A. INTRODUCTION

This report describes the background and detail of the design approach taken to external pedestrian and landscape spaces associated with the proposed Westfield Knox Retail Expansion. The report should be read in conjunction with the Architectural Plans, Sections and Elevations prepared by Westfield Design, the Traffic Impact Assessment prepared by GTA Consultants, and the Pedestrian and Cycle Movement Plan report prepared by Land Design Partnership.

The current report is a revision of the original Planning Permit Submission report prepared in December 2013, and has been revised in response to specific questions raised by the City of Knox in their letter dated 19th February 2014. Revisions to the original report are highlighted in red.

B. LANDSCAPE CONTEXT

Urban Context

The total study area, combining the Westfield Knox shopping centre and Knox Ozone Precinct, is located generally at the corner of Stud Road and Burwood Highway Wantirna South. From there it extends to the east along Burwood Highway to the City of Knox municipal offices, located opposite the intersection of Burwood Highway and Tyner Road. On its non-road frontages, the study area is bounded to the north by a mix of residential and open space uses, and to the east by municipal and commercial uses.

Within this total site, the immediate area of proposed expansion is focused on the south and south eastern edges of the existing shopping centre, generally away from these adjoining uses.

Topography

The total precinct as a whole grades generally from its highest points in the east, where the Knox Ozone / Coty of Knox Municipal Office boundary is between 74 and 75 AHD, to the west, where the Stud Road Boundary is around 68 AHD.

The Westfield Knox Shopping Centre site itself is broadly relatively flat falling from around 70.6 on Melbourne Road, at its eastern edge, to Stud Road in the west.

The Burwood Highway frontage is also relatively flat along its length ranging generally between 69.2 and 71.2.

While this relatively flat overall topography is masked by the changes in level achieved by structure, the implication for the development of pedestrian and cycle movement system and public realm spaces is that these can be easily achieved in order to provide direct access and comfortable activity spaces around the proposed expansion.

Vegetation

While there are various trees, many of them quite mature, scattered around the existing shopping centre at various locations, the most prominent site vegetation is found in three key locations:

- Along the Burwood Highway frontage
- Along the Stud Road frontage
- Along the main entry from Stud Road
- Within the existing car park to the north of Myer

The characteristics and implications of the trees in each of these locations are summarised below:
Burwood Highway Frontage

The road landscape adjacent to the Westfield Knox shopping centre is typical of the Burwood Highway landscape, being characterised by a mix of mature mainly native planted trees, predominantly Eucalyptus species. These trees contribute strongly to the “bush boulevard” road landscape character referred to in the Knox Central Urban Design Framework. This character is typified by buildings and development being viewed through a “veil” of informally located native trees, such as occurs in this case. In some cases these trees emerge from a planted understorey, but more typically from a simple sloping grassy ground plane.

Existing site vegetation

Stud Road Frontage

The Stud Road landscape is essentially similar in character to Burwood Highway, although it is less strongly expressed due to the more narrow nature of the road reserve, and the sparser distribution of the trees. Despite this, the scattered trees create a filter between the road and the car park decks occurring on this frontage. The ground plane is typically grassy and grading from the car park pavement down to Stud Road. This frontage has the potential to be strengthened through additional planting to provide both a buffer to the road and to provide visual continuity with the Burwood Highway frontage.

Main Entry from Stud Road

This entry is characterised by an avenue of flowering cherry trees leading from Stud Road to the roundabout providing access to either the western or northern car park areas. While creating a pleasant entry space, this avenue is fundamentally at odds with the overriding character of the vegetation on the site and in the adjacent road reserves, and with the overall preferred precinct character outlined in the Knox Central Urban Design Framework. The avenue trees are backed on the northern side by a number of Red Ironbark trees.

Planting to North of Myer

The area of tree planting to the north of the existing Myer store is well established and provides a sense of shade and “softening” to an otherwise hard zone dominated by car parking and roads. Its value, however, is localised and does not contribute to the overall character or urban presence of the centre as a whole.
Pedestrian and Cycle Access

Having main road frontage on two of its edges, along with bus routes on both roads, the Westfield Knox centre is highly accessible to pedestrians and also to cyclists. Crossing of Burwood Highway by pedestrians is facilitated by three signalised crossings, as well as a formal footpath along the Burwood Highway verge. Similarly, Stud Road pedestrians have the benefit of a formed footpath and a signalised crossing at the intersection with Burwood Highway. The amenity for these pedestrians dissipates once they reach the site due to the presence of large car parks on both road frontages, which need to be negotiated before building entries are reached. Existing pedestrian connection into the site are illustrated in the Pedestrian Movement Plan.

From the northern residential areas, dedicated and direct pedestrian access is again provided, in this case by shared paths running through Lewis Park and leading directly to entries on both the northern and eastern frontages of the centre.

A significant community movement system is provided by the dedicated cycle path which runs along the boundary of the centre with the residential properties to the north. While not serving the centre directly, this path is an important part of the local shared trail network, connecting Lewis Park and area to the north with Bind Cree and ultimately therefore with the Dandenong Valley Metropolitan Park. Its consideration in the planning of the extension will be important.

Knox Central Urban Design Framework

As well as considering these important physical characteristics of the existing site, the landscape concept has also considered the strategic design objectives for the site as expressed in the City of Knox’s key strategic plan for the site, the Knox Central Urban Design Framework. The UDF makes a number of statements which relate directly to the objectives of urban design on the site, expressed through both architecture and landscape. These objectives are fundamentally summarised in the statement below.

“The existing presentation of the precinct and the relatively convoluted frontage to the Burwood Highway and Stud and Scoresby Roads (and Lewis Road) suggests that future planning and design initiatives have the potential to establish a proud sense of address to the activity centre that projects a sense of ‘urbanity’ within its predominantly suburban bushland surrounds.”

“Strong potential for a built form presence along each of Burwood Highway, Stud, Scoresby and Lewis Roads...”

“Opportunity to create inviting public people spaces that build on the precinct’s strong environmental themes...”

“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.”

“An improved built form relationship to Burwood Highway and Stud Road, with the opportunity for direct connections with the tram line extension proposed to occur along the north side of Burwood Highway.”

These planning and design objectives, balanced with the recognition of the importance of the existing vegetation, especially on Burwood Highway, give important guidance in approaching the relationship between built form and vegetation at Westfield Knox. They lead to consideration of a spatial design expression which gives both a more immediate and contemporary built form presence to both Burwood Highway and Stud Road, along with the public realm benefits which that implies, within the context of a continuing “bush boulevard” landscape character.
B. LANDSCAPE DESIGN PHILOSOPHY

Informed in large part by the existing site conditions (particularly the existing vegetation) and strategic documents related to the precinct (particularly the Knox Central Urban Design Framework), the design philosophy behind the proposed landscape associated with the proposed retail expansion of Westfield Knox is expressed by the following objectives:

- Retaining and enhancing the general “bush boulevard” landscape character along both major road frontages, recognising the contribution these make to the broader character of the district.
- Allowing for a more “urban” built form expression along both road frontages, by moderating the retention of trees with the potential for a more immediate building presence.
- Creating visually prominent, active and high amenity public spaces along both road frontages, in place of existing car parks
- Ensuring that overland flow requirements along Stud Road (refer drainage report) are not compromised by inappropriate landscape levels
- Retaining all existing pedestrian and cycle access to the site and providing enhanced connection to centre entries and other activity spaces
- Ensuring that the landscape not only creates positive spaces, but contributes to a clear sense of address and access for the development. The creation and reinforcement of clear linkages to entries, particularly for pedestrians, through appropriate planting and pavement treatments, is a key objective.
- Developing a landscape which is attractive over both the short and long term, while standing up to the particular rigours of retail centre environments.
- Using landscape materials, and especially planting, which will respond to the existing character of the local area, as well as responding to the new architecture of the expanded centre.
- Responding to the City of Knox’s ESD objectives by minimising water consumption in the landscape, re-using collected and treated stormwater where possible, encouraging biodiversity through the use of indigenous plants and incorporating recycled landscape materials where appropriate.
C. THE LANDSCAPE CONCEPT

The above design philosophy is embodied in the Landscape Concept, which is expressed by way of plan and cross-section in the drawings attached (LSK00 – LSK05) and in the attached image sheets. The key elements of the landscape concept are also highlighted in the following text:

Main Southern Forecourt (refer LSK01 – LSK04)

- The main southern forecourt is a significant new public space formed by the extension of active retail buildings towards Burwood Highway, in the place of static car parking decks. In this way, the extension of these buildings not only achieves one of the key built form objectives of the Knox Central Urban Design Framework – that of achieving “a built form presence” with an improved “built form relationship with Burwood Highway” – but also projects “a proud sense of address to the activity centre that projects a sense of ‘urbanity’ within its predominantly suburban bush land surrounds.”

The southern forecourt will be a new front door for Westfield Knox and for the precinct generally – it will be a lively public space activated by a range of food and beverage outlets around its edges, as well as by the constant activity of people arriving at the centre.

The landscape treatment of the forecourt has a number of layers which respond to the form and the function of the area:

- Some trees will need to be removed to allow for positive interaction with Burwood Highway by both vehicles and pedestrians. The trees to be removed are highlighted on the tree removal plan following. These trees have been assessed by Homewood Consulting at three levels of significance. Numbers in each level are also shown following, and are summarised below:
  - High significance removed – 25
  - Medium significance removed – 33
  - Low significance removed – 71

  These informally located trees will be replaced by formal avenues of new trees, identifying this as a distinctive space, with a distinctive function. The avenue trees will lead directly to the front entry and drop off area. To either side of the vehicle entry off Burwood Highway, the existing informally planted native trees will be supplemented by new plantings, reinforcing the “bush boulevard” character identified in the Knox Central Urban Design Frameworks. This planting approach will not only identify a “proud sense of address” at the point of entry of Burwood Highway, but will also reinforce the existing character on the rest of the Highway frontage.

- The entry forecourt will be a large space, with a variety of built form and a degree of vehicle movement. It will also have distinct outdoor dining spaces either side of the entry road. In order to unify the space, and overall angled lineal geometry has been applied to the space. This geometry has been applied to pavement patterns, water features, planting and furniture placement so that the forecourt is perceived as a single space with a variety of activities.

- In terms of detail, the forecourt landscape will be defined by a range of materials and urban landscape elements, including:
  - Lineal water features across the spaces, concentrated into a reflecting pool in the main entry island, edged by planting and fine texture gravel surfaces. Water features within the main forecourt will make use of captured and treated stormwater, subject to the availability of such water after other uses such as toilet flushing and irrigation.
  - Textured and coloured pavements of exposed aggregate concrete and ruled coloured concrete
  - Textured colourful planting providing both structure and visual detail
  - A range of contemporary urban furniture including seats, benches, drinking fountains, bollards and litter bins. Thematically, the furniture will utilise timber and steel reflecting both the “natural” character of the site surrounds and the contemporary character of the new buildings.
- Key species considered for use around the southern forecourt will include a mix of native and non-native species suited to such an environment. Selection of final species will be based on performance criteria such as durability in public spaces, drought tolerance, longevity management requirements and non-invasive characteristics.

Candidate species will include:

- *Ulmus parvifolia*
- *Westringia “Blue Gem”*
- *Correa reflexa*
- *Correa “Dusky Bells”*
- *Dianella longifolia*
- *Diplarella moraea*
- *Patersonia occidentalis*
- *Clivia miniata*
- *Carpobrotus rossii*
- *Agave attenuata*
- *Blechnum nudum*
- *Xanthorrhoea minor*
- *Viola hederacea*
- *Hardenbergia violacea (climber)*
- *Meuhlenbeckia axillaris (climber)*
- *Trachelospermum Jasminoides (climber)*

Burwood Highway Planting (refer LSK01, LSK02)

- As noted above, and in accordance with the objectives of the Knox Central Urban Design Framework, apart from trees required to be removed in order to expose and activate the new entry forecourt planting along the Burwood Highway frontage will be retained and supplemented in order to contribute to the desired “bush boulevard” character of the Highway. Planting will continue the informal distribution of trees, and species will be chosen for their clear trunked character and suitability to site conditions. Tree planting will be generally be into a grassy understorey, apart from scattered medium height shrubs and low level mass planting at the interface with either built form or car parking

In response, proposed key species may include:

Canopy Trees
- *Corymbia citriodora*
- *Corymbia maculata*
- *Eucalyptus melliodora*
- *Eucalyptus cephalocarpa*
- *Eucalyptus polyanthemos*
- *Eucalyptus tricarpa*
- *Eucalyptus radiata*
- *Eucalyptus rubida*
- *Acacia melanoxylon*

Shrubs and Ground Covers
- *Acacia acinacea*
- *Bankisia marginata*
- *Kunzea ericoides*
- *Prostanthera lasianthos*
- *Rhapodogia spinescens*
- *Correa “Dusky Bells”*
- *Correa reflexa*
- *Goodenia ovata*
- *Leptospermum “Cardwell”*
- *Leptospermum continentale*
- *Lomandra “Tanika”*
- *Dianella var*
The landscape treatment of the Burwood Highway frontage will also integrate a number of stormwater treatment initiatives in the form of bio-retention swales and raingardens. The purpose of these will be to both reduce flows in the broader stormwater system and to deliver improved stormwater quality from the site into this system. While the precise location and form of swales and rain gardens will be subject to the detailed design of landscape and civil works (by influencing the amount of stormwater run-off) the City of Knox’s recommendation that such elements be around 3 – 5% of the catchment area is noted. As noted above, in a landscape sense these swales and raingarden will be visually and physically integrated with the broader landscape between the Burwood Highway reserve and the adjacent car parking areas. In this regard, at least 50% of the areas of the swales and rain gardens will be planted with appropriate indigenous species such as:

- Carex appressa
- Carex fascicularis
- Gahnia sieberiana
- Isolepis inundata
- Juncus pallidus
- Goodenia ovata

For further detail regarding the performance of the proposed stormwater treatment initiatives, including MUSIC modelling, refer to Westfield Knox Drainage Analysis Flooding, Construction and Stormwater Quality Advice (March 2014), prepared by Cardno Pty. Ltd.

Stud Road Planting (refer LSK01, LSK02, LSK03)

- Planting along Stud Road will continue the theme established along Burwood Highway of informal canopy trees emerging from lawn or low mass planting. Levels on Stud Road will be retained as existing in order to retain overland flow requirements.

In response, proposed key species may include:

**Canopy Trees**
- Corymbia citriodora
- Corymbia maculata
- Eucalyptus melliodora
- Eucalyptus cephalocarpa
- Eucalyptus polyanthemos
- Eucalyptus tricarpa
- Eucalyptus radiata
- Eucalyptus rubida
- Acacia melanoxylon

**Low-level Shrubs and Ground Covers**
- Acacia acinacea
- Banksia marginata
- Kunzea ericoides
- Prostanthera lasianthos
- Correa “Dusky Bells”
- Correa reflexa
- Goodenia ovata
- Leptospermum “Cardwell”
- Leptospermum continentale
- Lomandra “Tanika”
- Dianella var
- Westringia “Blue Gem”
- Carpobrotus rossii
- Kennedya prostrata
As with Burwood Highway, the landscape treatment of the Stud Road frontage will also integrate a number of stormwater treatment initiatives in the form of bio-retention swales and raingardens. The purpose of these will be to both reduce flows in the broader system and to deliver improved stormwater quality from the site into this system. As noted above, in a landscape sense these swales and raingardens will be visually and physically integrated with the broader landscape between the Stud Road reserve and the adjacent car parking areas.

Again these swales and rain gardens will be planted with appropriate indigenous species such as:

- Carex appressa
- Carex fascicularis
- Gahnia sieberiana
- Isolepis inundata
- Juncus pallidus
- Goodenia ovata

Western Carpark and Stud Road Entry (refer LSK01)

- The new decked car park to the west and north of the existing Myer store will feature raised planters and mesh climbing screen to enable the growth of climbing plants on the facade of the car park building. This will both provide shade for the car park building and soften views to the building from residential areas to the north and from Stud Road itself.

Key climbing species considered for this use include:

- Meuhlenbeckia axillaris (climber)
- Trachelospermum jasminoides (climber)

- As noted above, the existing entry from Stud Road will be removed, and a new entry constructed along the northern site boundary. This entry will be expressed as a formal avenue leading into the site, replacing the existing avenue, but planted with tall narrow trunked native trees more appropriate to the “suburban bush land” character of the site surrounds. These trees will form an effective planted buffer to the adjacent residential properties to the north of the site. Existing tree planting along the northern site boundary, already forming an effective interface buffer between the site and the adjoin residential properties, as well as providing effective shading for the existing shared trail, will be retained and supplemented where possible. Beyond the extent of the proposed works along this new access, existing car parking and the existing interface condition will be retained.

Proposed species will include:

**Canopy Trees along new access road**
- Corymbia citriodora
- Corymbia maculata

**Low-level Shrubs and Ground Covers along new access road**
- Lomandra “Tanika”
- Westringia “Blue Gem”
- Carpobrotus rossii

**Planting to supplement existing trees along northern boundary**
- Acacia melanoxylon
- Acacia acinacea
- Banksia marginata
- Kunzea ericoides
- Prostanthera lasianthos
Western Retail Entries (refer LSK04)

- Entry into the main area of the current shopping centre is through the western edge of the Myer Store. The extension of the internal mall to the west will create a new entry point from the decked car park to southern edge of the Myer store. The landscape of both of these entries will contribute to the renewed character of the centre in the following ways:
  - The Myer entry will be replanted with a range of textured and colourful low level species, suited to the low light conditions of this entry, and will focus on tall sculptural species which have the potential to emerge through the void between the retail edge and the car park. While the detailed dimension and profile of the raised planters is subject to further detailed design, it is intended that the planters will have a drainage system integrated with the hydraulics network of the centre, and will be irrigated via an automatic system utilising captured and treated stormwater. The City of Knox’s suggestion that planters be sized to provide a minimum of 1m³ of soil for each m² of mature canopy is noted, and will be used as a guide in the detailed design of the planters.
  - The new mall entry will also feature tall sculptural planting, and low level texture planting, but will also provide seating and waiting opportunities through the provision of benches and seat height planter walls. Pavement will be coloured and texture, creating an attractive and comfortable new entry to this extended mall area.

Key species considered for both of these western entries include:
  - *Ficus hillii*
  - *Clivia miniata*
  - *Diplarena moraea*
  - *Carpobrotus rossii*
  - *Agave attenuata*

New Bus Interchange (refer LSK05)

- As part of the proposed retail expansion, a new bus interchange facility is to be provided to the east of Melbourne Road in an existing car parking area. This facility will contribute to the increased modernization and urbanization of the centre, both through its Public Transport function and through its physical expression. From the landscape point of view, the interchange will feature the same textured pavements to be introduced at the Southern Forecourt (described above), contemporary and compliant bus shelters where permits, contemporary seating and shade trees space.

Plants species to be considered for use in the bus interchange area include:
  - *Ulmus parvifolia*
  - *Westringia “Blue Gem”*
  - *Correa “Dusky Bells”*
  - *Diplarena moraea*
  - *Carpobrotus rossii*
  - *Trachelospermum jasminoides (climber on fences if required)*

The proposed layout for the new bus interchange is outlined on the Bus Interchange Landscape Concept plan attached.

Pedestrian Movement

- The expansion of the retail mall and the public realm it facilitates will provide a range of new opportunities for pedestrian movement and access to and through the site. The creation of a coordinated and integrated pedestrian network is highlighted in the separate Pedestrian and Cycle Movement Plan report.
D. CONCLUSION

The landscape and public realm associated with the proposed retail expansion of Westfield Knox will embody the key urban design aspirations of the Knox Central Urban Design Framework, and will contribute to the integration of the new building with its urban context in the following key areas:

- Creation of new public spaces in high profile locations, with a clear and distinctive identity
- Reinforcement of pedestrian movement patterns from residential areas, through careful planting and path alignments
- Continuation of established landscape themes along the key road frontages
- Additional planting to existing landscape areas to enhance the new built form
- Softening of new car park buildings through the introduction of planted panels in selected locations of the façades