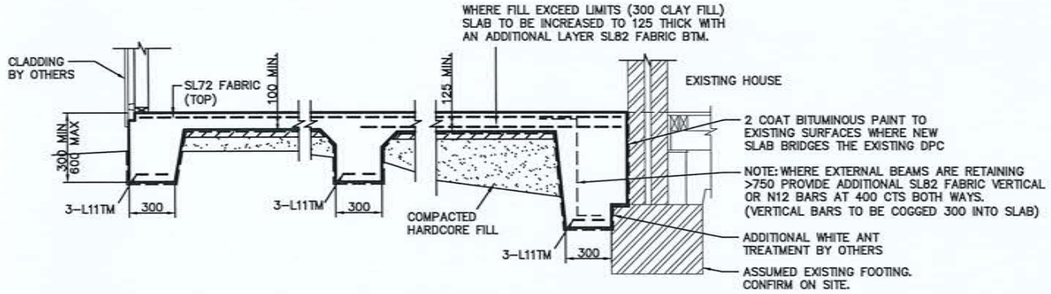
S|240406-2|C



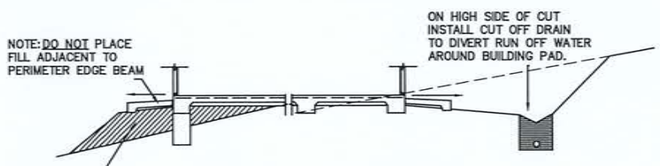
TYPICAL SECTION THRU DECK



TYPICAL SECTION THRU EXTENSION



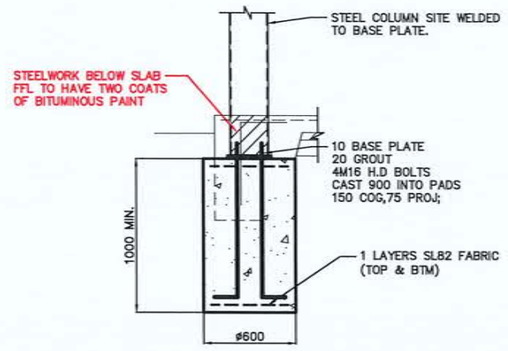
TYPICAL SECTION THRU EXTENSION ON FILL IF REQUIRED



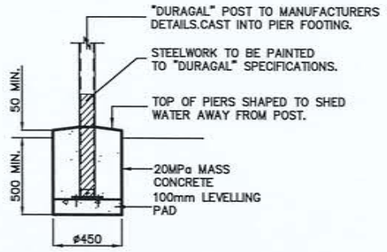
IMPORTANT NOTES FOR REACTIVE SITES.

FOR REACTIVE SITES IT IS ESSENTIAL TO MAINTAIN STABLE MOISTURE CONDITIONS DURING THE ENTIRE LIFE OF THE BUILDING
THIS CAN BE ACHIEVED BY THE FOLLOWING.

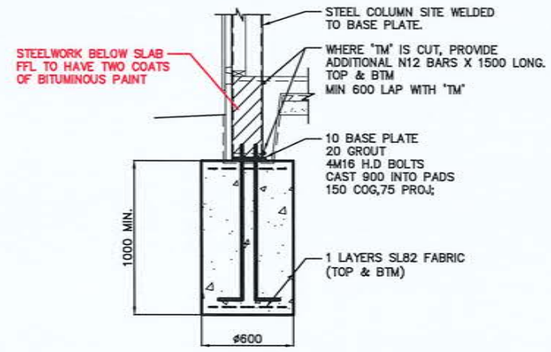
1) DRAINAGE OF THE SITE–SITE SHOULD BE GRADED SO THAT WATER DOES NOT POND AGAINST THE BUILDING SITE DRAINAGE RECOMMENDATIONS TO BE MAINTAINED AFTER CONSTRUCTION.
2) FILL NOT TO BE PLACED NEXT TO PERIMETER EDGE BEAM
3) GARDENS–GARDENS SHOULD NOT INTERFERE WITH DRAINAGE REQUIREMENTS AVOID OVER WATERING
4) TREES & SHRUBS–RESTRICT THE PLANTING OF TREES NEAR THE BUILDING
5) PLUMBING–ANY LEAKS TO STORMWATER OR SEWERAGE SYSTEMS TO BE REPAIRED PROMPTLY.
6) THE OWNERS ATTENTION IS DRAWN TO CSIRO INFORMATION SHEET NO.BTF 18(2011) – GUIDE TO HOME OWNERS ON FOUNDATION MAINTENANCE AND FOOTING PERFORMANCE.



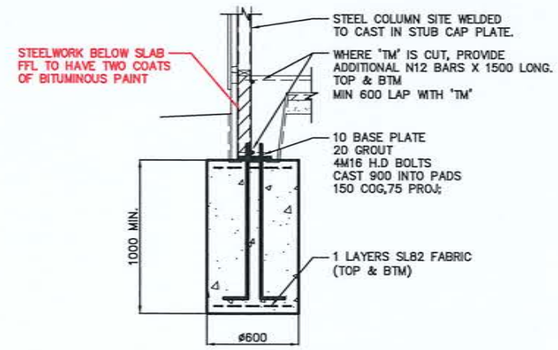
TYPICAL BORED PIER (BP1) DETAIL



TYPICAL PIER (P1) DETAIL
TO SUIT DURAGAL FLOOR LAYOUT
(MAX. 1.8m CTS)



TYPICAL BORED PIER (BP2) DETAIL



TYPICAL BORED PIER (BP3) DETAIL

No.	DATE	AMENDMENTS	BY
B	DEC 2024	ISSUED FOR CONSTRUCTION	BX
A	SEPT 2024	ISSUED FOR CLIENT REVIEW	BX

Project:
PROPOSED ALTERATIONS & ADDITIONS
116 BURLEY GRIFFIN WAY
MURRUMBURRAH NSW 2587

Sheet Subject:
SLAB & FOOTING DETAILS

Client: AMANDA SACHS

Scale: 1:20(A1)
Design: J.G.
Drawn: A.B.X.
Date: SEPT 2024
Chk'd:

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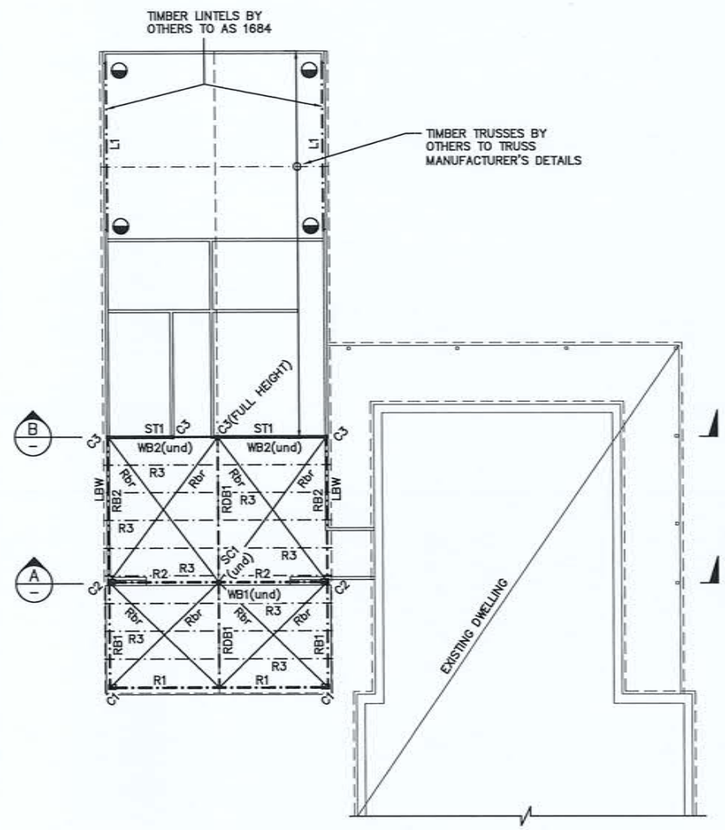
S|240406–3|B
SHEETS IN SET 7

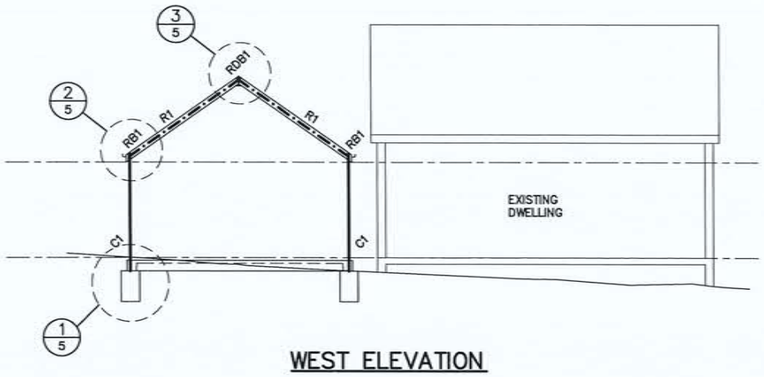


STEEL/TIMBER MARKING PLAN

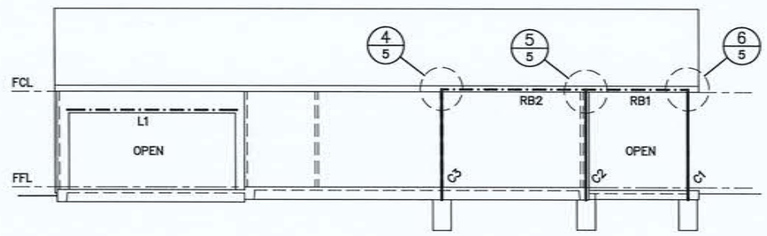
STRUCTURAL SIZES

COLUMNS	C1	250 X 150 X 6.0 RHS
	C2	200 X 100 X 9.0 RHS
	C3	89 X 89 X 5.0 SHS
STUB COLUMNS	SC1	89 X 89 X 5.0 SHS
	SC2	89 X 89 X 5.0 SHS
RAFTERS	R1	250 X 150 X 6.0 RHS
	R2	200 X 100 X 9.0 RHS
	R3	200 X 45 HySPAN LVL AT 900 CTS. MAX.
RIDGE BEAMS	RDB1	250 UB 31
ROOF BEAMS	RB1	200 X 75 PFC
	RB2	200 X 100 X 6.0 RHS
WALL BEAMS	WB1	300 X 90 PFC (ON FLAT)
	WB2	150 X 75 PFC
DOOR HEADER	DH1	300 X 90 PFC (ON FLAT)
STRUTS	ST1	150 X 75 PFC
WALL BRACING	Wbr	89 X 89 X 5.0 SHS
ROOF BRACING	Rbr	2/30 X 0.8 G.I. STRAPS
LINTELS	L1	TIMBER LINTEL BY OTHERS TO AS 1684, OR 380 X 100 PFC

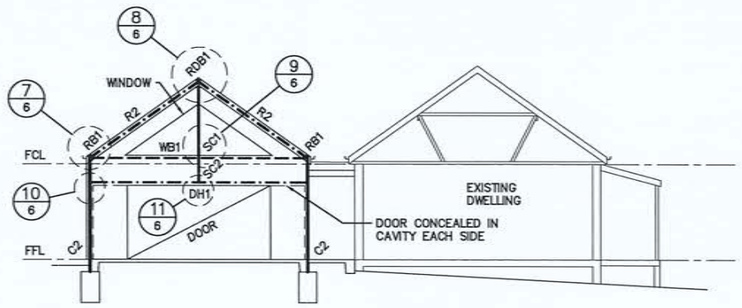
INDICATES TRIPLE STUD UNDER.
TIE DOWN USING 2/30 X 0.8 G.I. STRAPS
6 NAILS EACH END.



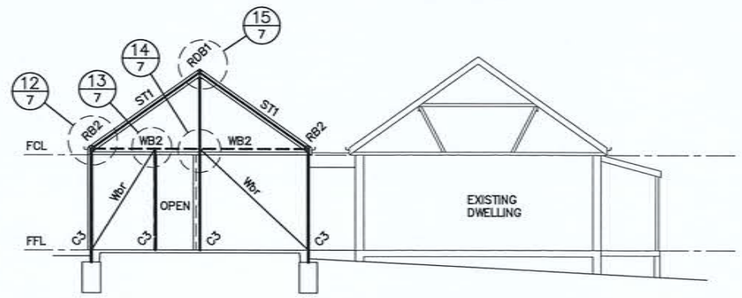
WEST ELEVATION



NORTH ELEVATION



SECTION A



SECTION B

STEELWORK NOTES:

1. STEELWORK TO BE IN ACCORDANCE WITH AS 4100. FABRICATION TO BE CARRIED OUT IN ACCORDANCE WITH SECTION 14 OF AS 4100. ERECTION TO BE CARRIED OUT IN ACCORDANCE WITH SECTION 15 OF AS 4100.
2. UNLESS NOTED OTHERWISE, STEEL IS TO BE OF THE FOLLOWING GRADE;

UB"s, UC's, PFC's & LARGE ANGLES TO AS/NZS 3679.1	GRADE 300
WELDED SECTIONS TO AS/NZS 3679.2	GRADE 300
HOT ROLLED PLATES, FLOOR PLATES AND SLABS TO AS AS/NZS 3678	GRADE 250
HOLLOW SECTIONS TO AS 1163	GRADE C350
COLD FORMED PURLINS AND GIRTS TO AS 1397	GRADE G450 Z350

3. DIMENSIONS AND SETOUTS TO BE OBTAINED FROM ARCHITECTURAL DRAWINGS WHERE NOT INDICATED ON STRUCTURAL DRAWINGS.
4. THE FABRICATOR SHALL PROVIDE CLEATS AND DRILL HOLES NECESSARY FOR FIXING OTHER ELEMENTS TO THE STEEL WHETHER OR NOT DETAILED ON THE STRUCTURAL DRAWINGS.
5. THE FABRICATION AND ERECTION OF STRUCTURAL STEELWORK IS TO BE SUPERVISED BY A PERSON QUALIFIED IN SUCH SUPERVISION, IN ORDER TO ENSURE ALL DESIGN REQUIREMENTS ARE MET.
6. BEAMS AND RAFTERS TO BE INSTALLED WITH NATURAL CAMBER UP.
7. MEMBERS SHALL BE SUPPLIED IN SINGLE LENGTHS. SPLICES ARE PERMITTED ONLY WHERE SPECIFICALLY SHOWN ON STRUCTURAL DRAWINGS.
8. STEELWORK SHALL BE TEMPORARILY BRACED TO STABILISE THE STRUCTURE DURING ERECTION.
9. UNLESS NOTED OTHERWISE;
   - BOLTS TO BE M20 8.8/S
   - CONNECTIONS SHALL HAVE A MINIMUM OF 2 BOLTS
   - BOLTS AND WASHERS SHALL BE GALVANISED
   - HOLES SHALL BE 2mm LARGER THAN THE BOLT DIAMETER
   - BOLTS TO BE IN ACCORDANCE WITH AS 1252
10. WELDING TO BE CARRIED OUT IN ACCORDANCE WITH AS 1554.1 UNLESS NOTED OTHERWISE;
    - FILLET WELDS SHALL BE 6mm C.F.W. SP TO AS 1554.1
    - BUTT WELDS SHALL BE COMPLETE PENETRATION SP TO AS 1554.1

    RADIOGRAPHIC OR ULTRASONIC EXAMINATION TO BE IN ACCORDANCE WITH AS1554.1, AS2177.1 AND AS2207 AS APPROPRIATE.
11. STEELWORK NOT TO BE ENCASED BY CONCRETE SHALL BE PROTECTED FROM CORROSION IN THE FOLLOWING MANNER; THE STEELWORK IS TO BE CLEANED TO AN AS 1627 CLASS POWER BRUSH PREPARATION AND GIVEN 1 COAT '215 RUST FIGHTER' TO GIVE A DRY FILM THICKNESS OF 40 MICRONS BEFORE DISPATCH TO SITE.
12. STEELWORK TO BE ENCASED IN CONCRETE SHALL BE UNPAINTED. ENCASING CONCRETE SHALL BE GRADE N25 PROVIDING ADEQUATE COVER TO SUIT FIRE RATING OR EXPOSURE CONDITIONS. CONCRETE ENCASING SHALL BE REINFORCED WITH 5mm WIRE TO AS 4617 OR 6mm STRUCTURAL GRADE BARS TO AS 4617 AT 150mm PITCH WHERE NOT INDICATED ON STRUCTURAL DRAWINGS.

No.	DATE	AMENDMENTS	
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Project:
PROPOSED ALTERATIONS & ADDITIONS
116 BURLEY GRIFFIN WAY
MURRUMBURRAH NSW 2587

Sheet Subject:
STEEL MARKING PLAN & DETAILS

Client: AMANDA SACHS

Scale: 1:100(A1)

Design: J.G.
Drawn: A.B.X.
Date: SEPT 2024
Chk'd:

XEROS PICCOLO
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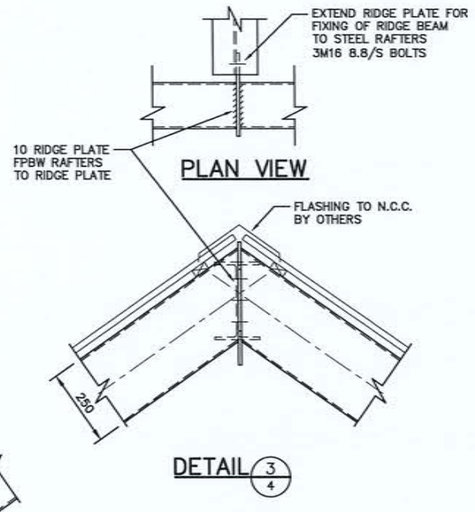
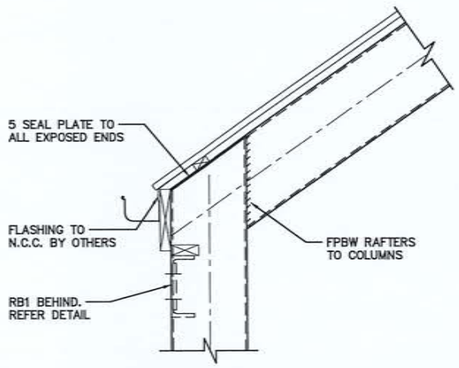
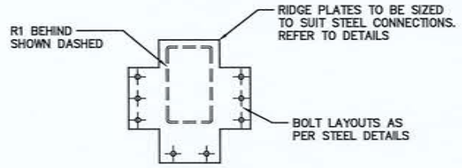
SHEETS IN SET 7



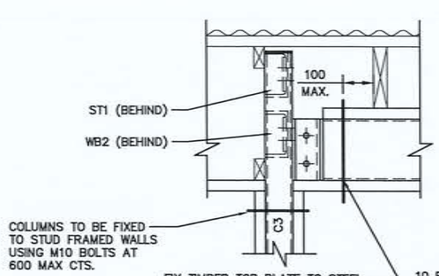
DETAIL 3/4



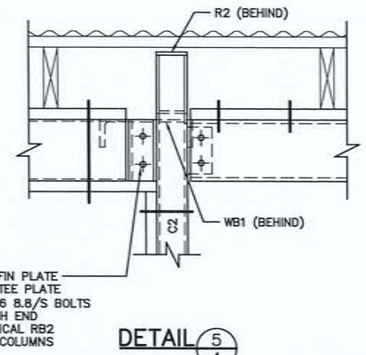
DETAIL 2/4



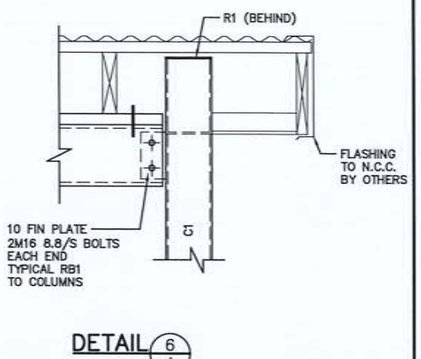
TYPICAL RIDGE PLATE



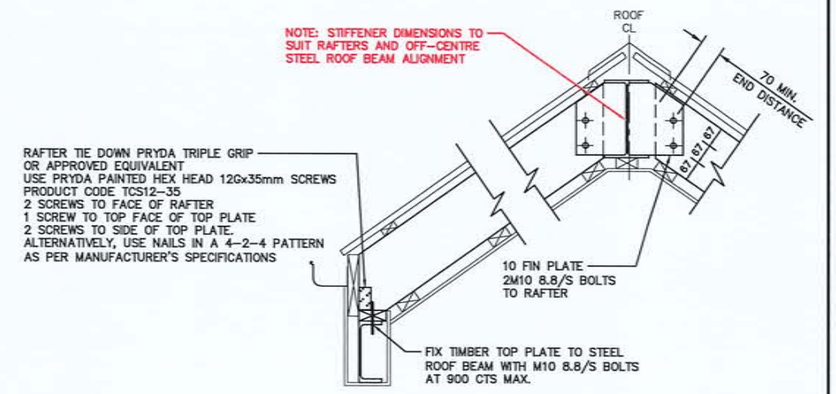
DETAIL 4/4



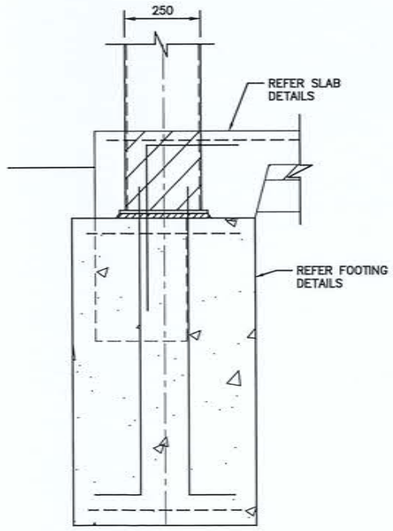
DETAIL 5/4



DETAIL 6/4



TYPICAL TIMBER RAFTER TO STEEL CONNECTIONS



DETAIL 1/4

No.	DATE	AMENDMENTS	
B	DEC 2024	ISSUED FOR CONSTRUCTION	BX
A	SEPT 2024	ISSUED FOR CLIENT REVIEW	BX

Project:
PROPOSED ALTERATIONS & ADDITIONS
116 BURLEY GRIFFIN WAY
MURRUMBURRAH NSW 2587

Sheet Subject:
STEEL DETAILS 1/3

Client: AMANDA SACHS

Scale: 1:10(A1)

Design: J.G.

Drawn: A.B.X.

Date: SEPT 2024

Chk'd:

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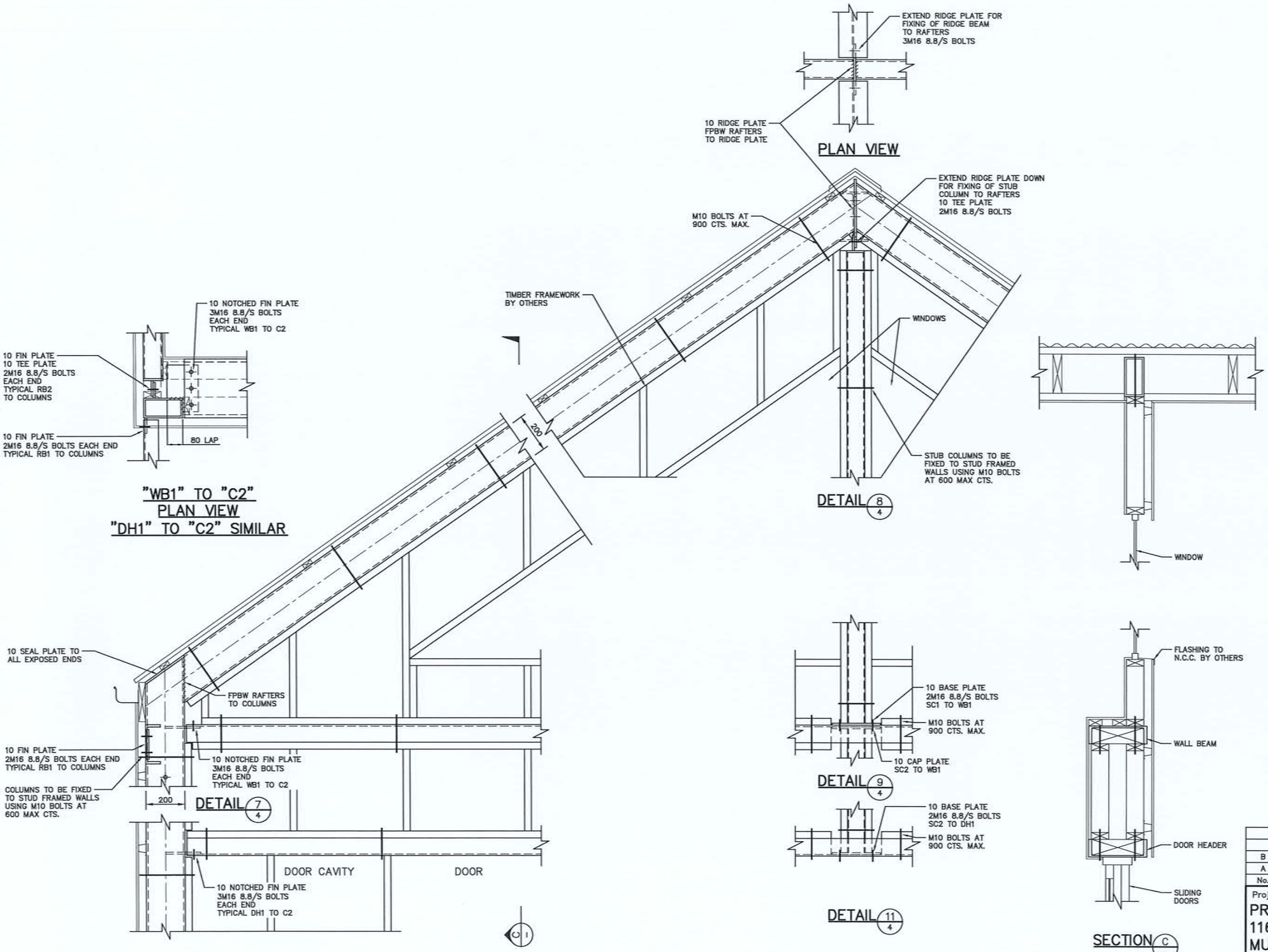
S 240406-5 B

SHEETS IN SET 7



No.	DATE	AMENDMENTS	
B	DEC 2024	ISSUED FOR CONSTRUCTION	BX
A	SEPT 2024	ISSUED FOR CLIENT REVIEW	BX

Project:
PROPOSED ALTERATIONS & ADDITIONS
116 BURLEY GRIFFIN WAY
MURRUMBURRAH NSW 2587

Sheet Subject:
STEEL DETAILS 2/3

Client: AMANDA SACHS

Scale: 1:10(A1)

Design: J.G.

Drawn: A.B.X.

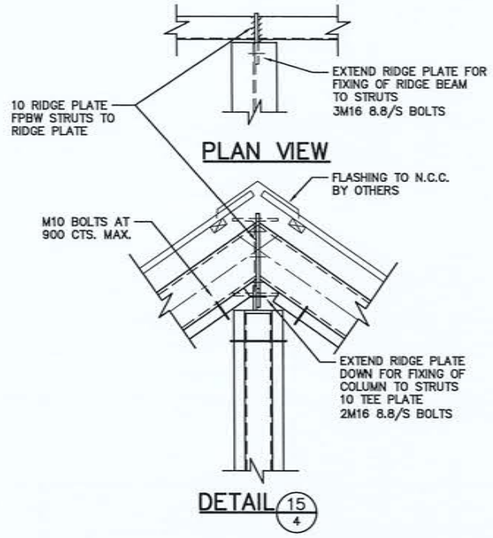
Date: SEPT 2024

Chk'd:

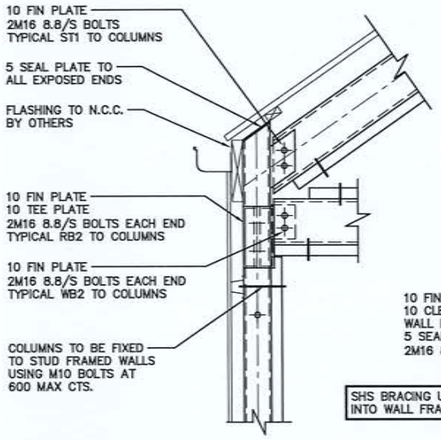
XEROS PICCOLO
CONSULTING ENGINEERS
5 BYE STREET
WAGGA WAGGA, NSW, 2650
TELEPHONE (02) 6925 5855
FACSIMILE (02) 6925 5655
EMAIL WAGGA@XEROSPICCOLO.COM.AU
A.C.N. 137 881 853

S 240406-6 B

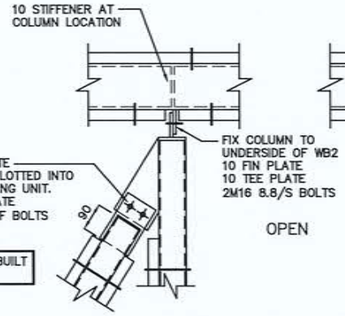
SHEETS IN SET 7



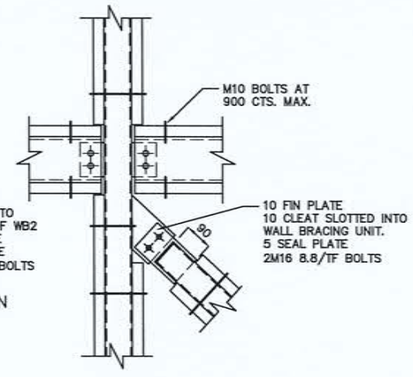
DETAIL 15/4



DETAIL 12/4



DETAIL 13/4



DETAIL 14/4

No.	DATE	AMENDMENTS	BY
B	DEC 2024	ISSUED FOR CONSTRUCTION	BX
A	SEPT 2024	ISSUED FOR CLIENT REVIEW	BX

Project:
PROPOSED ALTERATIONS & ADDITIONS
116 BURLEY GRIFFIN WAY
MURRUMBURRAH NSW 2587

Sheet Subject:
STEEL DETAILS 3/3

Client: AMANDA SACHS

Scale: 1:10(A1)

Design: J.G.

Drawn: A.B.X.

Date: SEPT 2024

Chk'd:

XEROS PICCOLO
CONSULTING ENGINEERS
5 BYE STREET
WAGGA WAGGA, NSW, 2650
TELEPHONE (02) 6925 5855
FACSIMILE (02) 6925 5655
EMAIL WAGGA@XEROSPICCOLO.COM.AU
A.C.N. 137 881 853

S 240406-7 B

SHEETS IN SET 7

APPENDIX # 8

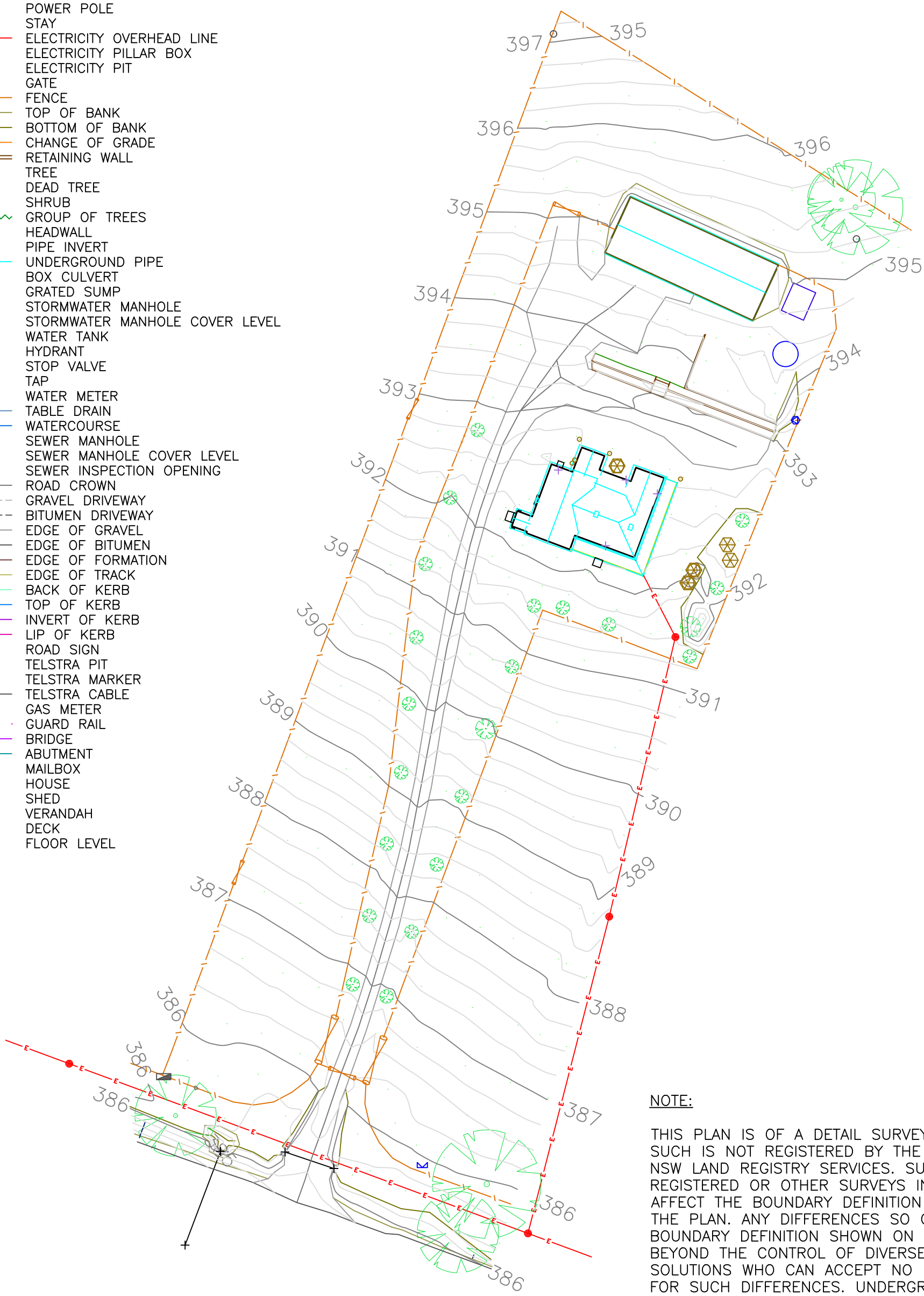
SURVEY REPORT

APPENDIX # 8

SURVEY REPORT

LEGEND

- POWER POLE
- STAY
- ELECTRICITY OVERHEAD LINE
- ELECTRICITY PILLAR BOX
- ELECTRICITY PIT
- GATE
- FENCE
- TOP OF BANK
- BOTTOM OF BANK
- CHANGE OF GRADE
- RETAINING WALL
- TREE
- DEAD TREE
- SHRUB
- GROUP OF TREES
- HEADWALL
- PIPE INVERT
- UNDERGROUND PIPE
- BOX CULVERT
- GRATED SUMP
- STORMWATER MANHOLE
- STORMWATER MANHOLE COVER LEVEL
- WATER TANK
- HYDRANT
- STOP VALVE
- TAP
- WATER METER
- TABLE DRAIN
- WATERCOURSE
- SEWER MANHOLE
- SEWER MANHOLE COVER LEVEL
- SEWER INSPECTION OPENING
- ROAD CROWN
- GRAVEL DRIVEWAY
- BITUMEN DRIVEWAY
- EDGE OF GRAVEL
- EDGE OF BITUMEN
- EDGE OF FORMATION
- EDGE OF TRACK
- BACK OF KERB
- TOP OF KERB
- INVERT OF KERB
- LIP OF KERB
- ROAD SIGN
- TELSTRA PIT
- TELSTRA MARKER
- TELSTRA CABLE
- GAS METER
- GUARD RAIL
- BRIDGE
- ABUTMENT
- MAILBOX
- HOUSE
- SHED
- VERANDAH
- DECK
- FLOOR LEVEL



MGA55 GDA 2020

NOTE:

THIS PLAN IS OF A DETAIL SURVEY ONLY AND AS SUCH IS NOT REGISTERED BY THE TITLES OFFICE OF NSW LAND REGISTRY SERVICES. SUBSEQUENT REGISTERED OR OTHER SURVEYS IN THIS AREA MAY AFFECT THE BOUNDARY DEFINITION AS SHOWN ON THE PLAN. ANY DIFFERENCES SO CAUSED TO THE BOUNDARY DEFINITION SHOWN ON THIS PLAN ARE BEYOND THE CONTROL OF DIVERSE PROJECT SOLUTIONS WHO CAN ACCEPT NO RESPONSIBILITY FOR SUCH DIFFERENCES. UNDERGROUND SERVICES ARE NOT SHOWN ON THIS PLAN. AS UNDERGROUND STRUCTURES AND CABLES MAY EXIST THEY MUST BE LOCATED BEFORE CONSTRUCTION – PLEASE DIAL 1100 BEFORE YOU DIG. THIS NOTE IS AN INTEGRAL PART OF THIS PLAN.

www.dialbeforeyoudig.com.au
DIAL 1100 BEFORE YOU DIG

REDUCTION RATIO:
1:600 @ A3

0 5 10 15 20 25

ALL DISTANCES IN METRES

PLAN OF LOTS 351 & 352 DP753624
116 BURLEY GRIFFIN WAY
MURRUMBURRAH
SHOWING SELECTED DETAIL AND CONTOURS

CLIENT: TIM SACHS

A3 SHEET	1 OF 1
DATE OF SURVEY	6 DECEMBER, 2023
COMPUTER REFERENCE	5149_DT1.dwg
LEVEL DATUM	AHD
ORIGINS OF LEVEL	PM84391
	400.522
CONTOUR INTERVAL	0.25m

DPS DIVERSE PROJECT SOLUTIONS
7 ADELE STREET, YASS NSW 2582
P.O. BOX 5, YASS NSW 2582
(PH) 02 6226 3322
info@dpsyass.com.au
ABN: 31 602 010 006

FW: MB D: MB

APPENDIX # 9

SEPTIC CONSENT

Hilltops COUNCIL

Ref: OS2020/0003
Contact Person: Kaye Keefe

Mrs Amanda Sachs
128 Burley Griffin Way
MURRUMBURRAH NSW 2587

APPROVAL TO INSTALL ON-SITE SEWAGE MANAGEMENT SYSTEM

issued under Section 68 of the Local Government Act 1993

Applicant:	Amanda Sachs
S68 Approval No:	OS2020/0003
Description of Activity:	Install On-site Sewage Management System (Replace Existing)
Land to be Developed:	Lot 351 DP 753624
Property Address:	Gleehaven Burley Griffin Way MURRUMBURRAH NSW 2587
Date of Determination:	24 January 2020
Determination:	Approval granted subject to the conditions described below
Approval to Operate from: **Approval to Lapse on:**	24 January 2020 24 January 2025

System Details:

System Type	**Septic Tank and Absorption Trenches**
Tank Size	3200 Litres
WC Flush	6/3 Litres
Fittings to be connected	WC and all wastes

MAILING ADDRESS
Locked Bag 5,
Young NSW 2594
www.hilltops.nsw.gov.au

BOOROWA OFFICE
6-8 Market Street,
Boorowa NSW 2586

HARDEN OFFICE
3 East Street,
Harden NSW 2587

YOUNG OFFICE
189 Boorowa Street,
Young NSW 2594

P 1300HILLTOPS / 1300 445 586
F 02 6384 2576 E mail@hilltops.nsw.gov.au

Conditions of approval:

PLUMBING AND DRAINAGE

1. All plumbing and drainage works are to comply with the requirements of the Australian Standard AS/NZS S3500 Plumbing & Drainage, the Plumbing Code of Australia and the *Plumbing and Drainage Act 2011.*

2. All plumbing and drainage works are to be carried out by Licensed Tradespeople.

ON SITE SEWAGE MANAGEMENT SYSTEM

3. All effluent disposal fields shall be located a minimum distance of:

   a) 100 metres from permanent surface waters,
   b) 40 metres from other waters including farm dams, intermittent waterways, drainage channels, etc,
   c) 250 metres from domestic use bores,
   d) 6 metres from upslope boundaries and 12 metres from downslope boundaries, and
   e) 3 metres from upslope driveways and buildings, and 6 metres from downslope driveways and buildings.

4. All stormwater and surface waters from higher levels are to be diverted from the disposal area by a suitable surface drainage system.

5. An area equivalent to the area set aside for the effluent disposal area proposed shall be provided elsewhere on the land to permit the replacement of the effluent disposal area at a future time. This area should not be considered for any future building development and should where possible be capable of being accessed by a gravity system.

6. The septic tank and the land application area must be permanently protected from possible vehicle or stock damage.

7. The design shall incorporate a conventional 3200 litre septic tank.

8. The drainage field for this application shall include conventional absorption trenches. The minimum total length of absorption trenching required for this proposal shall be 90 metres, and shall:

   a) be laid in no longer than 30 metre sections;
   b) have bridging pipes between trenches laid at opposing ends interconnecting the next trench or a concrete diversion box between the septic tank and trenches which diverts treated effluent evenly into each trench;
   c) use a proprietary arch profile and shall be no smaller than 350 mm in dome height;
   d) be backfilled to the top of the dome height with blue metal and/or aggregate between 9mm and 25mm with no fines;
   e) have hessian or geotextile fabric between the aggregate and the top soil finish cover;
   f) have the topsoil cover seeded with grass or turfed as soon after completion as is practical.

   Note: It is important that after growing of the grass occurs that it be kept at a low serviceable level in order that effective evapo-transpiration occurs.

DECOMMISSIONING OF EXISTING ONSITE SEWAGE MANAGEMENT SYSTEM

9. The existing onsite sewage management system shall be decommissioned in accordance with the NSW Health Guidelines and the following requirements after the new system has been installed:
   a) The contents of the existing septic tank are to be removed by a pump out tanker and disposed of at an approved Council facility.
   b) The sides, lid, baffle (if fitted) and square junctions of the tank should be hosed down as the tanker is removing the contents.
   c) The tank is to be disinfected by spreading hydrated lime all over exposed surfaces. NOTE: under no circumstances should people climb into and access the tank for this purpose.
   d) Several holes should be punched into the bottom of the tank. The lid and the parts of the walls above the ground should be demolished and collapsed into the tank and the tank filled with virgin excavated natural material as defined by the *Protection of the Environment Operations Act 1997.*

INSPECTIONS

10. When external sanitary drainage is laid ready for test. All drainage must be under water test at the time of the inspection.

11. Prior to backfilling or covering any absorption trenches, septic tank systems and connections to point of discharge.

12. Prior to use of the on-site sewage management system.

DOCUMENTS TO BE PROVIDED PRIOR TO FINAL INSPECTION

13. The installing plumber shall provide the following documents prior to the final inspection of the system:

    a) A certificate of compliance for the installation.

    b) An as-executed diagram of the on-site sewage management system and associated pipework.

USE OF THE SYSTEM

14. The system of sewage management must be operated in a manner that achieves the following performance standards:

    a) The prevention of the spread of disease by micro-organisms;
    b) The prevention of the spread of foul odours;
    c) The prevention of contamination of water;
    d) The prevention of degradation of soil and vegetation;
    e) The discouragement of insects and vermin;
    f) Ensuring that persons do not come into contact with untreated sewage or effluent (whether treated or not) in their ordinary activities on the premises concerned;
    g) The minimisation of any adverse impacts on the amenity of the premises and surrounding lands

Right of Review

Section 100 of the *Local Government Act 1993*, confers the right for an applicant to request the Council to review its determination within twenty-eight (28) days after the date of determination. Any requests for review are required to be accompanied by a fee as set by Council.

Right of Appeal

Section 176 of the *Local Government Act 1993*, confers the right of an applicant who is dissatisfied with the determination of Council to appeal to the Land and Environment Court within twelve (12) months after the date of determination.

Yours faithfully

Kaye Keefe
Environmental Health Officer

NSW GOVERNMENT | Health

Certificate of Accreditation

Sewage Management Facility
Septic Tanks, Collection Wells and Pump Wells

This Certificate of Accreditation is issued by the Secretary of the NSW Ministry of Health pursuant to Clause 41(1) of the Local Government (General) Regulation 2005.

Manufacturer: ***Reln Pty Ltd***

Of: ***14 Williamson Road, Ingleburn, NSW, 2565***

The Reln Septic Tanks, Collection Wells and Pump Wells as described in the following Schedule have been accredited as sewage management facilities for use in single domestic premises in NSW.

A/Director, Environmental Health
for Secretary (delegation PH335)

Issued: *21 November 2017*
Certificate No: *STCW 002*
Expires: *31 December 2022*

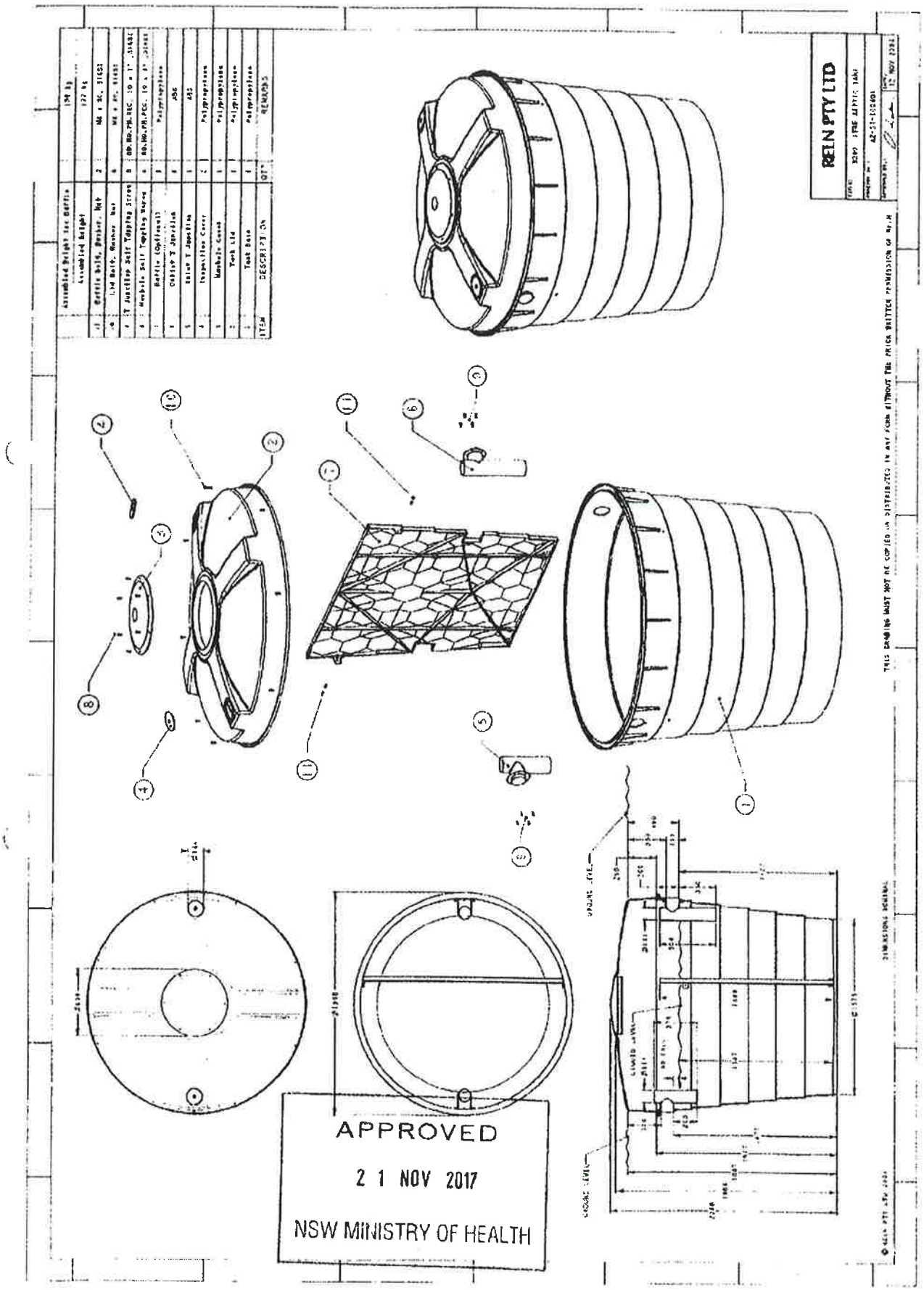
WOLLONDILLY SHIRE COUNCIL
APPROVED
App. No. DS2020/003
These are the plans / specifications referred to in the above consent / certificate.
Signed: ..... Date: 24/1/20.

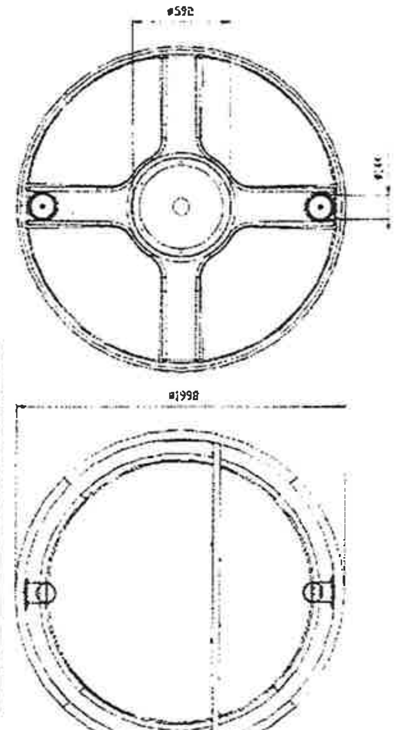
NSW GOVERNMENT | Health

Accreditation Schedule

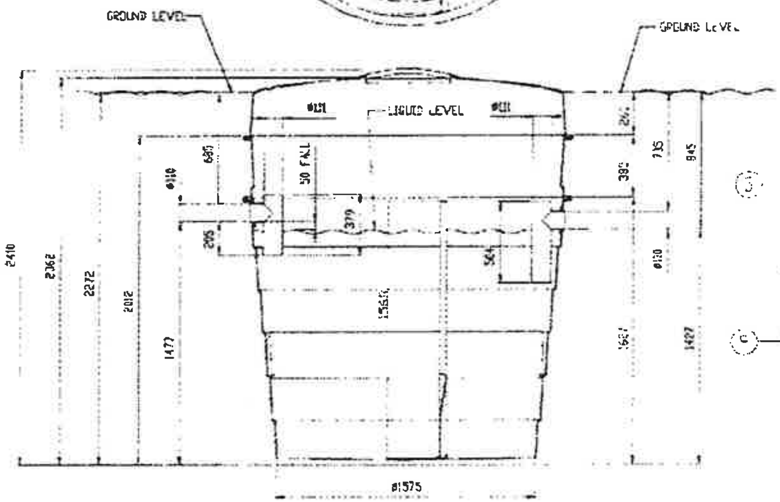
The Certificate of Accreditation applies to the following Septic Tanks and Collection Wells

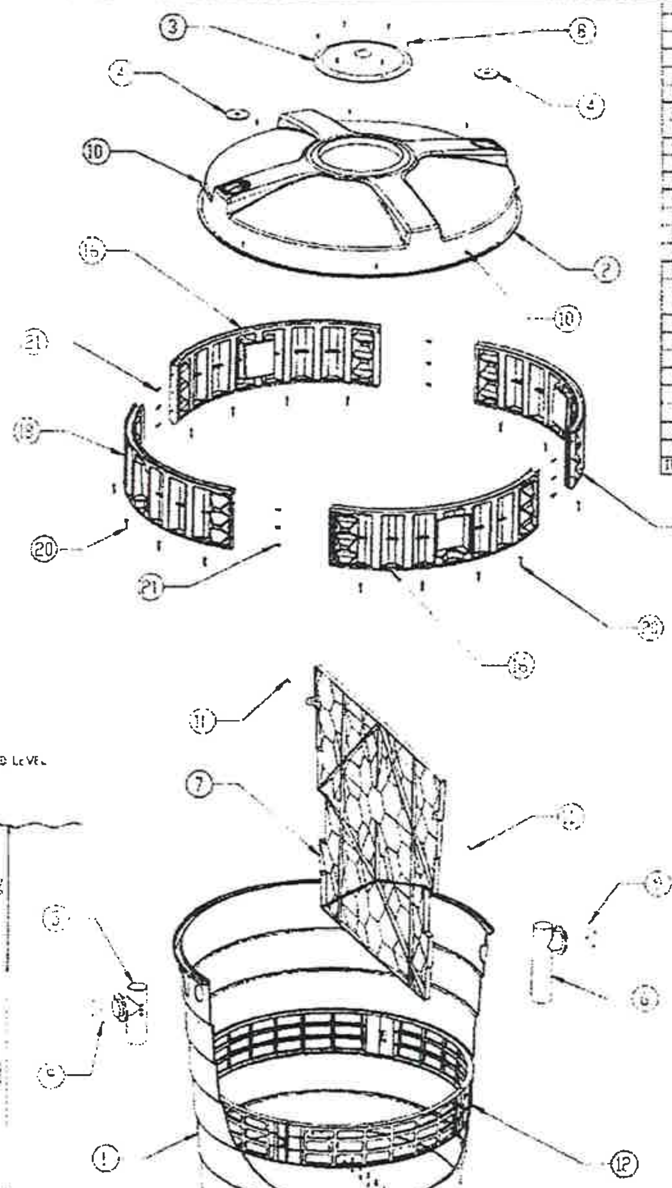
Model	Description	Size
Septic Tank	Vertical axis type cylindrical (tapered) injection moulded polypropylene tank. Tank, lid, access and inspection covers contain an ultra violet stabilizer. 4000 L tank is fitted with riser, baffle extension and reinforced structural brace ring. Tank lid burial depth is restricted to 0 mm	3200 L 3200L Deep Invert 4000 L
Collection Well	Vertical axis type cylindrical (tapered) injection moulded polypropylene tank. Tank, lid, access and inspection covers contain an ultra violet stabilizer. 4000 L tank is fitted with riser and reinforced structural brace ring. Tank lid burial depth is restricted to 0 mm	3200 L 3200L Deep Invert 4000 L
Pump Well	Vertical axis type cylindrical (tapered) injection moulded polypropylene tank. Tank, lid and access cover contain an ultra violet stabilizer. Tank lid burial depth is restricted to 0 mm	450/600 L



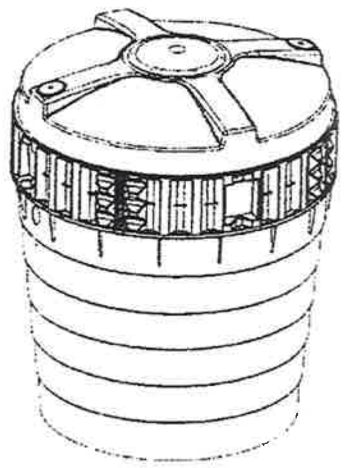


APPROVED
2 1 NOV 2017
NSW MINISTRY OF HEALTH





	ASSEMBLED WEIGHT INCL. BAFFLE		177Kg
	ASSEMBLED WEIGHT		159Kg
21	RISER RING SIDE BOLT, WASHER, NUT	12	M8 x 40, 316 SS
20	RISER - TANK BOLT, WASHER, NUT	16	M8 x 50, 316 SS
19	RISER OUTLET PANEL KEYED	6	POLYPROPYLENE
18	RISER SIDE PANEL - KEYED	1	POLYPROPYLENE
17	RISER OUTLET PANEL	0	POLYPROPYLENE
16	RISER SIDE PANEL	3	POLYPROPYLENE
15	RISER INLET PANEL - KEYED	0	POLYPROPYLENE
14	BAFFLE EXTENSION BOLT, WASHER, NUT	0	M6 x 30, 316 SS
13	400L BAFFLE EXTENSION	0	POLYPROPYLENE
12	REINFORCING RING SEGMENT	4	POLYPROPYLENE
11	BAFFLE - BOLT, WASHER, NUT	2	M6 x 30, 316 SS
10	LID - BOLT, WASHER, NUT	9	M6 x 30, 316 SS
9	T- JUNCTION SELF TAPPING SCREW	8	8G,HD,P,HREC 10x1" 316SS
8	MANHOLE - SELF TAPPING SCREW	6	8G,HD,P,HREC 10x1" 316SS
7	BAFFLE	1	POLYPROPYLENE
6	OUTLET T- JUNCTION	1	ABS
5	INLET T- JUNCTION	1	ABS
4	INSPECTION COVER	2	POLYPROPYLENE
3	MANHOLE COVER	1	POLYPROPYLENE
2	TANK LID	1	POLYPROPYLENE
1	TANK BASE	1	POLYPROPYLENE
ITEM	DESCRIPTION	QTY	REMARKS



Note
Only one riser can be fitted to 3200L tank
Riser may only be fitted to 3200L tank with factory fitted reinforced structural brace ring

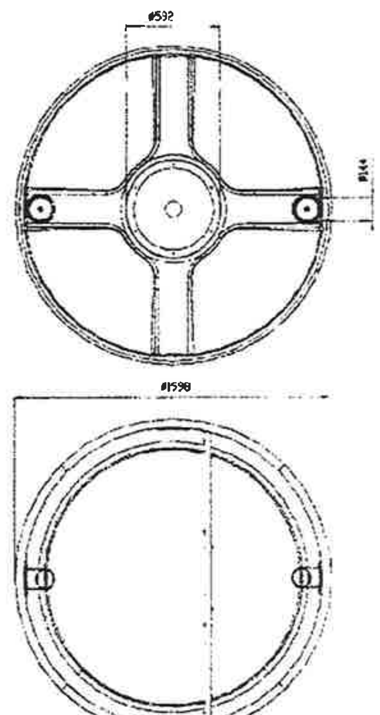
RELN PTY LTD

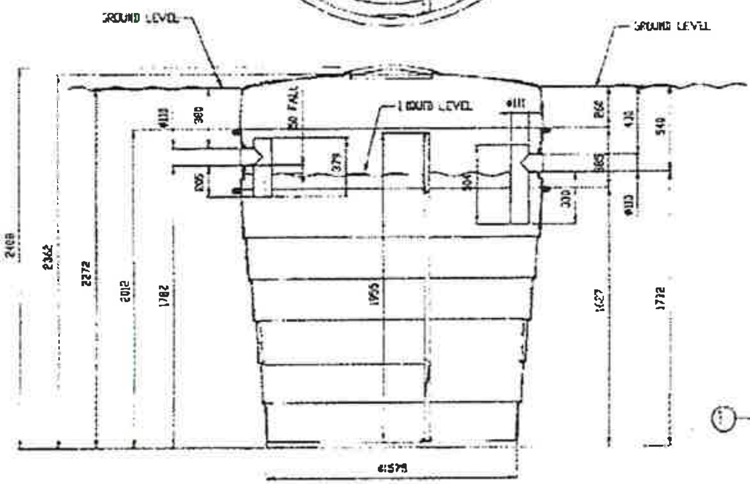
TITLE 3200 L DEEP INVERT SEPTIC TANK
DRAWING No. A2 - ST - 3200SR
DRAWN BY: S.W. DATE: 24.08.2010
APPROVED BY: D.L. DATE: 15.10.2010

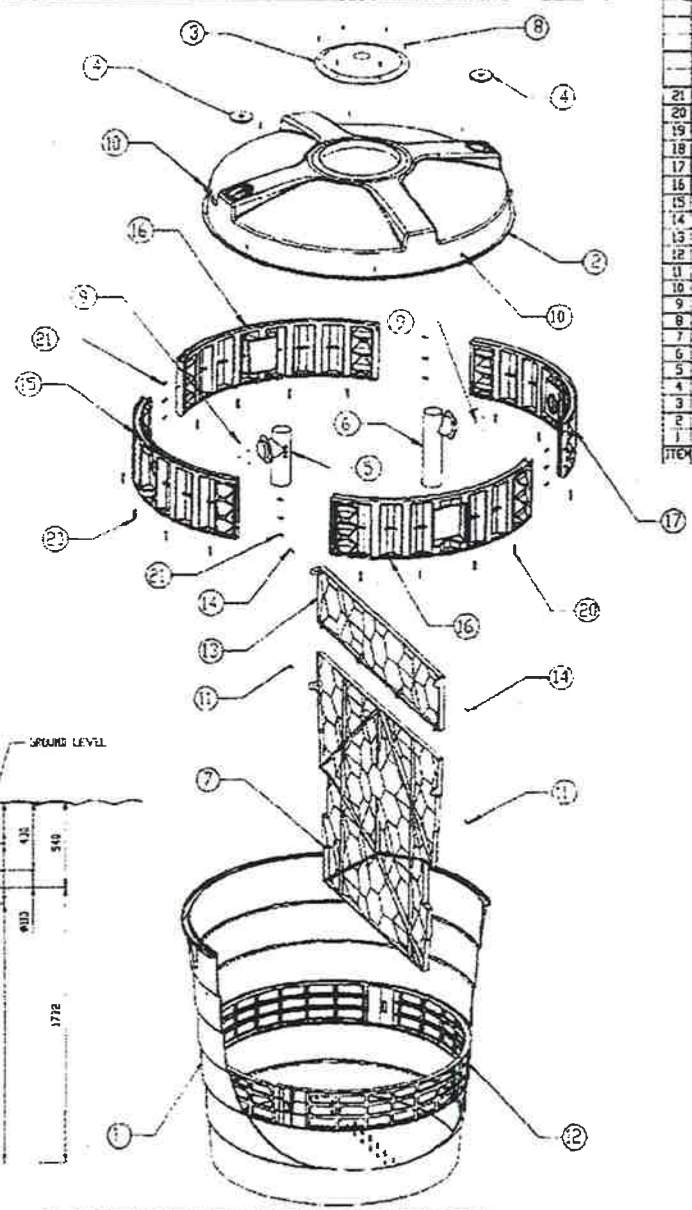
A2

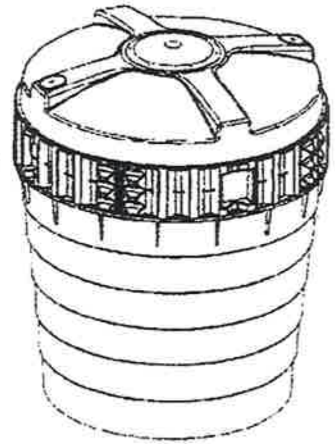
DIMENSIONS NOMINAL

ITEM	DESCRIPTION	QTY	REMARKS
	ASSEMBLED WEIGHT INCL. BAFFLE		181Kg
	ASSEMBLED WEIGHT		159Kg
21	RISER RING SIDE - BOLT, WASHER, NUT	12	M8 x 40, 316 SS
20	RISER - TANK BOLT, WASHER, NUT	16	M8 x 50, 316 SS
19	RISER OUTLET PANEL KEYED	0	POLYPROPYLENE
18	RISER SIDE PANEL - KEYED	0	POLYPROPYLENE
17	RISER OUTLET PANEL	1	POLYPROPYLENE
16	RISER SIDE PANEL	2	POLYPROPYLENE
15	RISER INLET PANEL - KEYED	1	POLYPROPYLENE
14	BAFFLE EXTENSION - BOLT, WASHER, NUT	2	M6 x 30, 316 SS
13	4000L BAFFLE EXTENSION	1	POLYPROPYLENE
12	REINFORCING RING SEGMENT	4	POLYPROPYLENE
11	BAFFLE - BOLT, WASHER, NUT	2	M6 x 30, 316 SS
10	LID - BOLT, WASHER, NUT	8	M6 x 30, 316 SS
9	T- JUNCTION - SELF TAPPING SCREW	8	8GX1/2"PAN.REC 316SS
8	MANHOLE - SELF TAPPING SCREW	6	8GX1/2"PAN.REC 316SS
7	BAFFLE	1	POLYPROPYLENE
6	OUTLET T- JUNCTION	1	ABS
5	INLET T- JUNCTION	1	ABS
4	INSPECTION COVER	2	POLYPROPYLENE
3	MANHOLE COVER	1	POLYPROPYLENE
2	TANK LID	1	POLYPROPYLENE
1	TANK BASE	1	POLYPROPYLENE









Note:
4000L tank base supplied factory assembled and sealed including reinforcing brace ring and tank base extensions predrilled to nominal capacity of 4000L (other than Baffles and T-Junctions)
A riser must not be fitted to 4000L tank

APPROVED

2 1 NOV 2017

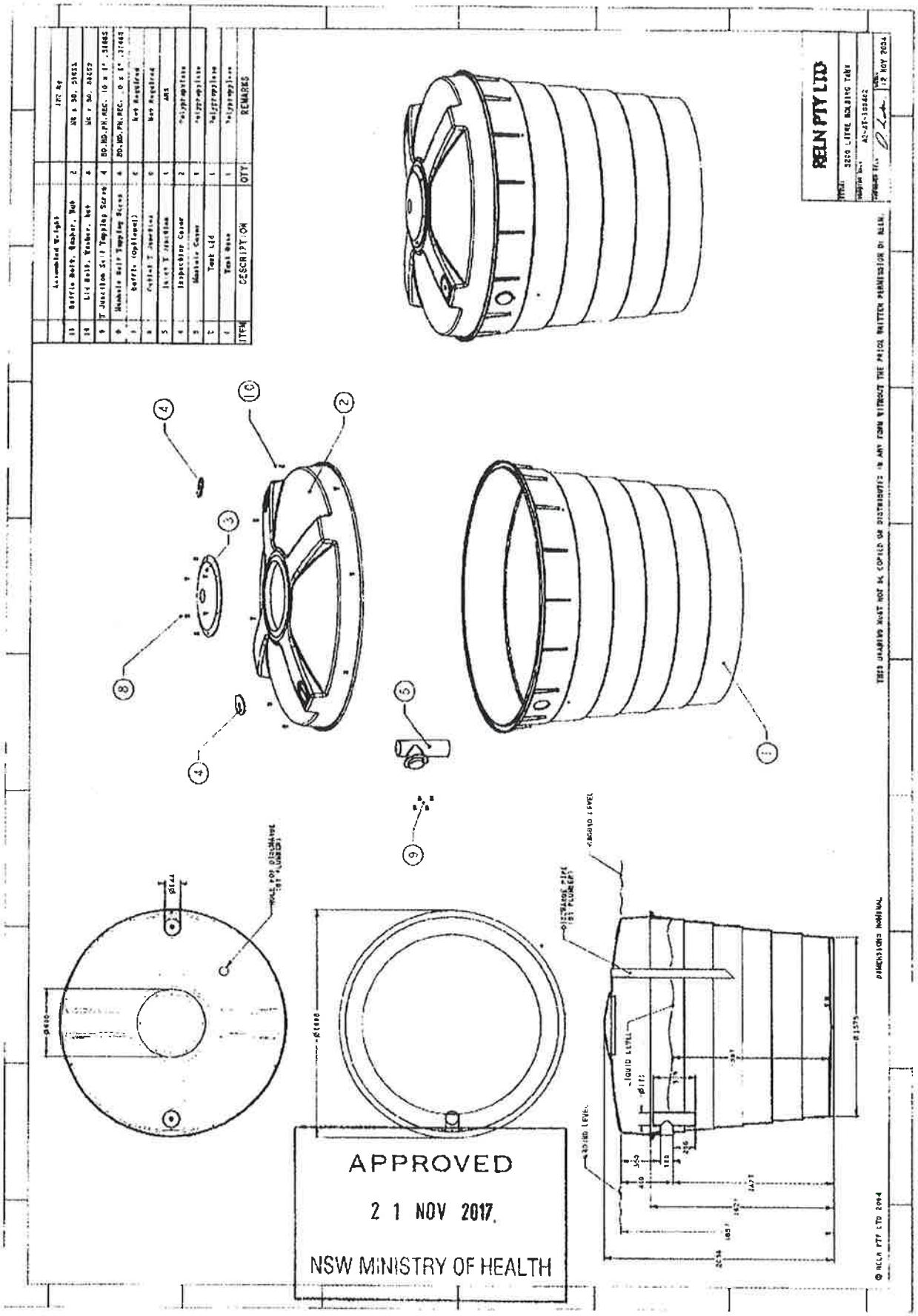
NSW MINISTRY OF HEALTH

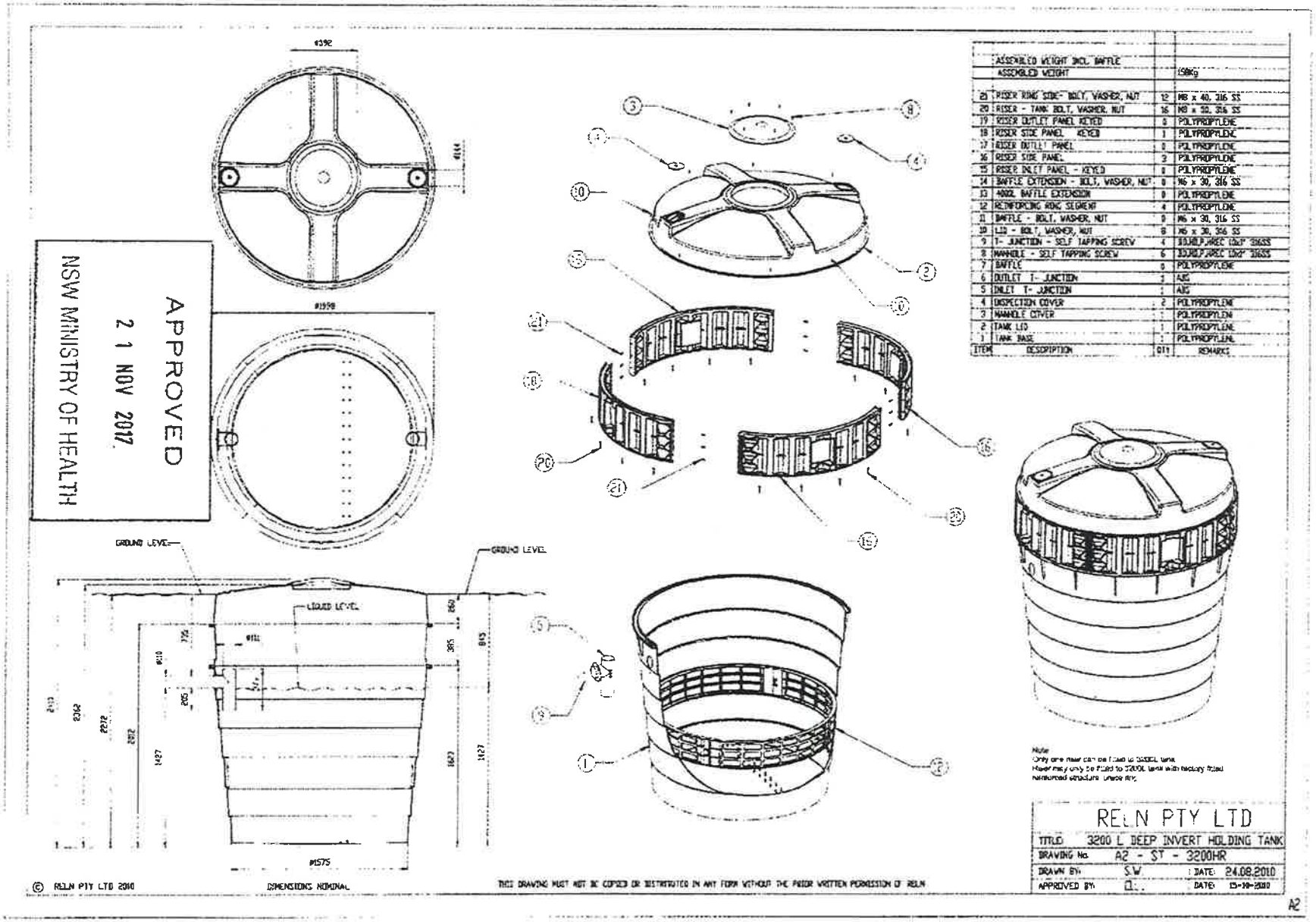
RELN PTY LTD

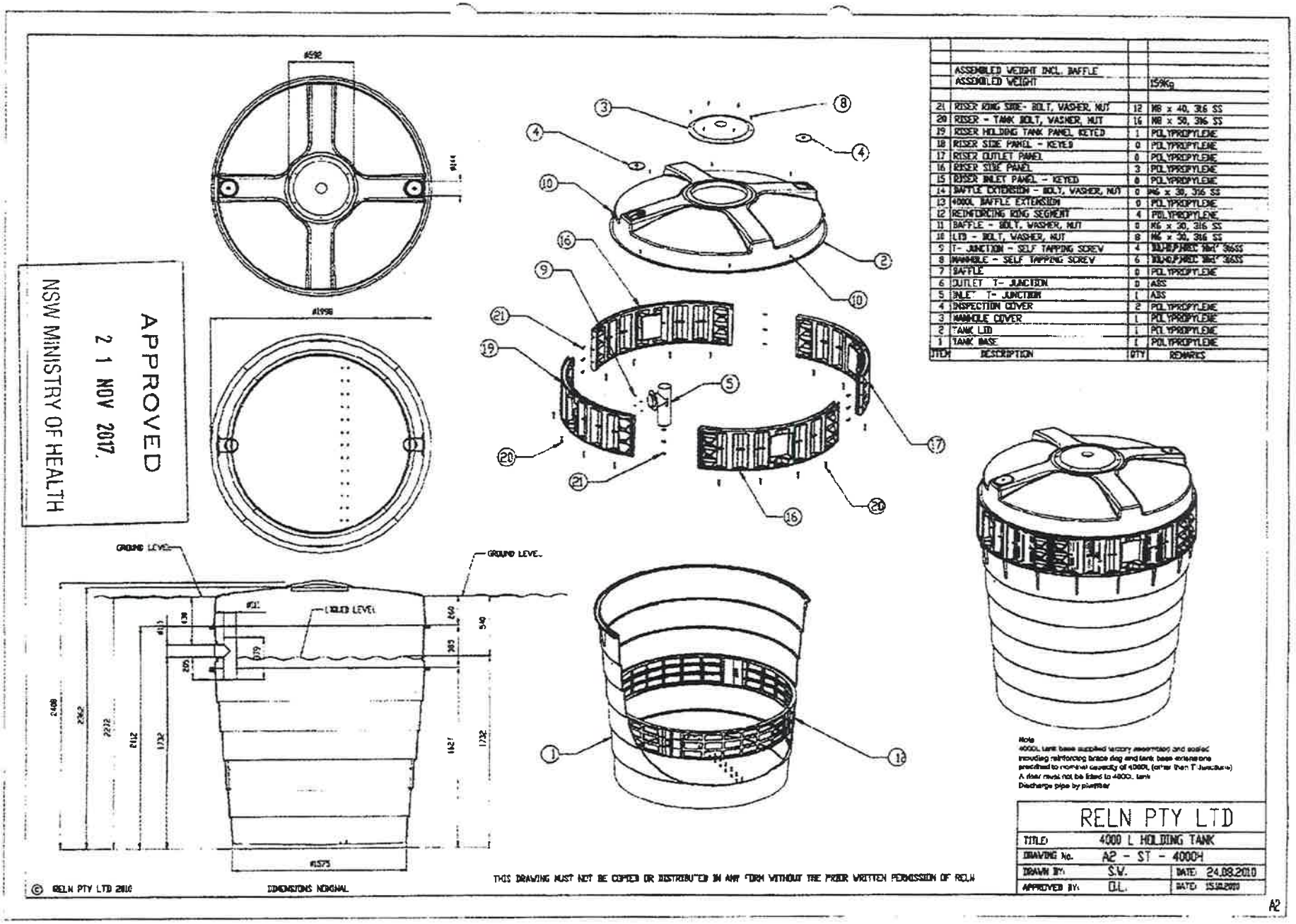
TITLE:	4000 L SEPTIC TANK		
DRAWING No.	A2 - ST 4000S		
DRAWN BY:	S.V.	DATE:	24.08.2010
APPROVED BY:	D...	DATE:	15.10.2010

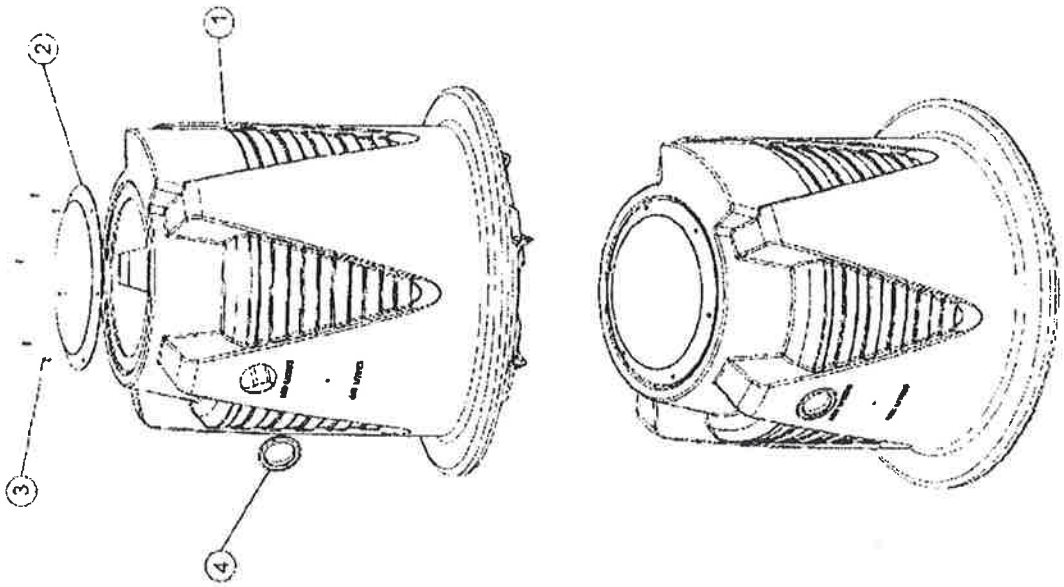
A2

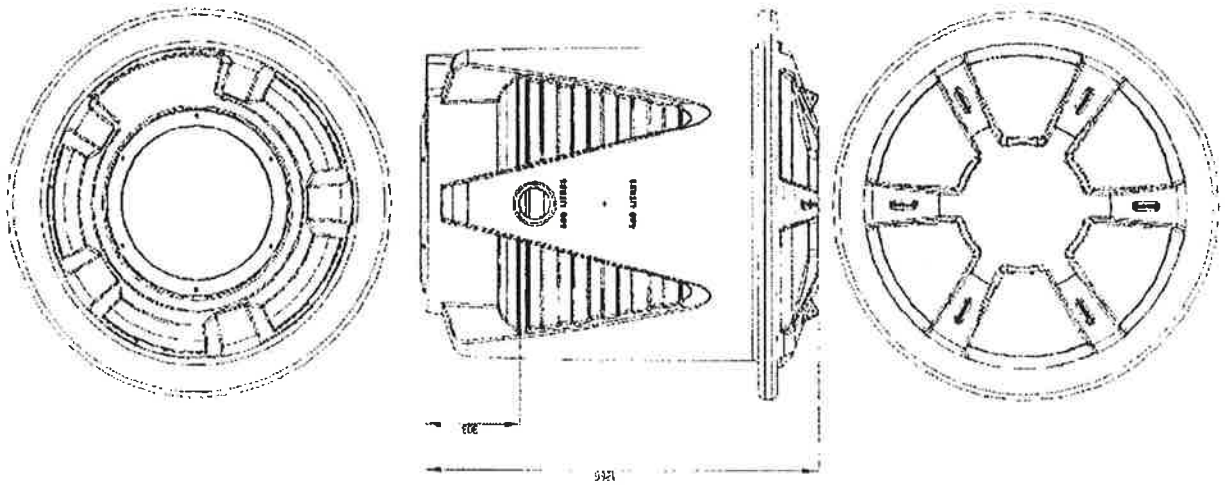
DIMENSIONS NOMINAL

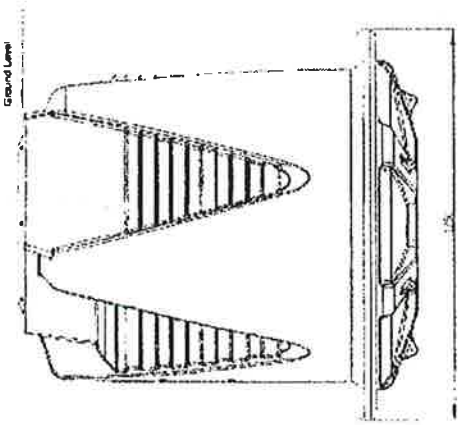










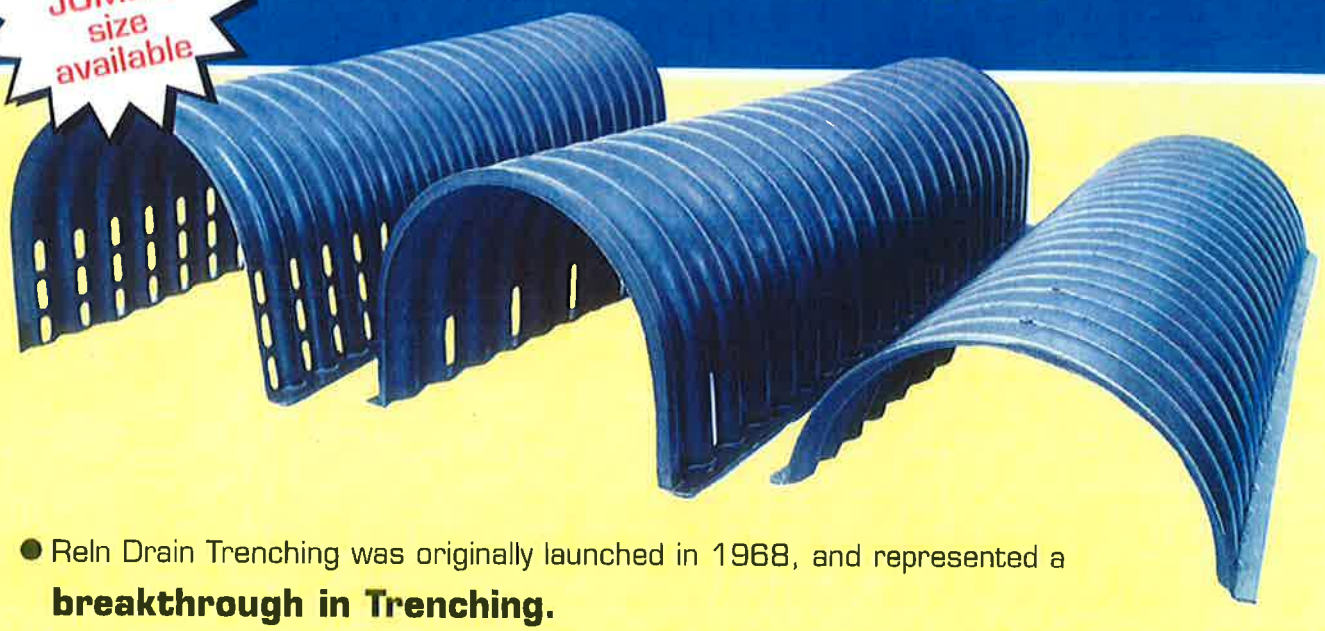


ITEM	DESCRIPTION	QTY	MATERIAL
1	Base	1	LLDPE UV
2	Manhole Cover	1	PP UV
3	Screws 10g Self Tapping	6	316 Stainless Steel
4	Sealing Ring	1	Rubber/Elastomer

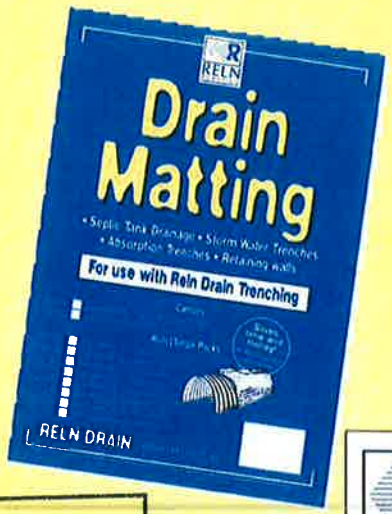
APPROVED
21 NOV 2017.
NSW MINISTRY OF HEALTH

The Original Reln Drain Trenching. Still the best.

Now! 410mm JUMBO size available



- Reln Drain Trenching was originally launched in 1968, and represented a **breakthrough in Trenching.**
- 3 sizes to choose from, 230mm, 350mm and 410mm, there's one to suit your soil type.
- **AS1547 Disposal Method Approved by Health Authorities** in all Australian States and New Zealand.
- **Perfect for septic effluent, sullage waste or stormwater,** Reln Drain Trenching deposes of them all, efficiently.
- Made in Australia from **strong and durable recycled plastic.**
- **End caps** for each size.
- AS 1547 requires **Reln Drain matting to be used** when installing Reln Drain Trenching **with septic tanks.**



RELN DRAIN

RELN PLASTICS

Hills COUNCIL

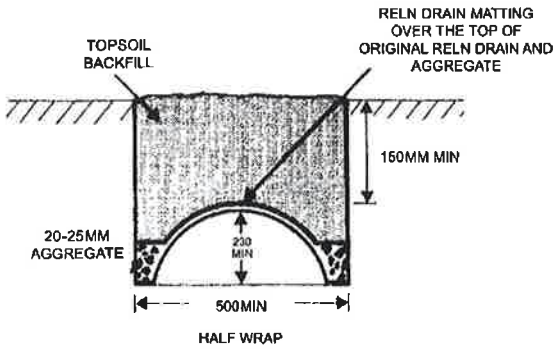
APPROVED

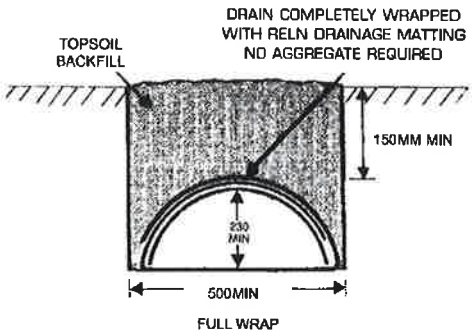
App. No. 05/2020/003

These are the plans / specifications referred to in the above consent / certificate.

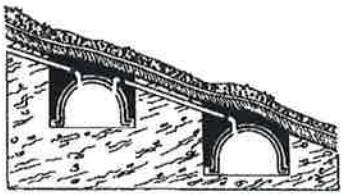
Signed: ..... Date: 24/1/20

Method of Installations





1. Dig trenches to suit your Reln Drain Installation. Trenches should be level along the contour of the land to provide a uniform loading of liquid to the soil. Trenches must be at least 150 mm deeper than the top of the Reln Drain and deep enough to allow the required fall for pipework. On sloping land the first trench of Reln Drain should be fully utilised before overflowing into the next Reln Drain trench.



2. Where required, cut an inlet hole suitable to accept the 100mm effluent inlet pipe in the top of the Reln Drain.

3. Completely wrap Reln Drain in Reln Drain Matting (2m x 6m pack) and lay Reln Drain in trench. Ensure each length of Reln Drain overlaps to join. (Alternatively Reln Drain can be layed straight into the base of the trench), 20mm-40mm size aggregate laid along outside edge of drain to cover drainage slots then half wrap with Reln Drain Matting (600mm x 6m pack).

4. Fit Reln Drain End Caps at each end. Cover End Caps with Reln Drain Matting.

5. Install inlet pipe to Reln Drain.

6. Cover trench with topsoil making suitable allowance for settlement.

7. Reln Drain Matting makes trench or slot drains impervious to external fines. Therefore Reln Drain Matting can extend the life of your effluent drainage system.

8. Saves time and money, when Original Reln Drain is completely wrapped in Reln Drain Matting, aggregate/blue metal ***is not*** required.

Always consult your local authorities when installing drainage systems.
Australian Standards 1547 requires matting is used on all effluent disposal systems.
Do not subject to vehicular traffic.

Technical Specifications. Approximate sizes:

	Jumbo (410mm)	**Large Drain (350mm)**	**Standard Drain (230mm)**
Height	410mm	350mm	230mm
Length	1520mm	1520mm	1520mm
External Width	550mm	584mm	515mm
Internal Width	460mm	533mm	460mm
Storage Capacity	260 Litres	227Litres	120Litres
Weight	21kg per bundle of 5	19kg per bundle of 5	22kg per bundle of 10
	Large End Cap	**Large End Cap**	**Standard End Cap**
Height	425mm	365mm	230mm
Width	565mm	585mm	545mm

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