PSP 25.1
Craigieburn North Employment Area

PSP 25.2
English Street

Precinct Structure Plan
Background Report

April 2015
## PLANS

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1.0 **METROPOLITAN & REGIONAL CONTEXT**

The metropolitan/regional context for the Precinct is shown in Plan 1 - Regional Context.

1.1 **North Growth Corridor Plan**

The Precincts are located north of Melbourne’s Central Business District (CBD) in the North Growth Corridor. The Craigieburn North (PSP 25.1) is located in Craigieburn, approximately 28kms north in the Hume City Council. The English Street Precinct (PSP 25.2) is in Donnybrook in the City of Whittlesea, approximately 30kms north. The Precincts form part of larger-scale development in the North Growth Corridor. Development will lead to a projected population increase of between 260,000 to 330,000 new residents and 83,000 to 105,000 new jobs by 2031 (See Plan 1).

1.2 **Surrounding Precincts**

The Precincts are surrounded by a number of neighbourhoods at different stages of development, including several areas that are subject to approved Precinct Structure Plans (PSPs) and Development Plans (DPs). The following neighbourhoods provide the surrounding context for the Precincts:

- **Lockerbie Precinct Structure Plan:** an approved PSP will inform the development predominantly new residential community to the north of the English Street Precinct. The Precinct will ultimately harbour the Principal Town Centre of the northern corridor.
- **Kalkallo:** a relatively undeveloped township exhibiting an archaic residential subdivision pattern. This area is subject to a Restructure Overlay and will be re-planned in the future.
- **Merrifield and Merrifield West:** approved PSPs will inform the development of large industrial and mixed-use developments to the north-west of the Craigieburn North Employment Precinct.
- **Northern Quarries Investigation Area:** an area of mixed uses, including utilities, quarries, conservation areas and future urban areas located immediately east of the English Street Precinct.
- **Amaroo Business Park:** an approved development plan will dictate the development of a business park (Commercial 2 Zone) abutting the south of the Craigieburn North Precinct.
- **Folkestone:** An approved industrial development plan area and unplanned UGZ areas immediately west of the Employment Precinct, across the Hume Freeway.

2.0 **LOCAL CONTEXT**

2.1 **Local context**

PSP 25.1 is strategically located on the Hume Freeway and Melbourne-Sydney rail line. The Amaroo Business Park is situated immediately south of the Precinct. The approved Merrifield and Folkestone Employment Precincts lie to the north-west of the Precinct, across Hume Freeway, with low-density housing to the south-west. North of the Precinct lies the Kalkallo township and approved Lockerbie Precinct Structure Plan.

PSP 25.2 is located south of Donnybrook township on Donnybrook Road and close to the existing Donnybrook train station on the Melbourne-Sydney rail line. The approved Lockerbie Precinct Structure Plan lies immediately north of the Precinct and includes the Lockerbie Principal Town Centre (PTC), the largest centre planned to service the region.

Land within PSP 25.1 is currently zoned Urban Growth Zone (UGZ) and Farming Zone (FZ) in PSP 25.2. An area of land along the Merri and Kalkallo Creeks between the PSPs is zoned Rural Conservation Zone (RCZ) to conserve biodiversity values. A second, rectangular area abutting PSP 25.1 is identified for conservation; but lies outside PSP 25.1 in the Northern Quarries investigation area. The Amaroo Conservation Area abuts the southern boundary of PSP 25.1.

The North Growth Corridor Plan identifies land in PSP 25.1 for “Industrial” uses. The Precinct will encourage a range of business types from industrial to business park uses. Land in PSP 25.2 is identified as “Urban – Land use to be determined”, the MPA has subsequently planned for this Precinct to contain a mix of “business with residential” uses.
3.0 **PRECINCT FEATURES**

The features of the Precinct are illustrated in Plan 2 - Precinct Features.

3.1 **Lot size and ownership pattern**

There are 49 individually owned lots in PSP 25.1 as well as a number of parcels vested as road and crown reserve. Lot sizes in the Precinct average around 8.7 hectares with lots ranging from 0.5 to 20.9 hectares. Several houses are present on site, particularly along Brookville Drive, with several new dwellings evident at the corner of Brookville Drive and Kinloch Court. The majority of landowners live off site.

PSP 25.2 comprises ten private lots and two reserve lots with an average area of 11.9 hectares, ranging between 0.3 to 33.2 hectares. Several landowners live on site.

Gerard Coutts Pty Ltd Project Management was commissioned in 2010 by the MPA to look at the potential for land owner unification and consolidation of land ownership within PSP 25.1. The consultants concluded that there was a mixed level of landowner support for the PSP, with the strongest support for land assembly noted in the Kinloch Court area. The consultants suggested a staging strategy based on landowner responses that identified the southern areas of the Precinct for short term development and Kinloch Court area as developing in the short to medium term.

3.2 **Topography & drainage**

Land within the Craigieburn North Employment Precinct is predominantly flat through the centre, with a small hill evident in the north and another elevated area in the south. Several small drainage lines convey water from west to east into the Merri Creek. The English Street Precinct area is also generally flat, rising to a high point in the central west. The site drains west and south-west into Merri Creek. A small, defined valley drains the centre of the Precinct.

Alluvium was commissioned by the MPA to examine, drainage works to minimise flooding, stormwater quality works to protect waterways, protection of Growling Grass Frog (GGF) environment and the provision of fit-for-purpose water supply.

The report suggested that retarding basins were not required on site, provided that culverts under the railway line were upgraded. Melbourne Water was cited as being the agency to confirm as to whether the retarding basins could be omitted. Melbourne Water subsequently confirmed the need for on-site wetlands and this is reflected in the approved Development Services Schemes (DSS) for the Precinct. See Section 5.1, for additional information.

3.3 **Heritage**

3.3.1 **Aboriginal heritage**

The Craigieburn Employment Precinct lies within the traditional land of the Woi Wurrung people, a language group part of a broader language area known as the East Kulin Language Area. It is believed that the East Kulin Language group covered central Victoria from the east side of Port Phillip Bay to the north of the Murray River for about the last 40,000 years. The Woi Wurrung people’s territory centred on the Yarra River and its catchment areas and extends to the Werribee River.

It is believed that the clan which occupied land including the South Morang area was the Wurundjeri william, a patriline of the Wurundjeri balug and one of the four Woi Wurrung clans.

Today, the Wurundjeri Tribe Land Compensation and Cultural Heritage Council Incorporated is the Registered Aboriginal Party (RAP) under the Aboriginal Heritage Act 2006, with responsibilities in relation to the management and administration of Aboriginal Cultural Heritage matters in the Activity Area.

As the land sits within a broader area of cultural sensitivity (the Merri Creek corridor) as defined by the Victoria Aboriginal Heritage Register, all land owners will be required to complete a Cultural Heritage Management Plan prior to the approval of any application for residential development.

No consultant assessments have been undertaken for the Precincts. Mandatory or Voluntary complex assessment will need to be undertaken by future developers, dependent upon the presence or absence of areas of cultural sensitivity on the land.

The MPA undertook a targeted cultural values inspection of the Merri Creek corridor through the Precincts with Wurundjeri Tribe Land & Compensation Cultural Heritage Council Inc in August 2013. The inspection surveyed the creek corridor for optimum sites for a future bridge crossing of the creek.
3.3.2 European (post-contact) heritage

European settlement in Port Phillip commenced early in the 19th Century, but it was in the mid-1830s that permanent European settlement of Victoria commenced with the arrival of the first squatters. A treaty was signed in 1835 by John Batman and elders of the Woi Wurrung (east of the Werribee River) for an arrangement to exchange supplies of basic goods for the provision of 600,000 acres of land.

The treaty was never recognised by the Government in NSW, and during the 1830s to 1860s a ‘squatting expansion’ saw squatters taking up land across Victoria, particularly on the plains north of Melbourne.

Land within the Precinct was first surveyed by Robert Hoddle and assistants in the 1830s as pastoralists began to settle in the Port Phillip district. Hoddle surveyed the Parish of Kalkallo in 1839 and land sales commenced in 1840. Areas to the west of the Merri Creek along the current routes of the Hume Freeway and the North Eastern Railway were purchased by people of English, Irish and Scottish descent.

Early settlements in the area were at Donnybrook (Rocky Water Holes) and Kinlochewe at a natural ford on Merri Creek near the present day crossing of Summerhill Road. Kinlochewe was established in 1841 and subsequently abandoned after fire destroyed much of the town in 1851. The town of Kalkallo was surveyed and town allotments were sold, so that by the 1860s Kalkallo was a developing township.

Following the construction of the north-eastern railway line connecting Melbourne and Sydney the section that passes next to the study area was completed in 1872, as was the Donnybrook train station, north of the Precinct. The rail line helped to consolidate and further expand agriculture in the region.

Since European settlement in the nineteenth century, land in the Craigieburn and Donnybrook areas has been predominantly used for agricultural purposes.

Today Kalkallo is a small town servicing the highway trade and surrounding agricultural district.

It is noted that there are no heritage controls on any part of the Precinct.

No consultant assessments have been undertaken for the Precincts. Mandatory assessment will need to be undertaken by future developers, dependent upon the presence or absence of areas of cultural sensitivity on the land.

3.4 Land contamination

The General Practice Note for Potentially Contaminated Land (DSE June 2005) identifies that potentially contaminated land generally applies to land used for industry, mining or the storage of chemicals, gas, wastes or liquid fuel.

Aurecon was commissioned by the MPA to undertake an assessment of any potential sources of contamination within the Precinct. The purpose of the study was to assess the suitability of land for the development of future industrial or residential (sensitive) uses.

With a history of agricultural use, the report identified several potential sources of contamination within the Precinct, including:

- Former market gardens;
- Large-scale intensive farming operations;
- Abandoned vehicles, farm equipment, debris and dumped materials;
- Structures potentially containing asbestos, lead based paint and septic systems, and;
- Farmyard infrastructure including areas for storage of fuels and chemicals.

A full list of the identified risks and affected properties can be found within the report.

Development proponents will be required to undertake their own risk assessments or environmental audits and any associated remediation.

Despite identifying several potential sources of contamination, Aurecon concluded that with the appropriate assessment and remediation, contamination should not be a constraint to the future development of sensitive uses.

Specific potentially contaminating activities and potential areas of concern that were identified in the precincts included:

- An apparent out of production market garden on parcel 502095 (810 Summerhill Road).
- Farm equipment and abandoned automobiles stored on a number of site properties (eg 780 Donnybrook Road, 295 Brookville Drive and 220 Brookville Drive).
- Large scale intensive farming operations where fertilisers, pesticides, and herbicides may have
been used (eg 30 Amaroo Road, 185 and 295 Brookville Drive).

- Small scale intensive farming operations where fertilisers, pesticides, and herbicides may have been used (eg 800 Donnybrook Road, 245 and 275 Brookville Drive, 770, 790, 835 and 840 Summerhill Road).
- Areas where abandoned vehicles, farm equipment, debris or dumping of unspecified materials have occurred (eg 720 Donnybrook Road, 30 Amaroo Road, 220 and 295 Brookville Drive, 920/920A Hume Highway and 60 Kinloch Court).
- Structures that may contain asbestos and have lead based paint and septic systems. Specific off-site potentially contaminating activities and potential AECs that were identified in proximity to PSP Area 25 include:
  - A large truck stop service station, constructed between 2006 and 2010, is located on the southwest corner of the interchange of Hume Freeway and Donnybrook Road.
  - Potential transport of contamination from off-site sources hydraulically upgradient of the Area onto the site via Merri Creek or Kalkallo Creek.

### 3.5 Existing roads and transport

Road access into PSP 25 is available via the existing interchange with the Hume Highway at Amaroo Road. Amaroo Road then connects to Brookville Drive which provides a north-south connection through the middle of the PSP to Donnybrook Road in the north.

The northernmost connection of Brookville Drive connects up to Donnybrook Road at its northernmost point. Brookville Drive acts as the key access road through the middle of 25.1, connecting Summerhill Road and Kinloch Court that run east-west.

Summerhill Road currently provides east-west access through the south of PSP 25.1 and connects to the east of the Precinct via an at grade rail crossing to Merri Creek and Wollert. There is no existing road access to the west of the Precinct other than at Donnybrook Road which includes an overpass over the Hume Freeway.

Access to the PSP 25.2 land is only available from Donnybrook Road via English Street and Norman Road.

The Sydney-Melbourne train line forms the eastern boundary of both Precincts. It presently consists of a pair of broad gauge VLine tracks and a single ARTC freight line. The existing Donnybrook train station lies immediately to the north-east of PSP 25.2.

* The Hume Highway forms the western boundary of 25.1, which is the main highway linking Sydney and Melbourne.

### 3.6 Biodiversity

#### 3.6.1 Native Vegetation

Prior to European settlement the Precincts were dominated by a number of ecological vegetation communities. Since European settlement the vegetation has been altered due to agricultural and farming practices. The Precinct has been largely cleared for agriculture; however there are several areas of remnant native vegetation.

The time stamped data from the Department of Environment and Primary Industries (DEPI) shows the Ecological Vegetation Classes (EVC) within the Precincts were:

- Plains Grassy Woodland (EVC 55)
- Creekline Grassy Woodland (EVC 68)
- Plains Grassy Wetland (EVC 125)
- Heavier-soils Plains Grassland (EVC 132_61)
- Grassy Woodland (EVC 175)
- Riparian Scrub (EVC 191)
- Riparian Woodland (EVC 641)
- Stony Knoll Shrubland (EVC 649)
- Creekline Tussock Grassland (EVC 654)

#### 3.6.2 Biodiversity Conservation Strategy

The Biodiversity Conservation Strategy (BCS) was approved by the Minister for Environment, Heritage and Water on the 5th September 2013. The BCS provides strategic direction for the retention and removal of Matters of National Environment Significance (MNES).

A series of documents form part of the BCS objectives and implementation. The relevant documents to the Precinct are:
3.6.3 Retention & offset requirements
The BCS identifies conservation areas to be retained in PSP 25.1 and PSP 25.2. They have been identified due to their biodiversity values of matter of national environmental significance and state significance. Urban development is to be excluded from conservation areas and each area will be protected and managed. All other vegetation may be offset and cleared.

3.6.4 Conservation Areas
A number of conservation areas are identified within or abutting the two Precincts. Their contributions to the protection of biodiversity in the state vary from protecting the Growling Grass Frog to nature conservation to open space that contains scattered trees.

Conservation Area no. 34 comprises part of the Merri Creek Growling Grass Frog (GGF) reserve. Merri Creek, which bisects the Precincts, is identified in the BCS as Growling Grass Frog Conservation Area (Category 1 habitat). It is intended that Category 1 habitat areas are retained for their high quality Growling Grass Frog habitat. Growling Grass Frogs have been recorded along the Merri Creek. The key rationale for the protection of these areas in the BCS is it ‘protects important population of Growling Grass Frog and ensures connectivity between populations within the northern growth corridor’.

This reserve protects remnant native riparian vegetation and nationally significant habitat for the threatened GGF. Within the Precinct, this reserve encompasses land up to 200 metres from Kalkallo and Merri Creeks;

Category 2, other suitable habitat has been identified in the Precinct mainly along existing water bodies and creek tributaries. The BCS has identified that Category 2 habitat can be cleared.

Conservation Area no.27, north of Summerhill Road, comprises Grassy Eucalypt Woodland and provides high persistence habitat for the Golden Sun Moth.

The Amaroo Conservation Area abuts the southern boundary of the PSP and protects remnant Plains Grassland and Plains Grassy Woodland. It was set aside prior to the BCS, and lies outside the areas considered by the BCS.

3.6.5 Merri Creek Conservation Area Concept Plan (CACP)
Ecology Australia were retained to provide the MPA with advice on Growling Grass Frog habitat qualities and to develop a Conservation Area Concept Plan (CACP) for the two PSP areas, in accordance with relevant DEPI guidelines.

The Precinct is known to contain an important metapopulation of GGFs and the report had the objective to gather data on the existing habitat, including distribution and quality. The Biodiversity Conservation Strategy (BCS – DEPI 2013) requires a CACP to be produced as well as a Sub-regional Species Strategy for the GGF.

The GGF habitat assessment will inform the Concept Plans for PSP’s 25.1 and 25.2 identifying nodes where wetlands may be located.

The buffer zones required for the GGF have been utilised for Melbourne Water wetlands where these did not result in the removal of native vegetation. “Water Management Zones” are identified in the GGF CACP.

Opportunities to incorporate Water Sensitive Urban Design treatments into the setbacks of the transmission line easement are also encouraged as are alternative water sources such as rainwater tanks.

DEPI and Hume City Council have reached an agreement on the ongoing use rights for Laffan Reserve in respect to the sporting uses continuing on land which is identified as GGF habitat.

3.7 Bushfire threat and management actions
Land within the Precinct is at risk of bushfire, however, the risks can be managed with appropriate development controls. The bushfire risk does not present significant obstacles to development.

The Country Fire Authority (CFA) does not have any Fire Station infrastructure within either Precinct and will be looking to provide suppression services from outside the CFA area. Development of the PSP will increase the fire threat being serviced by the PSP and contributes to the requirements for additional infrastructure (upgraded appliances), increased demands on members, including training to meet this increased risk.
4.0 FUTURE URBAN STRUCTURE

4.1 Transport and Movement

The North Growth Corridor Plan (August 2012) shows arterial road upgrades to Donnybrook Road, Brookville Drive and Summerhill Roads. A new grade-separated overpass of the Hume Freeway is planned between Summerhill Road and Mount Ridley Roads. A new mid-block, half-diamond freeway interchange is also proposed between the Summerhill Road overpass and the Donnybrook Road freeway interchange.

Sinclair Knight Merz (SKM) were commissioned by the MPA to provide traffic modelling and SIDRA intersection analyses. In addition to testing the major grid of roads proposed in the North Growth Corridor Plan, SKM tested two different bridge alignments for an arterial road crossing of Merri Creek; the existing Brookville Drive crossing and an alternative crossing to the east to link Brookville Drive with English Street.

The outcomes of the traffic modelling indicated that the 2026 (interim) and 2046 (ultimate) road networks will function quite differently, as described below:

4.1.1 Interim (2026) model outputs

In the 2026 model, a lack of capacity on the Hume Freeway between Donnybrook Road and the Craigieburn Bypass encourages rat-running along Brookville Drive.

With residential development forecast to occur quicker than employment development and therefore favouring the north-south bridge option, congestion is still an issue which raises the question as to whether or not Brookville Drive needs widening from two to four lanes.

4.1.2 Ultimate (2046) model outputs

The ultimate model features the completion of the OMR and the subsequent easing of congestion. The 2026 model assumes that the Craigieburn Employment Precinct is fully developed with 8,750 jobs created and 1,000 dwellings constructed in the English Street Precinct.

The Merri Creek bridge option was the preferred option as it removed turning movements from Donnybrook Road and improved congestion on that road.

Two freeway crossings were tested; the mid-block freeway half diamond at the extension of English Street, as well as a new freeway overpass linking Summerhill Road and Mount Ridley Road.

Both scenarios rely on an a Freeway overpass being constructed at the Summerhill-Mount Ridley Road, catering for 26,000 vehicles a day. Removal of this leads to an impact on Donnybrook Road, Craigieburn Road East, Scanlon Drive and the Hume Freeway.

When the Summerhill-Mount Ridley Road overpass is provided the Hume Freeway interchange is underutilised. This situation is reversed in the instance whereby the Hume Freeway interchange is provided thus making it an either/or situation, which in turn has an effect on the number of lanes required for Brookville Drive.

It is noted that the PSP areas are not predicted to be negatively affected by truck movements in either option or year.

4.2 Activity Centres, Employment Areas and Restricted Retail

The hierarchy of activity centres in the northern corridor is established by the North Growth Corridor Plan (August 2012). The network of town centres planned surrounding the Precincts are:

A Principal Town Centre (PTC) to be located in Lockerbie, north of the subject Precincts, on the Sydney-Melbourne rail line.

A Major Town Centre (MTC) in Mickleham (Merrifield), west of the Precincts and north of Donnybrook Road. A second MTC is located in Beveridge, south west of the existing township of Beveridge. Major Town Centres provide a wide range of goods and services, underpinned by multiple supermarkets and discount department stores. A diversity of services, commercial and entertainment uses co-locate with these major stores, serving a sub-regional catchment and supporting multiple suburbs and/or communities.

Local Town Centres (LTC) are planned to be developed in the surrounding Precincts of Lockerbie, Donnybrook and Woodstock, and Beveridge. LTCs provide for day-to-day and weekly needs, with a supermarket and supporting retail, commercial and community uses. LTCs create a focus for social interaction within the community.
Neighbourhood Convenience Centres are generally co-located with schools, community centres and open space in residential areas. These centres supplement the higher order centres in providing for day-to-day needs offering basic goods and services.

Existing employment Precincts include those at Amaroo Business Park, south of the Precinct, and at Folkstone and Merrifield, to the west of the Precinct.

Essential Economics were engaged by the MPA to examine the potential for the English Street PSP to accommodate retail facilities and commercial office development. The study found that based on comparable existing development examples that English Street could provide for a high amenity commercial development of between 20 to 30 hectares, with an estimated timeframe for delivery of between 30 to 60 years.

PSP 25.2 will contain a small but significant future residential population of close to 3,000 residents and was seen as having several strong attributes including Donnybrook Road frontage, close proximity to the existing rail station, sufficient vacant land and direct access to 90,000 future residents in the surrounding region. The report suggested that the Precinct might also be able to support a small local convenience store.

SGS Economics and Planning were commissioned by the MPA in May 2014 to advise as to the potential for PSP 25.1 to accommodate restricted retail or bulky goods in the north part of the Precinct on land identified for Commercial 2 zoning (C2Z). The study looked at a principal, secondary and tertiary catchments surrounding the Precinct and stretching north from Craigieburn to Wallan. It concluded that, based on anticipated population growth the Craigieburn North Employment Precinct could ultimately accommodate 48,000 to 60,000m² of restricted retail floorspace post full development of the region.

A small retail shop is also planned for the centre of the industrial Precinct to cater for the daily needs of future workers.

4.3 Community buildings

PSP 25.1 is designated for industry and commercial development so will not generate any requirements to provide community facilities within the Precinct.

PSP 25.2 does not provide sufficient residential catchment to demand the full provision of standard community items on site.

Capire was commissioned by the MPA to look at the potential for PSP 25.2 to accommodate items of community infrastructure, social services and open space. In their report, the English Street PSP area was acknowledged to be at risk of isolation due to surrounding physical barriers such as the railway line and Merri Creek corridor. The report also noted the reliance English Street residents might have on surrounding Precincts for facilities, for example in Lockerbie PSP and the Laffan Reserve.

To mitigate against the Precinct’s reliance on external facilities, the report recommended provision of a small, tailored facility on site, comprising a small community centre that could be adaptable enough to meet early needs of the Precinct until larger centres are developed in the Donnybrook PSP, before reverting to a potential commercial office function.

Civil Design Consulting Engineers (CDCE) were commissioned to provide cost estimates and preliminary drawings for community buildings and sporting reserves. These formed the basis of costs in the English Street Development Contributions Plan (DCP).

4.4 Open space

4.4.1 Sporting Reserves

Due to the primarily rural existing nature of the area, there are few recreation assets in the Precinct areas or their surrounds.

Due to limitations on space within the Precinct and the presence of the nearby reserves, the Precinct will not support sporting reserves on site. Funds from the English Street development contributions plan (DCP) will be used to develop new pedestrian links to these existing assets and to upgrade Laffan Reserve to be fit-for-purpose.

The Laffan Reserve, located immediately across Merri Creek from the Craigieburn Employment Area North Precinct, consists of two sporting ovals and tennis courts. Laffan Reserve was gifted to Hume City Council and presently provides sporting facilities for the Kalkallo Township and the broader region.

The widening of Donnybrook Road will require reconfiguration of the existing fields.
PSP 25.2 is not providing a sporting reserve on site, but will provide funding for the reconstruction of fields in Laffan Reserve through the English Street DCP. It is proposed that the reserve will ultimately be redeveloped for two soccer fields, a new multi-purpose field and pavilion.

PSP 25.1 is designated for employment so is not considered to generate additional requirements for sporting reserves.

4.4.2 Local Parks

As an industrial Precinct, PSP 25.1 will provide approximately 2% of NDA as open space. This has been largely earmarked to enhance the overall public realm amenity of the Precinct. Local parks have been identified to protect existing stands of River Red Gums outside conservation areas, as well as enhancing a constructed waterway in the centre of the Precinct.

PSP 25.2 will provide around 4% of NDA as open space. A range of local parks are planned to meet community planning standards for local parks within 400 metres safe walking distance of at least 95 percent of all dwellings. In addition, the PSP will draw on the potential open space opportunities presented by the Growling Grass Frog conservation reserve that forms the boundary of the Precinct.

4.4.3 Walking and cycling trails

There are no walking and cycling trails currently in the subject area. The PSP proposes a range of new shared paths – both offroad and onroad – to connect across the precinct. In particular, a shared trail will be developed through the GGF reserve.

The closest formal trail is the Galada Tamboore pathway, formerly known as the Craigieburn Bypass Trail. This shared trail extends north along the eastern side of the freeway reserve, from the northern ring road where it joins the Merri Creek trail and Metropolitan Ring Road Trail. The trail extends north to Amaroo Drive in Craigieburn, close to the southern extent of the PSP. Ultimately the trail will be extended north from Craigieburn Road along Merri Creek and join the path in the PSP areas.
5.0 UTILITY AND SERVICE INFRASTRUCTURE

5.1 Main Drainage and Integrated Water Management

Melbourne Water has completed four Drainage Services Schemes (DSS) to identify drainage and water quality infrastructure requirements across the PSP 25.1 Precinct area. These are:

- Kalkallo Township DSS 6553
- Donnybrook East DSS 6551
- Brookville Drive DSS 6502
- Amaroo DSS 4495

Generally, these schemes comprise pipes that drain to end-of-line sediment basins and wetlands for water quality treatment, before discharging into Merri Creek. The Brookville Drive DSS also proposes an open channel to link two wetlands. The new channel will lie within a 40-metre reserve that runs centrally through the Precinct. The channel will be constructed to look natural and landscaped to improve amenity.

The English Street DSS covers the entire PSP 25.2 area, and temporarily will accommodate some small rural flows from areas to the east of the Melbourne-Sydney railway line.

The catchment is subdivided into a number of smaller catchments, each containing pipes to transport storm water to end-of-line sediment basins and wetlands.

The northern drainage line comprises two wetlands; one central to the proposed employment area and the other at the end of line, partially within the Growling Grass Frog conservation area. The other drainage lines comprise pipes to end of line treatment wetlands, partially within the Growling Grass Frog conservation area.

There may be options for stormwater harvesting and using recycle water across the Craigieburn North and English Street Precincts. Land developers, Yarra Valley Water, the Hume City Council and the City of Whittlesea may explore these options with the Office of Living Victoria (OLV).

5.2 Water Supply and Sewerage

Yarra Valley Water (YVW) is the potable water, recycled water and sewerage provider for the Craigieburn North and English Street precincts. YVW is currently preparing strategies for potable and recycled water supply and sewerage for the Northern Corridor encompassing both precincts. These strategies include key infrastructure to cater for ultimate development of the northern corridor. The infrastructure is staged based on expected development timing and water plan funding. Bring-forward charges will be levied on developers where assets are required to be delivered ahead of the assets identified for delivery in YVW’s Capital Works Programme.

5.2.1 Water Infrastructure

YVW have installed a 600mm potable water transfer main which aligns across Summerhill Rd, and north-south along Brookville Drive. This is a critical water supply main that transfers water from Craigieburn to Wallan.

A 375mm recycled water transfer main has also been installed alongside the potable main, connecting the Mount Ridley tanks to Donnybrook Road and Kalkallo. This main currently acts as a distribution main however in the future will be a critical transfer link between the future Wollert RWTP and Mt Ridley Reservoir.

Yarra Valley Water have currently mandated the entirety of PSPs 25.1 and 25.2 with recycled water for residential use. Developers will be required to provide dual pie systems to all allotments. YVW will also explore with developers the potential for recycled water to be used across the Craigieburn North Precinct for industrial applications.

There will be key potable and recycled water distribution mains throughout this area in the future which will ultimately be fed by two tank sites – Mt Ridley and pressure reduced from Bald Hill.

5.2.2 Sewer Infrastructure

The provision of sewerage services to PSP 25.1 is dependent on the construction of the Amaroo main sewer. The main sewer route runs parallel to the Melbourne to Sydney Rail (on the eastern side of the Rail) from the Craigieburn Sewage Treatment Plant to approximately 300 metres north of Donnybrook Road. The works are planned to commence construction early 2015 and are anticipated to be complete mid 2017.

Connection points under the rail line are planned to be built as part of the project to provide outlet connections for the future sewers that will run through and provide the future sewerage services to PSP 25.1.
the Hume Industrial Branch Sewer and the Donnybrook Link Branch Sewer are other key assets that will in the near future need to be constructed through the northern section of PSP 25.1.

The Hume Industrial Branch Sewer will generally follow the Merri Creek alignment just outside the proposed conservation reserve. Allowance needs to be made for a construction corridor for both the Hume Industrial Branch Sewer and the Donnybrook Link Branch Sewer of approximately 50 metres in width with an ultimate 6 metre wide easement or reserve set in place for future access to these key assets. The plan provided in the MPA draft document (plan 10 - Utilities) provides indicative location of the future location of these branch sewers.

As development occurs within PSP 25.1 reticulation sewers will be provided as part of that development. Generally these sewers will be located within road reserves.

5.2.3 Electricity Supply

SP Ausnet is the responsible authority for the English Street and northern part of the Craigieburn North Precincts for the provision of electricity supply. Jemena is the responsible authority for the southern part of the Craigieburn North Precinct.

There are existing 22kV above-ground lines along the length of Donnybrook Road. As an interim measure, it is expected that the existing 22kV overhead supply along Donnybrook Road and the existing Kalkallo substation, can provide electrical supply to initial development. Upgrade of this alignment to 66kV in the near future is planned and ultimate development provision of a further two 22kV supply lines (three 22kV lines and one 66kV line are ultimately required).

In the Craigieburn North precinct, 66kV lines exist on the west side of Brookville Drive (in the road verge area) and 11kV on the east (placing them in the centre median in the ultimate case). Both run from Donnybrook Road in a southward direction, and the 11kVs stop approximately 350m south of the Brookville/English Street intersection and begin again 360m north of Kinloch Court. 11kVs deviate to the centre median approximately 230m south of Kinloch Court until they branch off to the existing Amaroo Road - road reserve (eastern side of the reserve) and towards both the Hume Freeway and Merri Creek. 66kVs run along the western side of the road reserve until they too deviate to the centre median along with the 11kVs (230m south of Kinloch). Upon reaching Summerhill Road, the 66kV lines branch eastward.

In English Street, above-ground 66kV lines exist along the length of road reserve to the Norman Road intersection.

5.2.4 Gas Supply

APA Group is the responsible authority for the provision of gas supply facilities for both Precincts.

A 300mm diameter east-west distribution gas main is presently being constructed along the northern side of the Donnybrook Road reserve, primarily to service development west of the Hume Freeway.

Gas reticulation to the local development requires a pressure reduction station or citygate to be installed on the APA high pressure gas main. APA Group has planned to install this in the vicinity of the Donnybrook Road crossing and have advised the location is likely to be on the south side of Donnybrook Rd.

5.2.5 Telecommunications

NBN Co. will be the provider of last choice for telecommunications facilities for the Precincts. NBN Co does not release planning information except in response to specific development applications.

Developers will be required to install pit and pipe infrastructure as a part of their subdivisional works with the installation of fibre optic cable to be carried out by NBN Co. including any backhaul works connection to the external NBN Co. network.

Currently NBN cables run parallel with the railway lines, some 100m to the east.

Developers also have the option to pursue alternative arrangements for fibre optic systems with other telecommunications providers.

There are currently two 100mm Telstra conduits located in the road reserve for Brookville Drive.
6.0 DEVELOPMENT CONTRIBUTIONS AND PRECINCT INFRASTRUCTURE PROJECTS

The Craigieburn North Employment Area and the English Street PSP and DCP documents have been prepared by the Metropolitan Planning Authority with the assistance of the Hume City Council, the City of Whittlesea, Government agencies, service authorities and major stakeholders.

The DCPs have been developed to support the provision of works, services, and facilities that will be used by the future workers in the Craigieburn North Employment Area and residents of the English Street Precinct.

The DCPs outline projects required to ensure that future workers and visitors to the Craigieburn North Employment Area can be provided with access to necessary services and transport infrastructure.

The DCP establishes a framework for development proponents to contribute a fair proportion towards the cost of works and services for the new development at the Craigieburn North Employment Area. It ensures the cost of providing new infrastructure and services is shared equitably between various developers and the wider community. Fairness requires costs to be apportioned according to the projected share of use and the required works, services and facilities items.

Costings for DCP projects are contained in the infrastructure costing reports prepared by Jacobs SKM and CDCE. Land valuations were undertaken by Charter Keck Cramer in November 2014.

Key Precinct infrastructure projects that are funded wholly or in part by the separate DCPs are identified in the following tables:
## 6.1 PSP 25.1 Craigieburn North – Precinct Infrastructure Projects

<table>
<thead>
<tr>
<th>CATEGORY</th>
<th>TITLE</th>
<th>DESCRIPTION</th>
<th>LEAD AGENCY</th>
<th>TIMING</th>
<th>INCLUDED IN DCP</th>
<th>DCP REFERENCE NO.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Road Projects</td>
<td>Road</td>
<td>Donnybrook Road</td>
<td>6 lane arterial road (ultimate) – land (41m).</td>
<td>VicRoads</td>
<td>M</td>
<td>No</td>
</tr>
<tr>
<td>Road Projects</td>
<td>Road</td>
<td>Hume Freeway</td>
<td>On-ramps from English Street (west)</td>
<td>VicRoads</td>
<td>L</td>
<td>No</td>
</tr>
<tr>
<td>Road Projects</td>
<td>Road</td>
<td>English Street (West)</td>
<td>4 lane arterial road (ultimate) – land (34m).</td>
<td>Hume City Council</td>
<td>M</td>
<td>Yes (interim) No (ultimate)</td>
</tr>
<tr>
<td>Road Projects</td>
<td>Road</td>
<td>Brookville Drive / Amaroo Road</td>
<td>4 lane arterial road (ultimate) – land for road widening to 34m.</td>
<td>Hume City Council</td>
<td>S</td>
<td>Yes (interim) No (ultimate)</td>
</tr>
<tr>
<td>Road Projects</td>
<td>Road</td>
<td>Summerhill Road</td>
<td>4 lane arterial road (ultimate) – land for road widening to 34m.</td>
<td>Hume City Council</td>
<td>S</td>
<td>Yes (interim) No (ultimate)</td>
</tr>
<tr>
<td>Road Projects</td>
<td>Road</td>
<td>English Street (west) to interchange with Hume Freeway</td>
<td>Land for Freeway interchange and bridge (interim treatment)</td>
<td>Hume City Council</td>
<td>S</td>
<td>Yes (land only)</td>
</tr>
<tr>
<td>Road Projects</td>
<td>Road</td>
<td>Summerhill Road overpass of Hume Freeway</td>
<td>Land for Freeway overpass bridge (interim treatment)</td>
<td>Hume City Council</td>
<td>S</td>
<td>Yes (land only)</td>
</tr>
<tr>
<td>Road Projects</td>
<td>Road</td>
<td>Summerhill Road overpass of Sydney-Melbourne railway line</td>
<td>Land for overpass bridge (interim treatment)</td>
<td>Hume City Council</td>
<td>S</td>
<td>Yes (land only)</td>
</tr>
<tr>
<td>Bridge Projects</td>
<td>Bridge</td>
<td>Hume Freeway – Interchange and overpass</td>
<td>Freeway half-diamond interchange comprising bridge overpass and two city-bound freeway on-ramps.</td>
<td>VicRoads</td>
<td>M</td>
<td>No</td>
</tr>
<tr>
<td>Bridge Projects</td>
<td>Bridge</td>
<td>Summerhill Road overpass of Hume Freeway</td>
<td>Bridge over the Hume Freeway to connect Mt Ridley Road to Summerhill Road.</td>
<td>VicRoads</td>
<td>L</td>
<td>No</td>
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<tr>
<td>Bridge Projects</td>
<td>Bridge</td>
<td>Summerhill Road overpass of Sydney-Melbourne railway line</td>
<td>Bridge over the railway line to provide for grade separation.</td>
<td>VicRoads</td>
<td>L</td>
<td>No</td>
</tr>
<tr>
<td>Bridge Projects</td>
<td>Bridge</td>
<td>Merri Creek Road Bridge</td>
<td>4 lane bridge crossing of Merri creek – 2 lane interim</td>
<td>Hume City Council and City of Whittlesea</td>
<td>M</td>
<td>Yes (interim) No (ultimate)</td>
</tr>
<tr>
<td>Bridge Projects</td>
<td>Bridge</td>
<td>Merri Creek Pedestrian Bridge</td>
<td>Shared trail bridge crossing of Merri Creek</td>
<td>Hume City Council and City of Whittlesea</td>
<td>M</td>
<td>No, in DCP for PSP 25.2</td>
</tr>
<tr>
<td>Intersection Projects</td>
<td>Intersection</td>
<td>English Street (West) / North-South Connector road</td>
<td>Purchase of land for intersection (ultimate treatment) and construction of 4-way arterial to connector roundabout (interim treatment)</td>
<td>Hume City Council</td>
<td>M</td>
<td>Yes (interim) No (ultimate)</td>
</tr>
<tr>
<td>Intersection Projects</td>
<td>Intersection</td>
<td>Brookville Drive / English Street (West)</td>
<td>Purchase of land for intersection (ultimate treatment) and construction of arterial to arterial signalised 4-way intersection (interim treatment)</td>
<td>Hume City Council</td>
<td>S</td>
<td>Yes (interim) No (ultimate)</td>
</tr>
<tr>
<td>Intersection Projects</td>
<td>Intersection</td>
<td>Brookville Drive / East-west access road ( Kinloch Court)</td>
<td>Purchase of land for intersection (ultimate treatment) and construction of arterial to access road 4-way roundabout (interim treatment)</td>
<td>Hume City Council</td>
<td>S</td>
<td>Yes (interim) No (ultimate)</td>
</tr>
<tr>
<td>Intersection Projects</td>
<td>Intersection</td>
<td>Brookville Drive / East-West access</td>
<td>Purchase of land for intersection (ultimate treatment) and construction of arterial to connector road 4-way roundabout (interim treatment)</td>
<td>Hume City Council</td>
<td>S</td>
<td>Yes (interim) No (ultimate)</td>
</tr>
<tr>
<td>Intersection Projects</td>
<td>Intersection</td>
<td>Brookville Drive (Amaroo Road) / Summerhill Road</td>
<td>Purchase of land for intersection (ultimate treatment) and construction of arterial to arterial signalised 4-way intersection (interim treatment)</td>
<td>Hume City Council</td>
<td>S</td>
<td>Yes (interim) No (ultimate)</td>
</tr>
<tr>
<td>Intersection Projects</td>
<td>Intersection</td>
<td>Summerhill Road / North-South connector road</td>
<td>Purchase of land for intersection (ultimate treatment) and construction of arterial to connector 4-way roundabout (interim treatment)</td>
<td>Hume City Council</td>
<td>S</td>
<td>Yes (interim) No (ultimate)</td>
</tr>
<tr>
<td>Intersection Projects</td>
<td>Intersection</td>
<td>Brookville Drive/Amaroo Road / East-West connector road (South)</td>
<td>Purchase of land for intersection (ultimate treatment) and construction of arterial to connector 4-way roundabout (interim treatment)</td>
<td>Hume City Council</td>
<td>S</td>
<td>Yes (interim) No (ultimate)</td>
</tr>
</tbody>
</table>
### 6.2 English Street - Precinct Infrastructure Plan

#### 6.2.1 Precinct Infrastructure Plan

**Table 6 Precinct Infrastructure Plan**

| CATEGORY          | TITLE                                                                 | DESCRIPTION                                                          | LEAD AGENCY       | TIMING   | INCLUDED IN DCP | DCP REFERENCE NO. |
|-------------------|-----------------------------------------------------------------------|                                                                     |                   |          |                 |                  |
| **ROAD PROJECTS** |                                                                       |                                                                     |                   |          |                 |                  |
| Road              | Donnybrook Road                                                       | 6 lane arterial road (ultimate) – land (generally 41m).              | VicRoads          | M        | No               | N/A              |
| Road              | English Street reconstruction – Donnybrook Road to Norman Street      | 4 lane arterial road (ultimate) – land for road widening to 34m.     | City of Whittlesea | S, M     | Yes (interim) No (ultimate) | RD-25.2-1        |
| Road              | English Street extension – Norman Road to Merri Creek                 | 4 lane arterial road (ultimate) – land (34m).                       | City of Whittlesea | S, M     | Yes (interim) No (ultimate) | RD-25.2-2        |
| **BRIDGE PROJECTS** |                                                                      |                                                                     |                   |          |                 |                  |
| Bridge            | Donnybrook Road overpass of Sydney-Melbourne railway line.            | Bridge over the railway line to provide for grade separation.       | VicRoads          | L        | No               | N/A              |
| Bridge            | Merri Creek Road Bridge                                               | 4 lane bridge crossing of Merri creek – 2 lane interim              | Hume City Council and City of Whittlesea | M, L     | Yes (interim) No (ultimate) | BR-25.2-1        |
| Bridge            | Merri Creek Pedestrian Bridge                                         | Shared trail bridge crossing of Merri Creek                         | Hume City Council and City of Whittlesea | M        | Yes               | BR-25.2-2        |
| **INTERSECTION PROJECTS** |                                                                  |                                                                     |                   |          |                 |                  |
| Intersection      | Donnybrook Road /English Street                                      | Purchase of land for intersection (ultimate treatment) and construction of 4-way arterial to arterial signalised intersection (interim treatment) | VicRoads and City of Whittlesea | S, M     | Yes (interim) No (ultimate) | IN-25.2-1        |
| Intersection      | English Street / Mid-block connector road                             | Purchase of land for intersection (ultimate treatment) and construction of arterial to arterial signalised 4-way intersection (interim treatment) | City of Whittlesea | S, M     | No (interim) No (ultimate) | N/A              |
| Intersection      | English Street / Mid-block connector road                             | Purchase of land for intersection (ultimate treatment) and construction of arterial to arterial signalised 4-way intersection (interim treatment) | City of Whittlesea | S, M     | Yes (interim) No (ultimate) | IN-25.2-2        |
| Pedestrian Crossing | English Street                                                        | Construction of a signalised pedestrian crossing.                  | City of Whittlesea | S, M     | Yes (interim) | IN-25.2-3        |
## Community Building and Sporting Reserve Projects

<table>
<thead>
<tr>
<th>Community Building</th>
<th>English Street Level 1 Community Activity Centre</th>
<th>Purchase of land for community centre and construction of two multi-purpose rooms</th>
<th>City of Whittlesea</th>
<th>S M</th>
<th>Yes (interim)</th>
<th>CB-25.2-1</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sporting Reserve</td>
<td>Contribution to upgrade of Sporting Reserve, Laffan Reserve (HCC)</td>
<td>Contribution to upgrade sporting reserves x 2 sports pitches / sporting reserve</td>
<td>Hume City Council</td>
<td>S M</td>
<td>Yes (interim)</td>
<td>SR-25.2-1</td>
</tr>
<tr>
<td>Sporting Reserve</td>
<td>Contribution to upgrade of Pavilion, Laffan Reserve (HCC)</td>
<td>Contribution to upgrade pavilion</td>
<td>Hume City Council</td>
<td>S M</td>
<td>Yes (interim)</td>
<td>SR-25.2-2</td>
</tr>
</tbody>
</table>

### Technical Studies referenced in the Background Report

- Land Assembly Strategy (Gerard Coutts Pty Ltd, 20 September 2010)
- Desktop Environmental, Hydrological and Geotechnical Study (Aurecon, 13 September 2012)
- Drainage Strategy (Alluvium, October 2012)
- Targeted Cultural Values inspection of PSP 25.1 Craigieburn North and PSP 25.2 English Street (Wurundjeri Tribe land & Compensation Cultural Heritage Council Inc, August 2013)
- Strategic Traffic Modelling Craigieburn PSP25 (SKM, March 2014).
- Craigieburn Employment Precinct North and English Street Intersection Analyses (SKM, 7 February 2014).
- Regional Town Centre and Employment Land Assessment: PSP 1067 Donnybrook, PSP 1096 Woodstock, PSP 25.2 English Street (Essential Economics, June 2014).
- PSP 25.1 Craigieburn North and PSP 25.2 English Street Infrastructure Costings Study – report (Jacobs SKM, August 2014).
- Restricted Retail Study – Craigieburn North (SGS Economics & Planning, September 2014).
- PSP 25 Growling Grass Frog Conservation Area Concept Plan (Ecology Australia, September 2014)
- Community Infrastructure Costing report (CDCE October 2014).