

Pound and Shrives Road Residential Area Development Plan

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Responsible Department: City Planning

Related policies: Nil



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Document Authorisation

Revision	Date	Details	Authorisation Position	Name
Version 1	4 September 2018	Development Plan adopted by Council	Manager	Nicola Ward

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1. Introduction

The Pound Road and Shrives Road Residential Area Development Plan (the 'Development Plan') has been prepared by the City of Casey to facilitate the development of 46.49 hectares of land in the suburb of Hampton Park (the 'Subject Site').

The Development Plan area, as shown in Figure 1, is located within the City of Casey municipality, approximately 35 kilometres from the Melbourne Central Business District.

The Development Plan area is located along Pound Road on the south west boundary and Shrives Road on the south east boundary. It is located approximately 1.4 kilometres from Hampton Park Shopping Centre via Pound Road and Hallam Road, and approximately 3.4 kilometres, to Fountain Gate Shopping Centre via Shrives Road, Princes Highway, and Overland Drive.

The Development Plan area, as it currently exists, is made up of nineteen (19) separate parcels of land, as described in the land summary in Table 1. Each of these parcels are generally comprised of a single dwelling, with some agricultural uses undertaken throughout. The 19 lots mostly comprise of open paddocks and green space. To the north of the site lies the Troups Creek Wetland and the Hallam Valley Floodplain. To the east of the site lies electrical transmission towers and power lines which traverse the Development Plan area to the east of Wethersdane Drive. This easement has a buffer of open green space on its eastern side. A major gas pipeline runs east-west throughout the entire site under a 24m wide easement.

This document has been prepared in accordance with Schedule 18 of the Development Plan Overlay which applies to the subject land.

Table 1. Land Summary Table						
Street Address		Certificate of Title		Plan of Subdivision		
Street Name	Street Number	Volume	Folio	Lot Number	Area (hectares)	Plan Number
Pound Road	175	09620	387	2	2.857	LP149173B
Pound Road	177	10922	397	3	2.322	LP149173B
Pound Road	1/179	10196	758	1	0.738	PS336543L
Pound Road	2/179	10196	759	2	1.262	PS336543L
Pound Road	181	09620	390	5	2.003	LP149173B
Pound Road	183	09330	264	1	2.301	PS128680
Pound Road	185	09330	265	2	2.821	PS128680
Shrives Road	106	09330	266	3	3.363	PS128680
Shrives Road	104	09330	267	4	3.198	PS128680
Shrives Road	102	09330	268	5	1.877	PS128680
Shrives Road	100	09330	269	6	1.860	PS128680
Wethersdane Drive	2	09427	557	7	1.770	LP136825
Wethersdane Drive	3	09427	558	8	2.776	LP136825

Table 1. Land Summary Table						
Street Address		Certificate of Title		Plan of Subdivision		
Street Name	Street Number	Volume	Folio	Lot Number	Area (hectares)	Plan Number
Wethersdane Drive	4	09427	559	9	6.793	LP136825
Wethersdane Drive	5	10733	446	1	1.588	PS509762L
Wethersdane Drive	5A	10733	447	2	1.214	PS509762L
Wethersdane Drive	6	09427	561	11	2.474	LP136825
Wethersdane Drive	7	09427	562	12	2.356	LP136825
Wethersdane Drive	8	09427	563	13	2.255	LP136825

1.1 Project Team

This Development Plan was initially prepared by KLM Spatial (proponent) as a framework to guide the future development of the area. The plan has been prepared in conjunction with the following team:

- Arboriculture: Tree Logic
- Cultural Heritage: Ochre Imprints
- Drainage: Water Technology Consultants
- Desktop Soil and Geotechnical: Tonkin + Taylor
- Ecology: Ecology & Heritage Partners
- Traffic: One Mile Grid
- Urban Design: Tract Consultants

1.2 Design Principles

The following key design principles have informed the process in creating the vision and development plan for the site:

- Site Responsive: Master planning that responds to site opportunities and constraints;
- Human Scale: An urban form that responds to the pedestrian scale;
- Permeability: A clear and legible road network;
- Walkability: Connect pedestrian and cycle networks into wider systems;
- Environment: Enhance existing vegetation and contribute to public amenity;
- Character: Produce efficient urban layout for a diversity of building types.

2. Site Analysis

2.1 Site Context

a. Site Context

The Development Plan Area (DPA) is located in a growing residential area, within the South Eastern Growth Corridor, as defined by the Casey-Cardinia Growth Area Framework Plan. The South East Growth Corridor is located on the outer edge of the broader economic region of Melbourne's south east and is heavily reliant on the established urban areas for jobs and services.

Due to the staggered rate of land being settled and subdivided, residential allotments in the area are of a very mixed density. The subject site is one of the few areas remaining with such large, semirural lifestyle residential lot sizes.



Figure 1: Aerial Photograph (Google Earth, 28.10.2015)

b. Surrounding Context

The site is irregular in shape with a primary frontage to Pound and Shrives Roads (south). The site is bound by a number of interfaces as follows:

- **North:** The Troups Creek Wetland is located to the north of the site. This area also contains the Hallam Valley Floodplain and Hallam Valley Trail. The Electricity Easement containing overhead power lines extends northward at the eastern end of this interface.
- **South:** The southern boundary along Pound and Shrives Roads falls under a Category 1 Road Zone (RZ1). The area south of Pound and Shrives Roads is predominantly residential. The area is characterized by conventionally sized lots, with detached single storey housing and a range of townhouse and unit developments.

- **East:** Dwellings are generally detached, single storey, brick homes, with hipped roofs, and attached garages. Dwellings could be considered of standard density, with allotments generally around 500 square metres in size. The Electricity Easement containing overhead powerlines extends southward at the eastern end of this interface. The easement is considered encumbered open space.
- **West:** The residential estate to the west is slightly older than that to the east. Allotments are larger, and more variable in size, averaging approximately 600 square metres. There is a greater number of double storey houses, with front setbacks containing a more established garden setting. Houses are generally brick with hipped roofs and attached garages.

Major Road Networks: The Development Plan area lies along arterial roads Pound and Shrives Roads. It is within close proximity to the arterial roads Cranbourne-Narre Warren Road, Princes Highway, and Hallam Road, as well as the Monash Freeway, and South Gippsland Freeway.

Public Open Space: Henry Joseph Moran Park (west), River Gum Creek Linear Reserve (south west), Hallam Road Linear Reserve (west), Hallam Main Drain (north east).

Public Transport: Bus route 895, which runs from Narre Warren South to Fountain Gate Shopping Centre, via Narre Warren Station. The route travels directly along the subject site along Shrives Road, with the nearest bus stop located at the intersection of Shrives Road and Wethersdane Drive. This bus service is infrequent, and services the site at 30-40 minute intervals during peak hours. Hallam and Narre Warren Train Stations, which provide public transport into the Melbourne Metropolitan Area, are located within approximately two kilometres northwest and northeast of the site respectively, however it is not robustly supported by existing infrastructure and facilities.

Education & Community Facilities: Hampton Park Primary School (south west), Valley Brook Pre School (west), Kilberry Vally Primary School (south), Berwick Lodge Primary School (east), Nossal High School (east).

Retail centres: Fountain Gate Shopping Centre (north east), and Hampton Park Activity Centre (south west).

3. Servicing and Infrastructure

3.1 Stormwater drainage

All local stormwater drainage is managed by City of Casey. Drainage flows through the site via a number of outfall drains within easements in existing properties, discharging into the Hallam Valley Contour Drain (HVCD) to the north. Overland flow is generally south to north, with steeper gradients at the south, and flatter low lying areas around the HVCD.

Allowance is to be made for existing overland flow paths. Any change to an existing overland flow path must be made in agreement with the Responsible Authority and Melbourne Water.

3.2 Potable water reticulation

South East Water is responsible for the water utility surrounding the development plan area. Subject to further advice from South East Water, and further review by the water authority's planning group when additional development details are known, it is assumed that the existing mains surrounding the development plan area will be available to accommodate future development at the site with potable water.

3.3 Sewerage reticulation

The Development Plan area is under the management of South East Water for its sewerage services. There are two accessible outfall points at the eastern and western boundaries of the development plan area. South East Water has advised that the system has capacity to cater for proposed development subject to some minor augmentation works at the western boundary. The sewer outfall at the eastern end has been constructed with a connection stub for future development on the subject site.

3.4 Electricity

The eastern portion of the Development Plan site is encumbered by an electricity transmission easement containing, from east to west, a 66 kilovolt (kV) line, a 220kV line, and two 500kV lines. There is also provision on the western side of the easement for a future 500kV line. Overhead High Voltage and Low Voltage lines run along the south side of both Pound Road and Shrives Road. There is linear buffer of green space on the eastern side of the easement, privately owned by different landowners. There are restrictions on development within the easement including buildings, roads, structures, earthworks, services and trees.

Details of any proposed future use of the easement must be submitted to and approved by AusNet Transmission Group before work is commenced on site.

AusNet Electricity Services is responsible for the supply of electricity to the Development Plan area. Further discussion and design in consultation with Ausnet will be required prior to future development to provide the site with electricity.

3.5 Gas

An approximately 24 metre wide Gas Transmission easement traverses the Development Plan area from east to west, containing a 750mm diameter transmission pipeline operating at high pressure. This easement is a licensed asset under the authority of APA Group, and subject to APA Group's restrictions guidelines.

The gas easement directly affects Lots 1 and 2 on PS128680, Lots 3, 4, 5, and 6 on PS128680, and Lots 7, 11, and 12 on PS509762L. On the eastern side of the site is an electrical easement running north-south. This easement directly affects Lot 9 on LP136825, Lots 1 and 2 on PS509762L, and Lots 6 and 8 on LP136825.

Gas supply to the site is under the management of APA Group. Further discussion with APA Group prior to any future development within the Development Plan area will be required to assess the capacity of this gas asset to service development.

3.6 Telecommunication

Underground telecommunication infrastructure exists along the south side of Pound Road, including mains cables with optic fibre infrastructure in a 100mm diameter conduit, and property service cables in 50mm diameter conduits. It is expected that telecommunications would be serviced from this location, subject to the roll out of NBN within the area, and further to negotiation with Telstra prior to future development.

4. Land Management

4.1 Geology

A geotechnical assessment for the Development Plan area was undertaken by Tonkin & Taylor ('Desktop Soil and Geotechnical Assessment – Pound Road and Shrives Road, Hampton Park', 10 September 2015).

4.2 Cultural Heritage

An 'Aboriginal Cultural Heritage Assessment, Pound & Shrives Road, Hampton Park' (19 October 2015) was completed by Ochre Imprints for the Development Plan area.

The Assessment revealed that the majority of the site is located within an area of cultural heritage sensitivity and as such will be the subject of a Cultural Heritage Management Plan (CHMP) under the *Aboriginal Heritage Regulations 2018* should the land be subdivided for residential purposes or another high impact activity be proposed for the land. Only a single parcel, located at 8 Wethersdane Drive, is outside this area of cultural heritage sensitivity, though given its landform, there is the potential for Aboriginal cultural heritage to exist. A CHMP may therefore be required for this site.

A registered site, VAHR 7921-1546, was also identified within the Development Plan area, registered within a CHMP (Chandler, J. 2015 'Pound and Shrives Road Roundabout, Hampton Park' CHMP 13314) undertaken for the construction of a roundabout at the intersection of Pound and Shrives Roads. The site is located within private land to the north of the existing road reservation. This registered Aboriginal place can only be harmed if permission to do so has been given.

4.3 Ecology

Ecology & Heritage Partners prepared an 'Ecological Assessment, Pound and Shrives Road, Hampton Park, Victoria' (April 2016). The assessment concluded that the Development Plan area is highly modified and significant flora species are considered unlikely to occur.

4.4 Hydrology

A hydrological assessment 'Pound Road Hampton Park, Hydraulic Investigation' (May 2017) was completed by Water Technology for the Development Plan area. The Hallam Valley Contour Drain (HVCD) runs east to west, adjacent the northern boundary of the site, with the Troups Creek East Branch channel flowing into the HVCD at the north-eastern corner of the site.

The northern portion of the Development Plan area is currently zoned Urban Floodway Zone (UFZ) and is affected by a Land Subject to Inundation Overlay (LSIO). The Investigation supported the UFZ extending southward to 65 metres from the northern boundary of the Development Plan area. The LSIO is the area that is subject to flooding caused by the 1% AEP rainfall intensity.

Residential development can not occur within the UFZ. Residential development may occur outside of the UFZ if works are approved and undertaken to reduce the flood risk associated with the LSIO, and there is no reduction to the existing flood storage volume within the land. The extent of the LSIO can be reduced subject to meeting these requirements, and subject to any affected land being filled to meet the applicable freeboard, as determined by Melbourne Water.

Development shall not result in any loss of flood storage volume in the Hallam Valley Floodplain, to the satisfaction of Melbourne Water. Flood storage works may be accepted within the 65 metre UFZ, pending approval from the Responsible Authorities. Earthworks should be carried out, such that, the volume of cutting within the floodplain is equivalent or greater than the volume of filling. Any land required for drainage purposes must be transferred to the drainage authority or municipal council, at no cost, and will not be credited as public open space.

A site specific drainage strategy must be submitted with planning applications for any subdivision and/or development of the parent lots forming part of the Development Plan area.

4.5 Bushfire

The site falls within a Bushfire Prone Area. Clause 13.02-1 of the State Planning Policy Framework seeks to ensure development of strategic document is not approved where it will result in the introduction or intensification for areas of a development in an area that has (or on completion will have) more than a BAL-12.5 rating. The risk or threat of bushfire in the General Residential Zone will not be increased from the existing situation, noting:

- The designated bushfire prone area applies to all 'non-urban' land which is located along the Hallam Main Drain. This is due to its unmanaged state of the grassland in the area;
- Future planning applications will be required to respond to the provisions of Clause 13.02 to the satisfaction of the Responsible Authority, and
- The requirement of a road along the drainage corridor will provide an appropriate buffer.

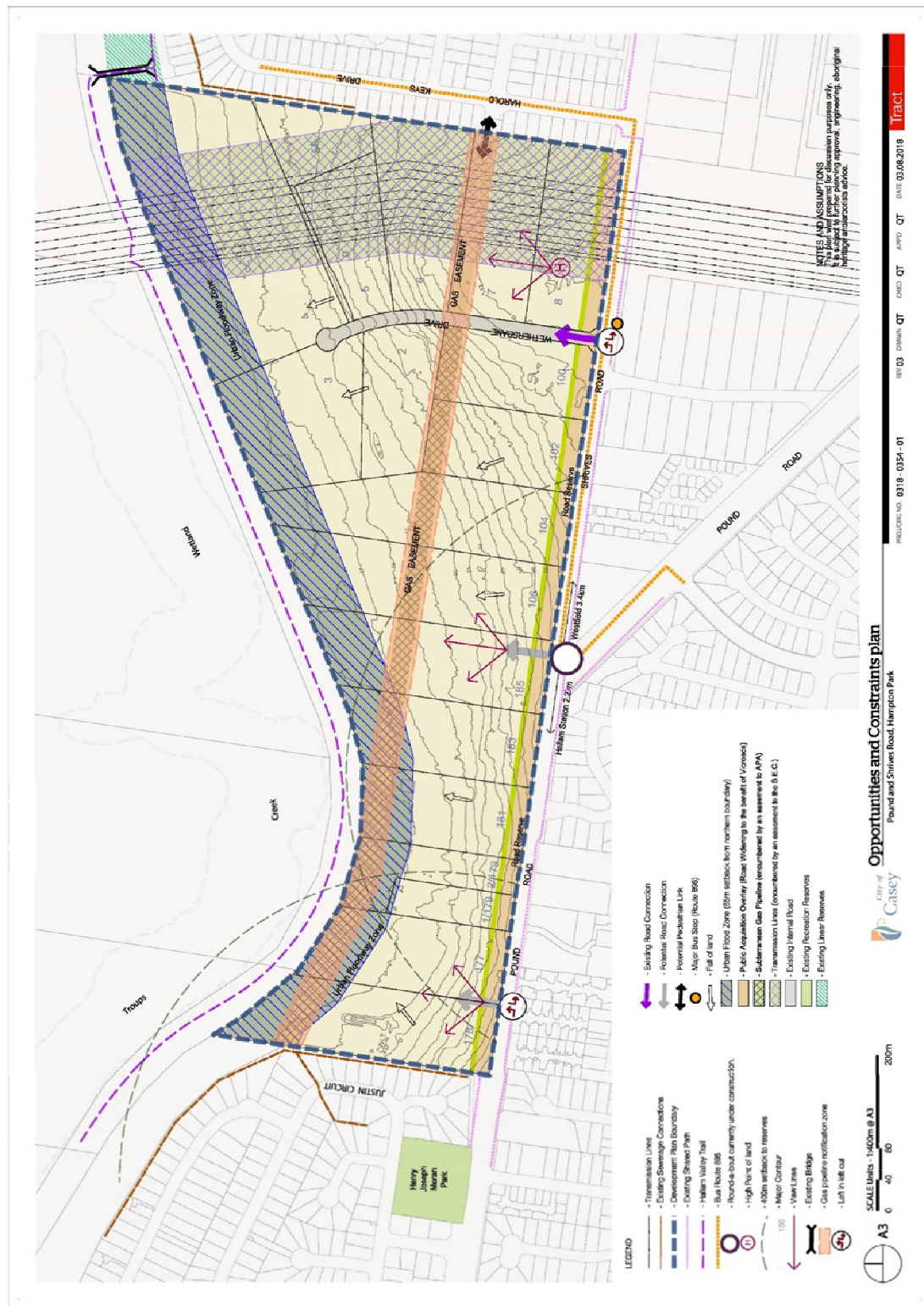


Figure 2: Pound and Shives Road Development Plan Opportunities and Constraints (Source: Tract Consultants 2018).

NB: KLM Spatial created the original version of this plan.

5. Strategic Planning Policy Framework

The land within the Development Plan is currently partially zoned as General Residential Zone (GRZ1) and Urban Floodway Zone (UFZ). Amendment C232 seeks to rezone 6.44 hectares of land currently in the Urban Floodway Zone to the General Residential Zone Schedule 1, and to amend the Land Subject to Inundation Overlay on the subject land. As supported by the policy context, the development of the subject site will provide a range of conventional density and medium density housing adjoining extensive areas of open space and new pedestrian paths, close to arterial roads.

The Development Plan aligns with key strategic directions of the State Planning Policy Framework. The Development Plan has been prepared in accordance to Schedule 18 to Clause 43.04 of the Casey Planning Scheme. The Development Plan Overlay (DPO18) sets out the information required to be included within this Development Plan. The Responsible Authority must take the Development Plan into consideration when assessing planning applications for the subdivision, use, or development of land in the area to which it applies. A permit can only be granted for the subdivision, use or development of land generally in accordance with this Development Plan.

The Development Plan is designed to be consistent with other key State and local policy guidelines, including:

- The State Planning and Local Planning Policy Frameworks of the Casey Planning Scheme
- The Municipal Strategic Statement
- Casey Housing Strategy, or any adopted Housing Strategy of the City of Casey
- Casey Activity Centre Strategy (2000)
- Any adopted Open Space Strategy of the City of Casey
- Casey C21: A Vision for Our Future
- Plan Melbourne 2017-2050
- Any adopted residential development or housing guidelines of the State Government

5.1 Planning Controls

The site is identified as, or affected by the following:

- Schedule 1 of the General Residential Zone (GRZ);
- The Hallam Valley Floodplain north of the site is affected by the Urban Floodway Zone (UFZ).

The following overlays are applicable to the subject site:

- Development Plan Overlay – Schedule 18 (DPO18);
- The Pound and Shrives Roads frontage is affected by Schedule 1 of the Public Acquisition Overlay (PAO1);
- Land Subject to Inundation Overlay (LSIO).

5.2 Servicing and Infrastructure

The overall utility strategy will involve individual developers within the Development Plan area applying to the different servicing authorities for connection to their constructed infrastructure mains. Provision of services and infrastructure will be dealt with at the planning permit stage. Relevant servicing authorities will be involved through the planning process.

5.3 Public Open Space Contributions

Pursuant to the public open space contribution required by Clause 52.01 of the Casey Planning Scheme, an 8% contribution is required. This will be delivered through a provision of a 1.2ha unencumbered public open space. The remaining contribution will be received through cash contribution to the Responsible Authority.

A contribution must be made as follows:

- Where a public open space shown on the lot in the Plan (in Figures 3 and 11) is equal to 8% or less than 8% of the lot's NDA:
 - The relevant land must be transferred to Council at no cost to Council;
 - A cash contribution is to be made to Council to bring the total public open space contribution to a value equal to 8% of NDA.
- Where public open space shown on the land in Figures 3 and 11 is greater than 8% of the lot's NDA, the relevant land must be transferred to Council at no cost of Council. In this case Council will compensate the landowner, at a time to be agreed, for the amount of land provided in excess of 8% but no greater than difference between 8% and the amount of land shown in Figures 3, and in the land budget tables Figure 4.

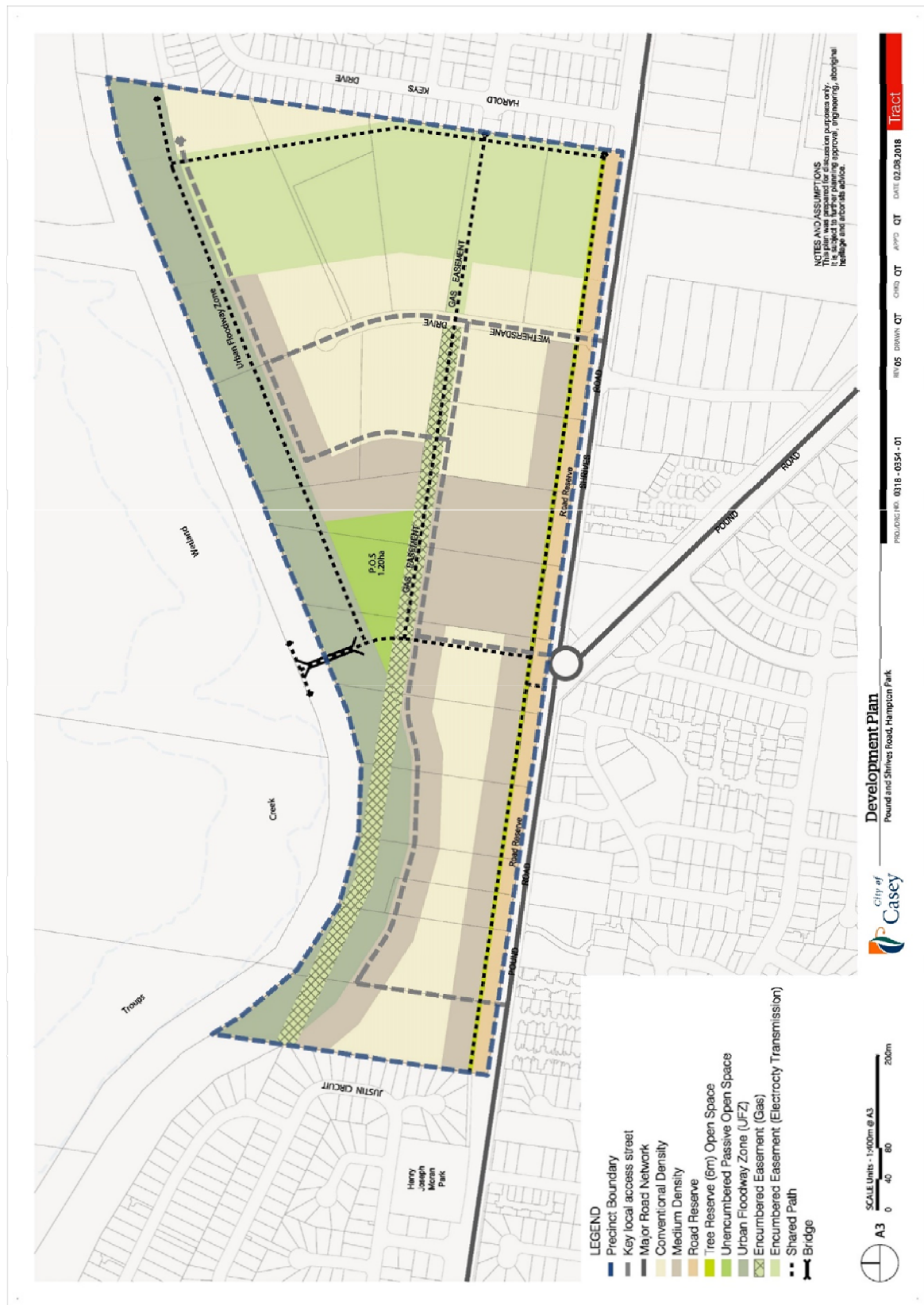


Figure 3: Pound and Shrikes Road Development Plan (Source: Tract Consultants 2018)

NB: KLM Spatial created the original version of this plan.

DESCRIPTION	HECTARES	% OF NDA
TOTAL PRECINCT AREA (ha)	46.49	
TRANSPORT		
ROADS AND PUBLIC TRANSPORT		
Public Acquisition Overlay	2.40	10.3%
SUB - TOTAL TRANSPORT	2.40	10.3%
OPEN SPACE		
SERVICE OPEN SPACE (ENCUMBERED)		
Drainage Line / Drainage Line / Wetland / Retarding	7.70	32.9%
Easements (Gas / Transmission)	11.07	47.3%
SUB - TOTAL - ENCUMBERED OPEN SPACE	18.76	80.1%
CREDITED OPEN SPACE (UNENCUMBERED)		
Passive Open Space	1.20	5.1%
Tree Reserves	0.71	3.0%
SUB - TOTAL - UNENCUMBERED OPEN SPACE	1.91	8.2%
TOTAL NET DEVELOPABLE AREA (NDA)	23.42	100.0%
RESIDENTIAL AREA		
RESIDENTIAL		
Residential - Conventional Density	13.31	56.8%
Residential - Medium Density	10.09	43.1%
SUB - TOTAL - RESIDENTIAL	23.40	99.9%
NET RESIDENTIAL AREA (RESIDENTIAL LOTS)	23.42	100.00%
634 lots		

Figure 4: Land Budget Table (Source: Tract Consultants 2018)

6. Development Plan Outcomes

6.1 Vision and Aims

The vision for the Development Plan area is to create a quality, landscape responsive, mixed density residential environment which complements the adjoining uses as well as providing an attractive living environment for residents through housing choice, promotion of a quality lifestyle, and sense of place in an environmentally sensitive setting.

The internal layout will provide convenient and safe access through the site. A diversity of high quality housing including townhouse typologies will be provided to cater for the changing housing needs of the City of Casey.

The fundamental aims of the Development Plan are to create a high quality residential environment that:

- Offers a range of housing typologies and lifestyle choice;
- Provides for safe living;
- Creates a distinctive sense of community and place;
- Sensitively and efficiently integrates natural physical features into the built environment;
- Provide residents with quality spaces for recreation, socialising and exercise, and
- Incorporates key principles of good urban design.

6.2 Built Form

The Development Plan will facilitate the future development of the site in accordance with a density that caters for various housing needs.

A high quality built form will contribute positively to the area where dwellings will:

- Contribute to a cohesive and legible character for the area as a whole;
- Create safe and legible spaces, maximising the opportunity for passive surveillance;
- Create positive interfaces to adjacent public open space areas;
- Ensure that garages/car parking/fencing structures do not dominate the streetscape; and
- Front public open space areas, Pound and Shrives Roads, and the gas transmission pipeline and electricity easements.

Residential Lot Mix

- Residential subdivision must deliver a broad range of lot sizes capable of accommodating a variety of housing types;
- Sites directly adjacent to public open space and Pound and Shrives Roads should be utilised for medium density housing, as shown in Figure 3;
- Graduated built form ranging from 1- 3 storeys that is responsive to adjoining interfaces. Subdivision applications must include indicative concept layouts for any lots identified for the future development of medium density housing that suitably demonstrate:
- Active interfaces with adjacent streets, open spaces and waterways should be provided;
- Safe and effective vehicle and pedestrian access and internal circulation, as appropriate.

Dwelling Types

The Development Plan generally provides for a diversity of housing typologies, including townhouses and 1-2 bedroom units. The Development Plan also provides for rear-loaded dwelling types to maximise active interfaces. Opportunities for casual surveillance should also be incorporated into upper floors with balconies or habitable rooms located to overlook the street and public open spaces.

Densities

The Development Plan site falls within the incremental change areas of the City of Casey's Housing Strategy. Development in incremental change areas will happen gradually and will comprise of conventional density, and medium density housing. New housing in incremental change areas requires sensitivity to the amenity of adjoining properties.

Medium density development is accepted throughout the site, however appropriately located medium density (high) development is encouraged throughout the areas along public open space, and road networks (Shown in Figure 3). Refer to Glossary for definitions of medium density in the context of the Pound and Shrives Road Development Plan. High density is discouraged as the site is not within 400m or 800m walkability catchments to Metropolitan, Principal, Major, or Neighbourhood Activity Centres.

The Development Plan seeks to achieve the following:

- Residential subdivisions must deliver a broad range of lot sizes capable of accommodating a variety of housing types and forms to meet increasingly diverse community needs. e.g. multistorey developments on smaller lots, and single storey dwellings on larger lots;
- Density of up to 25 dwellings per net developable hectare;
- Density of up to 30 dwellings per net developable hectare are to be directed to areas of public open space, Hallam Valley Floodplain, along Pound and Shrives Roads;
- Lots #185, #106, and #104 Shrives Road may develop to an average density of 30 dwellings per net developable hectare, to offset the public open space configuration, and maximise proximity to open space and its associated view lines;
- Medium (conventional) and lower density housing are encouraged closer to the gas and electricity transmission easements (excluding lots #185, #104 and #106 Shrives Road, as shown in Figure 3).

6.3 Sensitive uses

Specialised housing forms such as lifestyle communities, retirement living or aged care facilities should:

- Be integrated into the wider urban structure, and not gated;
- Must not directly face the gas transmission easement, and
- Must have connections to arterial roads which facilitate emergency vehicles, subject to the consent of VicRoads. This must not present a barrier to movement through the surrounding road network. Emergency vehicles are not encouraged along local roads.

6.4 Character

The Development Plan seeks to maintain character within the area surrounding the site through:

- A series of green links that increase permeability and provide landscaped visual relief;
- Development adjacent to the Hallam Valley Floodplain should respond sensitively to the topography and local environment in terms of building scale, landscape design and plant selection;
- Consistency of landscape, façade design, roofscape and fence design that will allow a diversity of house types to have a commonality within the streetscape to produce an integrated, simple, and ordered development;
- Assist in creating a cohesive theme throughout the development consistent with landscape features;
- Material finishes should exhibit a high visual quality, using a cohesive material and colour palette that is designed to age well and contribute to the development plan area for the long term;
- A consistent suite of lighting and furniture should be used across neighbourhoods, appropriate to the type and role of street or public space, unless otherwise approved by the Responsible Authority;
- A road hierarchy creating a network that is integrated, legible and permeable;
- New streets and roads within a subdivision should:
 - Allow for and ensure the provision of canopy trees; and
 - Discourage indented parking to allow for more space for tree root systems.

Interfaces and Active Frontages

The Development Plan seeks to ensure active, and attractive frontages to maintain neighbourhood character and aesthetic, and increase passive surveillance.

Lots and dwellings must front or side:

- Drainage channels, waterways;
- All open space and utilities easements;
- Tree reserves;
- Connector roads, local access streets;
- Arterial roads.

Viewlines

To contribute to active frontages, maintain neighbourhood character, and ensure passive surveillance, viewlines must be maximised wherever possible.

The following development principles will be applied:

- Front fences facing Pound and Shrives Roads where provided should be visually permeable, and no more than 1.2m in height (25% transparent);
- Side and rear fencing should not exceed 1.8m in height;
- Avoid fences and blank facades to interfaces;

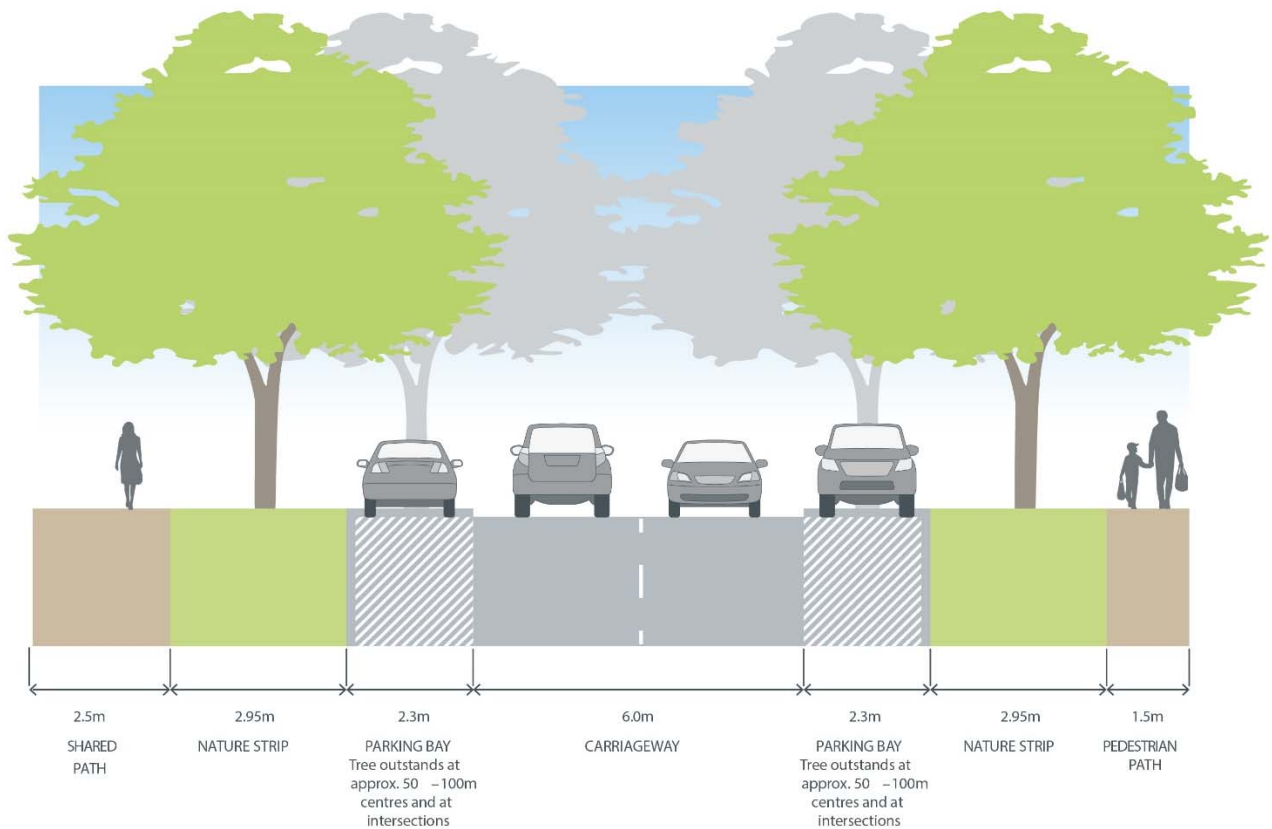
- There are to be no backyard fences facing public open space, or electricity transmission towers, as is reasonably possible;
- Avoid frontages to the electricity transmission towers where possible;
- Street networks within subdivisions should be designed to maximise the number of connections and direct views to open space;
- Built form must be well integrated with surrounding interfaces, including Hallam Valley Floodplain;
- Lot orientation is to ensure that passive surveillance is provided to open space areas; opportunities for casual surveillance should also be incorporated into upper floors with balconies or habitable rooms located to overlook the street, and
- Streetscapes will be enhanced by rear loading of garages, wherever possible.

6.5 Roads

Subdivision layouts must form a permeable street network that provides convenient access to local open space and allows for the effective integration with neighbouring properties. Future development is to provide for a legible traffic and pedestrian network via a clear hierarchy of private roads that will facilitate safe and efficient movements within the development. The Development Plan is supported by a Traffic Engineering Assessment undertaken by OneMileGrid Group.

The following development principles will be applied:

- Relevant minimum road reserve widths for the type of street are maintained, unless otherwise approved by the Responsible Authority;
- Street block lengths should not exceed 240 metres to ensure a permeable and low speed environment for pedestrians, cyclists and vehicles is achieved;
- Streets should be the primary interface between development and waterways;
- Where a single street spans across multiple boundaries that street may consist of multiple cross sections so long as a suitable transition has been allowed for between each. Where that street has already been constructed or approved for construction to a property boundary, the onus is on the development connecting into that street to adopt a consistent cross-section until that suitable transition can be made;
- Minimum required carriageway dimensions are maintained to ensure safe and efficient access, shown in the cross sections below.



Main Entry Road - 20.5m from Pound and Shrives Road

Figure 5: Main Entry Road from Pound and Shrives Road - 20.5m

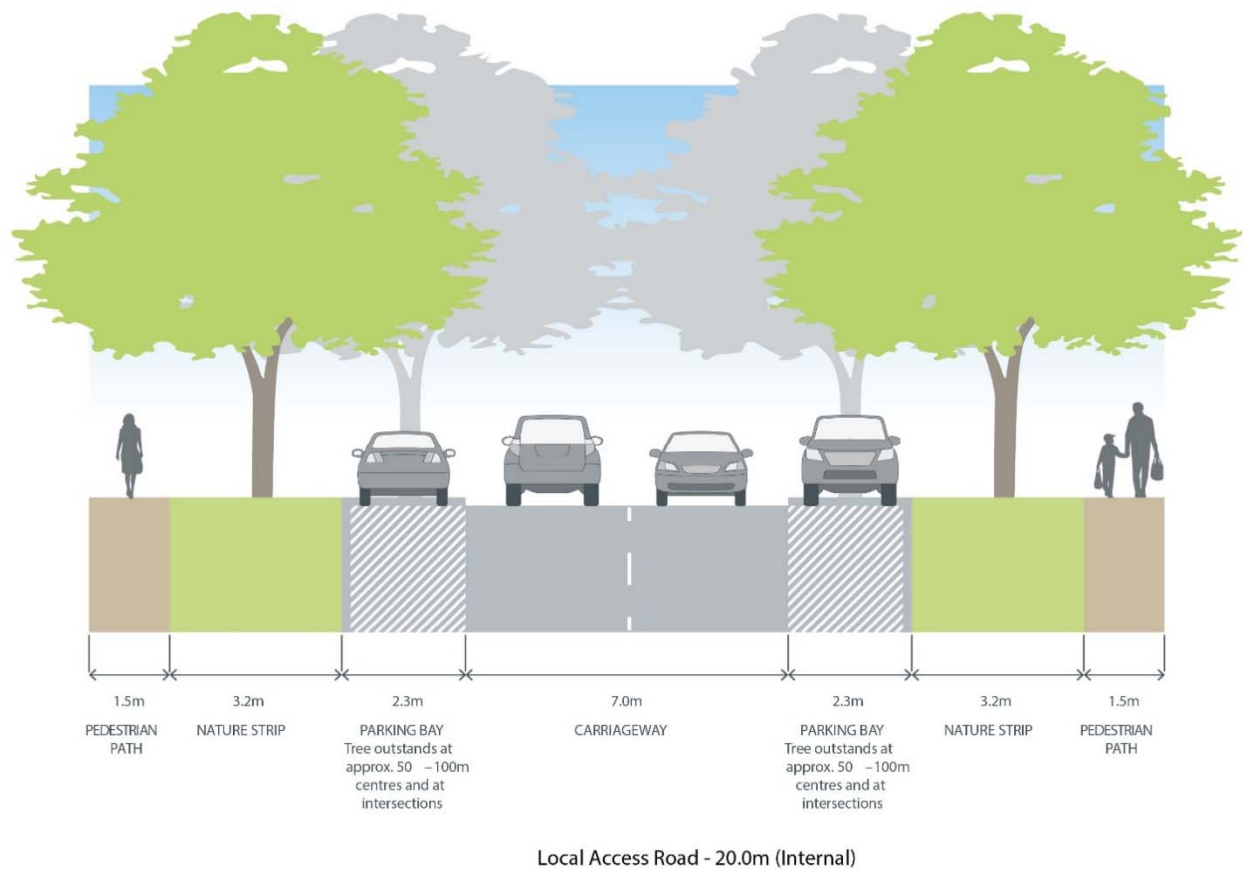
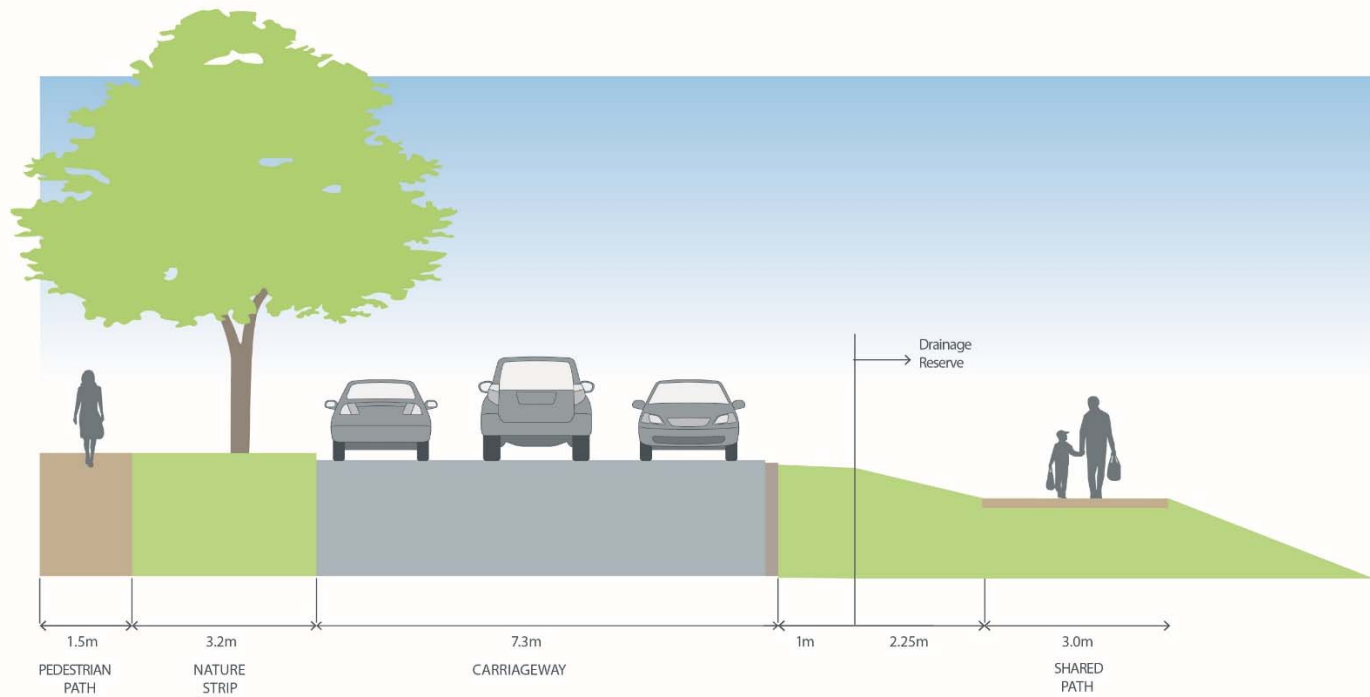


Figure 6: Local Access Road - 20.0m (Drainage Reserve Boundary)



Local Access Road - 13m (Drainage Reserve Boundary) - with Shared Path

Figure 7: Local Access Street - 13m (Drainage Reserve Boundary) - with Shared Path

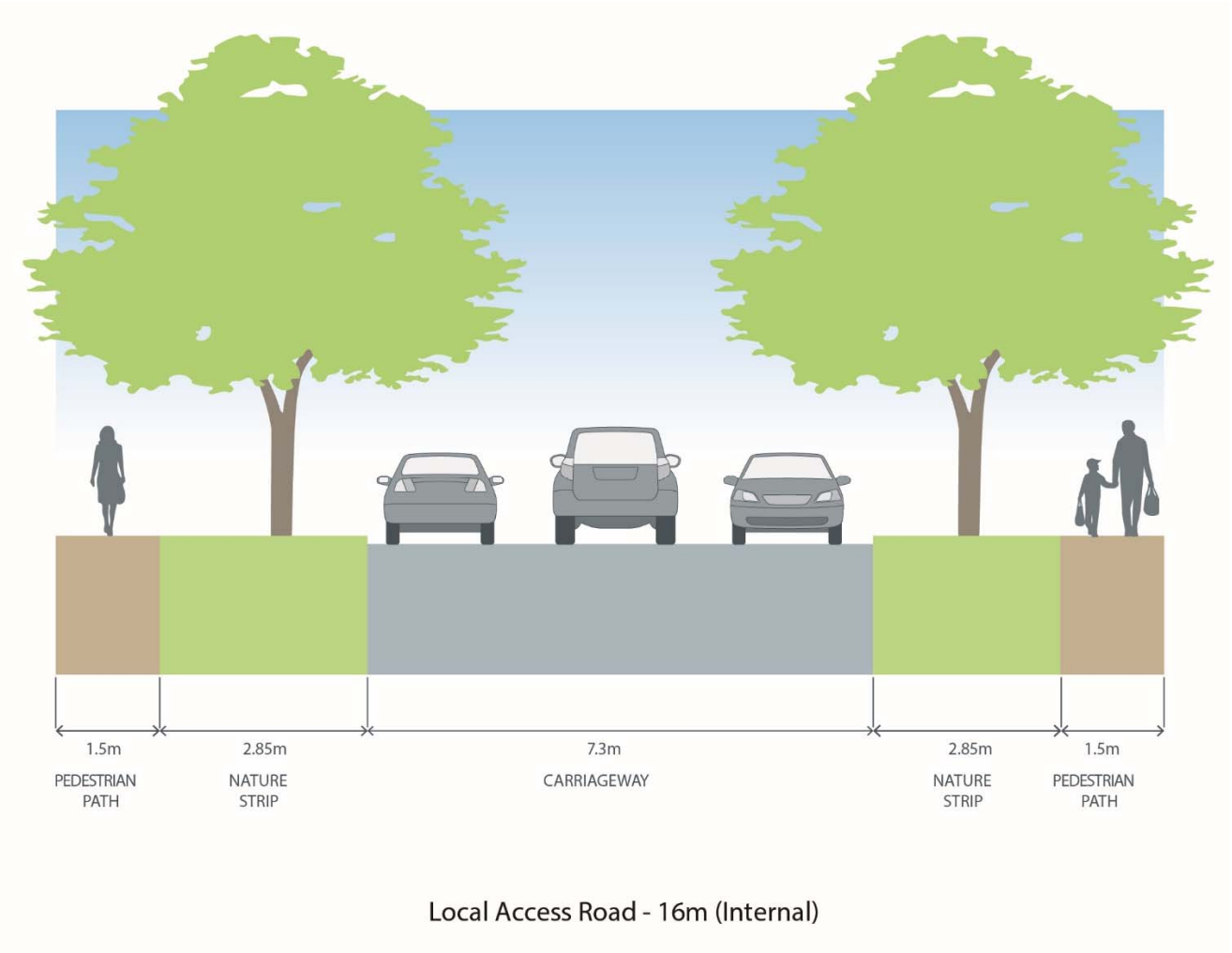


Figure 8: Local Access Road - 16m

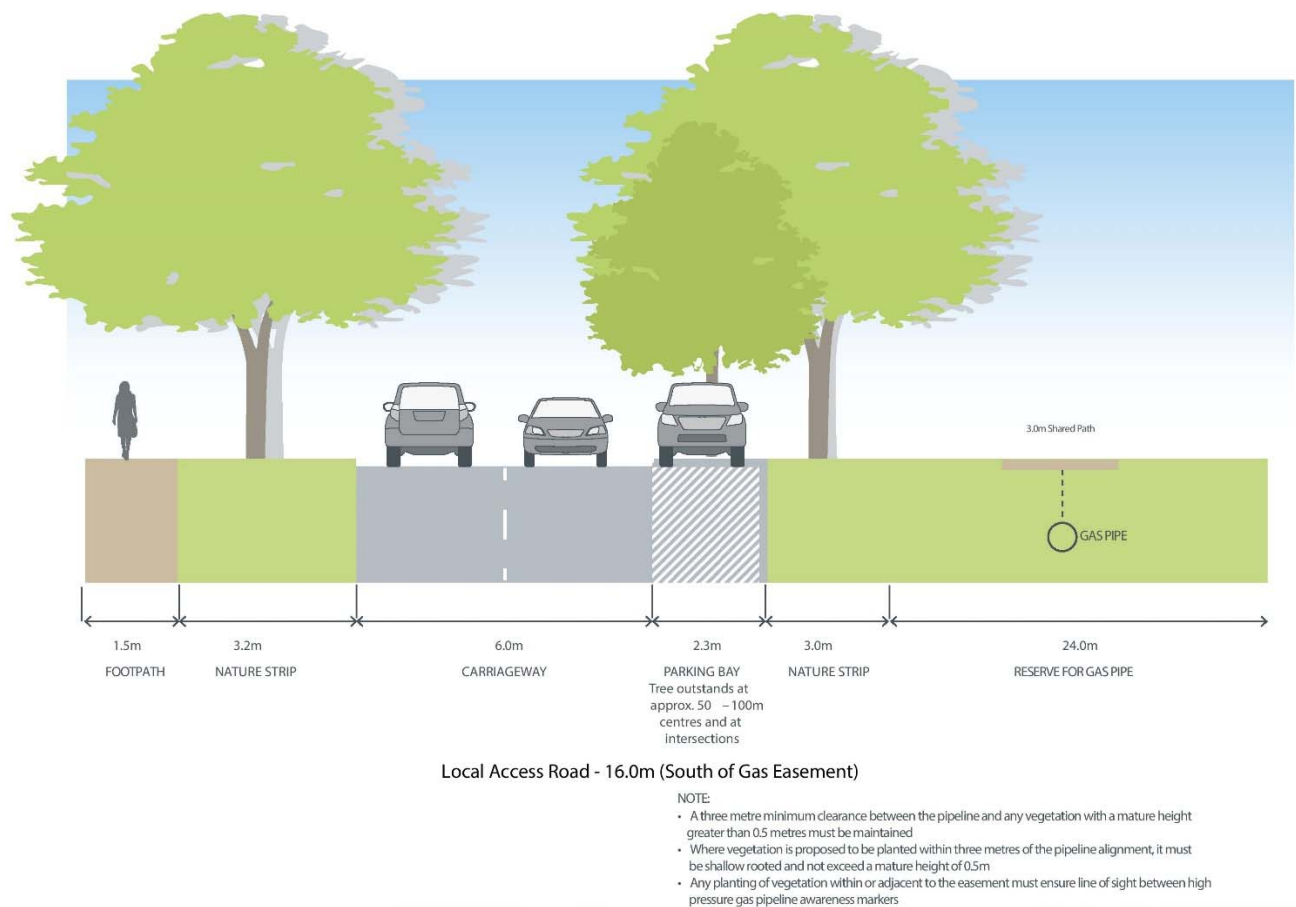


Figure 9: Local Access Road – 16.0m (south of Gas Easement)

6.6 Road Access

Pound Road and Shrives Road are under the management of VicRoads. Provision is made through a Public Acquisition Overlay at the southern boundary of the site for future duplication of these roads.

Properties fronting Pound and Shrives Roads may be granted temporary access subject to the following:

- Appropriate plans are submitted to the Responsible Authority and VicRoads for approval;
- Temporary access will be closed and replaced with a 6 metre wide tree reserve to the satisfaction of the Responsible Authority once alternate/permanent access is made available;
- Costs of reinstatement works will be borne by applicant/proponent;
- Sites with non-residential uses will have permanent access; access is tied to the use of the land, not the land.

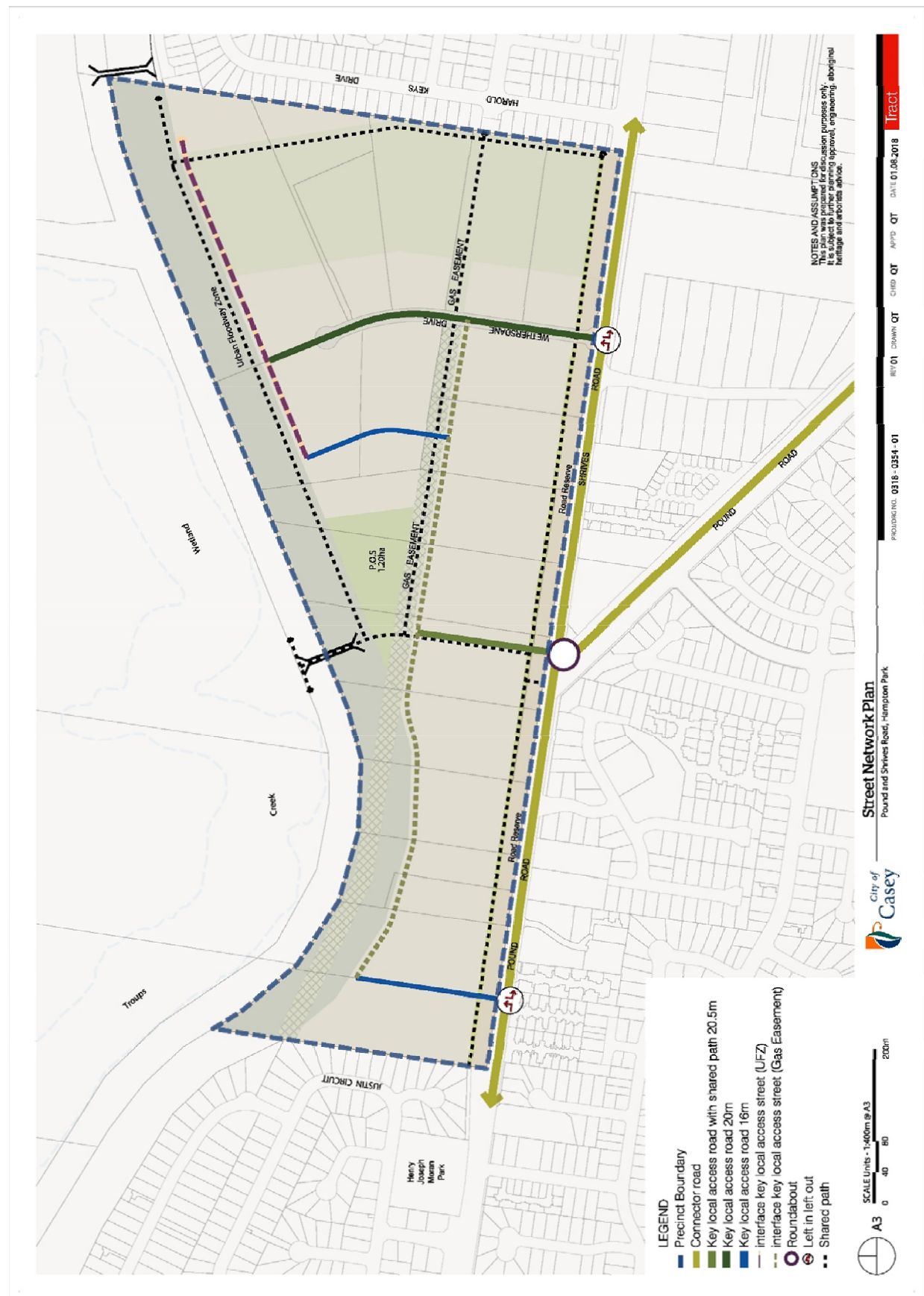


Figure 10: Street Network Plan (Source: Tract Consultants 2018)

6.7 Walking and Cycling

Walkable neighbourhoods

Development is to provide an integrated pedestrian network; providing connections both internally and externally to the surrounding road network and adjoining public open space.

Subdivision design should seek to create pedestrian-friendly, walkable neighbourhoods by providing links to enhance pedestrian accessibility to key destinations such as public open space, arterial roads, and public transport. Figure 10 identifies desirable pedestrian permeability links that are to be achieved.

Design of all streets and/or roads must give priority to the requirements of pedestrians and cyclists by providing:

- All subdivisions must deliver a simple street network which is easy to navigate and provides direct and convenient pedestrian access to connector and arterial roads and to key destinations;
- Footpaths of at least 1.5m on both sides of all streets and roads unless otherwise specified;
- A minimum of 2.95m nature strips are to be provided, for the planting of trees which will provide an aesthetic canopied boulevard effect once mature.
- Shared paths or bicycle paths as shown in cross sections in Section 7.4;
- Safe, accessible and convenient pedestrian and cycle crossing points must be provided at all intersections, key desire lines and locations of high amenity;
- Safe and convenient transition between on and off-road bicycle networks;
- Increased permeability in the road network should be delivered via shorter block lengths and the avoidance of cul-de-sacs;
- Where lots with direct frontage are provided, they should be set back five metres from the waterway corridor to provide pedestrian and service vehicle access to those lots, to the satisfaction of Melbourne Water and the Responsible Authority;
- The street network must be designed to ensure 95% of all households are located within 400 metres of public transport services, and all households are able to directly and conveniently walk to public open space.

Shared and pedestrian paths along waterways must:

- Be delivered by development proponents consistent with the network shown on Figure 10;
- Be above 1:10 year flood level with any crossing of the waterway designed to be above the 1:100 flood level to maintain hydraulic function of the waterway;
- Be constructed to a standard that satisfies the requirements of Melbourne Water;
- Bicycle parking facilities are to be provided by development proponents in convenient locations at key destination such as parks;
- The alignment of the off-road bicycle path must be designed for cyclists travelling up to 30 km/hr;
- Bicycle priority at intersections of minor streets and connector roads with dedicated off-road bicycle paths must be achieved through strong and consistent visual and physical cues and supportive directional and associated road signs;

- An indicative landscaped corridor for a shared path must be provided for within the electricity transmission line easement generally as shown in Figure 3, and
- Lighting should be installed along shared, pedestrian, and cycle paths linking key destinations, unless otherwise approved by the Responsible Authority.

6.8 Drainage

The transition between built form within the development and the Hallam Valley Floodplain may result in increased stormwater flows. Development must incorporate current stormwater drainage best practices, including water quantity and water quality management, so that downstream impacts are minimised and opportunities for productive use of stormwater are promoted.

Outcomes

Drainage management on the site should be such that the following over-arching WSUD outcomes are achieved:

- Protect natural systems and remnant indigenous vegetation, in particular such vegetation along significant drainage lines;
- Integrate stormwater treatment into the landscape so that stormwater is a visible, useful and interesting part of the urban landscape, and
- Reduce runoff and peak flows by use of infiltration, local storage, reuse, landscape areas and other porous surfaces, wherever possible.

All new development must demonstrate the following:

- Stormwater runoff to restrict proposed drainage discharge rates to be equal or less than pre-development conditions, in order to minimise flood risks within the broader catchment;
- The Development Plan area is to be serviced with fully reticulated and underground service connections;
- Consistent with Clause 56.01-2 and Clause 56.07 of the Casey Planning Scheme, a subdivision of 60 or more lots must include an Integrated Water Management Plan;
- Where practical, integrated water management systems should be designed to:
 - Maximise habitat values for local flora and fauna species.
 - Enable future harvesting and/or treatment and re-use of stormwater.
- The application of Australian best practice to manage stormwater runoff, sediment, and erosion during construction;
- The application of Australian best practice to achieve water sensitive urban design and potable water conservation objectives;
- Development shall not result in any loss of flood storage volume in the Hallam Valley Floodplain, to the satisfaction of Melbourne Water;
- Flood storage works may be accepted within the 65 metre UFZ, pending approval from the Responsible Authorities;
- Any land required for drainage purposes must be transferred to the drainage authority or municipal council, at no cost, and will not be credited as public open space.

Residential development can not occur within the UFZ. Residential development may occur outside of the UFZ if works are approved and undertaken to reduce the flood risk associated within the LSIO, and there is no reduction to the existing flood storage volume within the land. The extent of the LSIO can be reduced subject to meeting these requirements, and

subject to any affected land being filled to meet the applicable freeboard, as determined by Melbourne Water.

A site specific drainage strategy must be submitted with planning applications for any subdivision and/or development of the parent lots forming part of the Development Plan site.

The UFZ land is to be vested in the drainage authority, Melbourne Water.

6.9 Gas Transmission Pipeline Easement

A 24 metre wide gas transmission pipeline easement runs east-west throughout the Development Plan area. Further discussion with APA Group prior to any future development within the Development Plan area will be required to assess the capacity of this gas asset to service development.

The following requirements must be met and/or adhered to:

- All vegetation with a mature height greater than 0.5 metres requires a three metre minimum clearance of the pipeline. Restrictions on certain species apply;
- Any lots directly abutting the gas transmission pipeline easement must not rely upon the gas transmission pipeline easement as their accessway to the lot;
- Any carriageway or road required to provide direct access to lots must be located off gas transmission pipeline easement;
- Buildings, structures, roadway, pavement, pipeline, cable, fence or any other improvement on or under the land within the gas transmission pipeline easement must not be constructed without prior consent in writing from the pipeline licensee/operator (APA VTS Australia (Operations) Pty Ltd).
- No structure or vegetation will be permitted on the easement that prohibits maintenance of line of sight along the pipeline easement;
- Prior to the commencement of any works within the gas transmission pipeline easement of the gas transmission pipeline, the proponent must enter a Third Party Works Authorisation with the pipeline licensee/operator (APA VTS Australia (Operations) Pty Ltd). Works within the easement must comply with any conditions attached to a third party works approval;
- The gas pipeline easement is not to be used to co-locate other utilities and services e.g. sewer, water, electricity etc. Service crossings at 90 degrees would be considered subject to APA approval and any protective measures being implemented at the developers expense;
- Watercourses are not to traverse the gas pipeline easement and the construction of wetlands on the easement is prohibited without the written consent of the pipeline operator/licensee;
- Prior to the commencement of any works, including demolition, within the easement or on land within 50 metres of the gas transmission pipeline easement, a Construction Management Plan must be submitted to and approved by the Responsible Authority. The plan must:
 - Prohibit the use of rippers or horizontal directional drills unless otherwise agreed by the operator of the gas transmission pipeline;
 - Avoid significant vibration, heavy loadings stored over the pipeline and Heavy vehicle / plant crossings of the pipeline within the easement;

- Be endorsed by the operator of the gas transmission pipeline where the works are within or crossing the relevant gas transmission easement, and
- Include any other relevant matter to the satisfaction of the Responsible Authority.

Prior to the subdivision commencing for any stage which includes the gas transmission pipeline easement, landscape plans depicting any planned landscaping, including the planting of vegetation, species details, surface treatments, furniture, structures or improvements on or immediately abutting the gas transmission pipeline easement must be submitted to and approved by the Responsible Authority. The Responsible Authority will seek the view of the pipeline licensee / operator APA VTS Australia (Operations) Pty Ltd in this matter.

The following sensitive land uses or buildings and works associated with these land uses within the “gas pipeline notification zone” (50 metres on either side of the gas transmission pipeline easement) must prior to approval conduct a Safety Management Study (SMS) and implement the recommendations of the SMS as required by AS2885 Australian Standard Pipelines – Gas and Liquid Petroleum to the satisfaction of the pipeline owner/licensee (APA VTS Australia (Operations) Pty Ltd);

- Accommodation (other than dwelling)
- Child care centre
- Corrective institution
- Dependent persons unit
- Education centre
- Hospital
- Place of Assembly
- Residential Aged Care facility
- Retirement village
- Service Station

6.10 Environmentally Sustainable Design

The Development Plan is committed to ensuring Environmentally Sustainable Design outcomes in accordance with Council policy and best practice. The following initiatives are encouraged for incorporation into any future planning permit application/s.

Energy Conservation

- Promote the use of energy efficient materials where possible;
- Support the use of energy saving light globes and solar hot water;
- Encourage tenants to fit out buildings with 5 star heating and cooling systems.

Water Conservation

- Encourage the capture and reuse of water where possible;
- Reduce the reliance on mains water for landscape irrigation.

Stormwater Quality

- Reduce stormwater flow;
- Integrate WSUD measures in hardstand areas where possible;

Waste Management

- Provide options for the recycling of materials;
- Encourage residents to participate in waste recycling and minimisation.

Material Selection

- Encourage the use of prefabricated products;
- Encourage the use of local materials where possible.

Landscape

- Consider the use of native and indigenous planting;
- Provide mulch to all garden beds;
- Implement the landscape under suitable conditions to avoid waste.

Solar Access

- Solar penetration to landscaped and open space areas, should be maximised;
- Support the use of solar energy including solar panels on roofs;
- All dwellings within the Development Plan area must be designed and orientated to capitalise on the gains and benefits of passive solar orientation.

7. Public Open Space, Paths, and Trails

In line with the requirements Clause 52.01 of the Casey Planning Scheme, a total of 8% of the Development Plan area must be set aside and transferred to Council for Public Open Space.

The Development Plan delivers 1.2ha of unencumbered open space for use as public open space. Properties which do not contribute land are required to provide the 8% in cash contribution. Shown in Figure 3, the Development Plan area is endowed with encumbered open space which is not credited within the 8%. These spaces fall primarily on the Hallam Valley Floodplain, the gas transmission pipeline easement, and the electrical easement with overhead powerlines, and are to be utilised as landscaped paths and reserves connecting residential areas to the 1.2ha park. The internal and external shared path network serving both pedestrians and cyclists is aligned to run along the gas transmission pipeline easement.

All public open space must be finished to a standard that satisfies the requirements of the Responsible Authority prior to the transfer of the public open space, including but not limited to:

- Removal of all existing and disused structures, foundations, pipelines, and stockpiles;
- Clearing of rubbish and environmental weeds and rocks, levelled, topsoiled and grassed with warm climate grass (unless conservation reserve requirements dictate otherwise);
- Provision of water tapping, potable and recycled water connection points;
- Trees and other plantings (drought tolerant unless approved by Council);
- Vehicular exclusion devices (fence, bollards, or other suitable method) and maintenance access points; and
- Construction of minimum 1.5m wide pedestrian paths around the reserve, connecting and linking into any other surrounding paths or points of interest, except where shown as shared paths in Figure 10.

The following development principles will be applied:

- All public landscaped areas must be designed and constructed to enable practical maintenance and planted with species suitable to the local climate and soil conditions;
- A proponent delivering a master plan for a local park that traverses multiple property ownerships should consult with the landowners of parcels covered by the park to ensure an integrated design;
- Provide pedestrian and cycling paths as shown in the Development Plan, with linkage/s to existing the path network where possible;
- Integrating north-south connection of green space by connecting to the Hallam Valley Floodplain as well as the gas pipeline easement;
- Maximise on the view lines to the Hallam Valley Floodplain, by broadening the view from Pound and Shrives Roads;
- Ensure passive surveillance residential lots facing public open space;
- Water treatment facilities should be integrated with the open space network.

Existing Vegetation

A number of mature trees exist within the landscape concept. Council does not support the retention of various cypress and pine species due to their burdensome characteristics. Dead, poor performing, hazardous and inappropriate trees are to be removed by relevant landowners or developers prior to development.

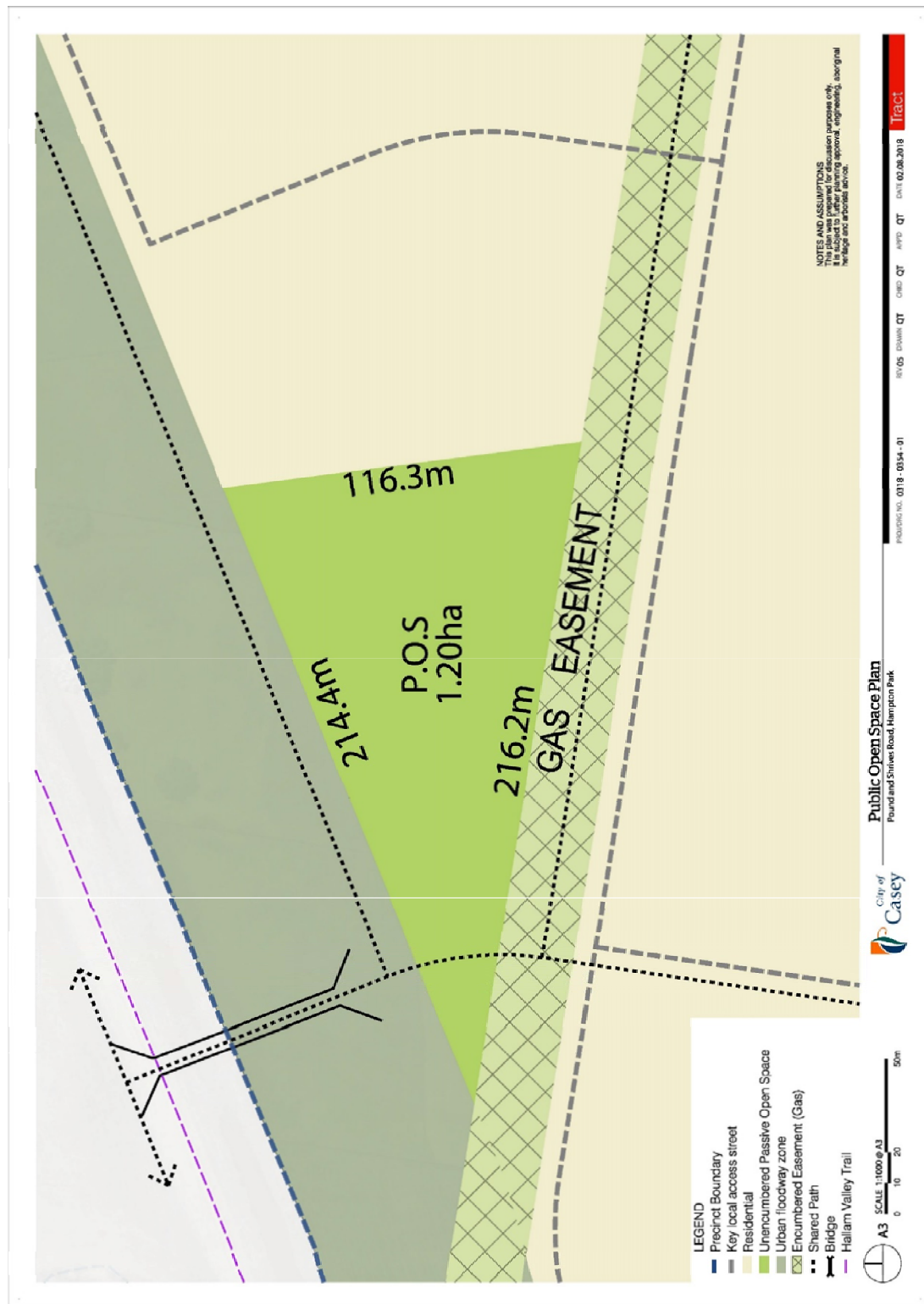


Figure 11: Public Open Space in the Pound and Shrives Road Development Plan (Source: Tract Consultants 2018)

8. Further Requirements

Application requirements are set out in DPO18 and outline additional information to be provided as part of future permit application/s. A permit granted must be generally in accordance with this Development Plan. The following information must be provided with any permit application for subdivision, as appropriate:

- A site analysis plan;
- The proposed subdivision layout;
- A plan showing existing and proposed levels to Australian Height Datum (AHD), including levels at the top and base of any cut and fill;
- An assessment demonstrating that the proposal is generally in accordance with the approved Development Plan;
- A submission against the requirements of the Casey Planning Scheme, including but not limited to Clause 56;
- A stormwater management plan;
- A traffic impact assessment report, as applicable;
- A landscape master plan;
- A Cultural Heritage Management Plan;
- Flora and fauna assessment;
- Arboricultural assessment;
- Appropriate tree protection measures must be in place prior to the commencement of works;

9. Administrative Updates

It is recognised that, from time to time, circumstances may change leading to the need for minor administrative changes to this document. Where an update does not materially alter this document, such a change may be made administratively. Examples include a change to the name of a Council department, a change to the name of a Federal or State Government department, and a minor update to legislation which does not have a material impact. However, any change or update which materially alters this document must be by resolution of Council.

10. Glossary of Terms

Development Plan

A strategic policy document that generally consists of plans and written guidelines or requirements associated with the subdivision, use, and development of land within a designated area. The application of a Development Plan is identified in the Planning Scheme by way of a Development Plan Overlay (DPO).

Encumbered land

Land that is constrained for development purposes. Includes easements for power/transmission lines, sewers, gas, waterways/drainage; retarding basins/wetlands; landfill; conservation and heritage areas. This land may be used for a range of activities (e.g. walking trails, sports fields). This is not provided as a credit against public open space requirements. However, regard is taken to the availability of encumbered land when determining the open space requirement.

Frontage

The road alignment at the front of a lot. If a lot abuts two or more roads, the one to which the building, or proposed building faces.

Gross Developable Area (GDA)

Total precinct area excluding encumbered land, arterial roads and other roads with four or more lanes.

Land Budget Table

A table setting out the total precinct area, gross developable area, net developable area and constituent land uses proposed within the precinct.

Linear Open Space Network

Corridors of open space, mainly along waterways that link together, forming a network.

Local Road

Roads or streets whose primary function is to provide access to abutting properties.

Medium Density Housing

In the context of the Pound and Shrives Road Development Plan, 'Medium housing density (medium)' equates to an average density of 25 dwellings per net developable hectare. 'Medium housing density (high)' equates to an average density of 30 dwellings per net developable hectare.

Net Developable Area (NDA)

Land within a precinct available for development. This excludes encumbered land, arterial roads, railway corridors, schools and community facilities and public open space. It includes lots, local streets and connector streets. Net Developable Area may be expressed in terms of hectare units (i.e. NDHa).

Pedestrian/cycle path (shared path)

Pathways linking key community focal points, in particular public open space elements and community facilities. Such paths are provided either off-road within public open space or on-road within a tree reserve or widened roadside verge. Paths should be 2.5 metres wide minimum for reasons of both function and safety.

Public Open Space

Land that is set aside in the precinct structure plan for public recreational purposes by the public; or as parklands; or for similar purposes. Generally includes local parks, district-level sports grounds and linear reserves.

Water Sensitive Urban Design

A sustainable water management approach that aims to provide water-quality treatment, flood management and green landscapes. Key principles include minimising water resistant areas; recharging natural groundwater aquifers (where appropriate) by increasing the amount of rain absorbed into the ground; encouraging onsite reuse of rain and incorporation of rain gardens; encouraging onsite treatment to improve water quality and remove pollution, and using temporary rainfall storage (retarding basins/ wetlands) to reduce the load on drains.