



2016 **KNOX
CENTRAL**
VIEWS AND VISTAS STUDY

PREPARED BY HANSEN PARTNERSHIP
IN COLLABORATION WITH KNOX CITY COUNCIL



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1 introduction

1.1 introduction

The Dandenong Ranges are an important and valued characteristic of the City of Knox's image and identity. They form a constant and prominent backdrop to the municipality. The profile of the Dandenong Ranges is referenced in Council's own cooperate identity and branding strategy as represented by the yellow wavy line the 'Hills Device' which depicts the skyline profile of the Ranges. It is therefore, important to ensure that future growth and development within the municipality is sensitive towards its valued eastern backdrop and does not unreasonably impact upon it.

This document assesses the potential impact of future built form within the Knox Central Activity Centre, from key vantage points to determine preferred maximum building heights that will not erode or undermine the publically accessible views and vistas towards and of the Dandenong Ranges.

1.2 purpose

The overarching purpose of this study was to: *assess the appropriateness of proposed (and revised) building heights in the context of impacts on the identified viewlines. This study will contribute to the development of a Structure Plan for the Knox Central Activity Centre.*

1.3 project objectives

The project objectives are as follows:

1. To determine the location of the **key vantage points** around Knox Central to test and assess the visual impact of future built form on skyline and Dandenong Ranges backdrop.
2. To undertake a **review of the preferred maximum building heights** within the 2005 Knox Central Urban Design Framework (KCUDF) and determine future built form scenarios to test.
3. To undertake a **visual assessment** of the future built form on the skyline and Dandenong Ranges backdrop.
4. To determine **preferred built form heights** for Knox Central, which will not unreasonably impact upon views towards the Dandenong Ranges.



View towards Dandenong Ranges from High Street Road, east of East Link



View towards Dandenong Ranges from within Harcrest development (Stud Road)

2 background

2.1 Knox Central Urban Design Framework

In 2005 Council adopted the Knox Central Urban Design Framework (KCUDF), which was prepared by a consortium of consultants, led by Hansen Partnership. This strategic document sought to establish a planning and design "vision and strategy to create a cohesive physically, economically, socially and culturally vibrant activity centre that will become the preeminent centre and focal point of regional activity".

Relevant principles contained within the KCUDF's overall Vision are:

- To establish Burwood Highway, Knox (to be known simply as 'Knox') as the premier address and the most well known and popular activity centre in the middle/outer eastern suburbs of Melbourne.
- To use natural and environmental features to distinguish Knox Central from other suburban activity centres.
- To establish a beautiful and highly regarded urban environment in terms of both its landscape setting and its built form.

The following Built Form / Scale objectives were identified in the KCUDF:

- A built form and scale that is respectful of the natural and environmental elements that characterise Knox Central, such as Lewis Park, Blind Creek, and the landscaped boulevards of Stud Road, Burwood Highway and Scoresby Road.
- The proposed built form should also be capable of accommodating a significantly higher intensity of land use and activity commensurate with the role of Knox as a principal multipurpose activity centre in the outer eastern suburbs of Melbourne.
- An intensity of built form that provides an incentive to encourage the redevelopment of existing properties, so that the level of change and the objectives identified for the study area by this Framework actually occurs.
- Buildings that are designed to integrate with the roads they front to create active, pedestrian friendly streets and attractive and visually pleasing streetscapes, both within the study area and along the major roads that abut the area.
- A building form that is higher and more intense than its surrounds in order to 'mark' the study area as a major town centre and focal point of the municipality and outer eastern region of Melbourne.
- The opportunity for well designed 'feature buildings' that exceed the building height that will prevail throughout study area generally, especially where they define key corner sites, topographical high points, and gateways to and within the precinct.
- The ongoing redevelopment of areas of ground level car parking and upper (open) levels of decked car parks, with activity generating uses such as residential or commercial, complemented by an increasing reliance on underground and deck car parking to accommodate the needs of new developments within the area.
- A building height and form that respects the character and amenity of existing residential areas.

Figure 20 of the KCUDF (refer figure 2) identified the preferred future built form and scale for Knox Central.

The plan illustrated 'feature forms' as being the tallest forms to be located at prominent locations along Burwood Highway, although no specific height guidance was indicated. It then indicated precincts of 5+ storeys at either secondary gateway locations and centrally to the activity centre. The remainder of the Burwood Highway and Stud Road corridors were defined as 3 -5 storeys, stepping down to low scale 2-3 storeys to the Blind Creek corridor and 1-2 storeys to sensitive residential interfaces to the northern and western edges of the Activity Centre.



Figure 1 - image from Knox Urban Design Framework-Future Form and Design (2003)



- LEGEND**
- Feature Forms
 - 5+ Storeys
 - 3 - 5 Storeys
 - Low Scale: 2- 3 Storeys
 - Low Scale: 1-2 Storeys
 - Existing Residential Surrounds

Note: Built Form Scale as shown is not definitive, rather an indication of the preferred scale range that may be suitable within the precinct subject to the consolidation of land, commercial feasibility and reasonable amenity impacts



KNOX CENTRAL
KEY ELEMENTS - BUILT FORM/ SCALE

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 Project No: 02/123 | Dwg. No: | Revision: | Scale 1: 7500 | Date June 2003 | checked

Figure 2 - Extract from KCUDF document 2005, hansen partnership (figure 20)

2.2 strategic overview

In the decade since the KCUDF was adopted, Knox has experienced considerable change and development pressure in the form of high-rise residential developments, which all exceed the preferred heights contained within the KCUDF.

The following approved developments (figures 4 & 5) are both examples of built form heights which have exceeded the preferred heights within the KCUDF.

In addition, the Westfield owned Knox Shopping Centre has prepared a Master Plan and associated Development Plan which contains increased built form in certain parts of its landholdings, as contained within the below Development Plan (Figure 3).

Therefore, it is now appropriate to review the preferred building heights contained within the KCUDF, before modelling them and testing their visual impacts.

2.3 refined building heights

The first step in reviewing the built form was to critically review the envisaged, forms and heights as contained within the KCUDF. Figure 20 was used as the basis for this work, which depicts 5 scales of built form as follows:

- a Feature Forms;
- b 5+ storeys;
- c 3-5 storeys;
- d low scale 2-3 storeys; and
- e low scale 1-2 storeys.

These built form classifications are too vague and contain too much flexibility within their ranges to meaningfully model and test the visual impact with a sufficient degree of accuracy. Therefore following a collaborative workshop with Council officers, it was determined to translate the existing built form into the Preferred Built Form Heights Plan 2016 (refer figure 14).



Figure 3 - knox shopping centre development plan (2014)



Figure 4 - Kubix 9-11 storey development at 400-408 Burwood Highway



Figure 5 - Knoxia 6 storey development at 456 Burwood Highway

The KCUDF and Figure 2 (figure 20) stipulates preferred built form heights in storeys only. Given that different land uses and building types can contain different floor to floor heights, which could significantly alter the height of a building in metres. It is standard practise for commercial buildings to contain floor to floor heights of 4m, and residential buildings to contain floor to floor heights of 3m. Therefore, depending on the type of building, its height can vary by 1m per storey. For example a 10 storey building could vary in overall height by up to 10m, as it would be approximately 30m in height if residential and 40m in height if commercial.

Therefore, it was determined to define the floor to floor heights to be modelled. In order to do this we reviewed the land use identified within the KCUDF, as outlined in Figure 6 : Knox Central Activity Mix, as well as the recent development outcomes along the southern side of Burwood Highway. Based on this process, it was determined to model the following areas as residential and therefore with a 3m floor to floor height:

- all form along the south side of Burwood Highway, between Stud Road and High Street Road, except the feature form on the corner of Tyner Road;
- forms along the southern interface of Lewis Park classified as 'b - 5-8 storeys';
- forms within the DELWP Site classified as 'd - 3 storeys'; and
- all forms classified as 'e - low scale - 2 storeys'

Refer Figure 6 - Knox Central/Built Form scale (1a)

It was also determined to slightly amend the extent of future built form to reflect current strategic thinking in two areas of Knox Central Activity Centre. These amendments are as follows:

- remove the wedged shaped built form within the Knox Community Gardens land as well as northern residential slither as Council does not intend for this Crown Land to be developed; and
- fill in the missing residential properties addressing both White Road and Jackson Road as 'd - low scale 3 storey forms', as this was an oversight in the KCUDF.

Refer figure 7 - Knox Central/Built form scale (1b)

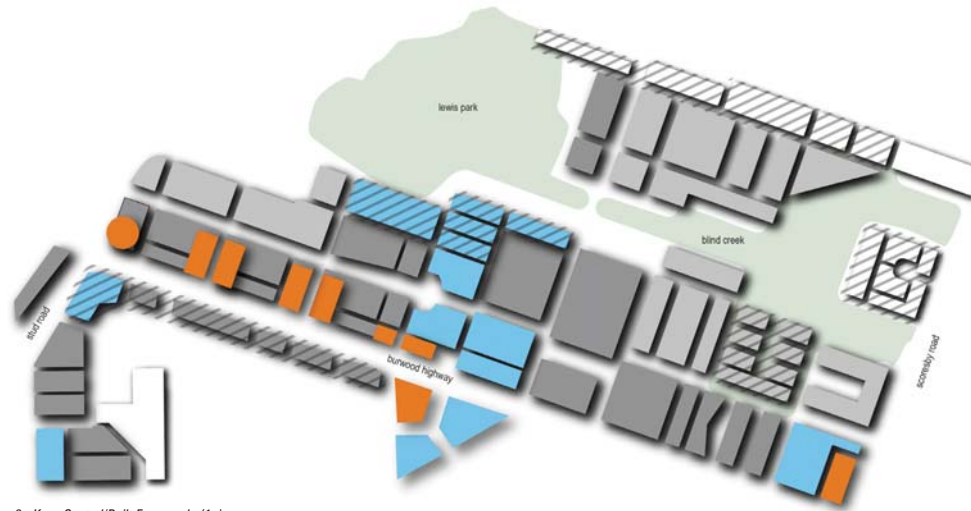
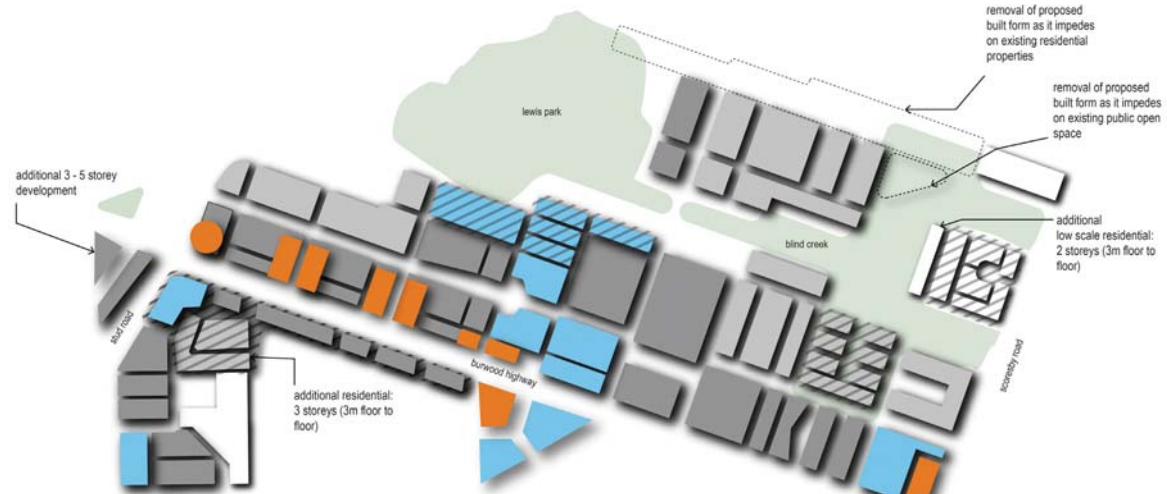


Figure 6 - Knox Central/Built Form scale (1a)



Knox Central Built Form/ Scale

legend

- orange square: feature forms
- blue square: 5 + storeys
- grey square: 3 - 5 storeys
- light grey square: low scale: 2- 3 storeys
- white square: low scale: 1- 2 storeys
- hatched square: residential development (3m floor to floor)
- dotted square: removal of proposed built form
- green square: public open space

Figure 7 - Knox Central/Built Form scale (1b)

3 key vantage points

3.1 dandenong ranges

The visual relationship between the Dandenong Ranges and Knox Central is highly valued. As mentioned in the introduction, the Dandenong Ranges form an important backdrop to the municipality.

The Ranges have a varied profile and ridgeline silhouette. The tallest and most prominent peak is Mount Dandenong, which rises to 633m in elevation and is distinguished by the 'Sky High' restaurant and lookout. Located just to the south of this peak is Mount Corhanwarrabul, which rises to 628m and is visually distinguished by the presence of the three transmission towers. Both of these peaks are located in a north-east direction from Knox Central, and are most prominent in views across Lewis Park and the Blind Creek corridor. The Ranges then transition down in height past the townships of Olinda and Sassafras, with the next distinguishable peaks being the Ferny Creek Summit at 561m, which contains another communications tower and One Tree Hill at 502m.

The Burwood Highway alignment primarily orientates key views towards One Tree Hill and the lower foothills around Ferntree Gully. However, given the lower profile of the Ranges and the undulating treed foothills the visual distinction between the Dandenong Ranges and the abutting suburbs and their tree canopy is less evident from Burwood Highway.

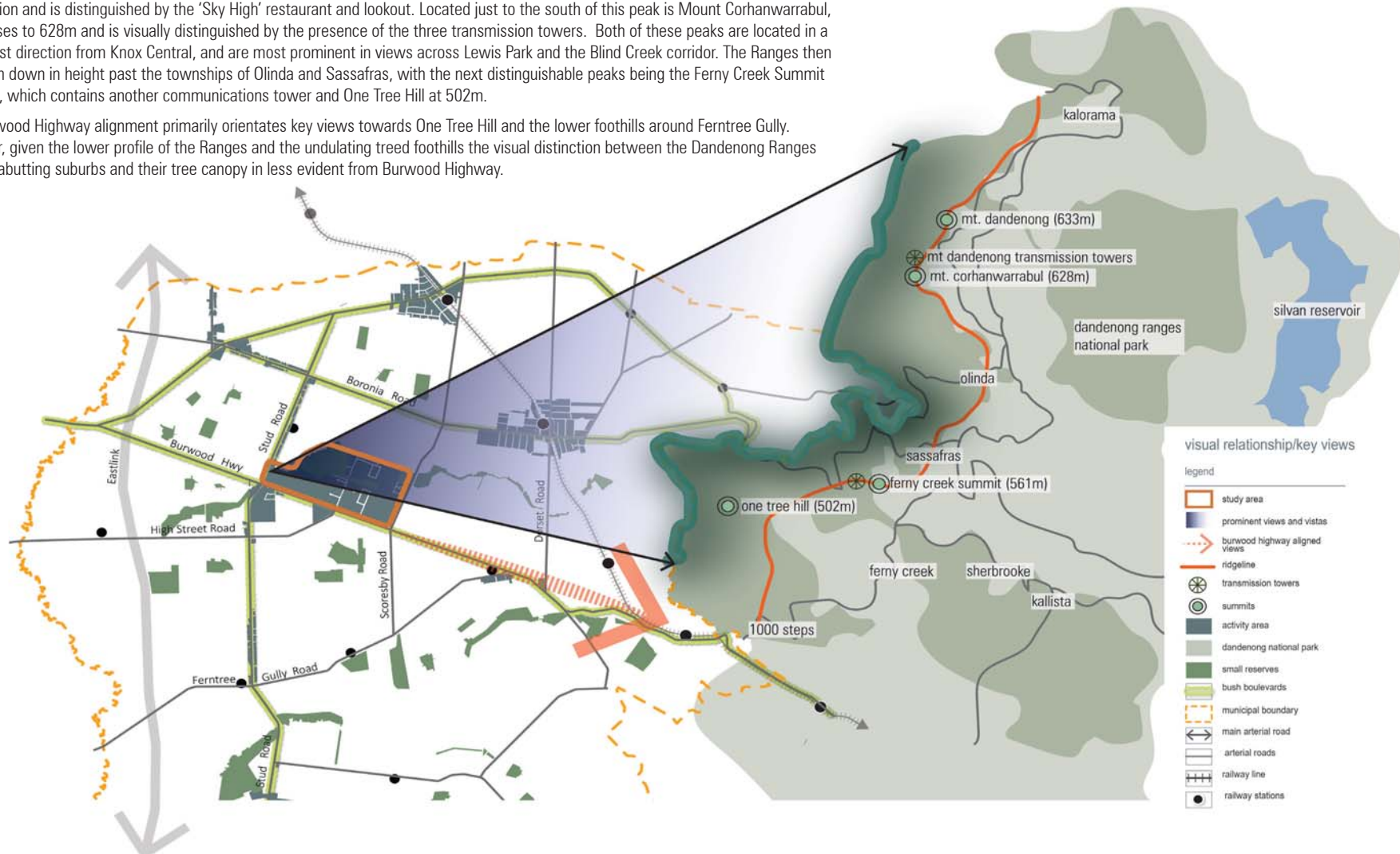


Figure 8 - Relationship between Knox Central and the Dandenong Ranges- prominent views

3.2 visual elements

The following section defines the various visual elements that are present within the views and vistas from the key vantage points.

Foreground - the part of the view located nearest the vantage point and containing the ground plain.

Tree Canopy - the extent of the often combined treed canopy which defines the middleground of the view and demonstrates the leafy green character of the Knox municipality. Typically the tree canopy either defines the base of the Dandenong Ranges or projects into the sky.

Horizon Line - the imaginary line in perspective terms which defines where the sky meets the ground. This line is always relative to the eye level of viewer.

Dandenong Ranges Profile - the visible extent of the hills which projects above the foreground and tree canopy.



Figure 9 - Visual Elements diagram

3.3 selection process

Council officers identified the initial key vantage points to be tested. Hansen Partnership then undertook a two step analysis process to determine the key views or vantage points from which the testing would occur.

The first step involved a desktop analysis of the entire Knox Central Activity Centre, to identify high points, and vantage points from which significant views and vistas towards the Dandenong Ranges exist. This analysis commenced with a review of the analysis contained within the KCUDF and in particular Figure 14 - Existing Visual Setting (refer Figure 10 below). It then incorporated a review of the terrain map available from the land.vic website, contours and a google street-view site visit.

This desktop process confirmed that the six initial key vantage points identified by Council were all of merit and that targetted site inspections should be undertaken to document their existing views and vantage points to determine the most appropriate and specific location to assess each view from.

The desktop analysis also identified two additional vantage points to be considered, being: along High Street Road and within Roselyn Crescent Reserve.

The eight initial key vantage points are as follows:

- view 1 burwood highway
- view 2 stud road
- view 3 lewis park
- view 4 knox terrace (Westfield)
- view 5 blind creek
- view 6 knox community gardens
- view 7 high street road
- view 8 roselyn crescent reserve

Hansen Partnership undertook targeted site inspections of the initial key vantage points in March 2016.

A series of photographs were taken for all keys views to determine the most appropriate photograph and therefore specific location to document the existing condition and visual impact of the Dandenong Ranges or ridgeline profile. As a result of these site inspections and discussions with Council officers at the collaborative workshop, it was determined to not include view 2 as the vantage point did not provide views or vistas of the Dandenong Ranges profile.

View 6 was removed given that no future built form would now be encouraged between this vantage point and the Dandenong Ranges. While, View 8 was removed given its sightlines towards the Dandenong Ranges do not encapsulate any land within the Knox Central Activity Centre and the extensive trees canopies within the reserve presently block any views of the ranges.

Where the key views were determined to be along a road corridor (views 1 & 2), all photographs were taken through the windscreen of a moving vehicle. This was intentionally done as it was determined that these views are predominantly only available and experienced by motorists, given the arterial nature of both Burwood Highway and Stud Road.

For the remainder of the views (3 & 5) all photographs were taken from standing eye level above natural ground level, except view 4, which was taken from standing eye level within the Westfield Knox Food Court.

Appendix 1 contains the series of photographs taken from each key vantage point and documents the selected photograph illustrating each view.

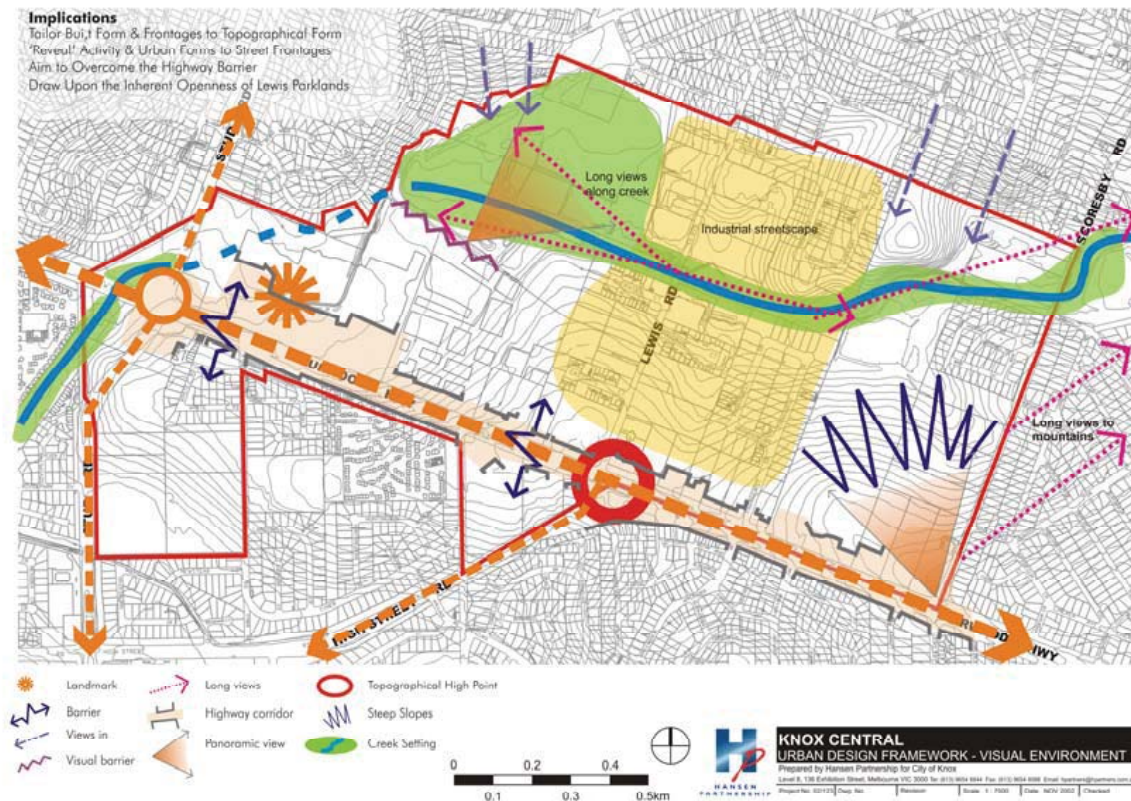


Figure 10 - Existing visual setting from KCUDF



Figure 11 - View selection

3.4 key vantage point criteria

The following vantage point criteria was formulated in order to assess and determine the importance of each vantage point.

Selection Criteria

- Locations that are within the public realm or that are publicly accessible
- Locations where significant amounts of people congregate and use spaces, such as the Westfield Terrace and Knox Community Gardens.
- Locations where long views are maintained for significant periods of time, such as along Burwood Highway and Stud Road.
- Elevated locations where expansive views and vistas towards the Dandenong Ranges are currently possible.
- Locations where a stationary view can be obtained, such as from a public seat or pedestrian crossing.

4 review of preferred maximum building heights

4.1 scenarios

The following built form scenarios were determined to be tested (where applicable) for each of the 6 key views.

- Existing photo
- Draft Built Form Heights Plan 2016 (as determined at the collaborative workshop with Council officers.)
- Draft Built Form Heights Plan 2016 + height variations
- Approvals and proposals
- Preferred Built Form Heights Plan 2016 + approvals and proposals

These scenarios are described as follows:

- **Existing photo** - selected photography of a key vantage point that clearly depicts the existing conditions as a starting point for the visual analysis. These photographs form the basis for the photomontages which insert various built form scenarios to demonstrate their visual impact.
- **Draft Built Form Heights Plan 2016 (PBFHP)** - the heights and forms determined following the collaborative workshop with Council officers (refer Figure 13).
- **Draft Built Form Heights 2016 + height variations** - the heights and forms determined following the collaborative workshop with Council officers (refer Figure 14), with agreed additional levels of height (variation) shown.
- **Approvals and proposals** - the heights and massing of approved developments and significant proposals. This includes the following developments:
 - Kubix;
 - Knoxia; and
 - Knox Westfield Master Plan Concept.
- **Draft Built Form Heights 2016 + approvals and proposals** - the heights and forms determined following the collaborative workshop with Council officers plus the approvals and proposals.

4.2 3D Model

The applicable scenarios were modelled in Sketch-up and overlaid on a Google Terrain. The terrain model was created by selecting a large portion of the surrounding context in Google Terrain and uploading the data into Sketch-up. The terrain model was then scaled against contours obtained through GIS information to match the study area. The model was intentionally extended towards the east to incorporate a large portion of the Dandenong Ranges.

The built form was modelled in a massing (building envelope) sense. Floorplates were modelled at differing floor to floor heights (3m and 4m depending of residential or commercial use) as well as making the building heights visually discernible. The different built form scenarios were built and allocated individual layers, the layers could then be turned on and off to accurately display the numerous combination of built form scenarios independently of one another.

Within the Sketch-up program a 'camera' tool, which allows specific vantage points to 'fixed' in the model. The 'camera' was placed at standing eye level to accurately replicate the position of the selected vantage point (existing photograph). Once the 'camera' was appropriately located, the different built scenarios on their separate layers could be viewed to discern the visual impacts on the existing context. The camera exports 2d images that are used in the photo-montaging process in Adobe Photoshop.

4.3 montages

The exported 2d images from Sketch-up are overlaid on top of existing photos (in Adobe Photoshop). The terrain model within the Sketch-up model allowed the images to be accurately overlaid and aligned with the actual ridgeline of the Dandenong Ranges. This alignment assists in creating a realistic representation of the numerous scenarios. The process was undertaken with each vantage point. Each applicable scenario was then overlaid on to the existing photograph (context) to create the montage image.

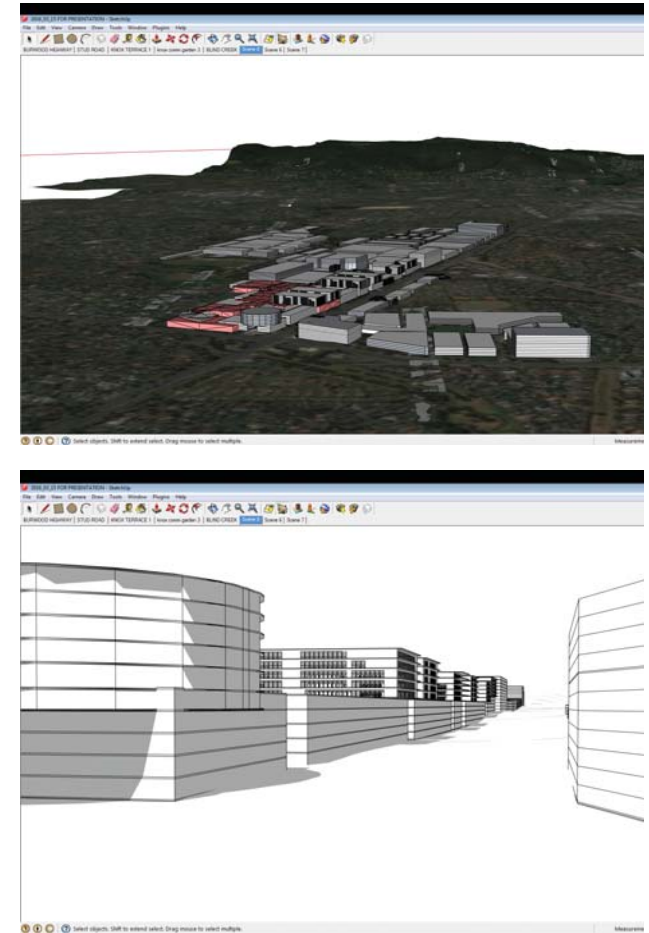


Figure 12 - Sketchup Screen Shots

5 visual assessment

5.1 assessment criteria

The following assessment criteria was formulated to assess the visual impact of the built form scenarios against and determine the level of visual encroachment into the tree canopy, Dandenong Ranges profile or skyline.

The future built form, within the Knox Central Activity Centre:

- should not significantly encroach above tree canopy;
- should not significantly intrude into the dandenong ranges profile;
- must not project above the dandenong ranges profile;
- may project into the skyline profile where dandenong ranges are not visible;



view 1 - burwood highway



view 2 - lewis park



view 3 - westfield knox terrace

5.2 collaborative workshop

In March of 2016 a collaborative workshop was held with Council officers and the hansen team to discuss and assess the visual impacts of the applicable scenarios against the (above) assessment criteria. The outcome of this process is documented within Chapter 5.

This workshop was also utilised to identify areas within the Knox Central Activity Centre which have capacity to accommodate increased built form height (above the 2005 KCUDF) without unreasonably impacting upon the Dandenong Ranges profile from the five key vantage points.

During this workshop it was determined to remove initial vantage points 1, 6 and 8 (as discussed in section 3.3) resulting in the 5 key vantage points and their views towards the Dandenong Ranges as illustrated in Figure 13.



Figure 13 - Preferred Built Form Heights Plan 2016 with view sheds



view 4 - blind creek



view 5 - high street road

5.3 view 1: burwood highway

Image 1: Existing conditions illustrates that the northern edge of Burwood Highway has a continuous canopy that is only punctured by the spire (centre point) of the Westfield Knox Shopping Centre. The taller existing Myer 'box' is not visible due to its setback from the road corridor and is hidden behind the substantial canopy tree planting along Burwood Highway. To the south of Burwood Highway, the recent development, Kubix (9-11 storeys) encroaches into the tree canopy (in the background) but does not encroach into the profile of the Dandenong Ranges.

It is important to note that as the viewer proceed down the hill and into the lower section of Burwood Highway that is adjacent to the study area, the views of the Dandenong Ranges are impeded by the tree canopy.

Image 2: Preferred Built Form Heights Plan 2016 illustrates the impact of the heights and forms determined following the collaborative workshop with Council officers upon the existing conditions. The 10 storey feature form (highlighted in orange) at the northern corner of Stud Road and the Burwood Highway protrudes through the tree canopy and signifies an arrival into the Knox Central Activity Centre as well as 'marking' the gateway location. The feature forms continue to protrude above the tree canopy along Burwood Highway but have minimal visual impacts on the Dandenong Ranges profile.

In this case the intrusion into the tree canopy is acceptable due to the prominent corner built form that will 'mark' the threshold of the activity centre.

To the south of Burwood Highway, the forms of the PBFHP sit beneath the datum line of the Kubix development (11 storey residential development). This illustrates that the current height of existing and approved developments taking shape along the southern edge of Burwood Highway is acceptable from a visual impact perspective.

Image 3: Preferred Built Form Heights Plan 2016 + Height Variations shows the variation in height of the forms to the south of Burwood Highway, highlighted in blue with a maximum height of 11 storeys (with 3m floor to floor heights). This height is determined using the datum of permit approvals in the same area (Kubix 9-11 storeys). The forms present a broad mass at the southern corner of Burwood Highway and Stud Road, and afford a sense of balance on entry to the activity centre.

The forms protrude marginally above the canopy and have an impact on the continuous nature of the landscape character but do not impede on the profile of the Dandenong Ranges.

image 1: existing conditions



image 2: preferred built form heights plan 2016



image 3: preferred built form heights plan 2016
+ height variations



view 1: burwood highway (cont)

Image 4: Approval and proposal illustrates the impact of developments currently awaiting approval or that are under construction.

To the north of Burwood Highway the pink highlighted masses breaching the tree canopy are the most current development plan forms of Westfield Knox. However, these forms do not impede the profile of the Dandenong Ranges.

To the south of Burwood Highway the three apartment buildings of the Kubix development can be seen. The building closest to Stud Road is the existing 9 storey form and can be seen in Image 1 (Existing View). This development has set a precedent in terms of forms marginally breaching the tree canopy but do not encroach into the profile of the Dandenong Ranges.

image 4: approvals and proposals



image 5: preferred built form heights plan 2016
+ approvals and variations

Image 5: Preferred Built Form Heights 2016 + approvals and variations presents the 'combined' built form from each scenario (excluding Image 3 – Height Variations) in the same image. The feature forms of the PBFHP still present the most prominent masses along the northern edge of Burwood Highway. The southern side of the highway is dominated by the current and proposed elements of the Kubix development. There is no impact on the Dandenong Ranges from this vantage point, however the tree canopy is breached on multiple occasions by the feature forms at the western most point of the activity centre.



Image 6: 3d Model

Given the prominence of the canopy trees which form the landscape character along Burwood Highway and dominate the foreground we have included this screen-shot of the 3d model to illustrate the alignment of the built form massing of the PBFHP and the Google Terrain model which is not visible. This was done to clearly demonstrate that much of the built form massing will not be visible from this key vantage point.

image 6: 3d model image
preferred built form heights plan 2016



5.4 view 2: lewis park

Image 1: Existing conditions Illustrates the view across Lewis Park towards the Dandenong Ranges to the east. This vantage point illustrates the dense nature of the tree canopy which is marginally breached by 2 storey commercial buildings to the north-east.

Image 2: Preferred Built Form Heights Plan 2016 illustrates the impact of the 4 storey commercial forms and 2 storey residential forms on the existing conditions. The majority of forms presented would sit beyond the canopy with marginal impact above the line of the tree canopy. The higher forms of the PBFHP located along Burwood Highway cannot be viewed beyond the tree canopy. It is also important to note, in this scenario the prominent views of the Dandenong Ranges are to the east of the precinct. This view will be unobstructed by any larger development envelopes along Burwood Highway.

Image 3: 3d Model image represents the relationship between the proposed massing envelopes and the Google Terrain model.

image 1: existing conditions



image 2: preferred built form heights plan 2016



image 3: 3D Model Image



image 1: existing conditions



5.5 view 3: westfield knox terrace

Image 1: Existing conditions illustrates the views towards the Dandenong Ranges profile from the 'terrace' of the food court on the 2nd floor of the Westfield Knox shopping centre. The existing conditions present a foreground of at-grade car parking. In the middle ground the existing Westfield Knox 'box' can be seen projecting above the ridgeline and the Dandenong Ranges. The decked car park extends to the north into the canopy. The tree canopy features strongly both in the foreground and the distance.

image 2: preferred built form heights plan 2016



Image 2: Preferred Built Form Heights Plan 2016 + approvals illustrates the view of the Westfield Knox Development Plan massing. The image shows the current carpark as a 2 storey commercial envelope. Beyond the pink highlighted envelope of the Development Plan, an upper level of the 7 storey residential envelope can be seen, as highlighted in blue. This mass does not significantly encroach on the profile of the Dandenong Ranges. To the north (left hand side of the image) a slither of 3 storey commercial form stretches toward the north. This built form would not be visible due to the tree canopy in the foreground.

image 3: preferred built form heights plan 2016
+ height Variations

Image 3: Preferred Built Form Heights Plan 2016 + Height Variations illustrates the clear presence of the PBFHP forms that have been increased in height from 7 to 11 storeys of residential (3m floor to floor) to test the limitations of height impact from this vantage point. 4 upper levels of the 11 storeys have a dramatic impact upon the profile and ridgeline of the Ranges. The image illustrates that a 7 storey residential envelope (refer image 2) would provide a more satisfactory built outcome.

5.6 view 4: blind creek

Image 1: Existing conditions illustrates a clear view of the Dandenong Ranges from beneath the tree canopy from the shared path, along the Blind Creek corridor. Single and double storey forms of residential properties can be seen in the distance protruding through the tree canopy, and siting below the profile of the Dandenong Ranges.

image 1: existing conditions



Image 2: Preferred Built Form Heights Plan 2016 illustrates the impact of a 2 storey residential envelope located on the western edge of the existing residential properties, within the DELWP land (a strategic development site at the corner of Burwood Highway and Scoresby Road). The image demonstrates that a 2 storey residential envelope will marginally encroach into the lower reaches of the Dandenong Ranges profile.

image 2: preferred built form heights plan 2016



image 1: existing conditions



5.5 view 5: high street road

Image 1: Existing conditions illustrates the view towards the Dandenong Ranges profile from High Street Road. The existing conditions present a foreground of landscape character either side of the road reserve. A three storey commercial building can be seen in the middle ground fronting onto Burwood Highway with the profile of the Dandenong Ranges in the background. The three Mt Dandenong transmission towers can be seen in the far distance atop the ranges (refer figure 8).

image 2: preferred built form heights plan 2016



Image 2: Preferred Built Form Heights Plan 2016 illustrates the impact of the built form envelope fronting onto Burwood Highway. The heights vary between 6 storey commercial forms to a 10 storey feature form on the corner of Scoresby Road and Burwood Highway (to the right of the image). The built form envelope of the PBFHP has minimal impact on the profile of the Ranges. This image illustrates the extent of the built form envelopes, most of which would be obscured by the tree canopy (refer image 3).

image 3: preferred built form heights plan 2016

massing beyond canopy



Image 3: Preferred Built Form Heights Plan 2016

We have included this image to illustrate the extent to which the built form would be hidden beyond the tree canopy. The image also illustrates that the views of the Ranges would not be obstructed by the proposed envelopes.

6 preferred built form heights plan 2016

6.1 recommendations

Based on the visual assessments from the 5 key vantage points it was determined that the Knox Built Form Envelopes be amended as follows to create the Future Preferred forms:

- the Feature Forms be 10 commercial storeys or 40m;
- the commercial forms to the north of Burwood Highway and to the south-western edge of the study area to Stud Road be 7 storeys or 28m;
- the commercial forms to the north of Burwood Highway and fronting Stud Road to be 6 storeys or 24m ;
- the residential forms to the immediate south of Burwood Highway between High Street Road and Tyner Road East to be 7 storeys or 21m;
- the commercial forms fronting Lewis Park (between Capital City Boulevard and Lewis Road) to be 5 storeys or 20m ;
- the residential forms to the immediate south of Burwood Highway and fronting Lewis Park to be 6 storeys or 18m;
- the commercial/industrial forms predominantly along the Blind Creek interface to be 3 storeys or 12m;
- the residential forms fronting Blind Creek and Scoresby Road to be 3 storeys or 10m;
- the residential forms fronting Tyner Road to be 3 storeys or 9m and;
- the residential forms fronting Blind Creek to be 2 storeys or 8m.



Knox Central Preferred Built Form Heights Plan 2016

legend

40m feature forms (10 storeys) commercial	20m 5 storeys commercial	12m 3 storeys commercial-industrial	18m 6 storeys residential	9m 3 storeys residential	
34m 11 storeys residential	24m 6 storeys commercial	10m 3 storeys residential	8m 2 storeys residential	8m 2 storey commercial (recreation)	
28m 7 storeys commercial	21m 7 storeys residential				

Figure 14 - Preferred Built Form Heights Plan 2016



hansen

appendix 1: view selection



1 site photos

view 1: burwood highway



①



②



③



④



⑤



⑥



⑦



⑧



⑨

site photos (cont)

view 2: lewis park



①



②



③



④



⑤



⑥



⑦



⑧



⑨

site photos (cont)

view 3: knox terrace



①



②



③



④



⑤



⑥

site photos (cont)

view 4: blind creek



①



②



③



④



⑤

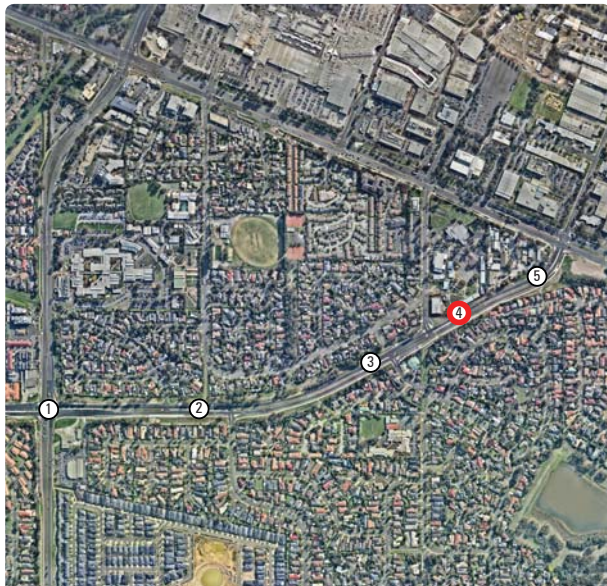


⑥



site photos (cont)

view 5: high street road



①



②



③



④



⑤



hansen