

Summary of Submissions to Proposed Amendment C149 and Recommended Responses

The two tables below provide a summary of the 106 submissions received to proposed Amendment C149, along with a discussion and recommended response.

- The first table provides a summary of submissions and recommendations for all submissions *excluding Friends of Lake Knox Sanctuary (FOLKS)*

The second table provides an overview of Council's response to a range of submissions received from FOLKS with regards to the Strategic Development Site (Corner of Burwood Highway and Scoresby Road). This includes the following submissions: 22B, 26B, 28, 52-75, 76A, 77, 78, 80-91, 92A, 92B, 94-96

No.	Submission Source	Submission Summary	Discussion and Recommendation
1	Individuals	Seeks a change of suburb name for the Wantirna Lea estate from Ferntree Gully to either Wantirna or Knox Central.	Noted. On 20 th December 2016 Council resolved to "refer this matter to an issues briefing once the Knox Central Structure Plan is finalised." Changes to post code boundaries and suburb names are assessed through the Geographic Place Names Act 1998 and associated processes.
2	Individual	<ol style="list-style-type: none"> 1. Opposes the scale of development (40m height limits) proposed for Burwood Highway. As the gateway to the Dandenongs 'we should be more respectful of the landscape and nature look of the area'. 2. Concerns about public transport and that the proposed tram will only serve small demographic and will not provide links to existing rail infrastructure. 	<ol style="list-style-type: none"> 1. Noted. The Structure Plan provides a framework for future development and improvements in the Knox Central Activity Centre. This Activity Centre has long been identified as an area where changes in the types of housing provided and an increase in resident population is anticipated and encouraged. This is identified in a range of Council policies including the 2015 Knox Housing Strategy. The Structure Plan aims to provide for more intense (up to 40m) development to support the Centre's role as the major focal point of the municipality and a premier destination for the outer eastern region of Melbourne. Preferred heights of '5+ stories' have long been in place for this site (since the adoption of the 2005 Urban Design Framework). Given the broad nature of preferred heights additional work was completed to assist with refining preferred heights across the centre. A review of building heights for the Knox Central (including consideration of the 'Kubix' and 'Knoxia' developments), identified key views to the Dandenong Ranges and concluded that the proposed built form framework and scale of development (i.e. heights) would not significantly impact on these views. The Structure Plan includes measures to improve landscaping along the Burwood Highway Corridor. 2. Noted. The Structure Plan includes a number of strategies and actions in relation to public transport improvements in Knox Central, including improvements to the bus network and extension of the No.75 tram line. Council will continue to advocate to the relevant authorities to achieve these. Modelling indicates that while the tram route extension will see a small shift from car use, it would change significantly from bus to tram usage, and consequently reduce congestion in Knox Central.
3	Individual	<ol style="list-style-type: none"> 1. Opposes the scale of development proposed in the Structure Plan. 2. Concerns about the lack of trees. 3. Concerns about traffic and lack of public transport to support the scale of development. 	<ol style="list-style-type: none"> 1. Noted. The Structure Plan provides a framework for future development and improvements in the Knox Central Activity Centre. This Activity Centre has long been identified as an area where changes in the types of housing provided and an increase in resident population is anticipated and encouraged. This is identified in a range of Council policies including the 2015 Knox Housing Strategy. The Structure Plan aims to provide for more intense (up to 40m) development to support the Centre's role as the major focal point of the municipality and a premier destination for the outer eastern region of Melbourne. 2. Noted. There are large areas of open space included within Knox Central, and one of the Structure Plan actions is a Master plan for Lewis Park (and Blind Creek) to improve the existing open space. The Structure Plan also includes measures to improve landscaping along the Burwood Highway Corridor. 3. Noted. The Structure Plan includes a number of strategies and actions in relation to public transport improvements in Knox Central, including improvements to the bus network and extension of the No.75 tram line. Council will continue to advocate to the relevant authorities to achieve these. Modelling indicates that while the tram route extension will see a small shift from car use, it would change significantly from bus to tram usage, and consequently reduce congestion in

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4	Individual	<ol style="list-style-type: none"> 1. Need to manage the car parking impacts of higher density development. Suggests more parking, wider roads to accommodate emergency vehicles, and allowing parking on nature strips. 2. Westfield site should accommodate bus parking/drop off zones close to entries for community buses that serve seniors. 3. Knox Central should develop with an appropriate mix of cultures, not dominated by one cultural group. 4. Concerns and seeking clarification about higher density residential development near Gateshead Drive. 5. Suggestion that if this area is targeted for higher density housing all the properties along Gateshead drive, could be purchased and included as potential redevelopment. 	<p>Knox Central.</p> <ol style="list-style-type: none"> 1. Noted. The <i>Knox Central Integrated Transport Study</i> highlighted that there is considerable provision of both on and off street car parking, and no evidence of overspill into neighbouring residential streets. It recommends that, in the short term, parking provisions for new development should be in accordance with current statutory requirements contained in the Knox Planning Scheme (See Clause 52.06 of the Knox Planning Scheme), which ensures the provision of an appropriate number of car parking spaces having regard to the demand likely to be generated from development, the activities on the land and the nature of the locality. It is not the role of the Structure Plan to govern specific details such as road widths, and parking on nature strips. 2. Noted. Council has an ongoing relationship with the management team of Westfield Knox. Concerns relating to community bus parking raised in this submission have been passed on to Westfield. 3. Noted. 4. Accept in part. Residential development is proposed near Gateshead Drive – within the Commercial Core. No change of use is proposed to land within the Open Space and Recreation Precinct. This is broadly consistent with the 2005 Knox Central Urban Design Framework. A review of this interface has indicated that careful management of any impacts from higher density residential development will be required. The maintenance and protection of existing residential amenity and interfaces is addressed through design objectives in DDO13 is considered appropriate to address concerns – subject to an extension of the area identified as a ‘Sensitive Residential Interface’. 5. Not supported This suggestion is not supported as it would be inappropriate to expand the Activity Centre boundary in this location, which has no direct access to the centre and was recently designated ‘Knox Neighbourhood’ as part of the implementation of the 2015 Knox Housing Strategy which was recently incorporated into the Planning Scheme via Amendment C131 (approved in March 2016). <p>RECOMMENDATION: Amend all maps relating to the Structure Plan and Planning Scheme to reflect this inclusion of a Sensitive Residential Interface further along Gateshead Drive (north west of Lewis Park).</p>
5A and 5B	Individuals	<ol style="list-style-type: none"> 1. Concerned that the development of the Strategic Development Site will increase instances of flooding in the Wantirna Lea estate. 1. Supplementary submission provided of photographs showing flooding impacts along Blind Creek near the Strategic Development Site. 	<ol style="list-style-type: none"> 1. Noted Council will continue to liaise with the landowner (Places Victoria) and Melbourne Water in relation to this site and any potential flooding impacts. 2. Noted.
6	Individual	<ol style="list-style-type: none"> 1. Proposed new development along Burwood Highway are out of scale with the Knox area. 2. High density housing is inappropriate in area with limited on-street car parking and poor public transport infrastructure. Public Transport needs to be improved before high density housing. 3. Concerns about parking, where tradesman and future residents are going to park. 	<ol style="list-style-type: none"> 1. Noted. The Structure Plan provides a framework for future development and improvements in the Knox Central Activity Centre. This Activity Centre has long been identified as an area where changes in the types of housing provided and an increase in resident population is anticipated and encouraged. This is identified in a range of Council policies including the 2015 Knox Housing Strategy. The Structure Plan aims to provide for more intense (up to 40m) development to support the Centre's role as the major focal point of the municipality and a premier destination for the outer eastern region of Melbourne. Preferred heights of ‘5+ stories’ have long been in place for this site (since the adoption of the 2005 Urban Design Framework). Given the broad nature of preferred heights additional work was completed to assist with refining preferred heights across the centre. A review of building heights for the Knox Central (including consideration of the ‘Kubix’ and ‘Knoxia’ developments), identified key views to the Dandenong Ranges and concluded that the proposed

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			<p>built form framework and scale of development (i.e. heights) would not significantly impact on these views.</p> <p>2. Noted. The Structure Plan includes a number of strategies and actions in relation to public transport improvements in Knox Central, including improvements to the bus network and extension of the No.75 tram line. Council will continue to advocate to the relevant authorities to achieve these.</p> <p>3. Noted. <i>The Knox Central Integrated Transport Study</i> highlighted that there is considerable provision of both on and off street car parking, and no evidence of overspill into neighbouring residential streets. It recommends that, in the short term, parking provisions for new development should be in accordance with current statutory requirements contained in the Knox Planning Scheme (See Clause 52.06 of the Knox Planning Scheme), which ensures the provision of an appropriate number of car parking spaces having regard to the demand likely to be generated from development, the activities on the land and the nature of the locality.</p>
7	Individual	<ol style="list-style-type: none"> 1. Pleased to see that the Community Garden's/Vineyard site will be retained and not developed. 2. Submission raises other issues relating to development in Boronia. 	<ol style="list-style-type: none"> 1. Noted. 2. These concerns are beyond the scope of the Knox Central Structure Plan
8	Government Agency	South East Water has no objection to the proposed amendment.	Noted.
9	Individual	Requests that the site at 309 Stud Road be included in the Activity Centre.	Not supported. Due to its location on the 901 SmartBus route this site was recently designated as 'Activity Area' as part of the implementation of the 2015 Knox Housing Strategy which was recently incorporated into the Planning Scheme via Amendment C131 (approved in March 2016). The current planning scheme and the Knox Housing Strategy provide clear guidance for the future of this site. The site is located within a Residential Growth Zone and has considerable development potential.
10	Individual	<ol style="list-style-type: none"> 1. Concerns with traffic. 2. Concerns about the building of medium density housing directly behind their property which is on the border of a 'Sensitive Residential Interface'. Preference for two storey buildings at interface not three to four stories. 3. Identifies an apparent contradiction with regards to the 'Sensitive Residential Interface' 	<ol style="list-style-type: none"> 1. Noted. The Knox Central Integrated Transport Study included a review previous studies and traffic modelling. It concluded that there is need to improve pedestrian and cyclist safety and amenity and it supported the introduction of new road links and access, which are reflected in the Structure Plan. Council will continue to work with Vic Roads and other authorities to implement these improvements. 2. Noted. A review of this interface has indicated that careful management of any impacts from higher density residential development will be required. The maintenance and protection of existing residential amenity and interfaces is addressed through design objectives in DDO13 is considered appropriate to address concerns. 3. Noted. There are a range of proposed height limits in areas identified as having 'sensitive residential interfaces'. Within the Structure Plan – specifically in relation to the Strategic Development Site these is a design response that states: "Avoid development that is greater than two stories adjacent to existing residential areas". This design response relates only to this site and is one of a range of responses that could be applied to meet the design objectives for this site.
11	Individual	<ol style="list-style-type: none"> 1. Opposes the scale of development proposed, believes the Knox Area is not appropriate for buildings up to 13 storeys, does not want privacy compromised, shadows created with reduction in natural light. does not want a substantial increase to the housing density. 2. Concerns about traffic and parking along Burwood Highway and at Westfield Knox. 	<ol style="list-style-type: none"> 1. Noted. The Structure Plan provides a framework for future development and improvements in the Knox Central Activity Centre. This Activity Centre has long been identified as an area where changes in the types of housing provided and an increase in resident population is anticipated and encouraged. This is identified in a range of Council policies including the 2015 Knox Housing Strategy. The Structure Plan aims to provide for more intense (up to 40m) development to support the Centre's role as the major focal point of the municipality and a premier destination for the outer eastern region of Melbourne.

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		<p>3. Supports proposed public transport upgrades but only 'Extension of the tram to Knox must not come at the expense of everyday users of Burwood Highway.'</p> <p>Traffic congestion must not be increased.</p> <p>4. More open space should be provided.</p>	<p>Preferred heights of '5+ stories' have long been in place for this site (since the adoption of the 2005 Urban Design Framework). Given the broad nature of preferred heights additional work was completed to assist with refining preferred heights across the centre. A review of building heights for the Knox Central (including consideration of the 'Kubix' and 'Knoxia' developments), identified key views to the Dandenong Ranges and concluded that the proposed built form framework and scale of development (i.e. heights) would not significantly impact on these views. A review of this interface has indicated that careful management of any impacts from higher density residential development will be required. The maintenance and protection of existing residential amenity and interfaces is addressed through design objectives in DDO13 is considered appropriate to address concerns.</p> <p>2. Noted. <i>The Knox Central Integrated Transport Study</i> was commissioned to review current and future traffic impacts in the activity centre. It reviewed previous studies and undertook traffic modelling and concluded that there was need to improve pedestrian and cyclist safety and amenity and supported the introduction of new road links and access. Council will continue to work with Vic Roads and other authorities to manage these improvements. <i>The Knox Central Integrated Transport Study</i> highlighted that there is considerable provision of both on and off street car parking, and no evidence of overspill into neighbouring residential streets. It recommends that, in the short term, parking provisions for new development should be in accordance with current statutory requirements contained in the Knox Planning Scheme (See Clause 52.06 of the Knox Planning Scheme), which ensures the provision of an appropriate number of car parking spaces having regard to the demand likely to be generated from development, the activities on the land and the nature of the locality.</p> <p>3. Noted. The Structure Plan includes a number of strategies and actions in relation to public transport improvements in Knox Central, including improvements to the bus network and extension of the No.75 tram line. Council will continue to advocate to the relevant authorities to achieve these. Modelling indicates that while the tram route extension will see a small shift from car use, it would change significantly from bus to tram usage, and consequently reduce congestion in Knox Central.</p> <p>4. Noted. There are large areas of open space included within Knox Central, and one of the Structure Plan actions is a Master plan for Lewis Park (and Blind Creek) to improve the existing open space. Current Open Space areas are not proposed for rezoning or development.</p>
12	Community Organisation (Knox City Tennis Club)	Queries why the Tennis Club and Coleman Reserve, which are adjacent to Lewis Park, are not included in the Activity Centre.	<p>The exclusion of the tennis club (and Coleman reserve) from Knox Central was an oversight.</p> <p>RECOMMENDATION Amend all maps relating to the Structure Plan to reflect this change to the boundary (both in the Planning Scheme and in the Structure Plan).</p>
13	Fairhills High School	Requests that the Structure Plan be amended to reflect the correct name of the school, and include a section on education within the 'futures section' that highlights KIOSC at Swinburne , the Fairhills High School Performing Arts Theatre, and quality primary, secondary, tertiary educational facilities.	<p>Agree with changes RECOMMENDATION: Make the changes requested to the Structure Plan.</p>
14	Individual	<p>1. Heights are not in keeping with the liveability of the City of Knox, heights be limited to 4 storeys.</p> <p>2. Requests a resident committee be formed to appraise any future plans before they are sent for approval to Council.</p> <p>3. Request more space for playing areas and usable ground floor level open space.</p>	<p>1. Noted. The Structure Plan provides a framework for future development and improvements in the Knox Central Activity Centre. This Activity Centre has long been identified as an area where changes in the types of housing provided and an increase in resident population is anticipated and encouraged. This is identified in a range of Council policies including the 2015 Knox Housing Strategy. The Structure Plan aims to provide for more intense (up to 40m) development to support the Centre's role as the major focal point of the municipality and a premier destination for the outer eastern region of Melbourne.</p>

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		<ol style="list-style-type: none"> 4. Queries the use of references to 'higher density housing' as opposed to high density. 5. Supports the extension of the tram line, but it should be extended to link up to Ferntree Gully train station. 6. Concerns with increased traffic congestion along Burwood Highway, emergency access and other general traffic and parking concerns 	<p>Preferred heights of '5+ stories' have long been in place for this site (since the adoption of the 2005 Urban Design Framework). Given the broad nature of preferred heights additional work was completed to assist with refining preferred heights across the centre. A review of building heights for the Knox Central (including consideration of the 'Kubix' and 'Knoxia' developments), identified key views to the Dandenong Ranges and concluded that the proposed built form framework and scale of development (i.e. heights) would not significantly impact on these views.</p> <p>2. Noted. The use of a 'resident committee' to consider development applications is not considered appropriate. The planning permit assessment process provides opportunity for the community to provide comment.</p> <p>3. Noted. A range of 'useable' ground floor open space will be provided depending on the location, and zone of each development application. The Strategic Development site will include a mix of medium density housing that will include open space at ground level consistent with 'ResCode'. Additional open spaces will also be provided as part of the development of this site.</p> <p>4. Noted. It is recommended that the use of higher be retained, the choice of this language was recommended as part of an earlier expert peer review of the draft planning scheme documentation.</p> <p>5. Noted. The Structure Plan includes a number of strategies and actions in relation to public transport improvements in Knox Central, including improvements to the bus network and extension of the No.75 tram line. Council will continue to advocate to the relevant authorities to achieve these.</p> <p>6. Noted. <i>The Knox Central Integrated Transport Study</i> was commissioned to review current and future traffic impacts in the activity centre. It reviewed previous studies and undertook traffic modelling and concluded that there was need to improve pedestrian and cyclist safety and amenity and supported the introduction of new road links and access. Council will continue to work with Vic Roads and other authorities to manage these improvements. <i>The Knox Central Integrated Transport Study</i> highlighted that there is considerable provision of both on and off street car parking, and no evidence of overspill into neighbouring residential streets. It recommends that, in the short term, parking provisions for new development should be in accordance with current statutory requirements contained in the Knox Planning Scheme (See Clause 52.06 of the Knox Planning Scheme), which ensures the provision of an appropriate number of car parking spaces having regard to the demand likely to be generated from development, the activities on the land and the nature of the locality.</p>
15	Company	Supports the amendment, requests that Council maintain ongoing communication with business and landowners through the transition to a Mixed Use Zone.	Support for the amendment is noted. The transition from an industrial focussed area to a mixed use precinct will require careful management, including regular communication with affected landowners and operators.
16	Individuals	<ol style="list-style-type: none"> 1. Supports the proposal in general. But prefer maximum building height of 12m throughout the whole activity area. 2. Requests that the area around Gateshead Park and residences backing on to the north-west corner of Lewis Park be noted as a 'sensitive residential interface'. 	<p>1. Noted. The Structure Plan provides a framework for future development and improvements in the Knox Central Activity Centre. This Activity Centre has long been identified as an area where changes in the types of housing provided and an increase in resident population is anticipated and encouraged. This is identified in a range of Council policies including the 2015 Knox Housing Strategy. The Structure Plan aims to provide for more intense (up to 40m) development to support the Centre's role as the major focal point of the municipality and a premier destination for the outer eastern region of Melbourne.</p> <p>Preferred heights of '5+ stories' have long been in place for this site (since the adoption of the 2005 Urban Design Framework). Given the broad nature of preferred heights additional work was completed to assist with refining preferred heights across the centre. A review of building heights for the Knox Central (including consideration of the 'Kubix' and 'Knoxia' developments), identified key views to the Dandenong Ranges and concluded that the proposed built form framework and scale of development (i.e. heights) would not significantly impact on these views.</p>

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			<p>2. Accept. A review of this interface has indicated that careful management of any impacts from higher density residential development will be required. The maintenance and protection of existing residential amenity and interfaces is addressed through design objectives in DDO13 is considered appropriate to address concerns – subject to an extension of the area identified as a ‘Sensitive Residential Interface’.</p> <p>RECOMMENDATION: Amend all maps relating to the Structure Plan and Planning Scheme to reflect this inclusion of a Sensitive Residential Interface further along Gateshead Drive (north west of Lewis Park).</p>
17	Individuals	<ol style="list-style-type: none"> 1. Supports retention of dam. 2. Does not support development along the boundary of Wantirna Lea estate (if developed, should be single storey). 3. Careful traffic management will be required when the site is developed. 	<p>Refer to recommendations in response to the submissions from FOLKS (below)</p>
18	Individual	<ol style="list-style-type: none"> 1. Thanks Council staff for opportunity to comment. 2. Concerned with the Kubix development. 3. Seeks more open space for green spaces for children to play, but those proposed will be of value. 	<ol style="list-style-type: none"> 1. Noted. 2. Noted. 3. Noted. <p>There are large areas of open space included within Knox Central, and one of the Structure Plan actions is a Master plan for Lewis Park (and Blind Creek) to improve the existing open space. Additional open spaces will be provided as part of the development of the strategic development site.</p>
19	Company (Scentre, owner and operator of Westfield)	<ol style="list-style-type: none"> 1. Overall support Provides general support for the objectives and strategies of the Plan and amendment. Requests to be kept informed of the progress of the Lewis Park masterplan. 2. Drafting issues Raise concern with use of the word ‘must’ for design requirements. Requests that this be replaced with the word ‘should’ to identify provisions as ‘preferred’ and to enable Council to apply discretion in their assessment. 3. Application of overlays Considers that the dual use of the proposed DDO13 and the modified Development Plan Overlay - Schedule 2 (DPO2) over the Westfield site complicates the planning controls for the land, and unnecessarily replicates the objectives and guidelines of the Knox Central Structure Plan. Submits that the any key DDO controls can be incorporated into the DPO requirements, and that the DDO can be specifically applied to the Burwood Highway frontage only. 4. Building Heights Considers that the ‘Preferred maximum building heights’ as proposed by DD013 (being generally 24 metres, 12 metres and 18 metres across the site) are unreasonably restrictive for a higher order activity 	<ol style="list-style-type: none"> 1. Noted. As an adjoining landowner Scentre will be kept informed of the Lewis Park Masterplan. 2. Agree in part. Recommend changes to the DDO to provide clarity about the nature of the preferred heights. No change is recommend to the proposed setbacks along Burwood Highway. These are sought to achieve specific, and consistent landscape outcomes, in accordance with the policy intent of the current planning scheme and proposed amendment C149. Revised documentation addressing this issue has been prepared in discussion with the submitter. 3. Noted. Council recommends that the DPO and DDO continue to be applied to the entire site. However, a revised DPO and DDO13 has been prepared in consultation with the submitter, that improves clarity and removes duplicate controls. 4. Accepted in part. The building heights shown for the site were carefully and strategically tested, taking into account key views to the Dandenong Ranges and scale of development required for the activity centre. The Building heights shown in the Structure Plan are discretionary, rather than mandatory and provide guidance for any future development. No changes are recommended to the preferred heights. However, it is recommended that the DDO is modified to provide clarity about the nature of the preferred heights. 5. Accepted in part. In addition to removing repetitive design requirements, and rationalising a number of similar design requirements for clarity, the following changes are recommended: <ul style="list-style-type: none"> - Removal of references to reducing at-grade car parking (as this will occur through any significant redevelopment of the shopping centre.) - Changes to the building design requirements (for all precincts) deleting “Car parking must be underground or concealed so that it is integrated into the overall built form” (noting that the following general design objective will remain “To minimise the visual impact of car parking, services and access when viewed from the public realm”); and changing “buildings should (changed from ‘must’) avoid large, unbroken expanses of walls to the public realm or

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		<p>centre.</p> <p>5. Design requirements Raises concerns regarding some design requirements including: to significantly reduce ground level car parking; conceal and integrate multi-level car parking into the built form; and provide for significant areas of active interfaces to Burwood Highway and Stud Road. Supports in principle strategies relating to the encouragement of street level uses' and active street frontages', but notes that there are often fundamental difficulties in achieving these requirements for a mall and car based retail format such as Westfield Knox.</p> <p>6. Status of existing permit Seeks clarification and/or further discussions with Council officers in relation to the status of the approved (or conditionally approved in association with Planning Permit No. P/2013/6923), and Development Plan in the context of the draft new provisions and the longer term master planning for the centre.</p>	<p><i>oblique side views."</i></p> <p>Recommend retaining the following design requirement within the DDO: <i>"For development with a frontage to Burwood Highway, 80% of the Burwood Highway façade must comprise entries, display windows, clear glazing, or other active interfaces to create visual interest and to allow views between the shopping centre and public realm"</i></p> <p>Recommend retaining the following requirements within the DPO: <i>"A more intense built form along Burwood Highway including clear and legible feature forms to punctuate the Burwood Highway frontage at entry points into the site and at street intersections"</i> and <i>"Active frontages being provided to Burwood Highway, which may comprise entries, shop fronts, display windows, clear glazing, or other engaging interfaces."</i></p> <p>6. Noted. Council will continue to work in partnership with the Scentre Group to facilitate the development of this centre.</p> <p>RECOMMENDATIONS:</p> <ul style="list-style-type: none"> • Substantial restructuring of the text within the DPO to improve clarity and reduce repetition. • Revisions to the DDO to remove a number of references to this site – which are addressed through the revised DPO. • In order to provide clarity about the nature of the preferred heights change the DDO: <i>"A building height must not exceed the heights..."</i> to <i>"A building height should not exceed the heights shown in Figure 2"</i>. <p>Revised documentation addressing the responses and recommendations above has been prepared in consultation with the submitter. Please refer to the revised planning controls presented to Council on 27 March 2017 for detailed track changes as a result of these recommendations.</p>
20	Individual	<ol style="list-style-type: none"> 1. Opposes development along the boundary of Wantirna Lea estate, but does not oppose the overall development of the site (the 'strategic development site'). 2. Notes the biodiversity values of the water body, and supports retention of dam. 3. Concerned with flooding on the site 4. Concern a cul-de-sac alongside Wantirna Lea would result in traffic congestion. 	<ol style="list-style-type: none"> 1. Refer to recommendations in response to the submissions from FOLKS (below). 2. Refer to recommendations in response to the submissions from FOLKS (below). 3. Noted. Council is continuing to liaise with the landowner (Places Victoria) and Melbourne Water in relation to this site and any potential flooding impacts. 4. Refer to recommendations in response to the submissions from FOLKS (below).
021	Individual	<ol style="list-style-type: none"> 1. Considers that High rise development has no place in this area. 2. Traffic is already an issue and should be dealt with before adding more, public transport is inadequate and there is no definite plan to create more options. 	<ol style="list-style-type: none"> 1. Noted. The Structure Plan provides a framework for future development and improvements in the Knox Central Activity Centre. This Activity Centre has long been identified as an area where changes in the types of housing provided and an increase in resident population is anticipated and encouraged. This is identified in a range of Council policies including the 2015 Knox Housing Strategy. The Structure Plan aims to provide for more intense (up to 40m) development to support the Centre's role as the major focal point of the municipality and a premier destination for the outer eastern region of Melbourne. Preferred heights of '5+ stories' have long been in place for this site (since the adoption of the 2005 Urban Design Framework). Given the broad nature of preferred heights additional work was completed to assist with refining preferred heights across the centre. A review of building heights for the Knox Central (including consideration of the 'Kubix' and 'Knoxia' developments), identified key views to the Dandenong Ranges and concluded that the proposed built form framework and scale of development (i.e. heights) would not significantly impact on these views. 2. Noted. <i>The Knox Central Integrated Transport Study</i> was commissioned to review current and future traffic impacts in the activity centre. It reviewed previous studies and undertook traffic modelling and concluded that there was need to improve pedestrian and cyclist safety and amenity and supported the introduction of new road links and access. Council will continue to work with Vic Roads and other authorities to manage these improvements.

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			The Structure Plan includes a number of strategies and actions in relation to public transport improvements in Knox Central, including improvements to the bus network and extension of the No.75 tram line. Council will continue to advocate to the relevant authorities to achieve these.
22A & B	Individual	Concerned about the potential impact on biodiversity and residential amenity as a result of development of the site (the 'strategic development site').	Refer to recommendations in response to the submissions from FOLKS (below).
23	Company	Requests that a property on Parkhurst Drive be rezoned to Mixed Use Zone as future residential development of the Strategic Redevelopment Site will have a detrimental impact on existing industrial land use and development in precinct.	Not accepted. A review of precinct objectives supports the retention of this site in the current Industrial zoning rather than MUZ. The Industrial precinct continues to provide a valuable mix of employment generating demand. It is not appropriate to further fragment the Industrial precinct, and reducing opportunities for a range of employment generating uses. Additionally, there is an adequate supply of residential land proposed across the Activity Centre, within standard residential zones, the proposed Mixed Use Precinct, and permitted within the Commercial Core. For these reasons it is not considered appropriate to rezone additional Industrial land to Mixed Use. Interfaces to the Industrial precinct are highlighted in the Structure Plan, and the appropriate treatment of these interfaces form part of Councils position for the development of this site. Council will continue to advocate for these interfaces to be appropriately managed through the rezoning and development of the strategic Development site.
24	Individual	<ol style="list-style-type: none"> 1. Opposes development along the boundary of Wantirna Lea estate, but does not oppose the overall development of the site (the 'strategic development site'). 2. Notes the biodiversity values of the water body, and supports retention of dam. 3. Concerned with flooding on the site 4. Concern a cul-de-sac alongside Wantirna Lea would result in traffic congestion. 	<ol style="list-style-type: none"> 1. Refer to recommendations in response to the submissions from FOLKS (below). 2. Refer to recommendations in response to the submissions from FOLKS (below). 3. Noted. Council is continuing to liaise with the landowner (Places Victoria) and Melbourne Water in relation to this site and any potential flooding impacts. 4. Refer to recommendations in response to the submissions from FOLKS (below).
25	Individual Same as #26A	<ol style="list-style-type: none"> 1. Opposes development along the boundary of Wantirna Lea estate. 2. Notes the biodiversity values of the water body. 3. Concerned with flooding on the site 4. The proposed development is inconsistent with environmental benefits sought by the amendment and earlier plans. 	<ol style="list-style-type: none"> 1. Refer to recommendations in response to the submissions from FOLKS (below). 2. Refer to recommendations in response to the submissions from FOLKS (below). 3. Noted. Council is continuing to liaise with the landowner (Places Victoria) and Melbourne Water in relation to this site and any potential flooding impacts. 4. Refer to recommendations in response to the submissions from FOLKS (below).
26 A	Individual	<ol style="list-style-type: none"> 1. Opposes development along the boundary of Wantirna Lea estate. 2. Notes the biodiversity values of the water body. 3. Concerned with flooding on the site 4. The proposed development is inconsistent with environmental benefits sought by the amendment and earlier plans. 	<ol style="list-style-type: none"> 1. Refer to recommendations in response to the submissions from FOLKS (below). 2. Refer to recommendations in response to the submissions from FOLKS (below). 3. Noted. Council is continuing to liaise with the landowner (Places Victoria) and Melbourne Water in relation to this site and any potential flooding impacts. 4. Refer to recommendations in response to the submissions from FOLKS (below).
27	Individual	<ol style="list-style-type: none"> 1. Objects to any development over three storeys in the 'Rembrandts Triangle' area, and 530-532 Burwood Highway. 2. Raises concerns relating to privacy, land value, traffic, noise and views. 3. Objects to the proposed height limits along Burwood Highway more broadly. 	<ol style="list-style-type: none"> 1. Not supported. The Structure Plan provides a framework for future development and improvements in the Knox Central Activity Centre. This Activity Centre has long been identified as an area where changes in the types of housing provided and an increase in resident population is anticipated and encouraged. This is identified in a range of Council policies including the 2015 Knox Housing Strategy. The Structure Plan aims to provide for more intense (up to 40m) development to support the Centre's role as the major focal point of the municipality and a premier destination for the outer eastern region of Melbourne.

No.	Submission Source	Submission Summary	Discussion and Recommendation
		<p>4. Objects to the proposed street setback requirement to High Street Road (6m), where it is 12m to Burwood Highway.</p>	<p>Preferred heights of '5+ stories' have long been in place for this site (since the adoption of the 2005 Urban Design Framework). Given the broad nature of preferred heights additional work was completed to assist with refining preferred heights across the centre. A review of building heights for the Knox Central (including consideration of the 'Kubix' and 'Knoxia' developments), identified key views to the Dandenong Ranges and concluded that the proposed built form framework and scale of development (i.e. heights) would not significantly impact on these views.</p> <p>2. Noted. Additional modelling completed in response to this submission shows that any future development (including any 'feature forms' up to 40m) will not result in any overshadowing of existing houses. The High Street Road reservation (approximately 47m) combined with the proposed setbacks set out in the Structure Plan and Planning Scheme Amendment provide an appropriate buffer for any future overlooking and overshadowing. The maintenance and protection of existing residential amenity and interfaces is addressed through design objectives in DDO13 is considered appropriate to address concerns.</p> <p>3. Noted. (See response to number 1 above)</p> <p>4. Not supported. An additional setback to High Street Road is not required to address amenity impacts on existing residential properties. The more generous setbacks proposed along Burwood Highway are sought to achieve specific landscape outcomes, that are no sought along High Street Road.</p>
29	Individual	<p>1. Requests that buildings on the corner of Burwood Highway and High Street Road be no more that 12m and should have a 15m street setback to High Street Road, due to impacts on residential area south of High Street Road.</p> <p>2. Concerned with traffic and car parking increases.</p>	<p>1. Not supported. The Structure Plan provides a framework for future development and improvements in the Knox Central Activity Centre. This Activity Centre has long been identified as an area where changes in the types of housing provided and an increase in resident population is anticipated and encouraged. This is identified in a range of Council policies including the 2015 Knox Housing Strategy. The Structure Plan aims to provide for more intense (up to 40m) development to support the Centre's role as the major focal point of the municipality and a premier destination for the outer eastern region of Melbourne.</p> <p>Preferred heights of '5+ stories' have long been in place for this site (since the adoption of the 2005 Urban Design Framework). Given the broad nature of preferred heights additional work was completed to assist with refining preferred heights across the centre. A review of building heights for the Knox Central (including consideration of the 'Kubix' and 'Knoxia' developments), identified key views to the Dandenong Ranges and concluded that the proposed built form framework and scale of development (i.e. heights) would not significantly impact on these views. Additional modelling completed in response to this submission shows that any future development (including any 'feature forms' up to 40m) will not result in any overshadowing of existing houses. The High Street Road reservation (approximately 47m) combined with the proposed setbacks set out in the Structure Plan and Planning Scheme Amendment provide an appropriate buffer for any future overlooking and overshadowing.</p> <p>An additional setback to High Street Road is not required to address amenity impacts on existing residential properties. The more generous setbacks proposed along Burwood Highway are sought to achieve specific landscape outcomes, that are no sought along High Street Road.</p> <p>The maintenance and protection of existing residential amenity and interfaces is addressed through design objectives in DDO13 is considered appropriate to address concerns.</p> <p>2. Noted. <i>The Knox Central Integrated Transport Study</i> was commissioned to review current and future traffic impacts in the activity centre. It reviewed previous studies and undertook traffic modelling and concluded that there was need to improve pedestrian and cyclist safety and amenity and supported the introduction of new road links and access. Council will continue to work with Vic Roads and other authorities to manage these improvements. <i>The Knox Central Integrated Transport Study</i> highlighted that there is considerable provision of both on and off street car parking, and no evidence of overspill into neighbouring residential streets. It recommends that, in the short term,</p>

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			parking provisions for new development should be in accordance with current statutory requirements contained in the Knox Planning Scheme (See Clause 52.06 of the Knox Planning Scheme), which ensures the provision of an appropriate number of car parking spaces having regard to the demand likely to be generated from development, the activities on the land and the nature of the locality.
30	Individual	Requests that buildings on the corner of Burwood Highway and High Street Road be no more than 12m and should have a 15m street setback to High Street Road, due to impacts on residential area south of High Street Road.	<p>Not supported</p> <p>The Structure Plan provides a framework for future development and improvements in the Knox Central Activity Centre. This Activity Centre has long been identified as an area where changes in the types of housing provided and an increase in resident population is anticipated and encouraged. This is identified in a range of Council policies including the 2015 Knox Housing Strategy. The Structure Plan aims to provide for more intense (up to 40m) development to support the Centre's role as the major focal point of the municipality and a premier destination for the outer eastern region of Melbourne. Preferred heights of '5+ stories' have long been in place for this site (since the adoption of the 2005 Urban Design Framework). Given the broad nature of preferred heights additional work was completed to assist with refining preferred heights across the centre. A review of building heights for the Knox Central (including consideration of the 'Kubix' and 'Knoxia' developments), identified key views to the Dandenong Ranges and concluded that the proposed built form framework and scale of development (i.e. heights) would not significantly impact on these views.</p> <p>Additional modelling completed in response to this submission shows that any future development (including any 'feature forms' up to 40m) will not result in any overshadowing of existing houses. The High Street Road reservation (approximately 47m) combined with the proposed setbacks set out in the Structure Plan and Planning Scheme Amendment provide an appropriate buffer for any future overlooking and overshadowing.</p> <p>An additional setback to High Street Road is not required to address amenity impacts on existing residential properties. The more generous setbacks proposed along Burwood Highway are sought to achieve specific landscape outcomes, that are not sought along High Street Road.</p> <p>The maintenance and protection of existing residential amenity and interfaces is addressed through design objectives in DDO13 is considered appropriate to address concerns.</p>
031	Individual	<ol style="list-style-type: none"> 1. Objects to development adjacent to Wantirna Lea Estate, as the area is prone to flooding. 2. Wants to see preservation of the water body and associated flora and fauna. 	<ol style="list-style-type: none"> 1. Noted Council is continuing to liaise with the landowner (Places Victoria) and Melbourne Water in relation to this site and any potential flooding impacts. 2. Noted <i>Refer to recommendations in response to the submissions from FOLKS (below).</i>
032	Individual	Submission relates to 382 Burwood Highway and proposed 12m setback from Burwood Highway. Submits that this setback prevents the site from achieving the objectives of the structure plan and will result in an underdevelopment of the site.	<p>Not supported.</p> <p>The setbacks proposed along Burwood Highway are sought to achieve specific, and consistent landscape outcomes, consistent with policy intent of the current planning scheme and proposed amendment C149. Additional modelling completed in response to this submission show a limited impact of the development potential of this site as a result of a change in setback. There are a number of other site constraints that impact this site (such as the lot width, access and flooding). Therefore, we recommend that the 12m setback along Burwood Highway remain.</p>
033	Individual	Objects to the number of development sites along Burwood Highway and the proposed building heights as this type of development is out of keeping with the area.	<p>Noted.</p> <p>The Structure Plan provides a framework for future development and improvements in the Knox Central Activity Centre. This Activity Centre has long been identified as an area where changes in the types of housing provided and an increase in resident population is anticipated and encouraged. This is identified in a range of Council policies including the 2015 Knox Housing Strategy. The Structure Plan aims to provide for more intense (up to 40m) development to support the Centre's role as the major focal point of the municipality and a premier destination for the outer eastern region of Melbourne. Preferred heights of '5+ stories' have long been in place for this site (since the adoption of the 2005 Urban Design Framework). Given the broad nature of preferred heights additional work was completed to assist with refining preferred heights across the centre. A review of building heights for the Knox Central (including consideration of the 'Kubix' and 'Knoxia' developments), identified key views to the Dandenong Ranges and concluded that the proposed built form framework and scale of development (i.e. heights) would not significantly impact on these views.</p>

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034	Consultant (on behalf of landowner)	Broad support of Amendment C149. Requests that the height requirement in the DDO13 is amended to reflect the requirement of the Residential Growth Zone that applies to the site (on Jackson Road)	Accepted. Requirements in relation to building heights and car parking in the DDO should be discretionary to allow for design flexibility. RECOMMENDATIONS: 1. Preferred heights in the Structure Plan and the DDO be amended to show a preferred height limit of 13.5m (up from 12m) for properties in White, Jackson and Tyner Road within the Residential Growth Zone. This will provide greater clarity within the planning scheme as it is consistent with the zone (which has discretionary height controls); and additional modelling undertaken in response to this submission does not show a substantial increase in development potential with the change in preferred heights by 1.5m – based on the application of ‘ResCode’ provisions. 2. In order to provide clarity about the nature of the preferred heights change the DDO: “A building height must not exceed the heights... ” to “A building height should not exceed the heights shown in Figure 2 ”.
035	School	General support for proposal but requests opportunity to make further submissions at Panel.	No further action required, following a meeting with the school and planning representatives.
036	Government Agency (EPA)	1. Supports the application of the Environmental Audit Overlay to sites proposed to be rezoned to Mixed Use Zone. 2. Notes that future development should comply with SEPP N1 and SEPP N2 as appropriate.	1. Noted. 2. Noted.
037	Individual	1. Fully supports and endorses the plan for Knox Central. 2. Supports ongoing advocacy for the extension of the tram line. 3. Supports the future signalisation of Boronia Road Lewis Road intersection.	1. Noted 2. Noted. The Structure Plan includes a number of strategies and actions in relation to public transport improvements in Knox Central, including improvements to the bus network and extension of the No.75 tram line. Council will continue to advocate to the relevant authorities to achieve these. 3. Noted.
038	Places Victoria	1. Water Body Places Victoria has undertaken initial due diligence in relation to the existing dam on the site. Their submission includes a draft Stormwater Management Plan. This report considers the future of the on-site dam and the need for a high level of water management. The draft Stormwater Management Plan, provides stormwater management solutions which include the consideration of improving and replacing the functions of the dam through the creation of an alternative wetland area, stormwater treatment wetland and sedimentation basin. Maintaining the dam on the site poses a number of challenges and better environmental outcomes could be achieved through the removal of this dam and construction of water bird habitat in the adjacent area. The key reasons for removing the dam are that the: <ul style="list-style-type: none"> • Embankment is of unknown construction materials and quality. • Embankment is very close to Blind Creek. The dam could be removed and the development built with a setback of over 30 metres from creek allowing for a more continuous waterway corridor with a road 	1. Not supported. Council acknowledges the significance of the dam (which has been naturalised) and the surrounding native vegetation. However, Council recognises that parts of the dam will need to be modified to address public safety concerns. For these reasons, Council sought the services of an independent ecological expert to determine the dam’s ecological significance and advise Council on how to best protect its valued habitat, while improving its ability to function and support the future redevelopment of the site. The changes sought to the Structure Plan and local planning policy (Cl. 22.15) are not supported. Alternatively, Council recommends changes that highlight the biological significance of the Dam (as identified by the ESO2) and seek an outcome that includes the retention of the biological values of the existing water body. Requests to change language to ‘where possible’ and ‘investigate the potential’ are not supported. 2. Not supported The ‘Masterplan’ for this site included in the Structure Plan represents Council position for the development of this site. It is recommended that the future application of the DPO is the most appropriate tool to support the redevelopment of this site. 3. Accept in part. The consistent approach to building heights throughout the structure plan and proposed changes to the planning scheme is the use of building heights (in metres). The use of heights not storeys was selected because of the range of floor to ceiling building heights across the range of uses proposed within the centre. Recommend changes to the DDO to provide clarity about the nature of the preferred heights. No change is recommended to the proposed setbacks along Burwood Highway. These are sought to achieve specific, and consistent landscape outcomes, in accordance with the policy intent of the current planning scheme and proposed amendment C149. It is the intention of the Structure Plan to achieve active frontage to both sides – therefore a change from must to should

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		<p>fronting the creek corridor to promote access and surveillance of the creek corridor.</p> <ul style="list-style-type: none"> • Dam fills with untreated stormwater and its current design is not suitable to provide stormwater treatment. Retro fitting the existing dam to provide stormwater treatment will have a significant detrimental impact on the existing fauna on the site during construction. The normal water level of the dam and the incoming invert of the pipe for Fairhills High School will make it difficult to provide stormwater treatment upstream of the existing dam but within the development area. • Dam provides very limited flood storage as it is usually full to full supply level. • Dam does not comply with safety requirements for urban public water bodies. <p>While the dam provides some habitat for water birds of state significance, which includes the FFG listed species of Blue Billed Duck, the report states that better habitat can be provided with an alternative wetland habitat. Requests a change of wording to: The development <i>should</i> investigate the opportunity to retain and enhance the waterbody on site and review options to facilitate integrated water management and to provide a high level of neighbourhood amenity.</p> <p>Requests a change of wording to: Provide a natural open space adjoining Blind Creek with facilities (e.g. park furniture) and retain canopy trees <i>where possible</i>.</p> <p>Change wording to: <i>Investigate the potential</i> to provide additional connections to the Blind Creek linear public open space and shared path.</p> <p>2. Application of overlays</p> <p>Requests that acknowledgement is made that the Master Plan represents an initial design response which will be subject to further review and change. This review and change will consider the relevant planning controls for the site (i.e. zones and overlays).</p> <p>While it is likely that a DPO will be applied to the subject land, the site is still subject to a strategic planning review to confirm that this is the most appropriate tool.</p> <p>Requests that wording is amended as follows: “Apply the Development Plan Overlay or <i>similar</i>”.</p> <p>3. Drafting issues</p> <p>Raises concern with the use of the term <i>must</i>, which would be interpreted as a mandatory requirement.</p> <p>Supports a performance based approach by adopting the</p>	<p>is not recommended.</p> <p>The following changes to the building design requirements (for all precincts) are recommended: deleting “<i>Car parking must be underground or concealed so that it is integrated into the overall built form</i>” (noting that the following general design objective will remain “<i>To minimise the visual impact of car parking, services and access when viewed from the public realm</i>”); and changing “<i>buildings should</i> (changed from ‘<i>must</i>’) <i>avoid large, unbroken expanses of walls to the public realm or oblique side views.</i>”</p> <p>4. Not supported</p> <p>While noting that the traffic impacts of the proposed development are being considered. Requests to change language to ‘<i>possible</i>’ and ‘<i>investigate the potential</i>’ are not supported.</p> <p>5. Refer to 1 to 4 (above)</p> <p>RECOMMENDATIONS:</p> <p>In Cl 22.15 change “<i>Require the development of the Strategic Redevelopment Site Precinct to retain and enhance the existing water body on site in order to facilitate integrated water management and to reinforce its ecological function and provide a high level of neighbourhood amenity.</i>”</p> <p>To: <i>Development of the Strategic Development Site must:</i></p> <ul style="list-style-type: none"> o <i>include retention of the biological values of the existing water body;</i> o <i>facilitate integrated water management; and</i> o <i>provide a high level of neighbourhood amenity.</i> <p>In DDO13 Modify the following design objectives:</p> <ul style="list-style-type: none"> - Delete: Balconies and ground level windows must be provided overlooking the street, driveways and/or any adjoining public open space to maximise passive surveillance. - Delete: At-grade car parking should not be visible from Burwood Highway. - Buildings should (change from ‘<i>must</i>’) avoid large, unbroken expanses of walls to the public realm or oblique side views. <p>Consistent with the recommended changes to the local planning policy amend the Structure Plan to highlight the biological significance of the Dam (as identified by the ESO2) and seek an outcome that includes the retention of the biological values of the existing water body.</p> <p>As the future rezoning of this site will be facilitated by the State Government Fast Track Rezoning process it is recommended that the section in the structure plan that considers this site include the Objectives, Strategies and Actions that specifically relate to the development of this site. This will provide greater context for the built form guidelines and provide a consolidated point of reference for development expectations for this site.</p>

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		<p>term should where appropriate.</p> <p>While noting that Places Victoria is in the early phases of master planning for the site, the proposed building heights are generally consistent with current thinking. However, a consistent approach to expressing building heights is encouraged, in relation to the number of storeys and metres.</p> <p>4. Traffic management infrastructure</p> <p>Notes that the traffic impacts of the proposed development are still under review.</p> <p>Requests a change of wording to: <i>Possible</i> signalised intersection (Scoresby Road).</p> <p>Requests a change of wording to: <i>Investigate the potential</i> to deliver an upgrade to the existing bus stop along Scoresby Road (near Applegum Crescent).</p> <p>5. Knox Central Structure Plan</p> <p>Makes the following recommendations for changes to the Structure Plan</p> <ul style="list-style-type: none"> • Change wording to: Building heights should be generally in accordance with Figure 15. • Change wording to: The development should investigate the opportunity to retain and enhance the waterbody on site and review options to facilitate integrated water management and to provide a high level of neighbourhood amenity • Change wording to: Provide a natural open space adjoining Blind Creek with facilities (e.g. park furniture) and retain canopy trees where possible. • Change wording to: Investigate the potential to provide additional connections to the Blind Creek linear public open space and shared path. • Change wording to: Investigate the potential to deliver an upgrade to the existing bus stop along Scoresby Road (near Applegum Crescent). • Places requests that acknowledgement is made that the Master Plan represents an initial design response which will be subject to further review and change. This review and change will consider the relevant planning controls for the site (i.e. zones and overlays). 	
039	Individual	<ol style="list-style-type: none"> 1. Concerned with residential amenity impacts (overlooking, visual bulk), increased traffic and carparking with increased density proposed around property in White Road. No more Kubix type development. Requests no more apartments in the area. 2. Retention of Tyner Road terraces and possible 	<p>1. Noted.</p> <p>The Structure Plan provides a framework for future development and improvements in the Knox Central Activity Centre. This Activity Centre has long been identified as an area where changes in the types of housing provided and an increase in resident population is anticipated and encouraged. This is identified in a range of Council policies including the 2015 Knox Housing Strategy. The Structure Plan aims to provide for more intense (up to 40m) development to support the Centre's role as the major focal point of the municipality and a premier destination for the outer eastern region of Melbourne.</p>

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		<p>heritage listing.</p> <p>3. Improvement to open space and more greenery.</p>	<p>Preferred heights of '5+ stories' have long been in place for this site (since the adoption of the 2005 Urban Design Framework). Given the broad nature of preferred heights additional work was completed to assist with refining preferred heights across the centre. A review of building heights for the Knox Central (including consideration of the 'Kubix' and 'Knoxia' developments), identified key views to the Dandenong Ranges and concluded that the proposed built form framework and scale of development (i.e. heights) would not significantly impact on these views.</p> <p><i>The Knox Central Integrated Transport Study</i> was commissioned to review current and future traffic impacts in the activity centre. It reviewed previous studies and undertook traffic modelling and concluded that there was need to improve pedestrian and cyclist safety and amenity and supported the introduction of new road links and access. Council will continue to work with Vic Roads and other authorities to manage these improvements.</p> <p><i>The Knox Central Integrated Transport Study</i> highlighted that there is considerable provision of both on and off street car parking, and no evidence of overspill into neighbouring residential streets. It recommends that, in the short term, parking provisions for new development should be in accordance with current statutory requirements contained in the Knox Planning Scheme (See Clause 52.06 of the Knox Planning Scheme), which ensures the provision of an appropriate number of car parking spaces having regard to the demand likely to be generated from development, the activities on the land and the nature of the locality.</p> <p>The maintenance and protection of existing residential amenity and interfaces is addressed through 'ResCode' and design objectives in DDO13 is considered appropriate to address concerns about overlooking and visual bulk.</p> <p>2. Not Supported. Sites of historic significance for Knox Central were identified in the Heritage Assessment Report for Knox Central (Context 2016). The terraces were not considered to be historically significant.</p> <p>3. Noted. There are large areas of open space included within Knox Central, and one of the Structure Plan actions is a Master plan for Lewis Park (and Blind Creek) to improve the existing open space. The Structure Plan also includes measures to improve landscaping along the Burwood Highway Corridor.</p>
040	Individual	<ol style="list-style-type: none"> 1. Increased traffic and parking congestion around Tyner Road and in general. 2. No additional density without increased public transport. 3. Concerned with precedent set with Kubix development - design quality, loss of "green" feel. 4. Concerns that High and medium-density residential developments bring crime. 5. Supports Lake Knox proposal. 	<p>1. Noted <i>The Knox Central Integrated Transport Study</i> was commissioned to review current and future traffic impacts in the activity centre. It reviewed previous studies and undertook traffic modelling and concluded that there was need to improve pedestrian and cyclist safety and amenity and supported the introduction of new road links and access. Council will continue to work with Vic Roads and other authorities to manage these improvements.</p> <p><i>The Knox Central Integrated Transport Study</i> highlighted that there is considerable provision of both on and off street car parking, and no evidence of overspill into neighbouring residential streets. It recommends that, in the short term, parking provisions for new development should be in accordance with current statutory requirements contained in the Knox Planning Scheme (See Clause 52.06 of the Knox Planning Scheme), which ensures the provision of an appropriate number of car parking spaces having regard to the demand likely to be generated from development, the activities on the land and the nature of the locality.</p> <p>2. Noted. The Structure Plan includes a number of strategies and actions in relation to public transport improvements in Knox Central, including improvements to the bus network and extension of the No.75 tram line. Council will continue to advocate to the relevant authorities to achieve these.</p> <p>3. Noted. Preferred heights of '5+ stories' have long been in place for this site (since the adoption of the 2005 Urban Design Framework). Given the broad nature of preferred heights additional work including a view line analysis was completed to assist with refining preferred heights across the centre. A review of building heights for the activity centre (including the Kubix and Nokia developments), identified key views to the Dandenong Ranges and concluded that the general built form framework and scale of development would not significantly impact on these views</p> <p>4. Concerns are noted.</p>

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			<p>Under the State Planning Policy Framework (Clause 11.01-2 Activity Centre Planning) planning must consider as relevant: <i>Safer Design Guidelines for Victoria</i> (Crime Prevention Victoria and the Department of Sustainability and Environment, 2005). Additionally, the Municipal Strategic Statement (Clause 21.04 Urban Design) includes the following strategy: “Ensure that new development incorporates Ecologically Sustainable Design (ESD) principles, Safer Design Principles and Crime Prevention Through Environmental Design (CPTED).” These are considered sufficient to address these concerns.</p> <p>5. Noted. <i>Refer to recommendations in response to the submissions from FOLKS (below)..</i></p>
041	Company	<ol style="list-style-type: none"> 1. Seek future use of site (258 Scoresby Road) for aged care, accommodation uses office space and food and drink premises, and a higher built form limit (than the proposed 12m). 2. C149 shows site as open space, conflict with current and proposed controls for the site, incompatible height limit for size of site. 	<p>1. Not supported. The site was <i>deliberately</i> included within the Open Space and Recreation Precinct. This precinct includes open space and a mix of public and private recreation facilities, which Council has sought to identity and enhance as the residential community within Knox Central grows. The <i>Knox Central Key Issues Background Report</i> includes the following as an Open Space and Recreation Opportunity and Consideration: <i>Retain 256 - 258 Scoresby Road as land for complementary recreational uses.</i> This site has a Special Use Zone that is consistent with the future and Council’s intended future use for this site. The purpose of the zone recognises the use of private facilities including community, sporting leisure, recreation, education and religious facilities, and the consideration of flood risk in future development (which also applies to this site). The preferred height of 12m is considered appropriate for this site, within the Open Space and Recreation Precinct; its the preferred future land uses; and the context of this site - located on the edge of the Activity Centre, with adjoining land uses being open space, community gardens and residential land within a ‘Knox Neighbourhood setting’. Simply because a site is large does not make it ‘strategic’ or an ideal site for residential development. The use and development proposed in this submission do not support the purpose of the zone, or the open space and recreation precinct.</p> <p>2. Not supported Refer to 1 (above)</p> <p>RECOMMENATION: Council acknowledge the ‘Open space and recreation precinct’ in both the Structure Plan and local planning policy does not have objectives and visions. It is recommended that this oversight is corrected and that the relevant Vision for this site is included within the Structure Plan and Local Planning policy. Within the Local Planning Policy (Cl. 22.15) it is recommended that the vision for this precinct read: ‘This precinct will continue to provide significant open space and areas for recreation. This includes the provision of private facilities for sporting / leisure and recreation purposes.’</p>
042	Individual	<ol style="list-style-type: none"> 1. Oppose high density development such as Kubix. 2. Need to define exceptional design - how will this be assessed. 3. Increased traffic and parking congestion. 4. Lack of green space. 5. Supports Lake Knox proposal. 	<p>1. Noted The Structure Plan provides a framework for future development and improvements in the Knox Central Activity Centre. This Activity Centre has long been identified as an area where changes in the types of housing provided and an increase in resident population is anticipated and encouraged. This is identified in a range of Council policies including the 2015 Knox Housing Strategy. The Structure Plan aims to provide for more intense (up to 40m) development to support the Centre’s role as the major focal point of the municipality and a premier destination for the outer eastern region of Melbourne. Preferred heights of ‘5+ stories’ have long been in place for this site (since the adoption of the 2005 Urban Design Framework). Given the broad nature of preferred heights additional work was completed to assist with refining preferred heights across the centre. A review of building heights for the Knox Central (including consideration of the ‘Kubix’ and ‘Knoxia’ developments), identified key views to the Dandenong Ranges and concluded that the proposed built form framework and scale of development (i.e. heights) would not significantly impact on these views.</p> <p>2. Noted. Design assessment is based on a number of criteria including that provided in the Knox Planning Scheme and other urban design and architectural principles. The use of “exceptional design” in the Knox Central context is for development</p>

No.	Submission Source	Submission Summary	Discussion and Recommendation
			<p>that 'exceeds' standard development, allows flexibility for unique and innovative design solutions.</p> <p>3. Noted. <i>The Knox Central Integrated Transport Study</i> was commissioned to review current and future traffic impacts in the activity centre. It reviewed previous studies and undertook traffic modelling and concluded that there was need to improve pedestrian and cyclist safety and amenity and supported the introduction of new road links and access. Council will continue to work with Vic Roads and other authorities to manage these improvements. <i>The Knox Central Integrated Transport Study</i> highlighted that there is considerable provision of both on and off street car parking, and no evidence of overspill into neighbouring residential streets. It recommends that, in the short term, parking provisions for new development should be in accordance with current statutory requirements contained in the Knox Planning Scheme (See Clause 52.06 of the Knox Planning Scheme), which ensures the provision of an appropriate number of car parking spaces having regard to the demand likely to be generated from development, the activities on the land and the nature of the locality.</p> <p>4. Noted. There are large areas of open space included within Knox Central, and one of the Structure Plan actions is a Master plan for Lewis Park (and Blind Creek) to improve the existing open space.</p> <p>5. Noted. <i>Refer to recommendations in response to the submissions from FOLKS (below).</i></p>
043	Knox Community Gardens	<ol style="list-style-type: none"> 1. Supports C149 description of and support for community garden. 2. Concerns with building heights proposed for 258 Scoresby Road, and that a residential development on this site will impact on current views to the Dandenong Ranges. 3. Concerned with future pedestrian access to site, and potential crime impacts on gardens. 	<ol style="list-style-type: none"> 1. Noted. 2. Noted. No changes are proposed to the preferred building heights for 258 Scoresby Road (12 meters). This site is located within the Open Space and Recreation precinct – not a mixed use or residential precinct; accordingly, the site will remain in the Special Use Zone. The maintenance and protection of existing residential amenity and interfaces is addressed through design objectives in DDO13 is considered appropriate to address concerns. 3. Noted. Any changes to access will be undertaken in consultation with operators of Gardens.
044	Individual	<ol style="list-style-type: none"> 1. Supports the intention of the amendment to increase residential density but concerned with traffic and car parking, congestion. 2. Suggests extension of centre to reduce density and not concentrate increased traffic in one small area. 	<ol style="list-style-type: none"> 1. Noted. <i>The Knox Central Integrated Transport Study</i> was commissioned to review current and future traffic impacts in the activity centre. It reviewed previous studies and undertook traffic modelling and concluded that there was need to improve pedestrian and cyclist safety and amenity and supported the introduction of new road links and access. Council will continue to work with Vic Roads and other authorities to manage these improvements. <i>The Knox Central Integrated Transport Study</i> highlighted that there is considerable provision of both on and off street car parking, and no evidence of overspill into neighbouring residential streets. It recommends that, in the short term, parking provisions for new development should be in accordance with current statutory requirements contained in the Knox Planning Scheme (See Clause 52.06 of the Knox Planning Scheme), which ensures the provision of an appropriate number of car parking spaces having regard to the demand likely to be generated from development, the activities on the land and the nature of the locality. 2. Not supported. Changes to the boundary to manage traffic congestion is not recommended.
045	Individual	Objects to any development over three storeys in the 'Rembrandts Triangle' area. New development will be out of character with existing area, area is not Doncaster. Concerned with loss of privacy in surrounding area, also objects to the proposed height limits along Burwood Highway more broadly. Suggests a 15m setback along High Street Road.	<p>Not supported</p> <p>The Structure Plan provides a framework for future development and improvements in the Knox Central Activity Centre. This Activity Centre has long been identified as an area where changes in the types of housing provided and an increase in resident population is anticipated and encouraged. This is identified in a range of Council policies including the 2015 Knox Housing Strategy. The Structure Plan aims to provide for more intense (up to 40m) development to support the Centre's role as the major focal point of the municipality and a premier destination for the outer eastern region of Melbourne. Preferred heights of '5+ stories' have long been in place for this site (since the adoption of the 2005 Urban Design Framework). Given the broad nature of preferred heights additional work was completed to assist with refining preferred</p>

No.	Submission Source	Submission Summary	Discussion and Recommendation
			<p>heights across the centre. A review of building heights for the Knox Central (including consideration of the 'Kubix' and 'Knoxia' developments), identified key views to the Dandenong Ranges and concluded that the proposed built form framework and scale of development (i.e. heights) would not significantly impact on these views.</p> <p>Additional modelling completed in response to this submission shows that any future development (including any 'feature forms' up to 40m) will not result in any overshadowing of existing houses. The High Street Road reservation (approximately 47m) combined with the proposed setbacks set out in the Structure Plan and Planning Scheme Amendment provide an appropriate buffer for any future overlooking and overshadowing.</p> <p>An additional setback to High Street Road is not required to address amenity impacts on existing residential properties. The more generous setbacks proposed along Burwood Highway are sought to achieve specific landscape outcomes, that are not sought along High Street Road.</p> <p>The maintenance and protection of existing residential amenity and interfaces is addressed through design objectives in DDO13 is considered appropriate to address concerns.</p>
046	Individual	<ol style="list-style-type: none"> 1. Opposes development along the boundary of Wantirna Lea estate. 2. Notes the biodiversity values of the water body on the site. 3. Notes the flooding issues associated with the site. Supports retention of dam. 4. Concern a cul-de-sac alongside Wantirna Lea would result in traffic congestion and is in conflict with the current UDF. 5. Does not oppose the overall development of the site. 	<ol style="list-style-type: none"> 1. Refer to recommendations in response to the submissions from FOLKS (below). 2. Refer to recommendations in response to the submissions from FOLKS (below). 3. Noted. Council is continuing to liaise with the landowner (Places Victoria) and Melbourne Water in relation to this site and any potential flooding impacts. 4. Refer to recommendations in response to the submissions from FOLKS (below). 5. Noted.
047	Individual	Oppose development on Lake Knox, and retention of dam for its biodiversity values.	Refer to recommendations in response to the submissions from FOLKS (below).
048	Individual	<ol style="list-style-type: none"> 1. Oppose increase in density because of impacts on living standards in the Knox community. 2. Increased traffic and car parking congestion, already an issue in Tyner Road, also along Burwood Highway, which will get worse with more development, also suggests over/underpass across Burwood Highway for safety. 3. Future development should be only 2 storeys and restricted to Burwood Highway, as increased density will lead to loss of trees, overshadowing and privacy. 4. Concerns with interpretation with wording of documents. 	<ol style="list-style-type: none"> 1. Noted. The maintenance and protection of existing residential amenity and interfaces is addressed through design objectives in DDO13 is considered appropriate to address concerns. 2. Noted. <i>The Knox Central Integrated Transport Study</i> was commissioned to review current and future traffic impacts in the activity centre. It reviewed previous studies and undertook traffic modelling and concluded that there was need to improve pedestrian and cyclist safety and amenity and supported the introduction of new road links and access. Council will continue to work with Vic Roads and other authorities to manage these improvements. <i>The Knox Central Integrated Transport Study</i> highlighted that there is considerable provision of both on and off street car parking, and no evidence of overspill into neighbouring residential streets. It recommends that, in the short term, parking provisions for new development should be in accordance with current statutory requirements contained in the Knox Planning Scheme (See Clause 52.06 of the Knox Planning Scheme), which ensures the provision of an appropriate number of car parking spaces having regard to the demand likely to be generated from development, the activities on the land and the nature of the locality. 3. Not accepted. The Structure Plan provides a framework for future development and improvements in the Knox Central Activity Centre. This Activity Centre has long been identified as an area where changes in the types of housing provided and an increase in resident population is anticipated and encouraged. This is identified in a range of Council policies including the 2015 Knox Housing Strategy. The Structure Plan aims to provide for more intense (up to 40m) development to support the Centre's role as the major focal point of the municipality and a premier destination for the outer eastern region of Melbourne. Preferred heights of '5+ stories' have long been in place for this site (since the adoption of the 2005 Urban Design

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			Framework). Given the broad nature of preferred heights additional work was completed to assist with refining preferred heights across the centre. A review of building heights for the Knox Central (including consideration of the 'Kubix' and 'Knoxia' developments), identified key views to the Dandenong Ranges and concluded that the proposed built form framework and scale of development (i.e. heights) would not significantly impact on these views. 4. Language has been reviewed, no changes are recommended.
049	Individual	<ol style="list-style-type: none"> 1. Oppose development around "Lake Knox", for biodiversity values in surrounding area, loss of liveability. 2. Requests retention of land behind lake and existing residential along Blind Creek. 	Refer to recommendations in response to the submissions from FOLKS (below).
50	Consultant on behalf of landowner - Place of Worship	<ol style="list-style-type: none"> 1. Overall supportive of amendment, including the support for places of worship in CI22.15 and DDO13. 2. Concerned that an increasingly residential context has the potential to impact operations. Requests that noise attenuation measures in DDO13 will protect existing uses in this area. 	<ol style="list-style-type: none"> 1. Noted 2. Noted, no change recommended. <p>The noise attenuation measures in the proposed DDO13, along with EPA regulations in relation to noise will ensure that existing operations can continue.</p>
51	landowner (Villa Maria)	<ol style="list-style-type: none"> 1. Objects to DDO13 and mandatory height, and other design controls (such as 'car parking must be underground or concealed') as they are more restrictive than the current planning scheme. Seeking clarity whether height limits are mandatory or discretionary. 2. Concerns regarding current planning permits with height limits approved higher than the controls in DDO13. 	<ol style="list-style-type: none"> 1. Accept. Council officers clarified the nature of the proposed building heights with the submitter in January 2017. Requirements in relation to building heights and car parking in the DDO should be discretionary to allow for design flexibility, and we recommend relying on a general objective relating to car parking rather than a specific design requirement. 2. Noted. The discretionary nature of the proposed controls, and recommended changes in response to this submission should address these concerns. <p>RECOMMENDATIONS: Change the DDO as follows: Delete the following design building design requirement "Car parking must be underground or concealed so that it is integrated into the overall built form." The following general design objective will remain "To minimise the visual impact of car parking, services and access when viewed from the public realm." In order to provide clarity about the nature of the preferred heights change the DDO: "A building height must not exceed the heights..." to "A building height should not exceed the heights shown in Figure 2".</p>
76B	Individual	Supplementary submission, that included photographs showing flooding impacts on 'Lake Knox site.	Supplementary submission noted. Refer to recommendations in response to the submissions from FOLKS (below).
79	Individual	Landowner in proposed Mixed Use Area. <ol style="list-style-type: none"> 1. Requests more Council enforcement on noise, once development commences. 2. Concerns with limitations of use of land. 3. Queries transitional arrangements. 4. Concerns about property values and impacts on single titles. 	<ol style="list-style-type: none"> 1. Noted. This comment has been passed on to Council's enforcement officers 2. Noted. Current businesses will be able to continue operation under 'existing use rights'. 3. Noted. The transition from an industrial focussed area to a mixed use precinct will require careful management and include regular communication with affected landowners and occupiers/operators. 4. Noted.
93	Individual	<ol style="list-style-type: none"> 1. Strongly opposed to high density residential and commercial development along Burwood Hwy and in Knoxfield. 2. Seeks Knox to be uncluttered with open space and room to move. 	<ol style="list-style-type: none"> 1. Noted The Structure Plan provides a framework for future development and improvements in the Knox Central Activity Centre. This Activity Centre has long been identified as an area where changes in the types of housing provided and an increase in resident population is anticipated and encouraged. This is identified in a range of Council policies including the 2015 Knox Housing Strategy. The Structure Plan aims to provide for more intense (up to 40m) development to support the

No.	Submission Source	Submission Summary	Discussion and Recommendation
		<p>3. Should not be creating an area like Whitehorse Road Box Hill and Ringwood, Lonsdale Street Dandenong.</p> <p>4. New development will ruin 'Gateway to Dandenongs', increase congestion and create "slum" like conditions, and development like Kubix.</p>	<p>Centre's role as the major focal point of the municipality and a premier destination for the outer eastern region of Melbourne.</p> <p>Preferred heights of '5+ stories' have long been in place for this site (since the adoption of the 2005 Urban Design Framework). Given the broad nature of preferred heights additional work was completed to assist with refining preferred heights across the centre. A review of building heights for the Knox Central (including consideration of the 'Kubix' and 'Knoxia' developments), identified key views to the Dandenong Ranges and concluded that the proposed built form framework and scale of development (i.e. heights) would not significantly impact on these views.</p> <p>2. Noted. There are large areas of open space included within Knox Central, and one of the Structure Plan actions is a Master plan for Lewis Park (and Blind Creek) to improve the existing open space. Additional open spaces will be provided as part of the development of the strategic development site.</p> <p>3. Noted, refer to 1 (above)</p> <p>4. Noted, refer to 1 (above)</p>
97	Consultant (on behalf of landowner)	<p>1. Broadly supportive of C149, and proposals for boulevard and increased building heights along Burwood Highway.</p> <p>2. Seeks to apply MUZ to industrial sites along Burwood Hwy (between Lewis Road and the DELWP site), for consistent controls through area, as current IN1Z controls are too restrictive.</p>	<p>1. Noted</p> <p>2. Not supported. A review of precinct objectives supports the retention of sites along Burwood Highway in the current Industrial zoning rather than MUZ. The Industrial precinct continues to provide a valuable mix of employment generating demand. It is not appropriate to further fragment the Industrial precinct, and reducing opportunities for a range of employment generating uses. Additionally, there is an adequate supply of residential land proposed across the Activity Centre, within standard residential zones, the proposed Mixed Use Precinct, and permitted within the Commercial Core. For these reasons it is not considered appropriate to rezone additional Industrial land to Mixed Use.</p>
98 A, B, & C	Government Agency (VicRoads)	<p>New agency incorporating strategic planning functions of VicRoads, PTV and other transport planning agencies.</p> <p>1. Doesn't support amendment in current form as premature given that they do not support the Integrated Transport Study (ITS) that formed part of the Knox Central Structure Plan and C149. Doesn't support ITS as drafted as they were not involved in its preparation, methodology and input assumptions.</p> <p>2. Generally supportive of development of structure plan for area.</p> <p>3. Seeks references to 'lobby' be changed to liaise with VicRoads... or similar.</p> <p>4. Seeking meeting with Council to discuss comments (<i>this occurred in February 2017</i>)</p> <p>5. Supplementary submission 98B consisted of proposed revisions to the DPO2:</p> <ul style="list-style-type: none"> • including a requirement for a Transport Impact Assessment report that assesses the development impact on the arterial road network and; • a requirement for a future development plan to provide details of vehicular and pedestrian access, the development impact on the surrounding road network and how the impact will be mitigated. 	<p>1. Noted, changes recommended The Knox Central Integrated Transport Study was undertaken in 2015/2016 and was one of many inputs that informed the development of the draft Structure Plan. Both PTV and VicRoads were informed about the development of the draft Structure Plan. In response to this submission, and following conversations with Council's traffic and transport team the following modifications are recommended:</p> <ul style="list-style-type: none"> - placing greater emphasis on Council's adopted Integrated Transport Plan (2015) and drawing on information contained in the Knox Central Integrated Transport Study (Cardno 2016) <i>as appropriate.</i> - Changing references to lobby to advocate. <p>Requests for specific changes to the ITS are noted. This document was one of many inputs to the development of the Structure Plan. It is not proposed to update this document.</p> <p>2. Noted</p> <p>3. Not supported It is recommended that references to 'lobby' be changed to advocate, consistent with other Council policies and strategies.</p> <p>4. Noted. Council will continue to liaise with VicRoads in relation to the development of Knox Central.</p> <p>5. Agree. Recommend that these requirements are included in the DPO2.</p> <p>RECOMMENDATION: Within DPO2 including a requirement for a Transport Impact Assessment report that assesses the development impact on the arterial road network and; a requirement for a future development plan to provide details of vehicular and pedestrian access, the development impact on the surrounding road network and how the impact will be mitigated.</p>

No.	Submission Source	Submission Summary	Discussion and Recommendation
			<p>Within the Structure Plan amend the actions listed under Objective 5 in the Structure Plan to</p> <p>Update actions under objectives 5 and 6 to:</p> <ul style="list-style-type: none"> - Include the following first action <i>“Continue to support the delivery of the 2015 Integrated Transport Plan drawing on information contained in the Knox Central Integrated Transport Study (Cardno 2016) as appropriate.”</i> - Remove actions that are already reflected in the 2015 Knox Integrated Transport Plan - change the word ‘lobby’ to ‘advocate’. - Rework a number of actions for greater clarity and to reduce repetition.
99	Individual	Landowner in Eastgate Crt, Supports proposed MUZ as most appropriate to support future growth.	Noted.
100	Government Agency (CFA)	<ol style="list-style-type: none"> 1. Considers land within Activity Centre to be low bushfire risk, notes that Amendment does not increase bushfire risk. 2. Concern with fire risk around Blind Creek Corridor and Lewis Park, with any modifications to Blind Creek area in accordance with CFA requirements. 3. Revised BMO mapping is currently being prepared and may include other areas in Knox. 4. Future development in Activity Centre will need to consider location, siting and design in relation to structural fire risk, fire protection measures and standards under the Building Regulations, emergency vehicle access and improvements and maintenance of reticulated water supply. 5. Continues to be involved in planning of Westfield Knox. 6. Also provided comments to C150 for Council to consider the protection of life and property as a priority and limit development in areas at risk of increased bushfire risk. 	<ol style="list-style-type: none"> 1. Noted. 2. Noted. All future master planning and ongoing maintenance of this area will be undertaken in consultation with the CFA. 3. Noted. Any changes as a result of BMO mapping changes will be incorporated into the Structure Plan and Amendment C149 as required. 4. Noted. Will be addressed through planning permit and development processes. 5. Noted. 6. Noted. These comments have been incorporated into revised C150 (Planning Scheme Review) documentation.
101	Individual	<ol style="list-style-type: none"> 1. Concerned with development of DELWP site including potential 6 storey development. Suggests 2 storey limit to protect ‘gateway to hills’ and country feel. 2. Supports building of Cultural centre, like Whitehorse, Manningham and Maroondah Councils – who recognise spiritual nourishment as well as sporting facilities. 	<ol style="list-style-type: none"> 1. Noted The Structure Plan provides a framework for future development and improvements in the Knox Central Activity Centre. This Activity Centre has long been identified as an area where changes in the types of housing provided and an increase in resident population is anticipated and encouraged. This is identified in a range of Council policies including the 2015 Knox Housing Strategy. The Structure Plan aims to provide for more intense (up to 40m) development to support the Centre's role as the major focal point of the municipality and a premier destination for the outer eastern region of Melbourne. Preferred heights of ‘5+ stories’ have long been in place for this site (since the adoption of the 2005 Urban Design Framework). Given the broad nature of preferred heights additional work was completed to assist with refining preferred heights across the centre. A review of building heights for the Knox Central (including consideration of the ‘Kubix’ and ‘Knoxia’ developments), identified key views to the Dandenong Ranges and concluded that the proposed built form framework and scale of development (i.e. heights) would not significantly impact on these views. 2. Support for community and cultural facilities noted.
102	Government Agency (DELWP – Port Phillip Region)	<ol style="list-style-type: none"> 1. Minister for Planning and Department have no objection to amendment. 2. Request modification to Structure Plan in relation to 	<ol style="list-style-type: none"> 1. Noted. 2. Accept in part. Recommend that changes requested with regards to access are accepted. No changes are recommended with regards to

No.	Submission Source	Submission Summary	Discussion and Recommendation
		access and protection of trees and views on current DELWP site.	trees or the protection of views. RECOMMENDATION: Amend maps in the Structure Plan which show access to the Strategic Development site through the DELWP site – to remove this designation.
103	Landowner (Stockland)	<ol style="list-style-type: none"> 1. Owner of two retirement villages at: <ol style="list-style-type: none"> a) 466 Burwood Highway (Knox Village) and b) 2 Old Stud Road (Wantirna Village). Supports amendment but seeks to include these sites in activity centre boundary and seeks extension of height controls for both sites, consistent with proposed heights for surrounding sites. 2. Knox Village site <p>Seeks to include the site in the Burwood Highway South precinct with a:</p> <ol style="list-style-type: none"> a) 18m preferred maximum building height in the core of the site and at the eastern interface. b) 12m maximum building height along the western and southern residential interfaces. This reflects the DDO13 requirements for preferred maximum building heights adjacent to sensitive interfaces. 3. Wantirna Village site <p>Seeks to include the site in the Burwood Highway South precinct with a:</p> <ol style="list-style-type: none"> a) 18m preferred maximum building height in the core of the site and at the eastern interface and Burwood Highway frontage. b) 12m building height at the residential interface to the south and west. c) 16m street wall height d) 6m upper level setback (above the street wall podium). 4. Seeks to change wording of DDO13, Section 2 to reflect discretionary nature of the proposed controls and state that: “A building should not exceed the heights shown in Figure 2” rather than “A building must not exceed the heights shown in Figure 2”; and “A building should comply with the street setbacks, street wall heights and upper level setbacks specified in Table 2 and 3” instead of “A building must comply with the street setbacks, street wall heights and upper level setbacks specified in Table 2 and 3.” 5. Suggests that wording be modified to suit retirement village requirements in relation to active frontages and commercial uses as ground floor. 	<ol style="list-style-type: none"> 1. (See responses to 1 and 2 below) 2. Accept Support the inclusion of the entire Knox Village site in Activity Centre boundary, by extending the existing controls from the front of the site. This includes the height controls proposed in this submission. 3. Do not accept. It is not appropriate to include this site in the activity centre. Unlike the Knox Village site (which is within a Residential Growth Zone), the Wantirna Village within a General Residential Zone – consistent with the surrounding residential land. Its designation as ‘Knox Neighbourhood’ means it has a different policy context to the Activity Centre. Within ‘Knox Neighbourhood’ the preferred housing types are detached houses and dual occupancies (some large blocks may be able to accommodate villa unit style dwellings). 4. Accept in part In order to provide clarity about the nature of the preferred heights change the DDO the suggested change from must to should with regards to building heights is supported. While acknowledging that setbacks could be carried with a permit, changing the ‘must’ to a should is not supported as the setbacks proposed along Burwood Highway are sought to achieve specific, and consistent landscape outcomes. 5. Not supported. While acknowledging that the structure plan supports the ‘Burwood Highway South’ precinct as an area that will provide a mixed-use environment – it is not the expectation that every site will provide a mix is uses – but the precinct as a whole. The Vision for this precinct – as set out in the local planning policy (Cl. 22.15) states: ‘The southern side of Burwood Highway will provide a mixed-use environment providing higher density residential development with commercial uses at ground floor. Commercial uses will be complementary to the activities within the Commercial Core and will provide active street frontages, particularly at ‘feature forms’ and corner sites. In areas where active frontages may not be as critical, ground floor frontages will provide transparency and surveillance opportunities, and contribute to pedestrian amenity.’ While the emphasis is on active street frontages, this site is not on a corner, nor identified as a feature form. We believe the last sentence addresses these concerns and allows for flexibility of how this frontage is addressed. 6. Noted No changes are proposed to the setbacks for Knox Village and as Wantirna Village is not recommend for inclusion within the Activity Centre no setbacks are proposed. <p>RECOMMENDATIONS: Amend all maps relating to the Structure Plan to reflect a change to the boundary to include all of the Knox Village Site (In the Planning Scheme and in the Structure Plan); and apply preferred heights in line with submission 103 and include the sensitive residential interface notation to the south of this site. Change the DDO: “A building height must not exceed the heights...” to “A building height should not exceed the heights shown in Figure 2”.</p>

No.	Submission Source	Submission Summary	Discussion and Recommendation
		<p>6. Seeks clarification on preferred setbacks for:</p> <p>a) 466 Burwood Highway – currently a 15m landscape setback, DDO13m proposes 12m.</p> <p>b) 2 Old Stud Rd – currently 30m approx. reserve between property and Burwood Hwy, but no setback in DDO13.</p>	
104	Commercial Real Estate Developer	<p>Notes that there is interest for the rezoning of the Lewis Road precinct from market from a local, national and international purchaser and vendor perspective. Provided that infrastructure such as the tram line was in place, and there was not a “complete oversaturation of apartments” then the project will be success given the surrounding amenity including Westfield.</p>	Noted
105	Melbourne Water	<p>1. General Comments</p> <ul style="list-style-type: none"> • Reviewed structure plan and amendment from requirements for stormwater drainage, flood management and river health; • Provided comments as landowner of the Blind Creek retarding basin; which has a catchment flood management role and Blind Creek which provides stormwater conveyance, environmental benefits and liveability. • Recognises significant future opportunities to be explored for these assets. <p>2. Structure Plan</p> <ul style="list-style-type: none"> • Satisfied that Structure Plan objectives meet Melbourne Waters key interests and objectives. • Supportive of objectives of plan – actions should be updated to include an updated stormwater management plan for Lewis Park and Blind Creek areas (incl. retarding basin capacity) • Notes opportunities for master planning and future partnerships with the Lewis Creek and Blind Creek Corridor. • Currently involved with significant restoration projects along Blind Creek Corridor. <p>3. Strategic Development Site</p> <ul style="list-style-type: none"> • Undertaken broad review of proposed plan based on limited information in the structure plan. A more detailed review of this site needed once hydraulic calculations, modelling and other information is provided for formal assessment. • Current proposal does not meet requirement for any loss of floodplain storage (Blind Creek floodplain), to be offset by equivalent volume of cut within the hydraulically linked area. 	<p>1. Noted.</p> <p>2. Accepted. Recommend that the actions are amended to include reference to an updated stormwater management plan for Lewis Park and Blind Creek.</p> <p>3. Noted A copy of the submission from Melbourne has been provided to Places Victoria, and inform Council’s response to the development of this site.</p> <p>RECOMMENDATION: Amend the Structure Plan at Objective 4, Actions to read: <i>In partnership with Melbourne Water, develop a Master Plan for Lewis Park (and Blind Creek), which may include:</i> <i>An updated storm water management plan for both Lewis Park and Blind Creek, including a review of the retarding basin capacity of Lewis Park and transferring capacity to other appropriate locations up and down stream.....</i></p>

No.	Submission Source	Submission Summary	Discussion and Recommendation
		<ul style="list-style-type: none"> Flood levels must not increase up to the 1 in 100-year storm levels as a result of the development. Stormwater must be treated onsite in accordance with EPA requirements. Given catchment area (under 60ha), Council would likely be responsible for any asset constructed to meet these requirements. Require submission of flood modelling and volume calculations showing no loss of floodplain storage – can't make a considered assessment of proposal until this is provided. Require a minimum development setback of 30m from the top of the bank, consistent with the SPPF. 	
106	Consultant on behalf of landowner	<ol style="list-style-type: none"> Owner of a Lewis Road property located in the Lewis Road mixed use precinct (24m heights). Very supportive of amendment for their site and strategic regional role of Knox Central. \ Seek discretionary height limit, including an increase to the minimum height limit based on the proposed increased development intensity in the centre and other panel reports recommended "preferred heights" rather than "preferred maximum heights" Request that the DDO is revised to say "A building height should not exceed the heights..." rather than "A building height must not exceed the heights shown in Figure 2". 	<ol style="list-style-type: none"> Noted. Accepted. Changes are recommended to the DDO in order to provide clarity about the nature of the preferred heights. RECOMMENDATION: In order to provide clarity about the nature of the preferred heights change the DDO: "A building height must not exceed the heights..." to "A building height should not exceed the heights shown in Figure 2".

This table provides a summary of the submissions received from FOLKS and recommended response. This includes the following submissions: 22B, 26B, 28, 52-75, 76A, 77, 78, 80-91, 92A, 92B, 94-96

The grounds for objection are:

1. Site is of Biological significance – development will damage fragile habitat for fauna and flora
2. Water inundation and flood retarding issues
3. Lack of an adequate buffer zone
4. Increased traffic without adequate public transport and alternative transport options
5. Inconsistent with Knox Council's Knox Central Urban Design Framework

Discussion and Recommendation

1. Noted.

Council acknowledges the significance of the dam (which has been naturalised) and the surrounding native vegetation. However, Council recognises that parts of the dam will need to be modified to address public safety concerns. For these reasons, Council sought the services of an independent ecological expert to determine the dam's ecological significance and advise Council on how to best protect its valued habitat, while improving its ability to function and support the future redevelopment of the site.

Council recommends changes that highlight the biological significance of the Dam (as identified by the ESO2) and seek an outcome that includes the retention of the biological values of the existing water body.

2. Noted.

Council does not support development within the 1:100 flood extent. As part of the development of the entire site Places Victoria will need to manage flooding and stormwater impacts appropriately. Places Victoria have provided a draft Stormwater Management Plan as part of their submission (number 38) in response to these issues. Additionally, Melbourne Water have undertaken broad review of proposed plan based on limited information in the structure plan, and note that a more detailed review of this site needed once hydraulic calculations, modelling and other information is provided for formal assessment.

Council is continuing to liaise with the landowner (Places Victoria) and Melbourne Water in relation to this site and any potential flooding impacts.

3. Not accepted.

Development is proposed immediately to the west of the Wantirna Lea Estate to provide passive surveillance to the future open space. This design requirement represents good urban design practice – and was applied as part of the development of the Wantirna Lea estate – where properties along the northern side of Bond street 'front' onto the Blind Creek trail providing passive surveillance – rather than rear fences.

4. Noted.

While detailed design for the development of this site has not commenced the Structure Plan includes a number of strategies and actions in relation to public transport improvements in Knox Central, including improvements to the bus network and extension of the No.75 tram line. Council will continue to advocate to the relevant authorities to achieve these.

The *Knox Central Integrated Transport Study* was commissioned to review current and future traffic impacts in the activity centre. It reviewed previous studies and undertook traffic modelling and concluded that there was need to improve pedestrian and cyclist safety and amenity and supported the introduction of new road links and access. Council will continue to work with Vic Roads and other authorities to manage these improvements.

Council's Masterplan for this site highlights the need for pedestrian and cycle connections into the shared path along Blind Creek supporting active transport options.

5. Noted.

While the 2005 Knox Central Urban Design Framework (KCUDF) represented a starting point of the development of the Knox Central Structure Plan it is over 10 years old. There have been a number of significant changes since the adoption of the KCUDF including the adoption of the Knox Housing Strategy in 2015 that identified this site as a 'Strategic Investigation Site'.

RECOMMENDATIONS:

In CI 22.15 change *"Require the development of the Strategic Redevelopment Site Precinct to retain and enhance the existing water body on site in order to facilitate integrated water management and to reinforce its ecological function and provide a high level of neighbourhood amenity."*

To: *Development of the Strategic Development Site must:*

- o *include retention of the biological values of the existing water body;*
- o *facilitate integrated water management; and*
- o *provide a high level of neighbourhood amenity.*

Consistent with the recommended changes to the local planning policy amend the Structure Plan to highlight the biological significance of the Dam (as identified by the ESO2) and seek an outcome that includes the retention of the biological values of the existing water body. It is recommended that an additional design objective be included: *"Require the development of the strategic redevelopment site at the corner of Burwood Highway and Scoresby Road to retain the biological values of the existing water body; facilitate integrated water management; and provide a high level of neighbourhood amenity."*

Additionally, update the Masterplan for this site to:

- Show the extent of the Site of Biological Significance (ESO2)
- Add a notation over the Dam stating 'Biological values of the water body to be retained and enhanced'
- Reflect preferred heights across the precinct
- Remove any development areas currently within areas subject to flooding (1:100 years)
- Correct the alignment of the current Blind creek shared path
- Show a 'future connection' into the current DELWP site – and remove notations showing access through this site (in response to submission 102 from DELWP)

The future rezoning of this site will be facilitated by the State Government Fast Track Rezoning process. Therefore, it is recommended that the section in the Structure Plan that considers this site include all the Objectives, Strategies and Actions that specifically relate to the development of this site. This will provide greater context for the built form guidelines and provide a consolidated point of reference for development expectations for this site.

KNOX PLANNING SCHEME

22.15 KNOX CENTRAL ACTIVITY CENTRE

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This policy applies to all planning applications within the Knox Central Activity Centre, defined by the boundary shown in Figure 1 to this Clause.

22.15-1 Policy Basis

DD/MM/YYYY
Proposed C149

The Knox Central Activity Centre (**Knox Central**) is a regional retail, commercial and entertainment precinct for the municipality and the outer east with significant opportunities for commercial, mixed use and residential development.

Key issues for Knox Central include:

- Significant capacity for the provision of new higher density residential development and increased development intensity, to play a significant role in achieving housing diversity objectives for Knox.
- Opportunities to capitalise on the environmental and public open space attributes within Knox Central to create a distinctive sense of place.
- Opportunities to improve access to, and activation of, public open space areas, such as Lewis Park and the Blind Creek corridor.
- Opportunities to expand the variety of retail, commercial and recreational experiences to allow Knox Central to compete with other regional activity centres.
- Opportunities to facilitate a transition of under-utilised industrial areas to residential, high amenity industrial, and commercial uses.
- To integrate currently disjointed land uses and built form, and to improve interfaces with open space and the public realm.
- Opportunities to strengthen the civic and community presence in the Activity Centre.
- Opportunities to advocate for improved public transport options to, from and through Knox Central.
- Opportunities to transform the car-dominated appearance and poor presentation of built form along Burwood Highway and to create a distinctive tree-lined boulevard that marks the Knox Central.

22.15-2 Policy

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Proposed C149

Where a permit is required for the use and/or development of land, it is policy to:

- Support land use and development that is consistent with the Precinct Vision statements in Clause 22.15-3 and the objectives and strategies in Clause 22.15-4.

22.15-3 Knox Central Vision

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Proposed C149

Knox Central will be a vibrant modern mixed use activity centre that attracts residents, workers, and visitors from Melbourne’s east. It will be the most well-known and popular destination in the east of Melbourne.

It will be a busy and attractive urban centre that has a strong connection to the natural environment. It will provide a focus for public life, connecting people and communities, and will be an attractive place to live, work and play.

Knox Central’s physical form, encompassing a distinctive boulevard presence along Burwood Highway alongside the well-activated Blind Creek corridor, will provide a unique Activity Centre presence in Melbourne’s eastern suburbs.

Precinct Vision Statements

The following vision statements apply to precincts as shown in *Clause 22.15-5 Precinct Plan*.

Burwood Highway Corridor	The Burwood Highway Corridor overlaps with a number of precincts and will provide a distinctive, high quality and consistent built form. The Corridor will also provide a
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KNOX PLANNING SCHEME

	contemporary entrance to Knox Central, greater activation to the public realm, legible connections across Burwood Highway and development that strongly relates to the surrounding landscape character by delivering a tree-lined boulevard.
Commercial Core	<p>The Commercial Core Precinct will provide a broad mix of land uses including residential, employment, business, entertainment, community and leisure activities. A reorientation of the built form within the Precinct will integrate with Lewis Park to the north and the Civic/Community and Lewis Road Mixed Use Precincts to the east.</p> <p>Land uses that facilitate active frontages Burwood Highway will interact with the street and make a positive contribution to the public realm. The interface with Lewis Park will be capitalised through the development of higher density residential development, which will provide passive surveillance of this open space.</p> <p>New development within the Commercial Core Precinct will improve permeability within the precinct and support pedestrian amenity and safety.</p>
Civic/Community	<p>The Civic/Community Precinct will provide opportunities for formal and informal gathering spaces through the development of integrated, multi-purpose civic facilities with related entertainment, leisure, recreation and commercial uses.</p> <p>The development and use of the land will integrate with the entertainment and leisure uses in the Commercial Core Precinct to the west and complement and integrate with the recreational use of Lewis Park and the Blind Creek Corridor.</p>
Lewis Road Mixed Use	<p>The Lewis Road Mixed Use Precinct will transition from the existing industrial character to a mixed use precinct, characterised by higher density residential development with vibrant commercial premises at ground floor.</p> <p>Consolidation of small lots will contribute to the achievement of desired built form outcomes. New residential development, as the 'agent of change', will be designed to address potential internal amenity impacts resulting from the existing commercial and industrial uses. During this transition, the continuation of commercial and industrial uses with existing uses rights will continue to be supported. However, new land uses which are likely to result in poor amenity outcomes for residential land uses within the precinct will be discouraged.</p>
Burwood Highway South Mixed Use	<p>The southern side of Burwood Highway will provide a mixed-use environment providing higher density residential development with commercial uses at ground floor.</p> <p>Commercial uses will be complementary to the activities within the Commercial Core and will provide active street frontages, particularly at 'feature forms' and corner sites. In areas where active frontages may not be as critical, ground floor frontages will provide transparency and surveillance opportunities, and contribute to pedestrian amenity.</p>
Lewis Road Industry	<p>This precinct will support commercial/industrial uses. In addition, the area will support opportunities for emerging industries and encourage a transition from traditional industrial uses to high amenity, high value employment uses over time. Non-industrial uses, such as indoor recreational facilities and places of assembly, are considered appropriate given the Precinct's location within Knox Central. These types of uses will be supported in locations that minimise amenity impacts on adjoining and nearby land uses.</p> <p>Development will continue to be of a low scale industrial nature, with the exception of sites fronting Burwood Highway. Development fronting Burwood Highway will contribute to the</p>

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	<p>creation and maintenance of a tree-lined boulevard, through the provision of a more intensive built form, consistent street setback and street wall heights and landscaping, including canopy trees.</p> <p>New uses and development will respond appropriately to the interface to existing and future residential, mixed use or public open space adjoining the precinct.</p>
Strategic Red Development Site	<p>The redevelopment of this underutilised site will provide a high amenity, medium density neighbourhood in the northern portion of the site, which will be well- integrated with the Blind Creek corridor.</p> <p>The neighbourhood will be supported by mixed use development to the Burwood Highway frontage and Scoresby Road corner which will provide a small amount of local convenience retail and support local employment opportunities. The on-going use of part of the site by government departments is supported.</p> <p>New public open space on the site will integrate with the Blind Creek corridor and contribute to the environmental, recreational and access functions of the Corridor.</p>
Educational	<p>These areas will support the ongoing operation and expansion of existing educational land uses.</p>
Existing Residential	<p>The low density character of the Wantima Lea Estate will be retained. The White Road/Jackson Road precinct will be developed to achieve a medium density housing outcome.</p>
Open Space and Recreation	<p>This precinct will continue to provide significant open space and areas for recreation. This includes the provision of private facilities for sporting / leisure and recreation purposes.</p>

Commented [NV1]: A vision statement for this precinct was not included as part of exhibition.
This omission has now been addressed.

22.15-4 Objectives

Objective 1 – Civic/Community

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To enhance Knox Central’s role as the civic and public heart of the municipality, where communities connect and congregate.

Strategies

- Provide integrated civic and community facilities with related entertainment, leisure, recreation and business services around a central public space which integrates with Lewis Park.
- Improve pedestrian and vehicular links between the Commercial Core, Lewis Road and the balance of Knox Central to the east.
- Ensure the municipal and community uses within the Civic/Community Precinct integrate with future expansion of shopping, business and residential uses within the Commercial Core.
- Create feature building forms within the Civic/Community Precinct to complement future civic space.
- Provide civic buildings that improve physical and visual connections to Lewis Park, so that the outlook to and connection with the park is a key feature of the Precinct.
- Provide a highly accessible and visible Civic/Community Precinct that is pedestrian friendly.
- Facilitate accessible and safe pedestrian links between public transport nodes and civic and community facilities.
- Incorporate accessible ground level public spaces into the design of civic and related buildings.
- Support civic buildings to function as flexible and multi-purpose cultural/community facilities.

- Provide a new north-south street link to join the Civic/Community Precinct with underutilised sites to the south.

Objective 2 - Housing

To enable the development of high quality medium and higher density housing that responds to the housing needs of the Knox community, and supports the activity of the centre.

Strategies

- Optimise sites that are capable of accommodating additional dwellings in Knox Central.
- Support development that demonstrates a high standard of architectural merit and that optimises the land use and development potential of sites.
- Support a diverse range of medium to higher density housing choices in Knox Central to accommodate a changing and increasing population.
- Support the development of a high amenity, medium density neighbourhood in the northern portion of the Strategic ~~Red~~ Development Site Precinct that is integrated with the Blind Creek corridor, in accordance with the guidance provided in the Knox Central Structure Plan.
- Support development that provides affordable housing options.
- Support development that provides flexible and accessible housing options, with a high level of internal amenity.
- Support opportunities to integrate mixed use and residential development within the Commercial Core Precinct, particularly along the frontage with Lewis Park.
- Support the provision of aged care and supported residential accommodation.
- Support the provision of affordable and social housing stock within Knox Central, particularly as a proportion of redevelopment of Council-owned [land sites](#) and [the strategic development site of Strategic Investigation Sites as identified in Clause 21.05 'Housing'](#).
- To provide an orderly transition from an industrial area to a mixed use area (commercial and residential) within the Lewis Road Mixed Use Precinct.
- Facilitate a shift from the industrial nature of the Lewis Road Mixed Use Precinct to ground level commercial uses with upper level residential uses.
- To manage an orderly transition from an industrial to mixed use character within the Lewis Road Mixed Use Precinct by:
 - Applying an 'agent of change' principle so new residential development is responsible for mitigating the amenity impacts of the existing industrial uses within new dwellings.
 - Requiring a high level of internal amenity for new dwellings.
 - Requiring any expansion of an existing industrial use to take reasonable opportunities to further reduce noise below existing levels.

Objective 3 – Land Use Mix

To establish Knox Central as a focal point for activity including employment, education, retail, community, entertainment and leisure activities.

Strategies:

- Support higher density residential development, commercial, entertainment and leisure uses to activate interfaces with Lewis Park and the Blind Creek corridor as shown in Figure 1 to this clause.
- To discourage new development that represents an under development of land.
- Strengthen the role of the significant institutional uses by supporting the ongoing operation and upgrade of educational and aged care services.
- Support the establishment of an arts and culture hub in Knox Central.

- Support the role of Lewis Park as the primary regional open space within Knox, servicing the broader community.
- Support complementary recreational land uses near Lewis Park.
- Support the expansion of activity in the Commercial Core Precinct as the focus for major entertainment, hospitality, retail and leisure in Knox Central.
- Support small scale and complementary retail and hospitality operations outside of the commercial core in order to provide street level activity throughout Knox Central.
- Support local convenience retailing within the Strategic ~~Red~~Development Site Precinct as part of its redevelopment.
- Support the role of Knox Ozone as the focus for Knox’s ‘night time economy’, while managing potential negative impacts such as those associated with excessive alcohol use.

Objective 4 – Environment and Open Space

To capitalise on Knox Central’s natural and environmental features to distinguish it from other activity centres.

Strategies:

- ~~Require the development of the Strategic Redevelopment Site Precinct to retain and enhance the existing water body on site in order to facilitate integrated water management and to reinforce its ecological function and provide a high level of neighbourhood amenity.~~ Development of the Strategic Development Site must:
 - include retention of the biological values of the existing water body;
 - facilitate integrated water management; and
 - provide a high level of neighbourhood amenity.
- Establish a tree-lined boulevard along Burwood Highway which is a continuous planted setback with a tree canopy and formal landscaping.
- Support development that addresses and allows for high levels of interaction with open space. Avoid development that fails to optimise interfaces with open space.
- Support uses and development which complements and integrates with the Open Space and Recreation Precinct by providing passive surveillance, encouraging the use of these open spaces, and providing landscaping which supports the biological significance of these spaces.
- Maximise opportunities to capitalise on views to the Dandenong Ranges.

Commented [NV2]: These changes are recommended in response to submissions and additional information received during exhibition.

Objective 5 – Active and Public Transport

To facilitate an accessible and safe active and public transport network to and within Knox Central.

Strategies:

- Prioritise pedestrian and cyclist movements and access to public transport.
- Integrate development with future transport and street network links.
- Provide pedestrian connections between the Commercial Core Precinct and surrounding land uses to the north and east.
- Improve the pedestrian amenity, safety and connectivity throughout Knox Central, in particular:
 - along Burwood Highway and Stud Road;
 - to and within the Commercial Core Precinct.
- To support street level uses and development which activate the street frontage, particularly at areas of high pedestrian activity.
- Improve access for people with limited mobility throughout Knox Central.
- Support development that enhances pedestrian and bicycle accessibility of open space and recreation areas shown in Figure 1 to this clause.

- Support the development of a future tram reserve ~~along within the central median of~~ Burwood Highway.
- Encourage development that supports sustainable transport and active travel options.

Objective 6 – Road Network

To provide an efficient street network that connects key destinations including nodes of activity within Knox Central.

Strategies:

- Upgrade the road network to distribute traffic volumes throughout Knox Central.
- Support additional east-west road access within Knox Central.
- Improve vehicular links between the Civic/Community Precinct and the Commercial Core Precinct.
- Provide north-south vehicular links to optimise access to and from the Civic/Community and support the efficient use of underutilised land.

Objective 7 – Built Form and Public Realm

To achieve high quality built form and public realm which defines Knox Central as a premier mixed use activity centre.

Strategies:

- Support built form that provides a higher intensity of land use and activity commensurate with the role of Knox Central as the major focal point of the municipality and a premier destination for the outer eastern region of Melbourne.
- Support the development of a strong built form presence to Burwood Highway through the provision of consistent street wall heights and street setbacks.
- Establish a consistent landscape character for Burwood Highway that is a continuous planted setback with a tree canopy and formal landscaping to reflect the role and context of the activity centre and to support active and pedestrian-friendly street frontages and public spaces.
- Support development that demonstrates high levels of architectural merit.
- To discourage new development that represents an under development of land.
- Support the development of well-designed, high-quality and distinctive ‘feature forms’ along Burwood Highway.
- Support development that contributes to an active and pedestrian friendly public realm.
- Require development to be of the scale and design consistent with the objectives of the relevant precinct.
- Maximise views to the Dandenong Ranges from public areas within Knox Central.
- Support development that contributes to the activity, safety and amenity of the natural environment and open space.
- Support development adjoining the creek corridor that complements the natural setting.
- Support the provision of public art on public land and in communal and semi-public spaces on private land.
- Support advertising signage which achieves commercial objectives without creating visual clutter or having detrimental streetscape or amenity impacts.
- Support investment in the necessary infrastructure to ensure a high quality public realm as development intensity increases.
- Support the ongoing planting of appropriate tree species within the public realm, which contributes to local character, amenity and environmental outcomes.
- Maximise public safety in Knox Central through the incorporation of Crime Prevention through Environmental Design principles into design for the public and private realm.

22.15-5 Local Area Implementation

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Policy Guidelines

- Facilitate development in the Knox Central Activity Centre in accordance with the [Knox Central Structure Plan, Knox City Council, 2016](#)~~Knox Central Structure Plan, 2016~~
- ~~Review in 10 years from approval.~~

Commented [NV3]: This review period is more appropriately captured within the Structure Plan specifically and more generally within the MSS (under 'Monitoring and Review')

Application of zones and overlays

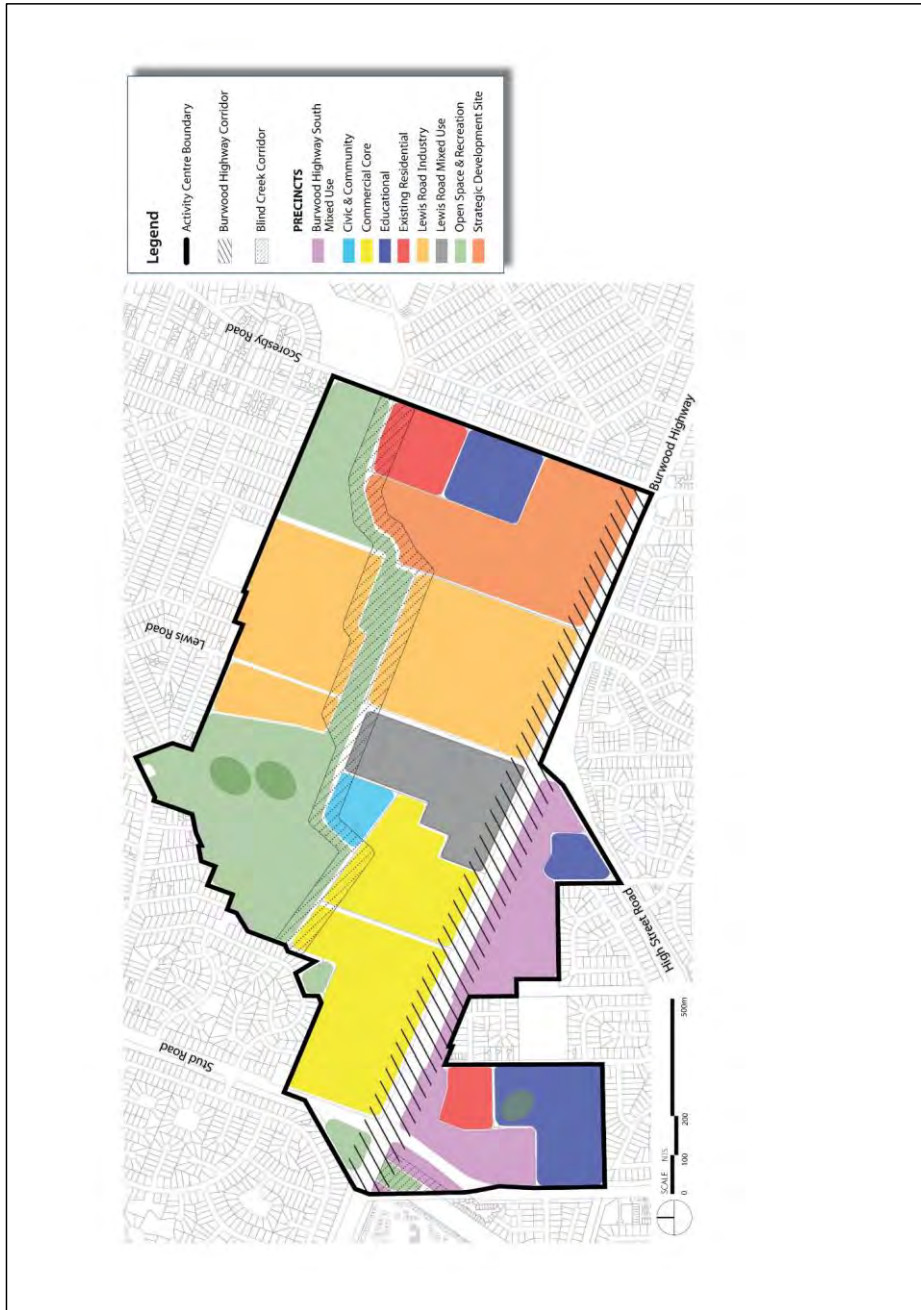
- Apply the Design and Development Overlay – Schedule 13 to all land within the Knox Central Activity Centre as shown in Clause 22.15-6 Precinct Plan.
- Apply the Mixed Use Zone to the Lewis Road Mixed Use and Burwood Highway South Mixed Used precincts as shown in Clause 22.15-6 Precinct Plan, to achieve higher density residential development and active commercial ground floor frontages.
- Apply the Environmental Audit Overlay to the Lewis Road Mixed Use Precinct as shown in Clause 22.15-6 Precinct Plan, to ensure that appropriate site remediation measures are undertaken prior to the commencement of sensitive land uses.
- Retain the Industrial 1 Zone to the Lewis Road Industry Precinct as shown in Clause 22.15-6 Precinct Plan.
- Amend Development Plan Overlay – Schedule 2 which applies to the Commercial Core Precinct as shown in Clause 22.15-6 Precinct Plan to implement the objectives of the Knox Central Structure Plan.
- Apply the Development Plan Overlay as part of the future rezoning of the strategic development site, ~~as shown in Clause 22.15-6 Precinct Plan from Public Use Zone.~~

Reference documents

Knox Central Structure Plan, Knox City Council, 2016

22.15-6 Precinct Plan

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SCHEDULE 13 TO THE DESIGN AND DEVELOPMENT OVERLAY

Shown on the planning scheme map as **DDO13**.

KNOX CENTRAL ACTIVITY CENTRE

1.0 Design objectives

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General

- To provide new built form that can accommodate a significantly higher intensity of land use and activity commensurate with the role of Knox Central.
- To provide buildings that exhibit a high standard of architectural and urban design through the presentation of integrated building forms that have a sense of address, clearly articulated façades and sensitively designed building form.
- To provide buildings that have regard for adjoining sites, including impacts on sensitive interfaces, the development potential of adjoining sites and the ability for future development to achieve reasonable amenity and design outcomes.
- To provide passive surveillance of the public realm.
- To ensure that the interface between new development and the Blind Creek corridor contributes to the activity, safety and amenity of the natural environment and open space corridor.
- To achieve landscaping and planting that complements the vegetation character of Knox and complements key features unique to Knox Central, such as Blind Creek and Lewis Park.
- To provide new building forms that are legible, attractive and representative of function.
- To provide new development which is environmentally sustainable and mitigates the urban heat island effect.
- To incorporate public art in to the design of buildings, development sites and precincts.
- To achieve a continuous boulevard streetscape along Burwood Highway that is planted with canopy trees and formal landscaping to reflect the role and context Knox Central.
- To support active and pedestrian-friendly street frontages and public spaces.
- To minimise the visual impact of car parking, services and access when viewed from the public realm.
- To prioritise pedestrian movement and the walkability of Knox Central.
- To provide an appropriate response to sensitive residential interfaces.
- To contribute to the activity, safety and amenity of open space.

Burwood Highway Corridor (excluding where the DPO2 applies)

- To promote a more intense built form outcome on Burwood Highway that contributes to a distinctive sense of place.
- To provide a contemporary entry into Knox Central.
- To provide development that is of a human scale, and provides a positive contribution to public realm and pedestrian amenity.
- To achieve a consistent built form that is punctuated with feature forms as shown in Figure 2 to this clause.
- To establish a continuous setback along Burwood Highway that is planted with canopy trees and formal landscaping to reflect the role and context Knox Central.
- To support active and pedestrian-friendly street frontages and public spaces.
- To provide ground floor setbacks that allow for active frontages, particularly at 'feature forms'.

Commented [NV1]: Suggested change to help reduce multiple controls applying to the Westfield Site

Design objectives for Westfield are set out within the DPO – beyond what is covered above in the General Design Objectives for the whole centre.

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- To create a boulevard within the Burwood Highway Corridor which provides a continuous, consistent and landscaped setback, intense and prominent urban form, and a high level of presentation to Burwood Highway.
- Encourage high quality, robust and contemporary development, with larger intensive nodes at key intersections and feature forms at identified key intersections such as Stud Road, Lewis Street/High Street Road, and at Scoresby Road.

Lewis Road Mixed Use Precinct

- To transform the existing industrial building stock into a high quality and attractive mixed use area.
- To create an active interface facing the Blind Creek corridor that contributes to the activity, safety and amenity of the open space corridor.
- To provide new residential development that is designed to mitigate the impact of existing industrial uses on the amenity of residents.
- To provide development that makes a positive contribution to the public realm and pedestrian amenity.
- To support a built form outcome that is higher than the existing industrial buildings.
- To achieve active frontages and higher density residential development built to a sensitive human scale.
- To support active ground level frontages to new streets through the development of the Master Plan for the Civic Precinct.
- To ensure that the new residential development is designed to minimise the impact of external noise sources on residents.
- To encourage the consolidation of smaller lots to optimise the redevelopment potential of the precinct.

2.0 Buildings and works

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A permit is required to construct a fence within a setback of a building along Burwood Highway, High Street Road or Stud Road.

Permit exemptions

A permit is not required for:

- The installation of an automatic teller machine.
- An alteration to an existing building façade provided:
 - The alteration does not include the installation of an external roller shutter.
 - At least 80 per cent of the building facade at ground floor level is maintained as an entry or window with clear glazing.
 - An awning that projects over a road if it is authorised by the relevant public land manager.
- To extend an existing single dwelling on a lot or construct buildings and works ancillary to a single dwelling on a lot.
- Within the Industrial 1 Zone:
 - A building or works which rearrange, alter or renew plant if the area or height of the plant is not increased.
 - A building or works which are used for informal outdoor recreation.
 - A rainwater tank with a capacity of more than 4500 litres if the following requirements are met:
 - The rainwater tank is not located within the building's setback from a street (other than a lane).

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- The rainwater tank is no higher than the existing building on the site.
- The rainwater tank is not located in an area that is provided for car parking, loading, unloading or accessway.

Building design requirements – all precincts

The following requirements apply to all precincts:

- Articulate form and façades through the use of different colours, materials, and the composition of rebates, openings and setbacks.
- A building on a corner site must actively address both frontages at street level.
- ~~Balconies and ground level windows must be provided overlooking the street, driveways and/or any adjoining public open space to maximise passive surveillance.~~
- Residential entries must be distinguished from retail and commercial entries.
- ~~Car parking must be underground or concealed so that it is integrated into the overall built form.~~
- Buildings ~~should~~ **must** avoid large, unbroken expanses of walls to the public realm or oblique side views.

Commented [NV2]: Recommend that this is deleted as it is best managed as a Design Objective – rather than a building requirement.

Commented [NV3]: Recommend that this is deleted and managed as a design objective and with specific building design requirements for Burwood highway and the commercial Core.

Commented [NV4]: Recommend that this is modified – acknowledging that this is not appropriate within all precincts (eg Industrial)

Building design requirements - Burwood Highway Corridor (excluding where the DPO applies)

The following requirements apply to land within the Burwood Highway Corridor as identified in Figure 1 to this schedule:

- Development must have a frontage to Burwood Highway.
- Buildings must be setback in accordance with Table 2 to provide a substantial area for landscaping in order to contribute to the boulevard character of the Burwood Highway.
- Fencing within a setback to Burwood Highway must be substantially transparent and constructed of high quality materials.
- At-grade car parking must not be visible from Burwood Highway.
- Setbacks to Burwood Highway must be:
 - planted with canopy trees at a minimum density of one canopy tree for each 5 metres of the Burwood Highway boundary (excluding the width of driveways). Each tree must be surrounded by 20 square metres of permeable surface with a minimum radius of 3 metres. Up to 50 per cent of the permeable surface may be shared with another tree.
 - Formally landscaped at the understorey level to support active building frontages and maximise passive surveillance.
- ~~For development within the Commercial Core Precinct with a frontage to Burwood Highway, 80% of the Burwood Highway façade must comprise entries, display windows, clear glazing, or other active interfaces to create visual interest and to allow views between the shopping centre and public realm.~~

Building design requirements – Land within DPO2

- Buildings must be setback in accordance with Table 2 to provide a substantial area for landscaping in order to contribute to the boulevard character of the Burwood Highway.
- Fencing within a setback to Burwood Highway must be substantially transparent and constructed of high quality materials.
- Setbacks to Burwood Highway and Stud Road must be:
 - planted with canopy trees at a minimum density of one canopy tree for each 5 metres of the road boundary (excluding the width of driveways). Each tree must be surrounded by 20 square metres of permeable surface with a minimum radius of 3 metres. Up to 50 per cent of the permeable surface may be shared with another tree.

Commented [NV5]: Recommend the inclusion of Stud Road to this as both Burwood and Stud are identified as “bush buolvards” in the planning scheme.

- Formally landscaped at the understorey level to support active building frontages and maximise passive surveillance.

- For development with a frontage to Burwood Highway, 80% of the Burwood Highway façade must comprise entries, display windows, clear glazing, or other active interfaces to create visual interest and to allow views between the shopping centre and public realm.

Building design requirements - Lewis Road Mixed Use

The following requirements apply to land in the Lewis Road Mixed Use Precinct:

- An active building façade must be provided to Eastgate Court, Sherwood Court and Bridgewood Courts.
- Development must provide landscaping within front setbacks to Lewis Road.
- Design of residential development must include acoustic attenuation measures that will reduce internal noise levels with windows closed from any existing industrial use.

Building Height

A building ~~should~~ **must** not exceed the heights shown in Figure 2.

Commented [NV6]: Recommended in response to numerous submissions to provide clarity that height controls are discretionary.

Siting and setbacks

A building must comply with the street setbacks, street wall heights and upper level setbacks specified in Table 2 and Table 3.

Table 2 Setbacks and Street Wall Heights– Burwood Highway Corridor

Setback or Interface	Requirement
Street setback – Commercial Core	12m
Street Setback – Burwood Highway South	Sites between Tyner Road and Lynne Avenue (Commercial 1 Zone) – zero setback All other sites - 12m
Street Setback – Lewis Road Mixed Use	15m
Street Setback – Lewis Road Industry	8m
Street Setback - Strategic Redevelopment Site	8m
Street wall height (Feature form locations as shown in Figure 2)	24m (6 storeys)
Street wall height (All other forms)	16m (4 storeys)
Upper Level Setback (above street wall podium)	6 metres

Table 3 - Other setbacks

Precinct	Street setback to Lewis Road	Street setback to High Street Road	Setback to Eastgate Court, Sherwood Court and Bridgewood Court

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Lewis Road Mixed Use	6m	n/a	Zero
Burwood Highway South Mixed Use	n/a	6m	n/a

3.0 Decision Guidelines

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Before deciding on an application, the responsible authority must consider:

- The objectives and strategies of Clause 22.15 'Knox Central Activity Centre'.
- Whether the design objectives contained in this schedule are satisfied.
- [Any approved Development Plan for the Commercial Core](#)
- Whether development contributes to a continuous and consistent built form outcome on Burwood Highway, through the use of building setbacks and street wall heights that are consistent with this schedule.
- Whether development demonstrates a high level of architectural quality and makes a positive contribution to the public realm.
- Whether development contributes to the pedestrian amenity of Burwood Highway.
- Whether development is designed and sited to maximise retention of canopy trees, where possible.
- Whether landscaping within front setbacks in the Burwood Highway Corridor:
 - Contributes to a consistent boulevard landscape theme; and
 - Supports active frontages and pedestrian amenity.
- ~~Whether development within the Commercial Core:

 - ~~Provides active frontages to Burwood Highway, that contribute to an attractive, pedestrian friendly and visually pleasing streetscape;~~
 - ~~Provides vertical articulation to visually break up the appearance of building frontages to Burwood Highway; and~~
 - ~~Incorporates glazing in the Burwood Highway facade to allow views between the shopping centre and public realm.~~~~
- Whether any building that exceeds the required height limit:
 - Demonstrates that the design is of exceptional quality and would exceed the high design quality already expected within the centre; and
 - Does not create any additional impacts on the amenity of sensitive residential interfaces (as shown in Figure 2) as a result of additional height.
- Whether development within the Lewis Road Mixed Use Precinct:
 - Contributes to the orderly transition from industrial to mixed use residential area;
 - Is designed and constructed to include acoustic attenuation measures that will reduce noise levels from any existing industrial use to below the noise limits specified in State Environment Protection Policy (Control of Noise from Industry, Commerce and Trade) No. N-1 (SEPP N1); and
 - Will have an unreasonable effect on existing uses.

Commented [NV7]: Recommend that these are deleted as an application will be assessed against an approved Development Plan.

Application Requirements

All applications for buildings and works must be accompanied by the following information, as appropriate to the satisfaction of the Responsible Authority:

- A Landscape Concept Plan
- A Traffic Management Plan

KNOX PLANNING SCHEME

- An Acoustic Report to demonstrate that new residential development or other sensitive uses have provided high levels of noise attenuation with regard to existing noise sources in the surrounding area.
- A ~~Green~~ Travel Plan which demonstrate opportunities to promote sustainable transport options, such as electric car charging points and car share spaces.

4.0 Reference Documents

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Proposed C149

Knox Central Structure Plan (2016)

KNOX PLANNING SCHEME

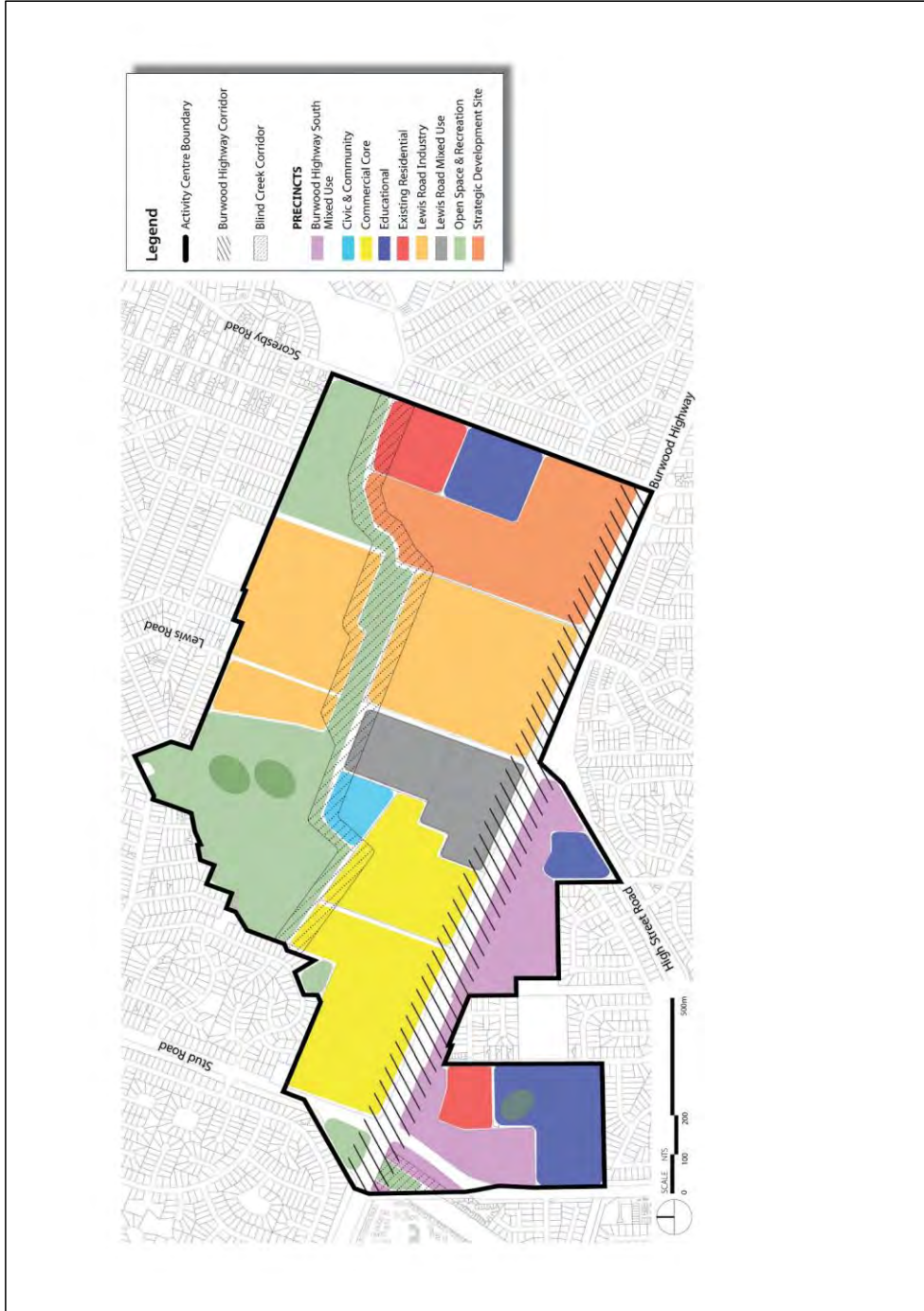


Figure 1: Knox Central Precinct Plan

KNOX PLANNING SCHEME

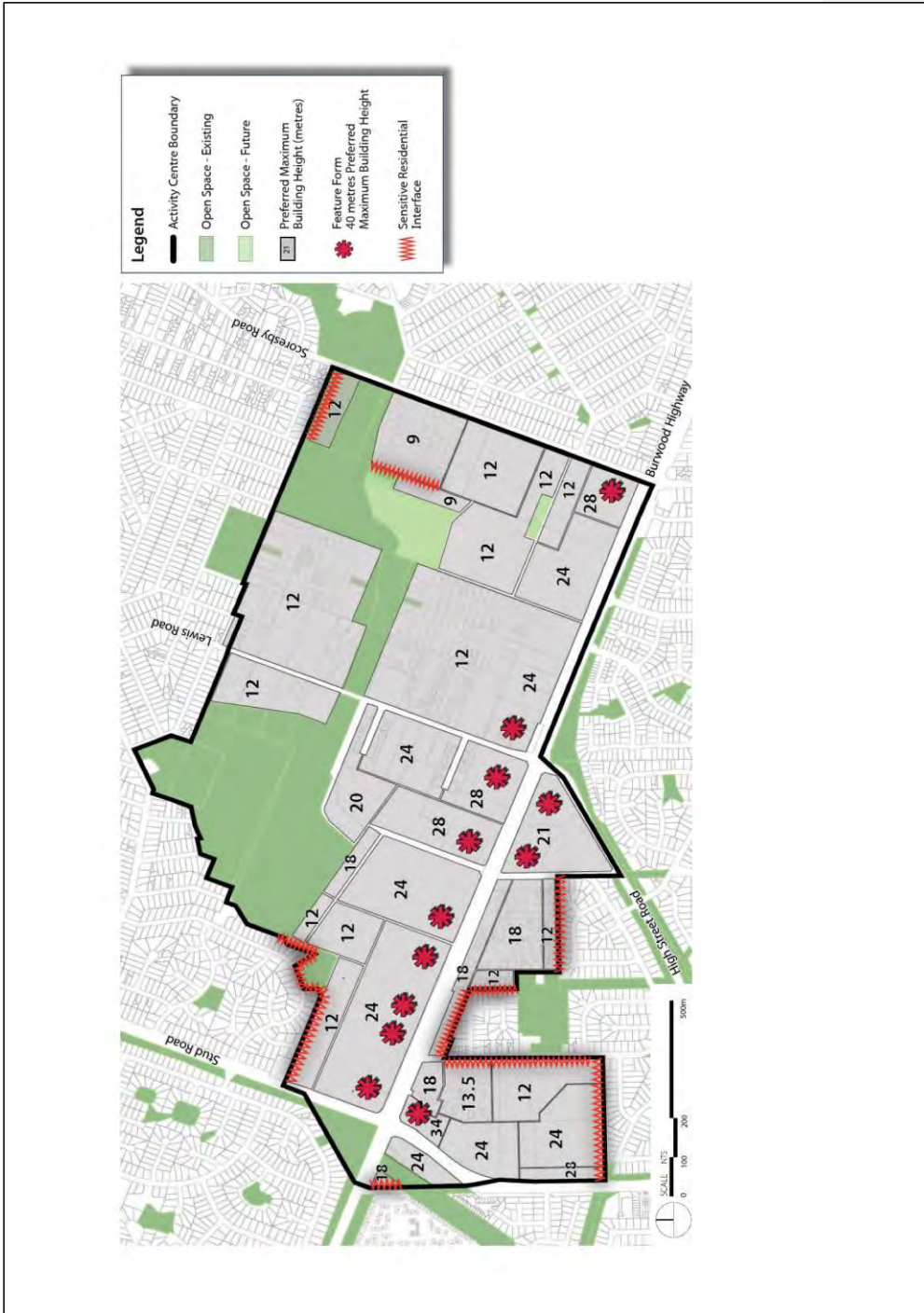


Figure 2: Knox Central Built Form Framework Plan

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SCHEDULE 2 TO THE DEVELOPMENT PLAN OVERLAY

Shown on the planning scheme map as DPO2

KNOX CENTRAL COMMERCIAL CORE PRECINCT (Westfield Knox)

1.0 Requirement before a permit is granted

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A permit may be granted before a development plan has been prepared to the satisfaction of the Responsible Authority for the following:

- ~~Advertising signs, except of a Major promotional sign, sky sign or an electronic sign.~~
- Changes of use to existing tenancies, including permissions under clauses 52.06 and 52.27.
- Minor buildings and works.
- Amendments to existing planning permits and endorsed plans.
- Subdivision of land.
- Minor alterations to the facade of buildings, including canopies and entry and exit points
- Use and development of the land for temporary uses.
- Internal changes of use and internal floor space reconfiguration.
- Minor works to car parking areas
- Minor landscape works
- Upgrading of essential services, including roof plant, waste management facilities and other ongoing maintenance works

Before granting a permit the Responsible Authority must be satisfied that the permit will not prejudice the future use and development of the land as contemplated by this Overlay.

Commented [NV1]: Recommend it is not necessary to resist this – a permit would be required and subject to the adoption of Am C150 (planning scheme re-write, which includes the introduction of a specific local planning policy on advertising signs) a specific local policy on advertising signs will apply.

2.0

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Conditions and requirements for permits

Bus Interchange

Prior to the granting of a permit for a development that increases the total leasable floor area by 10,000 square metres above that existing at <DATE TO BE INSERTED BY DELWP>, an agreement between the owner of the land and the Responsible Authority under Section 173 of the Planning and Environment Act 1987 must be entered into to the satisfaction of the Responsible Authority which requires that the owner:

- Designs and constructs a bus interchange in a highly accessible location and with a layout as agreed by Public Transport Victoria (or equivalent) and the Responsible Authority.
- The timing for the completion the bus interchange.
- Details of the size and nature of the bus interchange facility to the satisfaction of the Responsible Authority.
- Bears the all costs associated with the design and construction of the bus interchange.

The cost of preparing, negotiating and registering of the Section 173 agreement are to be borne by the owner. If a satisfactory bus interchange has already been delivered through agreement between the Responsible Authority and the relevant landowner, this requirement becomes redundant.

[Once the Bus Interchange has been developed this requirement no longer applies.](#)

Library

KNOX PLANNING SCHEME

Prior to the granting of a permit for a development that increases the leasable floor area by 10,000 square metres above that existing at <DATE TO BE INSERTED BY DELWP>, an agreement between the owner of the land and the Responsible Authority under Section 173 of the Planning and Environment Act 1987 must be entered into to the satisfaction of the Responsible Authority which requires that the owner provides:

- A fully functional public library with at least 2000 m2 of floor space.
- The exact location of the library to the satisfaction of the Responsible Authority, including any agreed interim facility if required in the opinion of the Responsible Authority.
- The timing of the provision of the library, and any agreed interim facility if required to the satisfaction of the Responsible Authority.
- Details of the nature of the library and associated amenities to be delivered.

The cost of preparing, negotiating and registering of the Section 173 agreement are to be borne by the owner. If a satisfactory replacement library has already been delivered through agreement between the Responsible Authority and the relevant landowner, this requirement becomes redundant.

[Once the Library has been developed this requirement no longer applies.](#)

Permit Application Requirements

An application for a planning permit for use or development of the land must be accompanied by the following, as appropriate, to the satisfaction of the Responsible Authority:

- A Town Planning Report that, amongst other things, assesses how the planning permit application is generally in accordance with the approved Development Plan.
- A Landscape Plan, detailing existing vegetation; proposed retention and removal of vegetation; new planting / landscape works; and any fencing or acoustic treatments required within the landscape areas of the site.
- An Arborist Report, detailing the safe useful life expectancy for trees to be retained or removed, and impacts arising from the proposed development, including management arrangements.
- A Traffic and Car Parking Management Plan.
- [A Transport Impact Assessment report that assesses the development impact on the arterial road network and provides details of roadworks that are required to mitigate the adverse impact, to the satisfaction of VicRoads.](#)
- A Pedestrian and Cycle Movement Plan.
- A Sustainability Design Assessment.
- A Waste Management Plan.
- A written response stating how the proposed design responds to Safety by Design principles to prevent hazards and unsafe space for the community.
- A Disability Access Audit Report, prepared by a suitably qualified and registered disability auditor, assessing the access requirements for disabled persons.

A planning permit must include conditions requiring the following, as appropriate, to the satisfaction of the Responsible Authority:

- Construction Management Plan.
- ~~Green~~ Travel Plan
- Shopping Centre Management Plan
- An Acoustic Report, to be provided within 3 months of the commencement of the use.
- Conditions which give effect to the vision, objectives and outcomes identified in the approved Development Plan.

~~Any conditions required by VicRoads, Melbourne Water and Public Transport Victoria
A permit granted must provide for:~~

Commented [NV2]: This addition is at the suggestion of DEJTER

Commented [NV3]: Recommend that this is deleted - if they are 'required' this is not necessary.

Traffic and car parking

- ~~Traffic management and traffic control works considered necessary, in adjoining or nearby roads, as a result of the proposed development or the stage of the development shown on the approved Development Plan.~~
- ~~The completion of traffic works in phase with the staging of buildings and works.~~
- ~~The location of the bus interchange.~~
- ~~Car parking in the ratio of 6.6 spaces to each 100 square metres of leasable floor area for a shop (other than restricted retail premises) and 1.5 to 3.5 spaces to each 100 square metres of leasable floor area (as required by the responsible authority) for other uses. The responsible authority may reduce or waive these requirements. The provision of 1,690 car parking spaces for Towerpoint is satisfactory for the use of all buildings existing on the Towerpoint site as at 1 August 1997 in accordance with Plan Ref. No 97/293 dated August 1997.~~

Management

- ~~General amenity provisions.~~
- ~~Operational matters relating to such things as control of nuisance, waste collection, vehicle loading and unloading times, management and maintenance of car parking areas and trolley control.~~

3.0

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Requirements for development plan

A Development Plan may be prepared in stages provided the Responsible Authority is satisfied that preparing a development plan will not prejudice the future use and development of the land as contemplated by this Overlay.

An approved Development Plan may be amended to the satisfaction of the Responsible Authority.

A Development Plan must ~~include the following vision and objectives for the future use and development of the site:~~

~~To provide for future use and development in accordance with the Knox Central Structure Plan, the vision, objectives and strategies of Clause 22.15 Knox Central Activity Centre, and the State and Local Planning Policy Framework.~~

- ~~To create a new, active and varied built form to Burwood Highway to contribute to the amenity of the streetscape.~~
- ~~To promote a more intense built form outcome on Burwood Highway.~~
- ~~To improve the activity, safety and amenity of Lewis Park.~~
- ~~To capitalise on the natural setting of Lewis Park and the views to the Dandenong Ranges.~~
- ~~To achieve improved pedestrian safety and amenity within the car parking areas and internal street network.~~
- ~~To improve legibility, permeability and pedestrian level interfaces throughout the site.~~
- ~~To minimise the visual impact of car parking from the public realm.~~
- ~~To establish a built form and site layout which addresses and integrates with adjoining land use and development.~~
- ~~To provide an appropriate interface and transition to surrounding adjoining residential areas.~~
- ~~To achieve a high quality landscape setting, building on elements such as Lewis Park, the Blind Creek corridor, and the backdrop of the Dandenongs.~~

Commented [NV4]: Recommend deleted as no longer relevant to Westfield or Council.

Commented [NV5]: This section has been rewritten to improve clarity and reduce repetition.

KNOX PLANNING SCHEME

~~To contribute to sustainability outcomes, and mitigating the urban heat island effect and minimising the use of resources.~~

The development plan must show, to the satisfaction of the Responsible Authority:

- The proposed use and development of each part of the land to which the plan applies.
- The location and size of an expanded or relocated public library in a visually prominent and highly accessible location.
- The provision of a bus interchange in a highly accessible location and with an area as agreed by Public Transport Victoria (or equivalent) and the Responsible Authority.
- Building footprints and heights.
- Setbacks of buildings to property boundaries.
- Integration of best practice Water Sensitive Urban Design and Environmental Sustainable Design principles.
- Integration of best practice Crime Prevention Through Environment Design Principles.
- The application of universal design principles to maximise amenity and safety for people with limited mobility.
- Areas designated for landscaping, including:
 - canopy trees and formal planting to be provided within Burwood Highway and Stud Road frontages.
 - canopy trees, within car parks and internal streets.
 - appropriate landscaping along the interfaces with residential areas to protect residential amenity.
- Interface treatments to surrounding sites and the public realm.
- Building entries to be clearly defined.
- Physical and visual connections being provided to:
 - the Civic/Community and Mixed Use Precincts to the north and east, as shown in Clause 22.15-4 Precinct Plan;
 - Lewis Park, Gateshead Park and the existing residential area to the north.
- A more intense built form along Burwood Highway including clear and legible feature forms to punctuate the Burwood Highway frontage at entry points into the site and at street intersections.
- Active frontages being provided to Burwood Highway, which may comprise entries, shop fronts, display windows, clear glazing, or other engaging interfaces.
- Vertical articulation of buildings to visually break up the appearance of building frontages along Burwood Highway and Stud Road.
- New development to activate Lewis Park, preferably through higher density residential development.
- How existing and future residential amenity will be protected through the design of car parking, loading bays and service areas.
- Pedestrian entry points being created to the north to encourage interaction with Lewis Park and future residential development adjoining the park.
- Details of improved access within and to and from the site, including pedestrian, cycle, motor vehicle and public transport access.
- A clearly delineated internal and external network of pedestrian and shared paths that provide a high level of accessibility throughout the site.
- An internal street network that emphasises and is conducive to street level activity.
- Awnings to be incorporated into façade design on pedestrian routes within the site.
- How conflicts will be minimised between delivery vehicles and pedestrian, cycle, motor vehicle and public transport access.

Commented [NV6]: Recommend that this is deleted as it is all covered in the first dot point. This will improve clarity of the DPO and reduce repetition.

- Multi-level car parking should be concealed and integrated into the built form, where practicable.
- Details of proposed staging and anticipated timing of development.

- ~~How the land use and development objectives for the site, having regard to the vision, objectives and strategies contained in the Knox Central Structure Plan will be implemented.~~
- ~~The proposed use and development of each part of the land to which the plan applies.~~
- ~~Building footprints and heights.~~
- ~~Setbacks of buildings to property boundaries.~~
- ~~How existing and future residential amenity will be protected through the design of car parking, loading bays and service areas.~~
- ~~Improved access within and to and from the site, including pedestrian, cycle, motor vehicle and public transport access.~~
- ~~The provision of a bus interchange in a highly accessible location and with an area as agreed by Public Transport Victoria (or equivalent) and the Responsible Authority.~~
- ~~How conflicts will be minimised between delivery vehicles and pedestrian, cycle, motor vehicle and public transport access.~~
- ~~Areas designated for landscaping.~~
- ~~Integration of best practice Water Sensitive Urban Design and Environmental Sustainable Design principles.~~
- ~~Integration of best practice Crime Prevention Through Environment Design Principles.~~
- ~~The location and size of an expanded or relocated public library in a visually prominent and highly accessible location.~~
- ~~Interface treatments to surrounding sites and the public realm.~~
- ~~Appropriate landscape areas along the Stud Road and Burwood Highway boundaries and along the interfaces with residential areas to protect residential amenity.~~
- ~~Details of proposed staging and anticipated timing of development.~~
- ~~Significant reduction of ground level car parking within the centre.~~

~~The development plan must include design criteria that establish a framework to the satisfaction of the Responsible Authority within which future planning permit applications must be assessed and which require at least the following:~~

Urban design

~~A high standard of architectural quality and urban design.~~

- ~~Extending the retail and related uses to the Burwood Highway and Stud Road frontages~~
- ~~A high standard of architectural quality and urban design.~~
- ~~A more intense built form along Burwood Highway including clear and legible feature forms to punctuate the Burwood Highway frontage at entry points into the site and at street intersections. The design and function of 'feature forms' should be well integrated with the broader Commercial Core Precinct.~~
- ~~Vertical articulation of buildings to visually break up the appearance of building frontages along Burwood Highway and Stud Road.~~
- ~~Crime Prevention Through Environmental Design principles being incorporated into the design of buildings, and public areas.~~
- ~~Water Sensitive Urban Design principles and Ecological Sustainable Design principles being incorporated into new development.~~

Site Interfaces

Commented [NV7]: These are addressed above.

KNOX PLANNING SCHEME

- ~~Physical and visual connections being provided to:~~
 - ~~the Civic/Community and Mixed Use Precincts to the north and east, as shown in Clause 22.15-4 Precinct Plan; and~~
 - ~~Gateshead Park and the existing residential area to the north.~~
- ~~New development to activate Lewis Park, preferably through higher density residential development with balconies, windows and private open space.~~
- ~~Pedestrian entry points being created to the north to encourage interaction with Lewis Park and future residential development adjoining the park.~~
- ~~Active frontages being provided to Burwood Highway, which may comprise entries, shop fronts, display windows, clear glazing, or other engaging interfaces.~~
- ~~Active frontages being provided to Burwood Highway and Stud Road to incorporate glazing allowing views between the shopping centre and public realm.~~

Pedestrian network

- ~~A clearly delineated internal and external network of pedestrian and shared paths.~~
- ~~An internal street network that emphasises and is conducive to street level activity.~~
- ~~Awnings to be incorporated into façade design on pedestrian routes within the site.~~
- ~~Building entries to be clearly defined and ground and upper level frontages to be active.~~
- ~~Upgrades to existing pedestrian infrastructure that provide a high level of accessibility throughout the site.~~

Car parking areas

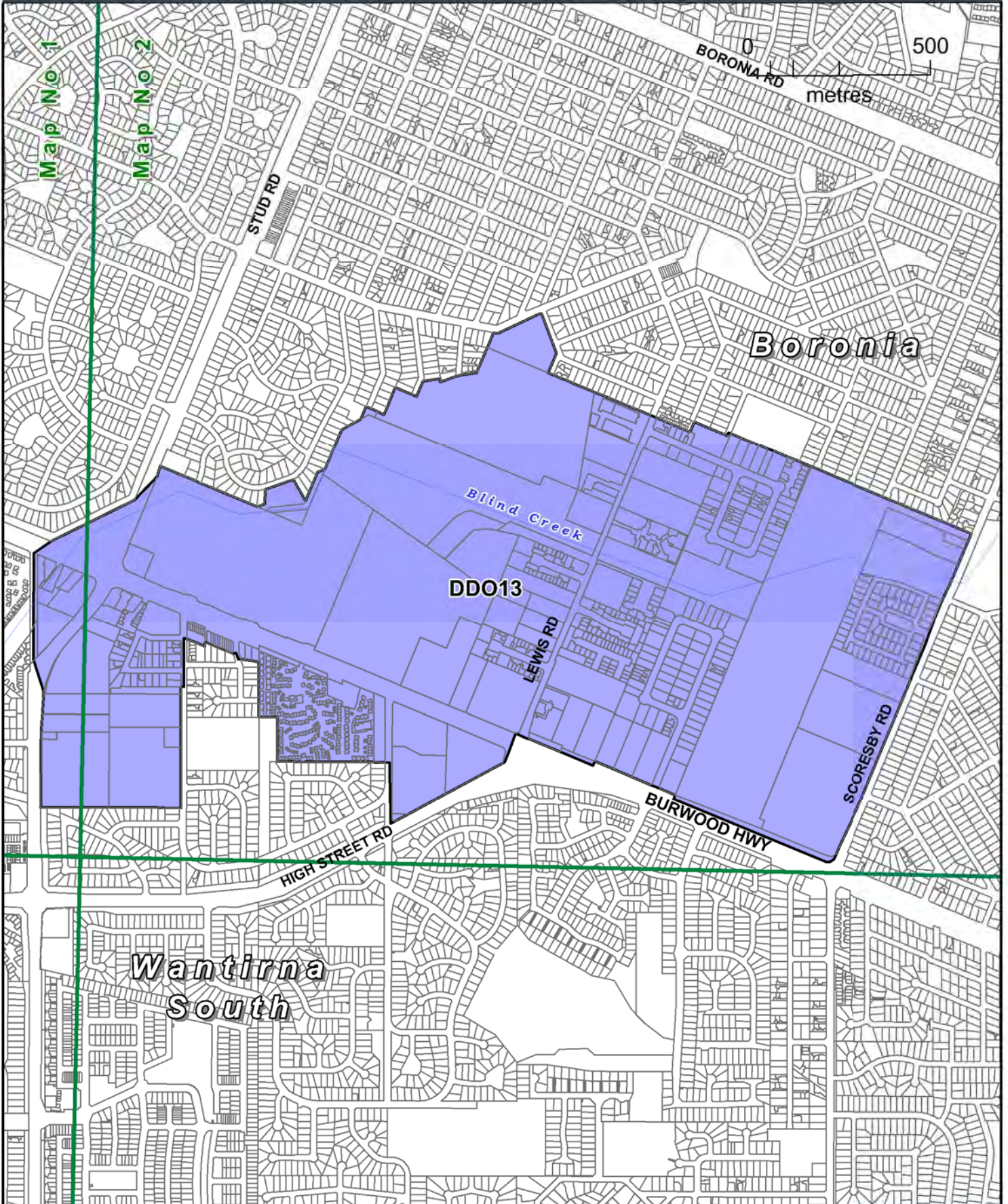
- ~~Multi-level car parking to be concealed and integrated into the built form.~~
- ~~Universal design principles to maximise amenity and safety for people with limited mobility.~~
- ~~Large areas of at-grade car parking to be avoided.~~
- ~~Landscaping, including canopy trees, within car parks and internal streets.~~

Landscaping

- ~~Canopy trees and formal planting to be provided within Burwood Highway and Stud Road frontages.~~

Commented [NV8]: Recommend deleted as it is highly unlikely that any future development plan or application will result in an increase in at-grade parking.

KNOX PLANNING SCHEME

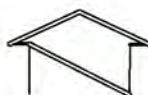


LEGEND

DDO13 DESIGN AND DEVELOPMENT OVERLAY - SCHEDULE 13

Part of Planning Scheme Map 1DDO & 2DDO

AMENDMENT C149



Knox Central Structure Plan

POST EXHIBITION CHANGES – MARCH 2017

'Knox Central – Capital of the East'



Document Register		
Version	Purpose	Date of Issue
1	Draft for consultation with Knox Central Advisory Committee	27 June 2016
2	Draft for Public Exhibition – for consideration by Council	13 September 2016
3	Draft for Public Exhibition – endorsed by Council	13 September 2016
4	Draft including recommended post-exhibition changes – for consideration by Council	27 March 2017

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INTRODUCING KNOX CENTRAL

Knox Central is Knox City Councils' (Council) largest activity centre and sits alongside the City's other major centres of Bayswater, Boronia and Rowville. Knox Central serves a broad cross-section of the community, both within Knox itself and across the eastern suburbs of Melbourne. It includes retail, residential, industrial, commercial, government-owned land and open space. Knox Central's location and boundary are shown in Figure 1.

Knox City Council has long had aspirations for Knox Central, with the *Knox Central Urban Design Framework 2005* providing high level directions for the activity centre for the last 10 years. It has taken some time to gather momentum, but it is considered that the time is now right for Council to turn its focus actively toward Knox Central for a number of reasons:

- *We have started to see tangible, visible changes in Knox Central. Developments such as Kubix and Villa Maria signal increased investment and development in the area.*
- *Demand for new types of housing in Knox is evident. While the main type of housing is still the detached family home, there has been a shift in types of new housing being built over the last five years.*
- *The market for higher density housing across outer suburban Melbourne has grown and this is increasingly the case in Knox. Knox Central is well-placed to respond this market shift, with large areas of underutilised land.*
- *In 2015, Council adopted the Knox Housing Strategy which designates Knox Central as an area that will accommodate higher density housing. Focusing higher density residential development in major centres, such as Knox Central, supports Council's desire to maintain the low scale character of Knox's suburban streets.*
- *Infrastructure has improved. Most notably, Eastlink better connects Knox with the broader Melbourne metropolitan area. This brings Knox residents closer to jobs in the city, and supports*

more opportunities for local employment.

- *The approval of a significant expansion of Westfield Knox represents significant private sector investment in the activity centre.*

Council can improve outcomes and benefits for the community by timing and leveraging its own investment and focus to take advantage of this significant private and infrastructure investment. There is an opportunity to shape the future of the activity centre and to create a sense of place and a central focus for people in Knox and beyond.

Some of the outcomes that Council wants to see for Knox Central are:

- *Improved civic and public spaces and places which allow for more active use by the community.*
- *A distinctive built and natural environment which creates a sense of arrival at 'Knox's CBD'.*
- *Rejuvenation of Lewis Park and Blind Creek. Open space becomes more precious as our suburbs become more intense. 'Unlocking' green open spaces and better integrating them with their surrounds provides increasingly valuable and far greater access for the community.*
- *Increased private and public sector investment, including more diverse housing options, more employment opportunities, and transport infrastructure improvements including the extension of the Route 75 Tram from Vermont South to Knox Central.*
- *Investment that provides maximum benefit to the community – particularly by making Knox Central more accessible, providing greater amenity, and a greater 'sense of place'.*
- *Greater opportunities for people to live in Knox Central, which is close to shops, transport, leisure activities and open space. In addition to its local amenity, Knox Central provides significant lifestyle opportunities due its proximity to the Dandenongs, and its easy access to the*

Mornington Peninsula and the Yarra Valley.

The strategic position of Knox Central and the high level direction for its role and function are still sound, but require some adjustment to reflect contemporary conditions.

The *Knox Central Structure Plan* (the Structure Plan) responds to current conditions and sets out Council's aspirations for Knox Central for the next 20 years.

The Structure Plan is an enabling document, which seeks to facilitate significant change with the Activity Centre in a way that produces positive outcomes for the Knox and broader communities.

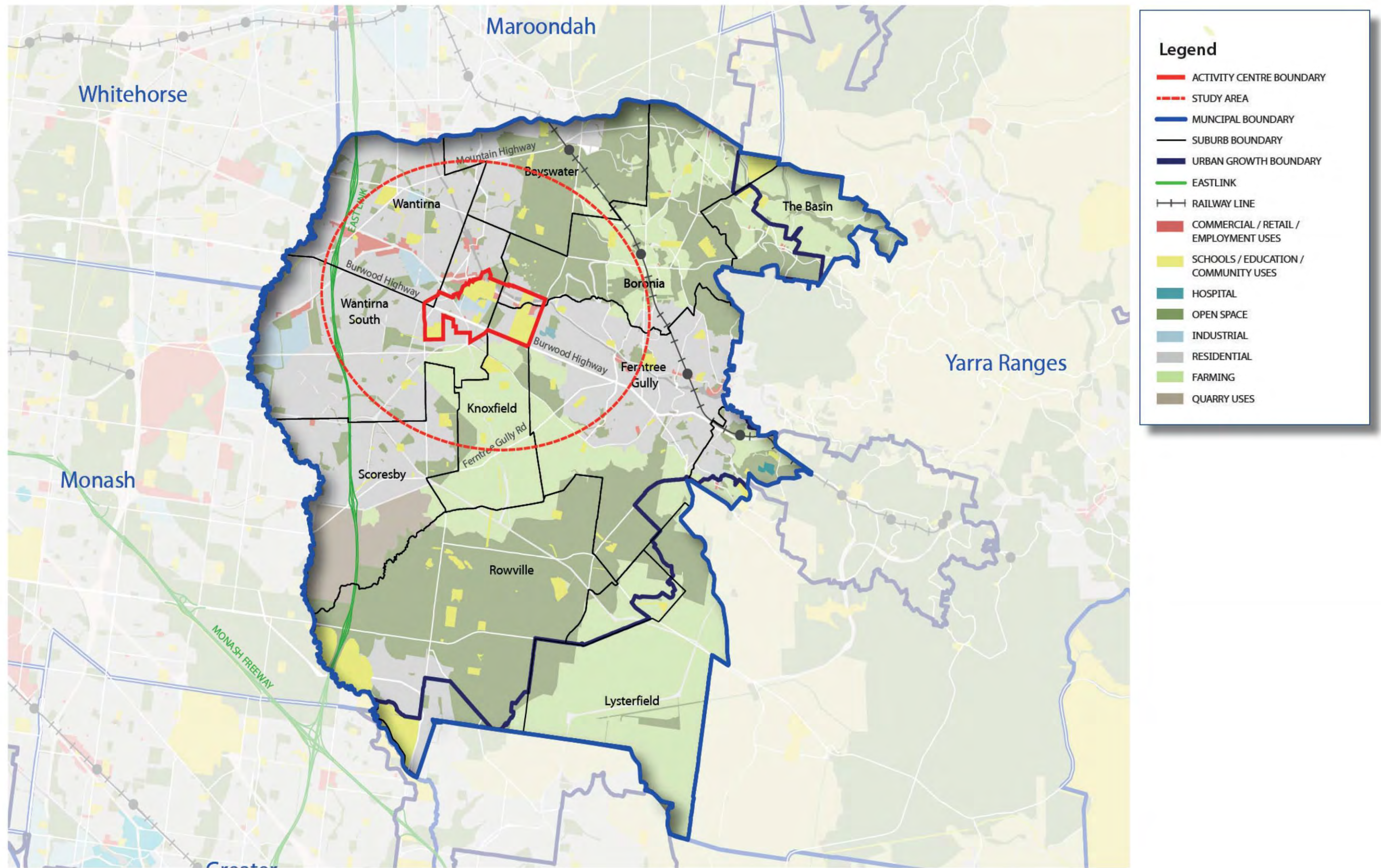


Figure1 Knox Central Activity Centre in the Knox context - boundary shown in solid red outline

THE SETTING

Knox Central is large in scale (approximately two kilometres east to west) with the central spine being Burwood Highway, generally between Stud Road and Scoresby Road. Knox Central is characterised by a broad mix of land uses and activities which are shown in Figure 2.

Knox Central contains significant open space and natural assets and enjoys selected long range views to the Dandenong Ranges.

Built Environment

Buildings within Knox Central are a mix of low scale buildings and more significant developments. Westfield Knox is a significant presence within the Activity Centre. At-grade carparks currently form a major part of the urban form of this site when viewed from the public realm.

In recent years, large scale residential developments have occurred on Burwood Highway and Stud Road, however it is considered that they could have made a positive contribution to the public realm.

Business Mix and Employment

Business in Knox Central is dominated by retail. However, it also has a unique position within Melbourne's Eastern Region, also encompassing a more significant manufacturing and wholesaling presence than other activity centres. Existing industry clusters in Knox Central include retailing, entertainment and hospitality; automotive services; furniture and flooring manufacturers and wholesalers; higher value manufacturing and scientific services; indoor recreation and construction.

Knox Central, particularly Westfield Knox, is the focus of significant social interaction for people in Knox and the Eastern Region, and is the main location of Knox's 'night time economy'.

Open Space and Recreation

Knox Central has several significant open space and recreational assets, including:

- Lewis Park
- Blind Creek Corridor
- Collier Reserve
- Gateshead Reserve
- Knox Community Garden site

Lewis Park comprises three sporting ovals; a sporting pavilion; a small playground; a small skate park; and part of the Blind Creek Trail shared path.

Natural Environment and Landscape

Knox Central has a significant role to play in terms of improving biodiversity outcomes, and the associated environmental and social benefits that this brings. The Activity Centre forms part of a habitat corridor from the Dandenong Ranges to the Dandenong Valley. Knox Central has a number of identified sites of biological significance associated with Lewis Park, the Blind Creek corridor and nearby areas.

Blind Creek and Lewis Park are significant water assets within the Activity Centre, which are currently underutilised. The Lewis Park retarding basin plays an important stormwater management role within the local and broader catchment area.

Knox Central offers long range views to the Dandenong Ranges from a number of vantage points.

Access, Movement and Transport

The main roads within Knox Central, particularly Burwood Highway, represent significant barriers for pedestrians. However, the shared path network within Knox Central provides opportunities for walking and cycling off-road. The Blind Creek Trail bisects the length of Knox Central and provides an east-west shared path through the activity centre.

Buses provide the sole form of public transport available within and to Knox Central. A significant bus interchange is located at Westfield Knox. The closest train stations are Bayswater, Boronia and Ringwood, which are linked by bus services to Knox Central.

Parking is not currently a significant issue in Knox Central. However, at-grade car parks are highly visible particularly from Burwood Highway. This results in a poor urban design outcome and compromised pedestrian amenity.

Education Facilities

A unique aspect of Knox Central is the provision of quality education facilities with the confines of the centre, including the Wantirna South Primary School, St Andrews Christian College, Fairhills High School (including a 300 seat Performing Arts Theatre; available to community groups and a Chinese Language School), and the Knox Innovation, Opportunity and Sustainability Centre (KIOSC), based at Swinburne University.

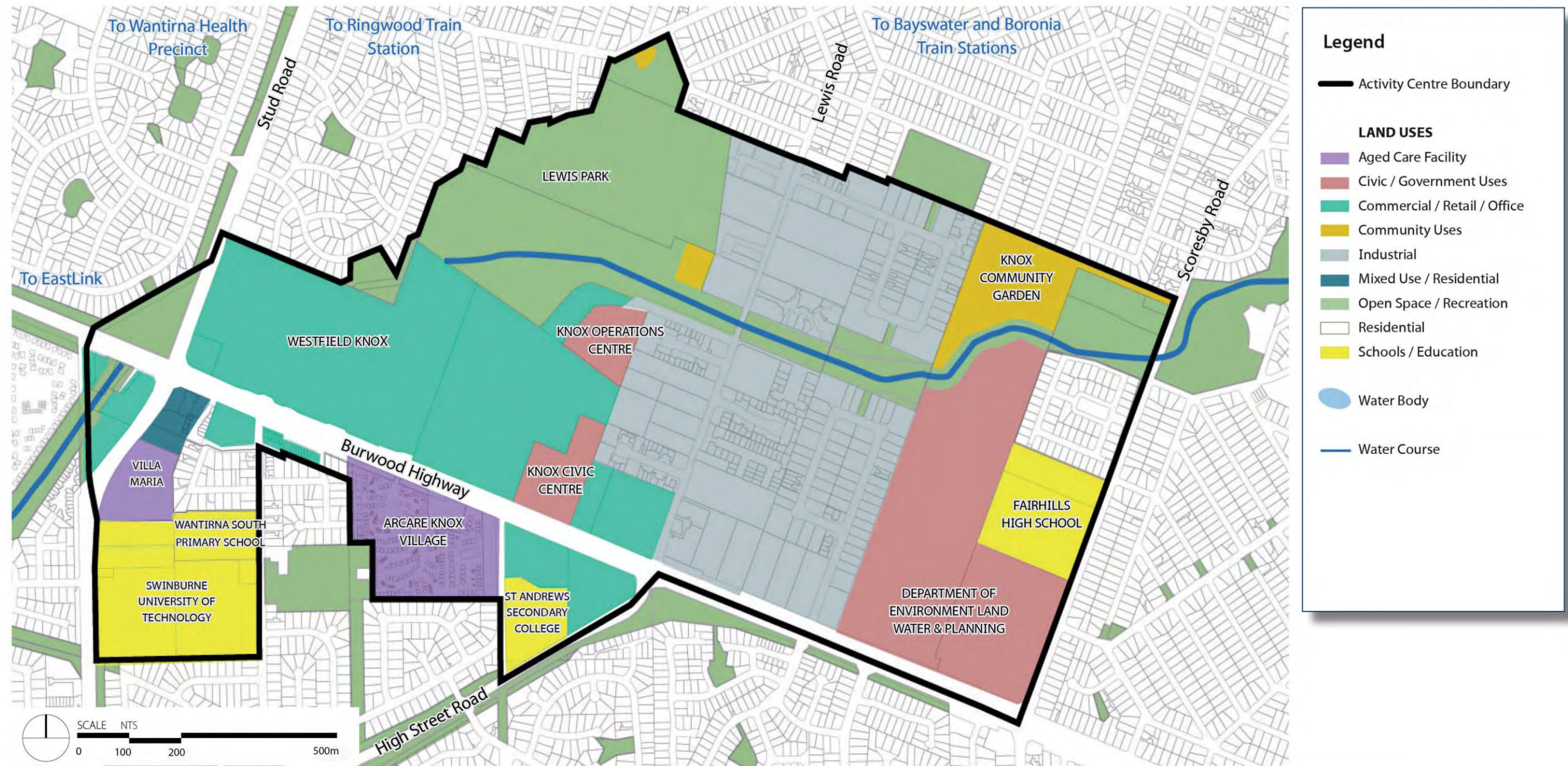


Figure 2 Knox Central Activity Centre - existing land uses



Figure 3 View looking east towards the Dandenong Ranges

THE STRUCTURE PLAN

The Structure Plan sets the framework for future land use, development and improvements in the Knox Central Activity Centre, including recommendations for future built form. It is guided by a vision that aims to support the development of a vibrant and well serviced Knox Central, capturing the opportunities for business and growth, while responding to the area's unique natural setting.

The Structure Plan is a strategic planning tool to manage, influence and facilitate change in the activity centre and to assist Council in decision making. It is an enabling document, which seeks to facilitate significant change within the Activity Centre in a way that produces positive outcomes for the Knox and broader communities.

The Structure Plan:

- is informed by research and a contemporary evidence base;
- forms part of Council's strategic planning framework for the City, recognising Knox Central's role as an area of significant change and growth.
- provides a framework for guiding Council business; developing partnerships with major landholders and service providers (including state government agencies); activating and providing the certainty needed for ongoing improvements in Knox Central;
- directs investment to capture the unique opportunities presented by Knox Central's location and assets;
- provides certainty for the community, landowners and developers by guiding future improvements and development, including planning controls; and

Delivers the objectives and strategies, outlined as part of the *Knox Vision and Knox City Plan 2013-17* at a local level.

The Structure Plan will be used by a range of

stakeholders including:

Knox City Council

- For informing changes to the Knox Planning Scheme, which will guide Council's assessment of planning permit applications in Knox Central;
- For identifying and prioritising future capital works projects for Knox Central;
- For identifying future programs and services required within Knox Central; and
- For advocating and seeking funding for studies and projects within Knox Central.

Landowners / Residents / Business Operators / Traders

- For guiding future improvements and/ or developments on private land; and
- For identifying opportunities to actively participate in the future development and improvement of Knox Central.

State Government Agencies (e.g. Department of Environment, Land, Water and Planning (DELWP), Department of Economic Development, Jobs, Transport and Resources (DEDJTR) Melbourne Water, VicRoads, Public Transport Victoria)

- For guiding the management and improvements to state government owned assets and services.

Development of the Structure Plan

The Structure Plan was informed by significant research and analysis, and the testing and development of various ideas and scenarios. Key inputs into the development of the Structure Plan include:

Review of Knox Central Urban Design Framework 2005

The Knox Central Urban Design Framework (KCUDF) has been the planning framework for Knox Central since its adoption by Council in 2005. Although

many of the directions and objectives of the KCUDF remain sound, they require updating and review. For this reason, the development of the Structure Plan took the KCUDF as its starting point. Analysis of the KCUDF forms a significant part of the *Knox Central Key Issues Background Report*.

Research

Extensive analysis and research has been undertaken, commissioned over a number of years. Summary and analysis of the relevant background research, as well as research recently commissioned by Council, is contained in the Knox Central Key Issues Background Report.

Knox Central Key Issues Background Report

This report identifies the key issues (opportunities and considerations) that need to be addressed through the development of a new structure plan.

The report also provides an analysis of the objectives and directions of the *Knox Central Urban Design Framework 2005 (KCUDF)*, which is the launching pad for the development of the new Structure Plan.

Key Stakeholders and State Agencies

An opportunity to comment on the content and currency of the Knox Central Urban Design Framework was extended to authorities including: Bicycle Network Victoria; Environmental Protection Authority Victoria (EPA); Melbourne Water; Public Transport Victoria (PTV) and VicRoads. Invitations were extended to landowners of key sites to discuss their aspirations for their sites and understand future plans.

Knox Central Advisory Committee (KCAC)

The Knox Central Advisory Committee (KCAC), comprising of Councillors and Council staff, have been working for a number of years to progress Council's vision for Knox Central. Consultation with KCAC was an important part of the development of the Structure Plan.

Strategic Planning Framework

Knox Vision and City Plan

The Knox Vision provides a shared vision for the future of Knox that will deliver the lifestyle, jobs and industry, health and wellbeing desired by members of the Knox community. The vision is outlined under five themes, each containing a description of the ideal future, and identifying the features that will exist when that future is achieved:

- **Healthy, Connected Communities**
- **Prosperous, Advancing Economy**
- **Vibrant and Sustainable Built and Natural Environments**
- **Culturally Rich and Active Communities**
- **Democratic and Engaged Communities**

These themes are used as indicators to monitor the community's wellbeing and achievement toward the broader Vision for Knox.

The Knox City Plan outlines the barriers, enablers and key strategies for achieving the aspirations for each theme outlined as part of the Knox Vision. These themes have provided a framework for the development of the Knox Central Structure Plan and the vision and strategic objectives contained in this report (refer Sections 3 and 4). The Structure Plan aims to deliver the objectives and strategies contained in Knox Vision and City Plan, at a local level.

CITY PLAN THEMES:

Healthy, Connected Communities



Aims to provide a safe community with strong community connections, where learning and volunteering are valued and supported, and the Knox community benefits from good health and wellbeing at all life stages.

Prosperous, Advancing Economy



Aims to provide a strong local economy that supports business growth, jobs and community wealth and improve local opportunities for people to live, work, learn and play in Knox.

Vibrant and Sustainable Built and Natural Environments



Aims to ensure the changing needs of a diverse community are supported through planned growth and change in housing and infrastructure that respects built form, natural systems and resource availability. It also aims to ensure biodiversity and places of natural significance, including waterways and open space, are highly valued, protected and enhanced, and infrastructure networks provide transport choice, affordability and connectivity.

Culturally Rich and Active Communities



Aims to improve the acceptance and valuing of diversity and difference in the Knox community and increase the use of public spaces and infrastructure for the purposes of cultural expression and physical activity.

Democratic and Engaged Communities



Aims to improve community leadership and participation in Knox and ensure Council is well governed and demonstrates effective leadership.

Knox Planning Scheme

A comprehensive overview of the current Planning Scheme provisions affecting Knox Central is provided in the *Knox Central Key Issues Background Paper*.

Opportunities and Considerations

Knox Central offers a number of opportunities and considerations that will influence its future planning and development.

The opportunities and considerations for Knox Central were determined based on extensive research and investigation, including desktop analysis, site visits, specialist reports, and engagement with Council staff. These are summarised in this section.

These opportunities and considerations have been aligned to the five City Plan themes to assist Council in monitoring the community's wellbeing and achievement toward its broader vision for Knox.

Healthy, Connected Communities

- A number of community facilities are located within Knox Central, including the Knox Library, the Knox Youth Information Centre and Headspace.
- Knox Central is a focal point for social engagement within Knox, particularly around Westfield Knox and Knox Ozone.
- Lewis Park provides a significant recreational space, but is physically separated from the rest of Knox Central.
- There are opportunities to improve the experience of pedestrians and encourage neighbourhood design that makes people feel safe both during the day and at night.
- There are a small number of spaces for community groups to gather. There may be opportunities to improve access to spaces for community groups.

Prosperous, Advancing Economy

- State Government planning policy encourages growth and development within activity centres, particularly those adjacent to public transport links such as Knox Central.

- Due to its status within the metropolitan planning framework, Knox Central may not be the focus of significant State Government investment.
- The mix of land uses, particularly the extent of industrial land within Knox Central, is unique amongst similar activity centres. Commercial and industrial activities provide significant employment and economic activity within Knox Central.
- Recent trends in consumer spending show a significant increase in hospitality spending.
- A number of underutilised sites within Knox Central provide opportunities for greater residential intensification and mixed use development.

Vibrant and Sustainable Built and Natural Environments

- There is an opportunity to create a unique urban form for Burwood Highway, as the central boulevard of Knox Central. Many sites are underdeveloped and therefore have the potential, through development, to contribute to a strong sense of place and character.
- The extent of open space is a distinguishing feature of Knox Central when compared to similar activity centres.
- Parks, environmental reserves and creeks make a significant contribution to Knox Central, however are not a prominent part of the 'identity' of the activity centre and are largely hidden from view.
- Knox Central is a 'car dominated' centre and the only form of public transport is the bus network. There are opportunities to encourage a shift from private vehicles to more sustainable modes of transport including walking, cycling and public transport by improving infrastructure and amenity within Knox Central and advocating to the State Government for public transport improvements.
- Council is seeking to improve the health of

waterways and streams through its Water Sensitive Urban Design (WSUD) and Stormwater Management Strategy. WSUD opportunities should be pursued in future development (public and private) across Knox Central.

- Knox Central has large areas of hard surfaces (car parks, industrial areas) and large areas of green, permeable surfaces. With the anticipated intensification of activity and increased residential densities, there is a need to mitigate the urban heat island effect.

Culturally Rich and Active Communities

- Council has a long held aspiration to develop a significant cultural facility within Knox Central.
- There is some public art located within the open space network. There are opportunities to upgrade and supplement existing public art in open space.
- There may be opportunities to foster public art within gathering spaces on private land, such as Westfield Knox.
- There are opportunities to expand the role of Knox Central in providing arts and cultural activities.

Democratic and Engaged Communities

- As the location of the Knox Civic Centre, Knox Central provides a focus for civic engagement.
- There are opportunities to strengthen the 'civic presence' within Knox Central, particularly through better use of Council's land holdings.

The drivers for change, opportunities and challenges listed in this section, have influenced the vision and strategic objectives outlined in Section 3 of this Structure Plan.



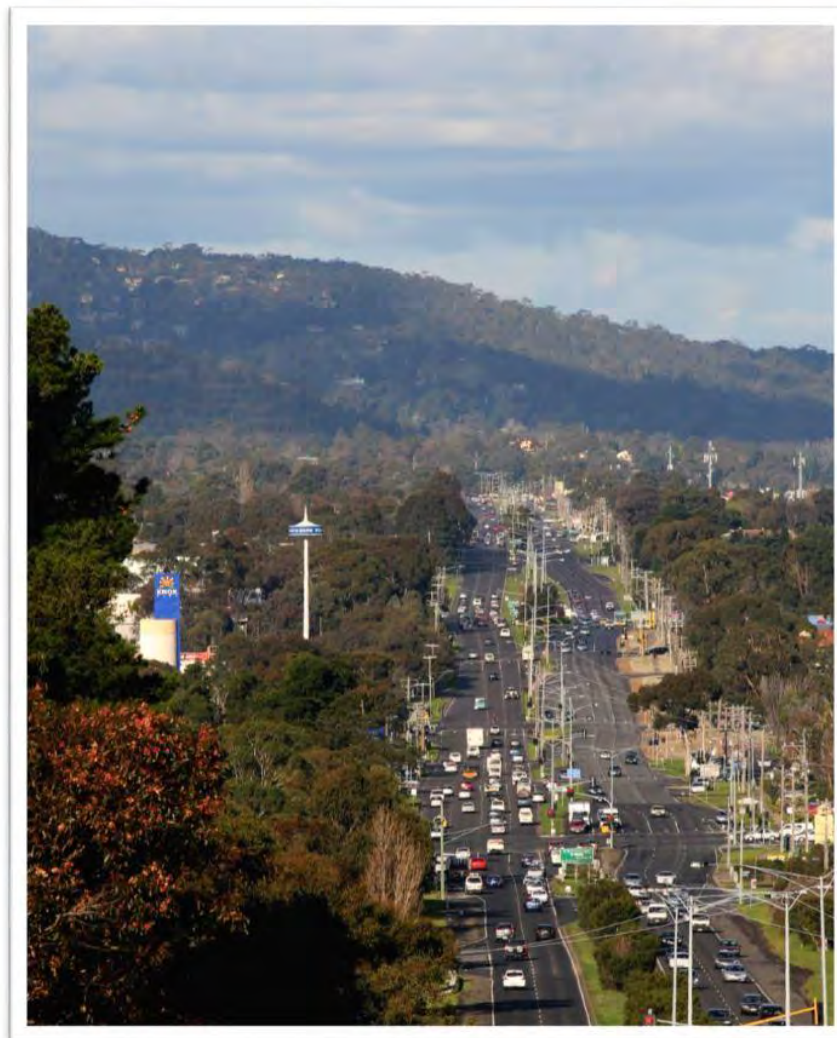
Figure 4 Aerial View of Lewis Park showing poor interfaces with surrounding land uses

VISION AND STRATEGIC OBJECTIVES

The Vision for Knox Central

The vision is an aspirational statement of the preferred long term future for Knox Central. The vision is important as it sets out how Knox Central should look, feel and function as it transforms over the next 20 years.

The vision statement represents a contemporary take on Council's long held aspirations for Knox Central and is informed by analysis of key opportunities and challenges for Knox Central undertaken in 2015 and 2016.



Knox Central – Capital of the East

Knox Central will be a vibrant modern mixed-use activity centre that attracts residents, workers and visitors from across Melbourne's east. It will be the most well known and popular destination in the east of Melbourne.

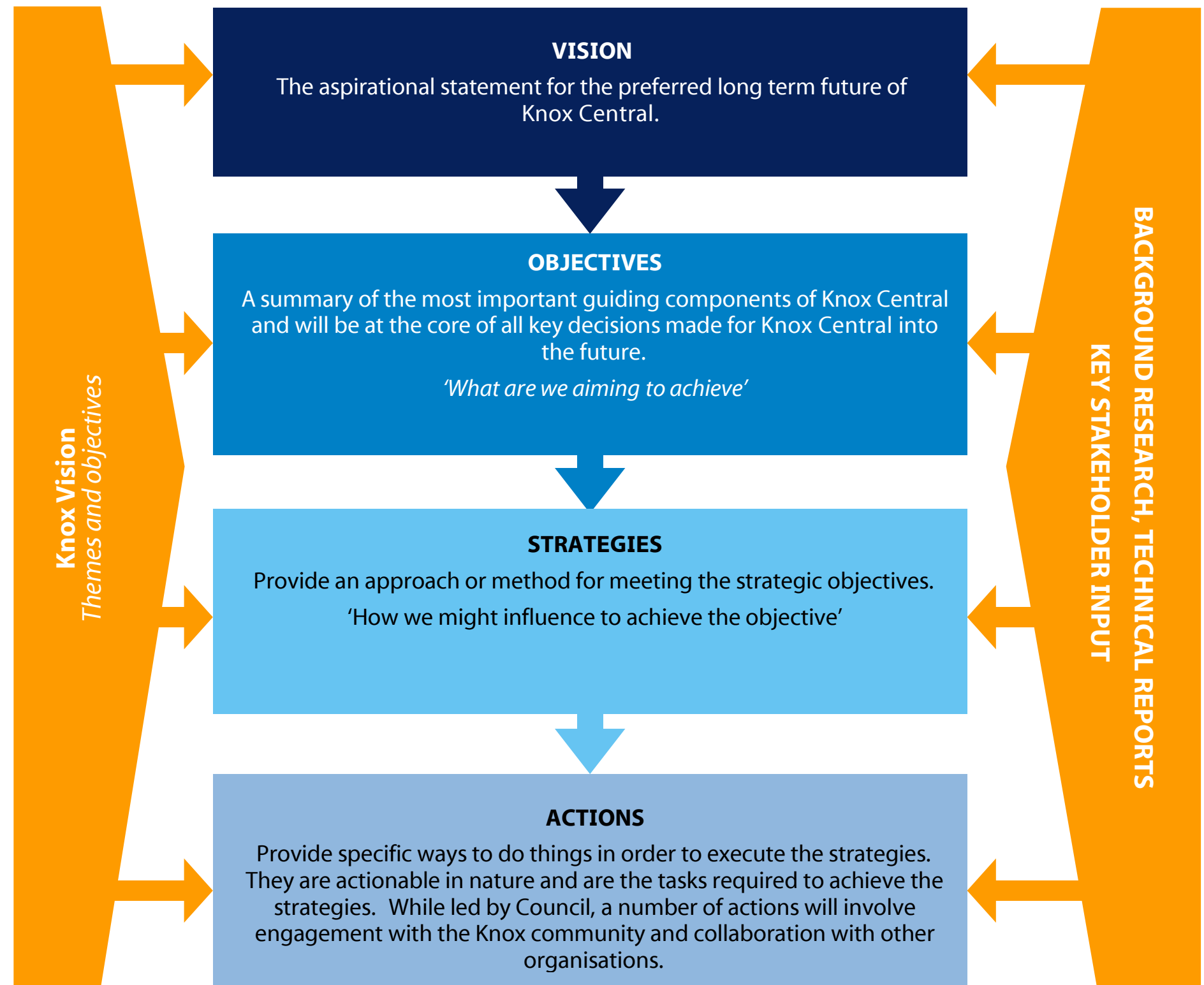
It will be a busy and attractive urban centre which has a strong connection to the natural environment. It will provide a focus for public life, connecting people and communities, and will be an attractive place to live, work, and play.

Knox Central's physical form, encompassing a distinctive boulevard presence along Burwood Highway alongside the well-activated Blind Creek Corridor and Lewis Park, will provide a unique Activity Centre presence in Melbourne's eastern suburbs.

Implementing the Vision

In order to achieve the vision for Knox Central, the Structure Plan provides a number of objectives, strategies and actions. They support the vision and provide more 'on the ground outcomes' to be achieved for Knox Central.

The objectives for Knox Central are outlined on the next page. The supporting strategies and actions for each strategic objective are detailed in Section 4 of this Plan.



Objectives

The Structure Plan provides a set of objectives for Knox Central. They aim to articulate the Knox Vision and Knox City Plan 2013-17 at a local level. The objectives were informed by background research and technical studies undertaken for the Structure Plan.








The objectives are a summary of the most important guiding components for Knox Central. They will be used to direct and assess all future planning and design outcomes within Knox Central to direct future development to be consistent with the Vision for the area.

Table 1 identifies the strategic objectives to guide future outcomes for Knox Central. The five City Plan themes are aligned with the relevant objectives. The table in Appendix A aligns the Structure Plan objectives with the City Plan objectives.

Section 4 aligns the Structure Plan objectives with strategies and actions.

- 1. To enhance Knox Central's role as the civic and public heart of the municipality, where communities connect and congregate.*
- 2. To enable the development of high quality medium and higher density housing that responds to the housing needs of the Knox community, and supports the activity of the centre.*
- 3. To establish Knox Central as a focal point of activity including employment, retail, community, entertainment and leisure activity.*
- 4. To capitalise on Knox Central's natural and environmental features to distinguish it from other activity centres.*
- 5. To facilitate an accessible and safe active and public transport network to and within Knox Central.*
- 6. To provide an efficient street network that connects key destinations including nodes of activity within Knox Central.*
- 7. To achieve high quality built form and public realm which defines Knox Central as a premier mixed use activity centre.*

Table 1 Structure Plan Objectives

STRUCTURE PLAN OBJECTIVES	CITY PLAN THEME ALIGNMENT
<p>OBJECTIVE 1 - To enhance Knox Central’s role as the civic and public heart of the municipality, where communities connect and congregate.</p>	
<p>OBJECTIVE 2 - To enable the development of high quality medium and higher density housing that responds to the housing needs of the Knox community, and supports the activity of the centre.</p>	
<p>OBJECTIVE 3 - To establish Knox Central as a focal point for activity including employment, education, retail, community, entertainment and leisure activity.</p>	
<p>OBJECTIVE 4 - To capitalise on Knox Central’s natural and environmental features to distinguish it from other activity centres.</p>	
<p>OBJECTIVE 5 - To facilitate an accessible and safe active and public transport network to and within Knox Central.</p>	
<p>OBJECTIVE 6 - To provide an efficient street network that connects key destinations including nodes of activity within Knox Central.</p>	
<p>OBJECTIVE 7 - To achieve high quality built form and public realm which defines Knox Central as a premier mixed use activity centre.</p>	

THE STRATEGIC RESPONSE

OBJECTIVE 1 *To enhance Knox Central's role as the civic and public heart of the municipality, where communities connect and congregate.*

CONTEXT AND KEY INFLUENCES

It has long been an aspiration of Knox City Council to develop a significant civic/community facility with a focus on arts and culture in the Knox Central.

Council has significant landholdings with Knox Central, many of which are landlocked, fragmented and underutilised in terms of their potential value to the community. One example is Council's Operations Centre, currently located adjacent to Westfield Knox and Lewis Park. Council has recently acquired land in Knoxfield with a view to relocating the Operations Centre to an industrial area, freeing up the Knox Central site for more valuable and accessible civic and community use. It also provides opportunities to create a vibrant interface to Lewis Park.

The Westfield redevelopment (approved in 2014) includes the provision of a temporary tenancy for the Knox Library, close to Knox Ozone. It also includes the provision of a longer term tenancy for the Knox Library, within the newly developed shopping centre.

The Knox Open Space Plan categorises Lewis Park as 'municipal open space'. Council's land holdings provide opportunities to better use Lewis Park and improve its interfaces with surrounding land.

STRATEGIES

- Provide integrated civic/community facilities with related entertainment, leisure, recreation and business services around a central public space which integrates with Lewis Park.
- Improve pedestrian and vehicular links between Westfield Knox, Lewis Road and the balance of Knox Central to the east.
- Ensure integration between the municipal/community uses within the civic/community precinct integrate with future expansion of shopping, business and residential uses on the Westfield Knox site.
- Create feature building forms to the civic precinct to complement future civic space.
- Provide civic buildings that improve physical and visual connections to Lewis Park, so that the outlook and connection to the park is a key feature of the civic/community precinct.
- Provide a highly accessible and visible civic precinct that is pedestrian friendly and a destination point with the Activity Centre.
- Facilitate accessible and safe pedestrian links between public transport nodes and civic/community facilities.
- Incorporate accessible ground level public spaces into the design of civic and related buildings.
- Support civic buildings to function as flexible and multi-purpose cultural/community facilities.
- Provide a new north-south street link to join up Council's landholdings with the future civic precinct.

ACTIONS

- Continue investigations into the development of appropriate arts and cultural facilities in Knox, within the context of the South/Eastern region.
- Commence the process to acquire land to facilitate Lewis Park frontage for the Civic/Community precinct.
- Develop a master plan for the future civic precinct and Council's land holdings, which includes:
 - Proposed road network and lot layout
 - Building envelopes
 - Indicative land uses
 - Pedestrian and cycle paths
 - Public/civic space
 - Connections to surrounding land uses including Lewis Park
- Following scoping and master planning, undertake the design process for the future civic buildings.
- Investigate innovative options for funding the future Civic Precinct (including public/private partnerships).
- Continue the process of relocating the Knox City Council Operations Centre.

OBJECTIVE 2 To enable the development of high quality medium and higher density housing that responds to the housing needs of the Knox community, and supports the activity of the centre.

CONTEXT AND KEY INFLUENCES

Housing Diversity and Choice

The majority of dwellings in Knox are separate houses (86.5% of dwellings in Knox, according to the 2011 Census, compared to 71.1% for greater Melbourne).

It is expected that families with children will continue to be the dominant household type in Knox, however couple-only and one-person households are the fastest growing household types. A greater diversity of housing types, in terms of size, type, affordability and accessibility, is needed in order to respond to the changing needs of Knox's population.

The *Knox Housing Strategy 2015* designates Knox Central as an 'activity area'. These are areas which will:

- see a greater change in housing styles than other areas in Knox;
- balance the retention of the green and leafy character, whilst allowing more intensive development;
- allow more people to live close to everyday and specialised services to support their needs and lifestyle changes; and
- contribute to quality residential design that is well-designed both architecturally and functionally, to enhance the quality of living in Activity Areas in Knox.

As housing affordability continues to be an issue, Council has forecast that an additional 860 social housing dwellings will be needed across Knox by 2036 to meet the requirements of the local community.

Housing Demand and Supply

There is expected to be demand for up to 2,400 additional apartments across Knox Central by 2035. Demand for townhouses can be considered as 'uncapped' within Knox Central (i.e. supply will be taken up by the market). The areas identified in this Structure Plan for residential and mixed use development are able to accommodate the

anticipated demand for new dwellings within Knox Central (*Knox Central: Land Use, Economic and Property Analysis, 2015, (updated 2016), Geografia*).

Knox Central has several aged care facilities offering accommodation with a range of levels of care. This forms an important part of the 'housing mix' in Knox Central.

Design Quality and Amenity

Better Apartments design standards and implementation mechanisms, prepared by the Department of Environment, Land, Water and Planning (DELWP) and the Office of the Victorian Government Architect (OVGA), were adopted in December 2016, and incorporated into the Knox Planning Scheme in March 2017. The Design Standards primarily focus on internal amenity concerns such as windows, storage, noise, natural ventilation and access to daylight.

The development of high quality architecture will be essential in achieving change and growth in Knox Central that makes a positive contribution to the community.

STRATEGIES

- Capitalise on sites that are capable of accommodating dwellings in Knox Central.
- Support development that demonstrates high levels of architectural merit and that maximises land use and development potential of sites.
- Support diverse medium to higher density housing choices in Knox Central to accommodate a changing and increasing population.
- Support the development of a high amenity medium density neighbourhood in the northern portion of the strategic redevelopment site at the corner of Burwood Highway and Scoresby Road that is integrated with the Blind Creek corridor, in accordance with the guidance provided in the

Structure Plan (See Figure 14).

- Support development that provides affordable housing options.
- Support development that provides flexible and accessible housing options, with a high level of internal amenity.
- Support integrated mixed use/ residential development within the Commercial Core precinct, particularly on the frontage to Lewis Park.

ACTIONS

- Develop planning controls to support the development of high quality medium and higher density development in Knox Central.
- Work with the owner of the strategic redevelopment site at the corner of Burwood Highway and Scoresby Road, to achieve positive neighbourhood outcomes including a contribution of at least 5% of the total housing allotments as social housing (contribution to include dwelling and land), in accordance with the *Knox Affordable Housing Action Plan*.
- Provide for social housing on Council-owned sites that are developed for housing, in accordance with the *Knox Affordable Housing Action Plan*.
- Include residential interfaces as a consideration of the Lewis Park Master Plan.

OBJECTIVE 3 To establish Knox Central as a focal point for activity including employment, education, retail, community, entertainment and leisure activity.

CONTEXT AND KEY INFLUENCES

Business Mix, Employment and Education

Business in Knox Central is dominated by retail however it also has a unique position within Melbourne's Eastern Region, having a manufacturing and wholesaling presence in an activity centre context. However, there is not expected to be future demand for additional industrial and commercial floor space (*Knox Central: Land Use, Economic and Property Analysis, 2015, (updated 2016), Geografia, 2015*).

Existing industry clusters include retailing, entertainment and hospitality; car related services; furniture and flooring manufacturers and wholesalers; higher value manufacturing and scientific services; and construction.

Knox Central is well-served by educational facilities including primary, secondary and tertiary education.

The Fairhills High School has a 300 seat Performing Arts Theatre (available to community groups, a Chinese Language School and an international student population. Along with the Knox Innovation, Opportunity and Sustainability Centre (KIOSC), based at Swinburne University, these education facilities provide a unique opportunity for creating an interface between education, the community and the economic development of the region.

Leisure and Entertainment

Knox Ozone is the focus of Knox's 'night time economy' and is the location of social interaction for many Knox residents. However, there is a lack of diversity in retail/hospitality/leisure spaces across Knox Central.

Lewis Park is a significant community asset which has biodiversity, water, recreational and community values.

Community Facilities and Spaces

Council has a long held aspiration to develop a significant cultural facility within Knox Central. Council has expressed its commitment to multi-

purpose, co-located and integrated community facilities across Knox.

There are a number of highly valued community groups located within Knox Central, including sporting clubs and the Knox Community Garden. Demand for community facilities, infrastructure and services will increase as the residential population within Knox Central increases. Council's land holdings within Knox Central may provide opportunities for the provision of additional community facilities.

STRATEGIES

- Proactively plan for the community infrastructure needs of existing and future residents, particularly additional demand on services as a result of increased local population.
- Strengthen the role of the significant institutional uses by supporting the ongoing operation and upgrade of educational and aged care services.
- Support the establishment of an arts and culture hub in Knox Central.
- Support the on-going use of the 'Community Gardens' site for appropriate community and complementary activities.
- Support higher density residential development, commercial, entertainment and leisure uses to activate interfaces to Lewis Park and Blind Creek.
- Support the role of Lewis Park as the primary regional open space within Knox, servicing the broader community.
- Support complementary recreational land uses near Lewis Park.
- Facilitate a shift from the industrial nature of the Lewis Road Mixed Use precinct to ground level commercial with upper level residential uses.
- Support the expansion of activity in the Commercial core precinct as the focus for major entertainment, hospitality, retail and leisure in

Knox Central.

- Support small scale and complementary retail and hospitality operations outside of the commercial core in order to provide street level activity throughout Knox Central.
- Support ground level commercial with upper level residential uses in the Burwood Highway South precinct.
- Support the provision a mixed use precinct, which includes local convenience retailing, at the strategic redevelopment site at the corner of Burwood Highway and Scoresby Road as part of the site's development.
- Support the role of Knox Ozone as the focus for Knox's 'night time economy', while managing potential negative impacts such as those associated with excessive alcohol use.

ACTIONS

- Continue to develop the community facilities needs analysis for Knox Central, in accordance with Council's Community Facilities Planning Policy.
- Continue to work with Victoria Police and others to maximise public safety within Knox Central.
- Continue the Knox Liquor Accord to ensure a safe and sustainable night time economy at Knox Central.
- Ensure the ongoing management of the Community Gardens site encourages broad community participation and access.
- Continue to partner with and support KIOSC, as a means of building workforce skills for the future.

OBJECTIVE 4 To capitalise on Knox Central's natural and environmental features to distinguish it from other activity centres.

CONTEXT AND KEY INFLUENCES

The extent and proximity of open space within Knox Central is a key distinguishing feature of the activity centre, when compared to other activity centres in Melbourne. These areas of open space offer benefits associated with amenity, local identity, recreation, environmental values and health and wellbeing. However, there are barriers to these areas, with most adjoining land uses turning away from open space.

Knox Central has a significant role to play in terms of improving biodiversity outcomes, and the associated environmental and social benefits that this brings. Lewis Park and the Blind Creek Corridor form part of a habitat corridor from the Dandenong Ranges to the Dandenong Valley.

While in the very upper reaches of the catchment Blind Creek retains its natural channel, within Knox Central, it has been piped, realigned and channeled.

'Daylighting' is the term used to describe the process of redirecting a watercourse above ground, from an underground drainage system, and to restore it to its more natural state. This process need not be undertaken for the whole 'stretch' of creek but can be applied in specific locations identified as being appropriate for special treatments and where the greatest environmental benefit can be achieved.

The *Knox Integrated City Strategy* acknowledges the health and wellbeing benefits of the natural environment, with an area of focus for the strategy being to "increase awareness and appreciation of the value of local biodiversity and its community health and wellbeing benefits".

Trees, in particular, provide numerous economic, environmental and social benefits – many of which have been recognised both nationally and internationally.

STRATEGIES

- Restore the environmental quality of Blind Creek through 'daylighting' and revegetation in strategic locations, to optimise ecological and

functional benefits of a natural waterway.

- Conserve the natural environmental qualities and vegetation character of Lewis Park, Blind Creek corridor and Collier Reserve.
- Improve the ecological function of parklands through natural revegetation and wetland formation.
- Establish the Blind Creek corridor as a key attraction for environmental education and community participation.
- Maximise opportunities for community interaction with the natural environment.
- Require the development of the strategic redevelopment site at the corner of Burwood Highway and Scoresby Road to retain the biological values of the existing water body; facilitate integrated water management; and provide a high level of neighbourhood amenity.
- Establish a formal boulevard character for Burwood Highway that is a continuous planted setback with a tree canopy and formal landscaping to reflect the role and context of the activity centre and to support active and pedestrian-friendly street frontages and public spaces.
- Support development that addresses and allows for interaction to open space. Avoid development that fails to optimise interfaces to open spaces.

ACTIONS

- In partnership with Melbourne Water, develop a Master Plan for Lewis Park (and Blind Creek), which may include:
 - An updated storm water management plan for both Lewis Park and Blind Creek, including a review of the retarding basin capacity of Lewis Park and transferring capacity to other appropriate locations up and down stream.

- Establishment of a Water Sensitive Urban Design (WSUD) network to manage stormwater quality and reuse in Lewis Park.
- Adjustment of the retarding basin levy embankment to enable residential/mixed use edge to Lewis Park.
- Identification of strategic locations for daylighting of Blind Creek.
- Identification of appropriate locations for additional pedestrian bridging points across Blind Creek.
- Identification of recreational needs (new and upgraded).
- Identification of appropriate options for ambient lighting along Blind Creek to encourage safety, activity and events.
- Continue to work closely with the Friends of Blind Creek group and Knox Environment Society.
- Upgrade stormwater management infrastructure to contribute to the amenity and function of open space.
- Promote the *Gardens for Wildlife* program to businesses within the Lewis Park industrial area, body corporate of the new residential developments and residents of new dwellings.
- Encourage corporate environmental and social responsibility in the local business community by providing advice and links to government programs through the Business Visit Program.
- Continue to undertake street planting programs in line with the 'Street Tree Planting to High Profile Roads' framework, including Burwood Highway if the speed limit is reduced to 60km/h (see Objective 5).
- Determine funding options, including development contributions, to deliver and recover the costs associated with capital works improvements and upgrades to Lewis Park and Blind Creek.

Lewis Park and the Blind Creek Corridor

Lewis Park and the Blind Creek corridor form a significant part of Knox Central, providing an environmental 'spine' through the Activity Centre. Lewis Park, which is municipal open space, can be viewed through the 'lenses' of biodiversity, connection, culture, economy, leisure, people, play, sustainability and water. As well as being a major recreational facility, Lewis Park which is owned by Melbourne Water, plays a significant role as a retarding basin and is the location of significant vegetation.

While in the very upper reaches of its catchment Blind Creek retains its natural channel, by the time the creek reaches Knox Central, it has been piped, realigned and channeled. 'Daylighting', the process of redirecting a watercourse above ground and restoring it to its more natural state, would bring many benefits if undertaken for Blind Creek.

Many of the adjoining land uses turn their back on Lewis Park and Blind Creek. Future development adjoining open spaces provides an opportunity to open up this important community and natural asset. In particular, Council's future Civic and Community Precinct will provide a significant new presence to Lewis Park.

A master planning project for Lewis Park is on Council's forward program of works. The master plan will involve a substantial body of work undertaken in partnership with Melbourne Water, to balance community and environmental outcomes with the water management requirements of the site. Given the close relationship between Lewis Park and Blind Creek, the scope of the master plan could extend upstream towards Scoresby Road.



Figure 5 Artist's Impression - future interface to Lewis Park

OBJECTIVE 5 To facilitate an accessible and safe active and public transport network to and within Knox Central.

KEY INFLUENCES

Public Transport

Knox Central is serviced solely by bus services, with the Westfield Knox operating as the bus interchange for a number of local and regional bus services. A number of the bus routes that access the Knox Central study area from local catchments have a very poor frequency and there are significant service gaps in surrounding neighbourhoods.

The extension of the Route 75 tram along Burwood Highway has long been a priority for Council and continues to be the focus of advocacy to the State Government. Recent modelling shows that, while the tram route extension would only result in a small shift from car trips to public transport, it would result in a more significant shift from bus to tram usage. This is significant as trams are less susceptible to on-road delays, particularly where the tram line would be primarily off road as would be the case in this instance.

Active Transport

Burwood Highway is a significant barrier for pedestrians and cyclists, particular due to the short crossing times at signalised intersections. This is a particular concern given the land uses south of Burwood Highway including aged care facilities and schools.

The active transport network primarily comprises shared paths and footpaths, with no on-road bicycle lanes. The Blind Creek trail is a significant part of the shared path network, providing the main east-west link through Knox Central. North-south shared paths are provided along Scoresby Road and Stud Road.

STRATEGIES

- Prioritise pedestrian and cyclist movements and access to public transport.
- Improve pedestrian and cycle access and safety as identified in *Figure 7 Active Transport Actions*.
- Improve connectivity, amenity and safety for pedestrians and cyclists particularly to and within the Commercial Core; and in relation to Burwood Highway and Stud Road.
- Provide safe pedestrian and bicycle connections to and within open space (including Lewis Park, Collier Reserve, Gateshead Reserve and the Blind Creek corridor).
- Support development that enhances pedestrian and bicycle accessibility along the Blind Creek corridor.
- Improve access for people with limited mobility throughout Knox Central.
- Improve the public transport network to and within Knox Central, including service frequency and coverage.
- Support the extension of the route 75 tram along Burwood Highway.

ACTIONS

- Continue to support the delivery of the 2015 *Integrated Transport Plan* drawing on information contained in the *Knox Central Integrated Transport Study* (Cardno 2016) as appropriate.
- Continue to advocate to Public Transport Victoria to extend the Route 75 tram to Knox Central.
- Advocate to Public Transport Victoria and VicRoads to improve bus priority measures.
- Advocate to Public Transport Victoria for bus frequency and coverage improvements on strategic routes, including connections to neighbouring Activity Centres including the Wantirna Health Precinct.
- Advocate to VicRoads to increase crossing times and automate pedestrian phases at identified signalised intersections on Burwood Highway.
- Implement the recommendations from the Principal Pedestrian Network (PPN) project and shared path audit within Knox Central.
- Encourage pedestrian connections between the Commercial Core and surrounding land uses to the north and east.

Active Transport Actions

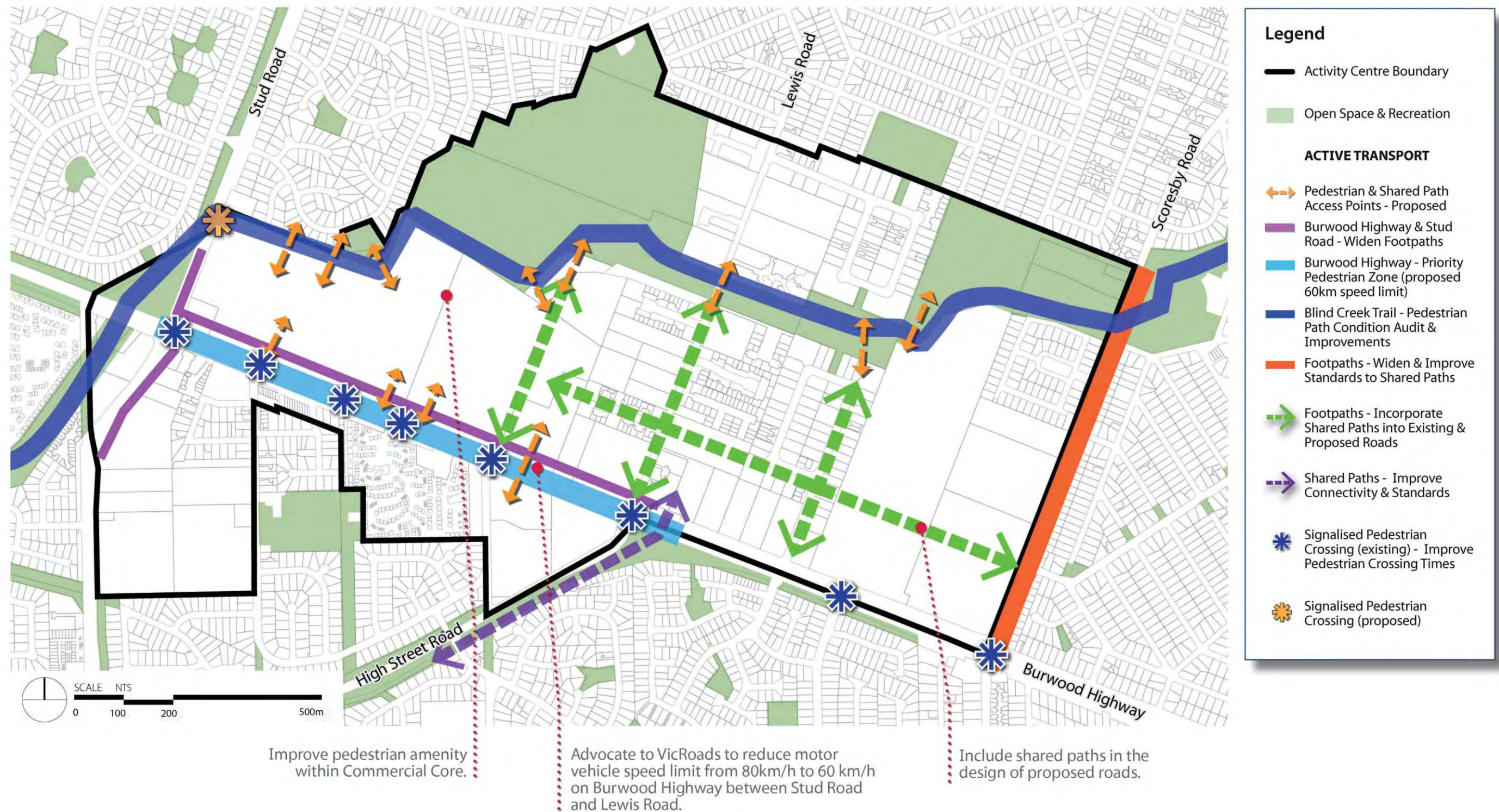


Figure 7 Active Transport Actions – see Objective 5 for a comprehensive list of actions

Public Transport Actions

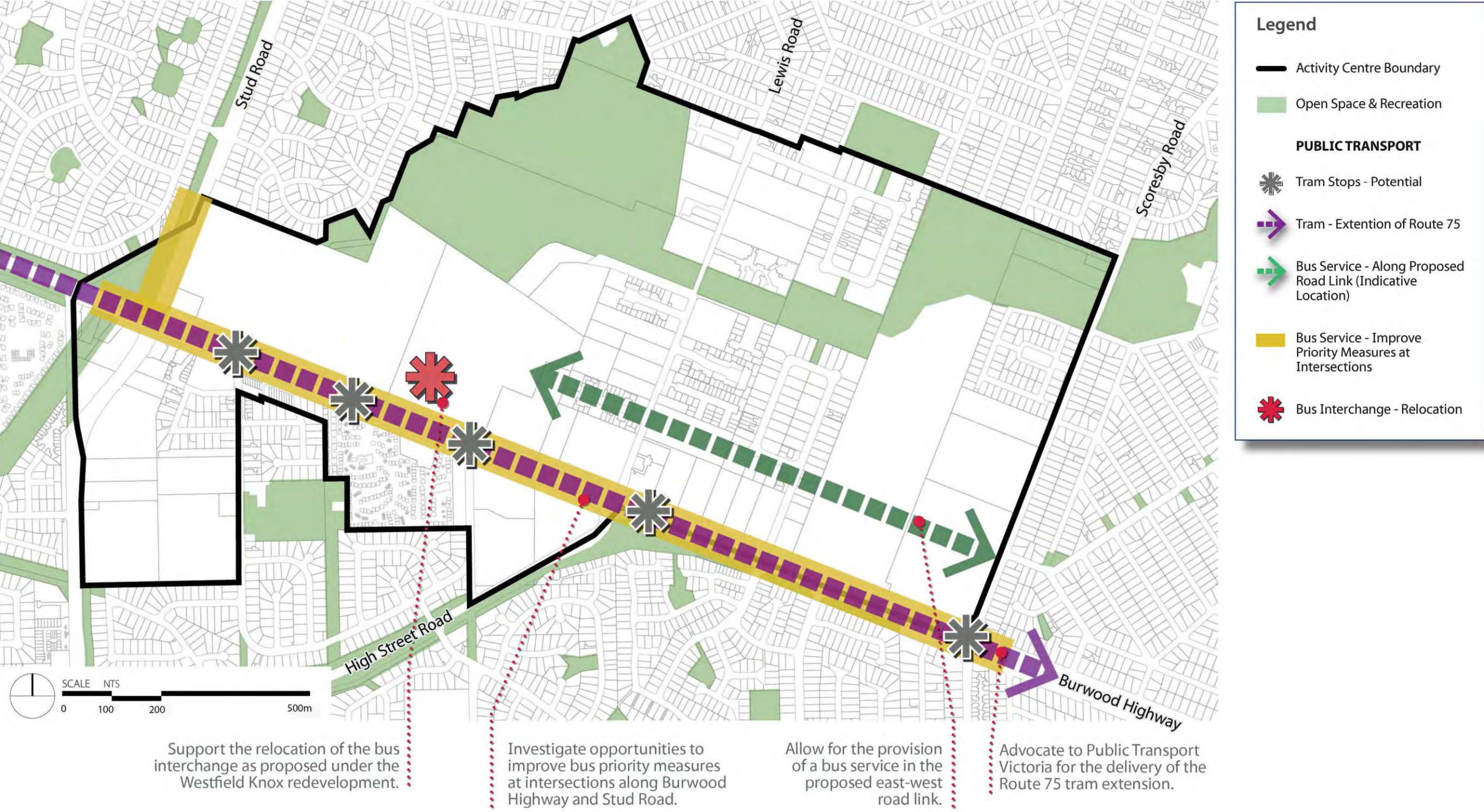


Figure 8 Public Transport Actions – see Objective 5 for a comprehensive list of actions



Council will continue to advocate for the extension of the Route 75 Tram to Knox Central.

Figure 9 Artist's Impression - Future Burwood Highway Conditions

OBJECTIVE 6 To provide an efficient street network that connects key destinations including nodes of activity within Knox Central

CONTEXT AND KEY INFLUENCES

There is currently poor connectivity between the various precincts within Knox Central, with Burwood Highway being the only east-west thoroughfare.

Road Network

There are a number of arterial roads within Knox Central including Burwood Highway, Stud Road, Scoresby Road and High Street Road. The main local roads within Knox Central are Lewis Road, Tyner Road and Parkhurst Drive.

The VicRoads *SmartRoads Road User Hierarchy* indicates that Burwood Highway and Stud Road are nominated as Bus Priority Routes, as well as Bicycle Priority Routes through the Knox Central. Burwood Highway between the Tyner Road (loop) intersections is also a nominated Pedestrian Priority Route.

During peak hours there is significant queuing at the intersections on Burwood Highway within Knox Central. The Boronia Road / Lewis Road intersection to the north of Knox Central is over capacity during peak hours. Improvements to the internal road network will be needed in order to accommodate the future residential population of Knox Central, and to provide better connections within the precincts of Knox Central.

A number of opportunities for traffic management were identified in the *Knox Central Integrated Transport Study* (Cardno 2016). The two main road interventions are the opening up of access to the Civic Precinct unlocking Council owned land, and a new east-west road to link the future neighbourhood at the Development Site at the corner of Burwood Highway and Scoresby Road site with the core of activities to the west.

Car parking

There are currently few issues associated with car parking within Knox Central. However, as the extent of development and activity within Knox Central increases, car park demand will increase accordingly. A key consideration in the future will be to provide adequate parking to address the additional demand, whilst promoting sustainable means of transport.

Road Safety

Statistics show that there is a high concentration of road accidents at intersections along Burwood Highway, including incidents involving pedestrians and cyclists, particularly between High Street Road and Stud Road.

STRATEGIES

- Support new road links in accordance with *Figure 10 Road Network Actions*.
- Upgrade the road network to safely and effectively distribute traffic volumes across Knox Central.
- Provide north-south vehicular links to optimise access to the Civic/Community precinct, and support the efficient use of underutilised land.

ACTIONS

- Continue to support the delivery of the 2015 *Integrated Transport Plan* drawing on information contained in the *Knox Central Integrated Transport Study* (Cardno 2016) as appropriate.
- Advocate to VicRoads for the signalisation of the Boronia Road/Lewis Road intersection
- Advocate to VicRoads to undertake intersection timing and phasing analysis at key intersections on Burwood Highway and Stud Road to identify improvements in the performance of the existing intersection arrangements.
- Support additional east-west road access within Knox Central.
- Support vehicular links between the Civic/Community precinct and the Commercial Core.
- Establish the design and function of the north-south road link as part of the master plan for the future Civic/Community precinct and Council's land holdings.
- Investigate the possible application of a Precinct Parking Plan for Knox Central to manage parking throughout Knox Central as development increases.

Road Network Actions

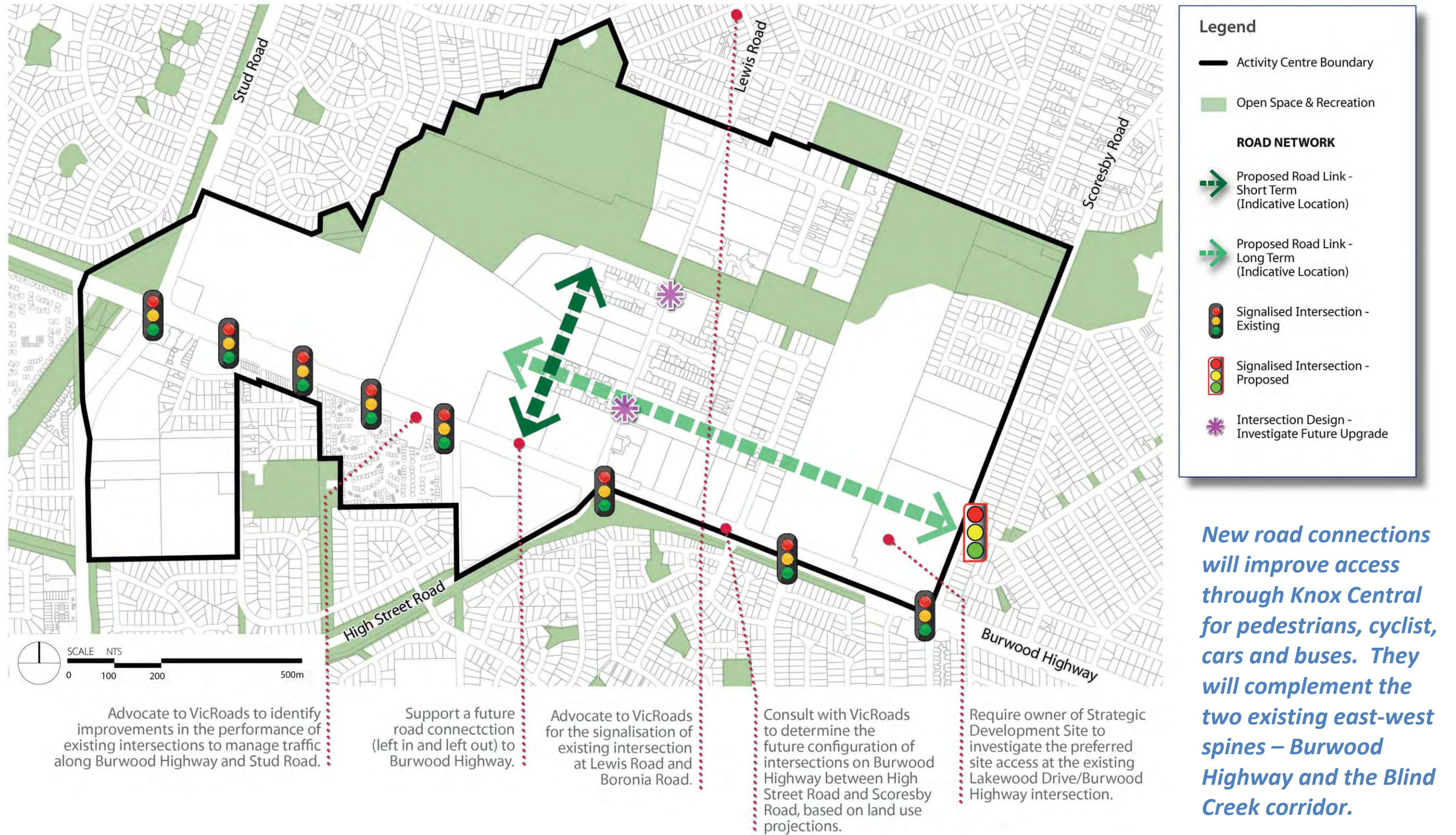


Figure 10 Road Network Actions – see page Objective 6 for a comprehensive list of actions

OBJECTIVE 7 To achieve high quality built form and public realm which defines Knox Central as a premier mixed use activity centre.

KEY INFLUENCES

Buildings within Knox Central have been developed over many decades with the oldest building in the area, the Wantirna South Primary School, dating back to the 1940s. Incremental change, and a diversity of land uses within the activity centre, has contributed to a somewhat inconsistent built form character. This is exacerbated by the variations in the nature and width of the Burwood Highway road reserve.

The vision for Knox Central includes a built form that is more intensive than other areas in Knox. The intensification of buildings within Knox Central presents an opportunity to achieve well-designed buildings of architectural merit in a high profile location.

The creation of a consistent and strong built form presence to Burwood Highway, achieved by building setbacks and street wall heights, will be an important part of building Knox Central's sense of place. In order to achieve a uniform built form, street setbacks will need to vary in response to the nature of the road reserve. Street setbacks should also support the achievement of a distinctive boulevard character to Burwood Highway.

Good design should not only focus on the architectural style and form of a building, but also on the way the building presents and engages with the adjoining footpath at the ground level. This is particularly the case on Burwood Highway, in order to support a more pedestrian friendly streetscape.

In establishing a built form framework for Knox Central that provides a strong sense of place across the entire activity centre, the following influences were considered:

- the built form elements of the *Knox Central Urban Design Framework 2005*;
- forecasted demand for commercial and residential development (*Geografia, 2015*);

- the significant regional role of the Activity Centre;
- development potential and capacity of precincts (*Geografia, 2015*);
- impacts to amenity of adjoining areas and contribution to the public realm (*Hansen, 2016a & 2016b*);
- the context of Knox Central in relation to its significant natural features, open space and the Dandenong Ranges backdrop (*Hansen, 2016a*).

The future public realm within Knox Central will be influenced by a number of major capital works projects proposed in the Structure Plan including the extension of the Route 75 Tram, construction of new roads, the Lewis Park Master Plan, and the development of new civic buildings and public spaces.

STRATEGIES

- Support a built form that provides a higher intensity of land use and activity commensurate with the role of Knox Central as the major focal point of the municipality and a premier destination for the outer eastern region of Melbourne.
- Support the development of a strong built form presence to Burwood Highway through the provision of consistent street wall heights and street setbacks which respond to the nature of the road reserve.
- Establish a distinctive boulevard character for Burwood Highway that is a continuous planted setback with a tree canopy and formal landscaping to reflect the role and context of the activity centre and to support active and pedestrian-friendly street frontages and public spaces.
- Support development that demonstrates high levels of architectural merit.

- Support the development of well-designed, high-quality and distinctive 'feature forms' along Burwood Highway.
- Support development that contributes to an active and pedestrian friendly public realm.
- Require development to be of the scale and design consistent with the objectives of the relevant precinct.
- Maximise views to the Dandenong Ranges from public areas within Knox Central.
- Support development that contributes to the activity, safety and amenity of the natural environment and open space.
- Support development adjoining the creek corridor that complements the natural setting.
- Support the provision of public art on public land and in communal and semi-public spaces on private land.
- Support advertising signage which achieves commercial objectives without creating visual clutter or having detrimental streetscape or amenity impacts.
- Support investment in the necessary infrastructure to ensure a high quality public realm as development intensity increases.
- Support the ongoing planting of appropriate tree species within the public realm, which contributes to local character, amenity and environmental outcomes.
- Maximise public safety in Knox Central through the incorporation of Crime Prevention through Environmental Design principles into design for the public and private realm.
- Develop a streetscape master plan for Burwood Highway to transform the public realm into a formal landscaped boulevard.

ACTIONS

- Develop planning controls that support the achievement of high quality building design which makes a positive contribution to the public realm.
- Develop planning controls that support the achievement of a strong built form character for Burwood Highway, including street wall heights and street setbacks.
- When the Route 75 Tram is extended to Knox, work with Public Transport Victoria and VicRoads, to ensure positive public realm outcomes, including landscaping and pedestrian amenity.
- Develop entry signage for Knox Central, in accordance with the *Knox Activity Centre Entry Signage Design Framework*.
- Incorporate the public realm infrastructure project recommendations from this Structure Plan into the capital works program and determine the funding options to deliver and recover the costs associated with capital works project delivery.



Figure 11 Aerial photo showing Knox Central's built form

The Burwood Highway Corridor

Burwood Highway is the central spine of Knox Central. Much of its streetscape is currently characterised by car parking areas and low scale development, with a number of underutilised sites. The streetscape also has the benefit of mature trees in some locations and a wide road reserve affording long views to the east.

Recent development has started the move toward a more intense built form, however has not necessarily made a positive contribution to the public realm. Future development will support the creation of a treed boulevard framed by building podiums, consistent building setbacks and street wall heights and a high quality landscape outcome. Building heights beyond the podium level will be directed by architectural quality, impacts on adjoining sites and site capacity. The intense and consistent built form to Burwood Highway will mark the arrival to Knox Central. At ground floor, active frontages will support pedestrian activity and create a sense of place and interaction.

The introduction of the Route 75 tram to Knox Central will further enhance activity at street level, with pedestrian nodes forming around tram stops and intersections. Changes to traffic conditions and improvement of pedestrian amenity will make for an environment which is conducive to all forms of transport – tram, bus, car, bicycle and walking.



Figure 12 Artist's Impression - Burwood Highway, entering Knox Central from the city

PRECINCT PLAN

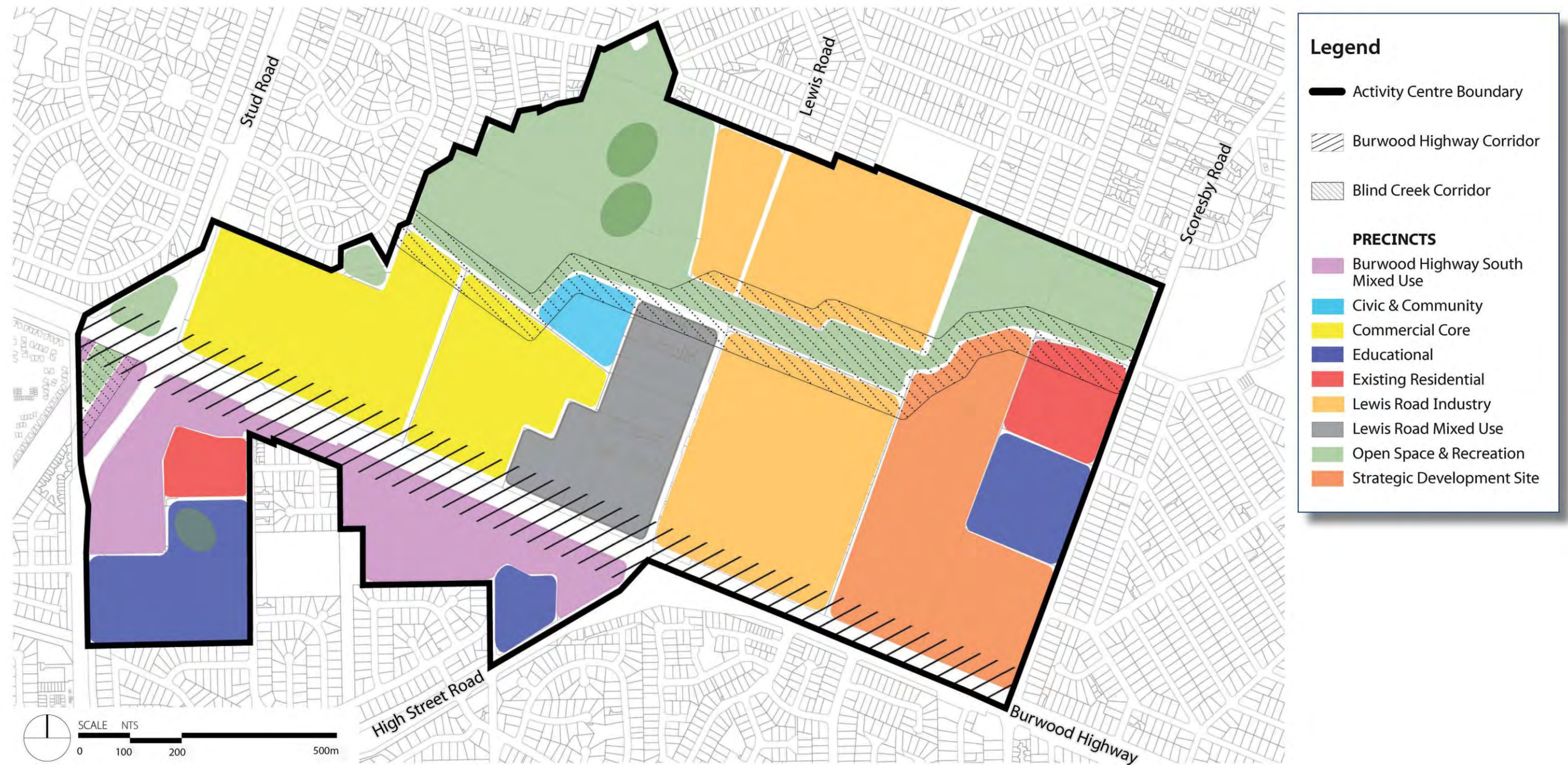


Figure 13 Activity Centre Precinct Plan

PRECINCT OBJECTIVES AND VISION

Burwood Highway Corridor

The Burwood Highway transects a number of precincts and will create a distinctive, high quality and consistent built form that provides: a contemporary entryway into Knox Central and surrounds, improved frontages to the public realm, legible connections across Burwood Highway and development that strongly relates to the surrounding landscape character, in the form of a treed boulevard.

Commercial Core

The commercial core will provide a broad mix of land uses including residential, employment, business, entertainment, community and leisure activities. A reorientation of the built form within the precinct will provide integration with Lewis Park to the north and the civic and mixed use precincts to the east.

Land uses that facilitate active frontages to Burwood Highway will allow for interaction with the street and make a positive contribution to the public realm. The interface with Lewis Park will be capitalised through the development of higher density residential development, which will provide activation of the open space.

New development within the Commercial Core will improve permeability of the precinct and support pedestrian amenity and safety.

Civic/Community

The precinct will provide opportunities for formal and informal gathering spaces through the development of integrated, multi-purpose civic facilities with related entertainment, leisure, recreation and commercial uses.

The development and use of the land will integrate with the entertainment and leisure uses in the Commercial Core to the west and compliment and integrate with the recreational use of Lewis Park and the Blind Creek Corridor.

Lewis Road Mixed Use

The Lewis Road mixed use area will see a transition from the existing industrial character to a mixed use precinct, characterised by higher density residential development with vibrant commercial premises at ground floor.

During this transition, the continuation of commercial and industrial uses with existing uses rights will be supported. New sensitive land uses will be required to address potential impacts to amenity resulting from existing commercial and industrial uses.

New land uses which are likely to result in poor amenity outcomes for residential land uses within the precinct are discouraged.

Given the fine grain subdivision pattern in some locations, consolidation of lots will be supported in order to achieve the desired land use outcomes.

Appropriate site remediation measures will be required to be undertaken prior to the commencement of new sensitive land uses.

Burwood Highway South Mixed Use

The southern side of Burwood Highway will provide a mixed-use environment providing higher density residential development and commercial uses at ground floor. Commercial uses will be complementary to the activities within the commercial core and will activate street frontages, particular in locations shown in Figure 16.

In areas other than high pedestrian 'nodes', where active frontage may not be critical, ground floor frontages will provide transparency and surveillance opportunities.

Development will provide a consistent built form character to Burwood Highway, through the use of front setbacks, street wall heights and landscaping. Development will contribute to an active, vibrant pedestrian environment.

Educational precincts

These areas will support the ongoing operation and expansion of existing educational land uses.

Open Space and Recreation

This precinct contains Lewis Park and part of the Blind Creek Trail which have wider social benefits for the Knox Community. The precinct also contains Collier and Gateshead Reserves which are local open spaces, the established Knox Community Gardens and a number of complementary recreation uses.

Future use of this precinct must support the will support the ongoing use and development of all assets, including the preparation of a masterplan for Lewis Park and the retention of 256-258 Scoresby Road for complementary recreation uses.

Lewis Road Industry

This area will support the on-going viability of existing commercial/industrial uses. In addition, the area will support opportunities for emerging industry clusters and encourage a transition from traditional industrial uses to high amenity, high value employment uses over time. Non-industrial uses, such as indoor recreational facilities and places of assembly, are considered appropriate given the Activity Centre context of this industrial area. These types of uses are supported in locations that minimise amenity impacts on adjoining and nearby land uses.

Development will continue to be of a lower scale industrial nature, with the exception of sites fronting Burwood Highway. Burwood Highway provides opportunities for a more intensive built form, in keeping with the development vision for this central corridor.

Strategic Development Site

The development of this underutilised site will provide a high amenity medium density neighbourhood in the northern portion of the site, which is well- integrated with the Blind Creek corridor.

The neighbourhood will be supported by a mixed use precinct to the Burwood Highway frontage and Scoresby Road corner which will provide a small amount of local convenience retail and support local employment opportunities.

The on-going use of part of the site by government departments is supported.

Residential areas

The low density character of the *Wantirna Lea Estate* will be retained. The *White Road/Jackson Road* precinct will be developed to achieve a medium scale, medium density housing outcome

.

BUILT FORM GUIDELINES

Overview

Built form guidelines have been prepared to support future development that contributes to the function of the activity centre, provides a high level of amenity for visitors, employees and residents, and set benchmarks in design quality. The guidelines will inform the development of planning controls to guide development in Knox Central.

DESIGN ELEMENTS

Building Design

The intensification of buildings within Knox Central presents an opportunity to achieve well-designed buildings of architectural merit in a high profile location. This design element provides guidance on façade articulation, architectural quality, the street level interface, materials and colours, and environmentally sustainable design.

This element also addresses opportunities for designing buildings for universal access and opportunities to incorporate best practice Environmentally Sustainable Development in buildings and landscaping.

Building Height

A key driver for determining building heights is the facilitation of more intensive activity across the breadth of Knox Central and while achieving a high level of pedestrian amenity and sense of place. Street wall heights are provided for Burwood Highway, to facilitate a strong and consistent built form character for this key road. Building heights are addressed by precinct in the table below. It is important to note that the building heights referred to in Figure 14 are preferred heights, and are therefore *discretionary requirements*. They are not mandatory requirements, but are guidelines to provide guidance for development and aid Council in its decision making.

Siting and Setbacks

This element addresses the desired setbacks and siting requirements for development within key areas of

development in Knox Central.

The recommended setbacks for sites within the Burwood Highway Corridor focus on achieving a unified street edge, supporting street level activity and contributing to a high quality public realm.

The recommended setbacks allow for Knox Central to contribute to a treed boulevard outcome for the greater Burwood Highway corridor, while also supporting a greater intensity of activity and development. They are not mandatory requirements, but are guidelines to provide guidance for development, support site responsive design and aid Council in its decision making.

Landscaping

This element provides guidance for landscaping in new developments within Knox Central.

The guidelines aim to facilitate development that complements the existing landscape character of Burwood Highway and the significant vegetation concentrated around Lewis Park and the Blind Creek corridor. Landscaping within Burwood Highway and Stud Road setbacks will be required to maintain a planted setback that includes a continuous tree canopy and formal landscaping to reflect the role and context of Knox Central.

Services, Access and Car Parking

This element addresses the treatment of services, vehicle access and car parking in developments.

Pedestrian access is also addressed in this section with a focus on providing clearly defined access for people of all levels of mobility.

The guidelines focus on minimising the visibility of the servicing aspects of buildings i.e. air conditioning units, and waste storage. The guidelines also recommend reducing the visibility of car parking and vehicle access so that it does not dominate the streetscape.

Internal Amenity

This element provides guidance on the design of internal spaces within buildings. A key focus for this element is ensuring that access to sunlight and natural ventilation is maximised to provide high amenity spaces for occupants and reduce energy consumption.

Table 2 outlines the built form guidelines for Knox Central. Guidelines are provided for the whole activity centre. Additional requirements for each of the precincts are listed below the general guidelines.

A greater level of detail is provided for the Strategic Redevelopment Site at the corner of Burwood Highway and Scoresby Road as it is a very large site which will create a new neighbourhood with Knox Central (See Figure 23).

The built form framework for Knox Central provides for an urban form that supports development across the Activity Centre and responds to anticipated demand over the next twenty years.

BUILT FORM FRAMEWORK – PREFERRED BUILDING HEIGHTS



Figure 14 – Built Form Framework - Preferred Building Heights

The Knox Central Structure Plan is an enabling document that encourages an intensification of activity and development within the Activity Centre. The preferred building heights shown Figure 15 seek to provide guidance to developers and the community on the likely future urban form of Knox Central. They are not intended to be prescriptive or mandatory heights. Rather, they represent a starting point for discussion between Council and landowners regarding the capacity of development sites. In considering the appropriate scale of development on individual sites, consideration will be given to the architectural quality of proposed buildings; the appropriate level of impacts on sensitive interfaces; the contribution the building makes to the public realm; and any constraints of the site. Developments that exceed the preferred building height must demonstrate that the design is of exceptional quality and would exceed the high design quality already expected within the Activity Centre. Development adjacent to a sensitive residential interface must also demonstrate that additional amenity impacts would not result from additional height.

BUILT FORM FRAMEWORK – PREFERRED SETBACKS



Figure 15 Built Form Framework - Preferred Setbacks

Burwood Highway preferred setbacks section diagrams

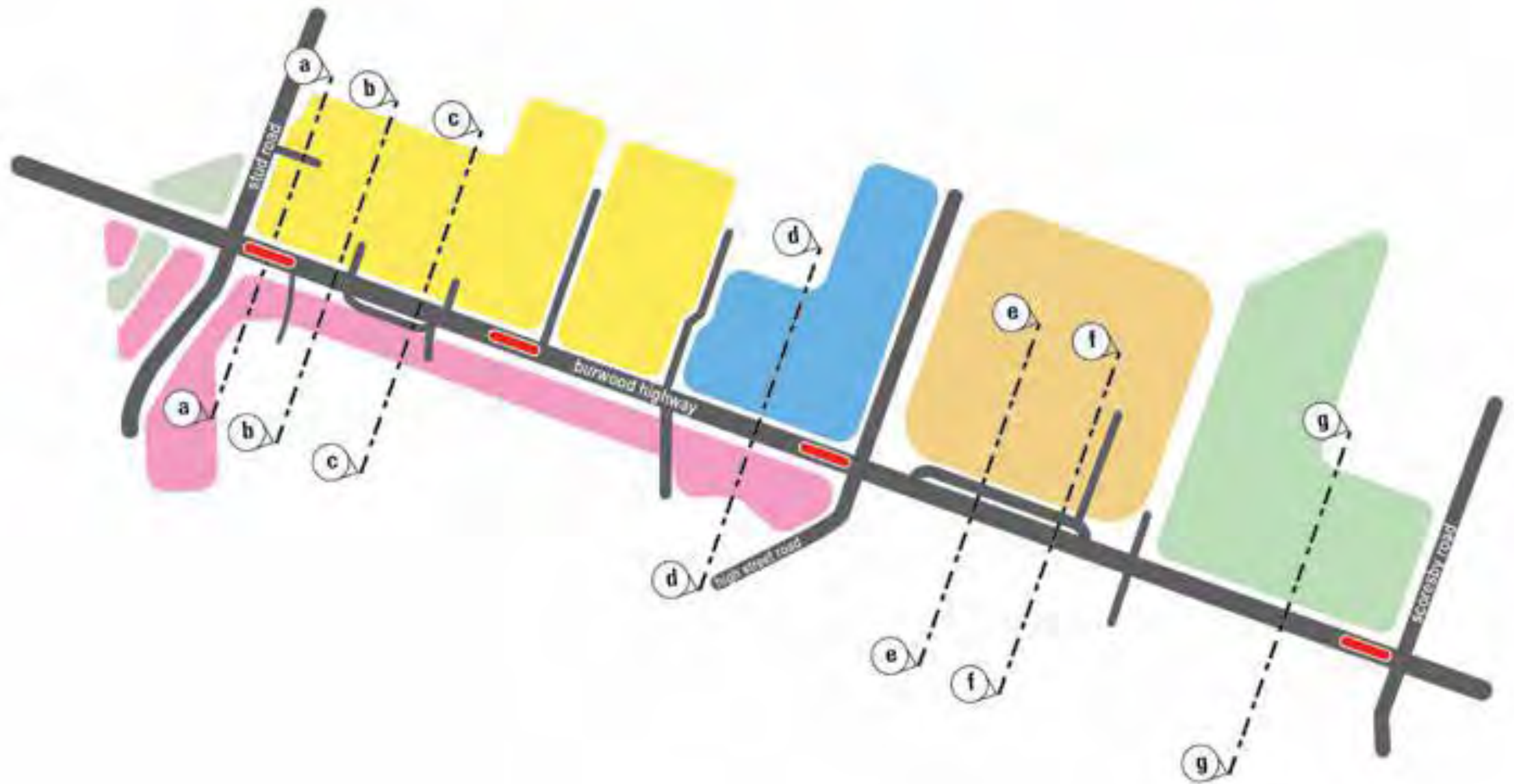


Figure 16 Section points (section diagrams on following pages)

The setback sections on the following pages demonstrate a variety of conditions along Burwood Highway. In some locations, property boundaries are very close to the road; in others there are wide landscape reserves, service lanes and carparks separating buildings from the road. The setbacks proposed in the Structure Plan respond to these variations and seek to create a consistent built form outcome.

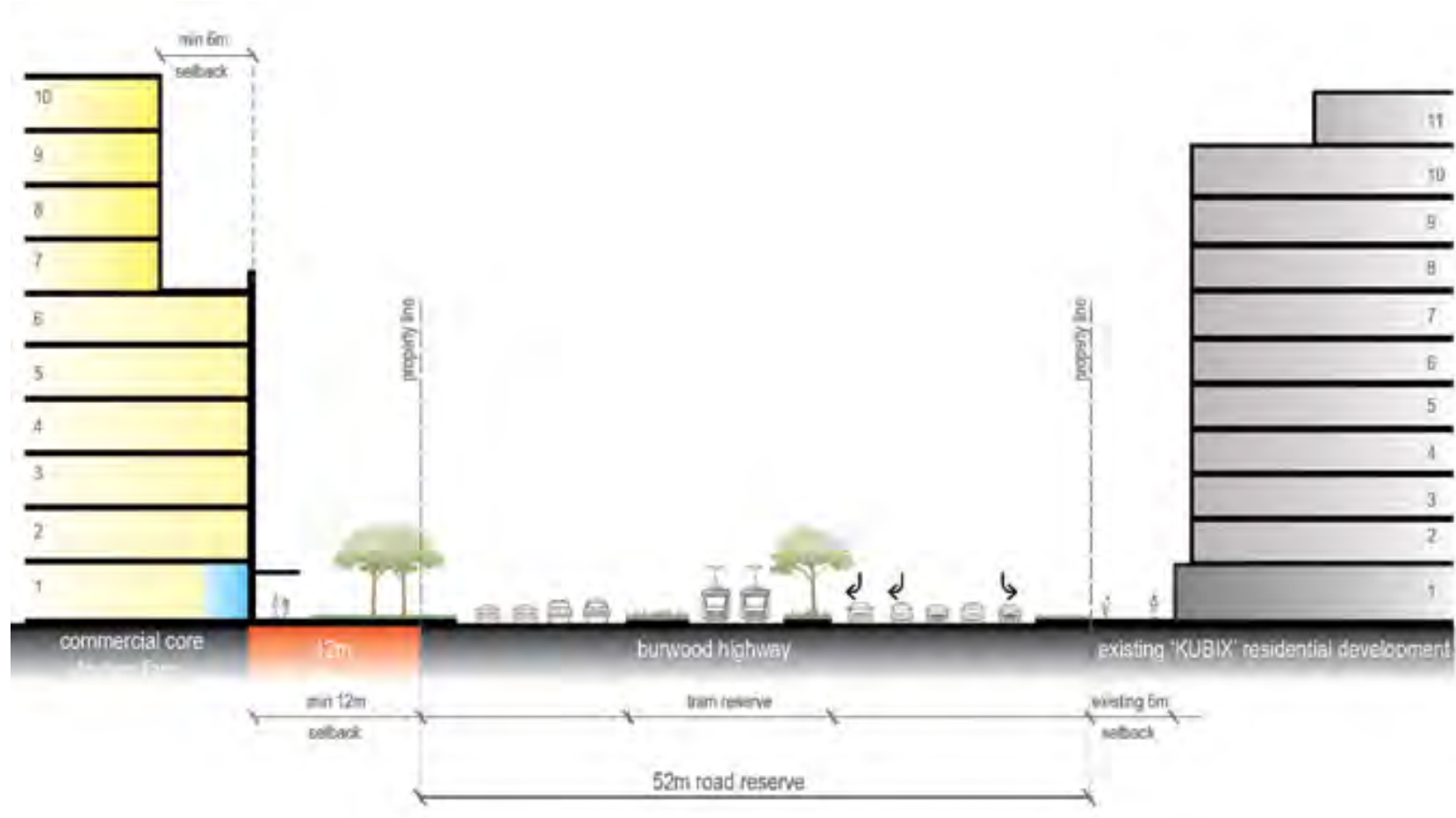


Figure 17 Section Diagram Commercial Core 'feature form' and Burwood Highway South Interface (existing Kubix building) (Section a)

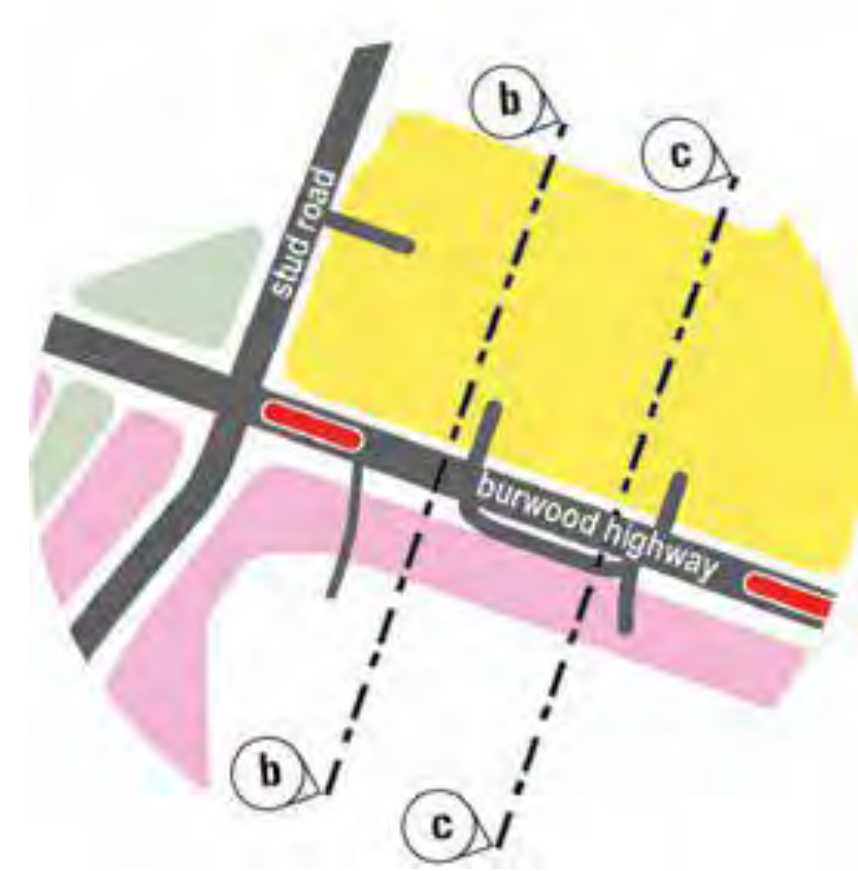
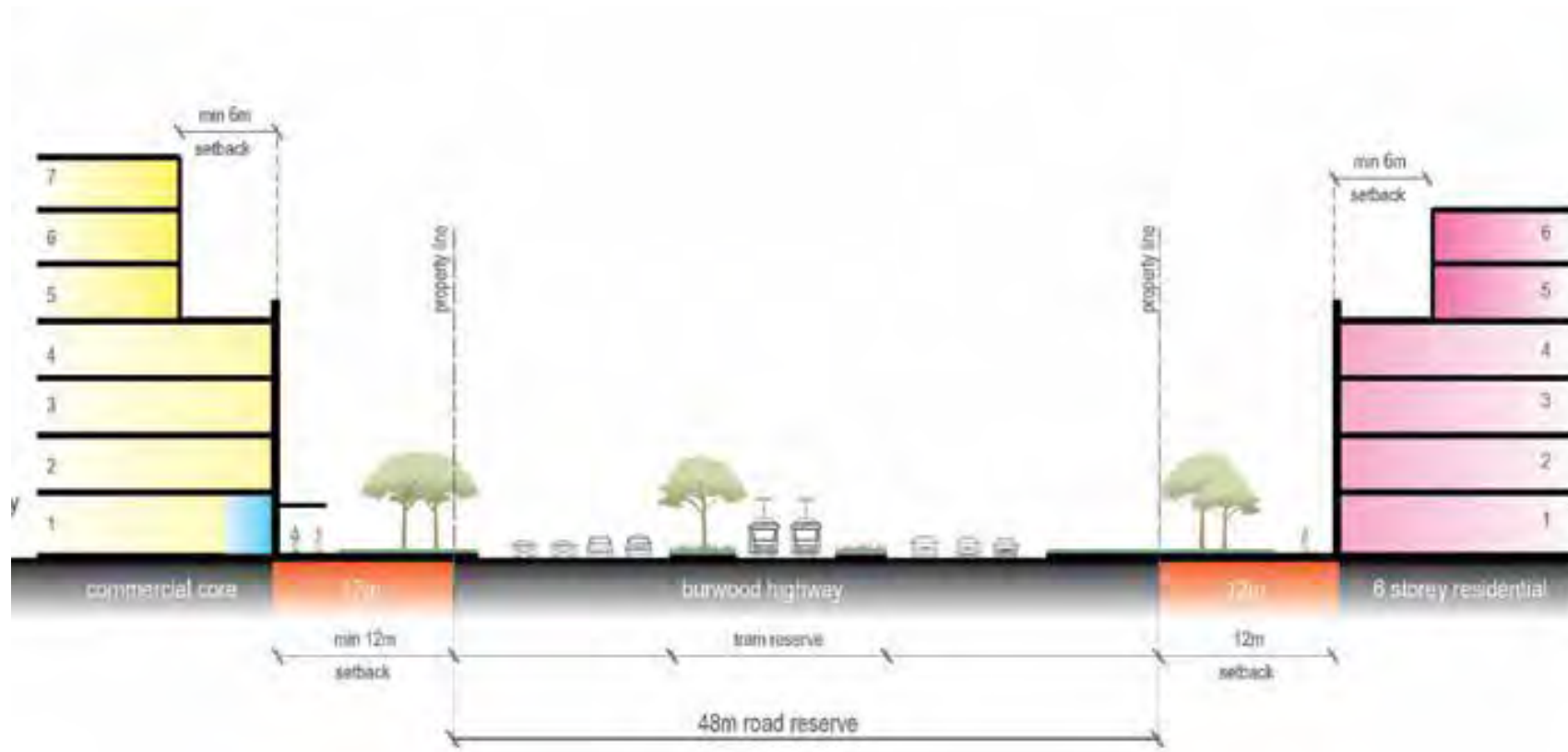


Figure 18 Section Diagram Commercial Core and Burwood Highway South Interface (Section b)

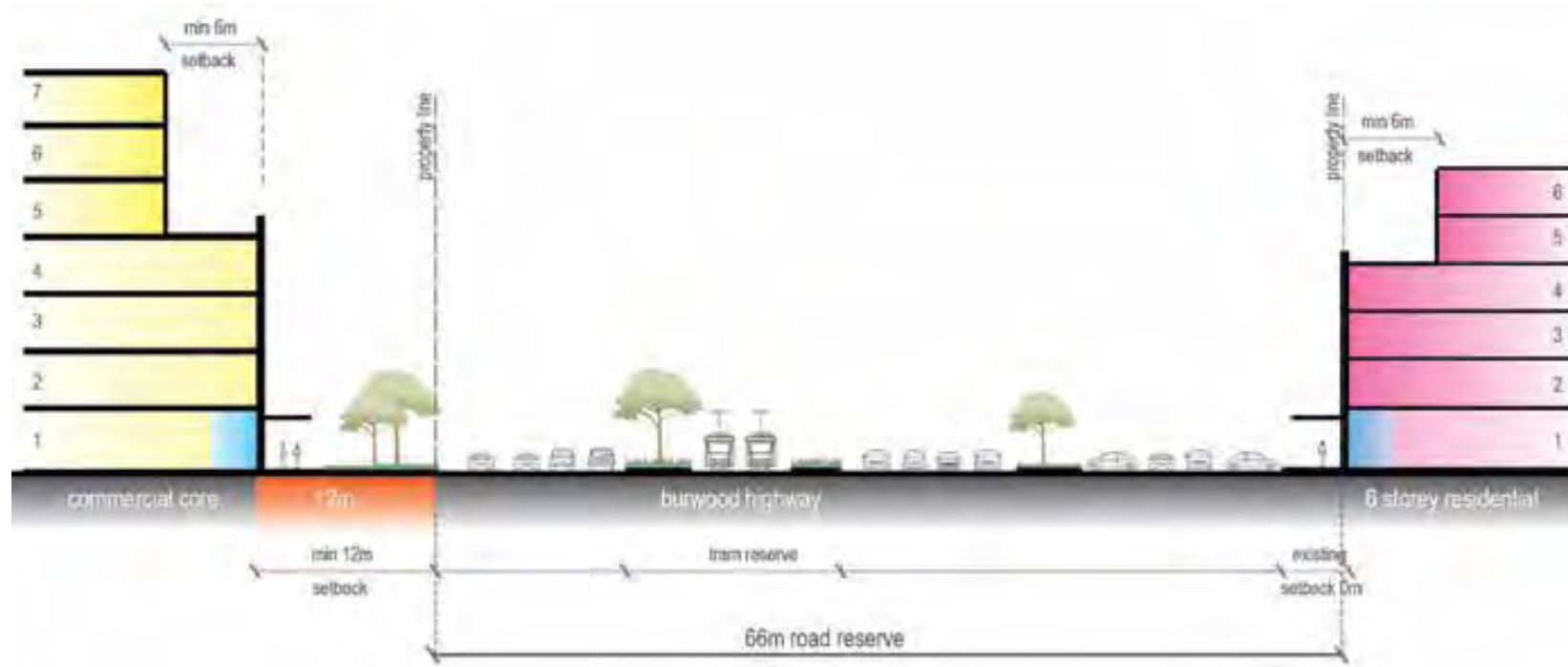


Figure 19 Section Diagram Commercial Core and Burwood Highway South Interface (Section c)

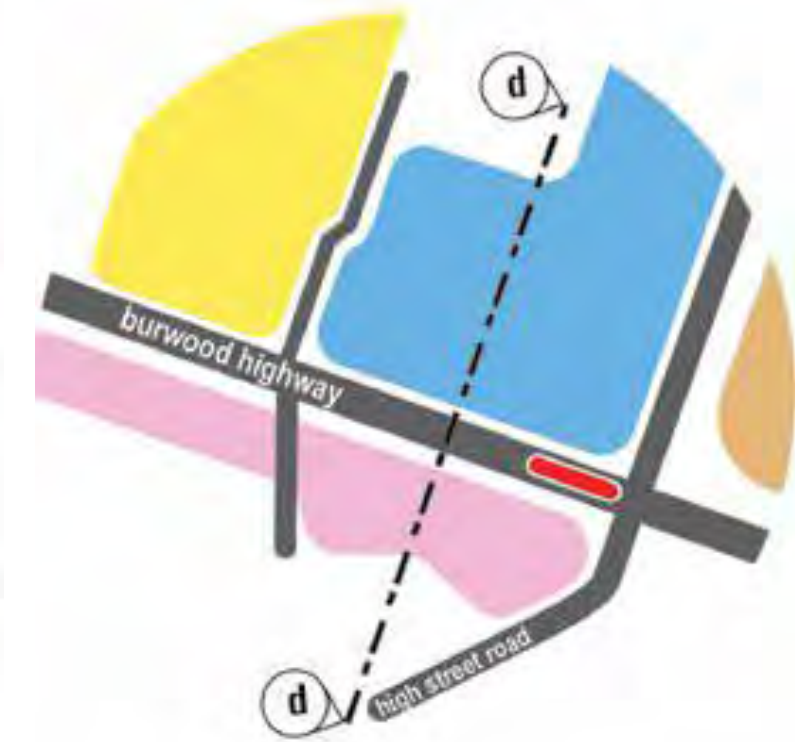
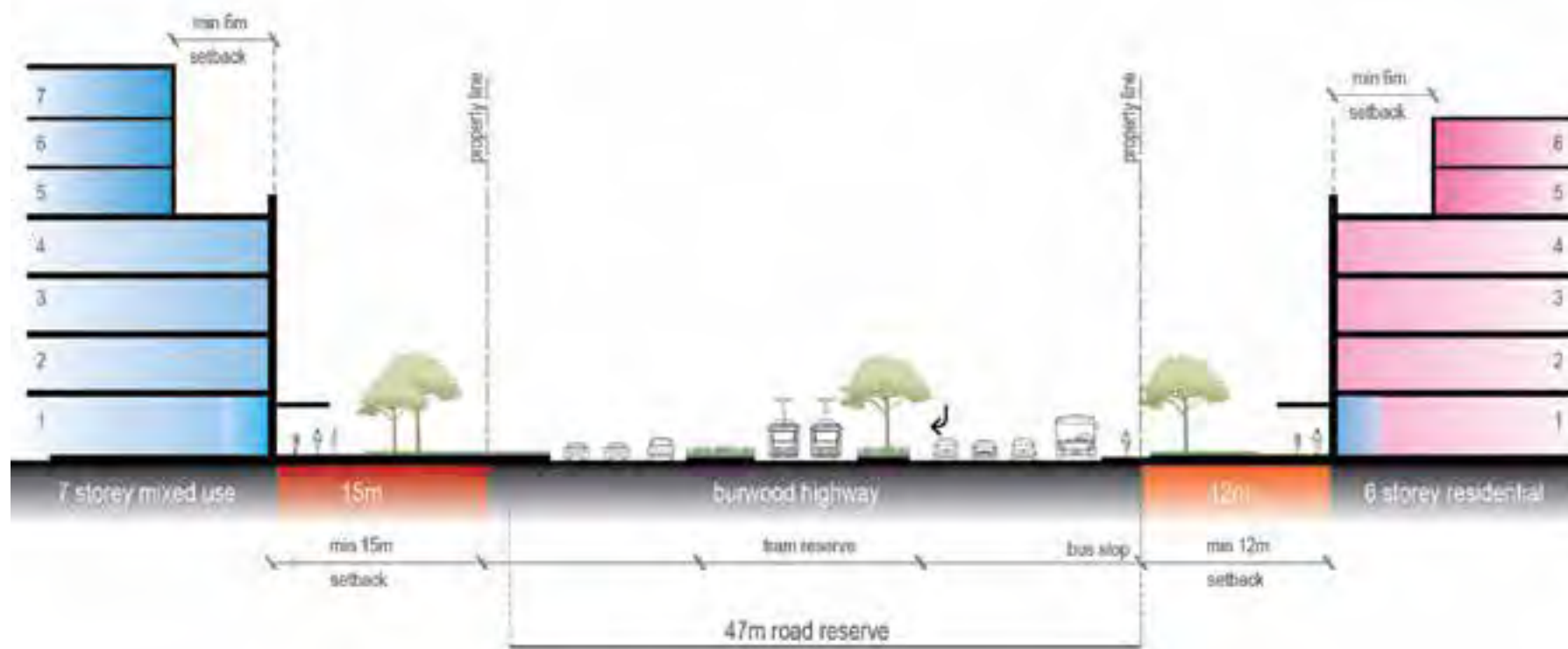


Figure 20 Section Diagram Lewis Road Mixed Use and Burwood Highway South Mixed Use (Section d)

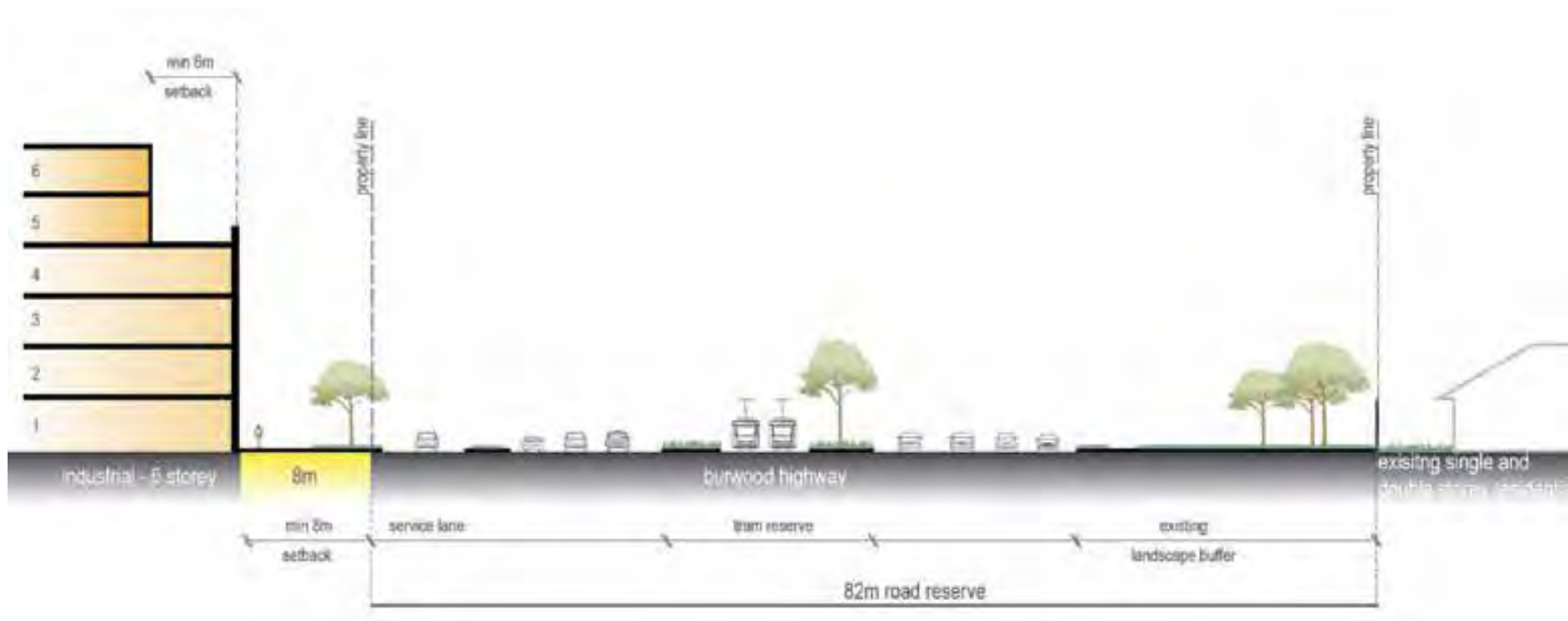


Figure 21 Section Diagram Lewis Road Industry Burwood Highway Interface (section e)

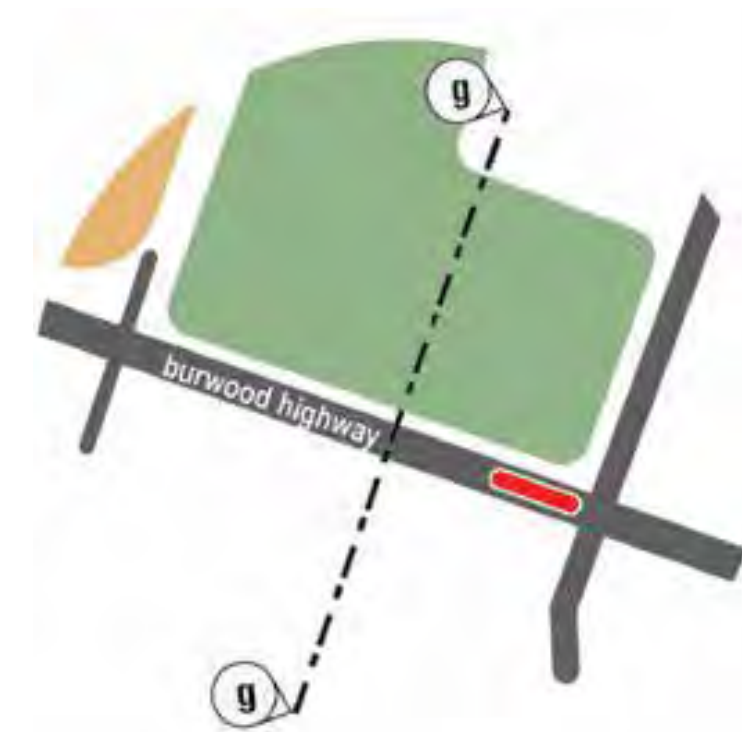
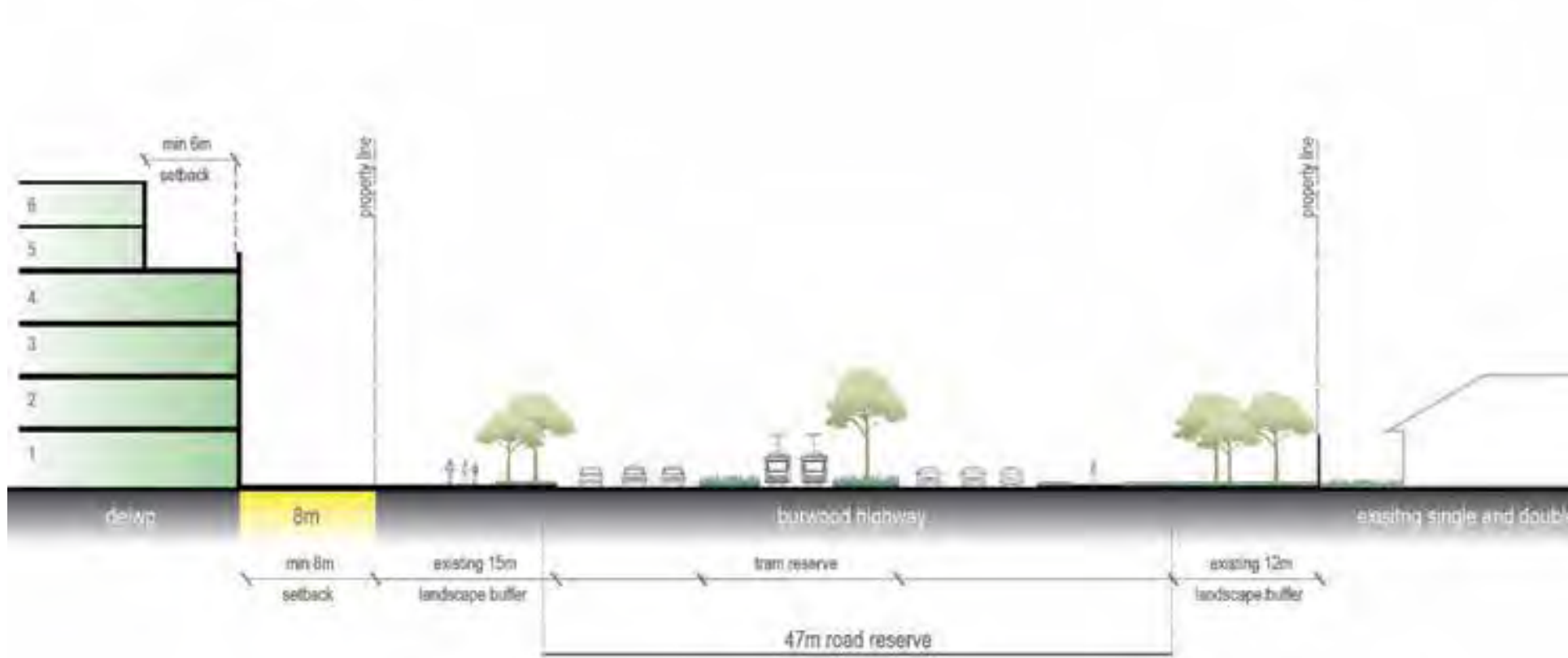


Figure 22 Section Diagram Strategic Development site (section g)

Table 2 – Built Form Guidelines

- **Design Objectives** - A statement of the desired outcome for the relevant design element.
- **Design response** - The preferred approaches for achieving the relevant design element objective(s). Other approaches for achieving the relevant objective(s) may be demonstrated to Council’s satisfaction.

ALL PRECINCTS	
DESIGN OBJECTIVE	DESIGN RESPONSE
BUILDING DESIGN	
<ul style="list-style-type: none"> • To provide a new built form that can accommodate a significantly higher intensity of land use and activity commensurate with the role of Knox Central. • To provide buildings that exhibit a high standard of architectural and urban design through the presentation of an integrated building form that has a sense of address, clearly articulated façades and are sensitively designed. • To provide buildings that have regard for adjoining sites, including their development potential, and the ability for future development to achieve reasonable amenity and design outcomes. • To provide opportunities for passive surveillance of the public realm. • To provide new building forms that are legible, attractive and representative of their function. • To contribute to sustainability outcomes, minimise resource use and contribute to the mitigation of the urban heat island effect. • To incorporate public art in to the design of buildings, development sites and activity centre precincts. 	<ul style="list-style-type: none"> • Articulate form and façades through the use of different colours, materials, and the composition of rebates, openings and setbacks. • Design buildings on corner sites to actively address both frontages at street level. • The scale, massing and orientation of new development should allow for daylight and sunlight penetration to adjoining sites. • Provide balconies and ground level windows overlooking the street, driveways and/or any adjoining public open space to maximise passive surveillance. • Pedestrian entries should directly front, be visible and easily identifiable from the street; and other public areas; provide shelter, and a sense of address. • Incorporate Crime Prevention through Environmental Design (CPTED) principles. • Provide active frontages and contribute to attractive, pedestrian-friendly and visually pleasing streetscapes. • External walls which may be vulnerable to graffiti should incorporate vertical landscaping or other forms of graffiti control. • Siting of buildings should accommodate the retention and/or planting of canopy trees and established vegetation. • Incorporate water sensitive urban design (WSUD) including stormwater re-use. • Incorporate Ecologically Sustainable Development (ESD), including solar orientation and natural ventilation, use of sustainable materials, and energy efficiency.
LANDSCAPING	
<ul style="list-style-type: none"> • To achieve landscaping and planting that complements the vegetation character of Knox and key features unique to Knox Central, such as Blind Creek and Lewis Park. • To maintain a continuous setback along Burwood Highway, planted with canopy trees and formal landscaping to reflect the role and context of Knox Central and to support active and pedestrian-friendly street frontages and public spaces. • To improve the ecological integrity of the Blind Creek corridor. 	<ul style="list-style-type: none"> • Maintain and protect existing native vegetation. • Require Water Sensitive Urban Design for development. • Require development and subdivision applications include landscape concept plans. • Provide setbacks in accordance with Figure 16 to accommodate boulevard planting along Burwood Highway and Stud Road frontages.
SERVICES, ACCESS AND CARPARKING	
<ul style="list-style-type: none"> • To minimise the visual impact of car parking, services and access when viewed from the public realm. • To ensure buildings services are integrated into the design of new buildings. • To prioritise pedestrian movement and the walkability of Knox Central. • To minimise the impact of on-street car parking as a result of new development. 	<ul style="list-style-type: none"> • Pedestrian entries to buildings should be clearly visible and easily identifiable from the street. • Require pedestrian entries to be accessible for all abilities. • Ramps or stairs required to access a raised ground floor level must be incorporated into the building design and be provided within the property boundary. • Distinguish residential entries from retail and commercial entries.

- Incorporate car parking and service infrastructure into building design, which is obscured from the public realm.
- Provide appropriate waste storage, loading and recycling facilities that are screened from public view.
- Provide convenient and safe car parking, in underground or concealed deck car parking.
 - Provide convenient and safe car parking, in underground or concealed deck car parking.
- Redevelopment of existing sites should incorporate the replacement of ground level car parking and upper (open) levels of decked car parks, with activity- generating uses such as residential or commercial.
- Pedestrian entry points, access, paths and walkways should be prioritised to improve walkability and the pedestrian experience.
- Car parking and bicycle parking is to be provided at the rates specified in Clause 52.06 of the Knox Planning Scheme.
- Incorporate opportunities for sustainable transport options such as electric car charging points and car share spaces.
- Basement car parks should be designed with the following considerations:
 - Provision of natural ventilation;
 - Integration of ventilation grilles or security gates into the façade and landscape design and minimising visibility from the public realm; and
 - Provision of security gates, concealing of service pipes and ducts, to improve the appearance of basement entries from the street.
- Loading and service areas should be located away from sensitive including residential interfaces.
- Avoid stairs and ramps which extend into the footpath space or dominate the building frontage and setback.
- Avoid locating air-conditioning units and other equipment within view of a primary active frontage street or residential areas. Wherever possible, incorporate these elements within the building envelope.
- Avoid parking and vehicle entries that present as a dominant element when viewed from the public realm.

INTERNAL AMENITY

- To achieve a high level of internal amenity in new buildings.
- To minimise the impact of external noise sources on new residential development.

- Design internal spaces to be flexible and adaptable, in order to accommodate a variety of uses in response to changing needs.
- Maximise sunlight and daylight access to the living spaces in dwellings, and communal and private open space.
- Provide suitably located end of trip facilities including secure bicycle storage.
- Provide an appropriate level of natural ventilation to all dwellings.
- Orientate buildings, and position windows, awnings and shutters, to capture solar access in winter and provide appropriate shading in summer.

BURWOOD HIGHWAY SOUTH	
DESIGN OBJECTIVE	DESIGN RESPONSE
BUILDING DESIGN	
<ul style="list-style-type: none"> To provide a building form that contributes to a distinctive sense of place. To provide a contemporary entryway into Knox Central and surrounds. 	<ul style="list-style-type: none"> Provide active ground floor frontages in locations as shown in Figure 16. Building frontages to High Street Road should address the public realm through the use of windows, balconies and transparent fencing.
BUILDING HEIGHT	
<ul style="list-style-type: none"> To promote a more intense built form outcome on Burwood Highway. To provide development that is of an appropriate human scale, and provides a positive contribution to public realm and pedestrian amenity. To achieve a consistent built form which is punctuated with feature forms at selected locations. 	
SITING AND SETBACKS	
<ul style="list-style-type: none"> To establish consistent street setbacks to the Burwood Highway frontage. To provide an appropriate interface and transition to surrounding sensitive residential areas. To provide appropriate street setbacks to side and secondary street frontages. To provide active ground floor frontages at key nodes of activity. 	<ul style="list-style-type: none"> Where a development abuts an established residential area, it should respond to the objectives of Clause 55 of the Knox Planning Scheme with regard to overshadowing and overlooking and side and rear setbacks. Avoid car parking in front setbacks.
LANDSCAPING	
<ul style="list-style-type: none"> To maintain a continuous setback along Burwood Highway, planted with canopy trees and formal landscaping to reflect the role and context of Knox Central and to support active and pedestrian-friendly street frontages and public spaces. 	<ul style="list-style-type: none"> Landscaping provided within front setbacks should include clear trunk canopy trees and formal landscaping. Landscaping within Burwood Highway setbacks should be planted with canopy trees at a minimum density of one canopy tree per 5 metres of the Burwood Highway boundary (excluding the width of one driveway). Each tree should be surrounded by 20 square metres of permeable surface with a minimum radius of 3 metres. Up to 50 per cent of the permeable surface may be shared with another tree.

COMMERCIAL CORE	
DESIGN OBJECTIVE	DESIGN RESPONSE
BUILDING DESIGN	
<ul style="list-style-type: none"> To create a new, active and varied urban frontage to Burwood Highway which contributes to the amenity of the streetscape. To contribute to the activity, safety and amenity of open space. To capitalise on the natural setting of Lewis Park and the views to the Dandenong Ranges. To improve legibility, permeability and pedestrian level interfaces through the precinct. To establish a built form and site layout which addresses and integrates with adjoining land use and development. 	<ul style="list-style-type: none"> Provide active frontages to the Lewis Park interface, including the provision of balconies, windows and private open space. Provide clearly delineated internal and external pedestrian ways and streets. Provide an internal street network that emphasises street level activity. Incorporate awnings into façade design on internal pedestrian routes. Provide active frontages to Burwood Highway, particularly at ‘feature forms’ and pedestrian nodes. Clearly define building entries and provide ground and upper level active frontages. 80% of the Burwood Highway frontage should comprise entries, display window, clear glazing, or other active interfaces. The design and function of ‘feature forms’ should be well- integrated with the broader Commercial Core precinct. Provide physical and visual connections to the civic/community and mixed use precincts to the north and east. Provide physical and visual connections to Gateshead Park and the existing residential area to the north. Incorporate <i>Crime Prevention Through Environmental Design</i> principles into the design of new public areas and pedestrian ways.
BUILDING HEIGHT	
<ul style="list-style-type: none"> To promote a more intense built form outcome on Burwood Highway To provide development that is of an appropriate human scale, and provides a positive contribution to public realm and pedestrian amenity To achieve a consistent built form which is punctuated with feature forms at selected locations. To mark entries into the precinct and highlight intersecting streets. To provide an appropriate interface and transition to surrounding adjoining residential areas. 	
SITING AND SETBACKS	
<ul style="list-style-type: none"> To maintain a continuous setback along Burwood Highway that is planted with a canopy trees and formal landscaping to reflect the role and context Knox Central and to support active and pedestrian-friendly street frontages and public spaces. To provide an appropriate interface and transition to surrounding adjoining residential areas. Provide ground floor setbacks that allow for active frontages, particularly at ‘feature forms’ and pedestrian nodes. 	<ul style="list-style-type: none"> Extend retail and related uses to the Burwood Highway and Stud Road frontages, over the existing decked car parking areas. Create clear and legible punctuating points to Burwood Highway that mark entry to the precinct at feature form locations shown in Figure 15. Establish viable centre entries to the north side of the shopping centre to provide interaction with Lewis Park and future residential development adjoining the park.
LANDSCAPING	

<ul style="list-style-type: none"> • To achieve a high quality landscape setting, building on elements such as Lewis Park, the Blind Creek corridor, and the Dandenongs backdrop. • To maintain a continuous setback along Burwood Highway that is planted with a canopy trees and formal landscaping to reflect the role and context Knox Central and to support active and pedestrian-friendly street frontages and public spaces. • To minimise the impacts of the urban heat island effect. 	<ul style="list-style-type: none"> • Provide landscaping, including canopy trees, within carparks and internal streets. • Provide canopy tree and formal planting in Burwood Highway and Stud Road setbacks.
SERVICES, ACCESS AND CARPARKING	
<ul style="list-style-type: none"> • To achieve improved pedestrian safety and amenity within the carpark and internal street network. • To minimise the visual impact of car parking from the public realm. 	<ul style="list-style-type: none"> • Incorporate undercroft/ basement parking to the periphery of centre with retail/ mixed use development above. • Multi-level car parking must be concealed and integrated into the built form • Include universal design principles to maximise amenity and safety for people with limited mobility.

CIVIC/COMMUNITY	
DESIGN OBJECTIVE	DESIGN RESPONSE
BUILDING DESIGN	
<ul style="list-style-type: none"> To provide new civic facilities to strengthen the physical heart of Knox Central. To provide adaptable and multi-purpose buildings that can respond to the needs of the community. To provide for buildings that physically and visually connect the civic role with adjoining retail, parkland and employment networks, and contribute to the activity, safety and amenity of the natural environment and open space corridor. 	<ul style="list-style-type: none"> Define a built form arrangement that improves physical and visual connections to Lewis Park. Form a series of related buildings that are similar in scale, form and massing around a civic plaza. Building design respects the advantages and view opportunities of its proximity to Lewis Park. Building design provides for connections and synergies to adjoining land uses. Buildings are orientated to accommodate desire paths to and from the Commercial Core. Provide a new road to activate the civic precinct and provide a connection from Eastgate Court to the Commercial Core. Provide a highly accessible and visible civic precinct that is pedestrian friendly. Facilitate accessible and safe pedestrian links between public transport nodes and civic/community facilities. Incorporate accessible ground level public spaces into the design of civic and related buildings. <p>Provide civic buildings that function as flexible and multi- purpose cultural/community facilities</p>
BUILDING HEIGHT	
<ul style="list-style-type: none"> To establish a suite of civic and mixed use forms around a central public space. To support an increase in the scale of creekside development where integration of Lewis Park and the retail area occurs. 	
SITING AND SETBACKS	
<ul style="list-style-type: none"> To establish a continuous setback that is complementary to the natural context of Lewis Park. To establish a public space which provides a pedestrian connection and views to Lewis Park. To maximise solar access to public space. 	<ul style="list-style-type: none"> Require upper level setbacks which are visually recessive when viewed from the creek.
LANDSCAPING	
To provide landscaping that represents the important civic role of the precinct.	<ul style="list-style-type: none"> Provide formal landscaping that marks the approaches to the precinct and contributes to the function of public spaces.

LEWIS ROAD MIXED USE	
DESIGN OBJECTIVE	DESIGN RESPONSE
BUILDING DESIGN AND HEIGHT	
<ul style="list-style-type: none"> • To redevelop industrial building stock promoting a high level of presentation to the street frontage. • To create a new active interface facing the Blind Creek corridor that contributes to the activity, safety and amenity of the open space corridor. • To provide new residential development that is designed to mitigate the impact of existing industrial uses on the amenity of residents. • To provide development that makes a positive contribution to the public realm and pedestrian amenity. • To support a more intense built form outcome. 	<ul style="list-style-type: none"> • Provide articulation and visual interest to boundary walls that are visible to the public realm. • Incorporate noise attenuating measures into new residential development, including: <ul style="list-style-type: none"> ○ locating habitable rooms (particularly bedrooms) away from significant noise exposure by using spaces like walkways, laundries and storage as a buffer; ○ noise-mitigating glazing, wall, ceiling and roof construction; and; ○ using setbacks and acoustic fencing. • Provide balconies and ground level windows overlooking the street, driveways and/or any adjoining public open space to maximise passive surveillance. • Avoid large building masses that dominate the streetscape. • Avoid blank unarticulated facades along street frontages. • Avoid sheer blank walls, including boundary walls that are visible from the public realm. • Incorporate appropriate and fit for purpose noise attenuation measures to dwellings and residential buildings, to the satisfaction of the responsible authority, where new dwellings are constructed within the Lewis Road Mixed Use Precinct.
SITING AND SETBACKS	
<ul style="list-style-type: none"> • To achieve active frontages and higher density residential development built to a sensitive human scale. • To create a new active interface facing the Blind Creek corridor. • To support active ground level frontages to new streets through the development of the Master Plan for the Civic Precinct. 	<ul style="list-style-type: none"> • Provide a landscaped setback to Lewis Road and Bridgewood Court, including tree planting and permeable surfaces with the exception of driveways and pathways. • Provide active ground level frontages to Eastgate Court and Sherwood Court. • Support development to side and rear boundaries at ground floor/podium level, with upper level setbacks provided to support daylight access and ventilation of dwellings. • Provide dual aspects for properties on the north side of Sherwood Court, to encourage an activated interface to the Blind Creek corridor, while maintaining an active streetscape to Sherwood Court. • Avoid car parking in front setbacks.

LEWIS ROAD INDUSTRIAL	
DESIGN OBJECTIVE	DESIGN RESPONSE
BUILDING DESIGN AND HEIGHT	
<ul style="list-style-type: none"> To provide industrial development that is fit for purpose and representative of function. The interface between new development and the Blind Creek corridor contributes to the activity, safety and amenity of the natural environment and open space corridor. To provide for industrial development that is consistent with the prevailing built form of the precinct. 	<ul style="list-style-type: none"> Development should be visually recessive when viewed from the Blind Creek corridor Development to the north side of Blind Creek should minimise overshadowing of the creek corridor Provide opportunities for passive surveillance from industrial development to open space. Avoid sheer walls, particularly to the street frontage.
SITING AND SETBACKS	
<ul style="list-style-type: none"> To provide street setbacks that contribute to a consistent street frontage. To provide opportunities to improve the streetscape and interface with open space through the provision of suitable landscaping. To minimise adverse effects on the visual amenity of nearby residential, mixed use areas or open space. 	<ul style="list-style-type: none"> Front setbacks to other streets within the precinct should be in accordance with Clause 22.02 of the Knox Planning Scheme. Provide an appropriate interface and transition to surrounding sensitive areas. Avoid car parking in front setbacks.
LANDSCAPING	
<ul style="list-style-type: none"> To maintain a continuous setback along Burwood Highway that is planted with a canopy trees and formal landscaping to reflect the role and context Knox Central and to support active and pedestrian-friendly street frontages and public spaces. 	<ul style="list-style-type: none"> Landscaping within Burwood Highway setbacks should be planted with canopy trees at a minimum density of one canopy tree per 5 metres of the Burwood Highway boundary (excluding the width of one driveway). Each tree should be surrounded by 20 square metres of permeable surface with a minimum radius of 3 metres. Up to 50 per cent of the permeable surface may be shared with another tree. Provide setbacks that accommodate landscaping along boundaries adjacent to open space.

STRATEGIC DEVELOPMENT SITE (CORNER BURWOOD HIGHWAY & SCORESBY ROAD)

There are a number of Objectives, Strategies and Actions that *specifically* relate to the development of this site. These are summarised below, to provide greater context for the built form guidelines (over page) and provide a consolidated point of reference for development expectations for this site.

OBJECTIVE 2 To enable the development of high quality medium and higher density housing that responds to the housing needs of the Knox community, and supports the activity of the centre.

Action: Work with the owner of the strategic redevelopment site at the corner of Burwood Highway and Scoresby Road, to achieve positive neighbourhood outcomes including a contribution of 5% of the total housing allotments as social housing (contribution to include dwelling and land), in accordance with the Knox Affordable Housing Action Plan.

The action to achieve five percent social housing as part of the development of this site (which is designated as a 'Strategic Investigation Site' in the *Knox Housing Strategy* and the Knox Planning Scheme) is consistent adopted Council Policy in:

- *The Knox Affordable Housing Action Plan 2015-2020*
- *Knox Housing Strategy*; and
- The Knox Planning Scheme

The Knox Affordable Housing Action Plan 2015-2020 also clarifies how the social housing is to be provided onsite, and includes an action to "Advise developers of Council's preference for dispersed affordable and social housing in Knox."

OBJECTIVE 3 To establish Knox Central as a focal point for activity including employment, education, retail, community, entertainment and leisure activity.

Strategy: Support the provision a mixed use precinct, which includes local convenience retailing, at the strategic redevelopment site at the corner of Burwood Highway and Scoresby Road as part of the site's development.

OBJECTIVE 4 To capitalise on Knox Central's natural and environmental features to distinguish it from other activity centres.

Strategy: Require the development of the strategic redevelopment site at the corner of Burwood Highway and Scoresby Road to retain the biological values of the existing water body; facilitate integrated water management; and provide a high level of neighbourhood amenity.

Table 3 – Built Form Guidelines Strategic Redevelopment Site (Corner Burwood Highway & Scoresby Road)

- **Design Objectives** - A statement of the desired outcome for the relevant design element.
- **Design response** - The preferred approaches for achieving the relevant design element objective(s). Other approaches for achieving the relevant objective(s) may be demonstrated to Council’s satisfaction.

These are reflected in Figure 23 ‘Master Plan for Strategic Development Site on the corner of Burwood Highway and Scoresby Road’

DESIGN OBJECTIVE	DESIGN RESPONSE
BUILDING DESIGN	
<ul style="list-style-type: none"> • To encourage contemporary design and architecture that incorporates ESD principles and takes full advantage of surveillance opportunities and frontage to the Blind Creek corridor. • To ensure site responsive design that makes the most of existing site features and topography. • To establish a strong built form presence along the Burwood Highway frontage. • To encourage medium density housing forms that capitalise on the setting and take full advantage of outlook and frontage onto the Blind Creek corridor and long range views. • To achieve an interface between new development and the Blind Creek corridor that contributes to the activity, safety and amenity of the natural environment and open space corridor. • Require new development to provide an appropriate interface and transition to surrounding sensitive residential areas. 	<ul style="list-style-type: none"> • Provide a prominent, high quality built form and landscape response to ‘mark’ the corner of Burwood Highway and Scoresby Road. • Create a gradual transition in built form scale and character from a robust Burwood Highway frontage to the naturalistic Blind Creek interface. • Ensure an appropriate and sensitive built form response to the interfaces with Fairhills High School and the Wantirna Lea estate to the east. • Development should incorporate active frontages at ground level across the entire site. • Ensure development fronts onto public open space to enable passive surveillance. • Development should provide appropriate interface treatments or buffers to retained Government land and industrial uses. • Avoid development that is greater than two storeys adjacent to existing residential areas.
LANDSCAPING AND PUBLIC OPEN SPACE	
<ul style="list-style-type: none"> • Require the development of the strategic redevelopment site at the corner of Burwood Highway and Scoresby Road to retain the biological values of the existing water body; facilitate integrated water management; and provide a high level of neighbourhood amenity • To ensure that development provides open space that responds to the form of the site and addresses the needs of future residents. • To ensure development of the site protects and enhances any remnant vegetation, particularly in the fringe areas of the existing water body. • To mitigate any effects of development on the abutting Blind Creek. 	<ul style="list-style-type: none"> • The development should incorporate street tree planting in accordance with <i>Knox Green Streets Policy</i>. • Provide a natural open space adjoining Blind Creek with facilities (e.g. park furniture). • The development should provide a local public open space (local play space with community amenity e.g. park furniture) centrally to the precinct. • To retain and enhance existing native vegetation, including canopy trees. • Development should incorporate best practice stormwater management through the integration of water sensitive urban design (WSUD) principles.
SERVICES, ACCESS AND CARPARKING	
<ul style="list-style-type: none"> • To improve access to the site. • To enhance existing pedestrian crossings across Burwood Highway. • To ensure safe and convenient access to a bus stop along Burwood Highway. • To provide pedestrian and cycle links to the Blind Creek linear open space and shared trail. 	<ul style="list-style-type: none"> • Provide connections to the Blind Creek linear public open space and shared path. • To provide a shared path along the length of the Burwood Highway frontage. • Upgrade the existing bus stop on Scoresby Road.
SUBDIVISION LAYOUT	

<ul style="list-style-type: none"> The site incorporates a permeable street network that provides provision for future connections to adjoining areas. 	<ul style="list-style-type: none"> The road layout should allow for future connections through to Parkhurst Drive. The road layout should allow for future connections through the DELWP site to the signalised intersection on Burwood Highway. The road layout should maximise walkability and pedestrian connections to the Blind Creek trail The road layout should provide road frontage to public open space and ensure development fronts onto public open space to enable passive surveillance of public spaces.
SIGNAGE	
<ul style="list-style-type: none"> Minimise the visual impact of signage to existing and future residential areas 	<ul style="list-style-type: none"> Signage for commercial premises within the mixed use precinct should be focused on the Burwood Highway frontage.



Figure 23 Master Plan for the Strategic Development Site on the corner of Burwood Highway and Scoresby Road

IMPLEMENTATION

Overview

Following the adoption of the final Structure Plan, (after public exhibition), a detailed Implementation Plan will be developed in order to prioritise the actions contained in the Structure Plan. The *Knox Central Structure Plan – Implementation Plan* will sit alongside the Structure Plan and will outline the steps required to implement each strategy and action of the Structure Plan.

The purpose of the Implementation Plan is to:

- Identify statutory and non-statutory deliverables;
- Identify Council and non-council opportunities, including community and business based strategies;
- Identify opportunities for partnership and investment;
- Include staging and priorities, with opportunities for catalyst projects; and
- Provide clear performance indicators to measure the progress of the Implementation Program.

Implementation of the Structure Plan will require collaboration and support from a number of stakeholders. While Council will lead and manage the implementation process, input and management may be required from other stakeholders including State Government agencies, the private sector and the local community. These stakeholders may provide funding, own relevant sites or manage related infrastructure.

The Implementation Plan outlines the steps required to implement each strategy and action in the Structure Plan including identifying responsibilities, stakeholders and priorities. This will ensure that the aspirations of the shared vision are realised through real projects.

All actions require Council in its various roles to facilitate and deliver. Some actions require direct input and management by others who may be

landholders or infrastructure providers. A significant role for Council will be as advocate and partner with key public landholders and government authorities.

Management, Monitoring and Review

As part of the implementation process, Knox City Council will review, manage and measure the implementation of the Structure Plan. It is proposed that the review of the Structure Plan will occur every ten years, with a mid-point review taking place every five years.

This will review and analyse:

- The actions and projects that have been delivered or underway;
- The success of key actions and projects;
- The consistency of projects against the vision for Knox Central and the objectives of the City Plan; and
- Any obstructions preventing the successful implementation of the program.

This process will allow Council to measure the success of the implementation program; adjust the program as needed; and allocate future resources as necessary to ensure the vision for Knox Central can be achieved.

Advancement of actions in the *Knox Central Structure Plan – Implementation Plan* will require Council's continued and dedicated involvement and commitment through business and resource planning processes.

Planning Scheme Implementation

The following provides a summary of the statutory recommendations provided as part of the Structure Plan.

Amendment C149

Amendment C149 to the Knox Planning Scheme seeks to implement the land use and development aspects of the Structure Plan into the Knox Planning Scheme.

Included in this amendment are changes to the MSS, Knox Central Local Planning Policy and the rezoning of

some land within the activity centre.

Municipal Strategic Statement (MSS)

The Municipal Strategic Statement (MSS) provides the strategic context and justification to guide the application of zones, overlays and provisions in the Knox Planning Scheme.

The Knox MSS is currently structured around the themes of urban design, housing, environment, economic development and infrastructure. A recent review of the MSS has restructured the MSS around the themes of Environmental & Landscape Values; Environmental Risks; Built Environment & Heritage; Housing; Economic Development; Community Development; Integrated Transport & Infrastructure; and Local Areas.

Some changes will be required to the MSS to include references to the Knox Central Structure Plan.

Local Planning Policy

Local planning policies guide decision making in relation to a specific discretion in a zone or overlay. They help the responsible authority and other users of the planning scheme to understand how a particular discretion is likely to be exercised.

A new local planning policy for the Knox Central is proposed to be included within the Knox Planning Scheme to provide additional guidance for assessment of development applications within Knox Central. The policy will include objectives and strategies that will support decision making in relation to development that is assessed under the zones and overlays.

Zoning

The rezoning of some land within Knox Central will be required to achieve the land use objectives articulated in the Structure Plan. This includes the application of the Mixed Use Zone (MUZ) for the Lewis Road and (part) Burwood Highway South Mixed Use Precincts.

Design and Development Overlay

Council will utilise a Design and Development Overlay (DDO13) to implement built form aspects of the Structure Plan, including specific design objectives and tailored detailed built form outcomes around building heights and setbacks for the activity centre.

Development Plan Overlay

In addition to the DDO13, Council has refined the existing Development Plan Overlay (DPO2) which applies to the Commercial Core to further implement the objectives for this precinct.

APPENDIX A

Alignment of Structure Plan and City Plan Objectives

KNOX CENTRAL STRUCTURE PLAN OBJECTIVES		OBJECTIVE 1 To establish Knox Central as a focal point for activity including employment, education, retail, community, entertainment and leisure activity.	OBJECTIVE 2 To enable the development of high quality medium and higher density housing, to respond to the housing needs of the Knox community, and support the activity of the centre.	OBJECTIVE 3. To enhance Knox Central's role as the civic and public heart of the municipality, where communities connect and congregate.	OBJECTIVE 4 To capitalise on Knox Central's natural and environmental features to distinguish it from other activity centres.	OBJECTIVE 5 To facilitate an accessible and safe active and public transport network to and within Knox Central.	OBJECTIVE 6 To provide an efficient street network to connect key destinations including nodes of activity within Knox Central	OBJECTIVE 7 To achieve high quality built form and public realm which defines Knox Central as a premier mixed use activity centre.	
CITY PLAN OBJECTIVES	HEALTHY, CONNECTED COMMUNITIES								
	1.1 The Knox community benefits from good health and wellbeing at all life stages		✓		✓	✓			
	1.2 A safe community with strong community connections and where learning and volunteering are valued and supported	✓		✓					
	PROSPEROUS MODERN ECONOMY								
	1.1 Knox has a strong local economy that supports business growth, jobs and community wealth	✓	✓						
	1.2 Improve local opportunities for people to live, work, learn and play in Knox	✓		✓	✓	✓			✓
	VIBRANT AND SUSTAINABLE BUILT AND NATURAL ENVIRONMENTS								
	1 The changing needs of a diverse community are supported through planned growth and change in housing and infrastructure that respects both built form and natural systems, and resource availability		✓		✓	✓	✓	✓	✓
	1.2 Biodiversity and places of natural significance, including waterways and open space are highly valued, protected and enhanced				✓				✓
	1.3 Infrastructure networks provide transport choice, affordability and connectivity					✓	✓		
	CULTURALLY RICH AND ACTIVE COMMUNITIES								
	1.1 Improve the acceptance and valuing of diversity and difference in the Knox community		✓						
	1.2 Increase use of public spaces and infrastructure for the purposes of cultural expression and physical activity		✓		✓				✓
	DEMOCRATIC AND ENGAGED COMMUNITIES								
	1.1 Improve community leadership and participation in Knox		✓						
	1.2 Increase opportunities for the Knox community to participate in public decision-making processes		✓						
	1.3 Ensure Council is well governed and demonstrates effective leadership		✓						



Preliminary Ecological Assessment of the Floodplain at 609-621 Burwood Highway, Knoxfield

A report to Knox City Council
by Dr Graeme Lorimer, Biosphere Pty Ltd

Version 1.0, 17th February 2017

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Executive Summary

The former horticultural research station in Knoxfield is under consideration for residential development. This report identifies the ecological issues concerning the site's floodplain and dam ('Lake Knox') that need to be taken into account in the early stages of considering the site's future. An annotated aerial photograph of the floodplain appears in Figure 1 on p. 3.

From my observations, the ecological significance of the site relates largely to the presence of rare wetland plants and habitat for the endangered Blue-billed Duck. All 1.6 hectares of the dam is covered with native submerged plants, including rare species. Those plants underpin the aquatic ecosystem by forming the base of the food chain for the rest of the wetland organisms, from microorganisms to frogs, fish and waterbirds such as the Blue-billed Duck.

In addition, the treed vegetation on the dam's northern bank is quite significant, ecologically and for landscape amenity. Several of the plant species growing there are rare – one of them rare throughout Victoria and others, within Knox.

Even before some of the site's ecologically significant features were identified, the dam and the vegetation to its north were given the planning protection of Schedule 2 of the Environmental Significance Overlay (ESO2) in the Knox Planning Scheme. Because of that overlay and the broader Victoria Planning Provisions, any proposals for rezoning, development, works or vegetation removal on the site must be assessed for their impacts on ecological values.

Any residential development of the former horticultural research station will require a wetland system on the floodplain to manage stormwater. The existing dam could contribute to stormwater management but it would need modification. Modification would also be required to improve the public safety of the currently tall, steep banks on the south, west and east. Shores with more gradual slopes would also be ecologically beneficial.

The theoretical option of filling in the dam and constructing a new wetland system elsewhere would kill much of the vegetation on the northern bank. That is because the root systems of the eucalypts and some other species (including the locally rare Hairy Knotweed) are reliant on the presence of the water in the abutting dam. It would take decades to replace the existing habitat value. Such an outcome would conflict strongly with the objectives of ESO2.

Filling in any part of the dam will also cause the loss of the dense cover of significant submerged native vegetation, although it may be possible to transplant some of it to a new wetland. Losing the dam and its vegetation also means losing the habitat for all the dependent fauna, such as Blue-billed Ducks. It would take some years for a new waterbody to provide similar habitat value.

My detailed consideration of all the matters just discussed has led me to the following recommendations, whose rationale is provided in Section 8:

1. As little as possible of the dam should be removed even though it must be recognised that the banks (other than the northern bank) need to be given much more gradual gradients.
2. The vegetated part of the dam's northern shore should be left unmodified. Even if some of the dam is filled in, that should not extend to the northern shore.
3. Even if it is ultimately decided that the ecological concerns considered here should be overridden by other considerations, there would remain a strong legal reason to restrict the

removal of native vegetation over the whole site to less than one hectare. That is approximately one-third of the total area of native vegetation on the site.

4. If a southern or western part of the dam is to be filled in or re-graded, the loss of significant habitat and rare plants should be compensated by extension of the waterbody into a new wetland area, generally to the northeast of the dam. Figure 5 on p. 11 provides just one example of the sort of concept that could be considered. Aquatic plants that are removed should be transplanted into the new wetland area. The provision of new wetland habitat should be augmented with revegetation and habitat management of dry-land vegetation around the wetland, e.g. on the promontory in the lake depicted in Figure 5. Part of the objective would be to provide an area of seclusion for birds to roost and breed in trees away from humans and dogs.
5. In accordance with ESO2, design work must have regard to Tree Protection Zones for all retained eucalypts. The most important tree to protect is the large, ancient Swamp Gum just north of the inlet channel to the dam (Section 4.3).
6. The design of the proposed development needs to be informed by ecological advice from a consultancy with expertise in waterbird ecology, wetland ecosystems and Water Sensitive Urban Design. Most ecological consultants do not have the required expertise. The brief assessment in this report is only adequate to guide initial consideration of the site's ecological constraints and opportunities.

1. Introduction

Residential development proposals are being formulated for land at 609-621 Burwood Hwy, Knoxfield, which was once part of a Victorian Government horticultural research facility. The site includes a shallow, 1.6-hectare farm dam on the floodplain of Blind Creek. An annotated aerial photograph appears in Figure 1.



Figure 1. Annotated aerial photograph of the subject land, with colour tinting to indicate the zones mentioned in the text.

The dam provides habitat for native waterbirds, pond life and aquatic vegetation. The vegetation around the dam includes substantial numbers of wild, indigenous plants that provide habitat for wildlife. These features and the waterbody itself provide amenity for users of the adjacent Blind Creek trail.

For these reasons, the dam and adjacent native vegetation are covered by Schedule 2 of the Environmental Significance Overlay in the Knox Planning Scheme, based on my 2010 report, 'Sites of Biological Significance in Knox'.

I have been asked to assess the ecological outcomes of possible redevelopment options for the site, including the dam and the surrounding floodplain. I have also been asked to consider these possibilities in the context of the planning controls that apply to the site.

2. Site Inspections

I have inspected the site from the adjacent public land as part of the following past projects:

- I and co-workers assessed the site for the 1997 report to Knox City Council titled '*Vegetation Survey of Linear Reserves – A Management Strategy for Riparian and Flood Plain Vegetation*' (see the description of Section B7 in that report);
- I reassessed the ecological attributes of the area as part of my 2009 report to Knox City Council titled '*Blind Creek and Lewis Parklands Ecological Assessment*'. I observed the endangered Blue-billed Duck on the dam and some uncommon plant species around the dam;
- I further assessed the area for my 2010 report, '*Sites of Biological Significance in Knox*', as mentioned above;
- I occasionally walk along the Blind Creek Trail (e.g. for Council's Environmental Weed Plan in 2016), making incidental observations of waterbirds on the dam and plants along the creek.

For the present report, I walked around the dam and its surroundings for three hours on 19th January 2017. I recorded the presence and abundance of all native and introduced species of vertebrate and butterfly in the area. I recorded the presence and abundance of all native and introduced species of plant that I observed within each of three zones: a) in the water of the dam; b) fringing the dam and c) along the inlet drain to the dam. The colour tinting on Figure 1 indicates these zones as well as some trees with no native understorey beneath them. I did not list the plant species elsewhere in the site, where I saw no indigenous plants. I inspected the larger trees for hollows that could be used by wildlife for nesting or roosting. I used satellite positioning to map the locations of rare plants and habitat trees.

3. Plant Species

During my inspection on 19th January 2017, I detected 38 wild indigenous plant species, three planted 'Australian natives' and 36 introduced plant species in or around the dam. These are listed in Appendix 1 along with the abundance of each species within each of the zones on Figure 1.

One species – the Floodplain Groundsel (*Senecio campylocarpus*) – is listed by the Department of Environment, Land, Water and Planning as 'rare' throughout Victoria. The species was first recognised as distinct from the very similar Cotton Fireweed *Senecio quadridentatus* in 2004 and it took some years for botanists to determine how common it is. In the past decade, it has been found to be abundant in some areas, including Knox, but the 'rare' listing remains.

No other plant species that I observed on 19th January 2017 is listed as rare or threatened in the whole of Victoria, but six fall in the highest two categories of risk of becoming extinct within Knox, i.e. the categories 'endangered' and 'critically endangered' in Knox.

One of these species, the Small Mud-mat (*Glossostigma elatinoides*), could only be identified with some uncertainty because there was no flowering material to confidently distinguish it from the rarer species, *Glossostigma cleistanthum*. If it is the former, less rare species (as I expect), it is the first record of the species in Knox. The only other records of *Glossostigma elatinoides* I can find within 35 km are from Warrandyte, Wonga Park, Lillydale Lake and near Beaconsfield. If the species turns out to be *Glossostigma cleistanthum*, it is listed as rare throughout Victoria and the only other record from the Melbourne region is from nearby Lakewood Nature Reserve. In either case, the species is quite significant.

Both *Glossostigma* species grow mostly in mud on the bottom of waterbodies. Diving waterbirds often feed off the plants and break off fragments that can be washed ashore, sometimes taking root there. I detected the species from small fragments washed up on the shore of the dam, indicating that it grows beneath the water even though I could not see it – a common occurrence for *Glossostigma* species. A confident identification may become possible when larger fragments wash ashore, particularly if they include flowers or fruit. It may be possible to propagate fragments to flowering stage, or a plant might spontaneously establish on the shore and produce flowers that can be easily accessed.

Because of the difficulty of detection, I am quite uncertain about the abundance of the *Glossostigma* on the floor of the dam.



Figure 2. Leaves and spiral stalks of female flowers of Eel Grass. Inset: close-up of a female flower, showing the curvature of the water surface created by the flower.

Another locally rare species, Eel Grass (*Vallisneria australis*), is abundant in the dam. Again, diving waterbirds feed on the plant and the organisms that live on the leaves, such as water

snails. The plant has a fascinating strategy to protect its flower buds and seeds from being eaten. The minute male flower buds are embedded among the leaf bases until the buds are ready to open, when they detach from the plant and float up to spread their pollen on the water surface. The small, pale pink female flowers remain attached to the parent plant by stalks as they rise to the water surface – see Figure 2. The female flowers open on the surface and modify the surface tension of the water to attract male flowers and pollen grains. Once fertilised, the flower stalk coils tightly to withdraw the flower back to the base of the plant, reducing the exposure to waterbirds while the seeds ripen.

Eel Grass is rare in the Melbourne region. Within 20 km of the dam, the known locations are at Heany Park, Lysterfield Lake, Warrandyte and Wonga Park. At the latter two locations, the Eel Grass grows with the aforementioned Small Mud-mat (*Glossostigma elatinoides*).

Although less rare than either of the abovementioned species, the Hairy Knotweed (*Persicaria subsessilis*) is still in the highest ‘critically endangered’ category for its risk of extinction in Knox. Three patches of this sprawling, tangled species grow on the dam’s northern bank. The largest patch measures approximately 4 m × 0.8m and may contain several plants, as may the second-largest patch, which is 1 m in diameter. The last patch is smaller and probably contains a single plant. Another Hairy Knotweed plant was seen on the bank of Blind Creek 130 m north-northeast of the dam in 1997 and 2009 but has not been checked since. There are only eight other known locations in Knox where the species has been recorded, and few others within 20 km.

In the next level of risk of local extinction – ‘endangered’ – are four more species around the dam. The Hop Wattle (*Acacia stricta*) is represented by approximately eight plants on the northeastern shore. The Tree Everlasting (*Ozothamnus ferrugineus*) is represented by a single plant on the northern shore. The Tasmanian Wallaby-grass (*Rytidosperma semiannulare*) is represented by at least five individuals near the southwestern corner but others may well have escaped detection due to the time of year. Finally, the cumbungi, *Typha domingensis*, can only be identified with about 75% confidence due to the lack of flowering material and difficulty penetrating blackberries to reach the solitary plant. The plant is small for a cumbungi and it grows in the water near the southwestern corner of the dam.

Larger amounts of cumbungi were noted around the dam in the 1997 report cited in the Introduction, suggesting that the dam’s vegetation has changed substantially since then.

4. Vegetation Cover

4.1. The Waterbody

The dam is densely covered with submerged indigenous plants, including the rare mud-mat and an abundance of the rare Eel Grass. A representative view of a shallower section of the dam appears in Figure 3, in which most of the foliage belongs to *Potamogeton crispus* and *Potamogeton ochreatus*. I did not venture into the deepest parts of the dam, which are still not very deep.

I detected no introduced plants in the dam. The dam therefore represents 1.6 hectares of purely native vegetation.



Figure 3. Representative view of a shallow part of the dam..

The dense cover of submerged plants is a critical aspect of the dam's ecological significance because those plants form the base of the food chain for aquatic life and waterbirds, and because they help purify and oxygenate the water.

4.2. Vegetation Fringing the Dam

There is a band of amphibious plants (particularly rushes) within about 1 m of the water around almost the whole dam. These form a stable mixture of indigenous and introduced plants. Among the indigenous species are patches of the locally critically endangered Hairy Knotweed noted above.

Abutting that band on the northern shore of the dam is a strip of predominantly native vegetation up to approximately 12 m wide dominated by Swamp Gums (*Eucalyptus ovata*) and wattle trees – particularly Black Wattle and Blackwood. This strip is depicted in Figure 4. It appears to have grown up on slightly raised ground formed from earth excavated from the dam during its construction, perhaps as many as sixty years ago. It includes the plants of the locally endangered Hop Wattle (*Acacia stricta*) and Tree Everlasting (*Ozothamnus ferrugineus*).



Figure 4. A view westward from near the dam's northeastern corner. The understorey between the dam and the red curve is predominantly indigenous. All the trees are indigenous.

4.3. Trees with No Indigenous Understorey

The oldest tree by far on the site is a Swamp Gum (*Eucalyptus ovata*) with a trunk diameter of roughly 1 m, located 50 m southeast of the dam. It appears as a large tree on an aerial photograph dated 1946, making it probably over a century old. It contains hollows suitable for occupation by certain species of birds, bats and invertebrates.

Preservation of such a tree is important for habitat as well as for natural heritage and history.

Figure 1 on p. 3 maps several other indigenous trees with no native understorey beneath them, along the northern and eastern perimeters. They have all arisen since the land was cleared for agriculture. Three of them, just north of the dam, have small hollows, one of which is occupied by honey bees.

4.4. The Inlet Drain to the Dam

The inlet drain to the dam's southeastern corner supports a patchy mix of introduced and indigenous plants. In places, the canopy of Black Wattle and (mostly) introduced deciduous trees is so dense that there are few plants beneath them. However, toward the dam, there are reasonable numbers of indigenous rushes in the drain. On the nearly-flat ground adjacent to the drain, the understorey comprises dense introduced grasses, dead blackberries and no indigenous plants.

5. Fauna

The indigenous fauna I observed on 19th January 2017 included eight waterbird species, seven other bird species, the Spotted Marsh-frog and two butterfly species. The introduced fauna comprised a Mallard, three bird species other than waterbirds, a Redfin (or similar fish) and some Cabbage White butterflies.

Because a three-hour visit cannot be expected to detect much of a site's entire fauna, I draw also on a list I compiled on 1st November 2008 along the Blind Creek Trail between Scoresby Rd and the footbridge immediately northeast of the dam.

The composite list from both these dates appears in Appendix 2. It is likely to be considerably incomplete due to the brevity of the observing period.

The most significant fauna species I observed was the Blue-billed Duck diving in the dam. That species is listed as 'endangered' in Victoria. I have observed small numbers (usually two or four) regularly at nearby Lakewood Nature Reserve and periodically at Waterford Valley Golf Course and the Reservoir Crescent dam in Rowville. Blue-billed Ducks are also recorded in recent years at Caribbean Lake and the lake at Heany Park. I have a strong impression of a small local population that flies daily between local waterbodies. In fulfilling their habitat needs, I expect Blue-billed Ducks make regular use of the dam of interest in this report. They are diving ducks and need to feed in open water with plenty of submerged vegetation, such as that seen in Figure 3. The dam in question does not have enough dense, tall, fringing vegetation to provide breeding habitat for Blue-billed Ducks or many other waterbirds. Blue-billed Ducks are rather shy and in Knox, I have always observed them to retreat when humans approach any closer than several tens of metres.

None of the other fauna species that I observed are rare or threatened but one possible visitor deserves attention. Hardhead (or White-eyed Duck) is listed as vulnerable in Victoria (one level less threatened than endangered). I have observed it at most of the same open waterbodies as the Blue-Billed Duck but more often and in greater numbers (typically four to six individuals), and sometimes at shallower lakes. Hardhead appear to move between waterbodies less frequently than the Blue-billed Duck but it is still likely that they periodically visit the dam of interest here. The most recent record from the dam is from 1992 but this may be simply due to lack of observational data.

6. Potential Development Impacts and Options

Any new development of the former horticultural research station will need to have a wetland system to purify and retard the flow of stormwater before it reaches Blind Creek. The existing dam cannot meet the requirements and it does not meet safety requirements for a publicly accessible waterbody. From an engineering perspective, the only options for the required wetland system that can overcome these problems involve:

- Extensive modification of the existing dam; or
- The construction of a whole new system to the northeast of the dam; or
- A combination of the two.

As discussed in my 2009 report to Knox City Council titled '*Blind Creek and Lewis Parklands Ecological Assessment*', these options provide opportunities to improve the environmental values of the existing dam and its surroundings.

The most important opportunity relates to the provision of gently sloping edges to the new or modified wetland(s), which improves safety, provides habitat for far more fringing plants and hence may provide the cover and plant material that many waterbirds need for nesting.

The most important environmental threats associated with a new or modified wetland system are:

- The potential frightening and permanent displacement of Blue-billed Ducks by increased proximity to humans and dogs once the land becomes publicly accessible; and
- Loss of the significant vegetation in the dam and between the dam and the Blind Creek Trail.

I believe that careful design can minimise these threats if the following matters are dealt with:

1. The treed vegetation between the existing dam and the Blind Creek Trail should be retained, with water still lapping on what is currently the dam's northern shore. The vegetation is partly dependent on the adjacent water, so it could be killed if the dam is drained or filled. The construction of a retarding basin levee over the trees' root systems could also kill them, including trees just north of the property boundary;
2. The design should include an open waterbody that is similar to the existing dam in its depth and submerged vegetation but with gradually sloping edges;
3. To allow the less common waterbirds to breed and provide them with enough separation from humans and dogs, the waterbody should extend well away from the publicly accessible part of its shore. Some parts of the shore should be inaccessible to humans and dogs, as at nearby Lakewood Nature Reserve. To provide separation between waterbirds and humans, the area of the wetland system should be at least comparable to the existing dam.

Item 1 above strongly favours the option of retaining the dam's existing north shore as part of the new or modified open waterbody. The other shores are much less important to retain, except perhaps the 40-metre strip extending south-southwest from the dam's northwestern corner to a pair of Swamp Gums with native understorey.

I anticipate that negotiations about the extent of residential development will consider the possibility of filling part of the dam to yield more housing and/or reduce the slope from the natural ground level to a new southern shore. I am not able to assess the need for such an option but I can provide ecological information that may help in its consideration.

If part of the dam were to be filled in along the southern edge, the remainder of the dam could be extended as illustrated conceptually in Figure 5. This would retain the current north shore and part of the dam. The arc formed by the new waterbody, in combination with screening vegetation on the southern side of the Blind Creek Trail, could be used to restrict public access to the north shore and provide security for waterbirds. Part of the new northern lobe of the waterbody could be shallow and provide water purification by denitrification and processes related to macrophyte vegetation. A sedimentation basin would have to be provided on the inlet side. The alignment of a retarding basin levee needs to be carefully chosen with regard to 'tree protection zones' for the remnant eucalypts, which should not be too difficult if the levee is low.



Figure 5. A concept plan for a new open waterbody (in semi-transparent blue) that retains the dam's existing north shore and would leave the vegetation on that shore out of bounds to the public.

The concept of Figure 5 involves the loss of a substantial fraction of the habitat relied upon by waterbirds, including Blue-billed Ducks. That loss would be compensated by the creation of a new area of wetland and the much shallower gradient of the new shores, which would provide habitat for numerous additional water plants and probably waterbird nesting sites that are notably lacking in the existing dam. It would be relatively easy to successfully transplant plants from the floor of the existing dam into the new wetland area. The current presence of those plants in the dam is testament to the ability of those species to colonise artificial waterbodies, even without any human assistance. Just as waterbirds and wind have transported wetland plants and pondlife to the dam previously, they will aid colonisation of the new waterbody and its shores.

I would expect a wetland of the kind suggested in Figure 5 to surpass the habitat value of the existing dam within three or four years from construction, as long as access by humans and dogs is adequately managed.

The concept in Figure 5 is only put forward here as one example of a possible way to seize the site's environmental opportunities and avoid the environmental threats. I can imagine alternatives that could be considered, including filling less (or none) of the existing dam and instead grading the edges more gradually (except the northern shore).

7. Planning Matters

I have been asked to consider existing environmental planning controls and policy. I do so from my perspective as an ecologist with experience in planning provisions related to the environment. I make no pretence of being legally qualified.

The redevelopment of the subject land involves both strategic and statutory planning. In my experience, it is important in developments like this to avoid focusing on narrow statutory planning matters (e.g. the ‘biodiversity assessment guidelines’ for permit applicants) at the expense of the broader environmental issues raised by rezoning and radical changes in permitted land uses.

7.1. Victoria Planning Provisions

Chapter 12 of the Victoria Planning Provisions (VPPs) begins by saying that ‘Planning should help to protect the health of ecological systems and the biodiversity they support (including ecosystems, habitats, species and genetic diversity) and conserve areas with identified environmental and landscape values’. This is relevant to the land of interest here, in view of the rare species and the identified values for biodiversity. Clause 12.01 requires Council to ensure that strategic planning (e.g. rezoning for the redevelopment under consideration here):

- ‘Avoids and minimises significant impacts, including cumulative impacts, of land use and development on Victoria’s biodiversity...’; and
- ‘Assists in the protection and management of sites containing high value biodiversity’.

Since Amendment VC101 in 2015, the prevailing interpretation of ‘Victoria’s biodiversity’ and ‘high value biodiversity’ has focused on species listed as rare or threatened throughout Victoria. In the present case, that relates directly to the Blue-billed Ducks observed on the dam, the Floodplain Groundsel growing on the banks and potentially the Mud-mat if it proves to be the statewide-rare *Glossostigma cleistanthum*. In order to protect those species, their habitat needs to be protected. The essential habitat feature for the ducks and the mud-mat is the dense vegetation growing on the floor of the dam. It can be conserved by retaining the dam (or part thereof) and/or creating a new wetland of similar depth. The Floodplain Groundsel volunteers itself readily around local wetlands and is unlikely to be significantly affected by any development options that may be considered.

Clause 12.01-1 of the VPPs provides the instruction that planning should consider, ‘as relevant’, the ‘Biodiversity Assessment Guidelines’ and the ‘Native Vegetation Information Management System’ (NVIM). Unfortunately, as is common in Knox, the information provided by the NVIM for the dam and its surroundings is clearly erroneous in regard to the extent and condition of the native vegetation, and is therefore not very relevant. The flaws arise because the information is based on computer predictions rather than direct observations. No account is taken of considerations such as the north-south movement of Blue-billed Ducks between the dam and Lakewood Nature Reserve or the absence of breeding habitat for that species at the dam. The Biodiversity Assessment Guidelines rely on the same information that comes out of the NVIM and therefore is similarly flawed.

Clause 12.01-2 only applies to planning permits for the removal of native vegetation. Such a permit can only be issued in the present case once the strategic planning matters are resolved and amendments are approved for rezoning and possibly changes to overlays such as the Environmental Significance Overlay. Nevertheless, it is important to anticipate now what

permit conditions would eventually apply in relation to each of the development concepts under consideration. If more than one hectare of native vegetation is to be removed (i.e. approximately one-third of the total across the proposed development site), the Biodiversity Assessment Guidelines require that a permit application must demonstrate that measures have been taken to minimise the adverse environmental impacts, which may well be impossible. This should be taken into account at the strategic planning stage; e.g. rezoning and any accompanying amendments to policies or overlays should not reduce the capacity for vegetation removal to be minimised and it should not be simply presumed that a permit could be issued to remove more than one hectare of vegetation (which includes the 1.6 ha of submerged vegetation in the dam).

7.2. Local Planning Policy Framework

A draft 'Knox Central Structure Plan' and associated Amendment C149 were exhibited in November 2016. The amendment proposes to amend the Municipal Strategic Statement and replace Clause 22.04 (Knox Central Principal Activity Centre Local Policy) with a new Clause 22.15 (Knox Central Activity Centre Local Policy).

At pages 42-44, the draft 'Knox Central Structure Plan' includes a master plan for the development site of which the dam and its surroundings are part. Of particular relevance, it includes the following principles:

- 'Development of the site protects and enhances any remnant vegetation, particularly in the fringe areas of the existing water body'. This would support the principles and guidance I have given above. It would be inconsistent with filling the dam in;
- 'The development should retain and enhance the water body on site in order to facilitate integrated water management and to provide a high level of neighbourhood amenity'. This would mean modifying the existing dam (e.g. making it safe for public access and incorporating WSUD principles) and would not be consistent with filling it all in.

However, the Knox Central Structure Plan is only a draft for public consultation.

If Amendment C149 proceeds to adoption, the most relevant provision from an ecological perspective is in the table on p. 3 of Clause 22.15, where it states that 'New public open space on the site [in question] will integrate with the Blind Creek corridor and contribute to the environmental, recreational and access functions of the Corridor'. I have taken this into account in my considerations above. Any significant reduction in the site's wetland area, or any failure to address the environmental threats identified earlier, would conflict with the goal of contributing to the environmental functions of the Blind Creek corridor.

If the draft Knox Central Structure Plan and/or Amendment C149 are materially altered or not adopted, different considerations may apply.

7.3. Overlays

Schedule 2 of the Environmental Significance Overlay (ESO2) applies to the dam, its shores and the native vegetation north of the dam. It provides extensive planning protection to the site's indigenous flora and fauna. The most salient of its objectives are:

- Protection of species identified as being threatened with local extinction, such as those discussed in Section 3 above;

- Enhancement of the condition and viability of aquatic ecosystems, which gain scant recognition elsewhere in the planning scheme;
- Avoidance of vegetation removal;
- Avoidance of fragmentation of habitat. This is of particular relevance to Blue-billed Ducks, which already have to fly regularly between local wetlands in order to make up enough habitat for their survival in Knox.

As the primary author of ESO2, I have taken it fully into account in my advice in this report. However, it is common in Victoria for ecological reports in such cases to focus on the state-wide Biodiversity Assessment Guidelines with inadequate regard to the additional requirements imposed by an Environmental Significance Overlay. It will be important in the present case for the proponent's ecological consultants to be made fully aware of all the requirements for assessment, design and offsetting that result from the overlay, beyond those of the Biodiversity Assessment Guidelines.

Overlays other than ESO2 that apply to the land in question do not appear directly important in regard to the site's ecological values and sensitivities. However, the Land Subject to Inundation Overlay provides some additional impetus to use the dam and the rest of the floodplain not for residential development but for public purposes that can tolerate flooding.

8. Recommendations

Based on my analysis above, I offer the following recommendations and associated rationale. They need to be considered side by side with non-ecological matters such as financial viability and maximising the efficiency of providing housing for Melbourne's growing population.

1. As little as possible of the dam should be removed even though it must be recognised that the banks (other than the northern bank) need to be given much more gradual gradients. *Rationale:* The 1.6 hectares of purely native vegetation in the dam is highly significant in its own right and it is vital to the aquatic ecosystem (including Blue-billed Ducks) as the base of the food chain. The plants also purify and oxygenate the water. Any reduction in the size of the waterbody will also impair the habitat for shy waterbirds like Blue-billed Ducks that keep their distance from shores with public access.
2. The vegetated part of the dam's northern shore should be left unmodified. Even if some of the dam is filled in, that should not extend to the northern shore. *Rationale:* The dam's north shore and its fringing vegetation are quite significant, ecologically and for landscape amenity. The root systems of the eucalypts, the rare Hairy Knotweed and several other plants are reliant on the presence of the water in the abutting dam. At least some of those plants would die or become unviable if the dam were filled in. It would take decades to replace the existing habitat value. This outcome would conflict strongly with the planning provisions discussed in Section 7 above.
3. Even if it is ultimately decided that the ecological concerns considered here should be overridden by other considerations, there would remain a strong legal reason to restrict the removal of native vegetation over the whole site to less than one hectare. That is approximately one-third of the total area of native vegetation on the site. *Rationale:* The state-wide Biodiversity Assessment Guidelines (BAGs) place more onerous conditions (the 'moderate risk-based pathway') on removal of native vegetation once a threshold of one hectare is reached. One of those conditions is a requirement to demonstrate that vegetation

removal is minimised. I cannot see how this could be demonstrated. The BAGs are quite prescriptive in this regard. In addition, ESO2 has a (more discretionary) decision guideline to consider, as appropriate, '*Whether the proposal adopts appropriate siting, design and management measures to avoid, or at least minimise, any adverse impacts on indigenous vegetation, habitat values, hydrology and land stability*'.

4. If a southern or western part of the dam is to be filled in or re-graded, the loss of significant habitat and rare plants should be compensated by extension of the waterbody into a new wetland area, generally to the northeast of the dam. Figure 5 on p. 11 provides just one example of the sort of concept that could be considered. Aquatic plants that are removed should be transplanted into the new wetland area. The provision of new wetland habitat should be augmented with revegetation and habitat management of dry-land vegetation around the wetland, e.g. on the promontory in the lake depicted in Figure 5. Part of the objective would be to provide an area of seclusion for birds to roost and breed in trees away from humans and dogs. *Rationale:* ESO2 and the BAGs require the loss of native vegetation to be offset to achieve a net gain in habitat (ESO2) or no net loss (BAGs). ESO2 places priority on offsets within Knox, preferably on the same site as the vegetation removal. I believe that the offsetting measures just described would provide genuine habitat compensation as well as providing ancillary benefits for amenity and stormwater management.
5. In accordance with ESO2, design work must have regard to Tree Protection Zones for all retained eucalypts. The most important tree to protect is the large, ancient Swamp Gum just north of the inlet channel to the dam (Section 4.3).
6. The design of the proposed development needs to be informed by ecological advice from a consultancy with expertise in waterbird ecology, wetland ecosystems and Water Sensitive Urban Design. The brief assessment in this report is only adequate to guide initial consideration of the site's ecological constraints and opportunities. *Rationale:* The nature of the site's environmental sensitivities and the appropriate design responses and offsetting lie outside the capacity and experience of most ecological consultants. Expert attention to these matters is required by the site's high ecological values.

Appendix 1 – Plant Species List

The table below lists all the plant species found in the colour-coded zones of Figure 1.

Species whose names are in bold type are at substantial risk of becoming extinct in Knox, in the ‘endangered’ or ‘critically endangered’ categories. After each species’ name, the three columns represent the zones and the symbols indicating the species’ abundance as follows:

- Scarce, or so concentrated in one or two locations as to be at risk of being destroyed by chance;
- ✓ Present in moderate numbers, not dominant within a vegetation stratum;
- D Dominant (or sharing dominance) within the relevant vegetation stratum, at least in some areas;
- M Many individuals but with too little cover to be dominant in the relevant vegetation stratum.

Wild Indigenous Plant Species

Scientific Name	Common Name	Abundance		
		In the dam water	Beside the dam	Along the drain
<u>Mosses and Liverworts</u>				
<i>Campylopus introflexus</i>	Heath Star Moss		✓	
<i>Chiloscyphus semiteres</i>	Green Worms		✓	
<u>Submerged aquatic species</u>				
<i>Glossostigma ?elatinoides</i>	Small Mud-mat	–		
<i>Potamogeton crispus</i>	Curly Pondweed	M		
<i>Potamogeton ochreatus</i>	Blunt Pondweed	D		
<i>Vallisneria australis</i>	Eel Grass	D		
<u>Trees</u>				
<i>Acacia dealbata</i>	Silver Wattle	–		–
<i>Acacia mearnsii</i>	Black Wattle	D		D
<i>Acacia melanoxylon</i>	Blackwood	D		
<i>Eucalyptus ovata</i>	Swamp Gum	D		
<u>Shrubs</u>				
<i>Acacia stricta</i>	Hop Wattle	–		
<i>Cassinia arcuata</i>	Drooping Cassinia	✓		✓
<i>Goodenia ovata</i>	Hop Goodenia	✓		
<i>Ozothamnus ferrugineus</i>	Tree Everlasting	–		
<i>Solanum ?laciniatum</i>	Large Kangaroo Apple	–		
<u>Grasses and Rushes</u>				
<i>Austrostipa rudis</i> subsp. <i>rudis</i>	Veined Spear-grass		M	
<i>Hemarthria uncinata</i>	Mat Grass		–	
<i>Juncus amabilis</i>	Hollow Rush	–	✓	✓
<i>Juncus gregiflorus</i>	Green Rush		M	✓
<i>Juncus sarophorus</i>	Broom Rush	–	D	✓
<i>Lachnagrostis filiformis</i>	Common Blown Grass		✓	
<i>Lomandra longifolia</i> subsp. <i>longifolia</i>	Spiny-headed Mat-rush		–	
<i>Microlaena stipoides</i>	Weeping Grass		✓	
<i>Rytidosperma fulvum</i>	Leafy Wallaby-grass		D	
<i>Rytidosperma laeve</i>	Smooth Wallaby-grass		✓	
<i>Rytidosperma penicillatum</i>	Slender Wallaby-grass		✓	
<i>Rytidosperma semiannulare</i>	Tasmanian Wallaby-grass		–	
<i>Rytidosperma setaceum</i>	Bristly Wallaby-grass		✓	

Scientific Name	Common Name	Abundance		
		In the dam water	Beside the dam	Along the drain
<i>Themeda triandra</i>	Kangaroo Grass		-	
<i>Typha ?domingensis</i>	Cumbungi	-		
Others				
<i>Alternanthera denticulata</i>	Lesser Joyweed		-	
<i>Epilobium hirtigerum</i>	Hairy Willow-herb		✓	
<i>Helichrysum luteoalbum</i>	Jersey cudweed		-	
<i>Lythrum hyssopifolia</i>	Small Loosestrife		✓	
<i>Persicaria decipiens</i>	Slender Knotweed		✓	
<i>Persicaria subsessilis</i>	Hairy Knotweed		✓	
<i>Senecio campylocarpus</i> *	Floodplain Groundsel		-	
<i>Senecio hispidulus</i>	Rough Fireweed		-	
<i>Senecio quadridentatus</i>	Cotton Fireweed		✓	

Planted Specimen Plants

Scientific Name	Common Name	Abundance	
		Beside the dam	Along the drain
<i>Callistemon citrinus</i>	Crimson Bottlebrush	-	-
<i>Melaleuca styphelioides</i>	Prickly Paperbark		-
<i>Sannantha ?pluriflora</i>	Tall Baeckea	-	

Wild Introduced Species

Scientific Name	Common Name	Abundance	
		Beside the dam	Along the drain
<i>Acacia baileyana</i>	Cootamundra Wattle		-
<i>Agrostis capillaris</i>	Brown-top Bent	M	M
<i>Anthoxanthum odoratum</i>	Sweet Vernal-grass	✓	
<i>Aster subulatus</i>	Aster-weed	-	
<i>Bromus catharticus</i>	Prairie Grass	✓	✓
<i>Cenchrus clandestinus</i>	Kikuyu	D	D
<i>Centaureum erythraea</i>	Common Centaury	-	
<i>Cirsium vulgare</i>	Spear Thistle	✓	
<i>Crataegus monogyna</i>	Hawthorn	✓	
<i>Cynodon dactylon</i>	Couch	D	
<i>Cyperus eragrostis</i>	Drain Flat-sedge	✓	✓
<i>Dactylis glomerata</i>	Cocksfoot		✓
<i>Ehrharta erecta</i>	Panic Veldt-grass	D	✓
<i>Ehrharta longiflora</i>	Annual Veldt-grass	✓	
<i>Erica lusitanica</i>	Spanish Heath	-	
<i>Erigeron sumatrensis</i>	Fleabane	-	
<i>Fraxinus angustifolia</i>	Desert Ash	✓	✓
<i>Holcus lanatus</i>	Yorkshire Fog	✓	✓
<i>Hypochaeris radicata</i>	Cat's Ear	✓	

* *Senecio campylocarpus* was first recognised as a distinct species in 2004 and was listed as rare throughout Victoria. Once described, it was found to be moderately common in parts of Victoria but the 'rare' listing remains.

Scientific Name	Common Name	Beside the dam	Along the drain
<i>Lotus subbiflorus</i>	Hairy Bird's-foot Trefoil	M	
<i>Lysimachia arvensis</i>	Pimpernel	✓	
<i>Malus pumila</i>	Domestic Apple	-	
<i>Malva</i> species, unidentified	a mallow	-	
<i>Modiola caroliniana</i>	Carolina Mallow	-	
<i>Paspalum dilatatum</i>	Paspalum	✓	✓
<i>Phalaris aquatica</i>	Toowoomba Canary-grass	✓	
<i>Pittosporum undulatum</i>	Sweet Pittosporum		-
<i>Plantago lanceolata</i>	Ribwort	✓	
<i>Prunella vulgaris</i>	Self-heal	-	
<i>Prunus cerasifera</i>	Cherry-plum	-	
? <i>Raphanus raphanistrum</i>	Wild Radish	✓	
<i>Rubus anglocandicans</i>	Blackberry	M	M
<i>Rumex crispus</i>	Curled Dock	✓	
<i>Salix</i> ? × <i>reichardtii</i>	Pussy Willow	-	
<i>Salix</i> species	a willow		✓
<i>Vulpia bromoides</i>	Squirrel-tail Fescue	✓	

Appendix 2 – Fauna Species List

I observed the species below on or near the dam, either while walking past on 1/11/2008 or (in the case of those ticked) during three hours on 19/1/17. Such brief periods of observation cannot detect the full range of wildlife present. An asterisk at the start of a species' name indicates that the species is introduced.

<u>Common name</u>	<u>Scientific name</u>	
Waterbirds		
Blue-billed Duck	<i>Oxyura australis</i>	
Australian Wood Duck	<i>Chenonetta jubata</i>	✓
*Mallard	<i>Anas platyrhynchos</i>	✓
Pacific Black Duck	<i>Anas superciliosa</i>	✓
Grey Teal	<i>Anas gracilis</i>	✓
Australasian Grebe	<i>Tachybaptus novaehollandiae</i>	✓
Hoary-headed Grebe	<i>Poliiocephalus poliocephalus</i>	✓
Little Pied Cormorant	<i>Phalacrocorax melanoleucos</i>	✓
Dusky Moorhen	<i>Gallinula tenebrosa</i>	✓
Eurasian Coot	<i>Fulica atra</i>	✓
Other Birds		
Masked Lapwing	<i>Vanellus miles</i>	
Silver Gull	<i>Larus novaehollandiae</i>	
*Spotted Turtle-Dove	<i>Streptopelia chinensis</i>	✓
Crested Pigeon	<i>Ocyphaps lophotes</i>	
Sulphur-crested Cockatoo	<i>Cacatua galerita</i>	✓
Rainbow Lorikeet	<i>Trichoglossus haematodus</i>	
Eastern Rosella	<i>Platycercus eximius</i>	
Tawny Frogmouth	<i>Podargus strigoides</i>	
Laughing Kookaburra	<i>Dacelo novaeguineae</i>	
Spotted Pardalote	<i>Pardalotus punctatus</i>	✓
Red Wattlebird	<i>Anthochaera carunculata</i>	
Little Wattlebird	<i>Anthochaera chrysoptera</i>	
Bell Miner	<i>Manorina melanophrys</i>	
Noisy Miner	<i>Manorina melanocephala</i>	✓
Magpie-lark	<i>Grallina cyanoleuca</i>	✓
Willie Wagtail	<i>Rhipidura leucophrys</i>	✓
Australian Magpie	<i>Gymnorhina tibicen</i>	✓
Little Raven	<i>Corvus mellori</i>	
Mistletoebird	<i>Dicaeum hirundinaceum</i>	
Welcome Swallow	<i>Hirundo neoxena</i>	✓
*Common Blackbird	<i>Turdus merula</i>	✓
*Common Starling	<i>Sturnus vulgaris</i>	
*Common Myna	<i>Acridotheres tristis</i>	✓
Other Vertebrates		
Common Brushtail Possum	<i>Trichosurus vulpecula</i>	
Spotted Marsh Frog	<i>Limnodynastes tasmaniensis</i>	✓
*?Redfin	? <i>Perca fluviatilis</i>	✓
Butterflies		
Greenish Grass-dart	<i>Ocybadistes walkeri sothis</i>	
Caper White	<i>Belenois java teutonia</i>	
*Cabbage White	<i>Pieris rapae rapae</i>	✓
Meadow Argus	<i>Junonia villida calybe</i>	✓
Common Grass-blue	<i>Zizina labradus labradus</i>	✓