6 Nathalia

06 Nathalia

6.1 Study Area

This section considers the Nathalia study area as shown in Figure 6.1 below.

The study area covers approximately 35ha and is generally bounded by an existing irrigation channel along the west and south a former railway reservation reserve along its north and a variety of smaller roads and landholdings along its east.

6.2 Site Analysis

The Site Analysis Plan is included as an attachment 6.2. This section summarises the key features, opportunities and constraints, traffic issues, and infrastructure issues of the Study Area.

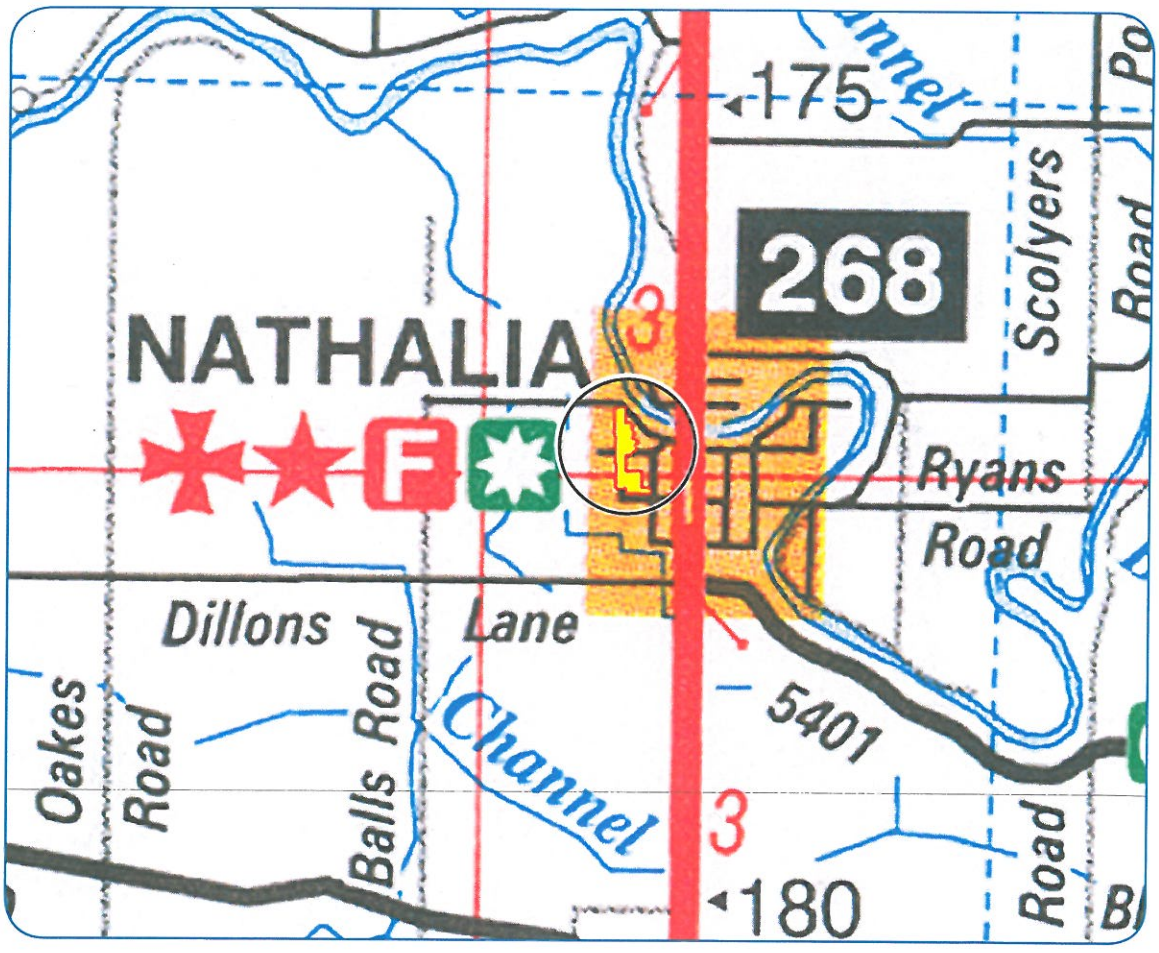

Figure 6.1 - Nathalia Study Area

5.2.1 Key features & opportunities & constraints

Key features and the opportunities and constraints of the Study Area include:

- The study area is approximately 35ha in area and comprises 15 lots with 11 landholders
- 5 dwellings exist within the Study Area. A Church and Nursery exist at its southern end.
- The site is relatively flat and consists of low key cropping and grazing activities.
- Any overland water flows across the site are constrained by the channel
- Vegetation is generally limited to gardens and property boundaries.
- No formal footpath network exists in the area.
- Four east-west connections into the Study Area are possible:
  1. Western extension of Pearce Street
  2. Western extension of McDonnell Street
  3. Western extension of Phillip Road
  4. Western extension of Burke Road
- There are currently 4 main east west road connections into the site with 2 connections containing both east and west access points.
- Significant linear open space exists nearby along the Broken River. No other open space exists west of the Murray Valley Highway.
- There is an opportunity to link through to the railway reservation and Broken River from the site.
- The Nathalia town centre is approximately 0.5kms east of the Study Area
- There is an existing irrigation channel running south and west of the site which is a significant infrastructure item and constraint
- There are a number of existing and proposed aged care facilities in the general area with a proposed retirement village between McDonnell and Pearce Streets and the Barwo aged care facility on Mc Donnell Street
- The Nathalia Hospital has been investigating opportunities for a new site and has determined a 2.8ha parcel within the study area to the west of Barwo, between Phillip and McDonnell Streets.
- There are some significant mature existing trees in the southern part of the site and some less mature trees in the northern section of the site. These appear to primarily be exotic.

These features, opportunities and constraints significantly influence the layout of the Development Plan. How they influence the DP is discussed further below in Section 6.4.1.

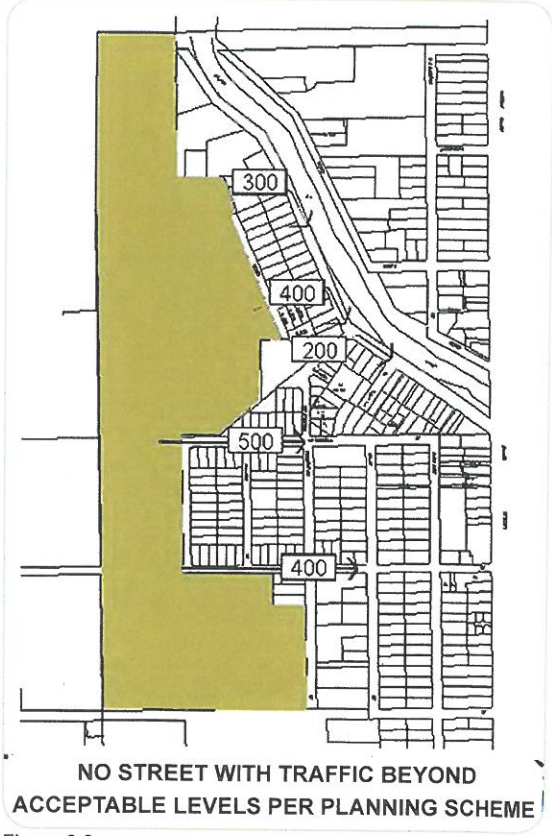

Figure 6.2

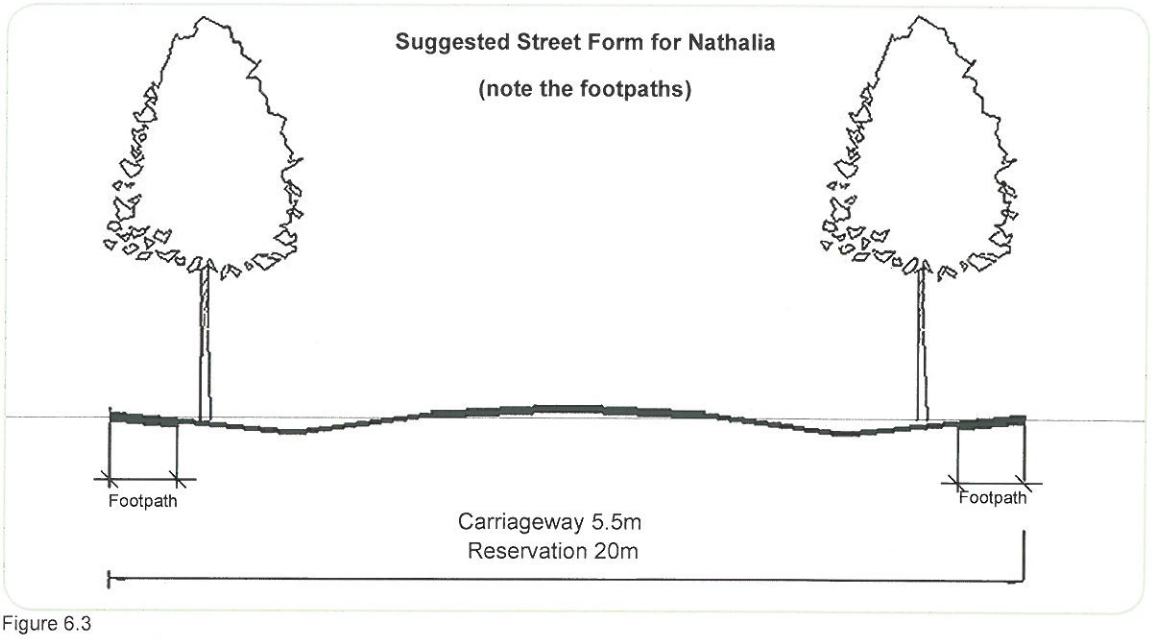

Figure 6.3

6.2.2 Traffic issues

The Development Plan proposes a simple westward extension of the existing street network within Nathalia. This will provide 5 linkages for the approximately 250 dwelling sites that may be produced, with an expected traffic imposition as shown in figure 6.2.

To preserve the historical nature of the streets of Nathalia, which are broad but with a quite narrow central sealed surface, we have proposed a street form as shown in figure 6.3.

This form of street will accommodate at least 2,000 vehicle movements per day, which is well below any likely ultimate volume of traffic.

The inclusion of the Hospital will place some additional pressure on Phillip and McDonnell Streets, but will not require any road reserve widening. Footpaths and shared pathways are lacking in the area and should be encouraged, particularly to provide links to the Hospital facilities.

6.2.3 Infrastructure issues

Electricity

Powercor Australia Ltd is the Network service provider for the study area.

The existing overhead infrastructure in the vicinity of the study area can be utilised to supply the proposed development.

In the event that the existing high voltage lines need reconductoring or extending as a consequence of a detailed assessment of the loading demands within the study area, Powercor's current policies dictate this work generally be completed at Powercor's cost, but Developers should confirm specific requirements and conditions by formal application to Powercor.

The usual strategy of High Voltage underground cable extensions to substations sited as appropriate throughout the development with Low Voltage domestic underground cable reticulation to the lots would apply.

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In relation to development costs, current policy conforms to the statutory requirement for Powercor to allow construction to be carried out comprising a mix of non-competitive works (ie works to be done by the Network service provider) and competitive works (ie works to be done by accredited contractors). Powercor will provide a fee offer and procedural conditions upon formal application.

Telecommunications

Telstra is the network service provider and they advise that they have a statutory responsibility to provide a network service to the respective property boundaries of the sites within the study area. The usual developer shared trenching conditions would apply within the proposed development (i.e. developer to fund shared trenching).

Telstra has existing assets in the vicinity of the study area. The need or otherwise to upgrade their network assets would be investigated in detail at the time of application for a Planning Permit.

Sewerage

Goulburn Valley Region Water Authority (GV Water) is the responsible water authority.

GV Water have existing assets in the vicinity of the study area.

GV Water advise that the study area can be fully serviced. The servicing can be achieved in part by extensions to their existing gravity sewerage reticulation mains and in part via the construction of new sewage pumping stations, rising mains and gravity reticulation mains.

The cost of new works would have to be borne by either the Developer(s) or GV Water in accordance with the statutory guidelines of the Essential Services Commission, Victoria (ESC). Generally, non-shared reticulation assets within a Developer's landholding that are 225mm or less in diameter are to be fully funded by the Developer. Larger trunk mains or shared distribution assets are to be fully funded by GV Water or otherwise by agreement between GV Water and the Developer(s) with ESC consent. There are formulae that apply to the funding of shared distribution assets whereby in the event that the said asset is not reasonably expected to be funded within GV Water's financial forward planning, then the Developer is required to contribute to the cost of the works. GV Water have indicated that they are very interested in negotiating with the respective landowners within the study area in an effort to maximise the overall benefit to the respective landowners and minimise the overall costs as a consequence of constructing new infrastructure.

GV Water requires Developers to enter into a "Deed of Agreement For Developer Constructed Works." Detailed conditions relating to the required "Developer constructed works" are subject to an appraisal of an investigation report to be submitted to GV Water by the Developer's accredited consultant.

Potable Water

Goulburn Valley Region Water Authority (GV Water) is the responsible water authority.

GV Water has existing assets in the vicinity of the study area.

GV Water advises that the study area can be fully serviced. The servicing can be achieved by the construction of water reticulation main extensions throughout the study area and connecting to the existing nearby assets.

The cost of new works would have to be borne by either the Developer(s) or GV Water in accordance with the statutory guidelines of the Essential Services Commission, Victoria (ESC). Generally, non-shared reticulation water mains within a Developer's landholding that are 150mm or less in diameter are to be fully funded by the Developer. Larger trunk mains or shared distribution assets are to be fully funded by GV Water or otherwise by agreement between GV Water and the Developer(s) with ESC consent. There are formulae that apply to the funding of shared distribution assets whereby in the event that the said asset is not

reasonably expected to be funded within GV Water's financial forward planning, then the Developer is required to contribute to the cost of the works.

GV Water requires Developers to enter into a "Deed of Agreement For Developer Constructed Works." Detailed conditions relating to the required "Developer constructed works" are subject to an appraisal of an investigation report to be submitted by the Developer's accredited consultant.

Drainage

Moira Shire Council is the responsible drainage authority for the study area and the receiving water of the stormwater runoff from the study area is the Broken Creek. The stormwater will discharge to the Broken Creek via a series of existing and proposed retarding basins, wetlands, pumping stations, rising mains, underground piped and open stormwater outfall drains.

Moira Shire is desirous of the stormwater drainage works within the study area being designed to accord with the current best practice principles contained in "Urban Stormwater Best Practice Environmental Guidelines, CSRIO 1999".

As such, the post construction performance objective of the drainage system is to achieve 80% retention of the typical urban load of suspended solids, 45% retention of the typical urban load of total phosphorus, 45% retention of the typical urban load of total nitrogen and 70% retention of the typical urban load of litter. Furthermore, flows from the study area need to be retarded such that they do not exceed the pre-development discharge that would result from a storm having an average recurrence interval of once every 1.5 years. Moira Shire will also require retardation to cater for the 1 in 100 year event.

Development will also have to accord with the construction phase performance objectives of limiting and preventing sediment, litter and other pollutants from entering the receiving waters.

Consequently, Development within the study area will have to accord with the "Best Practice Guidelines" and Developers will have to consider the adoption of "Water Sensitive Urban Design (WSUD)" principles.

Costs for drainage works including water quality improvement and retardation will be borne by the Developers.

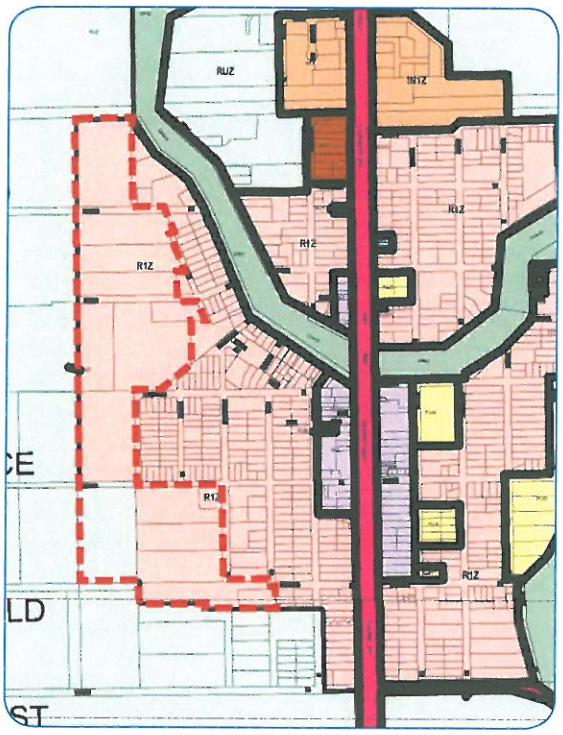
Moira Shire completed the Nathalia Floodplain Management Plan in November 2005, to address the significant issue of flooding in the township area. The Plan identifies various floodplain management measures to be implemented, as well as mapping of flood hazard. The entire study area is subject to inundation. Retarding Basins will be required to deal with drainage on the site, and areas for treatment of water will also be required. Approximately 10% of the study area will be required for drainage.

The ultimate location for retarding basins and required works is subject to some more detailed engineering investigations being undertaken, and as such the Development Plan offers alternatives A and B for consideration.

6.3 Planning Context

6.3.2 Zoning

The zoning of the Study Area is illustrated in Figure 6.4 below.



Public Land

- PCRZ Public Conservation And Resource Zone
- PPRZ Public Park And Recreation Zone
- PUZ5 Public Use Zone Cemetery/crematorium
- PUZ1 Public Use Zone Service And Utility
- RDZ1 Road Zone Category 1

Residential

- LDRZ Low Density Residential Zone

Rural

- RUZ Rural Zone

Figure 6.4 - Zones

The Study Area is primarily included within the Residential 1 Zone (R1Z). The purpose of the R1Z is:

- To implement the State Planning Policy Framework and the Local Planning Policy Framework, including the Municipal Strategic Statement and local planning policies.
- To provide for residential development at a range of densities with a variety of dwellings to meet the housing needs of all households.
- To encourage residential development that respects the neighbourhood character.
- In appropriate locations, to allow educational, recreational, religious, community and a limited range of other non-residential uses to serve local community needs.

All subdivision applications within the R1Z must meet the requirements of clause 56.

The small southern portion of the study area is included within the Rural Zone (RUZ). The purposes of the RUZ are:

- To implement the State Planning Policy Framework and the Local Planning Policy Framework, including the Municipal Strategic Statement and local planning policies.
- To provide for the sustainable use of land for extensive animal husbandry (including dairying and grazing) and Crop raising (including Horticulture and Timber production).
- To encourage:
  - An integrated approach to land management.
  - Protection and creation of an effective rural infrastructure and land resource.
  - Improvement of existing agricultural techniques.
  - Protection and enhancement of the bio-diversity of the area.

- Value adding to agricultural products at source.
- Promotion of economic development compatible with rural activities.
- Development of new sustainable rural enterprises.

- To ensure that subdivision promotes effective land management practices and infrastructure provision.

Land within the RUZ cannot be subdivided for residential purposes. To this end this part of the Study Area requires rezoning prior to its residential development.

6.3.3 Overlays

The Development Plan Overlay 1 (DPO1) applies to all land in the Study Area.

The DPO1 is named "Land North of Murray Valley Highway, Cobram, Land West of Weir Road, Nathalia, Land Adjoining Goulburn Valley Highway and Trengrove Street, Numurkah, Land South of Pine Street, Numurkah and Land North of Elliots Road, Bundalong".

The DPO1 specifies that a Development Plan for this area must describe:

- The means of servicing to lots including the provision of reticulated water and sewerage to all residential lots;
- Layout of connector roads and the impact on the surrounding road system;
- The design and make up of residential lot density in a manner that reflects demand of the area;
- The need for open space and any other community infrastructure as considered necessary by the responsible authority; and
- The impact of the development on any sites of flora or fauna significance, archaeological significance or significant views that may affect the land.

A permit may be granted before a Development Plan has been prepared to the satisfaction of the responsible authority for the purposes of subdivision.

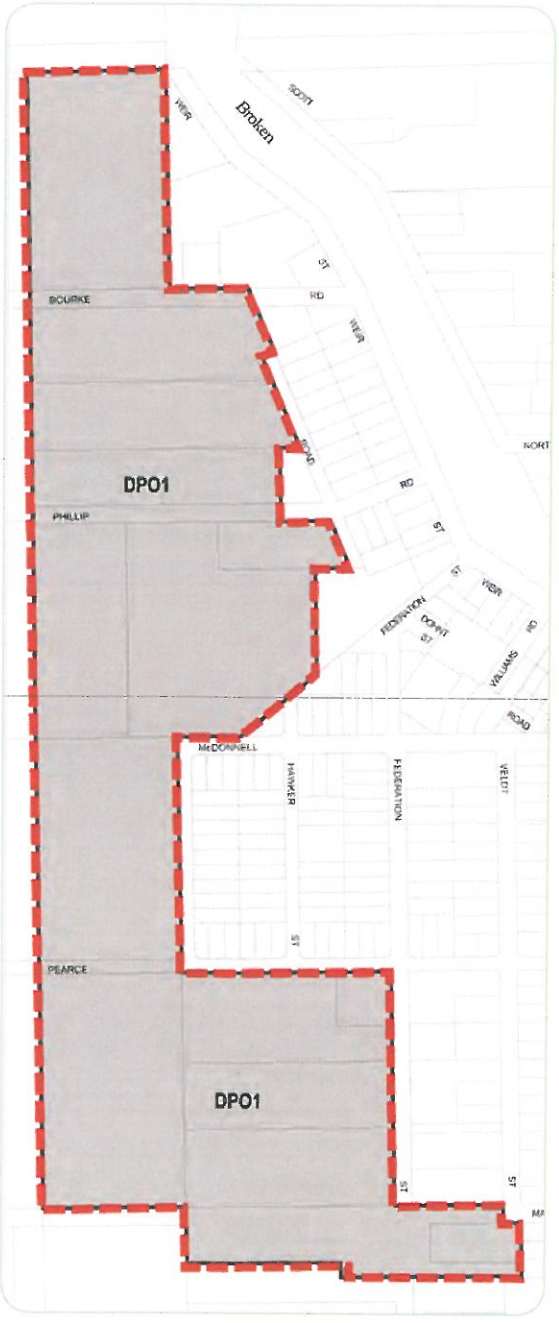


Figure 6.5 - DPO1

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6.4 Development Plan

The Development Plan provides the development, road and open space networks for the Study Area and has been developed cognisant of the issues outlined at Section 6.2. As discussed in Section 6.2.3, two 'options' for the development plan have been prepared to demonstrate alternative drainage solutions, subject to more detailed engineering investigations. While the intent of the options are consistent, the location of the drainage areas is the difference between the two options.This section identifies the key influences on the plans and then discusses their key features.

6.4.2 Key influences

The following issues have significantly influenced the development of the Development Plan:

- The need to provide appropriate interfaces to existing development and infrastructure.
- The need to provide a connected and permeable movement network
- The need to provide appropriate water quality treatment.
- The need to provide an integrated and useable public open space network
- The need to provide a diversity of lot and dwelling opportunities.
- The need to accommodate the Nathalia Hospital.

Appropriate development interfaces

Section 6.2 outlines the site's interfaces, including:

- Existing residential development and road layout pattern
- Existing nearby public facilities including Broken Creek, the Bowling Club, the Hospital and Town Centre.
- Existing vegetation.
- Irrigation Channel.

Each of these impacts upon the land uses proposed in the Development Plan, as outlined below.

The irrigation channel running along the south and western border provides a clear edge to Nathalia's western extent. Combined with the Broken River to the east of the area, access to the site will have to be primarily from the existing road network along the four main access streets Burke Road, Phillip Road, McDonnell Road and Pearce Street which all run in an east-west direction. Due to the location of the town centre to the east, these connections provide for direct access to town services.

Close to existing residential development, the site is a continuation of the inner area of Nathalia. The proposed lot layout and road network connects to this existing road network and continues the grid-based street system. The layout will provide for solar efficient design for dwellings, connect to the form of existing development and provide for the efficient provision of services.

The existing nearby public facilities include Broken Creek located north-east of the site, the town centre, the bowling club and the hospital are well located in relation to the study area. The east-west road and proposed foot path network will provide direct linkages to these facilities from the site providing for better access to facilities in the future.

The proposed new Hospital site within the study area will also provide an excellent local facility and is well located in relation to other facilities such as Barwo Aged Care and the proposed retirement village in Humberstone Street.

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A connected and permeable movement network

In accordance with State Planning Policy, a minimum 10 years of residential land supply should be maintained. In Nathalia it is estimated there is approximately 50 years of supply, the majority of which is within the Study Area

This is a significant oversupply of land and consideration of future development directions for Nathalia is not warranted.

The planning objective for the Study Area will be to capitalise on the existing road network linkages and create an additional north-south movement network.

The four road connections identified provide a perfect grid base for further development. Each of these should be extended westwards.

A new north-south network is required and this should link the area with roads and pedestrian networks.

These new connections are important in dispersing traffic and developing a connected permeable network.

These objectives have been discussed in Section 1, particularly in regard to Neighbourhood Linkages and Well Connected Streets. The network adopted needs to ensure new developments connect to existing neighbourhoods and infrastructure, and should aim to attract a high level of use by pedestrians, cyclists and the less-abled.

Water Quality Treatment

Drainage issues exist across the study area and require approximately 10% of the study area to manage these issues. The 10% includes both the 'water' component plus surrounding land. The 'water' component is not useable open space, and thus cannot be included in the open space contribution. Depending on the surrounding land's usability as a result of detailed design, it may be included in the open space contribution.

The development offers two options for the provision of drainage and water quality infrastructure:

Option A: A linear network, evenly distributed between landholdings along the irrigational channel.

Option B: Retarding basins centred around Pearce Street, in the 'lowest' land within the study area.

While provision can be made for retarding basins in the study area, it is likely some form of larger area will be required external to the study area to act as the 'receiving body' for drainage from the town. There are existing issues with poor drainage systems that will need to be resolved to integrate with new development, as more detailed engineering design is undertaken for developments in the area. As such, these two options are available for the Development Plan.

As a general principle the design outcomes achieved by older retarding basins (i.e. a hole in the ground where it is necessary to fence the entire area and consequently there is no integration with surrounds) are to be avoided.

Water quality controls are now such that deep water bodies will not deliver adequate quality of discharge to other waterbodies. Open space has been combined with the drainage retardation and water quality control measures, to ensure that an integrated approach to water retardation and quality treatment is undertaken, and that the area surrounding these functions is usable open space.

Virtually all drainage and open space areas have street frontage on all sides. This is to ensure that passive surveillance is always present, and will also generate amenity benefits for land that is proximate to the open space.

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Useable and accessible open spaces

Section 6.2 identifies a lack of open spaces in the area with limited opportunities to create new spaces.

The provision of open space in Nathalia, and indeed all towns studied during this project, is ad hoc, inefficient and generally does not meet the requirements of the community.

The Subdivision Act 1988 requires developments to provide a maximum of 5% of the developable land for open space. This may be provided in land or the cash equivalent. It is understood that it has been the historic practice of the Shire to accept a cash contribution. Whilst this may be well intended, with the contribution to go towards the provision of more meaningful open spaces, this also appears to have not occurred.

Many Councils do not accept encumbered open space as part of the 5% contribution. Encumbered open space is that space used for another purpose (e.g. required for drainage purposes, is subject to inundation) and thus may not be useable at all times. Clauses 12 and 56 of the Moira Planning Scheme provide specific objectives for open space and the provision of encumbered land generally does not meet these.

With an approximate area of 35ha, the Study Area should provide approximately 1.75ha of open space. An advantage of a Development Plan is that this space can be equitably distributed across the area. Equity in this sense refers to the need to take account of land ownership patterns and ensure that one landholder does not provide all the open space with no compensation from others. This requires consideration by a development contribution plan.

The open space and drainage and water quality treatment areas identified in the Study Area provide links throughout the site and provide for water quality treatment. Rather than provide additional local parks as well as areas for water treatment, the plans provide for areas of consolidated open space. Option A particularly achieves an equitable distribution of open space, as a larger number of landowners contribute land for drainage and open space.

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Diversity of development options

With an approximate developable area of 26ha, the Study Area has the ability to provide approximately 250 new lots, depending on the ultimate density of development.

As is the trend across Australia, and particularly in regional areas, our population is ageing. The number of dwellings required to accommodate this ageing population is in excess of the population growth. This is primarily attributed to the strong growth in single people households and the general decline in household size. These factors support the argument to generally reduce lot sizes, or increase development densities. State Planning Policy strongly encourages a better utilisation of our infrastructure and is a strong advocate for increased development densities across the State.

What an increased development density means is particular to a town, suburb or region. Certainly the development densities being targeted in Melbourne would not be relevant to or reflective of Nathalia's community desires. As per most traditional subdivision development, the existing average lot size in Nathalia is likely to be 800 to 1200sqm. Newer unit developments are likely to have an average lot size of around 400 to 500sqm.

The Development Plan does not provide a lot layout though specifies areas of development density – 'standard' and 'medium' - and average lot sizes. The lot layout detail is to be provided at the subdivision application level. A key purpose of the Development Plan is, however, to provide a flexible movement and open space network that will provide for a range of lot layouts and general development densities. A grid based network is most efficient in this regard, and also encourages a lot layout which promotes a high level of solar efficiency.

The location of medium density development should be dictated by the location of open space and good access to local facilities. Medium density lots should achieve an average size of 500sqm. Being located adjacent to public parkland provides these lots with added amenity and space that the lot is otherwise not able to provide. Importantly, these lots should 'front onto' the space to provide the added benefit of passive surveillance. Being located adjacent to main roads and local facilities increases the potential usage of such services.

'Standard' density lots should achieve an average lot size of 800sqm, though their design and end density will depend upon particular site constraints.

6.4.3 Development Plan features

This section provides detail of the key elements of the Development Plan.

Development Analysis

NATHALIA DEVELOPMENT ANALYSIS - Option A			
			% G. D. Area
Site Area	**34.7**	**Ha**	
Irrigation Channel	0.8	Ha	
Nursery	1.1	Ha	
Local Church	0.7	Ha	
Gross Developable Area	**32.1**	**Ha**	
Proposed Hospital Site	2.8	Ha	8.7%
Public Open Space	**4.7**	**Ha**	**14.6%**
Local Parks and Linear links	0.5	Ha	14.6%
Open Space for Drainage and Water Treatment	4.2	Ha	
Net Developable Area	**24.6**	**Ha**	
Roads	**6.9**	**Ha**	**21.5%**
inc. Laneways and widenings for tree protection			
Net Residential Area	**17.7**	**Ha**	**55.1%**
Higher Density Area	0.6	Ha	
Standard Density Area	17.1	Ha	
POTENTIAL DEVELOPMENT YIELDS			
			% Total Yield
Higher Density Area (average lot size 500 sqm)	12	lots	5%
Standard Density Area (average lot size 800 sqm)	214	lots	95%
Estimated Total Yield	**226**	**lots**	**100%**

NATHALIA DEVELOPMENT ANALYSIS - Option B			
			% G. D. Area
Site Area	**34.7**	**Ha**	
Irrigation Channel	0.8	Ha	
Nursery	1.1	Ha	
Local Church	0.7	Ha	
Gross Developable Area	**32.1**	**Ha**	
Proposed Hospital Site	2.8	Ha	8.7%
Public Open Space	**3.2**	**Ha**	**10.0%**
Local Parks and Linear links	0.2	Ha	0.6%
Open Space for Drainage & Water Treatment	3.0	Ha	9.3%
Net Developable Area	**26.1**	**Ha**	
Roads	**6.8**	**Ha**	**21.2%**
inc. Laneways and widenings for tree protection			
Net Residential Area	**19.3**	**Ha**	**60.1%**
Higher Density Area	0.6	Ha	
Standard Density Area	18.7	Ha	
POTENTIAL DEVELOPMENT YIELDS			
			% Total Yield
Higher Density Area (average lot size 500 sqm)	12	lots	5%
Standard Density Area (average lot size 800 sqm)	234	lots	95%
Estimated Total Yield	**246**	**lots**	**100%**

Open Space

The Development Analysis identifies either 4.7ha or 3.2ha of land for open space. The majority of this open space is located to provide for drainage and water quality treatment areas.

The reserves provide for more than the 5% open space requirements at present. However as previously discussed the reserves will also perform a drainage function reducing the total area acting as public open space.

The general objectives for the drainage measures required are outlined further in Section 6.2, but specific detail and areas will need to be determined at the subdivision application stage. This will need to consider what land is encumbered and unencumbered and thus what can be attributed towards the open space contribution. The additional engineering drainage investigations recommended by this report will provide the information required to more accurately assess the open space contribution.

In addition to providing the Study Area's drainage functions, the reserves also provide increased amenity in the public open space with the drainage reserves having the ability to act as aesthetic lakes and wetlands. This will ensure the reserves are clean, used, safe and pleasant and not merely 'holes in the ground'.

Linear reserves also provide for important pedestrian and cycle links within the study area.

Figure 6.6: Option A Landscape Plan

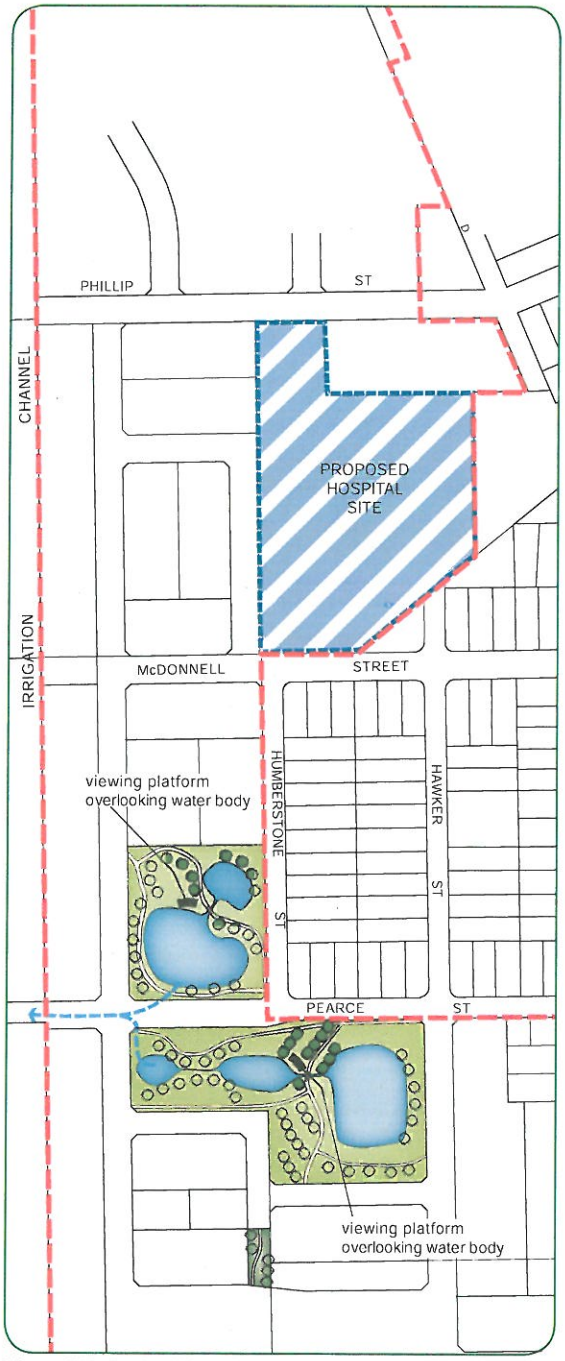

Figure 6.7: Option B Landscape Plan

Road network

Due to the former railway reserve to the north and development in the south of the site, access is primarily provided in an east-west direction from the east along Burke Road, Phillip Road, McDonnell Road and Peace Street. Road extensions into the site are proposed along these access points ensuring external access is sufficiently provided.

There is the opportunity to provide more west through connections to the site across the irrigation channel, should development occur in the future.

The north-south road network provides good connectivity throughout the study area and excellent accessibility to the proposed Hospital site.

The road network provides for excellent pedestrian and cycle opportunities through the study area as shown on the plan below. All streets should contain footpaths

Residential development

Over 19ha of residential land will be provided in the Study Area. Previous discussion refers to the need to provide a diversity of development options. This is achieved in this Study Area by identifying areas of 'standard' and 'medium' densities. The vast majority is 'standard' and it is anticipated these areas will achieve a lot size of between 800sqm and 1200sqm, and an average of 800sqm. The road network provides the flexibility, however, for alternative averages to be achieved if so desired.

Two pockets of medium density development are identified throughout the Study Area. These are located adjacent to open space to provide added lot amenity and critical mass. It is anticipated these areas will achieve an average lot size of 500sqm, though flexibility in the road network provides for alternative averages to be achieved if so desired.

Vegetation

Areas of the scattered vegetation identified in the site analysis plan need further flora and fauna and aborists assessments before their potential can be determined. At present they have the ability to be incorporated into any further subdivision plan, at the subdivision stage, if suitable.

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Figure 6.8: Option A Pedestrian and Bicycle Network

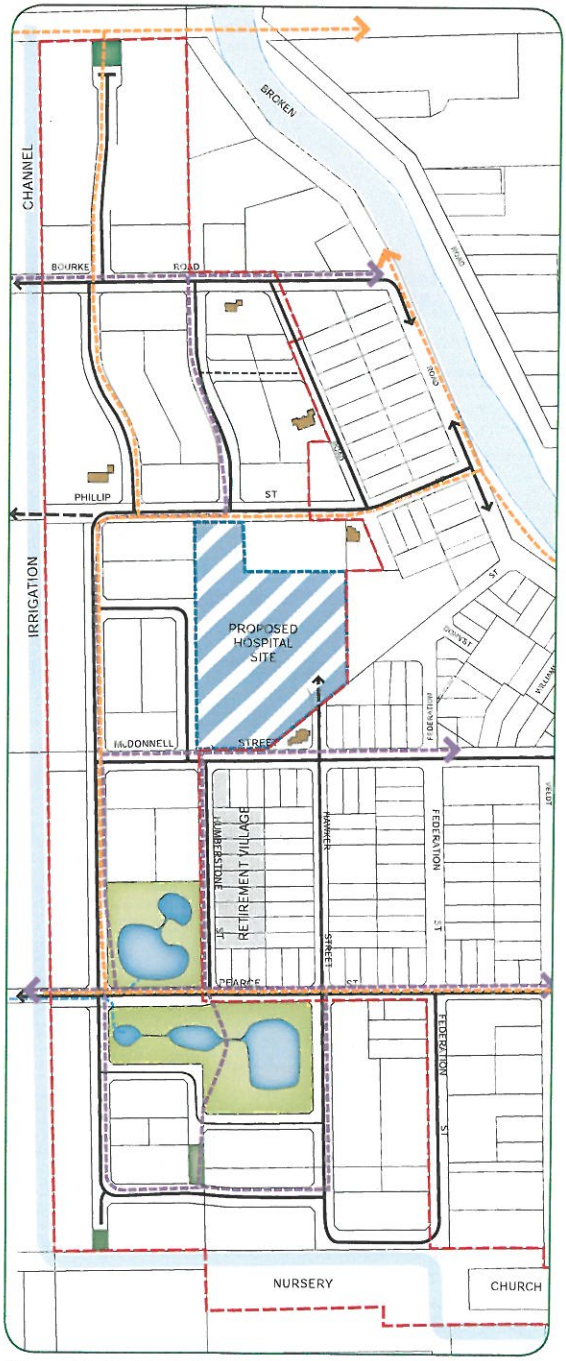

Figure 6.9: Option B Pedestrian and Bicycle Network

6.5 Development Contributions

It is important that the cost of providing open space and key infrastructure items is equitably distributed. Ideally these matters would be considered as part of a Development Contributions Plan (DCP), though a DP can provide the same level of guidance without the statutory requirements of the DCP.

6.5.1 Open Space

Approximately either 3.2ha or 4.7ha of public open space is to be provided across the Study Area. Of this, a percentage is to be provided as local parks, and thus is considered unencumbered, and the majority of land is to be provided for drainage and water quality treatment purposes, and thus is considered encumbered for the purposes of this analysis.

The public open space is distributed as shown in figures 6.10 and 6.11 for both options A and B.

Tables 6.1 to 6.4 provide a more detailed breakdown of open space in the Study Area, for both options A and B.

The encumbered open space relates to land primarily required for drainage and water quality treatment purposes. As this is its primary use, and will be developed as such, it is not considered to be useable open space. The figures provided in the table above for the encumbered public open space are indicative only. They may increase or decrease depending upon the specific drainage strategy proposed. Clearly if the land area required for drainage and water quality treatment purposes decreases then the developable area of the site increases.

The Subdivision Act 1988 requires a 5% public open space contribution when the land is subdivided. Table 6.2 notes that no land parcel provides more than this contribution, with only two providing unencumbered land to be credited towards their open space contribution.

All landholdings should provide 5% public open space, either via a land or cash in lieu contribution. This table outlines the public open space requirements for each landholding.

The cash in lieu contributions should be used in accordance with the requirements of the Subdivision Act and Moira Planning Scheme though may be put towards the development/improvement of other spaces within Nathalia that are likely to be used by the new residents of the Study Area.

It should be determined by Council upon completion of detailed investigation work what areas should be attributable to each developer's public open space contribution.

6.5.3 Utility Infrastructure

Funding of Water and Sewerage "Shared Distribution Assets" is to accord with the statutory guidelines of the Essential Services Commission, Victoria.

Developer contributions for the shared drainage assets including shared underground drainage pipes, land compensation, retardation basins, pumps, rising mains, wetlands and outfall infrastructure is yet to be determined.

Land Parcel No.	Parcel Area (ha)	Unencumbered POS	Encumbered POS	Total land to be provided (ha)
1	3.7	0.08	0.34	0.42
2	2.1	0.00	0.29	0.29
3	2.0	0.00	0.28	0.28
4	1.7	0.00	0.24	0.24
5	7.5	0.00	1.98	1.98
6	0.7	0.00	0.00	0.00
7	6.0	0.38	1.08	1.46
8	1.7	0.00	0.00	0.00
9	2.0	0.00	0.00	0.00
	27.4	0.46	4.21	4.67

Table 6.1 - Option A: Public Open Space Distribution

Land Parcel No.	Parcel Area (ha)	Unencumbered POS	Encumbered POS	Total land to be provided (ha)
1	3.7	0.08	0.00	0.08
2	2.1	0.00	0.00	0.00
3	2.0	0.00	0.00	0.00
4	1.7	0.00	0.00	0.00
5	7.5	0.00	1.10	1.10
6	0.7	0.00	0.00	0.00
7	6.0	0.11	1.70	1.81
8	1.7	0.00	0.20	0.20
9	2.0	0.00	0.00	0.00
	27.4	0.19	3.00	3.19

Table 6.2 - Option B: Public Open Space Distribution

Land Parcel No.	Parcel Area (ha)	Unencumbered POS (ha)	% of POS to be provided	POS requirement
1	3.7	0.08	2.2%	0.08ha (2.2%) POS provided, 2.8% cash in lieu
2	2.1	0.00	0.0%	5% cash in lieu
3	2.0	0.00	0.0%	5% cash in lieu
4	1.7	0.00	0.0%	5% cash in lieu
5	7.5	0.00	0.0%	5% cash in lieu
6	0.7	0.00	0.0%	5% cash in lieu
7	6.0	0.38	6.3%	0.38ha (6.3%) POS provided, 1.3% cash reimbursement
8	1.7	0.00	0.0%	5% cash in lieu
9	2.0	0.00	0.0%	5% cash in lieu
	27.4	0.46	1.7%	

Table 6.3 - Option A: Public Open Space Contributions

Land Parcel No.	Parcel Area (ha)	Unencumbered POS (ha)	% of POS to be provided	POS requirement
1	3.7	0.08	2.2%	0.08ha (2.2%) POS provided, 2.8% cash in lieu
2	2.1	0.00	0.0%	5% cash in lieu
3	2.0	0.00	0.0%	5% cash in lieu
4	1.7	0.00	0.0%	5% cash in lieu
5	7.5	0.00	0.0%	5% cash in lieu
6	0.7	0.00	0.0%	5% cash in lieu
7	6.0	0.11	1.8%	0.11ha (1.8%) POS provided, 3.2% cash in lieu
8	1.7	0.00	0.0%	5% cash in lieu
9	2.0	0.00	0.0%	5% cash in lieu
	27.4	0.19	0.7%	

Table 6.4 - Option B: Public Open Space Contributions

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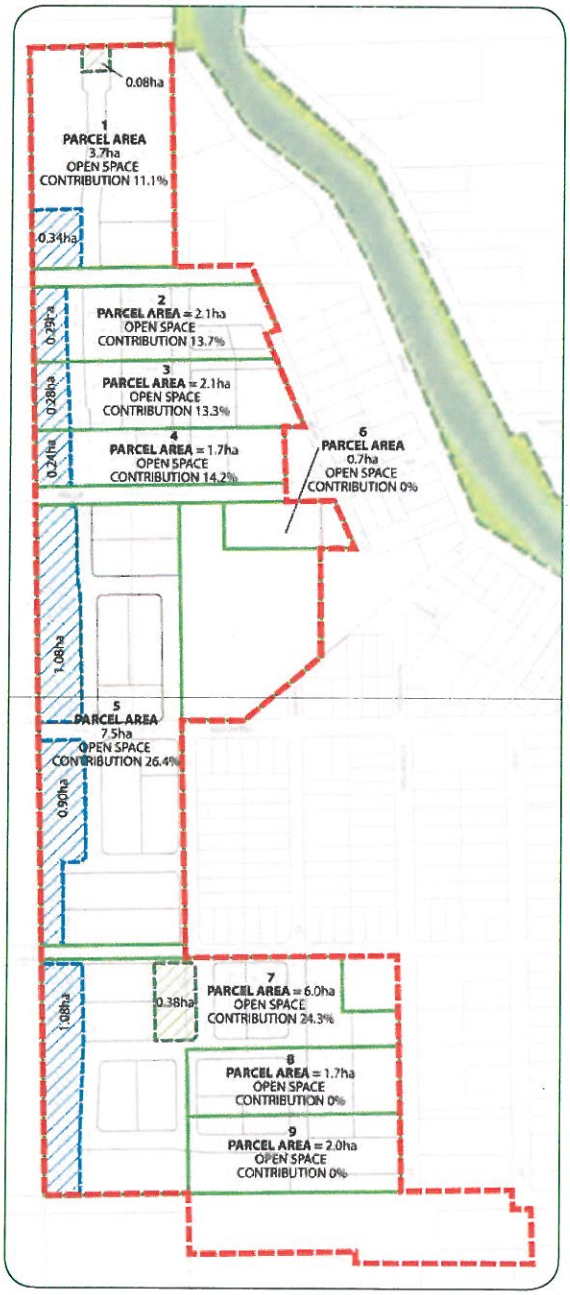

Figure 6.10 Option A: Public Open Space, Nathalia

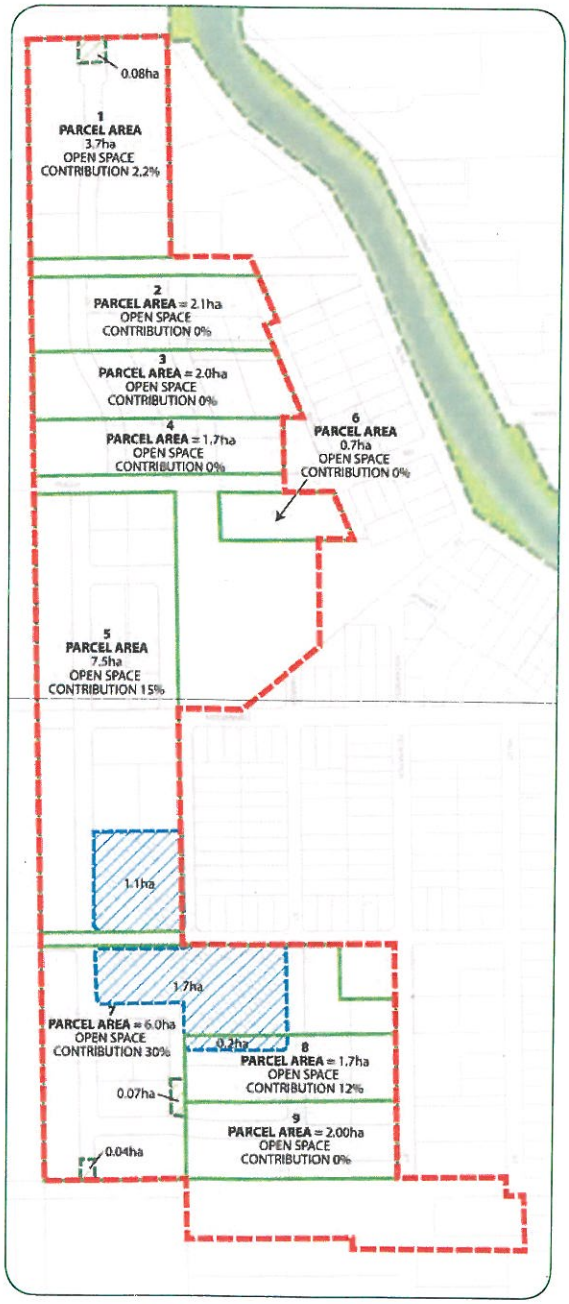

Figure 6.11 Option B: Public Open Space, Nathalia

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References and further information

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