

24 August 2021

Knox City Council Town Planning Department Attention: Email:

PLANNING PERMIT APPLICATION P/2021/6169 Subdivision 609 to 621 Burwood Highway, Knoxfield Response to Request for Information

Dear

We write on behalf of Development Victoria (the applicant) in relation to planning permit application P/2021/6169 (subdivision) at 609 to 621 Burwood Highway, Knoxfield. The purpose of this correspondence is to provide a response to the further information request issued by Knox City Council (Council) in relation to the abovementioned planning permit application. We note that the responses have been prepared by Development Victoria and its full project team.

For ease of interpretation, we have listed your request item (from your letter dated 15 July 2021) below in bold italics and have provided the Development Victoria response directly following each item. The green highlighted items match those highlighted in green in your letter.

In order to assist you with your further consideration of the application, we have enclosed the Landscape and Residential Design Guidelines, Architectus, 18 August 2021 - for information only.

PLANNING PERMIT P/2021/6169 (SUBDIVISION) COMMENTS

Mixed use area.

The width of the proposed mixed use area is inconsistent with the Burwood Highway and Scoresby Road Knoxfield Comprehensive Development Plan (September 2018). It appears to be only 60 metres wide in lieu of 114 metres.

The mixed use area allows for a mix of uses including residential use. As noted in the incorporated comprehensive development plan (CDP) under the comprehensive development zone (CDZ) schedule 2 (CDZ2), a dwelling is a section 1 'as of right' use in the mixed use area.

The remainder of the mixed use area is earmarked for a mix of uses utilising the Highway frontage but with ample depth to cater for buildings, car parking and landscape.











Balance lot.

Proposed earthworks and levels for future development have not been detailed in the balance lot. Any proposed earthworks on the balance or other lots must be detailed.

It is also noted that the balance lot covers the section containing the body of water known as 'Lake Knox'. Comments raised and information required under planning application P/2021/6170 will also be taken into consideration when a final assessment is undertaken for this application for this subdivision.

Proposed earthworks in the balance lot under this permit application relate only to the temporary stormwater treatment, which will be detailed in response to an appropriate condition on the planning permit for subdivision, relating to the provision of engineering plans.

The farm dam on the property (and not previously known as 'lake Knox') is included in a separate planning permit application for a utility installation and it is this permit application under which assessment of the dam removal / new wetlands should be considered and assessed. It must be noted that the utility installation site is in the balance lot and is not proposed to be subdivided. Furthermore, considerations / assessment under the LSIO and ESO2 that cover the utility installation area DO NOT affect the stages 1 and 2 subdivision area and cannot be used to assess that subdivision.

Dwellings proposed under the Small Lot Housing Code.

The building orientation and location, including heights and setbacks should be generally in accordance with the Burwood Highway and Scoresby Road Knoxfield Comprehensive Development Plan (September 2018). Examples must be provided of how the dwellings will comply with the Small Lot Housing Code and the approved development plan.

The subdivision of stages 1 and 2 will clearly set the scene for dwelling orientation and location.

Similarly, insofar as heights and setbacks are specified on the CDP, they will be met.

The Small Lot Housing Code (SLHC) applies to all the lots in stages 1 and 2 and dwellings that comply with the SLHC are exempt from the need for a planning permit. The responsible authority cannot require that examples must be provided of how dwellings will comply with the SLHC but the dwellings must comply as signed-off by the relevant building surveyor. Nevertheless, Development Victoria may provide some typical dwelling plan / elevation examples.

Furthermore, Landscape and Residential Design Guidelines, Architectus, 18 August 2021 have been prepared to guide builders on requirements, noting that all dwellings in stages 1 and 2 are to be constructed under builder packages issued to selected builders by Development Victoria. These Guidelines have been attached for information only.

Public open space contribution and subdivision.

Further details required on how the requirements of Clause 53.01 Public Open Space Contribution and Subdivision will be satisfied.

Technically, clause 53.01 of the Knox Planning Scheme does not apply to the subject land as it is not covered by any of the specified zones. Development Victoria however, has designed its subdivision masterplan for the whole of its land to comply at least with clause 53.01 and its schedule.

The public open space generation relates to residential, industrial or commercial land use. The gross area of the land is 19.21 hectares but as there is no public open space contribution generated by utility installation land use, an area of 3.3861 hectares has been discounted from the land area, leaving 15.8258 net developable areas in hectares (NDAh).



The proposed lots in stages 1 and 2 are all under 725 square metres and thus the public open space contribution to be applied is 8.5 per cent of the land. This provision will be met across the whole masterplan as set out in the tables below and in the attached public open space plan (refer appendix A public open space plan).

Stage	Unencumbered Public Open Space Reference (refer plan below)	Public Open Space Area (ha)	Percentage of total NDAh (15.8258 hectares)	
1	1	0.1076	0.68	
2	2	0.0975	0.62	
3	3	0.1344	0.85	
3	4	0.2843	1.80	
3	5	0.1599	1.01	
4	6	0.0272	0.17	
4	7	0.0434	0.27	
5	8	0.3038	1.92	
5	9	0.0756	0.48	
6	10	0.0823	0.52	
6	11	0.2998	1.89	
6	12	0.085	0.54	
7	13	0.2065	1.30	
7	14	0.084	0.53	
Wetlands	15	0.291	1.84	
Wetlands	16	0.5294	3.35	
Total		2.8117 hectares	17.77 %	

The second table below sums the areas of unencumbered public open space within each stage and as a percentage of the relevant stage area, noting of course that the stage area for the wetlands is not part of the 15.8258 NDAh.

Stage No.	Unencumbered Public Open Space Area (ha)	Stage Area (ha)	Percentage of Stage Area
1	0.1076	1.9753	5.45
2	0.0975	1.8567	5.25
3	0.5786	2.3311	24.82
4	0.0706	1.9024	3.71
5	0.3794	2.2804	16.64
6	0.4671	2.5744	18.14
7	0.2905	1.7251	16.84
Wetlands	0.8204	3.3861	24.23
Total	2.8117		



In addition, areas of encumbered (areas available for open space and recreation but with services underground, utility installation, widened tree reserves and the like) public open space across the project total 2.8919 hectares or a further about 18 per cent of the NDAh. Most of this area is within the wetlands.

The public open space areas are subject to detailed design and may change to some extent but clearly the quantum of unencumbered public open space will meet the Scheme requirements.

Lot design.

There is concern regarding the narrow lots, particularly when they are single fronted and the lack of opportunity for landscaping and on-street car parking opportunities.

Lots with a frontage of 7.5 metres (m) or less should be provided via rear or side access lanes, places or streets.

The lots are rear-loaded (from laneways) where less than 6 metres wide, in accordance with the SLHC. The significant number of rear-loaded lots provides for on-street car parking to meet the Scheme requirement of one per two dwellings. The on-street car spaces are well-distributed around stages 1 and 2. For more detail, refer to the One Mile Grid Traffic Impact Assessment report (19 February 2021), provided to Council with the planning permit application.

Road layout.

A consistent road pavement width in the northern section of stage 1 should be considered, to accommodate indented parking. Blue is 7.3 m, green is 5.5 m.

Stages 1 and 2 have utilised predominantly two road reservation widths: 15.6 and 14 metres. The north-south roads closest to the main entrance opposite Applegum Crescent have been widened as have the east-west roads to allow a potential for a slight increase in volumes compared with the shorter or more internal roads.

Furthermore and as noted elsewhere, there is ample on-street parking planned through the development stages to ensure compliance with the Scheme provision of at least one such space per two dwellings.

A 14 m road reserve is shown adjacent to the park in stage 2, which is inconsistent with the landscape plan. Please review and ensure all plans are consistent.

Integration with mixed use area

Street 1 has a 14 metres road reserve and is generally in accordance with the relevant cross-section included in the Traffic Impact Assessment report, though in this case, the footpath is provided within the adjacent reserve, as shown on the landscape plan.

Further details are required on how the mixed use area will integrate with the residential area. It should also be considered that a park is integrated into the mixed use precinct for better connection to the shared path and providing for opportunities for active frontage directly onto the open space.

The mixed use area between the south edge of stage 1 subdivision and Burwood Highway is yet to be planned in detail, is retained in the balance lot and is not the subject of the current subdivision application. The most logical interface however, has been determined to be a local street but with the use of laneways to minimise the number of fronting dwellings and thus minimise potential conflict with alternative land uses.

Further detail will be provided as part of a future planning permit application for the remainder of the mixed use area.



Environmentally Sustainable Design (ESD).

The Sustainability Management Plan (SMP) is applicable to the entirety of the development site and aims to address Council's requirements and expectations. The SMP Report is however limited in providing an in-depth analysis demonstrating that the relevant ESD objectives have, in fact, been achieved to Council's satisfaction.

Further detail in the SMP Report required is:

Preliminary Energy Efficiency Reports demonstrating that all Homes will achieve the 7 star energy efficiency rating. Additionally, a level of commitment is required as to the energy efficiency performance of the Mixed Use development, if dwellings are also incorporated as a part of such development.

All dwellings are to be constructed in accordance with the SLHC and thus planning permits are not required and planning permit conditions will not be applicable.

Nevertheless, design for the homes is not yet at a finalised stage, targets are not yet confirmed and energy efficiency reports would not be able to be prepared. While the designs will preference opportunities for efficiency, these are not a Scheme or Building Regulation requirements.

It is noted that the remainder of the mixed-use area is not relevant to this application,

 Distinction between the solar photovoltaic system capacities provided for Homes and Mixed Use developments.

The development will provide the following PV targets:

- Green Star homes (Lot 21) at least 5kw per home;
- other homes aspirational target of at least 3 kW per home (subject to available roof area).

It is noted that the remainder of the mixed-use area is not relevant to this application,

The inclusion of active electric vehicle charging spaces, particularly for Mixed Use development or within the Public Realm.

Dwellings will be designed to be EV ready, with each provided with three phase electricity to enable ease of future installation of EV chargers.

It is noted that the remainder of the mixed-use area is not relevant to this application,

The inclusion of secure bicycle parking spaces provided for residents, employees and visitors and guests. Distinction between how many secure bicycle spaces provided for Homes and Mixed Use development is required.

Residents will be able to store bicycles within each dwelling for themselves and visitors.

It is noted that the remainder of the mixed-use area is not relevant to this application,

The size of rainwater tanks provided for the Homes and Mixed Use development. This includes the commitment that all rainwater tanks will also be connected to laundry systems.

Rainwater tanks will be provided as follows:

- Green Star homes at least 3000L for each;
- other homes subject to detailed design and size of each lot noting that there may be spatial limitations in some cases.

Where installed, rainwater tanks will be connected to flush toilets and to garden watering. Additional connection to laundries will be explored as the design develops.



Improving the water efficiency ratings of the fixtures and fittings within each development (i.e. taps and flow rate of showerheads).

WELS targets are set out in the ESD report and include:

- Toilets: 4 Star WELS;
- Taps- bathroom/kitchen: 4 Star WELS;
- Showers: 3 Star WELS;
- Dishwasher: 5 Star WELS.

A detailed Stormwater Management Report that includes a stormwater model demonstrating that Council's Integrated Water Management and stormwater quality targets have been addressed through a myriad of design systems and assets that are shown on Development and other relevant plans (i.e. rainwater tanks, raingardens, bioswales, wetlands etc.).

The stormwater management plan by Engeny (as submitted with the planning permit application for the utility installation) demonstrates that the proposal meets the stormwater quality objectives for the site and contains the results modelling. This has been reviewed by the engineering team at Knox City Council but perhaps has not been seen by the ESD team.

Engeny has not assessed a "myriad of design systems" in detail, as it was determined that the most efficient solution was an integrated wetland system that also provides co-benefits for the environment, amenity and for recreation. It is the integrated wetland system that was modelled. Engeny believes for example, that an alternative of small raingardens throughout the development would have been unacceptable to Council due to the increased maintenance requirements for Council.

A response to Council's Indoor Environment Quality requirements which includes daylight, natural ventilation, thermal comfort and the use of non-toxic materials and products. Daylight and natural ventilation performance is particularly emphasised for the Mixed Use development.

All dwellings are to be constructed in accordance with the SLHC and thus planning permits are not required and therefore, planning permit conditions will not be applicable.

Nevertheless, the design development has not yet progressed to a point where details or commitments on specific IEQ measures would be able to be be provided. This will be an important consideration during the design phase and the project team will preference design initiatives for thermal comfort, natural/artificial light quality, air quality and acoustic comfort.

It is noted that the remainder of the mixed-use area is not relevant to this application.

- A response to circular economy principles with particular respect to the use of sustainable materials. The material selection is subject to final feasibility which will be completed in detailed design development. Final material selection for sustainable materials will also be subject to market availability. During the early planning stages and sustainability strategy development, Development Victoria has explored various opportunities to embed whole of life sustainability in material selection. This includes strong preference for:
 - Portland cement reduction by at least 40 per cent when compared to a reference case through replacement through alternative materials such as fly ash or slag;
 - use of recycled high-density polyethylene (HDPE) plastic pipes where possible in place of concrete drainage pipes provided;
 - Materials sourced from manufacturers that have ISO 14001 accreditation to contribute to increased demand for sustainability and transparency in the manufacturing industry;
 - 95 per cent (by cost) of all timber used in the construction works to be certified by a forest certification scheme that meets the GBCA 'Essential' criteria for forest certification or be from a reused source;
 - 100 per cent of polyvinyl chloride (PVC) to be used will meet GBCA PVC Best Practice Guidelines



Detail and distinction as to how each Home and Mixed Use development addresses greening and cooling requirements on-site, beyond that of 'cool roofs'.

Precinct greening is achieved through the significant wetland area and parks and green space throughout the development. Approximately 18 per cent of the site is designated for a network of interconnected unencumbered public open spaces, in addition to which there are road verges and street trees and private lot landscaping.

For homes further cooling will be achieved through light coloured roofs.

It is noted that the remainder of the mixed-use area is not relevant to this application.

It appears that the site aims to achieve a 6 star Green Star Communities rating utilising the respective assessment framework. However, the Green Star Communities framework is only being used as a benchmark assessment with the site not formally registering with the Green Building Council of Australia (GBCA) for formal certification. The Green Star Communities framework is not a direct and equivalent assessment tool to measure each development's (Home and Mixed Use) ESD performance with respect to Council's statutory ESD Policy within the Planning Scheme, nor address Council's requirements and expectations for the development. The Green Star Communities framework is a broader tool, measuring performance across the site from a holistic perspective.

However, it is acknowledged that the Mixed Use developments aim to archive a 5 star Green Star Design and As Built rating. Yet, it is believed that such achievement will only be a benchmarked assessment with the Mixed Use developments not achieving a formal, certified, rating by the GBCA.

Without discrediting the Green Star assessment frameworks, if the development, in its entirety or Mixed Use developments alone, are opting to not register the site and associated developments with the GBCA for formal certification, then Council requires the following assessment tools and approach; gauging ESD performance, to be utilised:

Development Victoria is committed to targeting a formal rating with the GBCA, with the sustainability targets to be third party verified and thus will not be 'equivalency' targets.

The project is currently in the process of completing registration for Green Star - Communities v1.1 and has been assigned the GBCA reference number GS-5834C.

It is noted that the remainder of the mixed-use area is not relevant to this application,

* The Stormwater Management Report may pertain to the entirety of the development site however detail is required as to how the Homes and Mixed Use developments will perform with respect to the design systems and assets that will be incorporated (i.e. rainwater tanks, permeable paving, common raingardens and/or bioswales in public areas and how this integrates with the wetland etc.)

As noted in a response on the previous page, the stormwater management plan by Engeny (as submitted with the planning permit application for the utility installation) demonstrates that that the proposal is meeting the stormwater quality objectives for the site and contains the results modelling. This has been reviewed by the engineering team at Knox City Council but perhaps has not been seen by the ESD team.

Engeny has not assessed a myriad of design systems in detail, as it was determined that the most efficient solution was an integrated wetland system that also provides co-benefits for the environment, amenity and for recreation. It is the integrated wetland system that was modelled. Engeny believes for example, that an alternative of small raingardens throughout the development would have been unacceptable to Council due to the increased maintenance requirements for Council.



** With respect to the NABERS framework, it is proposed that the Mixed Use development will achieve a NABERS 5 star energy rating and NABERS 4 star water rating. Council requires the formal Commitment Agreements to establish that such ratings will be achieved.

It is noted that the remainder of the mixed-use area is not relevant to this application,

There is currently no agreement in place for a developer / design team for this site and therefore the final sustainability targets are not confirmed.

Development Victoria is committed to prioritising sustainability initiatives for the site, which will be selected in line with the overarching sustainability strategy - aligned to its core values. This addresses strategies to:

- deliver best practice and exceed minimum code compliance;
- be carbon neutral ready (to achieve carbon neutrality by 2030);
- Invest in transformation and use DV influence to set formal sustainability targets within the development agreement.

Development Victoria plays an active and leading role in the Victorian sustainability industry, including its Sustainability Director sitting as a member of the technical reference panel of the 'sustainable subdivision framework'.

Development Victoria is also a participant in the GBCA Homes Early Access program, working with the GBCA to expand the capability of the volume home market to deliver sustainable outcomes, using 10 homes at Knoxfield to trial the tool before it is formally released. Thise reaffirms its commitment to making a visible and meaningful impact to addressing climate change and other environmental challenges.

Traffic and transport.

Council Traffic and Transport have raised the following in relation to traffic distribution and movements:

The through/right turn from the site at the intersection of Scoresby Rd and Applegum Cres is 3 times as high as the through/right at the intersection of Burwood Hwy and Lakewood Res. Is a dedicated right arrow needed for access out of the estate?

These movements are not comparable, as the Lakewood Drive intersection only serves a small DELWP office. The intersection analysis shows that the shared right and through movement from the site operates with a Degree of Saturation of under 0.6, which suggests it is only operating at about 60 per cent of its capacity. The operation as shown therefore, is very good.

Note that there is only expected to be a limited through volume from west to east, so the shared lane has a minimal impact. Due to the constraints of Applegum Crescent opposite, the right turn lane must be shared with the through lane, otherwise the through movement will not align with the departure side of the intersection. A separate right turn arrow may therefore be blocked by an occasional through movement and providing a separate right turn phase will take away time from the intersection time and impact on other movements. Given that this movement operates at approximately 60 per cent of capacity, no modifications to this operation are required.

Increase in right turns at the intersection of Burwood Hwy and Scoresby Rd is only 7 and no increase at the intersection of Burwood Hwy and Lakewood Drive. Is the modelling factored in any U-turn traffic movement? How will the U-turn traffic compare to right turn traffic?

Increases in right turns at the Burwood Highway and Scoresby Road intersection are shown in Figure 33 and Figure 34 of the traffic report to be higher than 7 movements. There are no increases in right turns at Lakewood Drive, as this access does not serve the subject site.

Internal local roads.

The roads must meet sight distance requirements in accordance with Dot (roads) and Austroads guidelines (Table 3.2 Austroads Road Design Part 4A: Unsignalised and signalised intersections).

The road network has been designed as a very low speed environment and all roads through the site are straight, other than the slight deviation in Road E and the Access Road. In these locations, the deviation will



assist in slowing traffic speeds. Furthermore, the raised crossing just east of the deviation in Street E and the raised intersection on Access Road, will ensure that very low speeds are maintained on approach to the deviation.

The straight alignment of roads provides good sight distances and the impact of slow point treatments, bends and deviations, ensure low speeds and minimise sight distance requirements.

Regardless, sight distance diagrams (refer appendix B typical sight distances) demonstrate that sight distances for approach speeds in excess of 20km/h are available. This is considered appropriate, given the location of the raised intersection and speed crossing on the critical approaches, which will have advisory speed limits of 20km/h

The right angle bends require a painted centreline and raised reflective markers to separate traffic travelling in opposite directions.

This detail can be provided at the detail design stage after the issue of a planning permit.

A give way sign and line marking is required at the proposed intersections Street A /laneway H, Street B/laneway E and Street A/access road to Burwood Highway.

As above.

A suitable name should be provided for each road as well as the walkway for block 23A. As above.

Street lighting is to be provided by the developer ensuring adequate lighting at intersections, bends, laneways, walkways and at the end of shared driveways as per AS1158. Appropriate line marking and signage for the roads is also to be provided for good visibility at night.

As above.

A review of the dimensions on all the cross-sections showed 3m shared path, 1.5m footpath, 7.3m pavement width for high level access street and 2.3m indented parking bays for collector road. This spatial allocation is considered as adequate except the clearance between the footpath and private land title boundary.

The clearance indicated on the plan is 0.05m which is not enough for pedestrian and children bike rider safety with clearance to vegetation and fences within private property. The 50cm also restricts maintenance works on the footpaths, needing to access private land. Even the suggestion of an easement creates an added complication for maintaining the path and access as over time, owners forget or ignore the easement conditions and it will become problematic in trying to enforce the restriction. Care needs to be taken so that the reason for the original offsets is not lost and the path is no longer serviceable. As such, a desirable clearance of 0.5m or a minimum clearance of 0.3m is needed for safety and maintenance purposes.

Throughout Knox (just look at the footpath / front fence alignments directly opposite in Scoresby Road) front fences abut footpaths. Development Victoria does not agree and has been provided with no evidence from Council to support its contention that a footpath setback from the property line is required for "safety and maintenance purposes". Furthermore, such a setback would diminish the verge width available for tree planting and tree root growth.

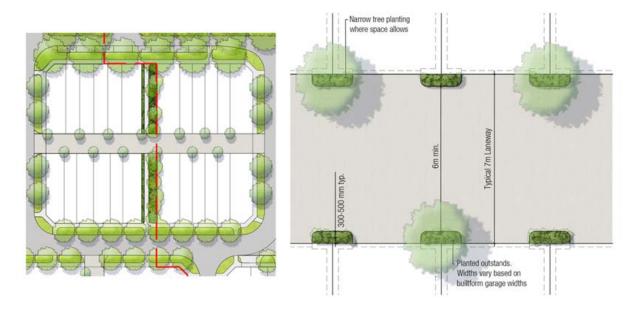
The very minor setback proposed by Development Victoria is only to allow for survey peg protection.

The laneway is proposed to have a road reserve of 7m with 7m road carriageway. There needs to be some buffer between the roadway and the title boundary, typically a 5.5m carriageway with around 1m of buffer for vehicle access safety.



The laneways are proposed with typical dimensions in accordance with standard practice and provide a pavement in excess of the standard under clause 56 of the Scheme, where an Access Lane has a 5.5 metres carriageway with no verge and the 5.5m carriageway is noted as being sufficient to "provide adequate access to a standard 3.5m wide single garage built to the property line".

Nevertheless, it is proposed to provide a central trafficable area of approximately 6 metres in width, which provides some flexibility in garage design, with small landscape outstands (approximately 0.5 metre x 0.5 metre) on lot boundaries, to provide some separation between garage access points. This will ensure that suitable access width (at least 6.5m) is available for access to both double and single garages adjacent to one another and provide some opportunity for landscaping and street lighting.



Refer below for further comments about the laneway operation.

Traffic management is required to discourage the use of the laneways (other than for access to garages and rubbish collection), keep the speed to approximately 10km/h and provide a safe shared zone for pedestrians with appropriate signage as per the Knox Planning Scheme clause 56.06-8. There is no laneway traffic calming scheme proposed at the current plans.

The laneways are located and designed as short vehicle access lanes to rear-loaded lots, where pedestrian activity is expected to be negligible (as each lot will have alternate pedestrian access). The longer laneway along the western boundary has been provided with speed control devices along its length, to ensure low speeds are maintained, though it is expected that traffic will typically only travel a short section of this laneway before turning east.

Access to the laneways from other roads will be provided via crossovers rather than typical road intersections, making it be clear to drivers entering the laneways of their status as a low-speed lane. Furthermore, the pavement treatment within the laneways will vary from the surrounding road network and where appropriate, landscaping outstands will at the laneway entry, to further manage speed perceptions and encourage a low-speed environment.

It is considered that additional traffic management treatments therefore, are not required along the laneways. The plan that the majority of the laneway frontages will have direct garage access limits any scope for traffic management treatments.



It is not considered necessary to provide shared zone signage in each laneway, as there are specific requirements for formal 'shared zones' which will not likely be met by the proposed laneways (as there will be very little pedestrian traffic), and all formally signed shared zones require Department of Transport approval.

The footpath connections across the laneways may have limited visibility due to the proximity of garages adjacent to the laneways. Raised platforms or similar traffic devices to keep speeds down within the laneways should be considered at these locations.

Laneways C, D and G have pedestrian crossings approximately mid-block along the laneways and there is opportunity in these areas to include traffic management, which can be identified at the detailed design stage. The following options could be considered within the area of the crossing points:

- the landscape outstands proposed elsewhere within the laneway could be utilised (with low height planting) subject to swept path review of adjacent garage access, to provide further indication of the crossing point and further narrow the crossing width;
- a different pavement treatment at the crossing point to highlight the crossing;
- bollards or planting adjacent the pedestrian path to prevent vehicles from using the path area.

Noting the width of the pedestrian crossing area, and the very low speed operation of the laneways, the above treatments would provide appropriate control of the crossing point.

Car parking provision.

Residential off-street car parking is not mentioned in the report. It is expected that the standard residential offstreet car parking rate will be provided as 1 space per 1 or 2 bedrooms and 2 spaces per 3 or more bedrooms. The provision of car parking for each dwelling will be in accordance with Scheme requirements.

Regarding on-street visitor car parking, the submitted Traffic Report mentioned that kerbside or indented parking in excess of 1 space per 2 dwellings can be provided, with a relatively even distribution of car parking across the site. However, below are some considerations around the placement of proposed parking close to intersections and bends and where roads are reduced to a single lane of traffic due to parking. The number of available parking spaces is likely to be reduced to ensure suitable two way access and safety at intersections:

- Parking must be at least 10m clear of all unsignalised intersections (as per the Victorian Road Rules)
 The parking plan shown in Figure 32 of the Traffic Impact Assessment report provides clearances to intersections of at least 10 metres.
- Parking is likely to be restricted within 20m of the 90 degree bends to allow for adequate sight distance for motorists

Clearances to bends are provided of at least 10 metres. This is appropriate as it matches the 10 metres clearance from for intersections and the bends will ensure that all traffic is moving slowly on the bend (as opposed to intersections, where priority traffic does not necessarily need to slow down).

Driveways and crossovers for any superlot should not be within 6m from the tangent points at an intersection as per AS2890.1, clause 3.2.3. Driveways and crossovers adjacent to 90 degree bends are to be designed as per an intersection.

There are no superlots proposed within the subdivision.

Individual lot design generally allows for crossovers to each lot to be located away from intersections, with corner lots having a long side abuttal which allows for flexibility in crossover locations. Regardless, it is expected typically that all lots will be accessed from the short road abuttal and as a result, some corner lots will likely be accessed from within 6 metres of the intersection tangent point.



It is noted that the Australian/New Zealand Standard for Parking facilities, Part 1: Off-street car parking (AS/NZS 2890.1:2004), does not differentiate between road types in relation to the crossover location and the same requirements are placed on sub-arterial, collector and local road intersections. Furthermore, the requirement applies to Category 1 and 2 access facilities, which can include developments of up to 100 parking spaces onto a local road, and additionally, there is no consideration of design speeds at the intersection.

In terms of the proposed development, all streets will be local roads expected to carry less than 1,000 vehicles per day. Only the main entry boulevard is expected to exceed traffic volumes of 2,000 vehicles per day.

The internal roads will have target speeds of less than 40km/h, assisted by traffic management treatments, the short length of most internal roads and the fact that traffic will typically be turning at the intersection adjacent.

Finally, each crossover will serve only a single lot and therefore, will carry no more than 7 vehicle trips per day.

Based on all of the above, for low speed, low traffic volume, local residential streets serving only a single residence, it is appropriate that some crossovers may be located within 6 metres of the turning radius of an adjacent intersection.

Long lengths of parking without a break to allow vehicles to overtake or pass an oncoming vehicles is not supported. 'No Parking' areas may be required to allow two vehicles from opposite directions to pass if there is not adequate road space for two way traffic.

The parking plan (in the Traffic Impact Assessment report) is designed to show the full potential available on-street parking spaces (approximately 300 spaces over the whole site) and is not indicative of the actual likely demand for parking.

Nevertheless, the parking plan shows parking typically only on one side of each street. Where a 7.3 metres road pavement is provided however, sufficient space remains for vehicles to pass regardless of the potential for a long length of kerbside parking. Where parking is shown on the narrower roads, a maximum length of 6 parked vehicle is shown. Should this parking be highly utilised, it may be necessary to provide No Parking or No Stopping restrictions although, it is noted that the narrower pavement is only used on short roads which are anticipated to serve a limited number of dwellings, and over short distances only. It is expected therefore, that the impact of occasional kerbside parking along these roads will not have a significant negative impact on the operation of the roads but more so, will likely assist in maintaining low traffic speeds. The provision of No Stopping areas is likely to be unnecessary.

The lots are not wide enough to accommodate a driveway and parking space. A minimum 3m wide crossing (as required in the Planning Scheme) with adjacent splays (refer to Council standards), is approximately 5.5m wide at the road pavement. Any frontage less than 11m is unlikely to be suitable for parking.

The parking plan allows for potential crossover locations. It is not necessary to provide one kerbside parking space per lot and when considering side abuttals to lots, the impact of combining adjacent crossovers and roads with dwellings only on one-side, the potential for kerbside parking is considerable, as indicated in the parking plan.

A single parking space requires a minimum length of 5.4m between the splays of crossovers. Where there are multiple cars parked parallel, the Australian Standards require a minimum 6m long car space so that cars can manoeuvre into and out of the space.

The parking plan shows kerbside parking spaces in excess of these dimensions, with a typical extract below highlighting the different dimensions for end bays rather than central bays.







There is a conflict between bin placement (for dwellings with laneway access) and proposed parking on the nearby streets (see example below from One Mile Grid's Waste Management Plan and Traffic Impact Assessment).

It is acknowledged that kerbside parking is shown on some streets where bin collection is also nominated, though this is standard for kerbside parking to be allowed where kerbside bin collection is required. This would occur in the vast majority of streets throughout the Municipality.

Regardless, where the dwellings with laneway access are provided, the combining of all vehicle access to the rear laneway results in kerbside parking be available along all other road frontages. For example, Block 19 and 20 accommodate in excess of 1 kerbside space per 2 dwellings even when removing the parking spaces shown where the bin collection is likely.

Noting that the rear-loaded lots will have primary pedestrian access (particularly for visitors) on the frontage roads, and with no crossovers to the frontage roads, the use of the side road abuttals for visitor parking is considered to be unlikely and therefore, the side roads are expected to be clear for bin collection. Additionally, the side road abuttals provide a considerably greater length than required for waste collection, therefore the occasional use of kerbside parking is not expected to limit the availability of bin collection locations.

Laneway and garage layout.

The landscape master plan provides some details on the lot layout, footpath, and indented parking bays. However, details relating to the location of crossovers and garages are needed to check for turning access movements. This is especially important for a narrow rear laneway access.

As above, the Scheme provides that a 5.5m wide laneway is sufficient for access to a 3.5m wide single garage and therefore, the proposal to provide a 7 metres wide laneways, with at least 6.5m provided for garage access, is appropriate.

Details of crossover locations must be provided and include swept path assessments. Intersections to be designed in accordance with - AustRoads Design vehicles and Turning Path Templates Guide (AP-G34-13) were required.

The internal road network generally comprises standard residential street cross-sections, and it is proposed to generally adopt standard crossover designs for property access and therefore, lot access will be provided appropriately.



Similarly, the internal intersections are designed as standard residential T-intersections, with standard kerb radii, which are designed to allow for the required vehicles. Swept paths (refer appendix C typical swept paths) for a standard intersection design, show the movement of cars and service vehicles. It is acknowledged that should a passenger vehicle and a service vehicle arrive at the intersection simultaneously, the service vehicle may need to allow the passenger vehicle to leave the intersection before continuing, as is standard practice at the majority of residential intersections in the Municipality.

Other details

Below are further comments and further information for the construction of the dwellings and road infrastructure:

Waste collection vehicle turning template at specific bends and intersections.

As above, the internal intersections are standard residential T-intersections, designed with standard kerb radii.

A length of 1.7m per dwelling is required along the road reserve to cater for waste and recycling bins. However, the placement of bins along the road reserve for greater than 10m is not acceptable as it may create sight distance issues.

Typically, no more than five dwellings will place bins adjacent to that run of dwellings although there are some locations where a laneway serves up to seven dwellings. For these locations, side street abuttals are much greater than 10 metres and therefore, bins can be placed with suitable breaks if necessary. The location of street trees will provide breaks between bins placed for collection.

Kerb profiles

Kerb profiles will be prepared at the detail design stage after the issue of a planning permit and in accordance witj an 'engineering plans' condition. The profiles will be finalised in consultation with the Council engineers.

Road pavement profiles and road surface specifications

As above.

Road and footpath gradients

As above.

Sight distance assessment at specific intersections

As provided in various responses, sight distances at intersections are appropriate.

Two-way vehicles turning movements at bends and intersections

The internal intersections are standard residential T-intersections, designed with standard kerb radii, and all bends are provided with similar radii to the T-intersections.

Raised T-intersections to be designed in accordance with VicRoads Road Design Note RDN 03-07 –
 Raised Safety Platforms (RSPs).

Accepted.

Waste management.

The proposed arrangement is not satisfactory, and an updated Waste Management Plan (WMP) will need to be re-submitted addressing the points, as outlined below.

As individual bins are being provided to each residential dwelling this will require provision of four bins (80 litre/120 litre for garbage, 240 litre for commingled recyclables, organics, glass). The WMP is to refer to provision of



the four bins for each dwelling and the Plan Drawings are to verify that sufficient space is available for four bins at each dwelling.

Builders will be required to ensure that the required number of bins can be accommodated within the dwelling design for each lot. The Waste Management Plan (19 February 2021) includes allowance for the fourth (Glass) waste stream when adopted by Council, and can be updated to include this requirement.

The WMP states that lots that access via a rear laneway, extended driveway or front an open space area will be required to transfer bins to an alternative location. The Plan Drawings are to indicate where bin collection points are for all dwellings including the alternative locations referred to. This is to include provision for permanent signage at the bin storage locations, indicating each individual bin and hard waste presentation location for the addresses where bins are not presented on the front nature strip.

As indicated above, for the alternative bin collection locations, there is considerable kerbside space available for the placement of bins, and it is not considered necessary to provide permanent signage for individual lots. Residents will typically place their bins in the most convenient location for collection. For rear-loaded laneway lots, the most convenient I/ logical ocations are at the centre of the side road frontages and therefore, it can be expected that bins will be located away from the intersections at either end of the street.

The WMP states that bins may be placed within the crossover of each dwelling. This will not be permitted.

There are no locations within the current stages of development where the use of crossovers for bin placement is required, although it is reasonable for residents to use their own crossover for bin placement if convenient. Furthermore, observations suggest that this is not uncommon for bins to be placed on the crossover for collection, particularly for older residents, where they may drive infrequently, and it is easier to place the bin on a concrete crossover than to negotiate a grassed verge.

Finally, the use of the existing single-dwelling crossovers provides a better amenity and sustainability approach compared with the provision of additional hard-stands.

Vehicle access.

Swept paths for collection vehicles to be provided on Plan Drawings to demonstrate accessibility for collection vehicles including on-site manoeuvring, and confirmation entry and exit into and from the development can be in a forwards direction. If visitor car parking spaces are to be utilised for collection vehicle turning area(s), confirmation of how car parking spaces will be kept clear on collection days is required.

The conflict has also been highlighted by Traffic team.

The waste vehicle will utilise a series of public roads, with no dead-ends that the collection vehicle is required to access. There are no visitor parking spaces (other than kerbside locations) or turnaround areas required for waste vehicles.

Hard waste and bundled green waste.

The WMP is to provide for Council's hard waste and bundled green waste service which will be available to residents in this development. Detail of the proposed collection arrangements for both hard waste and bundled green waste is required including for lots that access via a rear laneway, extended driveway or front an open space area so that placement will not interfere with bin placement.

The residential streets provide a sufficient verge area, of a minimum 2.3m between the kerb and footpath, which can accommodate both standard bin placement along the kerb (assume approximately 1 metre depth for the bin placement with space behind of 1.3 metres) for hard waste collection if collections are proposed on the same day. It is noted that the current hard waste collection is managed via a booking system and therefore,



it is unlikely that more than one adjacent resident will have a hard waste collection on the same day, leaving ample space for hard and green waste collection.

F-waste.

The WMP states that Council does not provide a pick up service for e- waste. E- waste is collected as part of Council's hard waste service.

Noted.

Resident information.

The WMP states that an information package will be provided to all residents. The WMP needs to state who will be providing this.

The proposed waste collection system will be the normal Council system and new residents will be informed by Council of details of collection days and the hard waste booking system.

The WMP must include:

- The responsibility for implementing the waste management plan;
- A mechanism allowing for future revision of the Plan should it be required.

The proposed subdivision proposes only public roads, with no communal land / owners corporations. The management of waste following the sale of lots will be the responsibility of Council, as is standard within a residential subdivision.

Landscape.

The Masterplan and Landscape Masterplan must provide scale and distances to items such as the length and widths of open space reserves and parks, setback distances of buildings/streets from boundaries etc. to determine if these distances are appropriate or not.

The landscape masterplan is at scale and with a scale bar to enable review of proposed dimensions and setbacks but is a masterplan on not a detailed landscape plan, which is a later plan provided in response to a planning permit condition.

Services such as electricity, gas, water and Telstra must also be shown on the Street Profiles so it can be demonstrated how these are located in relation to the proposed trees and that the trees have enough room below ground.

A detailed review and coordination of street tree locations relative to servicing requirements will be completed at the appropriate time when the civil and services engineers have progressed to an adequate level of detail. Detailed servicing layouts have not been resolved at this stage however, preliminary typical road cross sections showing proposed services relative to street tree locations has been provided for review (refer traffic Impact Assessment report).

The type of Park furniture and equipment and play space should be specified in the Masterplan along with any proposed BBQ areas.

Park furniture and equipment will be selected at the appropriate time at the detailed design phase. These selections will be reviewed and agreed with Council before finalisation.

The landscape masterplan includes a strategy for the placement of key public realm furniture elements across the project such as seating, picnic tables, shelters and such, and Council is invited to review and respond to this information.



It is anticipated that a combination of standard Council details, off-the-shelf and custom-designed built elements would be proposed for open spaces. In addition, a detailed list of play equipment will be provided for Council review and approval, as the detailed design phase progresses, to ensure an appropriate allocation of play experiences for a range of ages and abilities, recognising the site context and surrounding amenities.

Existing trees being removed or retained must be shown on the Landscape Masterplan.

Separate tree removal and retention plans have been provided with the planning permit application package. This was a deliberate choice as overlaying of this information on the landscape masterplan would have resulted in illegible plans.

A proposed plant schedule should be provided and include at least one small canopy tree in the front setback of each Lot.

Wherever space permits, it is anticipated that one tree per lot frontage will be installed.

Furthermore, a strategy for street tree species selections will be prepared and reviewed with Council at the appropriate time, to agree the streetscapes packages across the entire project. As the project progresses into detailed design, planting species lists will be provided to Council for review and comment.

The provision of a Bush Boulevard along Burwood Highway consisting of a 15 metre setback (plus a 3metre shared path) in front of the future Mixed-Use Precinct for the Bush Boulevard should be considered. The Landscape Masterplan should show broad information on proposed plantings etc.
The CDP requires an 8 metres setback from the Burwood Highway reservation inclusive of any footpath / shared path.

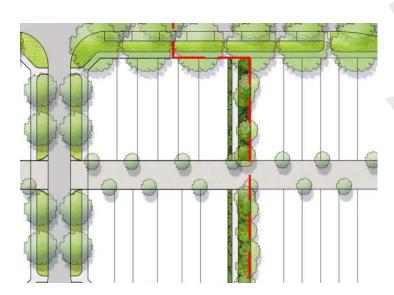
Detailed resolution of the Burwood Highway frontage will be reviewed with Council at the appropriate time, including proposing locations and species of new tree and understorey plantings. Any resolution of the adjoining Mixed-Use site known at the time of preparing this information, will be incorporated into the outcome of this area.

- The Street Profiles should show the Primary Streets as having nature strips of minimum width of 2.6 metres for large canopy trees to have sufficient room to grow below and above ground. Secondary streets can have slightly smaller nature strips of around 2.3m wide for medium small canopy trees. Noted. It is the intention to explore options for the inclusion of upright shrubs or small trees in these locations as portrayed graphically on the landscape masterplan.
- Typical Laneways between built form should also be provided with some landscaping such as tall upright shrubs (such as Syzygium 'Straight and Narrow) to provide some amenity and greenery to these areas.

Previous comments from Council have been incorporated into the masterplan: the entry boulevard has road verges of 2.6 metres (reducing to 2.4 metres where indented parking is provided) inclusive of kerbs.

All secondary streets (except where abutting a public open space) have minimum verge widths of 2.3 metres inclusive of kerbs.





We trust that the above and enclosed information is to your satisfaction and look forward to Council finalising its assessment of the application. Please contact this office should you have any queries.

Yours sincerely,



Collie Pty Ltd

Copy Enclosure: Development Victoria s listed above.





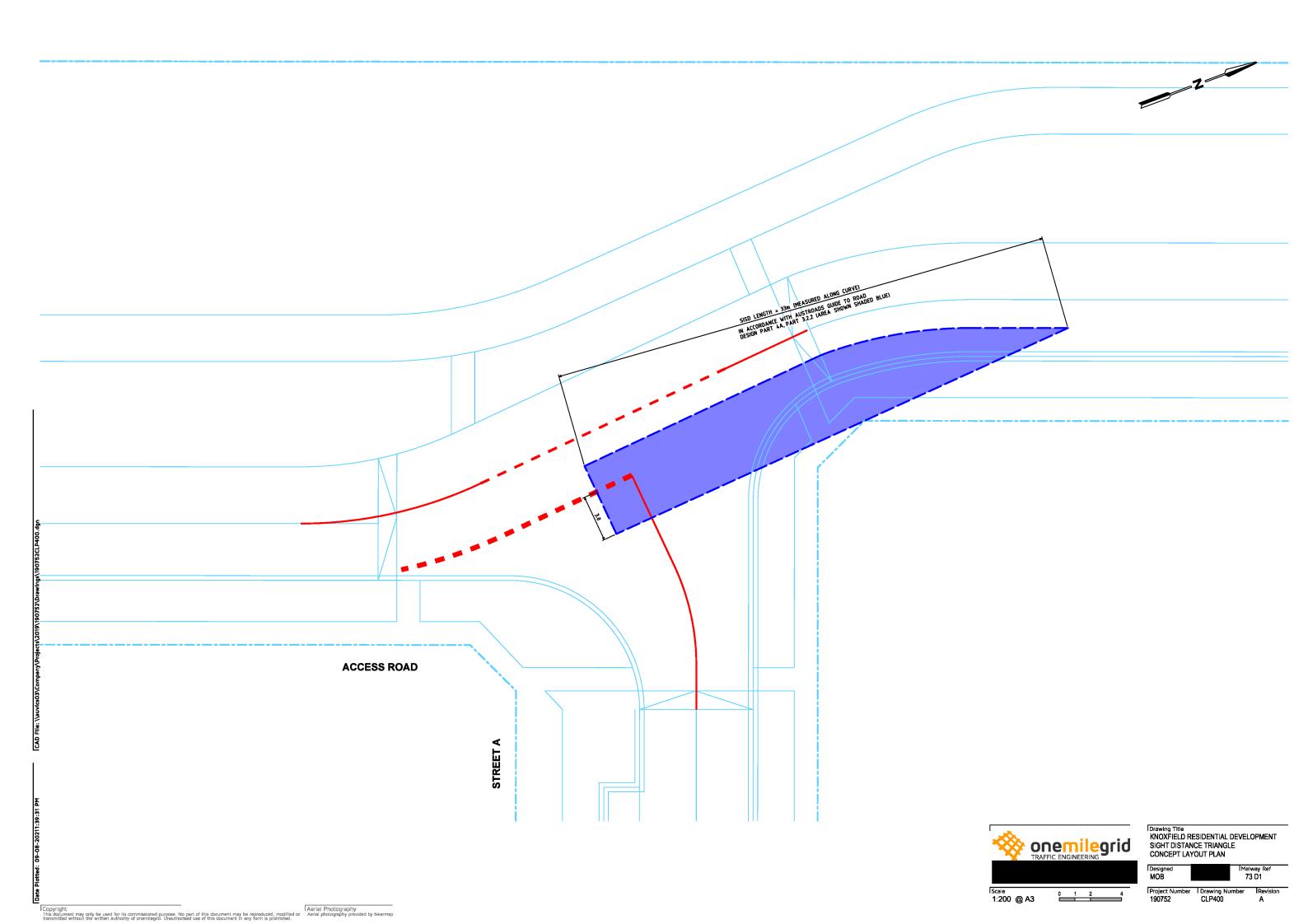
Appendix A
Public Open Space Plan

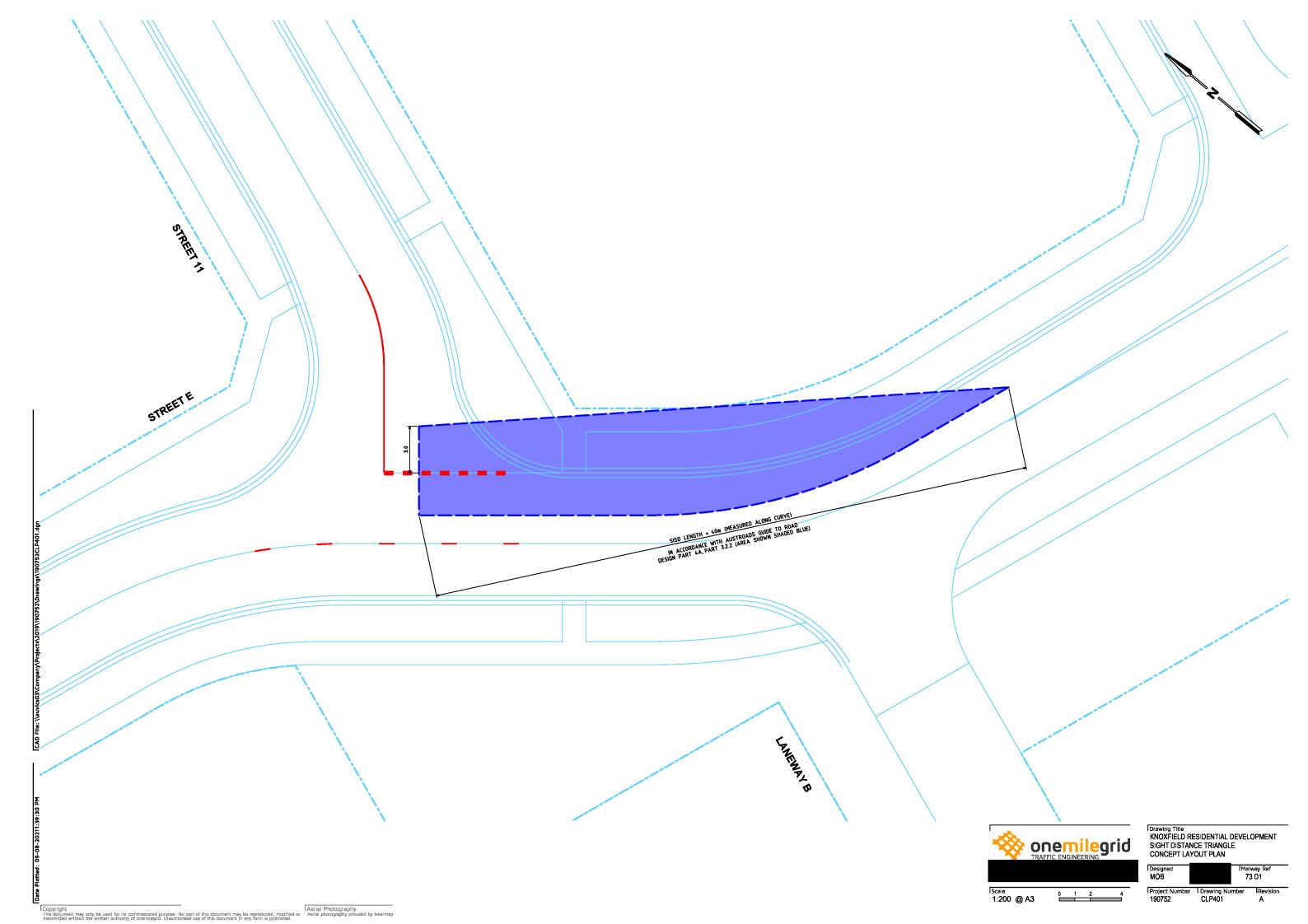






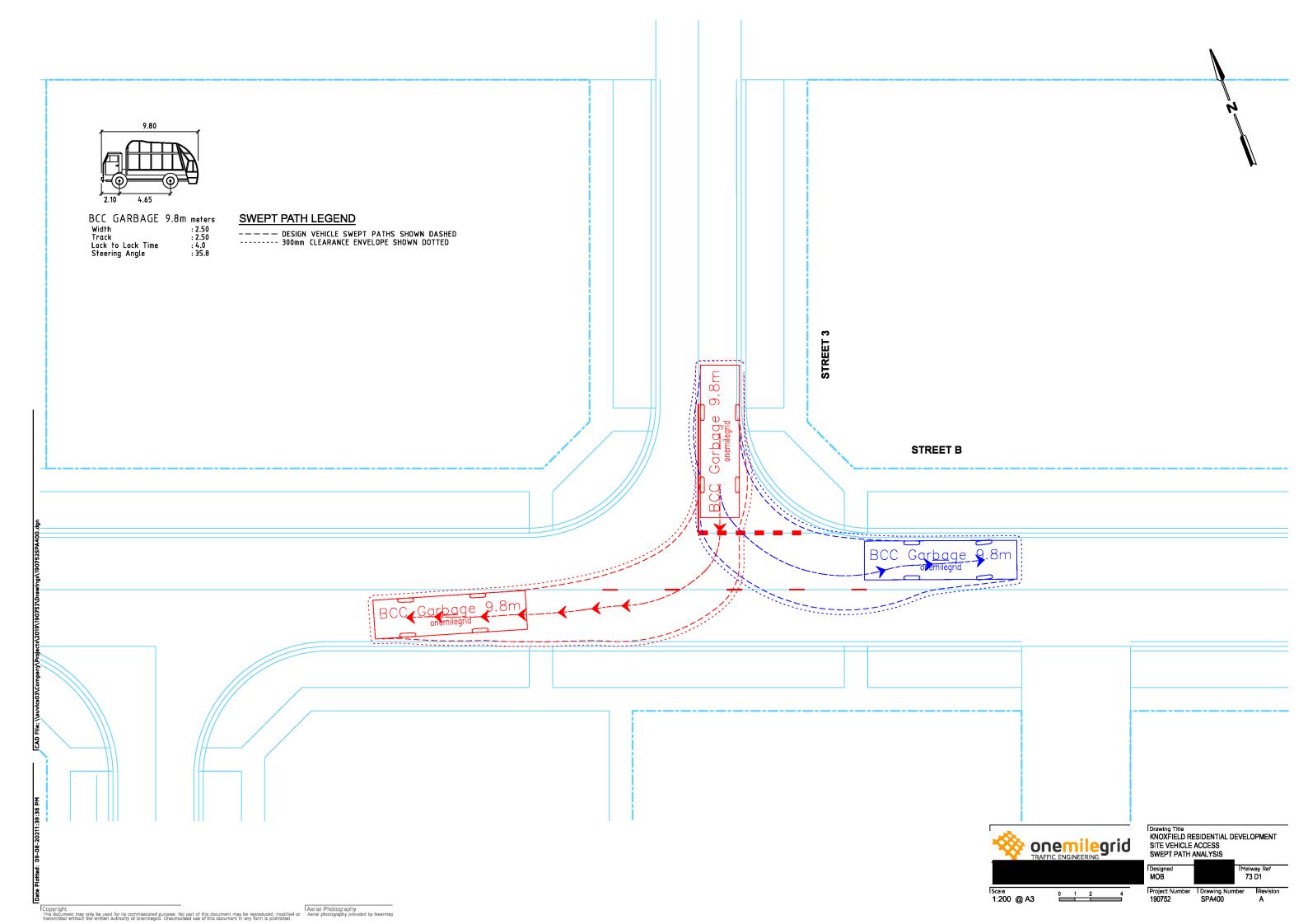
Appendix B
Sight Distance Diagrams

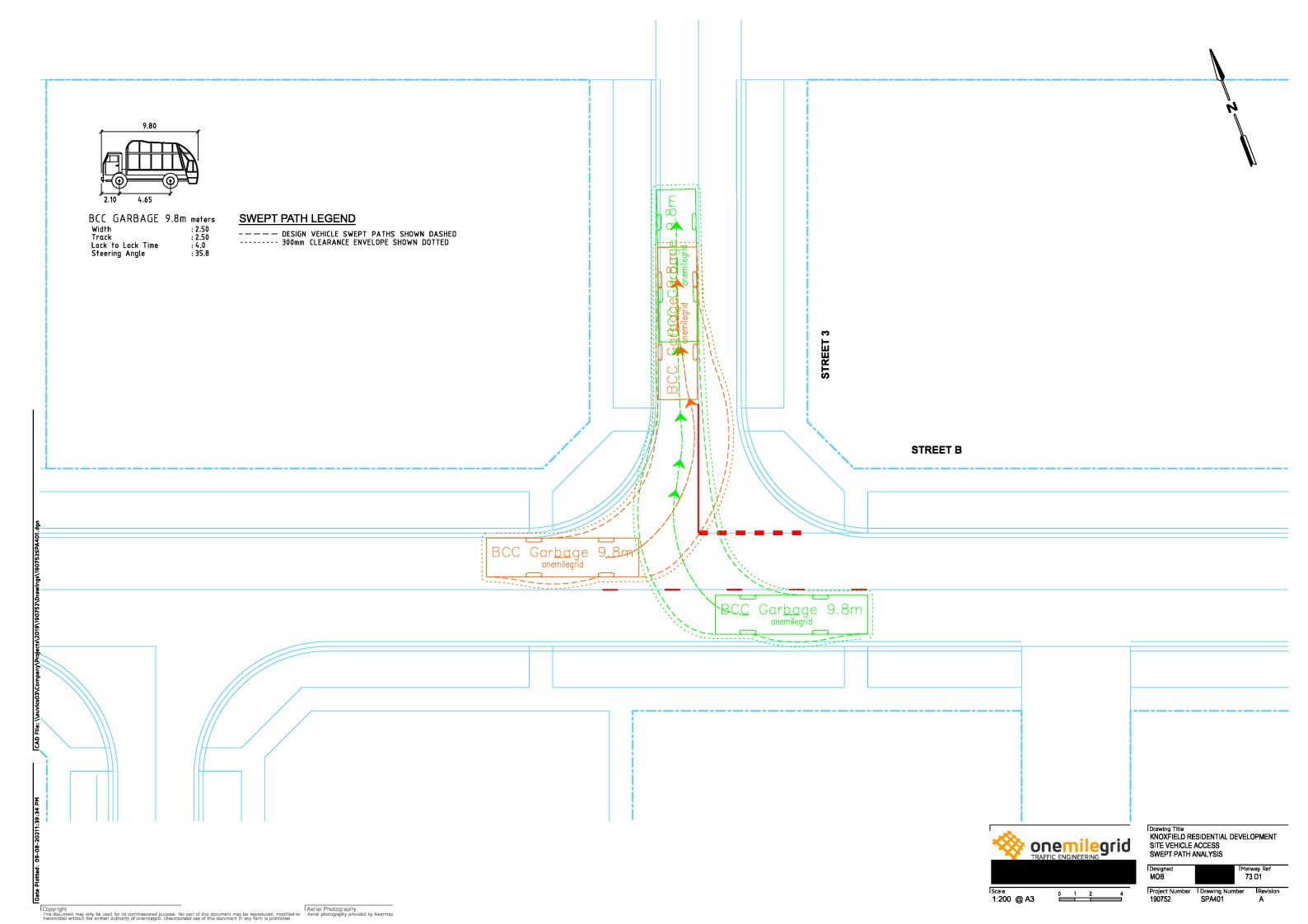


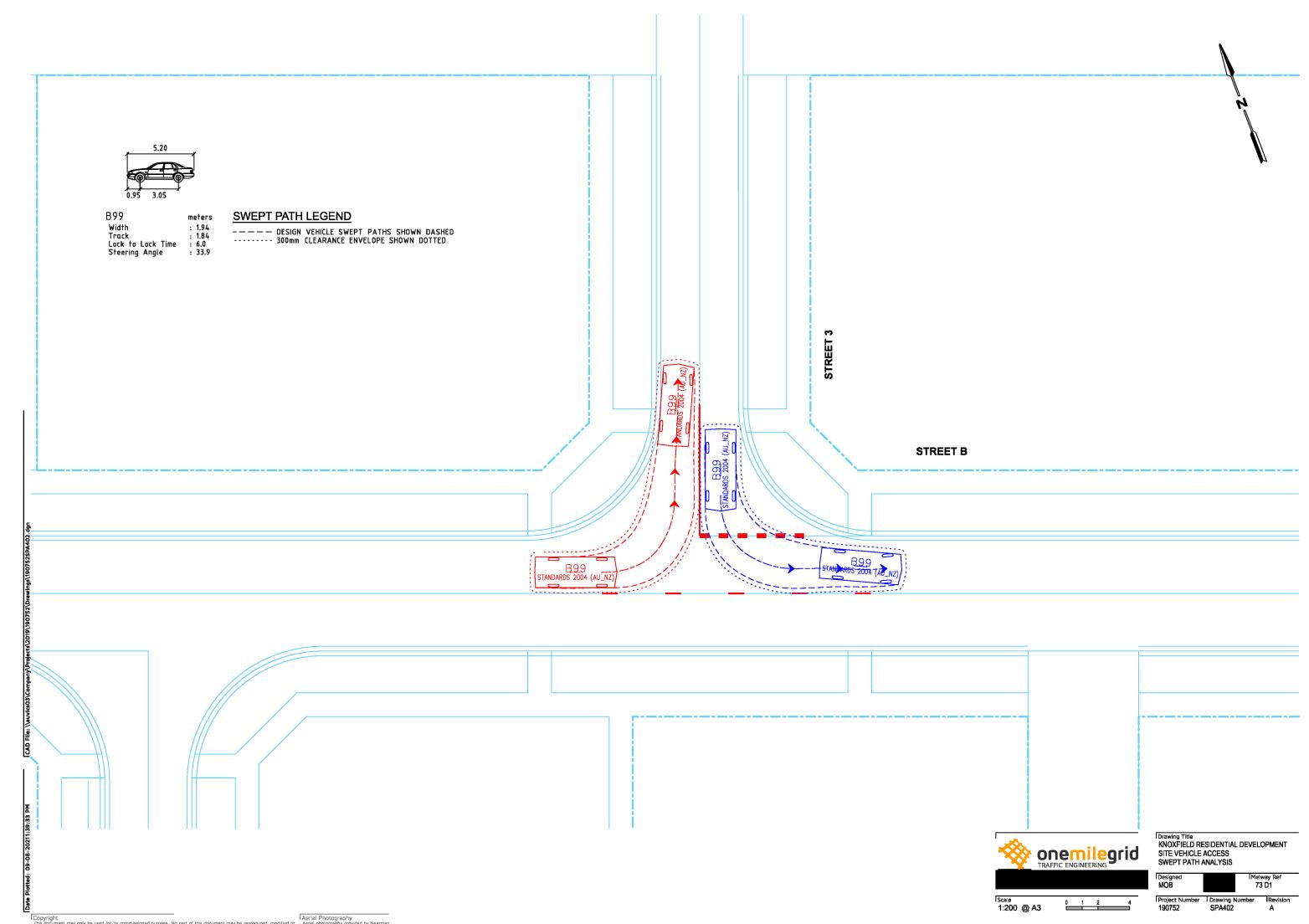




Appendix C Swept Paths







From:

Sent: Friday, 25 February 2022 12:30 PM

To:

Cc:

Subject:

[External] - FW: Response to RFI5 landscape issues 2021/6169 621 Burwood Highway, KF -

Subdivision application

Attachments: Knoxfield St 1 & 2 STS_2021.12.03.pdf

CAUTION: This email was sent from outside of the organisation - be cautious, particularly with links and attachments.

All,

The email trail below indicates further comments on landscape issues received from Knox City Council separately from RFI1 and RFI2. The originating (last in the trail) email sets out:

- in bold italics the original Knox City Council (KCC) questions;
- in plain text, the responses from Development Victoria (DV);
- in highlighted yellow, further questions from KCC;
- in plain text, responses from DV.

The Development Victoria responses are mainly from MDG Landscape Architects with some from other Development Victoria consultants.

Regards,

Ps. Please note my new email and the change of office address following our move in January 2022. It would be appreciated if you could update your records accordingly.



Information contained in this email is confidential and is intended for the use of the addressee. If you are not the intended recipient, please notify us and destroy the email received in error. The confidential nature of the information contained in this email is not waived by reason of mistaken transmission of the information to other than the addressee. It is your responsibility to check for viruses in any email message or any attachments to any email message before opening it. Collie does not accept liability for any loss or damage that may result, directly or indirectly, from your receipt of this email message or any attachment to it.

From:

Sent: Wednesday, 3 November 2021 16:01

To:

Cc:

Subject: FW: Further info review 2021/6169 621 Burwood Highway, KF - Subdivision application



 ${\it Knox~City~Council~acknowledges~the~traditional~custodians~of~the~City~of~Knox, the~Wurundjeri~and~Bunurong~people~of~the~Kulin~Nation.}$



From: Sent: Thursday, 28 October 2021 4:04 PM To: Subject: FW: Further info review 2021/6169 621 Burwood Highway, KF - Subdivision application
Hi The Control of the Control of th
Here are those landscape referral comments I sent you on the 8 th September
Cheers
From: Sent: Wednesday, 8 September 2021 2:55 PM To: Cc: Subject: FW: Further info review 2021/6169 621 Burwood Highway, KF - Subdivision application
Hi
Please see my responses below.
Kind Regards
From: Sent: Tuesday, 7 September 2021 9:41 AM
To:
Subject: Further info review 2021/6169 621 Burwood Highway, KF - Subdivision application
Hi All
Here is a breakdown of DV further info responses. Hope this helps.

Council's further info request or issue raised – in bold and italics

DV Response – Standard text

Our response and actions highlighted yellow

Landscape.

■ The Masterplan and Landscape Masterplan must provide scale and distances to items such as the length and widths of open space reserves and parks, setback distances of buildings/streets from boundaries etc. to determine if these distances are appropriate or not.

The landscape masterplan is at scale and with a scale bar to enable review of proposed dimensions and setbacks but is a masterplan and not a detailed landscape plan, which will be a later plan provided in response to a planning permit condition.

Response: Stage 1, Stage 2 and the Wetland area should be provided on separate plans at a larger scale in addition to the overall plan, so the basic detail of the plans can be assessed. The whited out areas and photos of other developments are not required on the larger scale plans.

The MDG plans have been prepared at a scale of 1:750 (at A1) and 1:500 (at A1).

Services such as electricity, gas, water and Telstra must also be shown on the Street Profiles so it can be demonstrated how these are located in relation to the proposed trees and that the trees have enough room below ground.

A detailed review and coordination of street tree locations relative to servicing requirements will be completed at the appropriate time when the civil and services engineers have progressed to an adequate level of detail. Detailed servicing layouts have not been resolved at this stage however, preliminary typical road cross sections showing proposed services relative to street tree locations has been provided for review (refer traffic Impact Assessment report).

Response: It will be too late to allocate room at the detailed design phase; we need to see that appropriate space has been allocated for trees, above and below ground and for services and other infrastructure at this Masterplan stage. There is no reason why services cannot be included in the street cross sectional detail as we normally receive this information at this stage and can provide examples if necessary. If additional room for these items is required, the design can be amended now. There is no ability to create extra room at the detailed design phase. Attached (refer attachment Knoxfield St 1 & 2 STS_20212.03.pdf) are street cross-sections for typical streets in the subdivision application area in relation to street tree locations (stages 1 and 2). These cross-sections show services (noting that gas is NOT being supplied to the development) worked up by PGA and MDG.

The type of Park furniture and equipment and play space should be specified in the Masterplan along with any proposed BBQ areas.

Park furniture and equipment will be selected at the appropriate time at the detailed design phase. These selections will be reviewed and agreed with Council before finalisation.

The landscape masterplan includes a strategy for the placement of key public realm furniture elements across the project such as seating, picnic tables, shelters and such, and Council is invited to review and respond to this information.

It is anticipated that a combination of standard Council details, off-the-shelf and custom-designed built elements would be proposed for open spaces. In addition, a detailed list of play equipment will be provided for Council review and approval, as the detailed design phase progresses, to ensure an appropriate allocation of play experiences for a range of ages and abilities, recognising the site context and surrounding amenities.

Noted. The appropriate sized parks should be provided for the number of Lots and size of subdivision. Just looking at Stage 1 and 2 in isolation makes it difficult for Council to assess if this has occurred.

In the earlier response to RFI1, Development Victoria provided a list of all public open space and sizes across the entire project area, together with total areas per stage. Please refer to that list.

• Existing trees being removed or retained must be shown on the Landscape Masterplan.

Separate tree removal and retention plans have been provided with the planning permit application package. This was a deliberate choice as overlaying of this information on the landscape masterplan would have resulted in illegible plans.

Response: Council have only received the original Arborist Report from Galbraith & Associates which does not show tree retention and removal, and the tree removal plan for the site office. If you have separate tree removal and retention plans for the different Stages and Wetland area can you please forward them on.

A tree retention, retention if possible and removal plan was provided to KCC as part of the planning permit application package, as appendices to the overall planning report.

A proposed plant schedule should be provided and include at least one small canopy tree in the front setback of each Lot.

Wherever space permits, it is anticipated that one tree per lot frontage will be installed. Furthermore, a strategy for street tree species selections will be prepared and reviewed with Council at the appropriate time, to agree the streetscapes packages across the entire project. As the project progresses into detailed design, planting species lists will be provided to Council for review and comment.

Response: The Landscape and Residential Guidelines that were very recently received by Council state that "the planting theme to be adopted should generally be of native character". The 4 Plant Palette's provided in the guidelines are around 50% exotic and 50% native plants. The percentage of native plants (including trees) should be bumped up to around 70%.

Attached (refer attachment Knoxfield St 1 & 2 STS_2021.12.03.03.pdf) is the stages 1 and 2 street tree species list, which combines tree species from the available current Knox City Council list as well as some typical species used for street trees that MDG believes are to include.

The provision of a Bush Boulevard along Burwood Highway consisting of a 15 metre setback (plus a 3metre shared path) in front of the future Mixed-Use Precinct for the Bush Boulevard should be considered. The Landscape Masterplan should show broad information on proposed plantings etc.

The CDP requires an 8 metres setback from the Burwood Highway reservation inclusive of any footpath / shared path. Detailed resolution of the Burwood Highway frontage will be reviewed with Council at the appropriate time, including proposing locations and species of new tree and understorey plantings. Any resolution of the adjoining Mixed-Use site known at the time of preparing this information, will be incorporated into the outcome of this area.

Response: The Bush Boulevard running along Burwood Highway leading up to the subject site from the west varies from 12 – 18 metres wide with the recently approved S.E.S site being 12 metres wide (next door). Council would expect a minimum of 12 metres to the frontage for the Bush Boulevard for this site. In your proposal of an 8 metre frontage which includes a 3 metre shared path, this only leaves 5 meters for a Bush Boulevard. This cannot be classified as a Bush Boulevard and requires more space.

The building setback requirements for Burwood Highway and Scoresby Road are as specified in the approved comprehensive development plan (CDP) incorporated in the Knox Planning Scheme under the comprehensive development zone schedule 2. These setbacks are 8 metres along Burwood Highway and 6 metres along Scoresby Road. KCC cannot require a larger setback.

The Street Profiles should show the Primary Streets as having nature strips of minimum width of 2.6 metres for large canopy trees to have sufficient room to grow below and above ground. Secondary streets can have slightly smaller nature strips of around 2.3m wide for medium – small canopy trees.

Previous comments from Council have been incorporated into the masterplan: the entry boulevard has road verges of 2.6 metres (reducing to 2.4 metres where indented parking is provided) inclusive of kerbs. All secondary streets (except where abutting a public open space) have minimum verge widths of 2.3 metres inclusive of kerbs.

Typical Laneways between built form should also be provided with some landscaping such as tall upright shrubs (such as Syzygium 'Straight and Narrow) to provide some amenity and greenery to these areas.

Noted. It is the intention to explore options for the inclusion of upright shrubs or small trees in these locations as portrayed graphically on the landscape masterplan.

Response: Entry Boulevard should be 2.6 metres wide regardless of parking as this is where the avenues of large canopy trees will be established..

The entry boulevard off Scoresby Road is as proposed in the attached (refer attachment Knoxfield St 1 & 2 STS_20212.03.pdf).



Knox City Council acknowledges the traditional custodians of the City of Knox, the Wurundjeri and Bunurong people of the Kulin Nation.



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KNOX CITY COUNCIL

PLEASE CONSIDER THE ENVIRONMENT BEFORE PRINTING THIS EMAIL

Knox City Council 511 Burwood Highway Wantirna South VIC 3152

Dear

Proposal: Planning permit for subdivision – Two lot subdivision (+ a balance lot), removal of associated native vegetation and creation of access to a road in a Road Zone

Site location: 609-619 BURWOOD HIGHWAY KNOXFIELD (Lake Knox Development) The planning permit application is NOT the "lake Knox Development" as noted above. It is a proposed subdivision of 621 Burwood Highway Knoxfield, which happens to contain an irrigation dam associated with its previous use as a horticultural testing establishment. The dam is not and never has been named Lake Knox.

Melbourne Water reference: MWA-1206879

Council reference: P/2021/6169 **Date referred:** 13/04/2021

Plan number: TP961547B

Our Decision

Melbourne Water, pursuant to Section 56 (2) of the Planning Environment Act 1987, requires the submission of the following additional information to be able to respond to the referred application:

- 1. An updated/amended Stormwater Management Strategy (latest revision 'Knoxfield Development Stormwater Management Rev 7') must be submitted for review and acceptance by Melbourne Water. The revised must include:
- a) Sections demonstrating that all lots within Stages 1 and 2 are filled 600mm above the identified applicable flood level;

The minimum existing ground levels in stages 1 and 2 are approximately 89.5 m AHD. The maximum applicable flood level for the site is quoted as 78.75 m AHD. This indicates there is over 10 metres difference in the flood level and the natural surface ground levels. While there will be minor cut and fill for boxing out of roads there will still be 10 metres vertical difference between the finished floor levels and the maximum applicable flood level from Blind Creek. The plans of subdivision include the proposed finished lot levels, which easily exceed the required 600 mm freeboard.

b) Details that the proposed stormwater runoff for the proposed Stages 1 and 2 achieves State Environment Protection Policy (Waters of Victoria) objectives for environmental management of stormwater as set out in the 'Urban Stormwater Best Practice Environmental Management Guidelines (CSIRO) 1999';

A separate planning permit application has been applied for to allow for the creation of the wetland system. This wetland system is proposed to be established in stages, with the habitat wetland created first and established to allow for continuity of habitat on the site. Once the habitat wetland is established the dam will be removed and the sediment basin constructed. It is expected that it will take 12 months or more to established suitable vegetation in the habitat wetland. An interim sediment pond is proposed to treat the runoff from stages 1 and 2 (and future stages 3 to 5) before discharging to Blind Creek.

c) Confirmation that the habitat 'wetland' for the broader site is offline;

The habitat wetland is offline from the flows in Blind Creek. This meets the typical definition of and requirements for wetlands to be offline as specified in Melbourne Water's Wetland Design Manual. The habitat wetland needs a regular source of incoming flows to ensure that water levels are maintained in summer and that turnover time is kept as low as possible. This means that the habitat wetland needs to receive flows from the stormwater wetland, making it online to the local catchment. Without inflows from the local catchment, the habitat wetland will have no source of water. The habitat wetland is also quite large for the catchment from which it is receiving flows and so will benefit from reduced turnover if all of the flows from the local catchment flow through the habitat wetland.

The wetland design will include the ability for flows to bypass the habitat wetland when maintenance is being undertaken however, under normal operating conditions the habitat wetland will benefit the most by maintaining regular inflows each time there is rainfall in the catchment on which it is located. This also best matches the current hydrological setup of the existing dam as the existing dam is online to the local catchment, included the developed areas to the east of the school. The water entering the dam also currently receives no treatment.

d) Confirmation that having only one treatment 'wetland' online is acceptable for stormwater runoff and treatment associated with Stages 1 and 2 of this subdivision application;

The treatment wetland cannot be constructed until the planning permit has been issued and it is proposed to construct the habitat wetland first and allow it to establish before the stormwater treatment wetland is constructed. Table 3-2 in the Stormwater Management Plan report shows that the treatment wetland alone can meet the stormwater treatment requirements for the entire site, which includes stages 1 and 2.

- e) The details of any outfall/s for the development and calculations of the flows, volumes and flood levels for the 1% AEP storm event within the property, and how they will service the proposed Stages 1 and 2.

 Refer to the full RFI2 response to Knox City Council.
 - 2. An ecological report, prepared by a suitably qualified person, to include the following specific assessment and considerations (Melbourne Water notes that an ecological assessment was submitted with planning permit application P/2021/6170 for the subject site as a whole):
- a) Clarification of approvals required under the Flora and Fauna Guarantee Act 1988, along with copies of all relevant consultation with Authorities; Refer to the full RFI2 response to Knox City Council.

- b) Depth comparison of the 'dam' and proposed 'wetland' waterbodies, given the Blue Billed Ducks tendency to dive/forage in deep water; and assessment of suitability of any differing replacement habitat depth if proposed;
- c) Details of proposed continuity of habitat for the Blue Billed Duck within any new proposed habitat 'wetland';
- d) Clarification of definitive timelines for construction of any new treatment 'wetland' required for Stages 1 and 2 of this subdivision application.

 Refer to the full RFI2 response to Knox City Council.

Advice

This application relates to the south-east portion of the broader subject site only and does not consider any works to the dam at the rear of the site.

The subdivision area is located within the floodplain of the Blind Creek (within the broader Dandenong Creek catchment). The applicable 1% Annual Exceedance Probability (AEP) flood level for the property, grades from 78.75 metres to Australian Height Datum (AHD) at the north-eastern corner down to 77.0 metres to AHD at the north-western corner of the site.

Melbourne Water notes that this proposed 'planning permit for subdivision' application seeks to formalize Stages 1 and 2 of the Knoxfield development proposal in accordance with the previously approved Knox Planning Scheme Amendment C160 and the associated development Masterplan.

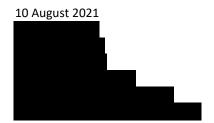
The above advice is provided by Melbourne Water as a recommending Referral Authority for this 'planning permit for development' application under the provisions of the Knox Planning Scheme. We note Knox City Council is the responsible authority for administering the Knox Planning Scheme, including deciding whether to issue a planning permit.

To find out more information in regards to building in flood prone areas please visit our website for more information. For general development enquiries contact our Customer Service Centre on 131722.

Regards,

OFFICIAL

Our Ref: SP476543 Your Ref: P/2021/6169



Dear ,

PLANNING PERMIT APPLICATION: P/2021/6169

ADDRESS: 621 Burwood Highway, KNOXFIELD VIC 3180

PROPOSAL: Removal of native vegetation for staged multi lot subdivision

Thank you for your correspondence received at this office on 25 June 2021 referring the above application to the Department of Environment, Land, Water and Planning (DELWP) pursuant to section 52 of the Planning and Environment Act 1987 (the Act). I apologize for the delay in this response.

After reviewing the Ecological Assessment: Stage 1 - 7 Development Area 609-619 & 621 Burwood Highway, Knoxfield (March 2021). DELWP notes a scenario test-native vegetation removal report has been attached which does not meet the planning permit application requirements under Clause 52.17 of Knox Planning Scheme and the Guidelines for the removal, destruction or lopping of native vegetation (DELWP 2017) (Guidelines).

The scenario test- native vegetation removal report shows that the permit application proposes to remove 0.996-hectare native vegetation for stage 1 and 2 of the proposed subdivision. The proposal was assessed under Detailed assessment pathway of the Guidelines. This means DELWP should be considered as a recommending referral authority under Clause 66.2-2 of the Planning Scheme. Before DELWP can further consider the above application, the following additional information is required to support the application:

1. Information about the native vegetation to be removed for this permit application, the Native Vegetation Removal Report is to provide the wetland construction offset requirements to correspond with the appropriate planning application, as well as the total vegetation removal and offset requirements for the full extent of the project. A Scenario Testing Report is not able to be accepted with a planning application. The report is to provide the below:

Ecocentric response:

An NVR report for native vegetation losses (both direct and TPZ impacts) for the project is provided. Please note however that the detail design for the development is yet to be finalised, and that we expect minor variations in actual losses and impacts. In the interim we propose that we continue to use EnSym analyses until a Planning Permit is issued and a detailed development plan can be finalised (also in order to reduce unnecessary requests for NVR reports from DELWP).

We have also requested that the Planning Permit make provision, as a secondary consent trigger, for an Offset Management Strategy (OMS). The OMS will provide details of the final native vegetation losses, requisite Offset targets, 3rd-party Credit sources (see also response to Q11 below), Allocation of Offset Credits during staged development works, and will facilitate opportunities to further avoid impacts on the ground (through micro-alignment of services and provision for TPZ impact minimisation) during the construction phase.

We note that, based on the current proposed development plans, the total native vegetation losses equates to 2.7353 hectares being removed (including 1.6810ha (52.1%) within the dam, 1.0543ha (32.7%) as patches and

scattered trees, plus 0.4925 ha (15.3%) north of the dam which is assumed lost due to TPZ impacts associated with altered soil hydrology). If permitted, these losses would trigger a Detailed Referral Pathway with no Species Habitat Unit Offsets required. This Offset will be purchased as Unallocated Credits *prior* to commencement of works, and allocated, via the OMS, for each of the development stages as detailed designs are finalised with Council.

As noted above, an NVR report is supplied for the project based on the current development proposal, and further responses are also provided for the items in question below.

- a) The assessment pathway and reason for the assessment pathway. This includes the location category of the native vegetation to be removed.
- Detailed, Location 2
- b) A description of the native vegetation to be removed that includes:
 - i) whether it is a patch or a scattered tree (or both) both
- ii) the extent (in hectares) 3.228ha (including 1.6810ha (52.1%) within the dam (unavoidable loss), 1.0543ha (32.7%) as patches and scattered trees (unavoidable TPZ losses plus some scattered patches within the development area), plus 0.4925 ha (15.3%) north of the dam which is assumed lost due to TPZ impacts associated with removal of the dam (these areas will be retained but are Offset as a precaution against altered soil hydrology).
- iii) the number and circumference (in centimetres measured at 1.3 metres above ground level) of any large trees within a patch large trees are measured as 70cm or greater (as based on the Valley Heathy Forest EVC 127 endangered, and Swampy Woodland EVC 937 endangered); further details of tree losses are provided in Section 3.1 of the Biodiversity Assessments.
- iv) the number and circumference (in centimetres measured at 1.3 metres above ground level) of any scattered trees, and whether each tree is small or large large trees are measured as 70cm or greater (as based on the Valley Heathy Forest EVC 127 endangered, and Swampy Woodland EVC 937 endangered); further details of tree losses are provided in Section 3.1 of the Biodiversity Assessments.
- v) the strategic biodiversity value score SBV values ranged from 0.123-0.270; see also attached NVR report.
- vi) the condition score VQA values as follows: dam (Aquatic Herbfield EVC 653 endangered; VQA 0.67), planted trees at property boundaries (Valley Heathy Forest EVC 127 within southern sector of the property; VQA 0.14 in patches and 0.20 as scattered trees), planted trees and understorey north of the dam which are retained, but Offset as a precaution (Swampy Woodland EVC 937; VQA 0.14 on boundaries to 0.55 north of the dam).
 - vii) if it includes endangered Ecological Vegetation Classes all three EVCs are endangered
- viii) if it includes sensitive wetland or coastal areas. the dam is included in the wetland_current layer (with a modelled conditions score of only 0.446 but was assessed on site as Aquatic Herbfield EVC 653 with a VQA of 0.670).
- c) Maps showing the native vegetation and property in context and containing:
- i) scale, north point and property boundaries see NVR report and mapping in Biodiversity Assessment.
- ii) location of any patches of native vegetation and the number of large trees within the patch proposed to be removed see NVR report and mapping in Biodiversity Assessment.
- iii) location of scattered trees proposed to be removed, including their size see NVR report and mapping in Biodiversity Assessment.
- d) The offset requirement, determined in accordance with section 5 of the Guidelines, that will apply if the native vegetation is approved to be removed. The total Offset (based on current development proposal) = 1.388 General Habitat Units (no Species Habitat Units required); see also NVR report attached.
- 2. The Arborist report that is referred to in the Ecological Assessment: Stage 1 7 Development Area 609-619 & 621 Burwood Highway, Knoxfield (March 2021).

Ecocentric response:

A tree census spreadsheet has been generated from the arborist report. The census identifies which trees are native, and of these, which are identified as canopy trees in the Valley Heathy Forest and Swampy Woodland

EVCs. Any of these that are lost (physically removed), or considered lost due to TPZ impacts (but which will be retained on site) are identified for Offsetting. In addition, there are several native canopy trees north of the dam that are offset as a precaution against changes to soil hydrology associated with decommissioning of the dam, but which will be retained on site and incorporated in the wetland habitat precinct.

3. Please detail why trees listed for removal under Stage 1 and 2 of the development cannot be retained. Apart from one tree labelled 277, which is within a roadway, is mapped to be within proximity to other retained vegetation. Works should be planned to further avoidance of trees mapped for removal. This may require the reduction of lot sizes to achieve.

Ecocentric response:

All native vegetation within Lots 1 & 2 is found at the margin of the property boundary within planted gardenbeds along the fencelines (with the exception of Trees 304 and 305, discussed below). These gardenbeds are mulched, with little to no native understorey vegetation present, and evidence of planting (such as tree guards and irrigation) was observed on site. None of this vegetation is of particular ecological significance, and much of it is non-native or considered to be environmental weeds in the City of Knox.

Nonetheless there are native canopy trees within these gardenbeds which are considered lost due to TPZ impacts of greater than 10%. Whilst these trees will be Offset, none are proposed for removal and it is expected that these trees will be retained within the proposed open space reserves along the Scoresby Road and Fairhills School boundaries. We note also that the detailed design for development is yet to be completed (due to be completed once a Planning Permit is issued) and that there is an opportunity therefore to microalign services and the construction footprint, as well as explore options to avoid impacting the structural root systems of these trees during the development process, thereby further protecting these trees from TPZ impacts in the future.

The exceptions are Trees 305 and 304, both of which are identified in the arborist report as planted, and with a DBH of only 40cm (these are both immature trees). These trees are both within the development area and impacts cannot be avoided; these trees will be Offset as small, scattered trees.

Tree 277 is identified in the arborist report as a Golden Wattle (*Acacia pycnantha*) which, whilst native to Victoria, is not considered to be a canopy species in the Valley Heathy Forest EVC. Furthermore, since this planted understorey shrub does not reach greater than 25% projected foliage cover, no Offset is required if this shrub cannot be retained.

4. The Ecological Assessment (Ecocentric, March 2021), states that there are trees present with hollows, bark fissures, canopy roosting or food resources. A high priority must be given to any Hollow Bearing Trees (HBT), if HBT trees are to be removed, please outline why it is not possible to retain.

Ecocentric response:

The native vegetation of highest ecological significance, including the majority of canopy trees with hollows, will be retained within the wetland precinct north of the dam. There is potential however for large trees that may retain hollows at the margin of the property (within the Lots development area Stages 1 - 7) that may have to be pruned or lopped for safety purposes. Whilst some of these trees are considered lost due to TPZ impacts, it is expected that these trees will be retained on site within the open space reserves proposed as part of this development.

There are a total of 16 large trees (DBH 70cm or greater) that are identified as lost due to TPZ impacts, of which none are expected to be physically removed (we expect all of these trees to be retained within the wetland precinct and open space reserves). We have however outlined a fauna salvage and relocation program to be implemented as part of the CEMP during the development proposal which will minimise inadvertent harm to arboreal mammals or birds that may be affected during tree pruning, lopping, or worst case scenario, removal programs (see Section 5.2.1 of the Biodiversity Assessment for details).

5. Impact to neighbouring vegetation must be avoided, avoid construction activities/ development within the TPZ of tree 50, 252 and 284.

Ecocentric response:

These trees are considered as follows.

Tree 50: Yellow Gum (*Eucalyptus leucoxylon*) with a DBH of approx. 85cm. This tree is located within the neighbouring DELWP property and will therefore not be directly impacted. This tree is identified as having a greater than 10% impact within it's TPZ (10.2m) associated with the proposed alignment of a shared user pathway. It is expected that the alignment of this pathway, as well as the construction method adopted (such as construction at grade with no significant surface excavation works and hand-pruning of structural roots) be fine-tuned as part of the detailed design process in order to minimise impacts within this tree's TPZ.

Tree 252: Mealy Stringybark (*Eucalyptus cephalocarpa*) with a DBH of approx. 100cm. This tree is located within the neighbouring Fairhills School property and will therefore not be directly impacted. This tree is identified as having a greater than 10% impact within its TPZ (12.0m) associated with the proposed alignment of a roadway. It is expected that the construction method adopted (such as use of a retaining wall and hand-pruning of structural roots) will be fine-tuned as part of the detailed design process in order to minimise impacts within this tree's TPZ.

Tree 284: Mealy Stringybark (*Eucalyptus cephalocarpa*) with a DBH of 70cm. This tree is located within the gardenbed on Scoresby Road, and is identified in the arborist report as likely to have self-sown. This tree will be retained within the proposed open-space reserve along Scoresby Road, but will be Offset as a precaution. We note also that the footpath within the road reserve was recently upgraded (these works were not conducted by DV), and there is a possibility that impacts within this tree's TPZ may have a detrimental effect on its vigour.

- 6. An offset statement providing evidence that an offset that meets the offset requirements for the native vegetation to be removed has been identified and can be secured in accordance with the Guidelines. A suitable statement includes evidence that the required offset:
- a) is available to purchase from a third party, or
- b) will be established as a new offset and has the agreement of the proposed offset provider, or
- c) can be met by a first party offset.

Ecocentric response:

The current Offset target, 1.388 GHUs (no SHUs) with a minimum SBV of 0.212, is readily available from 3rd party Offset Sites listed on the DELWP Offset Credit Register. Section 6.3.3 of the Biodiversity Assessment further notes that a suitable Offset Site, listed on the DELWP Native Vegetation Credit Register (TFN-C1763_3), has been identified, and the Offset target has been reserved from that site for this project. The Offset Credits will therefore be purchased and secured with an Allocated Credit Extract prior to the commencement of native vegetation clearance works.

More information about meeting the information requirements to support an application to remove, destroy or lop native vegetation is available on the DELWP website at:

. If you have any queries regarding this matter, please contact me on or email to

Yours Sincerely,

To:

Subject: RE: [External] - P/2021/6169 Deceleration Lane 621 Burwood Highway Knoxfield

From:

Sent: Thursday, 21 April 2022 9:24 AM

To:

Cc:

Subject: [External] - P/2021/6169 Deceleration Lane 621 Burwood Highway Knoxfield

CAUTION: This email was sent from outside of the organisation - be cautious, particularly with links and attachments.

Please find attached plans prepared as the Development Victoria response to the Department of Transport further comments on the abovementioned subdivision application and its request for the inclusion of a deceleration lane for north-bound traffic in Scoresby Road wishing to turn left into the development at 621 Scoresby Road Knoxfield.

The documents attached include:

- a revised subdivision plan (sheets 1 and 2), with the only changes reflecting the deceleration lane road
 pavement widening (and the consequential narrowing of the vegetated reserve) and the new interim bus
 stop;
- a revised landscape concept from mdg for the deceleration lane area, including identification of existing trees
 to be removed all of which were included in the application offset calculations as trees deemed to be lost
 due to road impacts on tree protection zones;
- a concept layout from One Mile Grid providing details of the proposed deceleration lane, re-aligned footpath and new interim bus stop location.

We trust these documents will now enable early notification of the application.

Regards,

Ps. Please note my new email and the change of office address following our move in January 2022. It would be appreciated if you could update your records accordingly.

collie

TOWN PLANNERS | URBAN DESIGNERS | LANDSCAPE ARCHITECTS

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