

STATEMENT OF ENVIRONMENTAL EFFECTS

Staged Residential Subdivision 10 Col Drewe Drive, Bowenfels, NSW, 2790 (Lot 1 DP 1268778)

Prepared for

Treadstone on behalf of Lithgow City Council

By

Integrated Design Group Pty Ltd

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EXECUTIVE SUMMARY

This Statement of Environmental Effects has been prepared to accompany a Development Application lodged on behalf of Lithgow City Council. The development application seeks approval for a staged residential subdivision to create 46 Torrens Title residential lots and 1 residue lot (to form public open space). The development application includes bulk earthworks, associated civil works including the construction of new roads, stormwater drainage, temporary detention basins and installation of services.

The objective of the development includes provision of alotments to encourage a diversity of housing type on specifically zoned land adjacent to important social infrastructure. The proposed development is located west of Great Western Highway at Lot 1,2 and 5 of DP 1268778, 10 Col Drewe Drive, Bowenfels, NSW 2790 and is a DA for a two-stage subdivision that will facilitate a diverse community of 80 dwellings to suit a range of household types and incomes. There will be subsequent DA's lodged for the development of housing and strata subdivision of several lots with in the subdivision to deliver the final yield of 80 dwellings.

This development application seeks approval for subdivision and works pursuant to Part 4 of the Environmental Planning and Assessment Act 1979. The land is zoned R1 General Residential and C3 Environmental Management, and the proposed development is permissible with consent pursuant to Lithgow Local Environment Plan 2014. The proposal complies with the relevant plans and policies that apply to the land and the development.

The proposed development is categorised as 'Integrated development' pursuant to section 4.46 of the Environmental Planning and Assessment Act 1979 given the land is mapped as bushfire prone and requires a Bush Fire Safety Authority from the New South Wales Rural Fire Service for the subdivision of bushfire prone land pursuant to section 100B of the Rural Fires Act 1997.

The DA is not considered 'Designated development' or 'State significant development' pursuant to the Environmental Planning and Assessment Act 1979 or Environmental Planning and Assessment Regulation 2021.

This Statement of Environmental Effects has considered the proposal pursuant to the requirements of section 4.15 of the Environmental Planning and Assessment Act 1979, Schedule 1 of the Environmental Planning and Assessment Regulation 2021, Lithgow Local Environment Plan 2014 and potential development impacts under the Lithgow Development Control Plan 2021. This Statement of Environmental Effects describes the development, its likely impacts, and measures to be implemented to mitigate any impacts. All anticipated environmental impacts can be satisfactorily managed and mitigated.

The Development Proposal and the Masterplan we prepared with careful consideration of the Objectives of R1 General Residential Zone as stated in the Local Environmental Plan (LEP). These objectives include:

- Meeting the housing needs of the community: Our proposal aims to provide adequate housing options for the community, taking into account the demand for different types of housing.
- Providing for a variety of housing types and densities: We have taken into consideration the need for diverse housing options, including dwellings, secondary dwellings, dual occupancies and multi-unit housing, as permitted by the R1 General Residential Zone with consent. This promotes a mix of housing types and densities within the development.
- Enabling other land uses for residents' day-to-day needs: Our proposal also considers the provision of facilities or services that cater to the day-to-day needs of residents, as permitted by the R1 General Residential Zone. This may include amenities such as passive open spaces and other essential services.
- Maintaining or improving water quality: the water quality of the subject site will be maintained and the appropriate measures will be implemented to mitigate any potential impacts.

Furthermore, we note that the R1 General Residential Zone permits a minimum lot size of 400 m2 for subdivision, which we have taken into consideration in our proposal. This allows for a reasonable lot size for subdivision, while also promoting a variety of housing types and densities to meet the needs of the community.

Overall, our Development Proposal and Masterplan have been carefully designed to align with the Objectives of R1 General Residential Zone as stated in the LEP, and we are committed to adhering to the relevant regulations and requirements throughout the development process.

The proposed development is an acceptable form of development as it promotes the delivery of diverse land and housing opportunities in the Lithgow Council local government area. It is recommended that development consent be granted subject to appropriate conditions of consent.



1 INTRODUCTION

1.1 BACKGROUND

INTEGRATED DESIGN GROUP Pty Ltd (IDG) has been commissioned by the Applicant to prepare this Statement of Environmental Effects (SEE). It accompanies a Development Application (DA) seeking approval for staged residential subdivision of one existing allotment to create 46 Torrens Title residential lots and 1 residue lot allowing for residential development compliant with the current Lithgow Local Environment Plan 2014 and Lithgow Development Control Plan 2021,

The proposal is for the delivery of a masterplan to achieve an increased diversity of housing in an area zoned for such purpose and adjacent to key community assets. The masterplan provides for detached residential dwellings to semi-detached dwellings, various forms of row housing and secondary dwellings. Subsequent applications will specify various housing typologies to be delivered within 'superlots', subject to market conditions and demographic need. The current application provides for allowable and known built form on familiar allotment sizes, and for future flexibility within the controls of the DCP.

The DA includes bulk earthworks and associated civil works including the construction of new roads, laneway, stormwater drainage and installation of services.

The site is legally identified as Lot 1 in Deposited Plan 1268778, 10 Col Drewe Drive, Bowenfels NSW 2790 (the Site). It is located adjacent to Lithgow Hospital, Three Tree Lodge (Residential Aged Care), Notre Dame University campus, adjoining R2 subdivision and future development parcels and the Locally Significant Heritage Listed Sweet Briar 'rural' property. The nearby precinct also includes Child Care facilities, Motel, small business premises and a Seniors Living village. The proposal has the potential to provide key worker housing within this locality and to serve the needs of these important community assets. The subject site and adjoining land includes zoning and planning for public recreation spaces of various kinds.

This DA is proposed to ensure the orderly development and efficient use of lands. Due to the changing nature of this locality, Table 1 outlines the relevant development consents, that were identified using Council's online ePlanning Portal, that are considered to influence the proposed development.

Table 1.Relevant DAs to the development of the site.

TABLE 1: RELEVANT DEVELOPMENT APPLICATIONS TO THE DEVELOPMENT OF THE SITE					
DA	Description	Address	Status		
DA142/18	Residential subdivision and civil works	994 Great Western Highway, Bowenfels 2790	Approved		

1.2 PRE-LODGEMENT MEETING

A Pre-Lodgement meeting was held with Council on the 8 November 2022. for the subdivision and to enable delivery of Master Planned construction of attached, detached and semi-detached dwellings, across a 2 staged process.

Following the discussion and advice from Council, the application was further develpoed based on feedback given and to address the following matters raised by council: stormwater drainage design based on different scenarios addressing staging of the approved DA142/18 north of the proposed development,;servicing design; temporary turning circles; proximity to Local Heritage Item; Council Engineering Standards and turning swept paths allowances.

1.3 PURPOSE OF REPORT

The SEE has been prepared in accordance with the Environmental Planning and Assessment Regulation 2021 (**EP&A Regulation**) Reference Clause 24(1)(b)(i) for the purpose of:

- Demonstrating that the environmental impacts of the development have been considered, and
- Outlining steps to be undertaken to protect the environment or to lessen any expected harm to the environment.



This SEE details the necessary information for the proposal to be assessed by the consent authority, including a description of the site and its surrounds and an assessment of the proposal against the relevant planning controls.

This SEE concludes that the proposed development is acceptable in that it is consistent with the relevant planning controls and will have minimal environmental impacts that can be satisfactorily managed. Moreover, the development meets key objectives in the diversification of housing and to address a general lack of supply in what is now recognised as a 'regional housing crisis', especially in respect of key worker and affordable housing.

1.4 TYPE OF DEVELOPMENT APPLICATION

This DA seeks approval for staged residential subdivision of one existing allotment to create 46 Torrens Title residential lots and 1 residue lot allowing for residential development compliant with the current Lithgow Local Environment plan 2014 and Lithgow Development Control Plan 2021, pursuant with section 1.5 of the Environmental Planning and Assessment Act 1979 (**EP&A Act**), compliant with the current Lithgow Local Environment Plan 2014 and Lithgow Development Control Plan 2021. This housing diversity provides opportunity for residential development ranging from detached residential dwellings to semi-detached dwellings, row housing and secondary dwellings.

The capital investment of the development is above \$5 million (refer to **Appendix A**) and the DA therefore will be referred to the Western Region Planning Panel for determination.

The Applicant has elected to lodge this DA as 'Integrated development' pursuant to section 4.46 of the EP&A Act given the land the subject of this DA is mapped as bushfire prone land. The following is therefore required:

• The land is mapped as bushfire prone and requires a Bush Fire Safety Authority from the New South Wales Rural Fire Service for the subdivision of bushfire prone land pursuant to section 100B of the Rural Fires Act 1997.

The development will be determined by the Western Regional Planning Panel but will be assessed by Council and as such under Policy 7.6 that assessment will be reported to full Council to refer to Panel for Determination the application being on Council owned land will will be determined by the Council.

1.5 REFERRALS AND CONSULTATION

As discussed above in **Section 1.4** of this SEE, the proposed development is categorised as 'Integrated development' pursuant to section 4.46 of the EP&A Act and is to be referred to the RFS to obtain General Terms of Approval.

The proposed development is likely to require the relocation of an aboveground electricity pole. As prescribed in section 45 of the State Environmental Planning Policy (Infrastructure) 2007 (**Infrastructure SEPP**), the DA will need to be referred to the relevant energy authority for a period of 21 days.

The site is located in the Sydney Drinking Water catchment & is subject to the requirements of Part 6.5 of SEPP (Biodiversity and Conservation) 2021. The proposal will be referred to Water NSW for concurrence. The proposal needs to demonstrate that it achieves a neutral or beneficial effect (NorBE) on the water quality being discharged from the site. The proposal will be supported by a water quality assessment including MUSIC modelling that demonstrates NorBE can be achieved.



2 THE SITE AND LOCALITY

This section of the SEE describes the Site and its location. It defines the project area for the purpose of this SEE and provides a summary of the key features of the environment of the area, and the broader locality which may be impacted by physical works, and therefore provides the key factors considered as part for the proposed development.

2.1 SITE LOCATION

The Site is situated in the suburb of Bowenfels, with close proximity to Lithgow Hospital, Notre Dame University and Three Tree Lodge residential aged care. The precinct also includes Child Care facilities, small commercial offices, a Seniors' Living village and zoned recreational land. The site is located approximately 3.5km south-west of Lithgow city centre. The site benefits from close proximity to major roads, including Great Western Highway and future open space allocated to the northern subdivision (DA142/18) and existing open space to the west at Three Tree Hill.

The subject site is located on the western edges to the Lithgow City Centre. The site contains Three Tree Hill which is a way finding marker to the surround area, and a significant natural feature. The site benefits from a semi rural context yet still in close proximity to the Great Western Highway and easy access to Lithgow City Centre. The site is surrounded by smaller pockets of development ranging from low rise residential, educational facilities, medical facilities and retail.

As a reflection of the site's unique position, the zoning allows particular site allow for 400m² sites which provides more opportunity for diversity of housing to include medium density than the surrounding suburbs.

The Australian Bureau of Statistics recent Census Data indicated that the highest industry employment in Lithgow is aged-care services and this site is in close proximity to some of the key services in the city centre. This provides opportunities for housing on this site for key workers in a health and education employment zone. This housing diversity through increase density models for key workers due to close proximity to work and less requirement for vehicular transport



FIGURE 1. GENERAL SITE LOCATION WITHIN THE CITY OF LITHGOW LGA



2.2 SITE DESCRIPTION

The Site is located to the west of Great Western Highway, legally described as Lot 1,2 and 5 in DP 1268778, 10 Col Drewe Drive, Bowenfels. Lithgow City Council purchased Lots 1 and 2 (and 5 as part of an intended Road reserve), DP1268778 in March 2021 and now intends to develop these lots, having an area of 6.36ha into a new residential community.

The Site is irregular in shape and has a total area of 70,445m². The property is predominantly grassed with no trees within the development area and 1 dam located toarwds the south eastern corner. The site does not contain any existing built structures. The western portion of the site falls to the east down 'Three Tree Hill', the north-eastern portion of the site falls to the north with a 941 - 955 Australian Height Datum (**AHD**) to the northen boundary and 941 - 948 AHD to the eastern boundary (refer to the Survey Plan at **Appendix B**).

Topography is what defines the site with the Three Tree Hill and prominent location and views across should be maintained. Views of the top of the hill become the focal point from almost any point along the highway.

Areas on greater topography can be developed through tradition single detached dwellings which are stepped appropriate to deal with slop, while flatter areas of the site present opportunity for higher density residential developments (such as terraces, studios and townhouse typologies).

The site is primarily accessed from Col Drewe Drive off the Great Western Highway. With the proposed DA subdivision to the North, there is another primary access point is to James O'Donnell Drive and through to Lithgow Town Centre. These access points creates a potential connection through the site towards the west to increase permeability in the site, and provide more pedestrian links through the surrounding suburbs.

In the semi-rural context the site is also located in bushfire zone which is impacted by surrounding vegetation, and the topography and exposure to large areas of grassland and vegetation to the west.

There is also an adjacent heritage item and while views to this item are not significant from the subject site, views from this item across to the Three Tree Hill are important to maintain.



FIGURE 2. AERIAL PHOTOGRAPHY OF THE SITE AND SURROUNDING LOCALITY



2.3 SURROUNDING LOCALITY

The Site is located in an area traditionally characterised as rural, however, with a number of recent nearby residential subdivisions being approved and developed, the locality is considered to be land in transition, in accordance with relevant current zoning. Most subdivision to date would be regarded as "typical" low density residential development, though higher density is evident in seniors' living estates and health infrastructure.

The development of important community health and other infrastructure in this locality through the past decade(s) has been a catalyst for zoning of the subject site to accommodate a higher diversity of housing stock. This includes the Lithgow Hospital, Residentail Aged Care, Motel, Offices, Senior's Living, Child Care and the like.

Simultaneously, the area is well served with public open space, associated with Three Tree Hill and open space provision in neighbouring residential estate development to the north.

Three Tree Hill is so called due to the significant location of 3 trees on an otherwise grassed hilltop. These 3 trees (2 remaining in reasonable condition) are an identified place marker in the locality, viewed from various directions and locations in the vicinity. The proposal specifically accounts for view lines toward the trees and height limits relative to the topography and tree locations.

The Site is located approximately 4.8km south-west of Lithgow Train Station, withint 400m of local bus services and 4km southwest of the nearest major shopping centre.





FIGURE 3. LOCAL GREEN SPACES IN LITHGOW

FIGURE 4. PUBLIC TRANSPORT PROXIMITY TO SITE

2.4 CONTEXTUAL INFORMATION

Lithgow City Council purchased Lots 1 and 2, DP1268778 in March 2021 and now intends to develop Lot 1 DP 1268778, having an area of 6.36ha into a new residential community.

Figure 3 shows the development site in its locality context with the approved subdivisions and future concept layouts (subject to change). The development site sits between existing and approved neighbourhoods of low-density residential character to the north and southwest with lot sizes typically above 800 m2 and housing forms of large single detached dwellings.

The development site and its parent lot have remained undeveloped since initial development consent was granted in 2007. This led to a submission to LCC Draft LEP 2013 to provide for a different housing product at South Bowenfels. This was encouraged by the success of the Tree View Estate development to the south, which saw positive results following a decrease in the lot size from the then standard of 800m² to 400m² with a General Residential zone R1.

The current zoning of the site, general residential zone R1, provides a minimum lot size of 400 m2, allowing a more affordable option to the current stock availability in South Bowenfels. The existing Development Control Plan (DCP) is based on the LRMDHC

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allowing for a diversity of housing types including attached and detached duplexes and terraces. This product has been developed in the existing township of Lithgow, however in the South Bowenfels release, due to the lot size controls, only large lot residential have been delivered.

The master plan and Figure 3 above highlight the connectivity between green spaces. The DA-approved subdivision to the north will provide the social amenity through a park and open spaces, while our application will further enhance this by adding additional open space, as clearly depicted in the master plan. The three trees hill will be the additional passive open space provided to contribute to the greenery and overall aesthetics of the development.

The development application (DA142/18) was granted approval in 2018, and the owners and developer are currently in the process of finalising the Construction Certificate documentation before commencing construction on the site. DA 142-18 is an independent application and has a separate owner and development partner. The subject development can proceed without any involvement from the adjoining landowner that obtained DA 142-18. The owners of the land to the north (DA 142-18) are observed to be in the process of obtaining a construction certificate for the consent that was granted in 2018. However, no projected start date for the project has been provided at this time.

Development site is situated in what is known as the South Bowenfels Release Area created by two major land rezonings in July 2004 LLEP1994 (Amendment No 8 & 9) that rezoned the land from Future Urban and Rural zone to part Residential and part Open Space. This followed the siting and construction of the major state infrastructure of the Lithgow Hospital in an out of centre location. No Masterplan of this area was prepared with the land rezonings. In 2007 Council prepared a DCP to provide development guidelines for the area.

The parent lot having an area of 33.48ha was created in 2005.

In 2007 Council consented to subdivision of the parent lot into 160 lots - DA 335/05. This consent was substantially commenced with the extension of Col Drewe Drive but remained undeveloped causing a stalemate for developments to the north and south in relation to collector roads and distribution of traffic back onto the GWH.

South Bowenfels DCP commenced in 2007 (now repealed and replaced by LDCP 2021) that provided development controls for the area at that time including a MLS of an average of 700m2 in any one development. This created the low density residential pattern typical within the release area. The DCP also provided a conceptual road layout for the main collector roads within the area (see attached map).

In 2014, Council's Principal Standard LEP was made. As a result of a submission to the Draft LEP supported to Council the parent lot was then zoned Part R2 Low Density Residential, Part R1 General Residential and Part C3 Environmental Management. R1 General Residential zone was assigned a MLS of 400m2. The R2 zone was assigned a 800m2 MLS. Council supported this amendment to provide for further housing diversity in the area around the

Subject development site was created from a subdivision of Lot 1 DP 108248 (parent lot) in August 2020. Council purchased Lot 1 and 2 DP 1268778 in 2021. Lot 5 DP 1268778 was a road reserve to be dedicated to Council.

C3 Environmental Management zone provides for passive open space and linkages to the public reserve located to the north of the development site.

Development of land to the north (DA142/18) of Lot 1 DP 1268778 will make provision for the dedication of a public open space reserve that is planned to be embellished to a District Level Park as identified in Council's Open Space and Recreational Needs Study. This park is located within a 500m radius from the development site with direct access from an extended public road.

Core community facilities and services will be provided by the Lithgow Town Centre located only minutes from the development site.



2.5 LITHGOW COUNCIL LOCAL ENVIRONMENT PLAN 2014 CRITICAL DESIGN CONSIDERATIONS

The Lithgow City Council Local Environmental Plan 2014 identifies a number of critical design considerations that affect future development on the site. The critical conditions relate to: Zoning and Land use; Minimum Lot Size; Heritage; Biodiversity; Riparian lands and Watercourses; Bushfire Prone Land.



FIGURE 5. LEP LAND ZONING MAP



FIGURE 6. LEP MINIMUM LOT SIZE MAP

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FIGURE 7. LEP HERITAGE MAP



FIGURE 8. LEP TERRESTRIAL AND BIODIVERSITY MAP





FIGURE 9. LEP RIPARIAN LANDS AND WATERCOURSES MAP



FIGURE 10. LEP BUSHFIRE PRONE MAP



2.6 SERVICES

The proposed development will require service connections to the utility service mains. A summary of the proposed utility infrastructure that is available or to be augmented by the applicant is outlined below and detailed in the Infrastructure Report provided at **Appendix C**.

Sewer

The site falls into two catchments for sewer services. Lots 1-17 are located within the western catchment. These lots will be serviced by a reticulated sewer system that drains to the south to the existing sewer pumping station located within the University of Notre Dame land.

Lots 18 - 46 are located within the eastern/northern catchment. These lots will be serviced by a reticulated sewer system that drains to a sewer lead-out that extends from the proposed sewer pumping station to the north and through the adjoining property 994 Great Western Highway.

Water

The site will be connected into the existing potable water main within Col Drewe Drive and a water main system extended along the proposed road network. The site will be serviced from the reservoir located off Hill Range Crescent. That reservoir has a ground level of approximately RL 972m AHD, more than 10m higher than the highest proposed allotment.

Electricity

The site will be serviced by the extension of an 11kv feeder from the Great Western Highway, along Col Drewe Drive to the site. This will be connected to a substation within the subdivision and electrical services distributed throughout the road network to service the proposed lots.

Gas

Gas services are available in the locality. The proposed subdivision will be serviced by the extension of the existing gas mains within Col Drewe Drive to the site and throughout the proposed road network.

Telecommunications

Telecommunications services are available in the locality. The proposed subdivision will be serviced by the extension of the existing NBN network within Col Drewe Drive to the site and throughout the proposed road network



3 PROPOSED DEVELOPMENT

The DA seeks approval for staged residential subdivision of one existing allotment to create 46 Torrens title allotments and 1 residue lot. The DA provides a masterplanned vision for a diverse housing estate and includes bulk earthworks and associated civil works including the construction of a new road network, stormwater drainage and installation of services.

Each component is described in more detail in the sections below.

3.1 DEVELOPMENT STAGING

The development is a two stage DA Subdivision based on the delivery timeframes of the approved subdivision to the north of the subject site (DA142/18). This staging will facilitate a diverse community of 80 dwellings to suit a range of household types and incomes. There will be subsequent DA's lodged for the development of housing and strata subdivision of several lots with in the subdivision to deliver the final yield of 80 dwellings.

Stage 1 will deliver the Collector Rd (Road A) and all lots West of it (Lots 1 -17) and a proportion of Lots to the East (Lots 18-31) including Road B & Road C. These lots will provide generally more familiar housing types but will also include a portion for 'demonstration' of alternative housing, including some medium density development of 2 superlots, and dual occupancy variants on lots that comply with the DCP provision for same. Development of the housing within Stage 1 will be the subject of Complying Development Certificates (where applicable) and/or subsequent Development Applications. **Stage 2** will complete the current proposal with the eastern part of Roads B, Road D and Circuit A and Lots 32-46. Again, superlots 32 & 36 will provide opportunity for further diversity in housing type, subject to future Development Consent. In total, the proposal is expected to yield approximately 80 homes across the 46 Lots identified in this application.

Investigation of services and road network capacity together with other environmental matters has confirmed capacity for the intended total development.

3.2 SEDIMENT AND EROSION CONTROL

During construction, and ongoing use of the Site, appropriate sediment and erosion control measures will be implemented and maintained by the applicant's contractors. The measures shown in the Engineering Plans (**Appendix D**) are intended to be a minimum treatment only as the contractor will be required to modify and stage the erosion and sediment control measures to suit the construction program, sequencing and techniques. These measures will include, but are not limited to:

- A temporary site security/safety fence is to be constructed around the site,
- Sediment fencing provided downstream of disturbed areas, including any topsoil stockpiles,
- Dust control measures including stockpiles, installing fence hessian and watering exposed areas,
- Placement of hay bales or mesh and gravel inlet filters around and along proposed catch drains and around stormwater inlet pits, and
- Stabilised site access at the construction vehicle entry/exits.

During the earthworks, the temporary detention basin will be used as a temporary sediment basin. Once the permanent solution is constructed, the basin will be cleared, and outlet pits will be constructed.

Any stockpiled material, including topsoil, shall be located as far away as possible from any associated watercourses or temporary overland flow paths. Sediment fences shall be installed to the downstream side of stockpiles and any embankment formation. All stockpiles and embankment formations shall be stabilised by hydroseeding or hydro mulching on formation.

3.3 DEMOLITION

The Site does not contain any structure but just existing fencing to be replaced. All demolition works and material disposal will be carried out in accordance with the AS2601-1991 – Demolition of Structures and Waste Management Plan.



3.4 TREE REMOVAL

The majority of the Site of the proposed works is clear of vegetation (other than pasture) with remnant trees (3) located on the site above the effected development area and within a non-residetial zoning. The proposed road pattern, disposition of development density and extent of cut required to grade the Site, does not effect these trees and none are required to be removed or impacted by development.

3.5 REMEDIATION OF LAND

The site is not known to have been subject to any past contaminating land uses and a contamination report is not required.

3.6 BULK EARTH WORKS

The proposed earthworks are required to establish the lot levels for the intended dwelling footprints. These levels have been designed to optimise the utilisation of cut and fill across the site, maintain fall to the street and to maintain boundary levels. All efforts have been made to balance cut and fill and limit the use of engineered structures to deliver the proposed design levels.

The proposed subdivision includes bulk earthworks across the site, including cut of approximately 21,200m³, and fill of approximately 9,200m³. The excess material is proposed to be stockpiled on the Stage 2 super lot 36 pending final detail earthworks for dwelling construction.

Stage 1 works include bulk earthworks across the whole site, with surplus material to be stockpiled in the area of the Stage 2 Lot 36. That material will be utilised in the detailed earthworks for future dwelling construction. Any remaining surplus material will be disposed of offsite as required.



FIGURE 11. CUT & FILL PLAN (JWP)



3.7 ROADS AND CIVIL WORKS

The proposed development includes the construction and delivery of a series of new local roads with associated road drainage, services and stormwater drainage facilities. All local roads are to be dedicated to Council as part of the subdivision and will be supplemented by a series of temporary turning areas until adjoining land is developed. Neighbours Consent for termporary works located in **Appendix I**. Further details on each aspect of the civil works are proposed in the following sections and detailed in the Engineering Plans at **Appendix C**.

3.7.1 ROADS

The proposed street network and hierarchy provide a permeable and legible street network, which will facilitate the safe movement of vehicles, pedestrian, and cyclists within the residential subdivision. The primary point of road access will be provided from Col Drewe Drive.

Table 2. Summary of Proposed Road Configuration

Proposed Road	Road Construction	Proposed Road Reserve Width
Road A	Collector Road	18m
Road B	Local Road	15m
Road C	Local Road	15m
Road D	Local Road	15m
Circuit A	Local Road (Car court)	32m
Road E	Laneway	10m

Local streets within the proposed subdivision have been designed to promote low-speed traffic environment whilst achieving the function and safety objectives for local residential traffic. In addition, the proposed local streets will make an important contribution to residential amenity through the provision of canopy cover through street tree planting, whilst also supporting appropriate levels of on-street parking.

Temporary turning facility is proposed at the termination of Road A, Road B and C, in order to allow vehicles to turn around at the end of the dead-end road. The temporary turning facility is proposed to utilise the on-street parking which will be restricted to allow Council garbage truck (10.7m) to turn around. 'NO PARKING' signage in the vicinity of the temporary turning facility will be installed and will be provided with 'NO THROUGH ROAD' signage at the entry. Neighbours Consent for termporary works located in **Appendix I**.



FIGURE 12. PROPSOED LOCAL ROAD (JWP)

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3.7.2 LOCAL ROADS

The proposed development includes 4 roads that are identified as Local Roads (Road B, C, D and Circuit A) under the adopted planning controls and will have a total reserve width of 15m, with road pavement of 8m and 3.5m verge on each side as per the DCP and illustrated in **Figure 12**. These roads will provide a 1.5m wide footpath within each of the road verges. Each Road is aligned wholly within the site.

3.7.3 COLLECTOR ROADS

The proposed development includes 1 road that is identified as an Access Road (Road A) under the adopted planning controls and will have a total reserve width of 18m, with road pavement of 11m and 3.5m verge on both sides as per the DCP and illustrated in **Figure 12**. These roads will provide a 1.5m wide footpath on one side of the road and a cycle lane on the other side (eastern) of the road with planting on either side of the road verge. Each Road is aligned wholly within the site.

The alignment of this road varies from the DCP to better respond to topography at the northern end of the site, and to align adjacent the eastern boundary adjoinging Three Tree Lodge to the east. This provides for better open view from the residential aged care facility, better view lines to Three Tree Hill, improved drainage management and better boundary interface. Working more closely with the topography also allows for better use of the natural fall, better drainage and servicing, better surveillance, and provides a buffer between residential properties and adjacent developments.

3.7.4 LANEWAYS & CIRCUITS

The proposed development includes a Laneway (Road E). The laneway will have a total reserve width of 10m, with road pavement of 6m and a varying verge with a minimum dimension of 2m on one side as illustrated in **Figure 12**. The laneway provides for part of the diversity of housing type appropriate to its location nearest the hospital and also provides passive surveillance along the hospital boundary and overlooking the staff parking area of the hospital. The laneway verge provides for a landscape buffer to the hospital site and an improved boundary interface in preference to rear fencing of multiple residential lots. The laneways specifically enable improved pedestrian movements along key desire lines connecting the development across "live, work and play" assets. Refer to Masteplan Document **Appendix G.**

Specific streetscapes are envisaged in Council's planning objectives and are enabled through a careful and strategic limited use of laneways. The entirety of the 'traditional' town plan of Lithgow is laneway based, and when compared with many newer parts appears to serve the townscape much better. These laneways also avoid dead-ends or convoluted turning heads that might otherwise result from the efficient development of the irregular site. This provides forward movement of service and emergency vehicles throughout the street network. These laneways allow for deliberate buffer landscaping between the development and the Three Tree Lodge.

<u>Circuit A:</u> In general, the estate is seeking to provide a wide diversity of housing and to gather these into neighbourly communities/places. This is achieved in a range of ways across the estate. Circuit A seeks to enable community activation and amenity in the midst of a particularly diverse group of homes in a low traffic environment and away from the major traffic thoroughfares. Further, it avoids 'dead end' vehicle movements in an otherwise land-locked corner of the subject land. (Note: previous concepts for the site deployed battle-axe and similar devices for access to this corner portion of the oddly shaped site)

Superlot 36, together with Lots 37&38 (having 2 street frontages) deliberately create the opportunity for supplementary dwellings and studios to address and gain access from the small culdesac that serves otherwise family-sized homes.

In preference to providing a short street with a large culdesac head, Circuit A enables simple large vehicle manoeuvring AND a pocket park within the street reserve, in which children can safely play and elderly can share in the community.

Pavement is minimised with a narrow carriageway, sufficient for turning movements in a low speed environment. Visitor parking will also be achieved where it doesn't restrict vehicle movements.

Significant planting is afforded through both the planted median (pocket park) and both regular verges having minimum driveway crossings. This reduces potential *urban heat island effects* and centres the homes around a significant low maintenance public landscape space.



The small number of homes forms a community of interest to care for and protect this discreet public space, and the space creates a particular, discreet identity for the community that surrounds it. There are successful and less successful versions of similar landscape medians through the history of urban and suburban spaces. Key elements contributing to the success of this proposal include:

- appropriate number of homes served
- appropriate diversity of homes/demographic served
- small scale of public space with very low maintenance demand and within the scope of 'neighbourly' effort similar to private mowing of nature strips
- low traffic volume and as narrow as possible carriageway to enable safe traverse by children between home and park.
- potential for detailed capital investment on establishment by developer without high on-going maintenance.
- the space will add value to the surrounding homes, distinguishing them in the market, and therefore be valued by owner/occupiers.
- this is not a 'utopian experiment' imposed within a 'social housing' scheme, but rather serves a percentage of likely home owners with due social capacity, while it is also an 'agglomerated' open space serving smaller than average family lot sizes and a broad demographic.
- there will be reasonable surveillance of the space from a range of homes and obvious vantage points discouraging antisocial potential.
- it is not too withdrawn from more active public areas.
- the location and orientation is deliberately aligned with topography to create an hierarchy within the precinct, symmetrically rising to the larger houses overlooking the park.

Successful spaces of similar intent include:

- Basin Reserve at Raleigh Park, Kensington
- Old Belvedere Promenade, East Perth
- Correys Square and Parkside Terrace, Cabarita

(These are each within specific Community Management Plans due to their size and the quality of homes surrounding them, hence the relative scale of this proposal is important in context).



FIGURE 13. CIRCUIT EXAMPLES

3.7.5 INSTALLATON OF SERVICES

The proposal includes the provision of services to all proposed lots as well as any necessary service main lead-ins.



3.7.6 RETAINING WALLS

The proposal includes the provision of a retaining wall along the eastern side of the collector road, from Col Drewe Drive to proposed Lot 25, and returning along the south boundary of Lot 25 for approximately 10m. The wall is a maximum height of 1m.

These lots have been designed to encourage a standard project housing typology which utilised the topography to step the down the site over 2 storeys through a landscape batter in the subfloor area and avoid the installation of expensive retaining walls.



FIGURE 14. PROPOSED HILLSIDE DWELLING SECTION

3.7.7 STORMWATER MANAGEMENT AND WATER QUALITY

The proposal will include a piped road drainage system and detention to restrict the post development discharge rates to the predevelopment for the 1% AEP event. The western catchment will drain to an above ground detention system on the southern side of Col Drewe Drive.

The eastern/northern catchment will drain to a detention tank below Road C to be constructed as part of the Stage 1 works. It will be sized to accommodate both Stages 1 and 2 run-off within that catchment. Discharge will be directed to the proposed drainage system within the development immediately to the north. OSD basin in the road reserve, shown on civil plans.

3.7.8 INTERALLOTMENT DRAINAGE

Interallotment drainage will be provided for all lots unable to drain stormwater directly to a public road. If the approved development to the north is not completed by the time works commence on site there will be temporary treatment on the subject site with tail out and a temporary easement on the neighbouring property. Please refer to letter of consent from the neighbouring owners.

3.8 SUBDIVISION

This DA seeks approval for subdivision of one existing allotment to create 46 Torrens Title lots and 1 residue lot and new local roads to be dedicated to Council as per the proposed Plan of Subdivision (refer to Engineering Plans **Appendix C**) and has been designed to align with future adjoining subdivision, generally in accordance with the DCP.

The subdivision provides superlots for future subdivision of a range of diverse housing types to suit the demographic and market preferences at the time. The supported have been conceived to provide a degree of flexibility for subdivision into lot sizes compliant with various options within the DCP. In this the proposed development will deliver a range of different lot types that will provide for different housing and different market entry points.

In spite of the irregular shape of the existing lot, proposed lots have been developed to remain as rectilinear as possible. The proposed residential allotments range in area between approx $400m^2$ (proposed Lot 43) to 2,118m² (proposed Superlot 36) (refer to **Figure 15**). The future subdivision of superlots will further diversify this lot size.



The allotment orientations have been designed in accordance with the DCP and provide an orderly streetscape to facilitate different housing products to achieve a variety of dwelling designs within the 'Suburban' and 'Urban' streetscape character anticipated by the DCP. Solar access ought be afforded within the detailed design of higher density housing types.



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3.8.1 SERVICING

The subdivision has been designed to be serviced by Lithgow City Council's standard garbage collection service and all lots will present garbage bins to the street address of each property. Lots 25-29 will provide garbage bin to the street address on Road B (as the rear lane servicing these lots is for personal vehicle access only and not for large service vehicles).

3.8.2 CRIME PREVENTION THROUGH ENVIRONMENTAL DESIGN

In April 2001, the then NSW Department of Infrastructure, Planning and Natural Resources (Department of Planning and Environment) introduced Crime Prevention Legislative Guidelines to Section 79C of the Environmental Planning and Assessment Act, 1979. CPTED employs four key strategies: Territorial re-enforcement; Surveillance; Access control and Space / Activity Management. This proposal employs these key strategies in the following manner.

Territorial Reinforcement: Community ownership of public space sends 'signals' to the community. Places that feel owned and cared for are likely to be used, enjoyed and revisited. People who have guardianship or ownership of areas are more likely to provide effective supervision and are more likely to intervene if crime is taking place, or if there is a risk of crime occurring. In this development almost all public spaces are bounded by lot frontages allowing for the use of actual symbolic boundary markers such as front fences and gates, driveway entries and living spaces in dwellings, encouraging communal responsibility for public areas.

Surveillance: People feel safe in public areas when they can see and interact with others. Criminals are often deterred from committing crime in places that are well supervised. All public spaces through the development have lot frontages adjacent to them providing potential for good passive surveillance from residential dwellings. The only public space which is not provided with lot frontages is the access laneway behind Lots 25-29. These lots are specifically designed to allow for secondary dwellings, or 'Fonzie Flat' typologies which incorporate residential rooms above garages and provide passive surveillance over the space. This laneway



is also visible from the communal areas of the adjacent aged care facility providing it with passive surveillance through the day from residents, but also through the night hours with active staff on site.

Access Control: Access control treatments restrict, channel and encourage people and vehicles into, out of and around the development. The proposal utilises clear and simple road network connecting to neighbouring subdivisions which allow for clear Way-finding, desire-lines and formal/informal routes minimising opportunities for people to wander in areas where they are not supposed to.

Space/Activity management: Space / Activity Management strategies are an important way to develop and maintain natural community control. The subdivision proposes pedestrian and vehicle movement through managed footpaths. Circuit A is a managed park area which is surrounded by a number of dwellings which provide a sense of ownership.

3.8.3 C3 ENVIRONMENTAL ZONING LAND

The area of the site that falls under the C3 Environmental Zoning (refer to **Figure 16**) and will be retained as managed landscape area open to the public. In order to preserve the locality views of the Three Tree Hill as a local landmark, landscaping on this hill is proposed to be retained as low grass land with pedestrian pathways around and through the C3 zone to activate this as a public park. By retaining this area as a managed landscape with low grassland the proposal seeks to maintain a reasonable Asset Protection Zone to the lots along the western side of Road A.



FIGURE 16. PROPOSED SUBDIVISION LAYOUT WITH LAND ZONING MAP OVERLAID



3.8.4 PEDESTRIAN ACCESS

The proposal seeks to encourage pedestrian movement throughout the locality through positive connectivity into neighbouring properties and by locating complimentary development typologies adjacent to each other and within walking distance.

The principle of Live-Work-Play encourages development on the site which is complimentary with neighbouring properties. Wth the neighbouring health care and educational businesses to the south, there is an allowance for the provision of key worker housing on the site. This housing is in the form of a medium-high density residential development (compliant with current zoning) which is in turn serviced by the large communal recreation spaces on the site, and in the neighbouring subdivision to the north.

While the proposal seeks to encourage pedestrian movement throughout the locality it locates these pedestrian paths along vehicle network to activate the streetstape and provide good passive surveillance from residential dwellings. The proposal does not propose a direct connection between the site and the neighbouring hospital carpark to the south.

3.9 LANDSCAPING

The master plan document provides guidance on the recommended planting strategy for public spaces, including the use of inductive planting. This planting approach involves selecting species and quantities of plants that are best suited to the local environment and will thrive in the given conditions. The specific species and quantities of plants to be used are crucial components that will form part of the conditions of consent when the approval is granted for the project.

Landscaping will be achievable within the front setback, side and rear yards of each of the dwellings as shown indicatively in the Masterplan Document provided at **Appendix G**. The intention is to provide a level transition between private indoor and outdoor spaces as much as possible on the steeply sloping site to create an extension of the main living spaces and incorporate both soft and hard elements to provide for a high level of residential amenity with opportunities for outdoor recreation and relaxation.

Landscaping is proposed in public open spaces, especially street verges to enhance streetscapes and reduce negative environmental impacts of road pavement, etc.

For each of the lots where integrated housing is proposed, future DA's will identify appropriate landscape and fencing treatments to compliment the streetscape and ensure defensible open space for residents.

Lots adjacent to the heritage item at LOT 252 DP1045308 will have a rear fence detail that is sympathetic to the heritage item. This fence will be constructed of timber and mesh, with screen planting within the rear boundary. (refer to **Figure 17**)



FIGURE 17. HERITAGE FENCE DETAIL

<u>3.10 TOPOGRAPHY</u>

The site is Lot 1 DP 1268778, 10 Col Drewe Drive Bowenfels. It is located at the western end of Col Drewe Drive, is irregularly shaped and approximately 6.36ha in area. The lot is bisected by an existing 18m wide public road reserve. The proposed subdivision includes the closure of that road reserve and it incorporation within the future road and lot layout.



The site contains Three Tree Hill within the C3 zone in the west of the site. Three Tree Hill forms the high point on the site, at an approximate RL of 969m. From that high point, the site slopes in two general directions.

The northern part of the site generally slopes to the north-eastern corner of the site to an RL of approximately 942m. The southern part of the site generally slopes to the southeast to an RL of approximately 934m at Col Drewe Drive. The western part of the site contains existing slopes generally between 10 and 20%. The eastern part of the site is flatter, with existing slopes between 0 and 10%.

The proposal includes bulk earthworks across the site. This is detailed in sheets CD010, CD011 and CD012 of the supporting engineering plans. The bulk earthwork provides benching to facilitate future dwelling design and construction for proposed Lots 1 to 17 on the steeper parts of the site. The bulk earthworks also regrades the area containing proposed Lots 18 to 46 to remove trapped low points and assist in stormwater and sewer gravity drainage to the north.



4 ENVIRONMENTAL ASSESSMENT

This section of the SEE assesses the proposed development against the planning framework and planning controls applicable to the site and the development, including:

- Threatened Species and Biodiversity Impacts (section 1.7 of the EP&A Act), and
- Bushfire prone land (section 4.14 of the EP&A Act); and
- Integrated development matters (section 4.46 of the EP&A Act), and
- Matters for consideration relating to DAs (section 4.15 of the EP&A Act).

4.1 THREATENED SPECIES & BIODIVERSITY IMPACTS

The EP&A Act contains provisions designed to ensure threatened species legislation as well as any approvals required under other legislation (known as 'Integrated development') are considered as part of a single development assessment process. The provisions as they apply to the proposed development are discussed below.

Section 1.7 of the EP&A Act requires consideration as to whether a proposed development will have a significant effect on threatened species, populations or ecological communities relating to terrestrial and/or aquatic environments as required under Part 7 of the Biodiversity Conservation Act 2016 (**BC Act**) and Part 7A of the Fisheries Management Act 1994 (**FM Act**).

Biodiversity Conservation Act 2016: In accordance with the BC Act, consideration as to whether the proposal is likely to significantly affect threatened species or ecological communities, or their habitats is required in accordance with the test outlined in section 7.3 of Part 7 of the BC Act. The subject site is not listed with council as containing any threatened species of ecological communities.

Fisheries Management Act 1994: The proposed development and associated civil works are not located in proximity to any watercourses or proposes any works that would cause harm to any threatened species, populations, or ecological communities under the FM Act.

4.2 BUSHFIRE PRONE LAND

Section 4.14 of the EP&A Act provides for the general consideration of bushfire hazard on land mapped as bushfire prone. The Environmental Planning and Assessment Amendment (Planning for Bush Fire Protection) Regulation 2020 amended clause 272 of the EP&A Regulation and prescribed PBP 2019 for the purposes of section 4.14(1)(a) of the EP&A Act.

Pursuant to section 4.14 of the EP&A Act, development consent cannot be granted for the carrying out of certain types of development on bush fire prone land, unless the consent authority:

- a. Is satisfied that the development conforms to the specifications and requirements of the version (as prescribed by the regulations) of the document entitled Planning for Bush Fire Protection prepared by the NSW Rural Fire Service in cooperation with the Department (or, if another document is prescribed by the regulations for the purposes of this paragraph, that document) that are relevant to the development (the relevant specifications and requirements), or
- b. Has been provided with a certificate by a person who is recognised by the NSW Rural Fire Service as a qualified consultant in bush fire risk assessment stating that the development conforms to the relevant specifications and requirements.

The Site considered 'bushfire prone'. Accordingly, the proposed development is categorised by the RFS as being a residential subdivision and this requires the RFS to issue a Bush Fire Safety Authority under the RF Act. The Bushfire Hazard Assessment provided at **Appendix F** demonstrates that the site can implement appropriate Bushfire Protection Measures in accordance with PBP 2019 including:

- Temporary APZs are indicated along the northern and eastern boundaries of 12m in depth as a temporary easement on neighbouring properties (see Appendix I) together with an APZ along the western boundary of 10m.
- Roads providing appropriate access and temporary turning heads (where required) in hammerhead arrangement
- Bushfire Attack Level construction standards for dwellings as required
- Access to appropriate services.

RFS has responded and approve the application.



4.3 INTEGRATED DEVELOPMENT

Section 4.46 and 4.47 of the EP&A Act requires a review of whether the proposed development on the land would trigger an approval under other environmental or related legislation. Such development is categorised as 'Integrated development'. The following provides brief commentary on whether any aspects of the development trigger a need for the consent authority to obtain General Terms of Approval from the relevant approval bodies.

Coal Mine Subsidence Act 2017

The Coal Mine Subsidence Compensation Act 2017 establishes the provision for the payment of compensation for damaged caused by subsidence arising from coal mining. The site is not located within a mine subsidence district. Therefore, no integrated approval is required to address this legislation.

Fisheries Management Act 1994

The FM Act contains several provisions for the protection of fish habitat and threatened species. The proposed development will not impact on any waterway mapped as 'Key Fish Habitat' or a waterway that contains a threatened species record. The proposed development will not harm marine vegetation, nor will it require dredging of the bed and land reclamation of a Key Fish Habitat Creek. Therefore, no integrated approval is required to address this legislation.

Heritage Act 1977

The Heritage Act 1977 seeks to protect and conserve items of Local and State Heritage Significance through the operation and establishment of the Heritage Council of NSW and its associated functions. No works are proposed that are referred to under section 57 of the Heritage Act 1977. Therefore, no integrated approval is required to address this legislation.

We do note that the site is adjacent to a heritage item (LOT 252 DP1045308) and measures have been taken to mitigate impact on this item including materials, construction methods, fence details and landscape buffer to those lots adjacent to the heritage item. Refer to Heritage Statement in **APPENDIX J**.

The current application has been referred to the heritage office at Council. It's important to note that there has been no change of use on the site since the original application, which was referred to and approved by the land council in 2006.

Mining Act 1992

The Mining Act 1992 aims to encourage and facilitate the discovery and development of mineral resources in NSW, having regard to the need to encourage ecologically sustainable development. No mining lease is being sought as part of this application, noting this application is for residential subdivision with component integrated housing.

National Parks and Wildlife Act 1974

The purpose of the NP&W Act is to conserve NSW's natural and cultural heritage, as well as foster public appreciation, understanding and enjoyment of NSW's natural and cultural heritage, and managing any lands reserved for the purposes of conserving and fostering public appreciation and enjoyment of NSW's natural and/or cultural heritage. It is also the principal legislative instrument for the protection and management of Aboriginal cultural heritage places and objects in NSW.

The Applicant will progress these investigation during the assessment period and appropriate conditions of consent can be imposed in the consent to ensure this procedure is followed.

Petroleum (Onshore) Act 1991

The Petroleum (Onshore) Act 1991 encourages and facilitates the discovery and development of petroleum resources in NSW. No production lease is being sought as a part of this DA, noting this application is for residential subdivision with component integrated housing.

Protection of the Environment Operations Act 1997

The Protection of the Environment Operations Act 1997 aims to protect and enhance the environment in NSW while promoting public access to information and involvement in environmental protection. The implementation of appropriate environmental protection works will ensure that no licence will be required.



Roads Act 1993

The Roads Act 1993 makes provision for road boundaries and road levels, opening and closing of public roads, classification of public roads, road works, protection of public roads and traffic and other road management practices including procedural matters for the establishment of tollways and financial assistance for road authorities. Section 138 of the Roads Act 1993 requires approval from the road's authority (either Council or Transport for NSW) for certain works to be carried out on, or over a public road, or connect to a classified road.

Col Drewe Drive is not a classified road and so the proposal is not Integrated Development pursuant to s138 of the Roads Act – see attached map of classified roads. SEPP (Transport and Infrastructure) 2021 is also not applicable. The subdivision proposal creates less than 50 lots and is more than 90m away from the Great Western Highway.

Rural Fires Act 1997

The Rural Fires Act 1997 (**RF Act**) establishes the NSW Rural Fire Service (**RFS**), defines its functions and makes provisions for the prevention, mitigation and suppression of rural fires. Section 100B of the RF Act requires a Bushfire Safety Authority to be issued by the Commissioner for:

- (a) a subdivision of bush fire prone land that could lawfully be used for residential or rural residential purposes, or
- (b) development of bush fire prone land for a special fire protection purpose.

A Bushfire Safety Authority authorises development for a purpose referred to in subsection (1) to the extent that it complies with standards regarding setback, provision of water supply and other matters considered by the Commissioner to be necessary to protect persons, property or the environment from danger that may arise from a bushfire.

The site is identified as 'bushfire prone land' on the Lithgow City Council Map 2014. Section 4.46 of the EP&A Act requires a bushfire assessment of residential subdivision proposals on bushfire prone land following the process and methodology set out within section 100B of the RF Act, clause 44 of the Rural Fires Regulation 2013 and the RFS document Planning for Bush Fire Protection 2019 (**PBP 2019**).

Peterson Bushfire were commissioned by the applicant to prepare a Bushfire Assessment and Recommendations for bushfire safety and design compliance and assess the proposed development against the requirements and principles of PBP 2019 (refer to **Appendix F**). As such, the proposed development is categorised by the RFS as being a residential subdivision and this required the RFS to issue a Bush Fire Safety Authority in accordance section 100B of the RF Act.

Water Management Act 2000

The Water Management Act 2000 (**WM Act**) provides for the protection, conservation and ecologically sustainable development of the water sources of the State. A Controlled Activity Approval is required to be obtained for any activity situated within 'waterfront land' (identified as being within 40 metres from the top of a river, lake or estuary) in accordance with section 91(2) of the WM Act. A review of the Department of Planning, Industry and Environment's (**DPIE**) Hydroline Map indicates that the site is not within 40m of a mapped watercourse. Therefore, the proposed development does not need to be referred to the Natural Resource Access Regulator.

4.4 ENVIRONMENTAL PLANNING INSTRUMENTS

State Environmental Planning Policy (Biodiversity and Conservation) 2021

The site is located within the Water Catchment Area and is subject to the provisions of SEPP (Biodiversity and Conservation) 2021.

The application is supported by a Stormwater Management Strategy that demonstrates the post development discharges from the site will achieve a NorBE (neutral or beneficial effect) on the quality of water leaving the site.

The western catchment will be treated in a raingarden on the southern side of Col Drewe Drive. The eastern/northern catchment will be treated in an amplified raingarden to be constructed on the subdivision of the site to the north of the subject site.

Lithgow City Council area is identified as Koala Habitat and Koala Protection. We note that other than the the 3 Heritage Trees on Three Tree Hill there is no other vegetation on the site in the area of the proposed works. There is no visible or recorded Koala Habitat or presence in these trees and ad as sucht eh development will have no impact on.



State Environmental Planning Policy (Building Sustainability Index: BASIX) 2004

This Development Application does not include the construction of dwellings. Future applications for house construction will address the various environmental controls at such time.

State Environmental Planning Policy (Resillience and Hazards) 2021

The Infrastructure SEPP aims to facilitate the effective delivery of infrastructure across NSW and allows for a range of development to be permitted with and without consent. It contains planning provisions for development of government infrastructure and utilities including requirements for proposal adjacent to sites containing or nominated as containing planned infrastructure.

State Environmental Planning Policy (Transport and Infrastructure) 2021

The Infrastructure SEPP aims to facilitate the effective delivery of infrastructure across NSW and allows for a range of development to be permitted with and without consent. It contains planning provisions for development of government infrastructure and utilities including requirements for proposal adjacent to sites containing or nominated as containing planned infrastructure.

4.5 LITHGOW CITY LOCAL ENVIRONMENTAL PLAN 2014

The Lithgow City Local Environment Plan 2014 described the planning, design and environmental objectives and controls to ensure orderly, efficient and sensitive development occurs. An assessment of the proposal against the relevant provisions of the LEP is provided in **Detailed Compliance Table in APPENDIX H**.

4.6 LITHGOW CITY DEVELOPMENT CONTROL PLAN 2021

The Lithgow City Development Control Plan 2021 described the planning, design and environmental objectives and controls to ensure orderly, efficient and sensitive development occurs. An assessment of the proposal against the relevant provisions of the DCP is provided in **Detailed Compliance Table in APPENDIX H**.

4.7 PLANNING AGREEMENT

Negotiations with Council are being undertaken in relation to a Voluntary Planning Agreement for the development with a view to have a finalised draft to be available for notification with DA

4.8 ENVIRONMENTAL PLANNING AND ASSESSMENT REGULATION 2000

There are no additional matters that previously considered in this SEE under the EP&A Regulation which would impact upon the consideration of this application. In accordance with the EP&A Regulation, all demolition works are to be carried out in accordance with AS 2601.

4.9 LIKELY IMPACTS OF DEVELOPMENT

The likely environmental impacts of the proposed development have been discussed in the previous sections of this SEE. As previously discussed, the proposed development is not considered likely to result in any adverse impacts provided the mitigation measure described in this report and supporting appendices are implemented.

4.10 SUITABILITY OF SITE

The site is in a key location between Lithgow's Health Precinct and adjoining subdivisions, this parcel of land bridges the two. It is suitable development of the subject site consistent with the zone objectives.

4.11 SUBMISSIONS

The application will be notified in accordance with Council's notification policy. The applicant requests the opportunity to review and comment on any submission received.



4.12 PUBLIC INTEREST

This DA seeks approval for residential subdivision and associated site works. It is considered in the public's interest for the following reasons:

- The proposed development provides for residential accommodation that is consistent with the objectives and controls contained in the Lithgow Development Control Plan.
- The proposed lots to be created under this DA meet a key purpose to address housing supply to accommodate the growth of housing demand within the Lithgow region, and specifically in proximity to key social infrastructure.
- The proposed subdivision provides for a mix of lots that can contribute to the supply and diversity of housing within the Lithgow Precinct.
- The development provides a suitable density within an area that will, when fully developed have sufficient and reasonable access to public recreation facilities, schools and the town centre.
- The proposed lots are capable of supporting a range of housing product which will facilitate variety within the streetscape and support different housing types.
- The orderly development of this site will enable the Applicant to address the conflugrance of a range of servicing technicallities that arise from other developments in the locality and subject catchments.



5 CONCLUSION

This DA seeks approval for residential subdivision of one existing allotment to create 46 Torrens Title residential lots and 1 residue lot. The DA includes bulk earthworks and associated civil works including the construction of roads, stormwater drainage and installation of services. The DA encompasses a strategy of a two-stage subdivision that will facilitate a diverse community of 80 dwellings to suit a range of household types and incomes. There will be subsequent DA's lodged for the development of housing and strata subdivision of several lots with in the subdivision to deliver the final yield of 80 dwellings. (See Figure 18)

The proposed development has been assessed against the relevant provisions of the EP&A Act and DCP and have been found to be an acceptable form of development consistent with the future anticipated growth of the Precinct for urban development. Further, it will provide for a diverse range of housing options within close proximity to key social infrastructure and with reasonable access to the Lithgow Town Centre and train station in a manner that is sensitive to the emerging character of the Lithgow area.

Future applications will indicate the realisation of the Masterplan represented in this application for subdivision. Individual and multiresidential housing applications will be informed and facilitated by this application but be subject to future determination.

Based on the information contained in this Statement of Environmental Effects we put forward the proposal should be granted consent, subject to appropriate conditions of consent.



FIGURE 18. MASTERPLAN DOCUMENT (IDG)



APPENDIX A – COST ESTIMATE REPORT



APPENDIX B – SURVEY PLAN



APPENDIX C – ENGINEERING PLANS



APPENDIX D – POTABLE WATER & WASTE WATER CONCEPT REVIEW



APPENDIX E – ELECTRICAL SERVICES REPORT



APPENDIX F – BUSHFIRE ASSESSMENT



APPENDIX G – MASTERPLAN DOCUMENT
LITHGOW CITY COUNCIL SWEET BRIAR CONCEPT MASTERPLAN SOUTH BOWENFELS

SWEET BRIAR, SOUTH BOWENFELS 19 APRIL 2023





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INTRODUCTION SUBJECT SITE

The subject site is located on the western edges to the Lithgow City Centre. The site contains Three Tree Hill which is a way finding marker to the surround area, and a significant natural feature.

The site benefits from a semi rural context yet still in close proximity to the Great Western Highway and easy access to Lithgow City Centre.

The site is surrounded by smaller pockets of development ranging from low rise residential, educational facilities, medical facilities and retail.

As a reflection of the site's unique position, the zoning allows particular site allow for 400m² sites which provides more opportunity for diversity of housing to include medium density than the surrounding suburbs.





INTRODUCTION PROJECT OBJECTIVES

The broad objectives and outcomes of the project are to:

1)

Plan and design a new and innovative residential estate that meets the needs of the community and reflects current industry best practice and principles in urban design, sustainability, and social outcomes.

2)

Prepare and lodge a development application with Lithgow City Council for the subdivision of the land via the NSW Planning Portal.

3)

Prepare a business case to test opportunities/risks for the development to provide broader sustainability, environmental and social outcomes against achieving a reasonable return on investment.

4)

Explores and if possible, incorporates opportunities for the future provision of more diverse and affordable housing to meet the needs of the community and opportunities to assist with upcoming major project construction workforces.

5)

Fulfil Council's obligations under a Regional Housing Fund Participation Agreement with NSW Department of Planning and Environment





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ANALYSIS

The site is located within an existing residential zone and on western edge of town, however it adjoins the Lithgow Hospital, Seniors living, and aged-care services to the east. To the North and further South of the site are DA approved residential subdivisions.

The Australian Bureau of Statistics recent Census Data indicated that the highest industry employment in Lithgow is aged-care services and this site is in close proximity to some of the key services in the city centre.

Opportunities:

- Provide housing on this site for key workers in a health and education employment zone
- Provide housing diversity through increase density models for key workers due to close proximity to work and less requirement for vehicular transport



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NOM

ANALYSIS ACCESS

The main access route from Sweet Briar to Lithgow Town Centre runs along the Great Western Highway and onto Main Street. With the proposition of creating a shared walkway along this vehicular route, to increase connectivity to the new subdivision at Sweet Briar. The main arrival point to the site connects in with the existing hospital and aged acre services with a grand view to the Three Trees atop the landscaped hill.

Opportunities:

- Provide housing development that promotes a walkable character and easy access to public transport to promote health and reduce vehicular traffic.
- Connect housing development in with local environmental assets such as bush and park areas



----- RECREATIONAL PATH

LOCAL ROUTE





ANALYSIS TRANSPORT

Bus routes connect the neighbouring hospital and aged care services to the train station and town centre on the hour hour.

The two closest bus stops are within 500m from the site both to the north and to the south.

The provides potential to develop a landscaped pedestrian connection running from north to south and with potential connection through the hospital to access bus stops and promote pedestrian movement throughout the new residential subdivisions.

Opportunities:

- Opportunity to connect local bus route through the new subdivision and connect existing bus lines
- Connect housing development in with local environmental assets such as bush and park areas







ANALYSIS GREEN SPACE

Lithgow has a large number of outdoor sporting fields for public use with smaller pockets of recreational outdoor space available.

The proposed subdivision to the north has dedicated open green space at the centre of the subdivision and there is an opportunity to incorporate and expand the open green space within the Sweet Briar proposal, connecting to this network of open spaces through bicycle and pedestrian paths networks and provide access to the significant community asset of Three Tree Hill as the centre point to any residential subdivision.

Opportunities:

- Opportunity to connect green spaces through residential development and bicycle paths
- Provide view lines and direct visual connections through residential road network to the sites key feature Three Tree Hill







ANALYSIS RESIDENTIAL DENSITY

Density in Lithgow ranges from high density to low density housing, with high density areas primarily located within close proximity the older centre of Lithgow close to transport, retail, commercial and community centres.

This higher density provides a useful precedent for diversity of housing in the Lithgow City and how this can be achieved to activate suburbs and communities through a diverse demographic.

Opportunities:

- Opportunity to provide localised area of higher density closer to key transport and employment areas
- Opportunity to explore low density housing options on smaller lots due to sites unique minimum lot size (400m²)



ROUP



ANALYSIS TOPOGRAPHY

Topography is what defines the site with the Three Tree Hill and prominent location and views across should be maintained.

From this analysis we also understand the developable areas of the site, highlighting the opportunities for different types of development, driving the proposing locations of the residential and open space areas.

Areas on greater topography can be developed through tradition single detached dwellings which are stepped appropriate to deal with slop, while flatter areas of the site present opportunity for higher density residential developments.

Identified on the adjacent diagram is the primary developable area for a residential area which allows for a greater density of development

Opportunities:

- Develop higher density typology on the level area of the site by incorporating terraces, studios and townhouse typologies
- Redirect collector road to better respond to the topography and allow for more housing yield on sloping land
- Provide alternative low density housing type that specifically addresses areas of significant slope and allows for minimal excavation and ground works.

HIGHER DENSITY DEVELOPMENT AREA

LOWER DENSITY HILL SIDE DEVELOPMENT





ANALYSIS ENVIRONMENT

Climate conditions local to Lithgow range from cold winters with high westerly winds and occasional snow to hot dry summer days with large expansive views to the western horizon, whilst nestled into the mountains to the east.

In the semi-rural context the site is also located in bushfire zone which is impacted by surrounding vegetation, and the topography and exposure to large areas of grassland and vegetation to the west.

Opportunities:

- Develop road network to provides houses with best opportunity to access north light
- Planting and landscape management takes into account bushfire risk. Provide access to part to allow for regular maintenance and monitoring of conditions.
- Road network provides for access for fire trucks and fire fighting strategies

VEGETATION BUFFER

VEGETATION CATEGORY 3

VEGETATION CATEGORY 1





ANALYSIS VIEWS

With the topography of the site, the Three Trees Hill is a significant landmark in the local area. Views of the top of the hill become the focal point from almost any point along the highway.

As such the views to the site a significant and any residential development should look to ensure that these views are maintain and enhances from the site surrounding.

There are local views to the north across the valley, to the east to mountains, and a large expansive view at the western edge of the site towards the sunset.

There is also an adjacent heritage item and while views to this item are not significant from the subject site, views from this item across to the Three Tree Hill are important to maintain to reinforce.

Opportunities:

- Develop road network which directs you towards Three Tree Hill that marks the site as a destination and promote the character of the hillside village
- Provide views to Three Tree Hill and for pedestrian movement and wayfinding through new subdivision
- Provide buffer landscaping and fence treatment along boundary with local heritage item

HERITAGE SITE

VEGETATION BUFFER

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ANALYSIS SITE ACCESS

The site is primarily accessed on Col Drewe Drive off the Great Western Highway and this p[art of the site presents an opportunity for an entry point to the subdivision that is visible and easy wayfinding.

With the proposed DA subdivision to the North, there is another primary access point is to James O'Donnell Drive and through to Lithgow Town Centre.

These access points creates a potential connection through the site towards the west to increase permeability in the site, and provide more pedestrian links through the surrounding suburbs.

Opportunities:

- Utilise existing and approved connection points from neighbouring properties and existing roads
- Provide connection to existing residential developments to the west through internal collector roads
- Potential for north-south connection through site to connect surround residential developments to employment and education areas.



- PROPOSED ROAD INTO SITE
- PROPOSED ACCESS THROUGH SITE
- ---- PEDESTRIAN LINK
- PRIMARY ACCESS POINT
 - PROPOSED ACCESS POINTS



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400m

ANALYSIS CENSUS DATA | AUSTRALIAN BUREAU OF STATISTICS

Recent census data indicates that the demographics of Lithgow City heavily focus towards those working in trade and technical industry, clerical and admin and community and personal service workers.

Data indicates that Aged Care Residential Services is the second larges employment industry in Lithgow, and with the Lithgow Hospital, and Three Tree Lodge Aged Care facility, it is reasonable to assume that workers in this industry would be looking for housing close to work.

Opportunities:

- · Provide key worker housing for rental
- Provide smaller lot housing for key workers that promotes walkable communities higher density residential living

PERSONS	Dominant groups
	An analysis of the jobs held by the resident population in Lithgow Urban Area in 2016 shows the three most popular occupations were: Technicians and Trades Workers (751 people or 17.4%) Cierical and Administrative Workers (688 people or 13.6%) Community and Personal Service Workers (561 people or 13.0%)
MALE	Dominant groups
	An analysis of the jobs held by the male resident population in Lithgow Urban Area in 2016 shows the three most popular occupations were:
	Technicians and Trades Workers (613 males or 28.0%) Machinery Operators And Drivers (489 males or 22.4%) Labourers (319 males or 14.6%)
FEMALE	Dominant groups
	An analysis of the jobs held by the female resident population in Lithgow Urban Area in 2016 shows the three most popular occupations were:
	Clerical and Administrative Workers (463 females or 22.8%) Community and Personal Service Workers (400 females or 19.7%) Professionals (342 females or 16.9%)

Industry of employment, top responses Employed people aged 15 years and over	Lithgow (C)	%	New South Wales	%	Australia	%
Coal Mining	618	8.1	19,153	0.6	46,491	0.4
Aged Care Residential Services	253	3.3	67,209	2.0	211,621	2.0
Supermarket and Grocery Stores	216	2.8	74,487	2.2	254,275	2.4
Accommodation	215	2.8	34,450	1.0	113,377	1.1
Local Government Administration	202	2.6	43,378	1.3	142,724	1.3

Of the employed people in Lithgow (C), the most common responses for industry of employment included Coal Mining 8.1%, Aged Care Residential Services 3.3%, Supermarket and Grocery Stores 2.8%, Accommodation 2.8% and Local Government Administration 2.6%.

iew the data quality statement for Industry of employment (INDP)

	People	21,090
	Male	50.7%
	Female	49.3%
	Median age	45
	Families	5,215
Ωř	Average children per family	
	for families with children	1.8
	for all households (a)	0.6
	All private dwellings	9,684
	Average people per household	2.3
	Median weekly household income	\$984
	Median monthly mortgage repayments	\$1,387
	Median weekly rent	\$230
	Average motor vehicles per dwelling	1.8



Couple family without children: 44.1%

Couple with children: 35%

MEDIAN AGE : 46

MARITAL STATUS:

married: 43.8%

not married: 45%

CULTURAL DIVERSITY:

de facto: 11.2%

English: 41.5%

Irish: 11.9%

One parent family 19.2%cv

SINGLE PARENTS

Female 79.3%

Male 20.6%



EXAMPLES NEWINGTON

Originally the Sydney Olympic Village, the suburb of Newington in Sydney's Inner West demonstrates how density can be achieved in a suburban context around key facilities and within commuting distances of shops and services.

Housing typology has a variety of areas ranging from 200-500m² with a townhouse typology and a unique Australian contemporary character.

The Newington example demonstrates how smaller lot housing can provide a significant range of housing diversity from 2 bedroom apartments to 5 bedroom dwellings.









EXAMPLES THORNTON

Initially conceptualised by Landcom, Thornton in North Penrith utilizes a range of housing densities from terraces and townhouse typologies near the community facilities and train station, transitioning into lower density suburban housing as the distance increases from the central community area.

Wirth a central park area the road network is a simple arrangement of link roads from surrounding areas, and circular roads around the precinct allowing for easy wayfinding and direct connections to neighbouring areas.

The Thornton example demonstrates hour diversity of housing works in a single subdivision, and how building up density from the edges to to the centre provides a clear public open space and central focus to a residential suburb.





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EXAMPLES LAURENCE STREET, LITHGOW

Laurence Street in Lithgow displays the current medium density typologies in regional New South Wales, with lots starting at 300m² in size.

The entirety of the 'traditional' town plan of Lithgow is laneway based, and when compared with many newer parts appears to serve the townscape much better.

The Laurence Street example shows how single storey small lot housing with small front setbacks and rear laneways provides an active streetscape with well defined private open space through the incorporation of positive fencing options.









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EXAMPLES CHIFLEY ROAD, LITHGOW

Housing along Chifley Road in Lithgow responds to the slope of the land by creating a consistent front fence along the streetscape with minor variations in building height as the building mass steps down with the topography.

As noted previously the entirety of the 'traditional' town plan of Lithgow is laneway based, and when compared with many newer parts appears to serve the townscape much better.

Chiefly road provides an example of how laneway development promotes active pedestrian-based streetscapes, and how row housing typologies present a fine grain texture to a streetscape and ample opportunities for engagement with between the pubic and private realm despite topography challenges.









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DESIGN PRINCIPLES









VIEWS TO LANDMARKS

CONNECTION TO PUBLIC GREEN SPACE

LIVE, WORK, PLAY

LAYERS OF DENSITY AND DIVERSITY



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DESIGN PRINCIPLES

The proposed development includes the construction and delivery of a series of new local roads with associated road drainage, services and stormwater drainage facilities. All local roads are to be dedicated to Council as part of the subdivision.

The key feature of this road network is the orientation of these roads towards the natural landmark on the site, Three Tree Hill.

By curving around the contours the collector road running north to south responds more appropriately to the topography and accentuates the base of the hill allowing for development to the perimeter.

The new local road running from east to west leads directly towards This encourages pedestrian movement around the site as there is clear wayfinding to local landmarks and it sets up the character of the streetscape.





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DESIGN PRINCIPLES CONNECTION TO PUBLIC GREEN SPACE

The masterplan develops a clear connection of residential dwellings to a number of public green space assets within or adjacent to the site.

Providing all houses in the subdivision with simple and clear access to public open spaces it promotes a healthy walkable community. It also provides activated streetscapes.

Wider verges or islands along the local roads also provides for a softer landscape experience as you traverse the site.

The subdivision deliberately leaves an open area along the western side of the north south collector road which provides a direct visual and walkable connection to this landmark space.



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DESIGN PRINCIPLES

The masterplan has been designed around the connection between the residential area, employment and recreation areas and the principle of 'LIVE, WORK, PLAY'.

The subdivision layout and road network are designed around a "live, work, play" axis promoting the idea that through a pedestrian network residents in the local area can live, work and play within walking distance of their dwellings.

There is potential that the employment generating facilities such as the hospital, university and aged care facility can access housing for key workers who often work shift hours that aren't conducive to regular daily commuting, specifically meeting their staff needs.





DESIGN PRINCIPLES

In response to the site analysis of environmental conditions, topography, and zoning the masterplan looks to provide housing diversity through a mix of house types that respond to each of these factors.

The site presents a limited opportunity to Lithgow to demonstrate housing diversity and address affordability

The zoning permits minimum 400m² lot sizes for single detached dwellings and while smaller than surrounding areas, this allows for a variety of dwelling types to the perimeter of the subdivision which provide a consistent blend into the neighbouring developments. It provides for the larger 4 bedroom dwelling currently in good supply in Lithgow.

The next layer of density is a series of attached dual occupancies which under the current LEP allow for 2 dwellings on 600m². This housing type presents the opportunity for larger extended families through the incorporation of granny flats.

On the more level area of the site, close to employment zones and central to the site, the masterplan provides the opportunity to provide medium density housing a series of 1, 2 and 3 bedroom townhouses, terraces.





CONCEPT MASTERPLAN

CONCEPT MASTERPLAN

- (1)HILLSIDE HOME UPHILL - single dwellings (Min. 400m²) (2)HILLSIDE HOME NARROW - single dwellings (Min. 400m²) 3 HILLSIDE HOME WIDE - single dwellings (Min. 400m²) $\left(4\right)$ HILLSIDE HOME LOWSIDE - single dwellings (Min. 400m²) (5)ATTACHED SPLIT LEVEL HOME LOWSIDE - Terraces or Town Houses (Multi Units) 6 TWO STOREY 4B DWELLING AND GRANNY FLAT - Dwelling + Granny Flat (450m²) $\left(7 \right)$ SINGLE STOREY 3B DWELLING ATTACHED - Attached Dual Occupancy (Duplex) 8 SINGLE STOREY 2B DWELLING - Attached Dual Occupancy (Duplex) (9) ATTACHED TWO STOREY DWELLING - Terraces or Town Houses (Multi Units) (10 TERRACE DWELLING Terraces or Town Houses (Multi Units) (11) TYPICAL 4B DWELLING - single dwellings (Min. 400m²)
- (12) TYPICAL 4B WITH DETACHED GARAGE single dwellings (Min. 400m²)





NTEGRATED

ANNINGLINTERIOR

D<mark>ESIGN</mark> GROUP



CONCEPT MASTERPLAN

CONCEPT MASTERPLAN - STAGING

- (1)HILLSIDE HOME UPHILL - single dwellings (Min. 400m²) (2)HILLSIDE HOME NARROW - single dwellings (Min. 400m²) 3 HILLSIDE HOME WIDE - single dwellings (Min. 400m²) $\left(4\right)$ HILLSIDE HOME LOWSIDE - single dwellings (Min. 400m²) (5)ATTACHED SPLIT LEVEL HOME LOWSIDE - Terraces or Town Houses (Multi Units) 6 TWO STOREY 4B DWELLING AND GRANNY FLAT - Dwelling + Granny Flat (450m²) $\left(7 \right)$ SINGLE STOREY 3B DWELLING ATTACHED - Attached Dual Occupancy (Duplex) 8 SINGLE STOREY 2B DWELLING - Attached Dual Occupancy (Duplex) (9) ATTACHED TWO STOREY DWELLING - Terraces or Town Houses (Multi Units) (10 TERRACE DWELLING Terraces or Town Houses (Multi Units) TYPICAL 4B DWELLING - single dwellings (Min. 400m²)
- (12) TYPICAL 4B WITH DETACHED GARAGE single dwellings (Min. 400m²)

STAGE 1

STAGE 2

HOUSING TYPES	TOTAL DWELLINGS	STAGE 1 DWELLINGS	STAGE 2 DWELLINGS	LOT PRICES \$	HOUSE SIZE	HOUSE & LAND PRICES \$ 000s
Lots - single dwellings (Min. 400m ²)	27	20	7	\$ 240,000 +	4 bedroom 2 garage	\$700 - \$800
Dwelling + Granny Flat (450m ²)	7	4	3	\$ 260,000 +	3 + 1/2 bed GF	\$800 - \$1,000
Attached Dual Occupancy (Duplex)	10	8	2		3 bedroom	\$600 - \$700
Detached Dual Occupancy (Detached)	4	0	4		3 bedroom (+std.?)	\$650 - \$750
Terraces or Town Houses (Multi Units)	32	17	5		2 or 3 bedroom	\$500 - \$600
Total	80	49	31		Range	\$500 - \$1,000





CONCEPT MASTERPLAN

PERSPECTIVE IMAGE





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2 | HILLSIDE HOME NARROW





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EXAMPLE HOUSE TYPES 5 | ATTACHED SPLIT LEVEL HOME LOWSIDE



GROUND FLOOR



7 | SINGLE STOREY 3B DWELLING ATTACHED



GROUND FLOOR



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8 | SINGLE STOREY 2B DWELLING



GROUND FLOOR



9 | ATTACHED TWO STOREY DWELLING



FIRST FLOOR



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10 | TERRACE DWELLING





GROUND FLOOR





APPENDIX H – DETAILED COMPLIANCE TABLE

LITHGOW DCP 2021	I - DETAILED COMPLIANCE TABLE	
CLAUSE	OBJECTIVES	COMMENT
PART 5.2 SITE SELECTION, ANALYSIS & DESIGN RESPONSE 5.2.1 SITE ANALYSIS & POTENTIAL LAND USE CONFLICT	a. That a detailed Site Analysis has been conducted/documented in accordance with the opportunities/constraints of the Site informed (where relevant) by this DCP	The various aspects of the site analysis have been carried out and documented in the Masterplan Document, this analysis was used to develop the proposed subdivision scheme.
	b. That the proposed development has provided an appropriate response to the Site Analysis for the proposed subdivision and the future intended use(s) whilst minimising potential land use conflicts and environmental impacts.	
5.2.2 WATER,	O1. Stormwater Management:	Complies:
NATURAL ENVIRONMENT & HAZARDS	 a) That stormwater systems are designed to maximise the resulting water quality leaving the site and manage water quantity to prevent environmental impacts and flooding. b) The need for inter-allotment drainage easements has been considered/addressed. c) For larger developments, detention basins and/or water sensitive urban design / water treatment mechanisms may be required. 	 a) The proposal includes stormwater quality controls for each subcatchment. These are detailed in the supporting engineering plans and Stormwater Management Strategy. These devices achieve a NorBE outcome for each subcatchment as required by Water NSW. b) Interallotment drainage is provided for proposed Lots 18 to 35 as they slope away for the proposed road frontage. c) As noted above, the proposal includes stormwater quality controls for each subcatchment. It also included stromwater detention devices to ensure post development discharge rates do not exceed predevelopment rates for each subcatchment.
		The northern catchment has an under road detention system. It also has a temporary water quality basin on proposed Lot 32 which will be removed when the adjacent development to the north proceeds. The water quality control device will be expanded to cater for our northern catchment. This will consolidate the water quality controls in a single location, freeing up zoned land for development on proposed Lot 32 and centralising Council's future water quality maintenance. The southwestern catchment has an above ground detention basin and water quality control device within the Col Drewe Drive road reserve, on the southern side of the existing carriageway.
	 O2. Watercourses: That suitable setbacks for lot boundaries (and where necessary - building envelopes) are provided to: a) Address the risk of flooding; b) Protect and enhance watercourses (including water quality and quantity); and c) Provide riparian corridor buffers for protection of vegetation and water quality. 	Complies: There are no watercourses, waterfront land, riparian corridors or flood pathways affecting the site.

	 O3. Significant Vegetation: That it maximises the retention and protection of existing significant vegetation/trees from both the Subdivision and future development (including infrastructure). Council may require: a) A Survey Plan or other suitably accurate plan showing existing trees/species/approximate size and indicating which trees are to be retained or removed; b) An Arborist Report or other suitably qualified report that provides: i) justification for removal of any significant trees; and ii) demonstration that the subdivision and future development will provide sufficient protection for those trees to be retained. 	Complies: Proposed subdivision does not involved the removal of any existing trees and maintains all significant vegetation on the site.
	O4. Hazards: That the site has limited hazards or that the hazards can be avoided or minimised/mitigated to an acceptable level for both the development area and associated access.	Complies: The proposed subdivision and road network avoids hazards and provides unlimited access to the site.
	O5. Slope: Subdivision on land with a slope of 20% or greater (being ~1:5 or 11o) is significantly constrained and needs to be supported by a Survey Plan and Geotechnical Report prepared by a suitably qualified person verifying the suitability of the proposed lot size considering any future (likely) building(s), hydrology and drainage, and site stability during site works, construction and operation of the development.	Complies: Survey plan has been provided and example house types indicate how houses can be developed on sloping arreas of the site through simple stepping in stories.
5.2.3 LOT SIZES, DIMENSIONS & SUITABILITY	O1. To provide lot sizes and dimensions that respond to the site constraints and opportunities and avoid or minimise / mitigate against existing and/or future land use conflicts.	Complies: Lot sizes and dimensions are compliant with relevant LEP minimum lot sizes and lot frontage requirements.
	O2. To increase lot sizes and dimensions (above the minimum) where sites have significant slope, site constraints, or natural hazards that would impact on the useability/amenity of the site layout and future development or environmental requirements in this DCP.	Complies: Lots that have an increased slope gradient have been fairly sized above the minimum requirements to ensure useability and amenity is adequate for future development.
	O3. To integrate infill subdivision(s) into existing urban and historic areas with similar pattern(s) and street frontage(s) to create consistent street character and improve navigation.	Complies: Infill subdivision has been considered for future developmnet and to respond to contextual character throughout Lithgow.
	O3 To ensure applications demonstrate that any proposed lot(s) in a subdivision, consolidation or boundary adjustment have an appropriate area and dimensions for the siting and construction of all proposed and/or likely development/buildings as well as ancillary or associated development.	Complies: Subdivision lot sizes have been designed to respond to a variety of housing typologies and are sized based on this analysis.
	O4. To achieve good urban design and (where relevant) residential amenity outcomes.	Complies: Residential amenity and urban design have been considered and are apparent in the masterplan with the inclusion of passive green spaces, walkable and rideable pathways and verges to accommodate future streetscape landscaping.
CONTROLS	 Minimum Lot Size: Any lot(s) created must comply with the minimum lot size(s) in LLEP2014. However, this is a minimum size only and larger lot sizes may be required to respond to site constraints including, but not limited to the following: a) Site constraints and opportunities raised in DCP Sections 5.2.1 & 5.2.2 above; b) Requirements for on-site effluent disposal areas (if relevant); c) The objectives for lot size in LLEP2014; d) Provision of a range of lot sizes to enhance the character of an area and minimise development that is too repetitive in lot layout and design. 	Complies: The subdivision includes various lot sizes to accommodate a variety of housing types. Minimum lot sizes have been achieved and are compliant with LLEP 2014. Refer to LEP compliance table for further information.
	 2) Urban Areas: Subdivisions in or adjacent to an urban zone and/or area are to satisfy the following design standards: d) If a new public road is created, address the controls in DCP Section 5.7 – New or Upgraded Public Roads below; e) Ensure lot sizes and shapes address and relate to the prevailing dimensions (including street frontages), pattern or rhythm of subdivision in the surrounding locality, particularly in historic areas, where this is a significant part of the street or local character; f) Maximise the number of regular shaped lots (i.e., lots that are roughly rectangular in shape) so there are less constraints for future development and/or subdivision, particularly in existing/historic urban areas; g) Provide suitable road frontage lot widths to promote ease-of-access to and servicing/utilities for each lot without dominating the street and ensure buildings address the street (where relevant); h) Provide depth to width ratios that accommodate vehicle access, manoeuvring, and a range of standard building types/layouts with relevant setbacks. 	Complies: Subdivision lot sizes have been designed to respond to a variety of housing typologies and are sized based on this analysis.
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5.2.4 ACCES & ENTRANCES	 O1. To provide all lots with safe, legal and practical vehicle access and manoeuvring area(s). O2. To provide safe and suitable access and manoeuvring for emergency vehicles and larger vehicles for servicing (as exercised). 	Complies: The proposal provides safe, legal and practical vehicle access and manouvering. Complies: The proposal provides suitable access for servicing and emergency vehicles.
	O3. To provide safe & suitable pedestrian/cycle access and facilities to encourage walking and/or cycling. O4. To promote safe and efficient road and footpath environments for all road users, cyclists and pedestrians.	Complies: The proposal provides safe and suitable pedestriand and cycle ways. Complies: The proposal provides safe and efficient road and footpath environments for users.
	O5. To minimise the number of lots created that do not have a substantial frontage/ direct access to a public road. O6. To ensure any access ways are of sufficient width and driveway construction to minimise impacts on neighbouring lots and provide suitable vehicle access.	Complies: The propsal subdivision addresses and minimises lots that have no street frontage. All lots have access of a public road. Complies: All lots have direct access to a public road in the subdivision plans and have been designed so driveways enter into the front of dwellings, or into rear land garages so as to have minimal impact on
CONTROLS	 Public Road: Each lot in a subdivision (including lots with adjusted boundaries) has safe, legal and practical access to a public road (maintained to Council's standards) either through: a) A direct frontage to that public road (this is the most desirable outcome for all new lots); b) A right-of-way arrangement through another lot; or c) By consolidation with an existing allotment that has access. 	neighbours. Complies: All lots have access to a public road in the subdivision plans.
	2) Reference: Address the requirements of DCP Section 2.5 – Vehicle Access & Parking and Section 2.6 – Pedestrian Access, Mobility & Safety (where relevant).	Complies: Road have been designed in accordance with Lithgow Council DCP with regard to carraigeway andchainage requirements. Footpath

	 3) Right-of-Way: Council will only permit subdivision that creates lot(s) that rely for access on an easement or right-of-way (or other restriction on title) in a rural and/or environmental zone/area where all of the following are satisfied: a) No public road access is adjacent to, or could reasonably be provided to, the proposed lot(s); b) A maximum of: i) Three (3) lots will utilise any easement or right-of-way (including the primary lot providing the access and two (2) additional lots); ii) Two (2) allotments are behind any allotment which has direct frontage to a public road; c) There is a minimum carriageway width for a right-of-way of 10m with a 4m formation with appropriate drainage; d) Where the slope of a driveway exceeds 10%, the access is to have a two-coat bitumen seal; e) There is written approval from the affected lot owner (easement only). 	Not Applicable
5.2.5 UTILITIES/EASEM ENTS	O1. To provide all essential utilities to the boundary of any new allotment suitable for the proposed use in accordance with LLEP2014 Clause 7.10 Essential services.	Complies: The proposal will provide utility services to all proposed lots. The northern part of the site will be serviced via a gravity sewer main lead-in through the neighbouring land to the north in accordance with the requirements of Lithgow City Council as the local Water Authority. The sewe main will then be reticulated throught the northern part of the site to provide gravity connections for those lots. The south western part of the site will gravitate sewer to an existing point of connection at the southern corner of the site. Potable water will be provided to the site via a water main extension from Col Drewe Drive. This will then be reticulated along teh proposed road network to service the proposed lots. Electrical services will be provided to the site via an 11kv feeder extension from The Great Western Highway and along Col Drewe Drive. This will extend along teh proposed collectro road within the site to a proposed substation within teh road frontage of proposed Lot 47. From there, low voltage electrical service will be provided within the proposed road network to the proposed lots.
	 O2. To address any connection requirements of the relevant utility authority. O3. To protect the operation of utilities and ensure appropriate access. O4. To ensure that on-site effluent management (if required) can be accommodated on any proposed lot without significantly affecting adjacent properties or the natural environment. 	Complies: See comments in O1. Complies: See comments in O1. Not Applicable: On-site effluent disposal is not proposed.

CONTROLS	1) Reference: All subdivision(s) comply with and address DCP Section 2.8 – Utilities, Easements & Infrastructure (where relevant).	Complies: The proposal complies with Secion 2.8 - Utilities, Easements & Infrastructure in that all service mains will be installed underground, with water, electricity and communications mains within the proposed road network. Sewer mains will be installed within the front of lots that slope to the road, and at the rear of lots that slope away from the road. The site does not contain any watercourses, sensitive areas, known natural hazards that would be adversely impacted by the provision of services. Service mains will be located in their standard footpath allocation and will not inhibit the installation of street trees.
	 Servicing Plan: A Concept Servicing Plan is to be submitted in support of all subdivision proposals detailing the location of all existing and proposed services to each lot including all existing and proposed easements. 	Complies: A concept servicing plan is included at sheet CD005 in the engineering plan set.
	3) Easements: If any easements are reliant on or cross over land adjoining the proposed subdivision then owners' consent from that adjoining land is required to be provided with the application.	Not Applicable
5.2.6 SITING & VISIBILITY OF UTILITIES	O1. To minimise the visual impact of any new or upgraded utilities by undergrounding connections and integrating infrastructure into the subdivision design (where possible).	Will be addressed
CONTROLS	For larger subdivisions that will require significant new or upgraded utilities: 1) Impacts: Utilities are sited where: a) Utilities installation (and maintenance) will have the least impact on existing site stability and disturbance, significant native vegetation, watercourses or riparian/ecological corridors, or other environmentally sensitive areas; and b) Existing or proposed vegetation (considering mature height of trees etc.), natural hazards (bushfire or flooding), or the environment will have the least impacts on utilities.	Complies: a) The subdivision road and lot layout has been designed to maximise the number of lots that slope toward the road. This minimises the number of lots reliant on interallotment drainage easements and sewer mains within the rear of the lots. The only vegetation of significance within the site are the existing trees on top of Three Tree Hill. No works are proposed within the vicinity of those trees. The site does not contain any watercourses, riparian or ecolgical corridors or other environmentally sensitive areas. b) The site is largely remant grazing land with no significant vegetation other than the trees on Three Tree Hill. The site is mapped as bushfire prone land, and services will be installed underground in accordnace with the requirements of Planning for Bushfire Protection 2019. The site is not flood affected.

	2) Efficiency: Utilities are sited to cater for all existing or future lots in an efficient and cost- effective manner that allows for future augmentation to allow for growth.	Complies: The sewer main lead-in through the adjacent site to the north will be coordinated with the approved layout to ensure the correct location and capacity. The potable water main extension from the Great Western Highway and along the proposed collector road will be 150mm diameter to cater for the surrounding development demand.
	 3) Underground: New or relocated utilities are sited: a) Underground (particularly in heritage conservation areas, new urban release areas, or main streets); or b) Utilise existing poles (where possible), to the satisfaction of the relevant utility authority, unless other constraints make this unsuitable. 	Complies: a) All services will be installed undergound. b) There are no existing poles within the site.
	 4) Common Trenching: Compatible public utility services are sited in common trenching (where possible) in a service corridor (see Engineering Guidelines) in order to: a) Minimise the land area required and future constraints on development of that land; b) Reduce costs; and c) Minimise any environmental impact. 	Will Comply
	5) Screening: Utility boxes and cabinets (e.g., electricity substations, meter boxes etc.) on private land above-ground must be integrated into the development and screened from public view whilst providing appropriate access (where appropriate).	Will Comply
5.2.7 STAGING	O1. Larger subdivisions must consider staged subdivision release and ensure each stage is capable of being developed independently of later stages and has appropriate access and utilities.	Complies: The proposal has been divided into 2 stages, however the entire subdivision is being designed to ensure a holistic approach to lot sizes, layout and access to utilities.
CONTROLS	 1) Plan(s): Where the subdivision of land will be (or is likely to be) carried out in stages or would result in a remnant parcel of vacant land capable of further subdivision, a Subdivision Plan (for the entire subdivision) is to clearly indicate: a) The entire land area to be subdivided (including land likely to be subdivided in the future) AND the boundaries of each stage of the subdivision; b) The proposed access, road structure, and other vehicle and pedestrian/bicycle connections for the development AND any likely future adjoining subdivision/development; c) Any staging of essential roads, infrastructure and/or other essential utilities/services or communal spaces and buildings. 	Complies: a) The proposal is to subdivide the site in two stages as shown on sheet CD006 of the engineering plan set. Note that bulk earthworks across the whole site is included in Stage 1 works as well as teh temporary water quality basin in proposed Lot 32. Stage 2 comprises the road, drainage and ultilities for proposed Lots 32 to 46. b) Proposed Roads A and C have been designed to connect with the corresponding roads within the approved subdivision layout on the site immediately to the north. Proposed Road B has been located to suit a future subdivision layout on the neighbouring site to the east and accomodate lots with a minimum size of 800m2. c) Stage 1 includes all necessary utility lead-in works as well as the northern stormwater detention basin to cater for the northern catchments within both Stages 1 and 2.

	 2) Connectivity: Each individual stage of a staged subdivision is to be designed to ensure it: a) Does not compromise suitable access to any other stage(s) of subdivision; b) Has access to essential infrastructure / utilities, roads and pedestrian connections, and landscaping in accordance with the controls in this DCP and is capable of operating independently of the infrastructure of later stage(s); c) Provides suitable capacity in infrastructure to allow for future development (that is likely to utilise or extend that infrastructure) to occur without significant capacity constraints/ upgrades; d) Provides a fully formed cul-de-sac or turning head (see Council's Engineering Guidelines) for any temporary terminating roads (that will later become through roads) so that the maximum sized design vehicle can enter and exit the cul-de-sac with a maximum three-point turn. 	Complies: a) The proposal has been designed with appropriate stgaing to suit progressive servicing and access. b) Stage 1 can operate independantly of Stage 2. c) The lead-in services, northern detention tank and water quality basin are sized for the ultimate development of the site. d) The proposal includes temporary turningh heads at the end of roads that will become through roads. Should the Planning Panel see fit, the temporary turning heads at the ends of Roads A and B could be deleted and service vehicles use the nearby T intersections to
		The temporary turning head at the nrothern end of Road C may not be necessary as both adjacent proposed Lots 31 & 32 are superlots capable of future development and as such will not require access or garbage services as part of this proposal.
	3) Future Growth: The staged subdivision of land is designed so that it promotes ease of future road access and infrastructure connection for adjacent land (not part of the current subdivision application) where there is a reasonable likelihood it could be developed in the future (even if not currently identified in Council's relevant land use strategies).	Complies: The road layout has been designed to accommodate future growth on surrounding lands, including connection to the approved road network on the site immediately to the north via Roads A and C. The southern end of Road A provides for future road extension to the zoned land to the west, while the eastern end of Road B facilitates future vehicle access to the neighbouring lot fronting the Great Western Highway.
PART 5.3 URBAN RESIDENTIAL SUBDIVISION 5.3.1 LOT SIZE & ARRANGEMENT - GENERAL	O1. To provide a range of lot sizes to suit a variety of residential type(s) and densities.	Complies: Lot sizes and dimensions are compliant with relevant LEP minimum lot sizes and lot frontage requirements. A variuety of lot sizes have been included to allow for a range of housing diversity.
	O2. To ensure new subdivisions in or adjacent to existing urban areas complement the existing subdivision pattern and character of the existing urban area.	Complies: The proposal takes into consideration the adjacent proposed and existing subdivision patterns and character.
	O3. To promote lot sizes, shapes and orientation that will maximise the number of lots with potential solar access to the future living spaces and private open spaces of new dwellings.	Complies: The proposal provides varied lots, with a focus on allowing the maximum amount of lots to have adequate solar access.
	O4. To require sufficient road frontage for all new lots for appropriate driveway access whilst encouraging dwellings to have a frontage/address to the street.	Complies: The proposal provides lots that have adequate frontage to roads, in some cases the lots are rear loaded to allow for a pedestrian focused street frontage.
	O5. To ensure that lots in villages without reticulated sewer have sufficient size to accommodate on- site effluent management as well as proposed or future development.	Not Applicable

CONTROLS	1) Sewerage: All new lots are to comply with DCP Section 2.8.1	Complies: All proposed lots will be provided with a point
	- Connection to Utilities. Where a village does not have	of connection to the gravity sewer system.
	reticulated sewer then lots sizes must address the requirements	
	of DCP Section 2.8.3 – On-Site Sewage Management.	
	2) Dwelling Diversity: The design of a subdivision creating 10 or	Complies: The proposal provides a variety of lot sizes to
	more lots is to:	support a range of housing diversity appropriate to
	a) Provide a range of lot sizes that can encourage diversity in	various demographics.
	residential type(s)/defisities	
	b) Highlight where different residential type(s)/densities could	
	locate and any additional future subdivision potential; and	
	c) Consider how corner lots could support future dual	
	occupancies and/or subdivision.	
	3) Lot Width: All lots (excluding battle-axe lots and medium	Complies: The proposal complies with the DCP
	density housing) are designed to	minimum lot width requirements.
	have a minimum width of:	
	a) 10m at the building line (see front setbacks in DCP Chapter 6	
	– Residential Development) for a rectangular lot;	
	b) 8m at the street frontage for a 'fan' or 'radial' shaped lot and	
	1411 at a point setback off from any road from age.	Complies: The proposal provides varied lets, with a
	4) Layour Onentation. The subdivision design is to consider for layout and orientation that will:	focus on allowing the maximum amount of lots to have
	a) Maximise the opportunity for dwellings to have sufficient	adequate solar access.
	presentation and openings to the	
	primary (street) frontage and contribute positively to the	
	streetscape;	
	b) Promote dwelling separation, privacy, landscape and open space(s) and residential amenity: c) Demonstrate adequate	
	solar access for all proposed future and existing neighbouring	
	dwellings and maximise good solar orientation (see diagram	
	below) subject to site constraints; and	
	d) Minimise overshadowing between future dwellings, for	
	example, by providing suitable lot widths that allow for up to a	
	two-storey building and respond to topography/slope.	
532ACCESS TO	01 To promote safe and efficient access to urban residential	Complies: The proposal provides safe and efficient acces
LOTS WITH	lots.	to residential lots with reduced street frontage.
LIMITED OR NO		
ROAD FRONTAGE	O2. To provide sufficient driveway widths & design for battle-axe	Complies: The proposal provides sufficent access widths
	lots to minimise impacts on adjacent residential lots and	to residential lots with reduced street frontage.
	accommodate traffic requirements.	
CONTROLS	A subdivision proposal that will create a battle-axe lot(s) (or	Not Applicable
	lot(s) accessed by an easement/right- of-way) addresses the following design standards:	
	1) Amount: Battle-ave lots in an existing urban residential zone:	
	a) If a lot is a battle-axe lot or other lot with an access handle, the	
	area of the access handle is not to be included in calculating the	
	lot size for the purposes of Clause 4.1 of the Lithgow LEP 2014.	
	b) Are only used where it is not feasible to extend a road to the	
	frontage of the lot and a battle- axe lot is needed to efficiently use	
	the land; and	
	c) Do not unreasonably impact on the amenity of adjacent	
	residential fots.	
	2) Access: Each battle-axe lot has a minimum access	Not Applicable
	handle/easement width of:	· · · · · · · · · · · · · · · · · · ·
	a) 4.5m for access to a single lot; or	
	b) 6.0m for combined access to two lots (with reciprocal	
	easements for access and services); and	
	Access handle lengths do not exceed 60m.	
	3) Access Seal: A sealed or concrete pavement is constructed for the full length of the access handle in accordance with	Complies: All battleaxe handles will include a sealed or concrete payement for its full length in accordance with
	Council's Engineering Guidelines prior to release of the	Council's Engineering Guidelines.
	Subdivision Certificate; and	

	4) Higher Densities: If the proposed battle-axe lot is intended to	Complies: The proposal does not include any battleaxe
	be used for more than a single dwelling and/or dual occupancy	handles to medium density lots.
	(i.e., it is for the purposes of medium density housing) then it	· · · · · · · · · · · · · · · · · · ·
	may require:	
	a) A wider access handle/driveway seal for two-way vehicle	
	traffic; and	
	b) Consider additional width to include setbacks and/or	
	, landscaping to minimise impacts on adjacent lots/dwellings	
	iandocaphig to initiative initiate of adjacont lots/attoiningo.	
PART 5.5 LARGE		
LOT RESIDENTIAL		
& RURAL		
SUBDIVISION		
COBBINICION		
554400500 8		
5.5.1 ACCESS &	U1. To provide safe and efficient access points to/from proposed	Not Applicable
ROAD DESIGN	lots to rural roads.	
CONTROLS	New driveways to public roads are grouped at existing or limited	Not Applicable
	access points (if feasible) to:	
	1) Minimise the traffic impact and risk of additional access	
	points to the public road system; and	
	2) Ensure sight lines in accordance with DCP Section 2.5.3 -	Not Applicable
	Vehicle Access & Driveways and Council's Engineering	
	Guidelines	
	Od Tanana late have a finite tangent all the tangent for the	Net Asselle shie
5.5.2 ACCESS TO	O1. To ensure lots have sufficient access widths to cater for the	Not Applicable
LOTS WITH	intended traffic and minimise impacts on adjacent lots.	
LIMITED OR NO		
ROAD FRONTAGE		
CONTROLS	The design of a subdivision that includes battle-axe lots or	Not Applicable
	access to a lot via an easement/right-of- way has regard for the	
	following design standards:	
	1) Each lot has a minimum access handle width of	
	a) 6 0m for access to a single lot:	
	b) 8.0m for combined access for up to three (3) lots (with	
	reciprocal easements for access and services); and	
	2) A minimum 3.5m wide road is constructed for the full length of	Not Applicable
	the access handle in accordance with Council's Engineering	
	Guidennes.	
PART 5.7 NEW OR		
UPGRADED		
PUBLIC ROADS		
5.7.1 GUIDELINES	O1. To ensure any road design comply with relevant road and	Complies: The proposal complies with the DCPs road
	access guidelines adopted by Council	and access quidelines
		Compliant The more sub-sub-sub-sub-sub-sub-sub-sub-sub-sub-
	ivew road design(s) for residential subdivisions comply with	Complies: The proposed roads comply with Council's
	Council's Engineering Guidelines and other relevant	Engineering Guidelines. Road A is a collector road with
	development standards including, but not limited to (as	an 18m wide reserve and an 11m wide carriageway. It
	amended):	has an offset crown to the west to minimise the height of
	1) Roads & Traffic Authority (RTA - now Transport for NSW)	the retaining wall along the eastern boundary adjacent to
	(2002) Cuido to Troffio Constating Development	Three Tree Lodge
	2) Roads & Traffic Authority (RTA – now Transport for NSW)	
	(1995) Road Design Guide;	Roads B, C and D are Local Access roads with 15m
	3) Relevant Australian Standards;	wide reserves and 8m wide carriageways.
	4) AUSTROADS (1988) Guide to Traffic Engineering Practice	
	5) ALISTROADS (vide to Read Design and	Circuit A is a one way appare designed to second date
		Circuit Ars a one-way access designed to accomodate
	6) Council Policy 10.5 – Footpath Reservations – Works	9.8m long service vehicle swept paths.
	Requirements.	
5.7.2	Any subdivision design that includes new public road(s) must:	Complies: Roads A and C have been coordinated with
SURROUNDING	O1. Integrate with the surrounding road network and other	the approved road layout on the subdivision immediately
ROAD PATTERNS	pedestrian/bicycle and open space connections and be	to the north. Road B has been located so as to allow
& ACCESS	sympathetic to settlements with strong grid pattern road	future subdivisions on the lot to the east with minimum lot
	sympanicae to settlements whith strong gird pattern rodd	
	systems.	areas or 800m2.
	02 Drovide a subdivision notion and read lower that each low	Compliant Son comments to 01 starts
	U2. FIOVIDE a Subdivision pattern and road layout that enables	Complies. See comments to OT. above.
	adjacent lands to be developed as urban growth occurs.	

CONTROLS	1) Navigation: Any new road pattern integrates with the adjacent road network and promotes ease of navigation and way-finding for someone not familiar with the neighbourhood.	Complies: See comments to O1. above.
	2) Pattern: Where a grid road pattern is dominant in a locality, that pattern (modified to suit the site and solar orientation) is maintained except where steeper topography dictates a curvilinear road pattern to significantly reduce cut and fill.	Complies: See comments to O1. above.
	3) Connection(s): New roads and pedestrian/bicycle paths are designed to connect to existing surrounding roads and road heads and shared pathways networks where they exist adjacent (or in reasonable proximity) to the proposed subdivision (particularly in urban zone and/or area where connectivity would benefit the broader community).	Complies: The proposal responds to existing site context, including roads, pedestrian paths and cycleways. Also taking into consideration the future intention for new cycle ways into Lithgow City Centre.
	4) Future Connection(s): A subdivision of land adjacent to land that has additional development potential (or is likely to in the future) makes provision for future road access to the adjacent (developable) land.	Complies: The proposal has taken into considertaion the future potential of subdivision on neighbiouring properties for allowing road conections through to the nieghbouring properties.
	5) Open Space: Where there is a drainage corridor or public open space proposed as part of the subdivision, where possible roads front these spaces rather than the backs of lot(s) to	Proposed Lot 47, which contains Three Tree Hill and the C3 zoned land, will be retained by Council as Open Space.
	recreational use and environmental outcomes. See DCP Section 5.4.3.5 – Public Open Space & Facilities.	It has frontage to Road A at the intersection with Road B to provide a visual and physical pedestrian connection, and is predominantly located adjacent to the rear boundaries of proposed Lots 1 to 17.
		Proposed Road A was located along teh Eastern boundary to avoid these new residential lots being low side lots, with rear boundaries to Three Tree Lodge, and interallotment drainage and sewer within the rear yards, which would have been a poor outcome.
		Whilst the Three Tree Hill open space is behind proposed Lots 1 to 17, the slope of proposed Lot 47 is such that it will remain visible in the locality. The road and lot pattern has been design to maintain and direct sight lines to the trees on Three Tree Hill.
5.7.3 ROAD HIERARCHY & DESIGN	O1. To provide a logical road pattern / clear hierarchy of roads.	Complies: The proposal provides a logical road pattern and hierarchy, which responds to future neighbouring subdivision opportunities.
	O2. To provide suitable vehicle, pedestrian and cycle connections and navigation to key services and attractions (suited to the size and density of the subdivision and surrounding network/connections).	Complies: The proposal provides suitable vehicle, pedestrian and cycle connections to key services.
CONTROLS	A development proposal considers relevant traffic impacts and, where warranted, provides a Local or Area-Wide Traffic & Parking Assessment (or similar, see Council's DA Guide) in support of a development application that addresses: 1) How the road hierarchy will promote ease-of-navigation and connectivity for vehicles, pedestrians, and bicycles (where relevant);	Complies: All proposed lots are accessible and capable of accomodating off street parking. Provision of a Local or Area-Wide Traffic & Parking Assessment is not considered necessary in the circumstances
	2) The impact of any traffic generation from the proposed subdivision on the proposed and existing road network and pedestrian / cycle routes;	Complies: Council's Engineering Design Guidelines at table 2.3.1.1 noteds that compliant Collector roads are suitable for 200-400 allotments and Local Access roads suitable for 15 - 200 allotments. The proposed and existing road network has capacity to accomodate traffic from the proposed subdivision.

	3) The maximum vehicle sizes likely to utilise the road network during construction and future use and provision of appropriate turning paths for the largest vehicle sizes; and	Complies: The largest vehicle likely to utilise the existing road network during construction would be a semi trailer. The existing Col Drewe Drive carriageway and intersection with the Great Western Highway can accommodate vehicles of that size. In the future, the largest size vehicle likley to use the proposed road network is a 9.8m long service vehicle. Swept paths have been provided on sheets CD400 and CD 401 in the engineering plan set.
	 The location, design and safety of any intersections or crossings. 	Complies: The intersections of Road A and Col Drewe Drive, and Roads A and B have been designed to provide appropriate sight distances in all directions. The subdivision does not include any proposed pedestrian crossings.
5.7.4 TERMINATING ROADS (CUL-DE- SACS)	O1. To minimise the use of cul-de-sacs, their length, and number of lots serviced by any cul-de-sac, and ensure they cater for waste collection and other services.	Complies: The proposal has mitigated the use of traditional cul-de-sacs by designing circuit roads around common green space. The circuit roads allow for access by service vehicles and garbage trucks.
	A subdivision design in an urban zone and/or area includes cul- de-sacs only where: 1) There are no other suitable alternatives; and	Complies: The circuit road responds to the irregular lot shape towards the south east of the current lot.
	2) Each cul-de-sac does not service more than 25 lots; and	Complies
	 Each cul-de-sac is no longer than 150m from the nearest intersection: 	Complies
	4) Each cul-de-sac has a turning facility to cater for a 12.5m	Complies
	5) Large vehicles (greater than 12.5m in length) will not need to rely on the cul-de-sac to turn around (i.e. cul-de-sacs will only be considered in commercial and industrial zones where there is on site turning capacity for every lot); and	Complies
	6) The design complies with Council's Engineering Guidelines relating to cul-de-sacs.	Complies: The proposal does not include any permanent cul-de-sacs. The temporary cul-de-scas can accommodate the Council's standard waste collection truck turning manoeuver.
5.7.6 SAFETY & SURVEILLANCE	O1. To ensure new roads are designed in accordance with crime prevention principles and to maximise safety and amenity for users.	Complies: The proposal has taken into consideration the impacts of safety and surveillance, arranging lots in a way to allow for passive surveillance to areas that may be of concern.
CONTROLS	The design of a subdivision that creates a new public road or extends an existing road by more than 50 metres addresses DCP Section 2.7 Designing for Crime Prevention including, but not limited to: 1) Appropriate locations and orientations of lots and building envelopes to maximise casual surveillance of the street;	Complies: Roads A, B and C and Circuit A have lot frontages facing them providing adequate passive surveillance. Road D is deliberately designed with Fonzie Flat house types which provide dwelling above garages which voerlook and provide good passive surveillance.
	2) Provision of appropriate lighting of roads, public spaces and walkways:	Will Comply
	3) Clear boundaries between public open space / streets, communal open space (if applicable) and private open spaces;	Complies: Proposed subdivision provies clear boundaries between public open space, streets, communal open space & private open sapces through boundary fencing.
	4) Appropriate landscaping and fence design.	Will Comply
5.7.7 PUBLIC DOMAIN LANDSCAPING & STREET TREES	O1 New urban subdivisions must have street tree planting provided to soften the proposed future buildings and streetscape whilst accommodating required vehicle and pedestrian access and movement.	Complies: The proposal adopts a wider verge along key roads to encourage larger street trees to be planted along key pedestrian links throughout the subdivision.

CONTROLS	A development application for the subdivision of land in urban	Will Comply: As indicated in Concept Masterplan
	zones and/or areas that includes a new road is supported by a	document each road is marked by avenue planting with 1
	Public Domain Landscaping Design that includes/addresses the	street tree for every lot frontage. On other subdivision
	following:	approvals council have provided Conditions of Consent to
	1) Avenue planting along all new public roads including at a	require compliance with this control.
	minimum:	
	a) One (1) street tree per lot frontage (up to a 40m frontage); or	
	b) One tree every 25m (for all lots with road frontages greater	
	than 40m).	
	2) Species are to be selected in discussion / agreement with	Will Comply: On previous subdivision approcals Council
	Council's Parks & Recreation Supervisor (or another authorised	have provided conditions of consent to require compiance
	officer).	with this control and confirmed that Council's Parks &
		Recreation Supervisor will provide confirmation of
		nominated species.

LITHGOW LEP 2014 - DETAILED COMPLIANCE REVIEW			
CLAUSE	REQUIREMENT	COMMENT	
PART 4. PRINCIPLE DEVELOPMENT STANDARDS			
	East portion of site: R1 Western Portion of Site: R2 Central parkland:	Note	
2.3 ZONE OBJECTIVES	To provide for the housing needs of the community. To provide for a variety of housing types and densities. To enable other land uses that provide facilities or services to most the day to day people of residents.	Complies: Proposal provides increased housing, deliberately exploring different lot sizes to encourage different house typologies and promote diversity. Proposal allows for easy expression to	
4.1 MINIMUM SUBDIVISION LOT SIZE	R1 - 400m2 R2 - 800m2 R5 - 4000m2 E3 - Not Allowed	Complies: The proposed development is consistent with the relevant requirements and aims of Part 4.1 of the Litghow LEP 2014	
4.1A MINIMUM LOT SIZES FOR DUAL OCCUPANCINES, MULTI DWELLING HOUSING AND RESIDENTIAL FLAT BUILDINGS	ZONE R1 - DUAL OCCUPANCY (ATTACHED) - 500m2 DUAL OCCUPANCY (DETACHED) - 600m2 MULTI DWELLING HOUSING - 800m2	Complies: The proposed development is consistent with the relevant requirements and aims of Part 4.1A of the Litghow LEP 2014	
4.3 HEIGHT OF BUILDINGS	Not Applicable	Not Applicable	
4.4 FLOOR SPACE RATIO	Not Applicable	Not Applicable	
5.2 RECLASSIFICATION OF PUBLIC LAND	(1) The objective of this clause is to enable the Council to classify or reclassify public land as "operational land" or "community land" in accordance with Part 2 of Chapter 6 of the Local Government Act 1993.	Will Comply. Council will classify land as noted on plans as public land.	
5.3 DEVELOPMENT NEAR ZONE BOUNDARIES	(1) The objective of this clause is to provide flexibility where the investigation of a site and its surroundings reveals that a use allowed on the other side of a zone boundary would enable a more logical and appropriate development of the site and be compatible with the planning objectives and land uses for the adjoining zone.	Complies: Site has 4 different zonings Proposed subdivision is within the R1 zone and complies with R1 Zone requirements.	
	(2) This clause applies to so much of any land that is within the relevant distance of a boundary between any 2 zones. The relevant distance is 50 metres.	Complies: Future DA for western part of the site (residual lot) may engage this clause but this submission does not propose work in this area.	
5.10 HERITAGE CONSERVATION	 (1) Objectives The objectives of this clause are as follows— (a) to conserve the environmental heritage of Lithgow, (b) to conserve the heritage significance of heritage items and heritage conservation areas, including associated fabric, settings and views, (c) to conserve archaeological sites, (d) to conserve Aboriginal objects and Aboriginal places of heritage significance. 	Note: Site is not located within a Heritage Conservation Area and under Clause (2) does not require specific Heritage consent. However site is adjacent to a Heritage Item and is appropriate screened and fenced along the boundary of the heritage site.	
7.1 EARTHWORKS	The objective of this clause is to ensure that earthworks for which development consent is required will not have a detrimental impact on environmental functions and processes, neighbouring uses, cultural or heritage items or features of the surrounding land.	Complies: The proposal includes bulk earthworks across the site in order to provide suitable allotments for future dwellings, remove trapped low points and enable stormwater and sewer in the northern part of the site to drain under gravity. Due to the slope of the western part of the site, proposed Road A will have a 1m high retaining wall along its eastern reserve boundary, adjacent to Three Tree Lodge. It is considered that this will not have a detremental impact on the use of Three Tree Lodge, and is a preferable outcome than a series of rear yards and fences.	

7.3 STORMWATER	Minimise the impacts of urban stormwater on land to which	Complies: The proposal includes the provision of
MANAGEMENT	this clause applies and on adjoining properties, native	onsite stormwater detention a water gality control
	hushland and receiving waters	devices to minimise the impacts of urban
		stormwater on adjoing properties, native husbland
		and receiving waters
74 TERRESTRIAL	The objective of this clause is to maintain terrestrial	Complies: Subdivision pattern is located to the
BIODIVERSITY	high high high high high high high high	east of the site away from water course and
BIODIVERGITT	(a) protecting native fauna and flora, and	rempant hushland on neighbouring site
	(b) protecting the ecological processes necessary for their	
	continued existence, and	
	(c) encouraging the conservation and recovery of native	
	fauna and flora and their habitats.	
7.5 GROUNDWATER	Objectives: Maintain the hydrological functions of key	
VULNERABILITY	groundwater systems: to protect vulnerable groundwater	
	resources from depletion and contamination as a result of	
	development.	
	(3) In deciding whether to grant development consent for	Complies: The north eastern portion of the site is
	development on land to which this clause applies, the consent	mapped as being Groundwater Vulnerable.
	authority must consider:	
	(a) whether or not the development is likely to have any	The proposal does not include any development
	adverse impact on the following;	that would result in on-site storage or disposal of
	(i) the water quality and flows within the watercourse,	solid or liquid waste and chemicals.
	(ii) aquatic and riparian species, habitats and ecosystems of	
	the watercourse,	
	(iii) the stability of the bed and banks of the watercourse,	
	(iv) the free passage of fish and other aquatic organisms	
	within or along the watercourse,	
	(v) any future rehabilitation of the watercourse and riparian	
	areas, and	
	(b) whether or not the development is likely to increase	
	water extraction from the watercourse, and	
	(c) any appropriate measures proposed to avoid, minimise	
	or mitigate the impacts of the development.	
7.7 SENSITIVE LANDS	(1) The objective of this clause is to protect, maintain and	Complies: Proposed subdivision located new
	improve the diversity and stability of landscapes including the	roads, lots and stormwater management on the
	restriction of—	eastern side of Three Tree Hill and provdies a
	(a) development on land generally unsuitable for	large open public park space between
	development due to steep slopes or shallow soils, and	neighbouring land identifies as Sensitve Land and
	(b) development on land subject to salinity, and	the proposed subdivison.
	(c) the removal of native vegetation, and	
	(d) development on land that is subject to regular or	
	permanent inundation, and	
	(e) development on land that is within significant karst	
	environments.	
	(2) This clause applies to land identified as "Sensitive Land	Complies: Site has small classification for
	Areas" on the Environmentally Sensitive Areas—Land	Environmentall Sensitive Areas for Biodiversity on
	Overlay Map.	the nrothern edge of the site. However this is for
		remnant bushland located on the neighbouring site.

	 (3) Before determining a development application for development on land to which this clause applies, the consent authority must consider whether the development is likely to have any adverse impact on the following— (a) any land with slopes greater than 25%, (b) any land subject to high erosion potential, (c) any land subject to salinity or impeded drainage, (d) any land subject to regular or permanent inundation, (e) any significant karst environment (including ecological, air quality and movement, water quality, biodiversity, geodiversity (geomorphical and geological), heritage, recreational and sociological values). 	Complies: The site contains some areas steeper than 25% within its southern corner, however the lot layout has been adjusted so as to minimise any intrusion into this area. Appropriate sediment and erosion controls will be implemented prior to the commencment of bulk earthworks onsite. The land is not mapped as being subject to salinity. The bulk earthworks will ensure that trapped low points are regraded so as to be able to drain appropriately. The site is not subejct to regular or permanent inundation, and is not mapped as being within a Flood Planning Area. The site is not located within a significant karst
		environment
7.10 ESSENTIAL SERVICES	Development consent must not be granted to development unless the consent authority is satisfied that any of the following services that are essential for the development are available or that adequate arrangements have been made to	Complies: All proposed lots will be provided with connections to potable water, electrical supply and gravity sewer.
	make them available when required— (a) the supply of water, (b) the supply of electricity,	All proposed lots can drain stormwater directly to the road or via interallotment drainage systems.
	 (c) the disposal and management of sewage, (d) stormwater drainage or on-site conservation, (e) suitable vehicular access. 	All proposed lots are capable of achieving suitable onsite vehicle access.



APPENDIX I – NEIGHBOURS CONSENT LETTERS



APPENDIX J – HERITAGE STATEMENT