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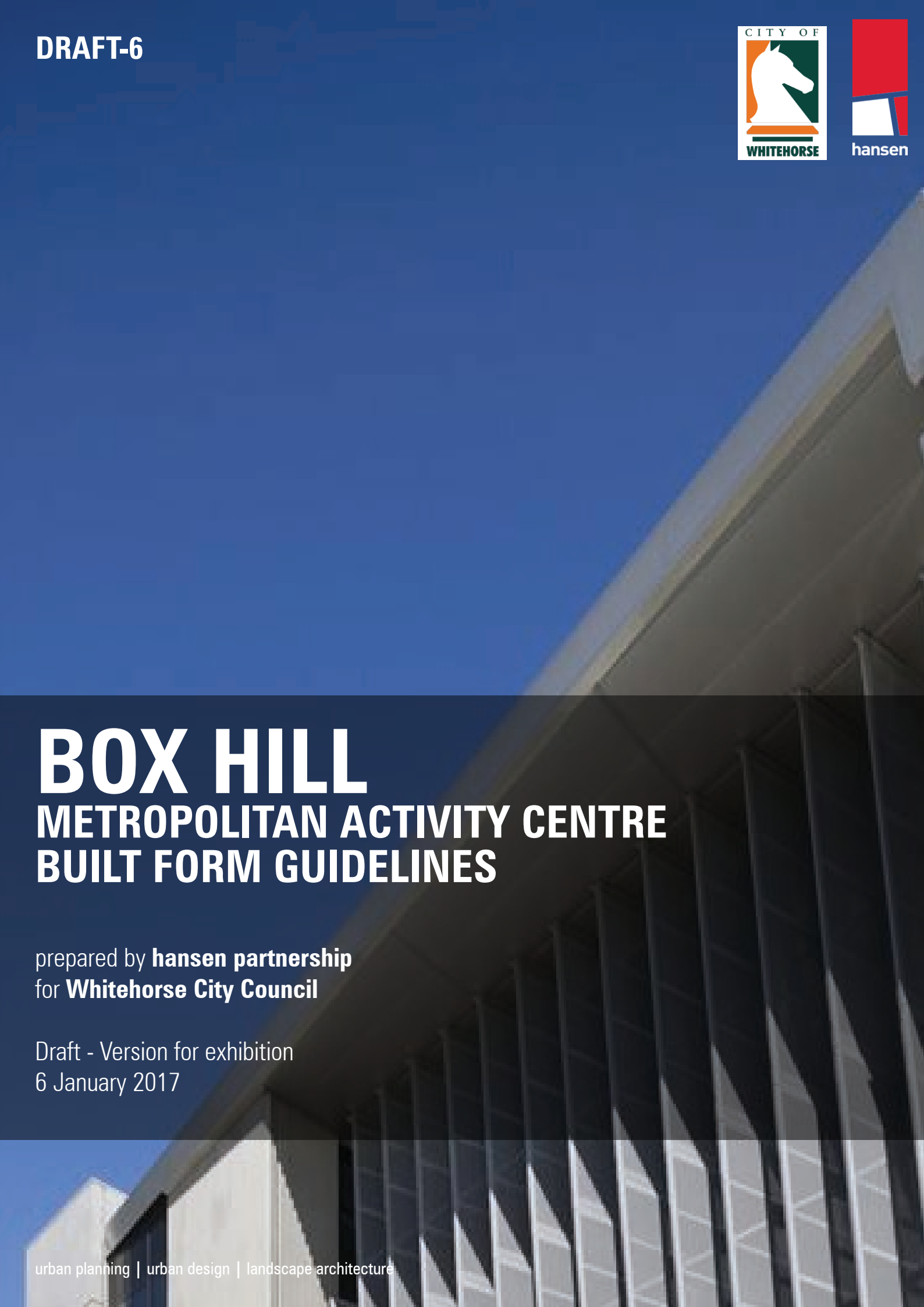


BOX HILL
METROPOLITAN ACTIVITY CENTRE BUILT FORM GUIDELINES

prepared by **hansen partnership**
for **Whitehorse City Council**

Draft - Version for exhibition
6 January 2017

urban planning | urban design | landscape architecture

Figure 1: Study Area

Introduction

- The Study Area for the Box Hill Built Form Guidelines (BHBFG) encompasses Built Form Precincts F and C as identified within the Structure Plan (refer to figure 3).
- The Built Form Guidelines (BHBFG) have been prepared for the City of Whitehorse. The scope of these Guidelines is to consider the overall urban structure and appropriate built form controls that can work in tandem with the trajectory of emerging development within the Box Hill Metropolitan Activity Centre. In the absence of any existing statutory height limit or an overall documented vision for future urban form (of Precinct F in particular), the Guidelines seek to make recommendations on development scale and typology for each sub precinct within the Study Area.
- The scope of these Guidelines does not include a review or recommendations for those areas that are not identified within the Study Area. It also does not seek to duplicate provisions relating to internal spatial arrangement, or those provisions addressed by the State Government Better Apartments Design Standards.
- In addition, the scope of this report broadly analyses the extent of maximum development capacity of the Study Area. Therefore, considering the 'high level' nature of these Guidelines, additional 'fine grain' analyses will be necessary to consider requirements for soft/ hard infrastructure capacity and public realm improvements in the longer term which will result from future development.

Structure of the Built Form Guidelines

ACTIVITY CENTRE CONTEXT

01

Activity Centre Context

Metropolitan Strategy Designation

Plan Melbourne

- Plan Melbourne forms the current State Government's Metropolitan Planning Strategy, which sets out a new planning vision for the future development of Metropolitan Melbourne.
- Plan Melbourne has identified Box Hill as one of two Metropolitan Activity Centres within the Eastern Subregion.
- A key part of Plan Melbourne's vision is to realise a '20-minute neighbourhood' which advocates for living locally within convenient access to services, public transport and recreation facilities.

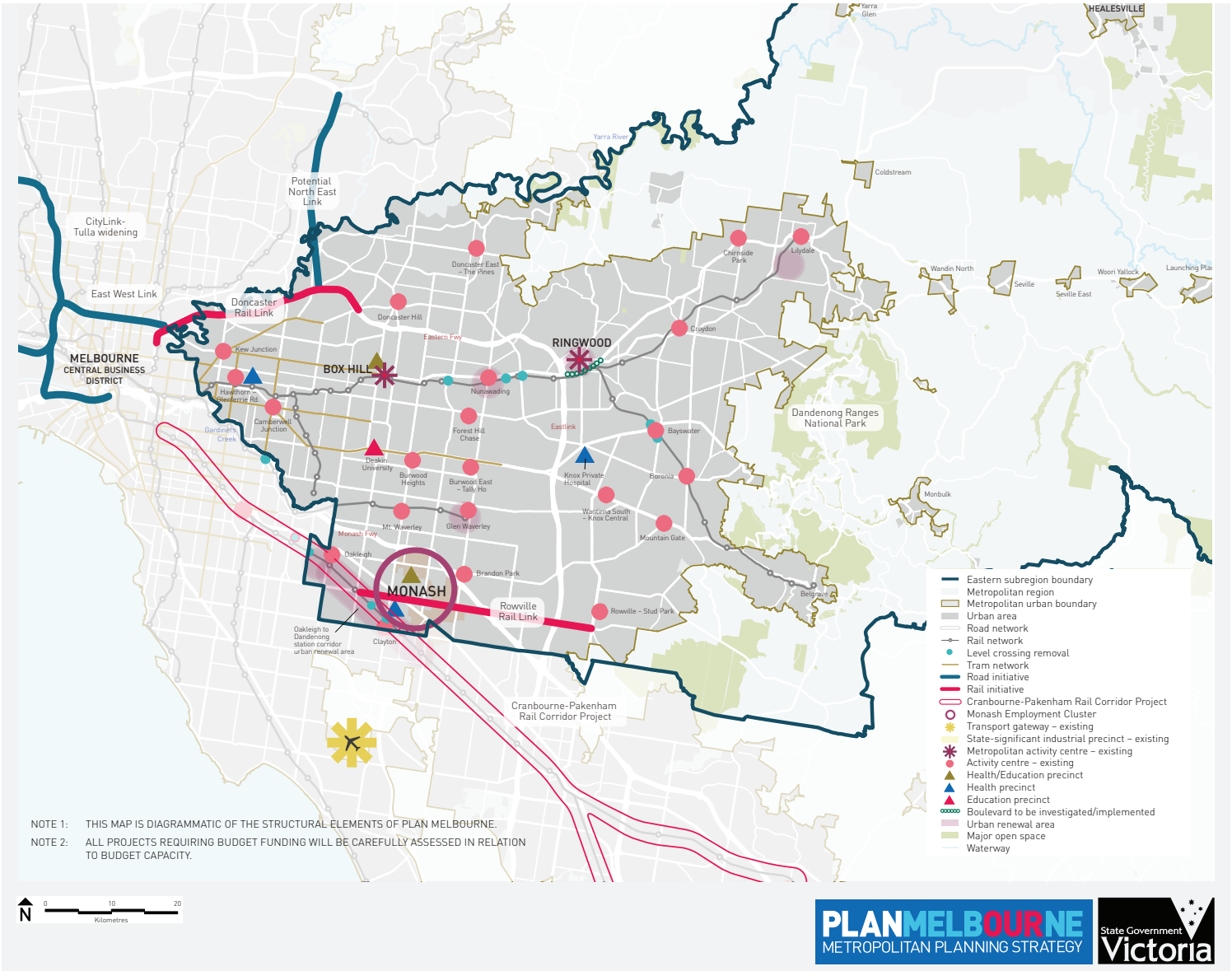
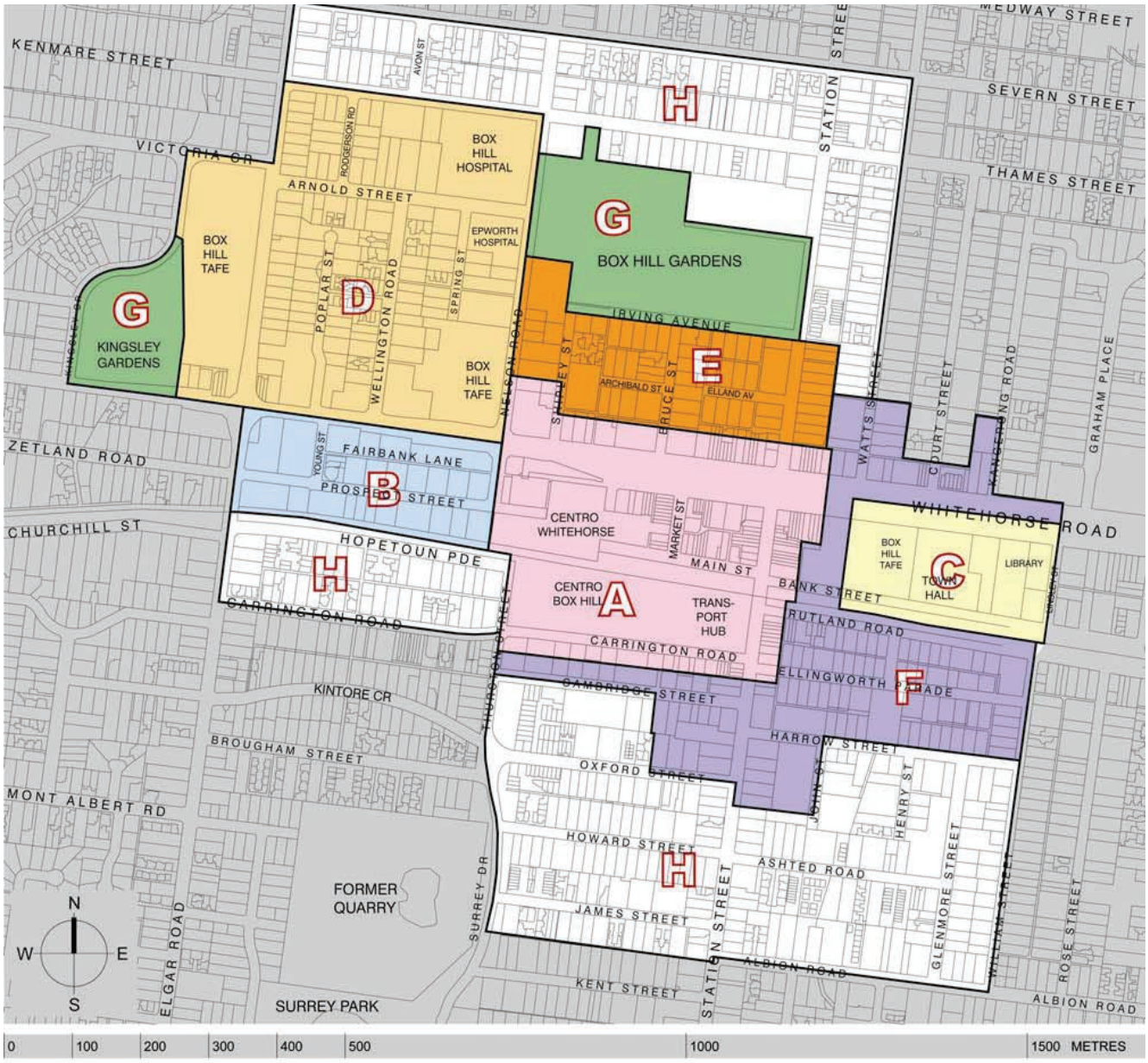


Figure 2: Structure Plan - Activity/ Land Use Precincts Plan



A Box Hill Transport & Retail Precinct: Retail sustained throughout the area complemented by entertainment, hospitality, commercial and other uses with extended hours of activity creating a central focus for Box Hill.

B Prospect Street Precinct: Consolidation as the primary office precinct in the activity centre.

C Civic & Eastern TAFE Precinct: Consolidation of cultural, community and educational facilities in the precinct.

D Hospital & Western TAFE Precinct: Growth and enhancement of educational and medical institutions and support for related businesses and services, plus high density residential (including student housing).

E Box Hill Gardens Precinct: Provision for significant high to medium density residential growth with small scale offices, limited retail and community services and retail to activate ground level street frontages.

F Southern & Eastern Precincts: Mix of office and retail uses responding to prominent Whitehorse Road and Station Street frontages, and mixed use (residential) as transition to purely residential precincts.

G Box Hill Gardens & Kingsley Gardens: Convenient access to high quality public open space and recreational opportunities within the activity centre.

H Residential Precincts: The areas' residential role and amenity protected but medium density residential development encouraged. (Most areas surrounding the study area are also residential.)

Activity Centre Context

Structure Plan Background

The Box Hill Transit City Activity Centre Structure Plan (June 2007) (Referred to as the 'Structure Plan' in this document) provides the context for the Box Hill Built Form Guidelines for Precincts F and C. The Structure Plan provides a vision for Box Hill to become *"the most significant urban centre in Melbourne's eastern suburbs".*

The focus on buildings suggests that buildings will *"contribute to the quality of the public environment, protect the amenity of neighbouring users, and provide appropriate transitions between areas of significant change and areas of relative stability".*

The Structure Plan has consequently been incorporated into the Whitehorse Planning Scheme (*Clause 22.07- Box Hill Metropolitan Activity Centre*).

Built Form Principles

The Structure Plan provides a clear set of *Aims for Built Form* in Box Hill MAC. These are:

- *Minimised front and side setbacks and increased heights to enable significantly increased densities in the Activity Centre;*
- *Maintenance of the traditional built form character of shops in the block between Whitehorse Road and Market, Main and Station Streets;*
- *Transitional heights around the core to protect amenity in surrounding residential neighbourhoods where existing heights will be maintained;*
- *Maintenance of the characteristic pattern of buildings set in landscaped grounds within the civic precinct near the Town Hall (Precinct E);*
- *Protection of key open spaces from overshadowing; and*
- *Design for better public transport access to nodes and stops.*

Built Form Strategies

The Structure Plan also sets out Strategies to support these aims. These include:

- *Create street-oriented development;*
- *Bridge major barriers;*
- *Integrate new development with heritage buildings;*
- *Facilitate change in nominated areas while protecting areas of stability;*
- *Design appropriately for a high density context;*
- *Promote sustainable building design and construction;*
- *Promote design excellence; and*
- *Encourage development to contribute to Box Hill's Sense of Place.*

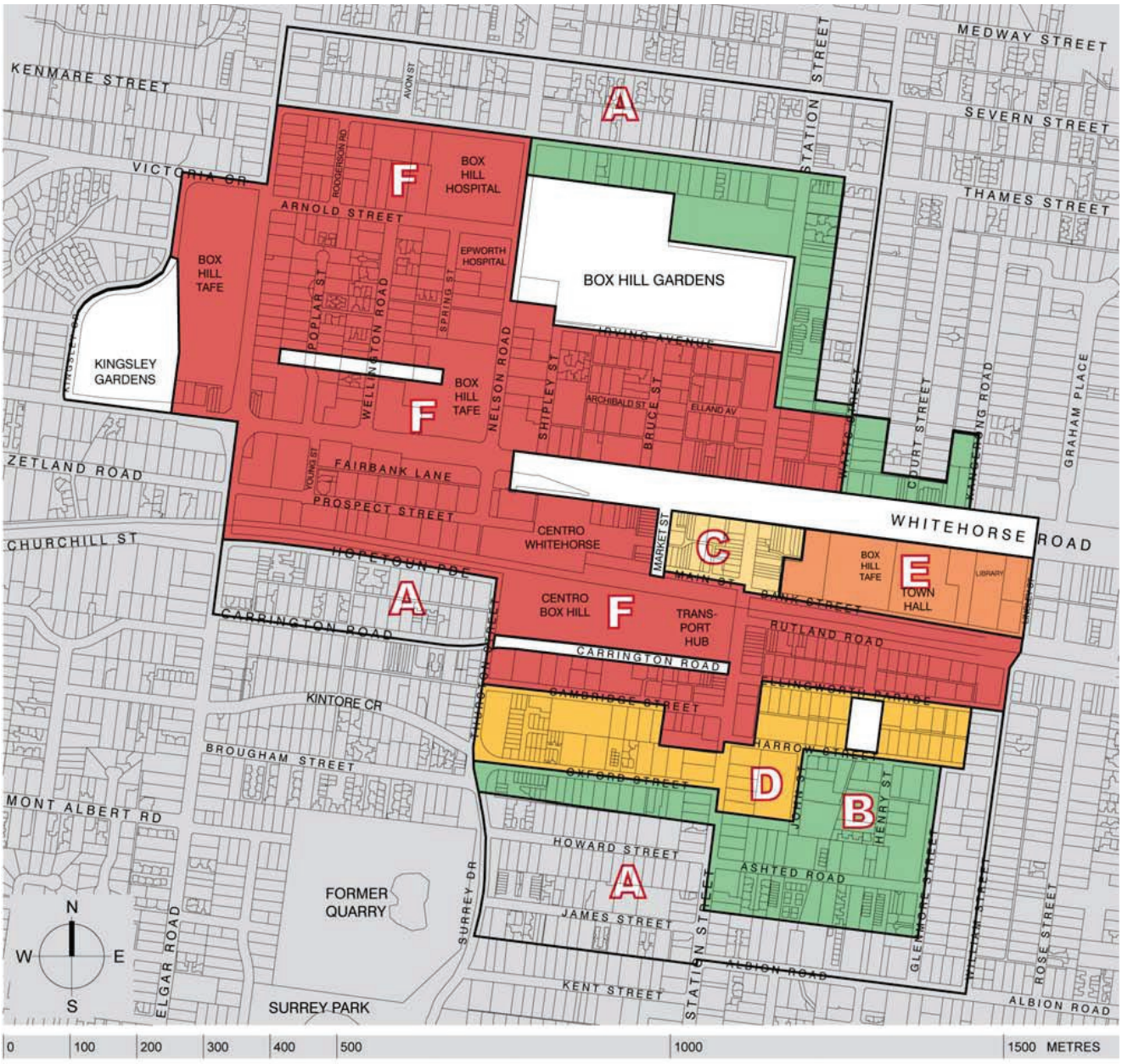
The Structure Plan indicates Built Form Precincts shown in Figure 3. These Built Form Guidelines apply specifically to Precincts F and C.

Box Hill's Vision:

"to be the most significant urban centre in Melbourne's eastern suburbs"

"Buildings will contribute to the quality of the public environment, protect the amenity of neighbouring users, and provide appropriate transitions between areas of significant change and areas of relative stability."

Figure 3: Structure Plan - Built Form Precincts Plan



A Peripheral Residential Precincts: New development supporting higher densities but consistent with the areas' existing built form character.

B Low-rise Higher-density Residential Precincts: 3-storey height limit with reduced setback requirements enabling increased residential densities while maintaining a transitional building scale.

C Traditional Town Centre: The existing built form character and 2 to 3-storey scale of the precinct retained including listed heritage buildings as well as complementary buildings.

D Mid-rise Commercial and Mixed Use Precincts: 4 storey height limit supporting increased density, with no (or minimal) front and side setbacks to create active frontages onto streets.

E Town Hall Precinct: Civic buildings given visual emphasis and the significance of heritage buildings and related spaces protected. Heights to be determined on case-bay-case basis and may vary across each site.

F Major Development Precinct: Taller buildings permitted, enabling increased density. Heights must not cause overshadowing of Key Open Spaces, Residential Precincts A or B or residential areas beyond the study area. Transitional heights to be provided at edges of the precinct to respect the scale of neighbouring precincts.

Key Open Spaces: Protect and enhance existing public and major private open spaces' character and provide an effective increase in useable open space through removal of encumbrances and design improvements.

Activity Centre Context

Study Area

Precinct C- Traditional Town Centre

- Precinct C covers the smallest area within the Box Hill MAC (approximately 2.04 hectares).
- It specifically refers to predominantly fine grained allotments along the southern side of Whitehorse Road (between Market Street and Box Hill TAFE) and Station Street. It is partially affected by existing and recently implemented Heritage Overlay (HO244) 'the Box Hill Commercial Precinct'.
- The Structure Plan's desired outcomes for Precinct C includes:
  - Pedestrian friendly streets and lanes lined by attractive buildings, give a sense of vitality and safety by active building frontages.
  - The precinct's built form character retained and heritage buildings protected.
  - Retail activity sustained throughout the precinct and complemented by shop-top commercial and mixed use.
  - The amenity (including access to sunlight) of key open spaces protected.

Precinct F- Major Development Precinct

- Precinct F covers the largest area within the Box Hill MAC (approximately 54.2 hectares).
- It covers the central portion of the Centre, between Elgar Road to the west, Watts and William Streets to the east. Whitehorse Road runs centrally through Precinct F.
- The Structure Plan's desired outcomes for Precinct F includes:
  - A fine grain of attractive pedestrian-friendly streets, lanes and arcades lined by buildings and given a sense of vitality and safety through their activation by adjoining uses.
  - Significantly increased land use densities close to the railway station, and in the area between the station, hospitals and TAFE.
  - The amenity (including access to sunlight) of streetscape and key public space protected.
  - Synergies between public parklands and uses at their edges, and enhanced community safety in parkland.
  - Amenity in surrounding low rise precincts protected.

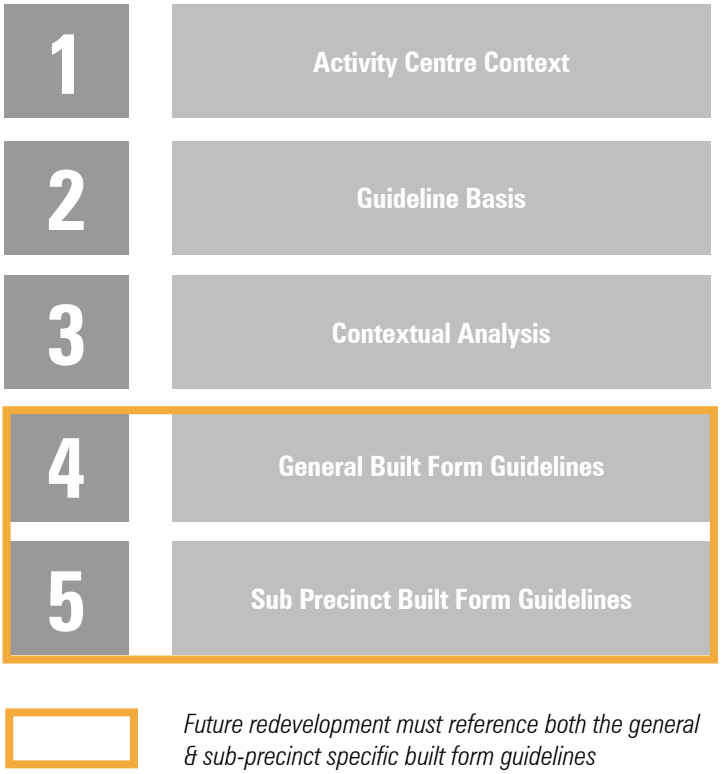
GUIDELINE BASIS

02

Guideline Basis

Purpose of Design Guidelines

- The **Box Hill Transit City Activity Centre Structure Plan** (June 2007) sets out objectives and strategies for future redevelopment of Box Hill MAC from a suburban centre into an urban centre.
- While the Structure Plan offers a **clear vision and broad guidelines** as to how this transition will occur, the City of Whitehorse has sought to prepare these Built Form Guidelines to foster distinctive characteristics which are emerging from recent redevelopment and investment (particularly within Precinct F) and to reflect aspirations for the future.
- The Guidelines form the **basis for the typical design response** and have been set out clearly to address matters associated with overall urban form consideration for the urban core of Box Hill Activity Centre in order to realise contextually responsive development outcomes.
- The Guidelines seek to provide clarity and achieve a degree of **consistency** of built form outcomes in a context where discretionary, performance based controls are preferred.
- The quality of **public realm** is critical to the success of Box Hill as a Metropolitan Activity Centre and a liveable urban centre. These Guidelines seek to enhance the quality of the public realm for the comfort and enjoyment of pedestrians.
- The Built Form Guidelines have been prepared in response to inappropriate application of the ResCode standards on medium to high density developments (greater than 4 storey). It is also acknowledged that the State Government's (DELWP & OVGA) **Better Apartment Design Standards** will address the internal amenity matters associated with medium to high density residential development.
- The existing urban form 'morphological or contextual analysis' of the Study Area is described in Section 3. Following each description, the implications for future built form are highlighted. This section covers:
  - Development Patterns (recent development applications and permits);
  - Development scales and types;
  - Street Network;
  - Public realm & environment; and
  - Subdivision patterns.
- Section 4 of this report addresses matters relating to the Key Directions, urban design objectives in determining preferred development scales and general guidelines for all land within the Study Area.
- More site specific detailed built form guidelines for each sub precinct is contained within Section 5 of this report.
- **Future redevelopment within the Study Area must reference both the general guidelines and sub-precinct specific guidelines.**



Future redevelopment must reference both the general & sub-precinct specific built form guidelines

Guideline Basis

How These Guidelines Should be Used

Development Approval Process

- Applicants are encouraged to discuss their proposal with the City of Whitehorse Planning Department prior to making a formal planning permit application. This may include submitting a 'preliminary development application' for commentary prior to finalising the formal application.
- The City of Whitehorse seeks to achieve a high standard of design within the Box Hill Activity Centre. Planning applications for major development sites should be prepared by architectural practices registered with the RAIA.
- While the Council's lead role in review of development proposals is critical, it is also acknowledged that the Centre's infrastructure (soft and hard) needs to keep up with the growing population. The role of private and public organisations in achieving a viable development outcome in terms of financial, social and environmental matters should not be underestimated through the use of public-private negotiation, or partnership where appropriate. Where these are supported by the Structure Plan and the Guidelines, Council has a role to play in facilitating a positive outcome.
- The City of Whitehorse seeks to explore options to encourage development outcomes which deliver local net community benefits negotiated between Council, prospective developers and community representatives.

Guideline Basis

How These Guidelines Could be Implemented

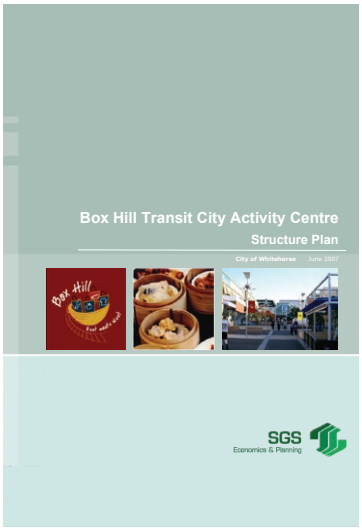
The Guidelines outline a series of objectives and strategies that will serve to enhance the character, image and potential of the Centre. One of the important steps in realising the objectives of the Structure Plan and the Guidelines is the establishment of appropriate planning controls, involving updates to the existing Local Policy and introduction of specific design controls within the Whitehorse Planning Scheme, as follows:

Planning Policy

- The Built Form Guidelines outline a series of objectives and controls that will serve to enhance the character, image and shape of the urban condition of Box Hill Metropolitan Activity Centre in the long term.
- Within the Whitehorse Planning Scheme, the Municipal Strategic Statement (MSS) at Clause 21 sets the strategic directions for planning across a range of issues and Clause 22 provides specific direction on a range of matters where additional guidance is required for the exercise of discretion. The objectives and strategies in relation to the Box Hill Transit City Activity Centre Structure Plan has been included in existing Clause 22.07- Box Hill Metropolitan Activity Centre.
- A further update to the Local Policy (Clause 22.07) will be required to include the Box Hill Metropolitan Activity Centre Built Form Guidelines (Precincts C and F) as a Reference Document.

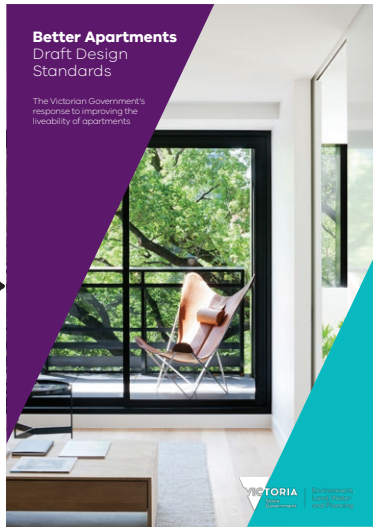
Design Development Overlay (DDO)

- It is envisaged that the Guideline recommendations for Precincts C and F will result in the variation of the existing built form environment. To achieve this, it is recommended for the Guidelines to be translated into a specific Design and Development Overlay (DDO) for the Study Area, which would logically address development scale and envelope (heights & setbacks) through specific design controls.
- It is noted that future drafting of the Design and Development Overlays (DDO) would need to minimise potential conflict between the State Planning Policy, Local Planning Policy, Zone provisions and Heritage Overlay provisions.



Box Hill Transit City Activity Centre Structure Plan (adopted)

Box Hill Metropolitan Activity Centre Built Form Guidelines



Better Apartments Design Standards DRAFT (DELWP & OVGA)

CONTEXTUAL ANALYSIS

03

Activity Centre Context

Emerging Development Patterns

Perceived Issues

- Absence of precinct specific built form controls, or guidelines that are applicable to Built Form Precinct C and F.
- Emerging 'sprawl' of opportunistic high rise apartment developments in locations away from the designated Whitehorse Road spine (Precinct F).
- Limitations of the existing Whitehorse Planning Scheme to influence hyper-dense development on grounds other than amenity (as opposed to density).
- Typical assumptions for high density that unconstrained development scales could be achieved on any site.
- High rise development often yielded substantially smaller sized dwellings which failed to provide for housing diversity, liveability and choice.
- ResCode is not applicable on developments greater than 4 storey and ineffective in managing site internal layout.
- Parking and access requirements often drive the site planning and internal layout.
- There are no clear strategic directions for the visions of Box Hill laneways in terms of vehicular, or pedestrian priority.
- Ground level private open space areas are generally poorly orientated and proportioned.
- Diminishing opportunities for in-ground landscaping.
- Ground level dwellings are often designed defensively given their exposure to the public realm.
- The compounding effect of large dwellings, with small, dysfunctional outdoor areas do not offer sufficient recreational space for residents.
- The traditional distinction between narrow side setbacks and broad rear 'backyard space' has been lost in favour of tight rear setbacks and side orientated private open space which works against the logical opportunity of typically deep allotment proportions.
- In areas where considerable change is anticipated, opportunities exist for landscaping, or shared party walling.
- The arrangement of massing within a site often results in a situation where neighbouring development competes for light and amenity, with privacy screening employed to compensate.

Examples of Approved & Constructed Developments

SMALL
800
people/ ha

19 wellington road, box hill (2013)
proposed scale: 5 storey (constructed)
site size: 740sqm
dwelling number: 27 dwellings

MEDIUM
1,800
people/ ha

9-11 Bruce street, box hill (2014)
proposed scale: 9 storey (approved)
site size: 862sqm
dwelling number: 67 dwellings

X-LARGE
3,800
people/ ha

850 Whitehorse rd, box hill (2013)
proposed scale: 26-36 storey (construction)
site size: 3,300sqm
dwelling number: 511 dwellings

Figure 4: Existing & Anticipated Building Heights

legend

- structure plan study area
- 1-2 storeys
- 3-4 storeys
- 5-6 storeys
- 7-8 storeys
- 9-10 storeys
- 11-15 storeys
- 16-20 storeys
- >21 storeys
- car park
- existing heritage building
- heritage overlay
- traditional street wall
- approved developments
- proposed developments
- railway line
- railway station
- existing open space

Activity Centre Context

Emerging Development Patterns

Development Trends: Small

- Typified by low rise medium density residential apartment.
- Most small developments within the Study Area are approved/ constructed prior to the year 2013.
- Development scale ranging from 4 to 7 storey on a single allotment.
- Most development includes landscape setback to the street.
- Side and/or rear setbacks are limited and typically development applications are tested against ResCode Standards (B-17 envelope) and borrowed light to bedrooms is common.
- Car parking is accommodated in basement car park format.
- Recent (post 2013) low rise medium density residential apartments are prevalent outside the Study Area, on single or consolidated residential allotments (on the residential zone).

Development Trends: Medium

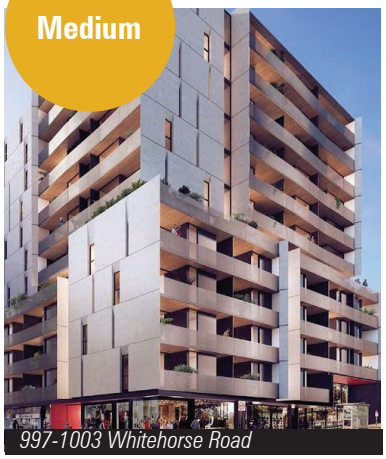
- Typified by mid rise residential apartment, with a small component of non - residential uses at the ground level.
- Most medium scaled developments within the Study Area are proposed, approved, or constructed between 2011 to 2015.
- Development scale ranging from 8 -15 storey on a single allotment and limited consolidated allotments.
- Most developments incorporate a consistent 4-5 storey 'street wall'.
- Side and/or rear setbacks varied with developments approved/proposed prior to 2013 having been tested against the ResCode Standards (B-17 envelope) and battle axed bedrooms are not uncommon.
- Post 2013, development approvals and applications typically include 4.5m setback provisions to the side or rear above the 'street wall' for development equity. Battle axed bedrooms are less common.
- Car parking is accommodated in basement car park format.
- Typically found along Bruce Street (west), Archibald Street, Irving Avenue, Wellington Road and Poplar Street.

Small

6 Bruce Street

109 Carrington Road

Medium



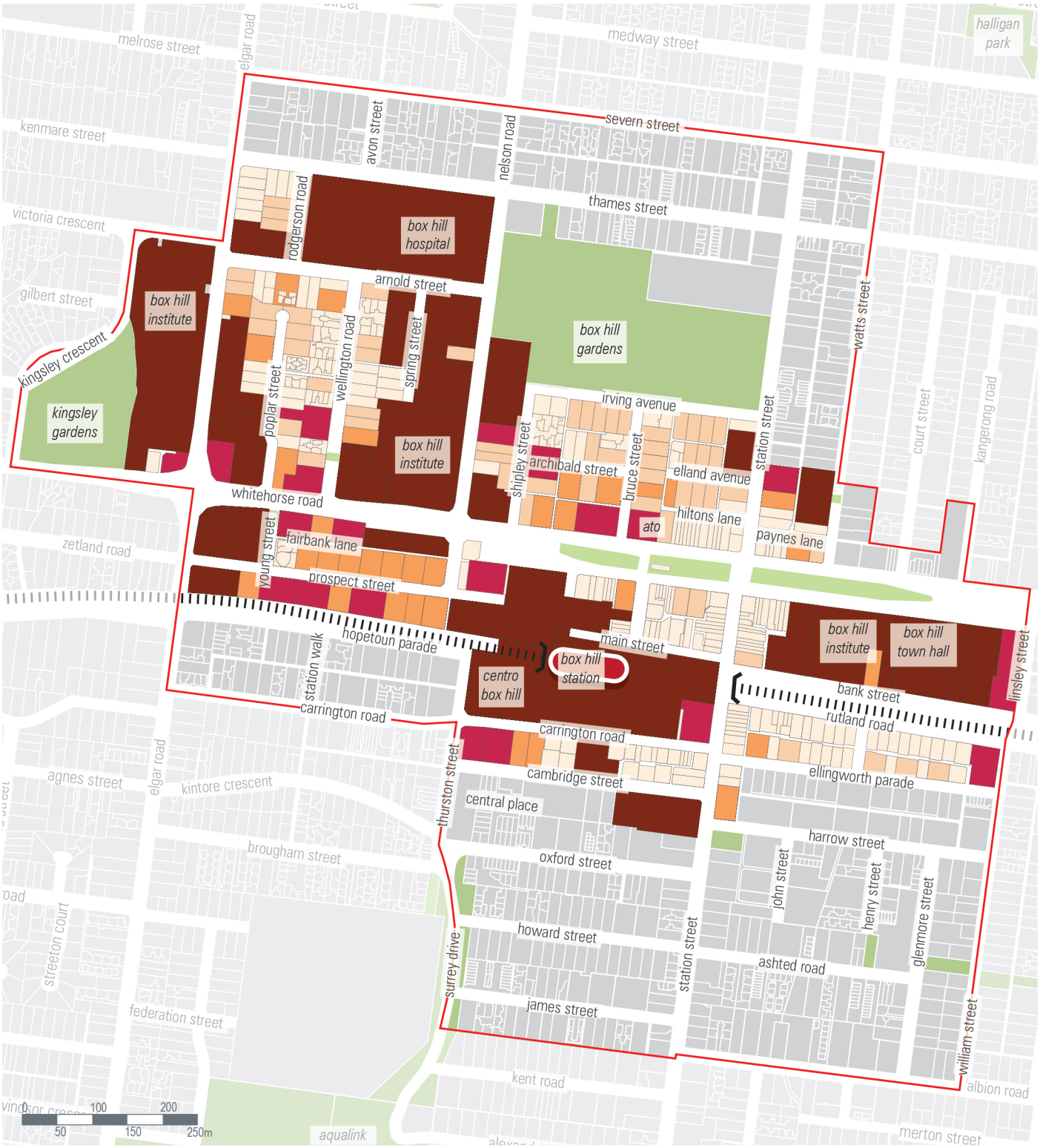
997-1003 Whitehorse Road

710 Station Street

1 Elland Avenue

6-8 Wellington Road

Figure 5: Existing Allotment Sizes



legend

- structure plan study area
- allotments: 0-700sqm (extra small)
- allotments: 700-1000sqm (small)
- allotments: 1000-1500sqm (medium)
- allotments: 1500-2500sqm (large)
- allotments: >2500sqm (extra large)
- existing open space
- railway line
- railway station

Activity Centre Context

Emerging Development Patterns

Development Trends: Large

- Typified by high rise mixed use development comprising high density residential apartments and non residential uses contained within the ground level, or podium levels.
- Most large developments within the Study Area are proposed, or approved, or constructed post 2013.
- Development scale ranging from 15 - 25 storey on single, or large allotments and within commercially zoned land.
- Development typology typically comprises 4-5 storey podium built to boundaries and rising form with varied setbacks above.
- Development approvals and applications typically include 4.5m setback provisions to the side and rear above the podium for development equity.
- Battle axed bedrooms are less prevalent.
- Car parking is accommodated within basement, or podium car park formats.
- Typically found along Whitehorse Road, Prospect Street and Wellington Road.

Development Trends: Extra Large

- Typified by high rise mixed use development comprising very high density residential apartments and non residential uses typically contained within the ground, or podium levels.
- Most large developments within the Study Area are proposed/approved/ constructed post 2013.
- Development scale ranging from 30-36 storey on single super allotment and within commercially zoned land.
- Development typology typically comprises 5-6 storey podium built to boundaries and rising form with varied setbacks above.
- Development approvals and applications typically include 4.5m setback provisions to the side and rear above the podium for development equity.
- Battle axed bedrooms are less prevalent.
- Car parking is accommodated within basement, or podium car park formats.
- Typically found along the west end of Whitehorse Road and Station Street (in association with the railway station and shopping centre development).

Large

990 Whitehorse Road

Extra Large

545 Station Street

850 Whitehorse Road

Built Form Implications

- Understanding the existing and emerging development patterns gives an indication of the likely future built form outcome.
- In general, scales of developments could typically be categorised into small, medium and large based on its allotment attributes (size & width) and its locality in relation to Whitehorse Road.

Figure 6: Existing Allotment Frontage Widths

legend

- structure plan study area
- frontage: <10m (small)
- frontage: 10 - 20m (medium)
- frontage: 20 - 25m (large)
- frontage: >25m (extra large)
- existing open space
- railway line
- railway station

Activity Centre Context

Subdivision Pattern & Lot Size

North of Whitehorse Road

- Along the north side of Whitehorse Road, the subdivision pattern typically has a long north - south street grid pattern which maximises access to east - west frontages and daylight.
- Within Built Form Precinct C (Traditional Town Centre), between Bruce Street and Station Street are **extra small allotments** of less than 700sqm with fine grain frontages (less than 10m width) associated with traditional shops. All allotments primarily address Whitehorse Road with additional access to rear laneways.
- Allotments fronting local roads/local streets are of **small to medium size,** typically zoned Residential Growth Zone 3 (RGZ3)**,** ranging between 700sqm to 1,500sqm. Most allotments have a single street frontage (10-20m frontage widths) with rear/ side laneways, with exception to allotments fronting Poplar Street, Wellington Road and Spring Street at the north western corner.
- **Extra large allotments** are predominantly associated with institutional, or educational uses, including the TAFE campuses, Box Hill Hospital site, Epworth Eastern Hospital site and DHS Office site (883 Whitehorse Road) located along Elgar Road, Nelson Road, Arnold Street and Whitehorse Road (west end). These allotments are typically greater than 2,500sqm with multiple street frontages, often with greater than 25m in width.

South of Whitehorse Road

- Along the south side of Whitehorse Road, the subdivision pattern typically has a long east - west street grid pattern with parallel rear laneways and railway line.
- Within Built Form Precinct C (Traditional Town Centre), between Market Street and the former ATO building (990 Whitehorse Road) are **extra small allotments** of less than 700sqm with fine grain frontages (less than 10m frontage widths) associated with traditional shops. Allotments primarily address Whitehorse Road, or Station Street with access to narrow rear/ side laneways.
- West of Station Street (excluding Precinct C) are mainly **medium to extra large allotments** (greater than 1,000sqm) with Commercial Zone (C1Z) designation. Extra large allotments (greater than 2,500sqm) are typical along Elgar Road, Thurston Street, Carrington Street and Box Hill Station/ Centro site. These sites have wide street frontages of typically greater than 25m.
- The south eastern portion of the Study Area, along Rutland Road and Ellingworth Parade, the subdivision pattern is more consistently **small to medium** with typical allotment sizes ranging between 700-1,000sqm. Allotment widths range between 10-20m wide and lot consolidation is not common.

Typical Allotment Sizes

The Study Area has a mixed subdivision pattern which allows for a variety of building types. For the purpose of these Guidelines, allotment sizes have been categorised into sizes as shown on Figure 5:

- Extra Small: less than 700sqm
- Small: 700 to 1,000 sqm
- Medium: 1,000- 1,500sqm
- Large: 1,500- 2,500sqm
- Extra Large: greater than 2,500sqm

Typical Allotment Widths

Allotment widths and street frontages also invite varied built form responses within the Study Area. Allotment frontage widths have been categorised into sizes as shown on Figure 6:

- Small: less than 10m
- Medium: 10-20m
- Large: 20-25m
- Extra Large: greater than 25m

Built Form Implications

- Larger lots are often more able to accommodate changing built form as the off-site impacts can be minimised and managed.
- Fine grain subdivision pattern within the Traditional Town Centre is representative of the special character that defines the Box Hill heritage commercial core and must be protected and enhanced.
- Limited allotment, or street frontage widths particularly along pedestrian priority streets encourage services and car parking access to be located to the rear, maximising ground level activation and improving ground level presentation to establish an inviting and high amenity urban environment.
- To date, there is less intensification within finer grain allotments in contrast to the coarser grained areas.

Figure 7: Access & Movement

legend

- structure plan study area
- railway line
- railway station
- boulevard (60m)
- primary north - south road (20m)
- local road (20m)
- local street (15m)
- laneway
- pedestrian link
- tram line
- tram stop
- bus routes
- bus stop
- bus interchange (elevated)
- signalised intersection
- signalled pedestrian crossing
- bridge
- existing open space

Activity Centre Context

Street Network

Whitehorse Road

- Is an east- west primary arterial road running centrally through the Study Area, accommodating multiple public transport facilities including buses and trams (route 109).
- Between Elgar Road to the west and Station Street to the east, Whitehorse Road widths and profile vary between 26 to 60m.
- Whitehorse Road West (between Elgar and Nelson Roads) is characterised by a narrower profile (26m at its narrowest point), bookended by institutional uses (Box Hill Institute, Department of Housing Site) and recently approved and constructed high rise mixed use developments (Whitehorse Tower).
- Whitehorse Road Central (between Nelson Road and Bruce Street) is characterised by dominant central median car parking and the shift in road alignment.
- Whitehorse Road East (between Bruce Street and Station Street) is a consistent 60m road reserve with a well- landscaped central median and pedestrian plaza and the Box Hill Central tram stop.

Primary North - South Roads

- Station Street is a primary north - south access road, connecting Box Hill to Doncaster to the north and Clayton to the south.
- Elgar Road is a primary north - south access road between the Eastern Freeway (north) and Burwood Highway (south). Along Elgar Road (between the railway line and Thames Street), road verges are provided on both sides, comprising pedestrian footpaths and nature strip.
- Both Station Street (between Irving Avenue and Oxford Street) and Elgar Road have a consistent width of 20m comprising bus routes and 2 traffic lanes in each direction.

Local Roads

- Local roads are secondary north - south and east- west access roads within the Box Hill MAC.
- Local roads typically have consistent width of 20m.
- These roads typically accommodate bus routes, one traffic lane and on street car parking in each direction.
- Pedestrian footpaths are clearly defined and landscape strips are common.
- Examples of Local Roads: Nelson Road, Wellington Road, Arnold Street, Cambridge Street.

Local Streets

- Local streets are secondary north - south and east- west access roads within the Box Hill MAC with consistent width of 15m.
- They are typified by one two way traffic lane and on street parallel car parking on both sides.
- Traffic movements are generally slower.
- Pedestrian footpaths are clearly defined and landscape strips are common.
- Examples of Local Streets: Bruce Street, Shipley Street, Poplar Street, Prospect Street, Hopetoun Parade, Carrington Road, Ellingworth Parade, Elland Avenue and Irving Avenue.

Laneways

- Most allotments within the Study Area have access to Box Hill's historic subdivision pattern of gridded laneways to the side or rear.
- These laneways are varied in width and have in the past provided secondary egress points to facilitate deliveries, waste collection and car park access.
- It is noted that existing subdivision bounded by Arnold Street (north), Elgar Road (west), Nelson Road (east) and Whitehorse Road (south) at the north western corner of the Study Area do not generally have access to rear/ side laneways.
- Examples of Laneways: Hiltons Lane, Paynes Lane and Fairbank Lane.

Pedestrian Links

- The Structure Plan has clearly nominated strategic locations for pedestrian streets, lanes and pocket plazas, including:
  - East- west link between Box Hill Institute (Elgar Road and Nelson Road campuses).
  - North - south links between Irving Avenue and Whitehorse Road.
  - Links between Whitehorse Road and Box Hill Station.

Built Form Implications

- Streets within the Study Area generally still have a suburban feel with street verges and nature strips along most of its local roads/ streets.
- A well proportioned street wall to street width ratio could assist in establishing a consistent sense of enclosure, or encourage a sense of open streetscape to foster a more urban, high quality pedestrian amenity and legible public spaces.

Figure 8: Public Realm & Environment

legend

- structure plan study area
- railway line
- railway station
- public space node
- highest point
- long range vista
- plaza
- plateau
- slope direction
- steep street (>3%)
- tram stop
- street tree
- boulevard
- existing open space
- key open space / link

Activity Centre Context

Public Realm & Environment

Topography

- Box Hill MAC is characterised by its hills and slopes with views to the Dandenong Ranges beyond to the east and could be fully appreciated along Whitehorse Road (east of Nelson Road).
- Existing open space in Box Hill is generally located downslopes to facilitate surface water runoffs.
- The tallest point within the Study Area is located at and around Box Hill Centro and Carrington Road.
- Between Elgar and Nelson Road along Whitehorse Road the slope falls away significantly along Whitehorse Road with an average slope of 3.2% (Elgar Road sits approximately 12m lower than Nelson Road).
- The slope also runs north - south with a generally flat plateau around the Box Hill Centro and Box Hill Railway Station. It is noted that the slopes are noticeable along Nelson Road, Bruce Street and Station Street (north of Whitehorse Road) with an average slope greater than 3%.
- It is a primary objective of the Design Guidelines to retain and enhance the existing topography on the site. In doing this, view corridors to the Dandenong Ranges (to the east) as a significant landscape feature, or key open space should be maximised.

Key Open Space

- The Structure Plan has clearly identified a number of key open spaces within the Study Area and the protection of these key open spaces is a key consideration in shaping the urban form.
- The following are identified as key open spaces in the Structure Plan:
  - Box Hill Gardens
  - Kingsley Gardens
  - Whitehorse Road (between Shipley Street and Linsley Street
  - Pedestrian link between Poplar Street and Box Hill Institute (Nelson Street campus)
  - Market Street
  - 22 Ellingworth Parade (south of Pippard Street)
- Avoid overshadowing of key public space between 11am and 2pm on 22 June (Structure Plan) beyond shadow impact cast by existing structures to ensure their long term amenity to support the growing population anticipated within the Activity Centre.

Streetscape

- A nature strip is commonly found within the roads and streets of Box Hill, owned and in most instances, maintained by Council. It generally divides private land from the vehicular carriageway. It typically accommodates grassed, street tree planting and shared path.
- Noting the variance in nature strips, they generally reflect the character of the local area and its urban, or suburban character.
- Remnant nature strips have maintained a degree of domestic/ residential streetscape character along most of the local roads/ streets in Box Hill.
- Recent streetscape upgrades will influence future streetscape character of Box Hill.
- In the major development area, the streetscape is evolving from a suburban to a more urban treatment with removal of nature strip in place of hard surface and street trees in grates.
- Retention of a continuous landscape provision along local roads/ streets within the Study Area should be encouraged as source of future high quality amenity within the public and private realms.

Built Form Implications

- An urban form proposition could further emphasize the natural terrain and topography.
- A long range view and vista to the Dandenong Ranges fosters a diverse and varied experience when travelling along Whitehorse Road and should be protected and enhanced.
- Retention of continuous landscaping provision at the ground level within the streetscape will require successful site planning layout and minimising vehicular crossovers for future developments.