

# AGENDA



Ordinary Meeting of Council

To be held at the

Civic Centre

511 Burwood Highway

Wantirna South

On

Monday 24 February 2020 at 7:00 pm

**Order of Business**

- 1 Apologies And Requests For Leave Of Absence.....5
- 2 Declarations Of Conflict Of Interest.....5
- 3 Confirmation Of Minutes.....5
- 4 Petitions And Memorials .....5
- 5 Reports By Councillors .....6
  - 5.1 Committees and Delegates.....6
  - 5.2 Ward Issues.....6
- 6 City Development Officers’ Reports For Consideration.....7
  - 6.1 Report of Planning Applications Decided Under Delegation - 1 January 2020 to 31 January 2020 .....7
  - 6.2 Draft Amenity Local Law 2020 .....13
  - 6.3 Electromagnetic Radiation & 5G Mobile Technology .....103
- 7 Public Question Time .....227
- 8 Engineering & Infrastructure Officers’ Reports For Consideration.....228
  - 8.1 Boronia Parking Management Plan .....228
  - 8.2 Call Up Item - Modifications and Upgrades to Tormore Reserve .....241

- 9 Community Services Officers’ Reports For Consideration .....248
  - 9.1 Minor Grants Program 2019-20 Monthly Report .....248
  - 9.2 Community Partnership Funding Review - Emergency Services.....252
- 10 Corporate Services Officers’ Reports For Consideration .....257
  - 10.1 Conduct of 2020 Municipal General Elections.....257
  - 10.2 Live Streaming of Council Meetings Policy .....262
  - 10.3 Financial Performance Report for the Period Ended 31 December 2019.....270
- 11 Items For Information.....292
  - 11.1 Assemblies of Councillors .....292
  - 11.2 ICT Capital Works Report.....299
  - 11.3 Capital Works Program Works Report as at 7 February 2020 .....304
- 12 Motions For Which Notice Has Previously Been Given .....326
- 13 Supplementary Items.....326
- 14 Urgent Business .....326
  - 14.1 Urgent Business .....326
  - 14.2 Call Up Items.....326

15 Questions Without Notice .....326

16 Confidential Items.....327

    16.1 State Basketball Centre.....327

    16.2 Recognition Function - Victorian and New South Wales Fires.....327

Tony Doyle  
Chief Executive Officer

**1 Apologies and Requests for Leave of Absence**

**2 Declarations of Conflict of Interest**

**3 Confirmation of Minutes**

Confirmation of Minutes of Ordinary Meeting of Council held on Tuesday 28 January 2020

**4 Petitions and Memorials**

## 5 Reports by Councillors

### 5.1 Committees and Delegates

### 5.2 Ward Issues

## 6 City Development Officers' Reports for consideration

### 6.1 Report of Planning Applications Decided Under Delegation - 1 January 2020 to 31 January 2020

**SUMMARY: Manager, City Planning & Building, Paul Dickie**

**Details of planning applications considered under delegation are referred for information. It is recommended that the items be noted.**

#### **RECOMMENDATION**

**That the planning applications decided under delegation reports (between 1 January to 31 January 2020) be noted**

#### **1.REPORT**

Details of planning applications decided under delegation from 1 January to 31 January 2020 are attached. The applications are summarised as follows:

<b>Application Type</b>	<b>No.</b>
Building & Works: Residential	8
Other	3
Subdivision	13
Units	13
Tree Removal / Pruning	10
Single Dwelling	4
Change of Use	3
Signage	1
Boundary Re-alignment	1
Dependent Person Unit	1
Liquor License	2
<b>TOTAL</b>	<b>59</b>

**Report Prepared By: Manager, City Planning & Building, Paul Dickie**

**Report Authorised By: Director, City Development, Matt Kelleher**

#### **Attachments**

Nil

## Knox City Council

### Planning Applications Decided by Responsible Officer

1 January 2020 and 31 January 2020

Ward	No/ Type	Address	Description	Decision
Baird	2020/9003	8 Edelmaier Street BAYSWATER VIC 3153	Increase wall height, new doors, windows, reconfigure roof beams and replace roof sheeting	23/01/2020 Approved
Baird	2019/7431	18 Patrick Court BORONIA VIC 3155	Development of a double storey dwelling to the rear of the existing dwelling	30/01/2020 Approved
Baird	2019/7205	1/19 Cypress Avenue BORONIA VIC 3155	Development of the land for four (4) double storey dwellings	3/01/2020 Approved
Baird	2019/7420	51 Western Road BORONIA VIC 3155	Three (3) lot subdivision (approved unit site)	7/01/2020 Approved
Baird	2019/7355	7 Stephen Road FERNTREE GULLY VIC 3156	Development of the land with a double storey dwelling to the rear of the existing dwelling	10/01/2020 Approved
Baird	2019/7398	19 - 21 Tulip Crescent BORONIA VIC 3155	The construction of two (2) double storey and four (4) single dwellings on the land	8/01/2020 Approved
Baird	2020/9002	1 & 2/88 Loretto Avenue FERNTREE GULLY VIC 3156	2 lot subdivision of existing buildings	9/01/2020 Approved
Chandler	2019/7486	5 Walker Street THE BASIN VIC 3154	Buildings and works (extension to existing dwelling)	23/01/2020 Approved
Chandler	2020/9012	8 Rangeview Road BORONIA VIC 3155	Buildings and Works - deck and verandah	24/01/2020 Approved
Chandler	2019/7382	1/11 - 13 Marland Road BORONIA VIC 3155	Boundary Re-Alignment	24/01/2020 Approved
Chandler	2019/9636	12 Prospect Place BORONIA VIC 3155	Raised Storage Area and Pallet Racking works as per plan	17/01/2020 Approved
Chandler	2019/7479	18 Bambury Street BORONIA VIC 3155	6 lot subdivision (approved unit site)	10/01/2020 Approved
Chandler	2019/7513	71 Stewart Street BORONIA VIC 3155	Two lot Subdivision (approved unit site)	10/01/2020 Approved



<b>Ward</b>	<b>No/ Type</b>	<b>Address</b>	<b>Description</b>	<b>Decision</b>
Chandler	2019/7500	395 Forest Road THE BASIN VIC 3154	Buildings and works (construction of a shed)	7/01/2020 Approved
Chandler	2019/7518	1 Debson Close BORONIA VIC 3155	Pruning of two Corymbia maculata (Spotted Gum) trees	15/01/2020 Approved
Chandler	2019/7424	282 Dorset Road BORONIA VIC 3155	Business identification signage	9/01/2020 Approved
Collier	2020/6009	88 Wakley Crescent WANTIRNA SOUTH VIC 3152	To remove one (1) Eucalyptus cladocaylx	24/01/2020 Refused
Collier	2019/7489	452 Mountain Highway WANTIRNA VIC 3152	The construction of one (1) single storey dwelling and one (1) double storey dwelling on the land and Alteration to a Road Zone Category 1	28/01/2020 Approved
Collier	2020/9013	14 Juniper Road WANTIRNA VIC 3152	Two lot subdivision (Approved Unit site)	31/01/2020 Approved
Collier	2019/9650	439 Mountain Highway BAYSWATER VIC 3153	Buildings and works for the construction of a carport	7/01/2020 Approved
Collier	2019/7361	489 Mountain Highway BAYSWATER VIC 3153	Development of the land for an additional warehouse to the rear of existing development and alteration of access to a Road Zone Category 1	31/01/2020 Approved
Dinsdale	2020/9010	7 St Andrews Road BAYSWATER VIC 3153	Two lot Subdivision (Approved Unit Site)	22/01/2020 Approved
Dinsdale	2019/7405	32 Norfolk Avenue WANTIRNA SOUTH VIC 3152	The construction of two (2) double-storey dwellings on the land	30/01/2020 Notice of Decision
Dinsdale	2019/7254	1 St Andrews Road BAYSWATER VIC 3153	Change of Use, Construct Buildings and Works, Signage and Car Parking Dispensation	9/01/2020 Notice of Decision
Dinsdale	2019/7264	6 Maida Avenue BAYSWATER VIC 3153	Development of the land for two (2) double storey and one (1) single storey dwelling (total three (3) dwellings)	10/01/2020 Approved
Dinsdale	2019/7336	29 Bona Vista Road BAYSWATER VIC 3153	Development of a double storey dwelling to the rear of the existing dwelling	17/01/2020 Approved

<b>Ward</b>	<b>No/ Type</b>	<b>Address</b>	<b>Description</b>	<b>Decision</b>
Dobson	2019/7448	1 Blackwood Park Road FERNTREE GULLY VIC 3156	The construction of two double storey dwellings and removal of vegetation	23/01/2020 Notice of Decision
Dobson	2019/7523	19 Grandview Crescent UPPER FERNTREE GULLY VIC 3156	Construction of a double storey dwelling	23/01/2020 Approved
Dobson	2019/7103	22 Sheldon Court LYSTERFIELD VIC 3156	Development and use of the land for a single dwelling	29/01/2020 Approved
Dobson	2019/7484	97 Glenfern Road FERNTREE GULLY VIC 3156	2 lot subdivision (approved development site)	28/01/2020 Approved
Dobson	2019/7425	10B -12 Forest Road FERNTREE GULLY VIC 3156	2 lot subdivision (boundary re-alignment)	31/01/2020 Approved
Dobson	2020/9000	2/54 Old Belgrave Road UPPER FERNTREE GULLY VIC 3156	The Pruning of one (1) Eucalyptus rubida	10/01/2020 Approved
Dobson	2019/7378	1 Eva Place LYSTERFIELD VIC 3156	Buildings and works (New single dwelling and garage, water tanks, pool and tennis court, with associated earth works) and variation to the Section 173 Agreement	17/01/2020 Approved
Dobson	2019/7506	8 Mayfair Drive FERNTREE GULLY VIC 3156	The removal of one (1) Eucalyptus cladocalyx (Sugar gum), the root and clearance pruning of one (1) Schinus molle (Peruvian peppertree) and the maintenance pruning and aerial inspection of one (1) Eucalyptus nicholii (Narrow leaved Black Peppermint)	7/01/2020 Approved
Friberg	2019/7337	58 Silverton Drive FERNTREE GULLY VIC 3156	Development of the land for three (3) double storey dwellings	24/01/2020 Approved
Friberg	2020/9007	2 May Court FERNTREE GULLY VIC 3156	Installation of a Temporary Dependent Persons Unit	16/01/2020 Approved
Friberg	2020/9001	4 Lindfield Court KNOXFIELD VIC 3180	Applying for the permit to remove one (1) Corymbia citriodora	7/01/2020 Refused

<b>Ward</b>	<b>No/ Type</b>	<b>Address</b>	<b>Description</b>	<b>Decision</b>
Scott	2020/9006	26 Coppelia Street WANTIRNA SOUTH VIC 3152	Construction of a single dwelling	28/01/2020 Approved
Scott	2020/9011	Wantirna Village 114/2 Old Stud Road WANTIRNA SOUTH VIC 3152	Buildings and works for the construction of a verandah	29/01/2020 Approved
Scott	2020/6007	72 Anne Road KNOXFIELD VIC 3180	Mitigation and Maintenance Pruning to one (1) Eucalyptus ovata	17/01/2020 Approved
Scott	2019/9642	35 Sylphide Way WANTIRNA SOUTH VIC 3152	2 lot subdivision (approved unit site)	9/01/2020 Approved
Scott	2019/7411	127 Tyner Road WANTIRNA SOUTH VIC 3152	28 lot subdivision (approved unit site)	6/01/2020 Approved
Taylor	2020/6011	36 Major Crescent LYSTERFIELD VIC 3156	Pruning of four (4) eucalyptus leucoxyton & four (4) Eucalyptus nicholii	24/01/2020 Approved
Taylor	2020/6004	18 Le John Street ROWVILLE VIC 3178	Erection of an internally illuminated advertising sign	30/01/2020 Approved
Taylor	2019/7282	14 Willow Avenue ROWVILLE VIC 3178	Development of the land for two (2) double storey dwellings	14/01/2020 Notice of Decision
Tirhatuan	2020/9005	49 Debra Street ROWVILLE VIC 3178	Removal of one (1) Eucalyptus camaldulensis	22/01/2020 Approved
Tirhatuan	2019/7482	5 Helena Court ROWVILLE VIC 3178	The development of the land for the construction of double storey dwelling to the rear of the existing dwelling	30/01/2020 Notice of Decision
Tirhatuan	2019/9648	14 Canter Street ROWVILLE VIC 3178	Removal of one (1) Dead Eucalyptus viminalis	3/01/2020 Approved
Tirhatuan	2019/7510	15 Hillview Avenue ROWVILLE VIC 3178	Four (4) lot subdivision (approved unit site)	14/01/2020 Approved
Tirhatuan	2020/6031	5 Rupicola Court ROWVILLE VIC 3178	Pruning of two (2) Eucalyptus radiata (Narrow leaved Peppermint), one (1) Eucalyptus goniocalyx (Long leaf Box) and one (1) Eucalyptus species, in accordance with Australian Standard AS 4373 – 2007	30/01/2020 Approved

<b>Ward</b>	<b>No/ Type</b>	<b>Address</b>	<b>Description</b>	<b>Decision</b>
Tirhatuan	2019/7364	1/1464 Ferntree Gully Road KNOXFIELD VIC 3180	Use of the site for an indoor recreation facility (Child play centre)	16/01/2020 Approved
Tirhatuan	2019/7323	970 Stud Road ROWVILLE VIC 3178	Development of the land for informal outdoor recreation and removal of native vegetation	14/01/2020 Notice of Decision
Tirhatuan	2020/6042	9 Denham Court SCORESBY VIC 3179	2 lot subdivision (Approved Unit Site)	28/01/2020 Approved
Tirhatuan	2019/7492	43 Stamford Crescent ROWVILLE VIC 3178	Three lot subdivision (approved unit site)	13/01/2020 Approved
Tirhatuan	2019/7302	1370 Stud Road ROWVILLE VIC 3178	Development of the land for three (3) double storey dwellings	31/01/2020 Notice of Decision
Tirhatuan	2019/7214	830 Wellington Road ROWVILLE VIC 3178	Construction of a warehouse and business identification signage	7/01/2020 Approved
Tirhatuan	2019/7461	5 - 13 Hillview Avenue ROWVILLE VIC 3178	Twenty one (21) lot subdivision (approved unit site)	10/01/2020 Approved
Tirhatuan	2020/6019	33 Dalmore Drive SCORESBY VIC 3179	Liquor Licence	31/01/2020 Approved
Tirhatuan	2020/6020	33 Dalmore Drive SCORESBY VIC 3179	Liquor License	31/01/2020 Approved

---

## 6.2 Draft Amenity Local Law 2020

**SUMMARY:** Coordinator Projects and Improvement, Janet Simmonds

A draft of the proposed *Amenity Local Law 2020* has been prepared as part of reviewing the existing Local Law and is planned to replace the current local law (*General Provisions Local Law 2010*) which will sunset on 30 June 2020. The draft Local Law (Attachment 1) is supported by the Local Law Community Impact Statement (Attachment 2) which details the proposed amendments to the Local Law, and the draft *Uses of Waste Collection Services Policy* (Attachment 3).

### RECOMMENDATION

That Council:

1. Commence the statutory process in accordance with Part 5 of the *Local Government Act 1989* ('the Act') to make the Amenity Local Law 2020.
2. Endorse the following documents for the purpose of community consultation and submissions under Sections 119 and 223 of the Act:
  - i. Draft *Amenity Local Law 2020* (Attachment 1)
  - ii. Local Law Community Impact Statement (Attachment 2)
  - iii. Draft *Use of Waste Collection Services Policy* (Attachment 3).
3. Gives notice in the Victorian Government Gazette, a local newspaper and on Council's website stating, in accordance with sections 119 and 223 of the Act:
  - i. The purpose and general purport of the proposed Local Law;
  - ii. That a copy of the proposed local law and any explanatory document can be obtained for inspection from the Council office or from Council's website;
  - iii. That any person affected by the Local Law may make a submission relating to the proposed Local Law under Section 223 of the Act, to be received at the Council office no later than Sunday 5 April 2020;
4. Consider any submissions received in accordance with Section 223 of the Act, including providing persons who have requested to be heard in support of their written submission, with the opportunity to be heard (for up to 5 minutes) in accordance with section 223(1)(b) of the Act, at a meeting of Council to be held in the Council Chamber, Knox Civic Centre on Monday 27 April 2020 commencing 7.00pm.
5. Authorise the Chief Executive Officer to undertake the necessary administrative processes to give effect to this resolution, including compliance with the requirements of section 223 of the Act.

### 1. INTRODUCTION

Every ten years, Council has a statutory obligation to review and update its Local Law to make sure the Local Law reflects amendments to legislation, changes that have taken place in the municipality, and to ensure the Local Law keeps pace with the community's changing expectations. Council's authority under the *Local Government Act 1989* and the *Domestic Animals*

*Act 1994* allows Council to make Local Laws for matters that Council has both a function and power; and is not dealt with by an existing Act or subordinate legislation.

The proposed *Amenity Local Law 2020* has the following objectives:

- a. Provide for the peace, order and good government of the municipal district;
- b. Promote a physical and social environment free from hazards, in which the residents of the municipal district can enjoy a quality of life that meets the general expectations of the community; and
- c. Prevent and manage nuisances which may adversely affect the enjoyment of life within the municipal district or the health, safety and welfare of persons within the municipal district;

and to achieve these objectives by:

- d. Regulating and managing activities of people within the municipal district which may be dangerous, unsafe or detrimental to the quality of life of other people in, or the environment of, the municipal district;
- e. Regulating and controlling peoples use and activity relating to Council land, roads and Council assets; and
- f. Providing standards and conditions for specified activities to protect the safety and the welfare of people within, and the environment of, the municipal district.

If made, the proposed *Amenity Local Law 2020* will:

- Revoke the existing *General Provisions Local Law 2010*;
- Provide for the administration and enforcement of the proposed Local Law and empower Council and authorised officers to issue permits, notices to comply, act in urgent circumstances and impound things;
- Provide for infringement notices to be served on those whom an authorised officer has reason to believe is guilty of an offence;
- Create offences relating to:
  - Neighbourhood amenity and private property
  - Keeping of animals
  - Use of Council land and Roads
  - Protection of Council Land & assets.

The proposed *Amenity Local Law 2020* has been drafted taking into consideration:

- New and emerging issues reported by the community to Council;
- Feedback from Councillors, internal Council staff and from Victoria Police;
- Benchmarking to review and compare neighbouring Council's local laws; and
- Amendments required to ensure that the Local Law does not overlap with any existing State legislation (which is not permitted under the Act).

The proposed *Amenity Local Law 2020* has been restructured to improve the readability of the document and due to the substantial format changes, is a new document rather than a tracked-changes version of the current Local Law. A detailed reconciliation providing a comparison of the current Local Law to the new Local Law, together with an explanation of why the change is required, is contained in Attachment 2 (Appendix 1). A summary of the major changes incorporated in the draft Local Law are provided in the Discussion section of this report.

Consistent with the Victorian Government '*Guidelines for Local Law Manual*', a Local Law Community Impact Statement (Attachment 2) has been developed, being an explanatory document for the community outlining information regarding the draft Local Laws.

The proposed *Amenity Local Law 2020*, the Local Law Community Impact Statement and the draft *Use of Waste Collection Services policy* (Attachments 1 -3), will be made available both on Council's website and hard-copy (at the Civic Centre and the 5 Council libraries) once Council has approved the draft Local Law for public consultation release.

A requirement in making a Local Law under Part 5 of the *Local Government Act 1989* is that Council undertake a Section 223 submission process. This process requires Council to publish a public notice which affords at least 28 days for a person to make a submission to Council on the proposed Local Law. Council is also required to allow the person making the submission to be heard in person at a meeting of Council, with a date, time and place of the meeting as determined. This report proposes the Section 223 submission hearings be heard at the Ordinary meeting of Council on 27 April 2020.

It is proposed that the final version of the Local Law, incorporating community feedback and any required amendments following external legal review of the draft Local Law (to ensure legislative compliance), will be provided to Council for approval in May 2020. The final Local Law will require gazettal in the Victorian Government Gazette and publication on Council's website to make it legally effective. The current Local Law cannot be extended and will sunset (extinguish) on 30 June 2020.

## **2. DISCUSSION**

The current Local Law is comprised of two documents – the *General Provision Local Law 2010* and the *Administrative Guidelines to the General Provision Local Law 2010*. Consistent with the Project Scope for the review of the Local Law, the Local Law Administrative Guidelines will be separated from the Local Law and become an internal operating guideline only. The responsible department for each clause of the Local Law will become the owner, subject to an approval process, of the standard operating procedures that support the operation of the Local Law.

### ***Draft Local Law – major changes***

The draft Local Law (Attachment 1) achieves the objectives outlined in the Project Scope for this review, being:

- A review and re-establishment of Council's Local Law
- An update of the Local Law for any legislative changes applicable to the functions and application of the Local Law
- Undertaken in accordance with the *Better Practice Local Laws Strategy* and *Guidelines for Local Laws Manual*, issued by Local Government Victoria
- A 'check-in' with community and key stakeholders to assess the relevance and effectiveness of the current Local Law, and the impact on Council delivered initiatives
- An opportunity to 'check-in' with Councillors to assess the relevance and effectiveness of the current Local Law, and to identify emerging community issues

- An opportunity to consolidate and modernise the Local Law, by making it a more readable community document.

The major changes reflected in the draft Local Law are summarised in Tables 1 and 2 below:

**Table 1: Summary of proposed changes**

(Refer to Attachment 2 – Appendix 1 for detail on all changes and the explanation for the change)

Action	Issue
Amended	Restructured the Local Law to prioritise clauses impacting residents property and their animals first, and grouping the remaining provisions under the following structure: Section B: Neighbourhood amenity and your property Section C: Keeping of Animals Section D: Use of Council Lands and Roads Section E: Protection of Council Land & Assets Note: Sections A, F and G cover Preliminary, Administration & Enforcement matters.
New	Dilapidated buildings
New	Council asset & building site provisions
New	Security Bonds
New	Smoke-free areas
New	Introduce a <i>Uses of Waste Collection services policy</i> (Attachment 4), and simplify the Local Law to make it an offence if a person contravenes Council's Waste policy/ code, providing Council with the ability to better adapt to fast paced changes in the waste management sector
New	Election Signage (incorporating proposed amendments)
Amended	Drones included in Toy Vehicle & model aircraft provision
Amended	Trading provision to enable Council to regulate e-scooter & bike sharing schemes
Amended	Keeping of animal provisions
Amended	Objectives of Local Law
Amended	Environmental Weeds
Amended	Alcohol provision
Retained	Tree & Vegetation protection provisions unchanged subject to tree canopy review
No change	Short stay rental accommodation (including AirBnBs) - not included in the Local Law
Amended	Schedule 1 – Penalties has been updated to reflect the amended clauses, and offence values amended to reflect: <ul style="list-style-type: none"> <li>• High penalty (10 units/ \$1000) for any offences endangering a life or property, or for works damaging Councils property</li> <li>• Medium penalty (5 units/ \$500) for ignoring or contravening a direction of an Authorised officer (of Council or Victoria Police for the alcohol offence)</li> <li>• Penalty of 3 units or \$300 for most other offences in the Local Law, for the exception of a couple of very low impact offences at 1 penalty unit/ \$100.</li> </ul> Maximum penalty set at 20 units (or \$2,000) as per the Local Government Act, which can be imposed by a decision of the Court if required.



**Table 2: Clauses required to be removed due to overlap/ duplication with existing legislation**  
(Refer to Attachment 2 – Appendix 1 for the explanation of the overlap and duplication)

Current clause	Clause provision
“Public Place”	Replaced by “Council Land” and “Road” throughout the Local Law
8.2	Business deemed to be who placed the goods for sale
14.1	Removal of a vehicle constituting a hazard in a public place
14.2	Parking a vehicle in a public place for more than 14 days
14.3	Parking a boat, caravan or trailer for 7 days in a 28 day period
19.3	Use of an unregistered motorised toy vehicle in a public place
20.1	Requirement that land is adequately fenced to prevent livestock escaping
20.3A	Planning permit is required to keep more than 5 cats and dogs
20.4	Requirement that additional cats and dogs are to be desexed
22.3	Direction by Council that a barking dog count device be used
25.2	Painting a vehicle on private land
31.1	Requirement that bees be kept in accordance with the <i>Apiary Code of Practice</i>
36	Drainage of properties

### 3. CONSULTATION

The Local Law review process has included consultation with Councillors, internal stakeholders across Council and with Victoria Police; and the proposed draft Amenity Local Law will be made available for public consultation and feedback following endorsement by Council, as discussed below.

Preliminary feedback was considered in the early phases of the review of the current Local Law, by reviewing requests and complaints from the public and identifying the frequency and complexity of issues, as well as identifying emerging issues.

Extensive internal consultation was undertaken during May/ June 2019, with 15 workshops held with staff from the 14 programs/ departments who currently have responsibility or involvement with the current Local Law. Councillors provided valuable feedback at consultation sessions on the Local Law held in August 2019. Victoria Police (three senior representatives from the Knox station) have been consulted with their feedback also being incorporated into the draft Local Law.

The public exhibition and submission period for the draft Local Law is anticipated to commence in March 2020, subject to Council’s approval of this report. Council is required to publish a public notice stating that any person affected by the proposed Local Law may make a submission, and Council is required to afford the person an opportunity to have their submission heard in person before a Council meeting. The Section 223 submission hearings, resulting from the public consultation on the draft Local Law, are proposed to be heard at the Ordinary meeting of Council on Monday 27 April commencing at 7:00pm – following the minimum 28 day consultation period during March (subject to Council approval).

#### **4. ENVIRONMENTAL / AMENITY ISSUES**

The purpose of the Local Law is to address environmental and amenity issues within the community. This has been reflected in the structure of the draft Local Law, which has grouped the provisions into sections within the document, including Section B that deals with *Neighbourhood amenity and your property*; Section C on the *Keeping of Animals* and Sections D & E related to the *Use and Protection of Council Land and Roads*. The importance of waste collection services in maintaining the amenity and environment of the municipality is supported by the *Uses of Waste Collection Services Policy*, which is an incorporated document to the draft Local Law (Attachment 3).

#### **5. FINANCIAL & ECONOMIC IMPLICATIONS**

The introduction of some of the proposed changes to the Local Law is anticipated to have some impact on staff resources to administer Council's regulatory services, with only minimal cost recovery expected through new permit fees and charges.

#### **6. SOCIAL IMPLICATIONS**

The Local Law is expected to provide a positive social response through improved safety and amenity within the municipality.

#### **7. RELEVANCE TO KNOX COMMUNITY AND COUNCIL PLAN 2017-2021**

##### **Goal 4 - We are safe and secure**

Strategy 4.4 - Protect and promote public health, safety and amenity

##### **Goal 8 - We have confidence in decision making**

Strategy 8.1 - Build, strengthen and promote good governance practices across government and community organisations

#### **8. CONFLICT OF INTEREST**

Under section 80c of the Local Government Act 1989 officers providing advice to Council must disclose any interests, including the type of interest.

Author – Coordinator Projects and Improvement, Janet Simmonds, - In providing this advice as the Author, I have no disclosable interests in this report.

Officer Responsible – Manager, City Safety and Health, Steven Dickson - In providing this advice as the Officer Responsible, I have no disclosable interests in this report.

#### **9. CONCLUSION**

The approval of the proposed *Amenity Local Law 2020* supports the legislative procedure that Council is required to follow in Part 5 of the *Local Government Act 1989* to make a local law. Local Laws support the purpose of Local Government, under the Act, being to perform the function and

exercise the powers for the peace, order and good government of the municipality. Having the proposed *Amenity Local Law 2020* in place from 1 July 2020 will ensure that Council is able to perform a range of services to support and protect the local community.

#### **10. CONFIDENTIALITY**

There are no items of a confidential nature in this report.

**Report Prepared By:                   Coordinator Projects and Improvement, Janet Simmonds**

**Report Authorised By:               Director City Development, Matt Kelleher**

#### **Attachments**

1. Attachment 1 - Draft Local Law 2020 [6.2.1 - 36 pages]
2. Attachment 2 - Local Law Community Impact Statement [6.2.2 - 37 pages]
3. Attachment 3 - Draft Use of Waste Collection Services Policy [6.2.3 - 10 pages]




# (Draft) Amenity Local Law 2020

## Contents

(Draft) Amenity Local Law 2020 .....	1
Section A: Preliminary .....	4
Part 1: Preliminary, Objectives and Definitions .....	4
Title.....	4
What are the objectives of this Local Law? .....	4
What authorises this Local Law? .....	4
When does this Local Law commence? .....	4
When does this Local Law end? .....	4
What does this Local Law apply to? .....	4
Are there any exemptions from this Local Law? .....	5
What does this Local Law replace? .....	5
Definitions .....	5
Section B: Neighbourhood amenity and your property.....	11
Part 2: Private land and neighbourhood amenity.....	11
Condition of Private Land.....	11
Obstructions from private land .....	11
Dilapidated buildings.....	11
Storage and works on vehicles on Private Land.....	12
Temporary accommodation on private land .....	12
Property numbers .....	12
Noise.....	12
Intruder Alarms .....	12
Part 3: Private land and the environment.....	13
Environmental Weeds .....	13
Tree and Vegetation Protection.....	13
Open air burning .....	13
Pests on private land .....	14
Council waste services .....	14
Non-Council waste services.....	14



Commercial or Trade waste .....	14
Section C: Keeping of Animals.....	16
Part 4: Animals .....	16
Limits on number of animals kept.....	16
Animal Housing .....	16
Removal of Animal Waste .....	17
Animal noise and odour .....	17
Nuisance caused by feeding animals .....	17
Section D: Use of Council Land & Roads.....	18
Part 5: Use of Council land and Roads .....	18
Behaviour on Council Land and Roads .....	18
Camping on Council land.....	18
Obstructions on Roads and Council land .....	18
Shopping Trolleys .....	18
Use of Toy Vehicles or Aircraft .....	19
Fireworks on Council land and Roads .....	19
Part 6: Vehicles on Council land or Roads.....	19
Vehicles on Council land and Roads.....	19
Repairing vehicles.....	19
Part 7: Trading, fundraising and promotional activities on Council land or Roads.....	20
Activities on Council Land or Roads .....	20
Election signage.....	20
Appeals and Collections .....	21
Commercial Filming and Photography on Council land .....	21
Event on Council land.....	21
Part 8: Alcohol and Smoking on Council land and Roads.....	21
Alcohol.....	21
Smoking in a Smoke-free area .....	22
Section E: Protection of Council Land & Assets .....	23
Part 9: Council Assets, Trees and regulating Building Sites .....	23
Building Management .....	23
Soil Stockpiles.....	24
Amenity Controls.....	24
Drains .....	25
Vehicle crossings .....	25
Defacing/ Damaging Council Land and Assets .....	25
Trees and Plants on Council land and Roads.....	26



Section F: Administration.....	27
Part 10: Permits.....	27
When is a permit required under this Local Law? .....	27
Permit Application and fees .....	27
Fees and Charges.....	27
Duration of permit .....	27
Correction of permits .....	28
Granting and refusal of a <i>permit</i> .....	28
Cancellation of a permit.....	28
Security Bonds.....	29
Section G: Enforcement.....	30
Part 11: Compliance and enforcement of the Local Law .....	30
Offences .....	30
Offences by Corporations.....	30
Infringement notices .....	30
Penalties.....	30
Notice to Comply and directions.....	30
Power of authorised officer to act in urgent circumstances.....	31
Power of authorised officer to confiscate and impound .....	31
Part 12: Delegations .....	32
Schedule 1: Penalties.....	33
Schedule 2: Smoke Free Areas .....	36
Part A – Smoke Free Areas.....	36
Part B – Guidelines for determining a Smoke Free Areas .....	36



## Section A: Preliminary

### Part 1: Preliminary, Objectives and Definitions

#### Title

- 1.1 This Local Law is called the “Amenity Local Law 2020”.

#### What are the objectives of this Local Law?”?

- 1.2 The objectives of this Local Law are to:
- (a) Provide for the peace, order and good government of the **municipal district**;
  - (b) Promote a physical and social environment free from hazards to health, in which the residents of the **municipal district** can enjoy a quality of life that meets the general expectations of the community; and
  - (c) Prevent and manage nuisances which may adversely affect the enjoyment of life within the **municipal district** or the health, safety and welfare of persons within the **municipal district**;
- and to achieve these objectives by:
- (d) Regulating and managing activities of people within the **municipal district** which may be dangerous, unsafe or detrimental to the quality of life of other people in, or the environment of, the **municipal district**;
  - (e) regulating and controlling peoples use and activity relating to **Council land, roads and Council assets**; and
  - (f) Providing standards and conditions for specified activities to protect the safety and the welfare of people within, and the environment of, the **municipal district**.

#### What authorises this Local Law?

- 1.3 This Local Law is made under the provisions of Part 5 of the *Local Government Act 1989* and Part 3 of the *Domestic Animals Act 1994*.

#### When does this Local Law commence?

- 1.4 This Local Law commences on the first day of July 2020.

#### When does this Local Law end?

- 1.5 Unless revoked sooner, this Local Law ends on 30 June 2030.

#### What does this Local Law apply to?

- 1.6 This Local Law applies throughout the whole of the **municipal district**.
- 1.7 This Local Law does not apply where any Act or thing is authorised by or under any Act, Rule, Regulation or the Planning Scheme.
- 1.8 Council may declare, by resolution, **private land** that is being used for public purposes as a **Council land**.
- 1.9 Any **private land** declared under clause 1.8 must be:
- (a) Advertised in a newspaper generally circulating within the **municipality**; and
  - (b) Advised to the **owner** of the **private land** as shown on **Council’s** rates records at the time of the declaration.



### Are there any exemptions from this Local Law?

- 1.10 **Council** may, by resolution, **determine** specified **persons, premises** or areas within the **municipality** to be exempt from a provision of this Local Law for a specified time and on specified conditions.

### What does this Local Law replace?

- 1.11 From the commencement of this Local Law, the *General Provisions Local Law 2010* previously made by **Council**, is revoked.

### Definitions

- 1.12 The words identified in **bold** throughout this Local Law have the following meaning:

**Acceptable no smoking sign** has the same meaning as in the *Tobacco Act 1987*.

**Alcohol** mean a beverage intended for human consumption, with an alcoholic content greater than 0.5 per cent by volume at a temperature of 20 degrees Celsius.

**Animal** means animals and birds of a type listed in Part 4 of this Local Law.

**Animal housing** means any structure erected for the purpose of housing **animals**.

**Approval** has the same meaning as **permit**.

**Asset protection approval** means an approval issued by **Council** under Clause 9.1.

**Authorised Officer** means a person appointed by **Council** under section 224 of the *Local Government Act 1989*.

**Barbeque** means any structure or device, erected or fixed outdoors, portable or mobile, which has as its primary purpose the cooking of food for human consumption.

**Bicycle** has the same meaning as in the *Road Safety Road Rules 2017*.

**Building** includes a part of a building and the whole or any part of a structure, temporary building or structure, fence, gate, wall, pavement light, outbuilding, service installation, mast, pole and other appurtenance of a building.

**Building site** means **land** on which **building work** is being carried out or which is being prepared for **building work** to be carried out.

**Building work** includes any work for which a building permit is required under the *Building Act 1993* or equivalent legislation and includes any work with respect to the construction, alteration, renovation, demolition or removal of any building or structure.

**Bulk rubbish container** means a bin, skip or other container used for the deposit of waste, but excludes an approved **garbage bin** issued by **Council**.

**Busking** means to provide a form of public performance or entertainment for voluntary donations. Busking includes, but is not limited to: playing a musical instrument, singing recitations, conjuring or





performing magic, performing puppetry, pavement art, juggling, miming, dancing, other theatrical or visual performance.

**Camp** means using a **caravan**, tent, sleeping bag, vehicle, shipping container, shed or like structure for residential accommodation (either temporary or permanent) by a person.

**Caravan** includes a campervan, motor home, and moveable dwelling.

**Donation bin** means any bin for the purpose or apparent purpose of the collection of donated items.

**Child care centre** means a **building** located on either **Council land** or **private land** used by a **person** to care for 4 or more children under the age of 13 years, in the absence of their parents or guardians, for the payment of a fee or other consideration.

**Children's playground** means **Council land** set aside or used for the predominant purpose of a children's play area.

**Council** means Knox City Council.

**Council asset** means a physical item that is owned, maintained or controlled by **Council** and provides or contributes to the local amenity and/or the provision of physical services to the community, including but not limited to,:

- (a) **road**;
- (b) **drain**;
- (c) **drainage infrastructure**;
- (d) **street tree**;
- (e) **street sign**; or
- (f) **other property vested in or under the control of Council**.

**Council Land** means land, buildings and facilities, excluding a road, which is vested in, owned or occupied, managed or controlled by **Council**.

**Declared significant tree** means a tree declared by **Council** as a significant tree.

**Declared significant vegetation** means vegetation that is declared by **Council** as significant vegetation.

**Determine** or **Determined** includes decided or specified by the **Council**.

**Dilapidated** means a **building** which is in a state of significant disrepair or has deteriorated or fallen into a state of partial ruin as a result of damage, age, neglect, poor maintenance or misuse. This may be characterized by a state or condition of a **building** which, in the opinion of an **authorised officer**, has:

- (a) **Missing, broken or deteriorated exterior cladding; and/or**
- (b) **Deteriorated guttering or downpipes; and/or**
- (c) **Broken or missing windows, window-awnings, eave lining or doors; and/or**
- (d) **Missing or broken roofing; and/or**
- (e) **Graffiti on exterior walls or fences; and/or**
- (f) **Deteriorated internal gates and fences; and/or**
- (g) **Inadequate or no maintenance; and/or**



(h) Any other building condition in a state of significant disrepair or which is a detriment to the appearance of the surrounding area.

**Environmental Weed** means any weed that is **determined** by **Council** as an environmental weed.

**Event** means an organized recreational, cultural, commercial or social event or gathering of people, including a carnival, festival, street party, procession or any similar activity.

**Garbage Bin** means a bin supplied or approved by **Council** for the collection of garbage.

**Incinerator** means an outside structure, device or piece of equipment which is designed, adapted, used or capable of being used for the burning of any unwanted material or substance.

**Infringement Notice** means an infringement notice issued under the *Infringements Act 2006*.

**Large Bird** means any cockatoo or other bird of similar or larger size of any age but does not include poultry or pigeons.

**Local Law** means this *Amenity Local Law 2020*.

**Model aircraft** includes any remote controlled aeroplane, helicopter, drone or similar (excluding kites).

**Motoring assistance organisation** means an organisation established to provide or providing roadside mechanical assistance for the sole purpose of enabling the motorist to proceed with his or her journey or to move the vehicle to another location, and includes any operator of tow trucks or similar **vehicles**.

**Motorised toy vehicle** means any recreational **vehicle** which may be propelled or operated (including by remote control) by internal combustion, steam, gas, oil, electricity or any other power.

**Municipal District** means the municipal district of **Council**.

**Net Gain** means the where the overall gains are greater than overall losses for vegetation and habitat.

**Notice to Comply** is a written direction prepared in accordance with Clause 11.9 of this Local Law.

**Nuisance** includes any behavior or condition which is liable to be dangerous to health, offensive or injurious to personal comfort.

**Occupier** means the person or persons in charge, or having the management or control, of or legally entitled to occupy land (including premises) and includes, in relation to land which has a lot entitlement or lot liability in respect of common property, the Owners Corporation created on the registration of a Plan of Subdivision affecting that land.

**Owner** in relation to land means the person who is registered on the certificate of title as the owner of the land or the person who is or is entitled to exercise any rights of ownership of the land.

**Penalty Unit** has the same meaning as in section 110(2) of the *Sentencing Act 1991*.



**Permit** means a permit or approval, authorised or required under this **Local Law**, and issued in accordance with the provisions of this **Local Law**.

**Permit Holder** means a company, person or persons in whose name a **permit** has been issued.

**Person** includes a natural person, a corporation, an association incorporated under the *Association Incorporation Act 1981*, a partnership and an unincorporated association.

**Person in charge of building work** means:

- (a) a **person** in charge of a **building site**; or
- (b) a **person** who causes **building work** to be carried out on any **private land**; or
- (c) the person whose name appears on any building permit taken out on the subject **private land** where **building work** is to be undertaken; or
- (d) the owner of a **building site** or, if a company is the registered proprietor of the **building site**, each director of that company.

**Planning Scheme** means the Knox Planning Scheme.

**Poultry** means any chicken, ducks, geese, peacocks, pheasants, turkeys, bantam, squab, guinea fowls and anything similar of any age but excluding **roosters**.

**Private Land** means any land which is privately owned or occupied, and structures and fixtures on such land (excluding Council Land or land vested in the Crown).

**Property address** means the road name and street number allocated to a property within the **municipal district** and may include, where there are multiple tenements within a property or multiple properties at one street number, the use of lot or unit numbers.

**Public Place** has the meaning ascribed to it by the *Summary Offences Act 1966*

**Road** has the same meaning as in the *Local Government Act 1989*, namely:

- (a) a street;
- (b) a right of way;
- (c) any land reserved or proclaimed as a street or road under the *Crown Land (Reserves) Act 1978* or the *Land Act 1958*;
- (ca) a public road under the *Road Management Act 2004*;
- (d) a passage;
- (e) a cul de sac;
- (f) a by-pass;
- (g) a bridge or ford;
- (h) a footpath, bicycle path or nature strip; and
- (i) any culvert or kerbing or other land or works forming part of the road.

**Rooster** means a male fowl of any age.

**Shopping Trolley** means a wheeled container or vehicle supplied by a retailer used primarily for the transportation of goods or other items.

**Sign** includes any letter, figure, symbol, device, poster, sign, banner, electronic projection or message used for notifying:



- (a) the existence of the sale or use of any *goods* or services; or
- (b) the holding of an event or function; or
- (c) the promotion of any person, company, organisation, industry or thing.

**Site fencing** means a temporary or permanent fence around the entire perimeter of a **building site** at the commencement and for the duration of the **building works**:

- (a) at a height of not less than eighteen hundred (1800) millimetres;
- (b) capable of preventing litter from being transported from a **building site** by wind;
- (c) capable of preventing unauthorised persons accessing the **building site**; and
- (d) having not more than one access opening fitted with gates, which is located to correspond with the vehicle crossing for the **building site**.

**Site identification** means a sign that is at least six hundred (600) millimetres in height and four hundred (400) millimetres in length, is erected at the entrance to the **building site** and is clearly visible from the **road**, and includes on the sign the:

- (a) lot number, as described on the Certificate of Title relevant to the land and house number if available;
- (b) name of the owner, developer or builder responsible for the **building site**;
- (c) relevant building surveyor's contact name and phone number; and
- (d) twenty-four (24) hour contact telephone number or numbers for the owner, developer or builder responsible for the **building site**.

**Small Bird** means any budgerigar, canary, finch or other similar size or smaller bird (excluding poultry).

**Smoke** means to:

- (a) smoke, hold or otherwise have control over an ignited **tobacco product**; or
- (b) light a **tobacco product**.

**Smoke free area** means an area:

- (a) identified in Schedule 2 to this Local Law; or
- (b) determined to be a **smoke free area** in accordance with clause 8.6 of this Local Law.

**Street furniture** means tables and chairs, stools and benches, umbrellas, heater, planter box, wind frames (barriers) and other items associated with trading activities.

**Temporary Vehicle Crossing** means any material that is used to protect a **road**, kerb, channel or footpath while **building work** is being undertaken that has been constructed and maintained to the satisfaction of **Council**.

**Tobacco product** has the same meaning as in the *Tobacco Act 1987*.

**Unmanaged honeybee swarm** means a colony of honeybees hiving or swarming in an unmanaged capacity on **private land**.

**Unightly** means a state or condition characterized by the presence of one or more of the following features or similar features of a property, and that in the opinion of an **Authorised officer** the property has:

- (a) excessive waste; and/or
- (b) discarded, rejected, surplus or abandoned solid or liquid materials; and/or
- (c) an accumulation of building waste and materials; and/or



- (d) graffiti on exterior walls or fences; and/or
- (e) unregistered **vehicles**; and/or
- (f) disassembled or incomplete **vehicles**, excessive machinery, machinery parts or similar; and/or
- (g) excessive dead, diseased or dying vegetation; and/or
- (h) excessively long grass and/or weeds; and/or
- (i) a disused excavation; and/or
- (j) anything being built which is left incomplete or any other thing which is a detriment to the appearance of the surrounding area.

**Vehicle** has the same meaning as in the *Road Safety Road Rules 2017*, being:

- (a) a motor vehicle, trailer and tram, and
- (b) a bicycle; and
- (c) an animal-drawn vehicle, and an animal that is being ridden or drawing a vehicle; and
- (d) a combination; and
- (e) a motorized wheelchair that can travel at over 10 kilometres per hour (on level ground) – but does not include another kind of wheelchair, a train, a wheeled recreational device, a wheeled toy or an electric personal transporter.

**Vehicle Crossing** means a constructed surface for vehicular access to **private land** to the satisfaction of **Council**.

**Wheeled Toy** has the same meaning as in the *Road Safety Road Rules 2017*, being:

Means a child's pedal car, scooter (other than a motorised scooter) or tricycle or a similar toy, but only when it is being used only by a child who is under 12 years old.

**Wheeled recreational device** has the same meaning as in the *Road Safety Road Rules 2017*, being:

- Means a wheeled device, built to transport a person, propelled by human power or gravity (or in the case of a scooter, propelled by a person pushing one foot against the ground, or by an electric motor or motors, or by a combination of these), and ordinarily used for recreation or play, and –
- (a) includes rollerblades, rollerskates, a skateboard, a scooter that is not a motor vehicle, or similar wheeled device, but
  - (b) does not include a golf buggy, pram, stroller or trolley, or a bicycle, an electric personal transporter, a wheelchair or wheeled toy, or a scooter that is a motor vehicle.

- 1.13 Where a word or phrase has a particular meaning, other grammatical forms of that word or phrase have a corresponding meaning.



## Section B: Neighbourhood amenity and your property

### Part 2: Private land and neighbourhood amenity

**Introduction:** *This Part relates to the appearance and condition of private land and properties in the municipality, and includes properties that have been allowed to reach a dilapidated, unsightly or dangerous condition. This part also contains provisions to provide for clear signage of street numbers to assist in the management of the municipality and to assist emergency services.*

#### Condition of Private Land

- 2.1 An **owner** or **occupier** of **Private land** must ensure that the **Private land** does not constitute or is not likely to constitute a danger to health or property.
- 2.2 An **owner** or **occupier** of **Private land** must ensure that the **Private land** is not **unsightly** or detrimental to the general amenity of the neighbourhood in which it is located.
- 2.3 An **owner** or **occupier** of **Private land** must ensure that the **Private land** is not used in any manner so as to cause a **nuisance** or become detrimental to the amenity of the immediate area.

**Maximum Penalty: 20 Penalty Units**

#### Obstructions from private land

- 2.4 Without a **permit**, an **owner** or **occupier** of **Private land** must not allow any vegetation, sign, fence, structure or other thing on that **Private land** to:
  - (a) encroach over any **Council land** or **road** to a height less than 2.5 metres;
  - (b) encroach over any **road** comprising the **road** pavement for the traffic of **vehicles** to a height less than 5 metres; or
  - (c) obstruct the clear view of traffic controls by a person on the adjacent **road**, or substantially interferes with vehicle or pedestrian use of any **Council land** or **road** or with street lighting.
- 2.5 Without a **permit**, an **owner** or **occupier** of **Private land** must not encroach, place or allow to be placed any obstruction or other thing on **Council land** or **road**.

**Maximum Penalty: 20 Penalty Units**

#### Dilapidated buildings

- 2.6 An **owner** or **occupier** of **Private land** must not allow a **building** on that **private land** to become **dilapidated**.
- 2.7 The **owner** of a vacant **dilapidated** building must take all reasonable steps to secure the building from unauthorized access.
- 2.8 **Council** or an **authorised officer** may, by notice in writing, direct the **owner** or **occupier** of any vacant **dilapidated** building to:
  - (a) Erect; or
  - (b) Repair; or
  - (c) Replace; or
  - (d) Modify



fencing enclosing the vacant premises.

**Maximum Penalty: 20 Penalty Units**

**Storage and works on vehicles on Private Land**

- 2.9 Without a **permit**, a person must not on **private land** keep or do any work on a **vehicle** which is 7.5 metres or more in length or 4.5 tonne or more in gross vehicle mass.

**Maximum Penalty: 20 Penalty Units**

**Temporary accommodation on private land**

- 2.10 Without a **permit**, an **owner** or **occupier** of **private land** must not occupy or allow another person to occupy a **caravan** or similar vehicle, tent or any other temporary or makeshift structure on **private land** for more than three weeks in any one calendar year.

**Maximum Penalty: 20 Penalty Units**

**Property numbers**

- 2.11 Council may allocate a **Property Address** to each land in the municipal district and, from time to time, may make changes to property addresses.
- 2.12 For each property that has been allocated a **Property Address** under clause 2.15, the owner must mark the **private land** with the street number allocated, which number must be of sufficient size, in such a position, made of such material and kept in such state of repair as to be clearly readable from the **Road**, which the **private land** fronts, under all normal lighting conditions.
- 2.13 An **owner** or **occupier** must not use an address other than the **Property Address** for the **private land**.

**Maximum Penalty: 20 Penalty Units**

**Noise**

- 2.14 An occupier of land or the person in charge of a vehicle must not emit or allow to be emitted any excessive noise from that land.
- 2.15 An owner and occupier of any land and any person in charge of a vehicle must comply with any relevant 'Noise Control Guidelines' produced by the Environment Protection Authority which 'Noise Control Guidelines' form part of this Local Law.
- 2.16 Nothing in clause 2.15 applies to any noise to which the *Environment Protection Act 1970* applies.

**Maximum Penalty: 20 Penalty Units**

**Intruder Alarms**

- 2.17 An **owner** or **occupier** of **private land** must not install or permit to be installed or cause to be retained in an active state; at or upon that private land, any alarm which emits a noise audible beyond the boundary of the land, unless the alarm is so constructed or regulated as to ensure that:
- (a) whenever a detection device is activated, the intruder alarm is automatically rendered inaudible beyond the boundary of the land within ten (10) minutes of it being activated; and
  - (b) the intruder alarm cannot re-activate until the device has been re-set.

**Maximum Penalty: 20 Penalty Units**



### Part 3: Private land and the environment

**Introduction:** *This Part contains provisions which aim to preserve the environment in the municipality, for a range of matters that are not already regulated for by other legislation.*

#### Environmental Weeds

- 3.1 The **Council** may **determine** any type of vegetation to be an environmental weed to which this Local Law applies.
- 3.2 An **owner** or **occupier** of **private land** of 2 hectares or less must not allow or permit the **private land** to support the growth of any **environmental weed** determined under clause 3.1.

**Maximum Penalty: 20 Penalty Units**

#### Tree and Vegetation Protection

- 3.3 Without a **permit**, a person must not cut, trim, lop, prune or allow to be cut, trimmed, lopped or pruned on any land a **declared significant tree** or **declared significant vegetation**.
- 3.4 The existence of any **declared significant tree** or **declared significant vegetation** declared must be included on any Land Information Certificate issued in respect of the relevant **private land** in accordance with the *Local Government Act 1989*.
- 3.5 Any person found guilty of an offence under clause 3.3 may be required by Council to provide restitution of vegetation based on a **net gain** principle.
- 3.6 Any person subject to a requirement under clause 3.5 must satisfy that requirement.

**Maximum Penalty: 20 Penalty Units**

#### Open air burning

- 3.7 Without a **permit**, a **person** must not light a fire or allow a fire to remain alight in the open air.
- 3.8 Clause 3.7 does not apply to:
  - (a) a tool of trade;
  - (b) a **barbeque** or similar for the purposes of cooking food for human consumption;
  - (c) a brazier, chiminea or small receptacle built for containing a fire for the purposes of personal heating; or
  - (d) a person authorised to engage in an activity for or on behalf of a public authority. providing that no nuisance is caused by the emission of smoke, soot, ash or odours.
- 3.9 A person who has lit or allowed a fire to remain alight contrary to clause 3.7 or any conditions in a permit, must extinguish the fire immediately on being directed to do so by an **authorised officer**.
- 3.10 No **permit** to burn will be issued during a declared fire danger period.
- 3.11 An **owner** or **occupier** of **private land** must not construct, erect, install, allow to remain, use or permit to be used an **incinerator** on any **private land**.

**Maximum Penalty: 20 Penalty Units**





### Pests on private land

- 3.12 An **owner** or **occupier** of **private land** must, upon becoming aware of the existence of an **unmanaged honey bee swarm** on that **private land**, take immediate steps to cause the hive or swarm to be removed.
- 3.13 An **owner** or **occupier** of **private land** must, upon becoming aware of the existence of a wasp nest on that **private land**, take immediate steps to cause the nest to be destroyed.
- 3.14 An **owner** or **occupier** of **private land** must, upon becoming aware of the existence of rats or mice on that **private land**, take immediate steps to:
- (a) destroy any rats or mice on that land; and/or
  - (b) remove or rectify any conditions on the **private land** which are conducive to the harbouring, breeding or feeding of rats and mice.
- 3.15 Any **person** who is given a direction under clause 3.14 must comply with that direction.
- 3.16 Clause 3.14 does not apply to:
- (a) rats or mice bred or kept exclusively for research, scientific or educational purposes; or
  - (b) rats or mice bred or kept exclusively as domestic pets.

**Maximum Penalty: 20 Penalty Units**

### Council waste services

- 3.17 A **person** who contravenes Council's *Use of Waste Collection Services Policy* is guilty of an offence.

**Maximum Penalty: 20 Penalty Units**

### Non-Council waste services

- 3.18 Where an **owner** or **occupier** of **private land** uses a non-Council managed waste collection service in respect to that **private land**, the:
- (a) service provided must be at a standard and frequency equivalent to that provided by Council; and
  - (b) bin/ receptacle must be kept in a clean and sanitary condition; and
  - (c) bin/ receptacle must not be stored or used in any manner so as to cause a nuisance or become detrimental to the amenity of the immediate area.
- 3.19 When a planning permit requires the development of a waste management plan, the **owner** of the **private land** must ensure that the waste services and other stated obligations in respect of that **private land** are provided in accordance with the waste management plan approved by **Council**.

**Maximum Penalty: 20 Penalty Units**

### Commercial or Trade waste

- 3.20 Without a **permit**, a **person** must not place out for collection a commercial or trade waste bin/ container on a **Road** or **Council Land**.
- 3.21 Where an **owner** or **occupier** of **Private Land** has or stores commercial or trade waste on that **Private Land**, the:
- (a) bin/ container and the surrounding area must be kept in a clean and sanitary condition; and



- (b) commercial waste must be regularly removed, at the frequency required to ensure that the container is not overflowing; and
- (c) bin/ container must be labelled with the address of the property, in accordance with a direction by an **authorised officer**; and
- (d) label on the bin/ container must be maintained and be clearly readable from the **Road**, which the **Private Land** fronts, under all normal lighting conditions.

3.22 Any **person** to whom a direction is given under 3.21(c) must comply with that direction.

3.23 A **person** must not place commercial or trade waste:

- (a) in a public litter bin;
- (b) in a public recycle bin;
- (c) on a hard-waste collection pile;
- (d) in a Council supplied bin that is for the purpose of residential collection;
- (e) in a Council supplied bin that is for commercial collection, for a property they do not own or occupy.

**Maximum Penalty: 20 Penalty Units**



## Section C: Keeping of Animals

### Part 4: Animals

*Introduction: This Part contains provisions which aim to ensure that any animals kept on private land do not cause a nuisance or adverse impact on the amenity of the area.*

#### Limits on number of animals kept

- 4.1 An **owner** or **occupier** of the land, the area of which is less than or equal to 4,000 square metres must not, without a **permit**, keep or allow to be kept on **private land** any more in number for each animal than is set out in the following table:

Type of Animal	Number
Dogs	Two (2)
Cats	Two (2)
Poultry	Five (5)
Rooster	Not permitted
Small birds	Twenty Five (25)
Large Birds	Five (5)
Ferrets, Guinea Pigs, Rabbits or Rodents	Five (5)
Other animals not listed (including agricultural animals)	Permit required (0)

- 4.2 Clauses 4.1 does not apply if the number or type of animals are permitted under the Knox Planning Scheme.
- 4.3 Unless specifically permitted under a Planning Scheme applicable to the land or an Act, a person must not, keep a **rooster** on any land.

#### Maximum Penalty: 20 Penalty Units

#### Animal Housing

- 4.4 The owner of an **animal** and the **owner** or **occupier** of the land on which the **animal** is housed or the **animal housing** is kept must ensure that the **animal housing**:
- is constructed or altered to the satisfaction of an **authorised officer** with adequate roofing, flooring and drainage;
  - is maintained in a clean and sanitary condition;
  - provides adequate shelter for the number of and welfare needs of the animal;
  - is maintained in good repair so as to not cause nuisance to neighbouring properties;
  - is located at a distance from neighbouring properties and dwellings that is to the satisfaction of an **authorised officer**;
  - is kept clear of materials which may harbour vermin.
- 4.5 The owner of an **animal** and the **owner** and **occupier** of the land on which the **animal** is housed must ensure that animal food is stored as to prevent access by vermin or insects, to the satisfaction of an **authorised officer**.



**Maximum Penalty: 20 Penalty Units**

**Removal of Animal Waste**

- 4.6 A person in charge of an **animal** on a **Council land or road** must carry a facility for the effective removal of any waste that may be deposited by that animal.
- 4.7 A person in charge of an **animal** on a **Council land or road** must collect from the **Council land or road** and appropriately dispose of any waste deposited by that animal.

**Maximum Penalty: 20 Penalty Units**

**Animal noise and odour**

- 4.8 The owner of an **animal** and the **owner** and **occupier** of the **private land** on which the **animal** is housed must not allow noise or odour to emanate from the **animal** as to cause a **nuisance**.
- 4.9 Clause 4.8 does not apply to any to any class of animal where another Act or legislation applies.

**Maximum Penalty: 20 Penalty Units**

**Nuisance caused by feeding animals**

- 4.10 If the feeding of an uncaged bird and/or **animal** by a **person** is causing a **nuisance** or damage to property, an **authorised officer** may direct the person to cease feeding the bird and/or **animal**.
- 4.11 Any person who is given a direction under clause 4.10 must comply with that direction.

**Maximum Penalty: 20 Penalty Units**



## Section D: Use of Council Land & Roads

### Part 5: Use of Council land and Roads

*Introduction: This Part contains provisions to protect the amenity of **Council land** or **Roads** through controls prohibiting persons from causing damage to, or acting in a socially unacceptable manner on **Council land** or **Roads**.*

#### Behaviour on Council Land and Roads

- 5.1 A person must not behave in a **Council land** or **Road** in such a manner as to interfere with another person's reasonable use of that **Council land** or **Road**.
- 5.2 A person must not behave in a **Council land** or **Road** in such a manner as to endanger or be likely to endanger a person's health or life, property, or an animal.
- 5.3 A **person** must comply with any **sign** erected on **Council Land** or **Road** by **Council**.

**Maximum Penalty: 20 Penalty Units**

#### Camping on Council land

- 5.4 Without a **permit**, a person must not **camp** in or on any **Council land** or **road**.

**Maximum Penalty: 20 Penalty Units**

#### Obstructions on Roads and Council land

- 5.5 Without a **permit**, a person must not place or permit to be placed or allow to remain on a **Road** or **Council land**:
  - (a) a **bulk rubbish container**; or
  - (b) a shipping container; or
  - (c) a **donation bin**; or
  - (d) any other thing.

**Maximum Penalty: 20 Penalty Units**

#### Shopping Trolleys

- 5.6 A person must not leave a **shopping trolley** on a **Road** or **Council land**, except in an area designated for the leaving of shopping trolleys.
- 5.7 The owner of a **shopping trolley** must ensure that their or their name and trading name are clearly marked on the shopping trolley.
- 5.8 The owner of **shopping trolley** must not allow the shopping trolley to be left on a **Road** or **Council land**, except in an area designated for the leaving of shopping trolleys.

**Maximum Penalty: 20 Penalty Units**



#### Use of Toy Vehicles or Aircraft

- 5.9 A person must not use or allow to be used a **wheeled toy, wheeled recreational device, motorised toy vehicle or model aircraft** on a **Road or Council land** so as to endanger, intimidate or unduly obstruct any other person or **vehicle** lawfully using or intending to use the same area, or damage property.
- 5.10 The **Council** may **determine** a **Road or Council land** in which the use of a **wheeled toy, wheeled recreational device, motorised toy vehicle or model aircraft** is prohibited, where it considers that the use of these items is reasonably likely to cause physical damage to infrastructure, or would prevent the free passage of other users of the **Road or Council land**, or damage property.

**Maximum Penalty: 20 Penalty Units**

#### Fireworks on Council land and Roads

- 5.11 Without a **permit**, a person must not discharge or cause or allow to be discharged any fireworks on a **Road or Council land**.

**Maximum Penalty: 20 Penalty Units**

### Part 6: Vehicles on Council land or Roads

*Introduction: This Part contains provisions regarding the placement of vehicles on Council land or Roads, for matters that are not already regulated for by other legislation.*

#### Vehicles on Council land and Roads

- 6.1 Without a **permit**, a person must not use, or allow to remain, any **vehicle** on any **Council land or Road** unless set aside for vehicle parking or is a designated roadway.

**Maximum Penalty: 20 Penalty Units**

#### Repairing vehicles

- 6.2 Subject to clause 6.3, a person must not paint, service, dismantle or repair a **vehicle** on a **Road or Council Land**.
- 6.3 Clause 6.5 does not apply to a minor repair being undertaken by a **motoring assistance organisation** to enable the immediate removal of the **vehicle**.

**Maximum Penalty: 20 Penalty Units**



## Part 7: Trading, fundraising and promotional activities on Council land or Roads

*Introduction: This Part contains provisions relating to commercial, fundraising and promotional activities on Council Land and roads. It establishes a permit system to regulate these activities, and aims to enhance the appearance and safety of streets and public places by controlling the placement of items on Council land and roads. It contains provisions which aim to manage and facilitate responsible trading, entertainment and promotional activities on Council land and roads - to ensure the free passage and use of these areas by all users of these areas, and to maintain the amenity of the neighbourhood.*

### Activities on Council Land or Roads

- 7.1 Without a **permit**, a person must not, or cause or authorise another person to, on or above a **Road** or **Council Land**:
- (a) display or sell any goods or services;
  - (b) place out, or affix to anything, any **sign**;
  - (c) place any **street furniture** or associated items;
  - (d) place any structure for the purpose of selling, promoting or offering to sell any goods or services;
  - (e) sell or trade, or offer for sale or trade, or display to give away, any:
    - (i) **vehicle**; or
    - (ii) goods or services carried about or placed on the person or any other movable thing.

**Maximum Penalty: 20 Penalty Units**

### Election signage

- 7.2 Without a **permit**, a **person** must not place a **sign** promoting a candidate or political party associated with a local, state or federal election on a **Road** or **Council Land**.
- 7.3 Election signs subject to clause 7.2 will be considered in accordance with the following criteria:
- (a) signs are placed in accordance with the conditions and at pre-approved locations **determined by Council**; or
  - (b) signs at other locations not included in clause 7.3(a) are subject to site-specific review and approval by an authorised officer.
- 7.4 Election signage on a **Road** or **Council Land** must not be displayed longer than:
- (a) 14 days after the election is held; and
  - (b) 3 months prior to the day of the election.
- 7.5 The placement of election signage must not:
- (a) create a danger to any person or property or damage **Council land** or **Road**; or
  - (b) interfere with a persons reasonable use or obstruct a **Council land** or **Road**.

Note: The placement of signage must comply with all relevant State and Federal laws. Non compliant signage may be impounded or directed to be removed by an **authorised officer** under section 11 of this Local Law. Election signage may include information about a candidate for an election.

**Maximum Penalty: 20 Penalty Units**



### Appeals and Collections

- 7.6 Without a **permit**, a person must not or authorise another person to solicit or collect on any **Road** or **Council land** any money, items or subscriptions for any purpose.
- 7.7 Without a **permit**, a person must not or authorize another person to hand out or distribute any handbill, placard, notice, pamphlet, book, paper, advertising material or similar thing, on any **Road** or **Council land**.
- 7.8 Without a **permit**, a person must not or authorize another person to erect or place on any **Road** or **Council land** any vehicle, caravan, trailer, table, stall or similar structure for the purpose of selling or offering for sale any goods or services or conducting a raffle or lottery.

**Maximum Penalty: 20 Penalty Units**

### Commercial Filming and Photography on Council land

- 7.9 Without a **permit**, a person must not conduct any filming or photography for commercial purposes, public exhibition or purposes associated with formal study, which involves the placement or use of a tripod, other equipment or items or vehicles on any **Council land** or a **Road**.

Note: The Council will take into account the *Filming Approval Act 2014* in considering an application for a **permit** under clause 7.9.

**Maximum Penalty: 20 Penalty Units**

### Event on Council land

- 7.10 Without a **permit**, a person must not organise or conduct a function, **event**, **busking** or entertainment on any **Road** or **Council land** that:
- (a) substantially occupies the **Road** or **Council land**; or
  - (b) encroaches or impacts or is likely to encroach or impact, on another person's use and enjoyment of the **Road** or **Council land**.

**Maximum Penalty: 20 Penalty Units**

## Part 8: Alcohol and Smoking on Council land and Roads

*Introduction: This Part provides controls, related to the smoking of tobacco and consumption of alcohol, to achieve responsible management of Council land or Roads so as to enhance the enjoyment of these areas by the community.*

### Alcohol

- 8.1 Without a **permit**, a person must not consume **alcohol** or have in their possession alcohol in an open container in on **Council land** or **Road**, except at the times and in the places **determined** by Council.
- 8.2 Where an **authorised officer** or Victoria Police officer reasonably believes that a person has contravened or is contravening clause 8.1, the authorised officer may direct that person to:
- (a) empty any open container containing **alcohol** or reseal that open container; or
  - (b) surrender any open container containing alcohol to the **authorised officer** or Victoria Police officer.





- 8.3 Clause 8.3 does not apply to a person in a licenced premises or authorised premises under the *Liquor Control Reform Act 1998*.

**Maximum Penalty: 20 Penalty Units**

#### Smoking in a Smoke-free area

- 8.4 A **person** must not **smoke** a **tobacco product** in a **smoke free area**.
- 8.5 Where an **authorised officer** believes on reasonable grounds that a **person** is contravening or has contravened clause 8.4, the **authorised officer** may direct the **person** to extinguish and then dispose of the **tobacco product**.
- 8.6 In addition to the smoke-free areas identified in Schedule 2 of this Local Law, the Council may determine, by resolution, any other area within the municipality to be a smoke free area.

**Maximum Penalty: 20 Penalty Units**



## Section E: Protection of Council Land & Assets

### Part 9: Council Assets, Trees and regulating Building Sites

*Introduction: This Part protects Council land and assets, including drains, vehicle crossings and Council trees and plants. These provisions establish a system of Asset Protection Permits, as a means of regulating building work which has potential to damage Council land or assets.*

#### Building Management

##### Asset Protection Approval

- 9.1 Prior to commencing or causing or allowing **building works** on **land**, the **owner** of **private land** must not commence or cause or allow **building works** on that **private land** without obtaining an **asset protection approval**.
- 9.2 An **asset protection approval** will require the payment of an asset protection fee and may, if required by **Council**, contain conditions that:
- (a) require works to be done on or around the **building site** to protect any **Council asset**, the health and safety of the public, the environment and the amenity of the area or to be in accordance with the relevant legislative framework; and/or
  - (b) require entry to and exit from the **building site** only at designated locations; and/or
  - (c) address any other matter referred to in this Part.

##### Notification upon completion of Building Works

- 9.3 The **owner** must advise **Council** within 7 days of completion of all **building works** covered by the **Asset Protection Approval** that such works are complete and ready for inspection by an **Authorised Officer**, to enable a final inspection by **Council** and assessment of any damage to any **Council Asset** that has occurred while the **Asset Protection Permit** is in place.

##### Inspection of Council assets

- 9.4 As soon as practicable after receiving notice of completion of the **building works**, **Council** will undertake an inspection of **Council assets** to determine damage to **Council assets**.
- 9.5 If, as a result of any inspection under Clause 9.1 and 9.4 damage has been caused to any **Council asset** as a result of the execution of the **building works** the subject of the **Asset Protection Approval**, **Council** may direct the owner of the **building site** to repair the damage at the owner's cost, to the satisfaction of **Council** and within a period of not more than twenty eight (28) days; and/or
- 9.6 If repair of any damaged **Council asset** is required under Clause 9.3, the owner must carry out the repairs to the satisfaction of, and within the timeframe specified by **Council**.
- 9.7 A person in charge of **building work** must ensure and provide the following:
- (a) an onsite and functioning toilet facility;
  - (b) access for the emptying and collection of temporary toilet facilities;
  - (c) a maintenance program so that there are no offensive odours or any adverse visual impact on neighbouring properties from the toilet facility;
  - (d) waste produced as a result of **building works** on the **building site** is:



- i. contained entirely within the **building site**;
  - ii. stored in a manner that does not attract the depositing of waste from sources other than the site;
  - iii. stored in a manner that does not cause detriment to the visual amenity of the area in which the **building site** is located; and
  - iv. disposed of regularly, and, where that waste is in the form of stormwater, to a legal point of discharge.
- (e) a litter container with lid of sufficient size;
  - (f) emergency contact details clearly displayed;
  - (g) a temporary or permanent fence to a minimum height of 1.8 metres that is fully contained within the land, that secures the land and is to the satisfaction of Council; and
  - (h) a temporary or permanent fence where gates or access points in the fence open onto the land; and
  - (i) the building site is provided with clearly legible and clean site identification.

9.8 A **person in charge of building work** must also:

- (a) undertake all approved **building work** on the **building site** unless otherwise directed by **Council**;
- (b) store all building related material on the **building site**;
- (c) place all litter capable of being blown from the **building site** in a suitable litter container;
- (d) prevent any sediment, mud, erosion, potential stormwater pollutants or other site run off from leaving the **building site**;
- (e) manage any dust or air pollutants from the **building site** to minimise **nuisance**;
- (f) ensure **vehicle** access to the **building site** is via a **vehicle crossing** or a **temporary vehicle crossing**;
- (g) ensure that for the duration of the **building works** the **vehicle crossing** or **temporary vehicle crossing** is maintained in a clean and safe manner for **vehicles** and pedestrians;
- (h) not allow any vehicle to deposit any mud, sediment, slurry or similar material from the **building site** in any public place; and
- (i) ensure that **building works** on the **building site** does not render pedestrian or vehicular traffic in the immediate area unsafe.

**Maximum Penalty: 20 Penalty Units**

#### Soil Stockpiles

9.9 The owner of a **building site** must ensure that soil that is stripped from the **building site** is stockpiled on the **building site** for re-use or is transported to a legal place of disposal.

**Maximum Penalty: 20 Penalty Units**

#### Amenity Controls

9.10 The **owner** or **person in charge of building work** must ensure that activities on the **building site** (including **building works**) do not damage or cause detriment to the natural or built environment in which the **building site** is located.

9.11 An **owner** or **person in charge of building work** must manage any dust or air pollutants from the **building site** to minimise detriment to the amenity of the area.

**Maximum Penalty: 20 Penalty Units**



### Drains

- 9.12 The **owner** or **person in charge of building work** must ensure that **building works** on the **building site** do not cause detriment to any **Council asset**.
- 9.13 For the purposes of Clause 9.12 detriment to a **Council asset** occurs if:
- (a) material, equipment, litter, waste, mud, silt, sand or another product emanating from **building works** enters or interferes with the **Council asset**; or
  - (b) there is any alteration to or interference with a **Council asset** for which a **permit** has not been issued.
- 9.14 The **owner** or **person in charge of building work** must ensure that the **building site** is provided with sediment/fencing barriers that ensure the retention of silt and soil on site, and the retention of other water borne particles and pollutants for later transportation to a legal place of disposal.

**Maximum Penalty: 20 Penalty Units**

### Vehicle crossings

- 9.15 Without a **permit**, an **owner** or **occupier** of **Private land** must not install, construct, alter or reconstruct a **vehicle crossing**, whether permanent or temporary, or authorise another **person** to do so.
- 9.16 Each point of **vehicle** access from any **private land** to a **road** must have a properly constructed and maintained **vehicle crossing** approved by **Council**.
- 9.17 Without a **permit**, an **owner** or **occupier** of **Private land** must not allow any **vehicle** to enter or leave any **private land** except in accordance with clause 9.16.
- 9.18 **Council** or an **authorised officer** may direct:
- (a) the construction of a temporary vehicle crossing or **vehicle crossing**; or
  - (b) the repair or reconstruction of a temporary vehicle crossing or **vehicle crossing**; or
  - (c) the removal of a redundant temporary vehicle crossing or **vehicle crossing**, and the reinstatement of any kerb, channel, footpath or other area to the satisfaction of Council by the **owner** or **occupier** of any adjacent land at his or her cost.
- 9.19 An **owner** or **occupier** of **private land** to whom a direction is given under clause 9.18 must comply with that direction.

**Maximum Penalty: 20 Penalty Units**

### Defacing/ Damaging Council Land and Assets

- 9.20 Without a **permit**, a person must not destroy, damage, deface, remove or interfere with:
- (a) **Council land** or **road**;
  - (b) any building, structure or infrastructure or any other thing on a **Council land** or **Road**;
  - (c) anything belonging to **Council** on **Council land** or **road** or in a **public place** unless allowed by Council, whether under this **Local Law** or otherwise; and
  - (d) any **Council** property or **Council assets** located on or in any **Council land** or **Private land**.
- 9.21 A **person** must not authorise or engage any other person to undertake any of the activities in clause 9.20.

**Maximum Penalty: 20 Penalty Units**



#### Trees and Plants on Council land and Roads

9.22 Without a **permit**, a **person** must not remove, lop, destroy, damage or interfere with any tree or plant on a **Council land** or **road**, or authorise another person to do so.

**Maximum Penalty: 20 Penalty Units**



## Section F: Administration

### Part 10: Permits

*Introduction: This Part outlines the process for obtaining and retaining permits under the Local Law. This part also provides for the requiring a security bond if required by Council.*

#### When is a permit required under this Local Law?

- 10.1 Where in this **Local Law** a **person** is prohibited from doing a thing “without a permit”, a **person** who does the thing which is prohibited to be done without first obtaining a **permit** from the **Council** under this Part is guilty of an offence.

#### **Maximum Penalty: 20 Penalty Units**

#### Permit Application and fees

- 10.2 An application for a permit under this Local Law must be in a form approved by Council and accompanied by any fee fixed by Council in accordance with clause 10.6.
- 10.3 The **Council** may require the applicant to give notice of the application for a **permit** in the manner **determined** by the **Council**.
- 10.4 The **Council** may require an applicant to provide it with more information before it deals with the application for a **permit**.
- 10.5 A **permit** issued under this Local Law is non-transferrable to any other **person**. If a business changes ownership, the permit will cease and an application for a new permit will be required.

#### Fees and Charges

- 10.6 **Council** may from time to time, by resolution, determine:
- (a) the quantum of any permit fee, asset protection fee, charges, guarantee or bond to apply under this **Local Law**; and
  - (b) an administrative, inspection or processing fee or charge in addition to a standard fee, charge, guarantee or bond applying under this Local Law.
- 10.7 In determining a fee or charge, **Council** may establish a system or schedule of fees and charges, including a minimum or maximum fee of charge, if it considers it appropriate to do so.
- 10.8 **Council** may waive, reduce, alter or refund, in whole or in part, any fee, charge, bond or guarantee with or without conditions.

#### Duration of permit

- 10.9 Except where expressly stated in this Local Law or in a **permit**, a **permit** operates from the date it is issued and expires one year after the date of issue.



### Correction of permits

- 10.10 The **Council** may correct a **permit** if that **permit** contains:
- (a) an unintentional error or an omission; or
  - (b) a material miscalculation or a material mistake in the description of a **person**, thing or property.
- 10.11 The **Council** must notify a **permit** holder in writing of any correction under clause 10.10.

### Granting and refusal of a *permit*

- 10.12 **Council** may decide to:
- (a) issue a **permit**; or
  - (b) issue a **permit** subject to conditions; or
  - (c) refuse to issue a **permit**.
- 10.13 Where a **permit** has been issued subject to conditions under clause 10.12, a **person** who does not comply with the conditions of the **permit** is guilty of an offence.
- 10.14 In determining whether to issue a permit and, if a permit is to be issued, the scope and conditions that will apply to it, Council may take into account the following where relevant:
- (a) the health and safety of the public;
  - (b) the amenity of the municipal district;
  - (c) the impacts on other persons or their property;
  - (d) the extent to which the granting of the permit might affect the activities or enjoyment of another person or group;
  - (e) the need to protect Council or Service Authority assets or infrastructure from damage;
  - (f) legislative and policy directives of the Commonwealth and State Governments;
  - (g) the need for work to occur which is authorised by Commonwealth or State Government legislation, or by Council or a Service Authority; and
  - (h) any relevant Council policies and guidelines; and
  - (i) any submission or comments that may be received in respect of the application.
- 10.15 Where Council has refused to issue a **permit**, the person seeking the Permit has twenty-eight (28) days from the date of Council's notice of refusal of permit under clause 10.12, to provide written reasons to Council as to why the Permit should not be refused.
- 10.16 If a written submission is received by Council under Clause 10.15 within the twenty-eight (28) day or other period, the information provided shall be considered, and if applicable the person seeking the **permit** will be given an opportunity to be heard by Council or Council's delegate and any such verbal submissions have also been considered.

### Maximum Penalty: 20 Penalty Units

### Cancellation of a permit

- 10.17 **Council** may cancel a **permit** if it considers that:
- (a) there has been a serious or ongoing breach of the conditions of the **permit**; or
  - (b) a **Notice to Comply** has been issued, but not complied with after the time specified in the **Notice to Comply**; or
  - (c) there was a significant error or misrepresentation in the application for the **permit**; or
  - (d) in the circumstances, the **permit** should be cancelled.



### Security Bonds

- 10.18 In deciding to grant a **permit**, **Council** may require the applicant to lodge with Council a **security bond** in such amount and in such a manner as **Council** determines.
- 10.19 In the event of a breach of the **permit** conditions of this Local Law, **Council** may retain an amount of the **security bond** as is necessary to remedy that breach and repair any damage caused by that breach.
- 10.20 Upon expiry of a permit, **Council** must release any remaining **security bond** to the person who paid it.
- 10.21 If after 12 months from the date that the **security bond** would be released under clause 10.20, **Council** cannot locate a person entitled to the release of any **security bond** or remaining security bond, **Council** may retain the **security bond** or remaining **security bond** and pay the money into its general revenue.





## Section G: Enforcement

### Part 11: Compliance and enforcement of the Local Law

*Introduction: This Part provides a means for enforcing this Local Law and powers to impound and serve Notices to Comply to seek compliance.*

#### Offences

- 11.1 A **person** who:
- (a) fails to comply with this Local Law; or
  - (b) fails to comply with a condition of a **permit**; or
  - (c) fails to do anything directed to be done under this Local Law; or
  - (d) knowingly provides erroneous, inaccurate or misleading information in an application for a *permit*; or
  - (e) refuses or fails to obey directions of an **authorised officer** to leave the **Council land** or **Road** where in the opinion of that **authorised officer** the person has failed to comply or is failing to comply with this Local Law; or
  - (f) fails to comply with a sign erected by the **Council**,
- is guilty of an offence.

#### Offences by Corporations

- 11.2 If a **person** charged with an offence against this Local Law is a corporation, any **person** who is concerned or takes part in the management of that corporation may be charged with the same offence.
- 11.3 If the corporation is convicted of an offence against this Local Law, a **person** charged under clause 11.2 with the same offence may also be convicted of the offence and is liable to the penalty for that offence unless that **person** proves that the act or omission constituting the offence took place without his or her knowledge or consent.

#### Infringement notices

- 11.4 Where an **Authorised Officer** reasonably believes that a person has committed an offence under this Local Law, the **Authorised Officer** may serve on that person an infringement notice.
- 11.5 The fixed penalty in respect of an infringement notice is the amount set out in the Schedule 1 to this Local Law. For offences not specified in Schedule 1, the infringement penalty for that offence will be 20% of the maximum penalty for that offence.

#### Penalties

- 11.6 A **person** guilty of an offence against this **Local Law** is liable to a penalty:
- (a) not exceeding 20 penalty units; and
  - (b) for a continuing offence, not exceeding 2 penalty units for each day after a finding of guilt or conviction for an offence during which the contravention continues.

#### Notice to Comply and directions

- 11.7 A **person** who fails to comply with a direction of an **authorised officer** is guilty of an offence.



- 11.8 An **authorised officer** may serve a **Notice to Comply** under this clause on a **person** who the **authorised officer** reasonably suspects to be in breach of this Local Law.
- 11.9 A **Notice to Comply** under clause 11.8 must be in writing and in a form approved by the **Council**.
- 11.10 A **Notice to Comply** under clause 11.8 may do one or more of the following things:
- (a) direct the **person** to comply with this Local Law;
  - (b) direct the **person** to stop the conduct which constitutes the breach of this Local Law;
  - (c) direct the **person** to deliver up to the **authorised officer** or to some specified person or some specified location any item or property of the **person** which constitutes the breach of this Local Law;
  - (d) direct the **person** to remove or cause to be removed any item, goods, equipment or other thing that constitutes a breach of this Local Law;
  - (e) direct the **person** to leave an area within the time specified in the notice that constitutes a breach of this Local Law.
- 11.11 A **Notice to Comply** under clause 11.8 must specify the time and date by which the **person** specified in the **Notice to Comply** must comply with the directions in clause 11.10.
- 11.12 The time required by a **Notice to Comply** under clause 11.11 must be reasonable in the circumstances having regard to:
- (a) the amount of work involved; and
  - (b) the degree of difficulty; and
  - (c) the availability of necessary materials or other necessary items; and
  - (d) climatic conditions; and
  - (e) the degree of risk or potential risk; and
  - (f) any other relevant factor.
- 11.13 Any **person** served with a **Notice to Comply** under this Local Law who fails or refuses to comply with it is guilty of an offence.

**Maximum Penalty: 20 Penalty Units**

**Power of authorised officer to act in urgent circumstances**

- 11.14 Any **authorised officer** may in urgent circumstances arising as a result of a failure to comply with this Local Law, take action to remove, remedy or rectify a situation provided:
- (a) he or she considered the circumstances or situation to be sufficiently urgent and that the time involved or difficulties associated with the serving of a **Notice to Comply**, may place a **person**, **animal**, property or thing at risk or in danger; and
  - (b) details of the circumstances and remedying action are forwarded as soon as practicable to the **person** on whose behalf the action was taken.
- 11.15 The action taken by an **authorised officer** under clause 11.14 must not extend beyond what is necessary to cause the immediate abatement of or to minimise the risk or danger involved.

**Power of authorised officer to confiscate and impound**

- 11.16 Where a **person** owning or responsible for items, goods, equipment, **bicycle** or other property or thing has:
- (a) failed to obtain a **permit** or placed items out in breach of permit conditions; or
  - (b) ignored a direction from an **authorised officer** to remove the items,
  - (c) any item in breach of the local law
- the items, goods, equipment, **bicycle** or other property or thing may be confiscated and impounded.



- 11.17 If an **authorised officer** has confiscated anything in accordance with this Local Law, the **Council** may refuse to release it until the appropriate fee or charge **determined** by the **Council** for its release has been paid to the **Council**.
- 11.18 If the owner or the person responsible for the confiscated items can be identified, as soon as it is reasonably practicable to do so, the **authorised officer** must serve a written notice in a form that is **determined** by the **Council** from time to time on the **owner** or **person** responsible for the confiscated item setting out the fees and charges payable and time by which the item must be retrieved.
- 11.18 If after the time required in a notice a confiscated item is not retrieved, an **authorised officer** may take action to dispose of the confiscated item according to the following principles:
- (a) where the item has no saleable value, it may be disposed of in the most economical way; and
  - (b) where the item has some saleable value the item may be disposed of either by tender, public auction or private sale but failing sale may be treated as in sub-clause (a);
  - (c) where the **owner** has advised the **Council** in writing that the **Council** may dispose of the goods because he or she does not intend to retrieve them, the **Council** may dispose of them by the method identified in sub-clauses (a) and (b).

## Part 12: Delegations

- 12.1 The **Council** may by instrument of delegation delegate any of its powers, functions and duties under this Local Law to a member of its staff.
- 12.2 A reference in an instrument of delegation to a delegate by way of the delegate's position with the **Council** includes:
- (a) a **person** authorised to carry out the powers, duties and functions of that position at the **Council**;
  - (b) a **person** acting in that capacity; or
  - (c) if that position at the **Council** ceases to exist, any *person* exercising any power, duty or function which was previously a power, duty or function of the previous position.



## Schedule 1: Penalties

Clause	Offence	Infringement Notice Penalty Units	Maximum Penalty Units
2.1	Failing to ensure that land does not constitute a danger to health or property	10	20
2.2	Failing to ensure that land is not unsightly or detrimental to the neighbourhood	3	20
2.3	Failing to ensure that land is not used in a manner so as to cause a nuisance	3	20
2.4	Failing to obtain a permit (vegetation, sign, fence, structure or other thing)	3	20
2.5	Failing to obtain a permit (obstruction)	3	20
2.6	Allowing a building to become dilapidated	5	20
2.7	Failing to secure a vacant building from unauthorized access	5	20
2.8	Failing to comply with a direction of an Authorised Officer regarding the fencing of a vacant premise	5	20
2.9	Failing to obtain a permit (heavy or long vehicles)	3	20
2.10	Failing to obtain a permit (occupying a caravan)	3	20
2.12	Failing to mark the land with a number so as to be clearly visible and legible from the road on which the land has its frontage	1	20
2.13	Failing to use the property address assigned by Council?	3	20
2.14	Emitting excessive noise	3	20
2.15	Failing to comply with Noise Control Guidelines	3	20
2.16	Failing to obtain a permit (alarms)	3	20
3.2	Allowing the growth of environmental weeds	3	20
3.3	Failing to obtain a permit (tree and vegetation pruning)	10	20
3.6	Failing to provide restitution of vegetation as required by Council	10	20
3.7	Failing to obtain a permit (open air burning)	3	20
3.9	Failing to comply with a direction (extinguishing a fire)	5	20
3.11	Constructing, erecting, installing, allowing to remain, using or permitting to be used an incinerator	5	20
3.12	Failing to take steps to remove an unmanaged bee swarm	3	20
3.13	Failing to take steps to destroy a European Wasp nest	3	20
3.14	Failing to comply with a direction (rats and mice)	5	20
3.16	Failing to comply with requirements of the Waste Management Policy	3	20
3.17	Failure to comply with requirements when using a non-Council managed waste collection service	3	20
3.18	Failing to ensure waste services are provided in accordance with a waste management plan	5	20
4.1	Failing to obtain a permit (animals)	2	20



Clause	Offence	Infringement Notice Penalty Units	Maximum Penalty Units
4.3	Keeping a rooster on land not permitted by Council	3	20
4.4	Failing to construct and maintain animal housing	3	20
4.5	Failure to store animal food to the satisfaction of an authorised officer	3	20
4.6	Failing to carry a facility for the effective removal of excrement	1	20
4.7	Failure to collect and appropriately dispose of excrement	1	20
4.8	Allowing noise or odour to emanate from an animal or bird	3	20
4.11	Failing to comply with a direction (animal or bird noise and odour)	5	20
5.1	Behaving on Council land or road so as to interfere with another person's reasonable use of that space	3	20
5.2	Behaving on Council land or road so as to endanger or be likely to endanger a person's health, life, property or an animal	10	20
5.3	Behaving contrary to a sign on Council land or road	3	20
5.4	Failing to obtain a permit (camping)	3	20
5.5	Failing to obtain a permit (bulk rubbish container, shipping container, donation bin or other thing which encroaches or obstructs a Road or Council land)	5	20
5.6	Leaving a shopping trolley on Council land or road	3	20
5.7	Failing to ensure that a name is clearly marked on a shopping trolley.	3	20
5.8	Allowing shopping trolley to be left on Council land or road	3	20
5.9	Using or allowing use of a wheeled toy, wheeled recreational device, motorized toy vehicle, model aircraft) on Council land or road so as to endanger, intimidate or unduly obstruct or damage property	3	20
5.11	Failing to obtain a permit (fireworks)	10	20
6.1	Riding, driving or parking a vehicle in or on any public place other than in an area set aside for vehicle parking or any designated roadway	3	20
6.2	Repairing or maintaining a vehicle on Council land or road	3	20
7.1	Failing to obtain a permit (goods, services, advertising, street furniture, other structures, vehicle, roadside trading)	5	20
7.2	Failing to obtain a permit (election signage)	3	20
7.4	Election signage displayed for period longer than permitted by Council	3	20
7.5	Failing to comply with requirements on the placement of election signage on Council land or Road	3	20
7.6	Failing to obtain a permit (money or item collections or subscriptions)	3	20
7.7	Failing to obtain a permit (distribution of handbill, placard, notice, pamphlet, book, paper, advertising material or similar thing)	3	20
7.8	Failing to obtain a permit (structure for selling or conducting raffle or lottery)	3	20
7.9	Failing to obtain a permit (commercial filming and photography)	3	20



Clause	Offence	Infringement Notice Penalty Units	Maximum Penalty Units
7.10	Failing to obtain a permit (event)	3	20
8.1	Failing to obtain a permit (alcohol)	3	20
8.2	Failing to comply with a direction of an Authorised Officer to empty, reseal or surrender an open container containing alcohol	5	20
8.4	Smoking a tobacco product in a smoke free area	3	20
8.5	Failing to comply with a direction of an Authorised Officer to extinguish and dispose of the tobacco product	5	20
9.1	Failing to obtain an asset protection permit (building works)	10	20
9.3 to 9.14	Failing to comply with requirements relating to the management of building sites	10	20
9.15	Failing to obtain a permit (vehicle crossings)	10	20
9.16	Failing to have a properly constructed and maintained vehicle crossing	5	20
9.17	Failing to obtain a permit (to enter or exit a property by means other than vehicle crossing)	3	20
9.19	Failing to comply with a direction of an Authorised Officer	5	20
9.20	Failing to obtain a permit (defacing or damaging land or assets)	5	20
9.21	Authorising or engaging a person to deface or damage land or assets	5	20
9.22	Failing to obtain a permit (trees and plants in public places)	5	20
10.13	Failing to comply with permit conditions	5	20
11.6	Failing to comply with a direction of an Authorised Officer under this Local Law	5	20
11.12	Failing to comply with a Notice to Comply served under this Local Law	5	20



## Schedule 2: Smoke Free Areas

### Part A – Smoke Free Areas

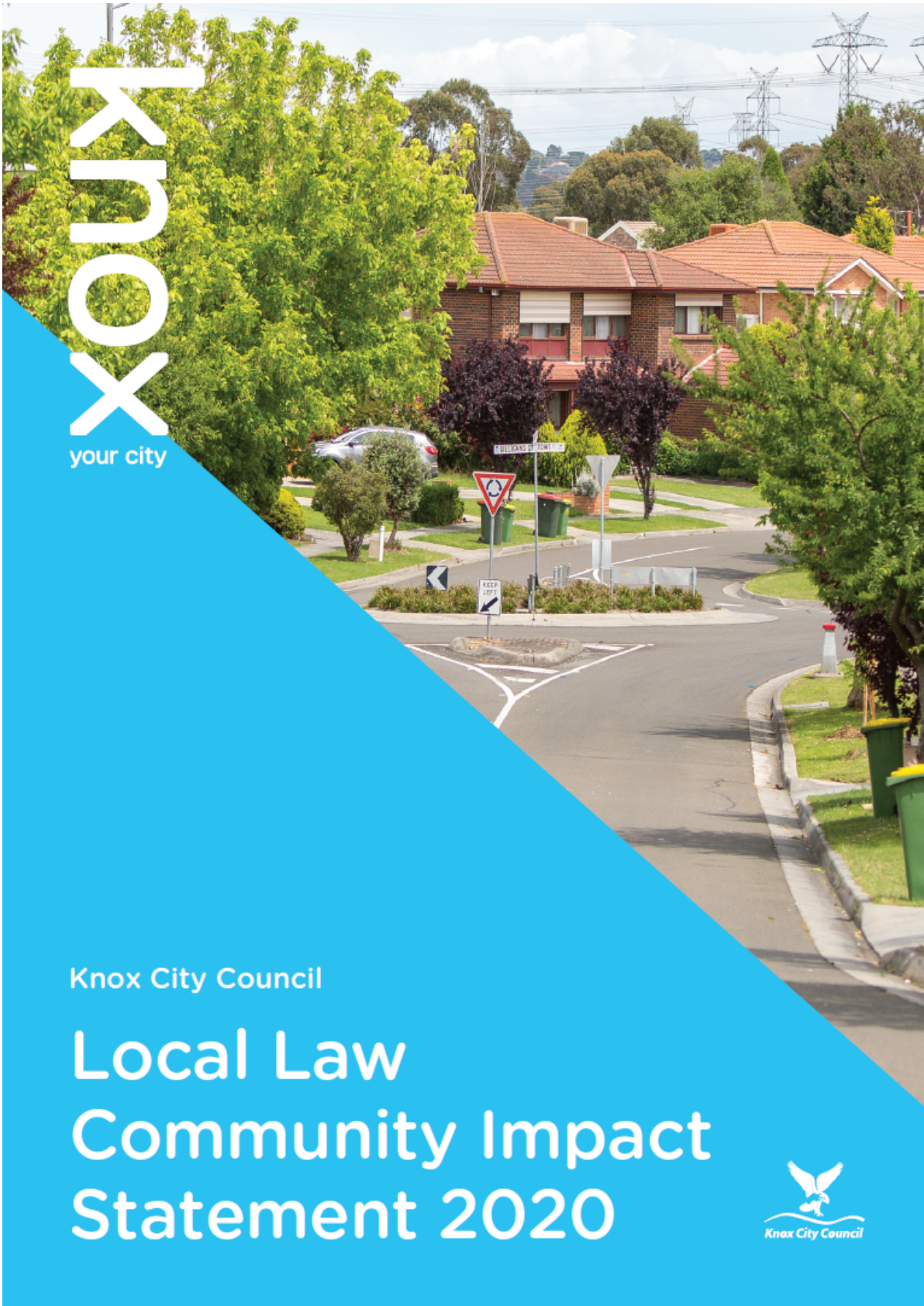
The following areas are **smoke free areas** for the purposes of clause 8.4 of this Local Law:

1. Within Council owned facilities and/or on Council land
2. At Council operated festivals and events
3. Any **children’s playground**; and
4. Any parcel of land on which a **child care centre** is located, and
5. Any parcel of land as **determined** by the **Council**.

### Part B – Guidelines for determining a Smoke Free Areas

When considering whether to **determine** a **smoke free area** for the purposes of clause 8.6 of this Local Law, the **Council** must have regard to the following factors:

1. the size of the proposed **smoke free area**;
2. the opinions of any **Person** who is the **Owner** or **Occupier** of any part of the proposed **smoke free area** or the area immediately adjoining the proposed **smoke free area**;
3. the proximity of the proposed **smoke free area** to a **public place**, part or all of which is not in a **smoke free area**;
4. the extent and outcome of any public consultation on the proposed **smoke free area**;
5. any benefits to the community which would be achieved by the **Council determining** the proposed **smoke free area**; and
6. any detriments to the community which would be caused by the **Council determining** the proposed **smoke free area**.









# Proposed Amenity Local Law 2020

## Community Impact Statement

### Introduction

The *Knox City Council General Provisions Local Law 2010* ('the current Local Law') came into operation on 1 July 2010 and consists of 61 provisions that:

- » provide for safe and fair use of Council-owned and managed land and roads (public places);
- » the fair and reasonable use of private land;
- » the keeping and control of animals;
- » the regulation of street activities;
- » the control of building sites;
- » the protection of Council assets; and
- » the uniform and fair administration of the Local Law.

The current Local Law sunsets on 30 June 2020, and a review and re-establishment of the Local Law is required every 10 years in accordance with Section 111 of the *Local Government Act 1989*. The current Local Law will be revoked at the time of the adoption of the new Amenity Local Law 2020 ('the proposed Local Law').

The *Local Government Act 1989* ('the Act') allows Council to make Local Laws for matters that Council has both a function and power, and is not dealt with by an existing Act or subordinate legislation. The Act contains clauses that specify the process required to create a Local Law. This is supported by the Victorian Government '*Guidelines for Local Laws Manual*' which outlines what Council must do to achieve legislative compliance, achieve better practice and how to explain Local Law matters to the community. This Local Law Community Impact Statement has been produced as required by the Guidelines, as an explanatory document for the community to understand the content of the Local Laws and the processes that Council has worked through to develop it.

### Objectives of the proposed Local Law

The purpose of the proposed Local Law is to:

- (a) Provide for the peace, order and good government of the municipal district;
- (b) Promote a physical and social environment free from hazards to health, in which the residents of the municipal district can enjoy a quality of life that meets the general expectations of the community; and
- (c) Prevent and manage nuisances which many adversely affect the enjoyment of life within the municipal district or the health, safety and welfare of persons within the municipal district;

and to achieve these objectives by:

- (d) Regulating and managing activities of people within the municipal district which may be dangerous, unsafe or detrimental to the quality of life of other people in, or the environment of, the municipal district;
- (e) Regulating and controlling peoples use and activity relating to Council land, roads and Council assets; and
- (f) Providing standards and conditions for specified activities to protect the safety and the welfare of people within, and the environment of, the municipal district.

### Overview of the Local Law review process

Council supports the importance of wide consultation as a part of this review in line with best practice principles. Council developed a Local Law Review Project Plan to outline a process for reviewing and amending the Local Law provisions, with the project scope and objectives being:

- » Review and re-establish Council's General Provisions Local Law ('the current Local Law');
- » Update the Local Law for any legislative changes applicable to the functions and application of the Local Law;
- » Undertaken in accordance with the *Better Practice Local Law Strategy and Guidelines for Local Laws Manual*, issued by Local Government Victoria;
- » A 'check in' with community and key stakeholders to assess the relevance and effectiveness of the current Local Law, and the impact on Council delivered initiatives;
- » A 'check in' with Councillors to assess the relevance and effectiveness of the current Local Law, and to identify emerging community issues; and
- » An opportunity to consolidate and modernize the Local Law, by making it a more readable community document, reducing costs and cutting red tape for business and customers.

Service feedback was considered in the early phases of drafting, through a review of the community requests for services submitted to Council by the public – to identify the frequency and complexity of issues already included within the current Local Laws, as well as identifying emerging issues being raised by the community and reported to Council. Extensive consultation has been undertaken across the organisation with relevant staff at all levels, to provide feedback on the current Local Law and also to identify emerging issues for the community. Councillors were briefed and opportunities were given to all Councillors to provide input to the review. Feedback from Councillors and Council staff identified improvements to the current local law as well as a range of new and emerging issues that are impacting the community, which have been considered and reflected in the proposed Local Law.

A benchmarking exercise was also undertaken to review the current Local Law to those of both neighbouring Council's as well as other relevant Victorian Councils, to identify any inconsistencies of laws between Councils, as well as a review of the inclusion of new and emerging issues that have been considered by other Councils in recent years.

After completion of this process, the proposed Local Law has been drafted.

### Overview of the Proposed Amenity Local Law 2020

The General Provisions Local Law 2010 ('the current Local Law') will be revoked and replaced by the proposed Amenity Local Law 2020, and as such all clauses are being replaced.

The proposed Local Law has been restructured improve the readability and to make it more user-friendly for the community, as well as to assist enforcement where required. The streamlining of language, the reorganisation of the Local Law clauses to improve the readability and the removal of anomalies make up a significant number of the changes between the current Local Law and the proposed Local Law. The proposed Local Law has also removed clauses due to an overlap with other State legislation and/or Council's Planning Scheme, to remove any duplication with existing laws. A reconciliation that relates the current Local Law clauses to the proposed Local Law clauses is attached in Appendix 1 to this document. Appendix 1 shows any modifications, amendments and deletions to any of the existing Local Law clauses, and also explains the new provisions that are not contained in the current Local Law.

## PART A – Comments on proposed Local Law overall

<p>Measures of success of proposed Local Law</p>	<p>The primary objectives of Local Laws are to protect the amenity of the municipality and the health and safety of the community. These objectives are not simply about compliance but are about creating an environment that is equitable and fair where residents, business and visitors alike can participate in the community with mutual respect and enjoyment.</p> <p>Whilst enforcement of Local Laws is important, measures of success must have regard to impact of Local Law related actions, whether that is information or enforcement, against those objectives.</p> <p>Measuring the success of a Local Law can be difficult, however there are some measures that can be considered but they should not be made in isolation. Some of the measures to be used are:</p> <ul style="list-style-type: none"> <li>» The number and subject of infringement notices and Notices to Comply issued;</li> <li>» The number, subject and outcome of appeals received;</li> <li>» The number, subject and outcome of prosecutions undertaken;</li> <li>» The number, subject and outcome of public complaints relating to Local Laws received;</li> <li>» The Community Satisfaction Survey rating for Local Laws related issues; and</li> <li>» The qualitative assessment by Council officers or in community consultations regarding community compliance.</li> </ul> <p>Council will need to annually collate and compare previous year's results of the above statistics. The assessment and reporting by Council officers on current trends, anomalies and emerging problems will also be used to measure the success of the Local Law.</p>
--	---

<p>State legislation that overlaps or is more appropriate instead of the Local Law</p>	<p>There are many pieces of existing legislation that deal with some issues covered by the proposed Local Law, such as:</p> <ul style="list-style-type: none"> <li>» <i>Building Act 1993</i></li> <li>» <i>Country Fire Authority Act 1958</i></li> <li>» <i>Domestic Animals Act 1994</i></li> <li>» <i>Environment Protection Act 1970</i></li> <li>» <i>Filming Approval Act 2014</i></li> <li>» <i>Impounding of Livestock Act 1994</i></li> <li>» <i>Infringements Act 2006</i></li> <li>» <i>Local Government Act 1989</i></li> <li>» <i>Planning and Environment Act 1987</i></li> <li>» <i>Public Health and Wellbeing Act 2008</i></li> <li>» <i>Road Safety Act 1986</i></li> <li>» <i>Summary Offences Act 1966</i></li> <li>» <i>Tobacco Act 1987.</i></li> </ul> <p>The objectives of the <i>Country Fire Authority Act 1958</i> are supported by the controls proposed in the Local Law in relation to incinerators and burning off.</p> <p>The <i>Domestic Animals Act 1994</i> does not provide the ability to limit the number of pets kept on a property.</p> <p>The objectives of the <i>Environment Protection Act 1970</i> are supported by the controls proposed in the Local Law in relation a range of activities with adverse environmental impacts.</p> <p>The objectives of the <i>Planning and Environment Act 1987</i> are supported by the controls proposed in the Local Law in relation issues of community amenity and liveability.</p> <p>The <i>Public Health and Wellbeing Act 2008</i> does not provide the ability to intervene promptly to support immediate abatement of situations, such as nuisance issues, where there may be risks to public health.</p> <p>The <i>Road Safety Act 2004</i> does not adequately cover the activities relating to vehicles left on a roadway for purposes of painting or dismantling a vehicle.</p> <p>The <i>Tobacco Act 1987</i> does not cover smoking bans around Council facilities.</p> <p>Accordingly, the proposed Local Law, like the Local Law it replaces, contains a number of provisions which complement existing legislation and provide a more appropriate local response, whilst not overlapping, duplicating or conflicting with existing State legislation. The proposed Local Law does not contain any clauses where it is considered that state legislation alone would provide a more appropriate response to the issues concerned.</p>
<p>Overlap of planning scheme</p>	<p>The Local Law is subordinate to the provisions of the <i>Planning and Environment Act 1987</i>. To the extent that there is any conflict or inconsistency the provisions of the Knox Planning Scheme will prevail.</p>

Risk assessment	<p>An assessment regarding risk has been undertaken on the proposed Local Law. The proposed Local Law should result in an overall reduction of risk of damage to Council assets and improved control of building sites through strengthened clauses in the proposed Local Law. The Local Law should also result in a reduction in community safety risks caused by dilapidated buildings, particularly those that are vacant and pose a potential opportunity for squatters or anti-social behaviour. A large number of clauses in the proposed Local Law have minor alterations or are unchanged, that do not impact the risk to either the community or Council accordingly.</p> <p>The Local Law contains the ability for Council to apply appropriate conditions in a permit or a requirement to comply with standards, which are in effect 'treatments' to minimise risk from use of or activity.</p>
Legislative approach adopted	<p>The current Local Law is generally considered to be low to medium impact and consistent with neighbouring and like Councils.</p> <p>Within this model the controls may be:</p> <ul style="list-style-type: none"> <li>» low impact – 'light touch' controls that generally carry no barriers to activity, save that they encourage the type of conduct one might normally expect to ensure safety and amenity;</li> <li>» medium impact – these include permit controls that may present a barrier or impediment to activity, or Local Law requirements that might require an entity to set in place processes to ensure compliance; or</li> <li>» high impact – where significant barriers to entry exist, or the controls in place carry an inspection and compliance regime that is materially onerous and time consuming.</li> </ul> <p>The approach taken by Knox City Council is not out of step with other Councils and is in line with best practice.</p> <p>The overall approach for the proposed Local Law is to be consistent with the existing Local Law. The decision regarding which regulatory approach to take varies according to the extent of risk, the perceived extent of non-compliance and the enforcement resources available.</p> <p>The proposed Local Law aims to ensure that the safety of the community and the potential for damage to Council assets is minimised where possible.</p>
Restriction of competition	<p>The review has been conducted in accordance with National Competition Principles. No clauses were identified as restricting competition in a manner that would be contrary to those principles.</p>

Penalties	<p>The penalties applying to all existing Local Law clauses were considered and reviewed. The monetary value for each penalty unit is controlled by State Legislation (the <i>Local Government Act 1989</i>, the <i>Sentencing Act 1991</i> and the <i>Monetary Units Act 2004</i>) and is currently set at \$100 per penalty unit for laws made pursuant to the <i>Local Government Act 1989</i>.</p> <p>According to the Attorney-General's Guidelines to the <i>Infringements Act 2006</i>, "An infringement penalty should generally be approximately no more than 20-25% of the maximum penalty for the offence".</p> <p>The level of penalties in the Local Law generally reflect: -</p> <ul style="list-style-type: none"> <li>» relative risks to community health, safety and amenity;</li> <li>» potential cost to the community of a breach (say due to potential damage to Council assets and infrastructure); and</li> <li>» the deterrent benefit in each case.</li> </ul>
Permits	<p>To satisfy the transparency and accountability principles of best practice Local Law making, permit applications and consideration of permits are detailed in <i>Section F - Administration</i> of the proposed Local Law.</p>
Fees	<p>Permit Fees and related charges are a budgetary matter decided independently by Council as part of the annual Budget process. It is not within the scope of the Local Law review to determine the level of fees and charges. Nevertheless, benchmarking of other Councils fees and charges takes place in the lead up to the annual Budget process.</p>
Comparison with neighbouring and like councils	<p>Benchmarking of new clauses was also undertaken against similar Local Laws at a range of councils including Maroondah, Manningham, Monash, Casey, Greater Dandenong, Booroondara, Yarra Ranges, Glen Eira and Melbourne City Council.</p>

<p>Charter of Human Rights</p>	<p>Knox Council, as a public authority under the <i>Charter of Human Rights and Responsibilities Act 2006</i> ('the Charter'), must ensure that a proposed local law is not incompatible with a human right or, in making a decision, fail to give proper consideration to a relevant human right. If a proposal restricts or interferes with a right, consideration will need to be given to determining whether the restrictions are reasonable and demonstrably justified under the Charter.</p> <p>The rights prescribed under the Charter have been reviewed to determine whether the proposed Local Law is incompatible with any of those rights. In summary, it is acknowledged that there is a minimal possibility that some of the controls, such as by controlling temporary accommodation on private land and camping on roads or Council land, may be considered incompatible with right to the Freedom of movement. Council's ability to seize and confiscate (impound) items such as an abandoned motor vehicle or shopping trolley left on a road may be considered incompatible with a persons' Property rights.</p> <p>Consideration of the proposed Local Law against the Charter concluded that the ability to undertake a use or activity so long as certain standards were met or complied with, the ability to apply for a permit or for alternate remedies to be found (such as screening or fencing a dilapidated property) was a reasonable justification of the controls. The proposed Local Law provides procedural fairness and limits any impacts under the Charter through a person's ability to appeal a decision or permit made under this Local Law. The limitation can further be reduced by a person's right to have an enforcement penalty referred to the Magistrates Court for a decision.</p> <p>Enforcement of Local Laws has been designed around processes that have regard to procedural fairness. Generally unless a matter is urgent or could compromise public safety enforcement processes provide ample opportunities to a person to remedy a breach of the Local Law. In conclusion, there are no amendments to the proposed Local Law that are incompatible with a human right under the Charter.</p>
--------------------------------	---



<p>Consultation and submission process</p>	<p>Once Council has approved the proposed Local Law to be made available for public review and comment, a Public Notice of the proposed Local Law will be given as required by Sections 119 and 223 of the <i>Local Government Act 1989</i>.</p> <p>The proposed Local Law and the Local Law Community Impact Statement, together with any documents referenced in the Local Law, will be made available for public review and comment. The period for review and consultation will be for at least 28 days, and during this time, three drop-in sessions will be organised (both during the day and evening) to allow any person, business or group to have any questions answered and/or provide a submission on the proposed Local Law. The proposed Local Law documents, together with information on the process and an online submission form, will be available to the public on Council's website. A communication plan for the review of the Local Law has several communication channels being used to promote the consultation period, including promotion in the Knox Leader newspaper, Council's KnoxNews, website and social media channels.</p> <p>The opportunity for public comment is required to be advertised under section 223 of the <i>Local Government Act 1989</i>. A meeting of a Special Committee of Council will be held to consider submissions under s223. Submitter(s) will be given an opportunity to speak to the submission.</p> <p>Details of submissions will be contained in the report to the Ordinary meeting of the Council recommending the making of the Amenity Local Law 2020.</p>
--	---

## PART B – Changes to the Local Law provisions

For the purposes of explaining the changes between the two versions of the Local Law, Appendix 1 provides a reconciliation of the proposed changes to the Local Law.

The proposed Local Law restructures the provisions to assist the community and business to understand the laws that relate to them and their property or activities, compared to those relating to the use of Council land and roads.

The high level sections of the proposed Local Law are:

- Section A: Preliminary
- Section B: Neighbourhood amenity and your property
- Section C: Keeping of Animals
- Section D: Use of Council Land & Roads
- Section E: Protection of Council Land & Assets
- Section F: Administration
- Section G: Enforcement

Parts numbered from 1 to 11 have been inserted within the proposed Local Law, to provide further structure and grouping of provisions, to simplify the locating of clauses of to assist the readability for the community.

## Appendix 1 – Amendments compared to the current Local Law

Clause Number					Amendments to the Local Law	
Old	New	Clause title	Summary of Clause	Retain	Status	Summary and explanation of changes
<b>Part 1 - Preliminary</b>						
-	1	Title	Name of Local Law	Yes	Amended	Change the name of the Local Law, to recognise the primary amenity focus of the Local Law.
1	1.3	Authorising Provision	This Local Law is made under the provisions of Part 5 of the <i>Local Government Act 1989</i> and Part 3 of the <i>Domestic Animals Act 1994</i> .	Yes	Unchanged	
2	1.2	Objectives of the Local Law	Sets out overview of purposes and mode of operation of Local Law	Yes	Amended	Updated to align with the objectives in the Local Government Act, and broadened to be have a strategic focus
3	1.4	Date of Commencement	Clarifies when the Local Law commences (1 July 2020)	Yes	Amended	Updated commencement date
4	1.5	Date of Cessation	Clarifies when the Local Law ceases. (30 June 2030)	Yes	Amended	Updated cessation date
5.1	1.6	Application of Local Law	Clarifies that the Local Law applies throughout the entire municipal district	Yes	Unchanged	
5.2	1.7	Application of Local Law	Clarifies that the Local Law does not apply where any Act, Rule, Regulation or Planning scheme applies	Yes	Unchanged	
5.3	Deleted	Application of Local Law	Incorporates the General Provision Local Law 2010 Administrative Guidelines to the Local Law	No	Deleted	Consistent with the Project Scope, the Local Law Administrative guidelines will be separated from the Local Law, and become an internal operating guideline only.

Clause Number					Amendments to the Local Law	
Old	New	Clause title	Summary of Clause	Retain	Status	Summary and explanation of changes
-	1.10	Exemptions	Provides Council, by resolution, to determine persons, premises or areas that are exempt from a Local Law provision.	New	New	Allows Council to apply exemptions to the Local Law by resolution, rather than requiring an amendment to the Local Law.
4	1.11	Replacement of Local Law	Identifies that the commencement of this Local Law replaces the revoked General Provisions Local Law 2010	Yes	Unchanged	
6	1.12	Definitions - New	<p>To assist understanding of the Local Law, the following new definitions have been included in the Local Law:</p> <ul style="list-style-type: none"> <li>» Acceptable no smoking sign</li> <li>» Animal</li> <li>» Asset protection permit</li> <li>» Bicycle</li> <li>» Building</li> <li>» Busking</li> <li>» Child Care centre</li> <li>» Children’s playground</li> <li>» Determine or Determined</li> <li>» Dilapidated</li> <li>» Event</li> <li>» Infringement notice</li> <li>» Model Aircraft</li> <li>» Notice to Comply</li> <li>» Occupier</li> </ul>	New	New	

Clause Number		Clause title	Summary of Clause	Retain	Amendments to the Local Law	
Old	New				Status	Summary and explanation of changes
6	1.12	Definitions – New	<p>To assist understanding of the Local Law, the following new definitions have been included in the Local Law:</p> <ul style="list-style-type: none"> <li>» Owner</li> <li>» Person</li> <li>» Private Land</li> <li>» Property address</li> <li>» Site fencing</li> <li>» Site identification</li> <li>» Smoke</li> <li>» Smoke free area</li> <li>» Street furniture</li> <li>» Tobacco product</li> <li>» Wheeled Toy</li> <li>» Wheeled recreational device</li> </ul>	New	New	
6	1.12	Definitions - Amended	<p>To assist understanding of the Local Law, the following definition amendments are proposed:</p> <ul style="list-style-type: none"> <li>» Bulk rubbish container</li> <li>» Camp</li> <li>» Caravan</li> <li>» Donation Bin – replaces Independent collection bin</li> <li>» Council asset – replaces Asset</li> <li>» Council land – replaces Land</li> <li>» Environmental Weed</li> <li>» Garbage Bin</li> <li>» Incinerator</li> <li>» Large Bird</li> <li>» Local Law</li> </ul>	Yes	Amended	

Clause Number					Amendments to the Local Law	
Old	New	Clause title	Summary of Clause	Retain	Status	Summary and explanation of changes
6	1.12	Definitions - Amended	<p>To assist understanding of the Local Law, the following definition amendments are proposed:</p> <ul style="list-style-type: none"> <li>» Motoring assistance organisation</li> <li>» Motorised toy vehicle</li> <li>» Municipal District – replaces Municipality</li> <li>» Penalty unit</li> <li>» Permit</li> <li>» Poultry</li> <li>» Public Place</li> <li>» Rooster</li> <li>» Sign – previously advertising sign</li> <li>» Small Bird</li> <li>» Unmanaged honey-bee swarm</li> <li>» Unsightly</li> <li>» Vehicle</li> <li>» Vehicle crossing</li> </ul>	Yes	Amended	
6	Deleted	Definitions - Deleted	<p>The following definitions are no longer required and have been deleted from the Local Law:</p> <ul style="list-style-type: none"> <li>» Boat</li> <li>» Collection week</li> <li>» Commercial waste</li> <li>» Commercial waste receptacle</li> <li>» Declared Dog</li> <li>» Green waste</li> <li>» Green waste bin</li> <li>» Goods</li> <li>» Guidelines</li> </ul>	No	Deleted	

Clause Number					Amendments to the Local Law	
Old	New	Clause title	Summary of Clause	Retain	Status	Summary and explanation of changes
6	Deleted	Definitions - Deleted	The following definitions are no longer required and have been deleted from the Local Law: » Hard garbage » Livestock » Machinery » Outdoor area » Public litter and recycle bin » Recreational vehicle » Recyclable goods » Recycling bin » Recycling facility and transfer station » Refuse » Residential land » Sell » Toy Vehicle	No	Deleted	
-	1.13	Definitions – grammatical forms	Clarifies that other grammatical forms of a word or phrase are taken as being the word or phrase as defined.	New	New	Provides authority and clarification to accept other grammatical forms of a word or phrase as being the word as defined in the Local Law.
<b>Part 4 – Amenity</b>				No	Deleted	Replaced with Section B that relate to Neighbourhood Amenity and a person’s private property.
7.1.1	5.1	Behaviour on Council Land and Roads	Prevents behaviour that endangers or interferes with another person’s use of Council land, facilities and roads.	Yes	Amended	Replaces ‘public place’ with ‘Council land’ and ‘Roads’ due to ‘public place’ having a definition that extends beyond Council’s authority/ ability to regulate.

Clause Number					Amendments to the Local Law	
Old	New	Clause title	Summary of Clause	Retain	Status	Summary and explanation of changes
7.1.2	5.2	Behaviour on Council Land and Roads	Prevents behaviour that endangers a person's health or life, property or an animal.	Yes	Amended	Replaces 'public place' with 'Council land' and 'Roads' due to 'public place' having a definition that extends beyond Council's authority/ ability to regulate.
7.1.3	5.3	Behaviour on Council Land and Roads	Requires a person to comply with any sign erected by Council on a Road or Council land.	Yes	Amended	Replaces 'public place' with 'Council land' and 'Roads' due to 'public place' having a definition that extends beyond Council's authority/ ability to regulate.
8		Trading Activities	Supports understanding of application and limits to Local Law.	Yes	Yes	Deletes reference to "Community Local Law 2 / 2010 Administrative Policy Guidelines"
8.1	7.1	Trading Activities – Signage	Protects amenity and safety by prohibiting placement of signage without a permit.	Yes	Amend	
New	7.2 to 7.5	Trading Activities – Election Signage	Provides the permit requirements for election signage, including restrictions regarding the period that election signage can be displayed on Council land or roads.	New	New	These clauses support the requirement of the permission required for the placement of items on Roads and other public lands, required under the <i>Road Management Act</i> , <i>Environment Protection Act</i> and the <i>Summary Offences Act</i> .
8.2	Deleted	Business deemed to be who placed the goods for sale	Unless evidence provided to the contrary, the person in charge of the company is deemed responsible for placing the goods or items for sale without a permit	No	Deleted	Schedule 8 section 2(b) of the Local Government Act 1989 states that a Local Law must not shift the onus of proof to a person accused of an offence. Clause must be removed as it attempts to shift the onus of proof (not permitted under the Local Government Act).
8.3	1.8	Declaration of Private land used for public purposes as Council land	Allows Council to declare, by resolution, private land that is being used for public purposes to be Council land.	Yes	Amended	Includes part of the property, to reflect that only part of a property may be used for public purpose.

Clause Number					Amendments to the Local Law	
Old	New	Clause title	Summary of Clause	Retain	Status	Summary and explanation of changes
8.4	1.9	Publication and advice of the change to the declaration of land	Requires Council to publish in a local newspaper and advise the owner of any declaration to amend their property to be Council land.	Yes	Unchanged	
9.1	8.1	Alcohol	Prevents nuisance associated with the consumption of alcohol on Council land, facilities and roads.	Yes	Amended	Removes reference to advertise exemptions in a local newspaper – to provide flexibility in the Local Law for Council to use appropriate communication channels as required to advise the community of any changes where public alcohol consumption is exempt.
New	8.2	Surrender or emptying of an open container of alcohol	Allows Victoria Police or an authorised officer to direct a person to empty or surrender an open container of alcohol.	Yes	New	Section 224A of the Local Government Act allows Victoria Police officers to enforce a Local Law that regulates the use, possession or consumption of alcohol.
New	8.3	Exemption for licenced premises	Provides an exemption to the alcohol provisions when in a licenced premises.	Yes	New	Recognises that consumption of alcohol is permitted in premises authorised under the <i>Liquor Control Reform Act 1998</i> .
10.1	5.5	Donation Bins (previously Independent Collection bins)	Requires a permit for the placement of a donation bin on a Road or Council land.	Yes	Amended	Consolidated into clause 5.5 together with other items that require a permit to be placed on a road or Council land. Updated to reference Donation bin rather than Independent Collection bin.
11.1	7.6	Appeals and Collections	Requires a permit to solicit or collect any money or items on a road or Council land.	Yes	Amended	Expands to include subscriptions and replaces 'any articles' with 'items'. Replaces 'public place' with 'Council land' and 'Roads' due to 'public place' having a definition that extends beyond Council's authority/ ability to regulate.



Clause Number					Amendments to the Local Law	
Old	New	Clause title	Summary of Clause	Retain	Status	Summary and explanation of changes
New	7.7	Distribution of handbills, pamphlets and advertising material.	Requires a permit to hand out or distribute any handbill, placard, notice, pamphlet, advertising material or similar on a road or Council land.	New	New	New provision to regulate the distribution of unsolicited paper notices from a road or Council land, which are often dumped and cause litter.
8.1	7.8	Item for the purpose of selling or conducting a raffle or lottery.	Requires a permit to place a vehicle, caravan, trailer, table or similar on a road or Council land for selling or conducting a raffle or lottery.	Yes	Amended	Expanded provision to regulate the placement of a vehicle or item on Council land or a road for the purposes associated with conducting an appeal or collection activity.
New	7.9	Filming and Photography on Council land	Requires a permit for filming and photography for commercial, public exhibition and formal study purposes – conducted on a Road or Council land.	New	New	The <i>Filming Approval Act 2014</i> establishes film friendly principles and guidelines, however a local law provision is required to provide approval for filming on Council land and roads.
New	7.10	Events on Council land	Requires a permit where a function, event, busking or entertainment where it substantially occupies or encroaches on another person's use of a Road or Council land.	New	New	New provision that protects the reasonable use of a Road or Council land for the purposes of events and like activities. The regulation of these activities reflect the non-commercial and/or infrequent nature of these activities.
12.1	9.15	Vehicle Crossings	Requires a permit to install, construct, alter or reconstruct a vehicle crossing.	Yes	Amended	Replaces 'construct or relocate' with broader actions of 'install, construct, alter or reconstruct' to be representative of the actions that result in alteration of a vehicle crossing.
12.2	9.16	Vehicle Crossings – construction and maintenance	Requires a vehicle crossing to be properly constructed and maintained as approved by Council.	Yes	Amended	Replaces 'kept in good condition' with 'properly constructed and maintained' – minor amendment that does not change requirement.
New	9.17	Permit required for vehicle access to property	Requires a permit for a vehicle access onto private land, if not deemed a vehicle crossing under clause above.	Yes	New	Protects Councils assets (footpath, kerbing, naturestrip) by ensuring all vehicle access points onto private property require Council permission.

Clause Number					Amendments to the Local Law	
Old	New	Clause title	Summary of Clause	Retain	Status	Summary and explanation of changes
12.3	9.18	Direction from Council regarding the vehicle crossing	Allows Council to direct the construction, repair, removal of a vehicle crossing, and reinstatement of any kerb, channel, footpath or other area at the owners cost	Yes	Unchanged	
12.4	9.19	Comply with direction from Council regarding the vehicle crossing	Requires a person to comply with a direction to construct, repair or remove a vehicle crossing.	Yes	Unchanged	
13.1	2.11	Property Address allocated by Council	Allows Council to allocate and change property addresses in the municipality.	Yes	Unchanged	Replaces numbering with property address.
13.2	2.12	Property Address – display requirements	Assists in providing community & emergency services through the clear display of property numbers	Yes	Amended	Updated wording to provide a more clear explanation for this clause.
New	2.13	Use of property address provided by Council	Requires an owner or occupier to use the address allocated to the property.	New	New	Supports community safety and amenity, and issues regarding identity theft, to require use of the property number allocated.
14.1	Deleted	Removal of a vehicle constituting a hazard in a public place	Allows Council to remove a vehicle that is constituting a hazard or danger.	No	Deleted	<i>Local Government Act 1989</i> Schedule 11 Section 4 allows Council to move or impound any vehicle that is unlawfully parked. The Local Law is not permitted to be inconsistent with any existing legislation/ Acts.
14.2	Deleted	Parking a vehicle in a public place for more than 14 days	Restricts the parking of a vehicle on a road or other Council land for more than 14 days.	No	Deleted	<i>Local Government Act 1989</i> Schedule 11 allows for a registered vehicle to remain in the same location for up to 2 months. The Local Law is not permitted to be inconsistent with any existing legislation/ Acts.

Clause Number					Amendments to the Local Law	
Old	New	Clause title	Summary of Clause	Retain	Status	Summary and explanation of changes
14.3	Deleted	Parking a boat, caravan or trailer for 7 days in a 28 day period	Restricts the parking of a boat, caravan or trailer on a road or Council land for 7 days in a 28 day period.	No	Deleted	<i>Local Government Act 1989</i> Schedule 11 allows for a registered vehicle to remain in the same location for up to 2 months. The Local Law is not permitted to be inconsistent with any existing legislation/ Acts.
14.3A	6.1	Using a vehicle on a road or Council land designed for parking or a roadway	Restricts the use of a vehicle to be parked or driven on a road or Council land designated for vehicle parking or a roadway.	Yes	Amended	Replaces 'public place' with 'Council land' and 'Roads' due to 'public place' having a definition that extends beyond Council's authority/ ability to regulate.
14.4	6.2 & 6.3	Repair or maintaining a vehicle on a road or Council land	For the exception of a motoring assistance organisation, a person must not paint, service, dismantle or repair a vehicle on a road or on Council land.	Yes	Amended	Expands 'repair or maintain' with 'paint, service, dismantle or repair' to provide more clarity of the actions covered by this activity on a vehicle. Replaces 'public place' with 'Council land' and 'Roads' due to 'public place' having a definition that extends beyond Council's authority/ ability to regulate.
14.5	7.1	Sale of vehicle on a road or Council land	Requires a permit to offer for sale a vehicle on a road or on Council land.	Yes	Amended	Consolidated into clause 7.1 together with other items that require a permit to be placed on a road or Council land. Replaces 'public place' with 'Council land' and 'Roads' due to 'public place' having a definition that extends beyond Council's authority/ ability to regulate.
15.1	5.4	Camping	Requires a permit to camp on a road or Council land.	Yes	Amended	Replaces 'public place' with 'Council land' and 'Roads' due to 'public place' having a definition that extends beyond Council's authority/ ability to regulate.

Clause Number					Amendments to the Local Law	
Old	New	Clause title	Summary of Clause	Retain	Status	Summary and explanation of changes
16	5.5	Obstructions on a road or Council land	Requires a permit to place or allow or remain on road or Council land any item – including a bulk rubbish container, shipping container & donation bin.	Yes	Amended	Consolidated into clause 5.5 together with other items that require a permit to be placed on a road or Council land. Replaces ‘public place’ with ‘Council land’ and ‘Roads’ due to ‘public place’ having a definition that extends beyond Council’s authority/ ability to regulate.
17.1	5.7	Shopping Trolleys – marked with owners details	Requires the owner of a shopping trolley to mark it with their name and trading name.	Yes	Amended	Replaces ‘business name’ with ‘trading name’ and removes the requirement to include their contact number – noting contact details are readily available, and trolleys are often national companies (Target, Coles, etc.).
17.2	5.6	Shopping Trolleys – not left on a road or Council land (user)	Prohibits leaving a shopping trolley on a road or Council land, unless in a designated trolley area.	Yes	Amended	Replaces ‘public place’ with ‘Council land’ and ‘Roads’ due to ‘public place’ having a definition that extends beyond Council’s authority/ ability to regulate.
17.3	Deleted	Shopping Trolley may be impounded	Council may impound an abandoned shopping trolley.	No	Deleted	Replaced by clause 11.15 that provides Council the authority to confiscate and impound any item that is in breach of the Local Law.
17.4	5.8	Shopping Trolley – not left on a road or Council land (owner)	Prohibits allowing a shopping trolley to be left on a road or Council land, unless in a designated trolley area.	Yes	Amended	Replaces ‘public place’ with ‘Council land’ and ‘Roads’ due to ‘public place’ having a definition that extends beyond Council’s authority/ ability to regulate.
18.1	5.5	Obstructions on a road or Council land	Requires a permit to place or allow or remain on road or Council land any item – including a bulk rubbish container.	Yes	Amended	Consolidated into clause 5.5 together with other items that require a permit to be placed on a road or Council land. Replaces ‘public place’ with ‘Council land’ and ‘Roads’ due to ‘public place’ having a definition that extends beyond Council’s authority/ ability to regulate.

Clause Number					Amendments to the Local Law	
Old	New	Clause title	Summary of Clause	Retain	Status	Summary and explanation of changes
19.1	Deleted	Use of Toy Vehicles or Aircraft – internal combustion engine model aircraft	Requires a permit to fly an internal combustion engine model aircraft in a public place.	No	Deleted	Replaced by clause 5.9 below that is inclusive of a wide range of model aircraft, not specifically internal combustion engine types.
19.2	5.9	Use of Toy Vehicles or Aircraft on a road or Council land	Prohibits using a toy vehicle, wheeled recreational device or model aircraft on a road or Council land so as to endanger, intimidate or unduly obstruct others, or damage property.	Yes	Amended	Expanded clause to encompass wheeled toy, wheeled recreational devices, motorised toy vehicles and model aircraft, including drones, within the definition of model aircraft. Replaces ‘public place’ with ‘Council land’ and ‘Roads’ due to ‘public place’ having a definition that extends beyond Council’s authority/ ability to regulate.
19.3	Deleted	Use of Unregistered Motorised Toy vehicles in a public place	Prohibits using an unregistered motorised toy vehicle in a public place so as to obstruct and endanger others.	No	Deleted	Replaced by clause 5.9, which includes motorised toy vehicles. Note that ‘monkey bikes’ are a defined under the <i>Road Safety Act</i> and are prohibited to be ridden anywhere that is not private property – enforced by Victoria Police.
19A	5.11	Fireworks on Council land and roads	Requires a permit to discharge fireworks on Council land or roads.	Yes	Amended	Replaces ‘public place’ with ‘Council land’ and ‘Roads’ due to ‘public place’ having a definition that extends beyond Council’s authority/ ability to regulate. Note: This clause is required in the Local Law to provide Council authority required under Section 4(j) of the <i>Summary Offences Act 1966</i> in relation to discharging fireworks.
<b>Section C – Keeping of Animals</b> <b>Part 4: Animals</b>			Amended Section of the Local Law, grouping together all the clauses/ provisions that relate to the keeping of animals.	Yes	Amended	Replaces Part 3 in the General Provisions Local Law 2010.

Clause Number					Amendments to the Local Law	
Old	New	Clause title	Summary of Clause	Retain	Status	Summary and explanation of changes
20.1	Deleted	Fencing of Livestock	Requirement to ensure land is adequately fenced to prevent livestock escaping	No	Deleted	Council officers authorised under 16B of the <i>Impounding of Livestock Act 1994</i> - to act where livestock are not adequately confined to the property. The Local Law is not permitted to duplicate powers under existing legislation/ Acts.
20.2	4.1	Keeping of Livestock	Requirement for a permit to keep livestock on less than 4,000 square metres.	Yes	Amended	Incorporated into clause 4.1 together with other animal types.
20.3	4.1 & 4.2	Animal Numbers	Limits numbers of animals that may be kept without a permit.	Yes	Amended	Consolidates all animals into a table and shows how many can be kept without a permit. Introduces the permit condition to apply on land less than 4,000 square metres, to reduce regulatory burden on the larger properties in the municipality.
20.3A	Deleted	Planning Scheme limits	States that a planning permit is required for more than 5 cats or dogs.	No	Deleted	Local Law not permitted to overlap with the Planning Scheme. This information is on Council's website and other ways to inform the community.
20.4	Deleted	Desexing of additional animals	Requires additional cats and dogs to be desexed.	No	Deleted	All cats are required to be desexed in the municipality, introduced in 2011 by Council under Section 10 of the <i>Domestic Animals Act</i> . The <i>Domestic Animal Act</i> regulates the registration fees and requirements on the keeping of cats and dogs – and the Local Law is not permitted to overlap with another Act.

Clause Number					Amendments to the Local Law	
Old	New	Clause title	Summary of Clause	Retain	Status	Summary and explanation of changes
20.5	4.3	Keeping of Roosters	Prohibits the keeping of roosters, unless specifically permitted under the Planning Scheme.	Yes	Amended	Amends the requirements regarding the keeping of roosters, to manage the noise issues caused by the keeping of roosters in residential areas.
20.6	Deleted	Animal Housing for excess animals	Requires a permit to construct or allow to remain animal housing designed for more than the permitted number of animals.	No	Deleted	Removes the burden on animal owners to amend or remove animal housing on their property, if less animals are kept or permitted.
20.7	4.4	Animal Housing	To ensure that animal housing is constructed and kept in a condition so it provides for the welfare of the animal, and does not cause nuisance to neighbouring properties.	Yes	Amended	Provides a greater clarity in the Local Law as to the requirements regarding animal housing, and removes onerous specific distance requirements that was contained in the Administrative guidelines to the Local Law.
New	4.5	Storage of animal food to prevent vermin/ insects	Requires animal food to be stored to prevent access by vermin or insects, to the satisfaction of an authorised officer	New	New	Introduced to reduce the nuisance of vermin and insects from inappropriate storage of animal food to reduce the nuisance to neighbouring properties and public health issues.
21	4.6 & 4.7	Removal of Animal Waste	To ensure animal waste deposited on Council land or road is collected and disposed of appropriately.	Yes	Amended	Replaces 'Excrement' with 'Animal waste' to align with more commonly used terminology. Replaces 'public place' with 'Council land' and 'Roads' due to 'public place' having a definition that extends beyond Council's authority/ ability to regulate.

Clause Number					Amendments to the Local Law	
Old	New	Clause title	Summary of Clause	Retain	Status	Summary and explanation of changes
22.1 & 22.2	4.8 & 4.9	Animal and Bird noise and odour	Requires an animal owner to prevent their animal making a noise or odour as to cause a nuisance.	Yes	Amended	Expands the reference to include owner and occupier of the land, and removes reference to the occupying nearby property – to remedy limitation that nuisance could be caused beyond the adjoining property. This provision does not apply to cats and dogs, which are covered by the <i>Domestic Animal Act</i> provisions.
22.3	Deleted	Use of barking dog count device	Allows an authorised officer to direct an owner of a barking dog to place a barking dog count device on the animal.	No	Deleted	Council discontinued using barking dog count devices several years ago due to the limitations of the device, and amended practices regarding managing barking dogs. Barking dogs are also dealt with by <i>Domestic Animal Act</i> provisions.
22.3A	4.10	Nuisance caused by feeding animals	To ensure that feeding an uncaged bird or animal does not cause nuisance or damage to property.	Yes	Unchanged	
22.4	4.11	Comply with direction to cease feeding animals	Requires a person to comply with a direction to cease feeding the bird and/or animal.	Yes	Unchanged	
<b>Section B – Neighbourhood Amenity and your property</b> <b>Part 2 – Private land and neighbourhood amenity</b>				New	New	New Section and Part of the Local Law, grouping together all the clauses/ provisions that relate to Neighbourhood Amenity and a person's private property. Introduced to improve the readability and increase the transparency of what a person can/ can't do on their own land.
23.1.1	2.1	Condition of Private Land – danger to health and property	To ensure the condition of private land does not constitutes a danger to health or property.	Yes	Unchanged	



Clause Number					Amendments to the Local Law	
Old	New	Clause title	Summary of Clause	Retain	Status	Summary and explanation of changes
23.1.2	2.2	Condition of Private Land – unsightly	To ensure the condition of private land is not unsightly or detrimental to the neighbourhood amenity.	Yes	Unchanged	
23.1.3	2.3	Condition of Private Land – nuisance	To ensure the condition of private land is not a nuisance or detrimental to the neighbourhood amenity.	Yes	Unchanged	
New	2.6	Dilapidated buildings	Requires that a building not be in a dilapidated condition.	New	New	New provision to address the neighbourhood amenity and potential community safety issues caused when buildings are left by property owners and developers to fall into a derelict and dilapidated condition.
New	2.7	Dilapidated buildings – secure from unauthorised access	Requires that a vacant dilapidated building be secured from unauthorised access.	New	New	New provision to address the community safety issues caused when unsecured dilapidated buildings can be attractors for crime and anti-social behaviour.
New	2.8	Dilapidated buildings – direction for fencing requirements	Allows Council to direct that fencing be erected/ repaired/ replaced/ modified enclose a vacant dilapidated building.	New	New	New provision to provide Council the authority to require fencing to enclose a vacant dilapidated building – to reduce access and assist in the minimisation of crime and anti-social behaviour.
24.1	Deleted	Sale of environmental weeds	A person must not sell or possess for sale any environmental weeds.	No	Deleted	Removal of provision due to the difficulties of restricting businesses from selling certain plants. Sale of noxious weeds is prohibited under the <i>Catchment and Land Protection Act 1994</i> .

Clause Number					Amendments to the Local Law	
Old	New	Clause title	Summary of Clause	Retain	Status	Summary and explanation of changes
24.2	3.2	Environmental weeds	To ensure environmental weeds are removed from private land of up to 2 hectares.	Yes	Amended	Removes “adjoining nature strip” reference due to being land Council owns, and includes reference to the prescribed environmental weeds in clause 3.1 below.
New	3.1	Council to determine environmental weeds	Provides Council the ability to prescribe what environmental weeds apply under the Local Law.	New	New	Provides Council with the authority to amend the listing of environmental weeds during the life of the Local Law. Provides flexibility to add or remove environmental weeds to limit biodiversity damage to the environment.
25.1	Deleted	Machinery or Vehicles on private land	Requires a permit for the storage of more than 2 unregistered, unroadworthy or disassembled vehicles on residential land for more than 2 months.	No	Deleted	Replaced by clause 2.2 regarding unsightly properties, including updated ‘unsightly’ definition to reference unregistered vehicles, disassembled or incomplete vehicles.
25.2	Deleted	Painting of a vehicle on private land	Prevents nuisance of using mechanical device to paint a vehicle on private land. Clause was originally included for those running a business from home repairing cars.	No	Deleted	Relates only to spray painting vehicles and is inconsistent to other spray painting (house, fence, roof which are permitted). Amenity issues can be dealt under clause 2.3 ‘Condition of land’ clause, and issues regarding odour/ fumes issues can be dealt with by Council under the <i>Public Health and Wellbeing Act</i> .
26.1	3.7 & 3.8	Open Air Burning	Prohibits a fire to be lit or remain alight in the open air, subject to limited exemptions.	Yes	Amended	Amendment to include an exemption from requiring a permit for the use of tools of trade; a small receptacle built for containing fire; and a person authorised to engage in lighting a fire for or on behalf of a public authority.
26.3	3.11	Open Air Burning – incinerators	Prohibits an incinerator on private land.	Yes	Amended	Expands to include ‘allow to remain’ to require the removal of an incinerator from a property.

Clause Number					Amendments to the Local Law	
Old	New	Clause title	Summary of Clause	Retain	Status	Summary and explanation of changes
26.4	Deleted	Conditions for a permit to burn	Outlines the factors that council will take into consideration when issuing a permit to burn.	No	Deleted	Replaced by clause 10.14 providing a range of factors Council take into account in issuing permits. Remove specific conditions and replaced by general conditions and factors considered with a permit. Specific conditions will also be included on the permit form and/or Council website, to assist residents/ customers.
26.5	3.10	No permit to burn during declared fire danger period	Clarifies that no permit to burn will be issued during a declared fire danger period.	Yes	Unchanged	This provision supports Section 37 of the <i>Country Fire Authority Act 1958</i> that prohibits the lighting of a fire in the open air during a fire danger period.
26.6	Deleted	Waive permit for greater than 1 hectare	Allows Council to waive the fee for a permit when the property is over 1 hectare.	No	Deleted	Replaced by clause 10.8 providing general ability for Council to waive a fee. Remove specific waiver and replaced by general section to waive fee/ permit when required.
26.7	3.7	Requirement to extinguish fire when directed	Allows an authorised officer to direct a person to extinguish a fire.	Yes	Unchanged	
27.1	6.5	Heavy and/or Long Vehicles on private land	Prevents issues from the noise and amenity of keeping and/or repairing trucks on private land.	Yes	Amended	Amended 'any land' to 'private land' to provide consistency with the other Local Law clauses. Intention to prevent nuisances caused through the keeping and repairing trucks in residential areas of the municipality.
28.1	2.4	Obstructions from private land	Requires a permit to allow vegetation or other thing encroach over a Council land or road, or obstructs vehicles, pedestrians or street lighting.	Yes	Amended	Replaces 'public place' with 'Council land' and 'Roads' due to 'public place' having a definition that extends beyond Council's authority/ ability to regulate.

Clause Number					Amendments to the Local Law	
Old	New	Clause title	Summary of Clause	Retain	Status	Summary and explanation of changes
28.2	2.5	Obstruction on a road or Council land	Requires a permit to place an item on a road or Council land that causes an obstruction.	Yes	Amended	Replaces 'public place' with 'Council land' and 'Roads' due to 'public place' having a definition that extends beyond Council's authority/ ability to regulate.
29	2.14 to 2.16	Noise	Prohibits an occupier of land or a person in charge of a vehicle to not emit or allow to be emitted excessive noise from that land.	Yes	Unchanged	
30.1	2.17	Intruder Alarms	Requires an intruder alarm to be rendered inaudible within 10 minutes of being activated.	Yes	Amended	Removes requirement of a permit requirement, noting Council has not previously issued a permit for an intruder alarm under this Local Law provision.
31.1	Deleted	Bees – kept according to the Apiary Code of Conduct	Requires that bees must be kept in accordance with the <i>Apiary Code of Practice</i> .	No	Deleted	Council is not authorised to enforce this code with the exception of Planning, which is dealt with under the Planning Scheme. State Government regulates the keeping of bees.
31.2	Deleted	Bees - Keeping of bees doesn't apply where a planning permit has been issued	Provides an exemption to the keeping of bees in accordance with the <i>Apiary Code of Practice</i> if a planning permit has been issued.	No	Deleted	Duplicated by clause 1.7 of Local Law that the Local Law does not apply where the Planning Scheme applies. Sec 111(3) of the Local Government Act states the Council must not make a local law which duplicates with the planning scheme
31.3	3.12	Bees – removal of an unmanaged honey bee swarm	Requires that immediate steps be taken to remove an unmanaged honey-bee swarm or hive.	Yes	Amended	Updated to replace 'reasonable' with 'immediate' to recognise the potential danger that an unmanaged bee swarm or hive has to health and property.

Clause Number					Amendments to the Local Law	
Old	New	Clause title	Summary of Clause	Retain	Status	Summary and explanation of changes
32.1	3.13	Wasp nests	Requires that immediate steps be taken for wasp nests to be destroyed.	Yes	Amended	Updated to replace 'reasonable' with 'immediate' to recognise the potential danger that a wasp nest has to health and property.
33.1	3.14	Rats and Mice	Requires Council to direct that immediate steps be taken to destroy any rats or mice on land, or remove or rectify the conditions that support the harbouring, breeding or feeding of rats and mice.	Yes	Amended	Updated to replace 'reasonable' with 'immediate' to recognise the potential transmission of disease and impact that rats and mice have on health and property. Clause expanded to include conditions that are 'harbouring' and 'feeding' rats and mice – to address that rats live in underground nests that can span across property boundaries and impact multiple neighbours.
33.2	3.15	Comply with a direction of Council regarding rats and mice	Requires a person provided with a direction regarding rats and mice to comply with the direction.	Yes	Unchanged	
33.3	3.16	Exemption to rats and mice provisions	Exemption under the local law applies for rats and mice kept as pets or for research, scientific or educational purposes.	Yes	Unchanged	
34	3.3 to 3.6	Tree and Vegetation Protection	Requires a permit to (or allow to be) cut, trim, lop, pruned a declared significant tree or vegetation. Requires restitution of vegetation on a net gain principle if found guilty of tree or vegetation removal.	Yes	Unchanged	Council will retain the local law provisions for tree and vegetation protection, whilst a strategic review of tree canopy change is conducted. This will inform future tree protections for the municipality and may support later amendments to this Local Law provision.

Clause Number					Amendments to the Local Law	
Old	New	Clause title	Summary of Clause	Retain	Status	Summary and explanation of changes
35	Deleted	Use of Trail bikes and recreational vehicles on private land	Prohibits the use of a trail bike or recreational vehicle on private land if it interferes with comfort or convenience of persons on neighbouring land.	No	Deleted	This issue can be managed under clause 2.4 on Noise (as this covers vehicles) and/or clause 2.3 on Condition of Land (regarding nuisance) of the Local Law.
36	Deleted	Drainage of properties	Requires that land is drained adequately and is not a nuisance to the occupier of adjoining land.	No	Deleted	Section 200 of the <i>Local Government Act</i> already provides Council with the authority to manage the drainage of land. The Local Law clause is required to be removed to ensure the Local Law does not duplicate an existing Act.
<b>Part 5 – Waste Collection Service</b>				No	Deleted	The Waste Collection Service part of the Local Law will be removed and simplified. A new Council <i>Use of Waste Collection Services Policy</i> will be introduced as an incorporated document to this Local Law.
New	3.17	Council waste services	Requires a person to adhere to Council's Waste Management Policy. Also requires a person to not damage, destroy or interfere with a garbage bin.	New	New	A new Council <i>Use of Waste Collection Services Policy</i> will be introduced as an incorporated document to this Local Law. This will enable Council to amend the policy to reflect the changes to waste services in a timelier basis.
37	Deleted	Domestic Garbage	Provisions on what an occupier of land can and cannot do regarding domestic garbage.	No	Deleted	Replaced by the new Council <i>Use of Waste Collection Services Policy</i> .
38	Deleted	Recyclable Goods	Provisions on what an occupier of land can and cannot do regarding recyclable goods & bin.	No	Deleted	Replaced by the new Council <i>Use of Waste Collection Services Policy</i> .
39	Deleted	Hard Garbage	Provisions on what an occupier of land can and can not do regarding hard garbage.	No	Deleted	Replaced by the new Council <i>Use of Waste Collection Services Policy</i> .

Clause Number					Amendments to the Local Law	
Old	New	Clause title	Summary of Clause	Retain	Status	Summary and explanation of changes
40	Deleted	Green Waste (not in Council supplied bin)	Provisions on what an occupier of land can and cannot do regarding green waste not in a Council supplied bin.	No	Deleted	Replaced by the new Council <i>Use of Waste Collection Services Policy</i> .
41	Deleted	Green Waste bin	Provisions on what an occupier of land can and cannot do regarding the green waste bin.	No	Deleted	Replaced by the new Council <i>Use of Waste Collection Services Policy</i> .
42	Deleted	Disposal of Disused Refrigerators and other Compartments	Requirement to remove the door or lid from disused refrigerators and similar.	No	Deleted	Safe disposal of this type of hard rubbish is included in Council's Waste and Recycling calendar.
43	Deleted	Interference with Hard Garbage	Prohibits removing or interfering with hard garbage left out for collection if for a commercial purpose.	No	Deleted	Replaced by the new <i>Use of Waste Collection Services Policy</i> .
44	Deleted	Screening of Bins and Receptacles	Allows Council to direct a person to screen the garbage and recycling bin or trade waste bin from public view.	No	Deleted	Replaced by the new <i>Use of Waste Collection Services Policy</i> .
45	Deleted	Depositing of Waste at the Recycling and Waste Centre	Requirement not to deposit hazardous, dangerous or infectious material at any recycling facility and transfer station.	No	Deleted	Replaced by the new <i>Use of Waste Collection Services Policy</i> .
46	3.18 & 3.19	Non Council Waste Services	Provides requirements to maintain the amenity and environment where a non-Council managed waste collection service is used.	Yes	Amended	Provides greater clarity of the requirements to protect the environment and amenity.
47	3.20 to 3.23	Commercial Waste	Requirements regarding the disposal of commercial waste.	Yes	Amended	Replaced by the new Council Waste Services Collection Policy.
48	Deleted	Suspension of Services	Allows Council to suspend the provision of a waste collection service.	No	Deleted	Replaced by the new Council <i>Use of Waste Collection Services Policy</i> .

Clause Number					Amendments to the Local Law	
Old	New	Clause title	Summary of Clause	Retain	Status	Summary and explanation of changes
<b>Section E – Protection of Council Land &amp; Assets</b>				New		New Section of the Local Law that replaces Part 6 regarding Council Assets and Building sites, and incorporates Asset Protection permit arrangements and clearer controls regarding building sites.
New	9.1 & 9.2	Asset Protection approval	Requires an asset protection approval from Council prior to commencing building works.	New	New	Provides Council the authority to grant approval and clarifies the conditions associated with the granting of the approval. Protects Council assets and the community from issues associated with building works undertaken without approval.
New	9.3	Notification upon completion of building works	Requires Council to be notified of the completion of building works within 7 days, to enable a final inspection and assessment of any damage to Council assets.	New	New	Enables the timely identification of any issues or damage, to enable rectification of damaged Council assets. Also enables Council to support the continuation of building works in a timely manner.
New	9.4 to 9.6	Inspection of Council assets	Outlines the timelines regarding the final inspection by Council, and the rectification of any damage caused to a Council asset.	New	New	Provides Council with protections regarding the timeliness and process of requiring repair to a Council asset damaged from building works.
49	9.7 & 9.8	Inspection of Council assets – building site requirements	Outlines items that a building site must have to ensure appropriate safety and health requirements.	Yes	Amended	Provides greater clarity of the requirements on a building site, to minimise any health, safety or amenity issues caused from the site.
New	9.9	Soil stockpiles	Requires the stock-piling of soil on the building site for re-use or legal disposal.	New	New	Manages soil on building sites, to minimise amenity issues caused from the site.



Clause Number		Clause title	Summary of Clause	Retain	Amendments to the Local Law	
Old	New				Status	Summary and explanation of changes
49.2.5	9.10 & 9.11	Amenity Controls	Requires the management of building site activities to not cause damage or detriment to the natural or built environment, or cause air pollutants.	Yes	Amended	Provides broader coverage of the potential impact on the natural or built environment resulting from the building site activities. Seeks to minimise the impact of any adverse effects on the environment or neighbouring properties.
49.2.8	9.12 to 9.14	Drains	Requirements to manage soil and pollutants to ensure no interference with a Council asset (i.e. cannot leave the site via a Council drain).	Yes	Amended	Provides broader coverage to protect Councils asset (i.e. drain) as well as the environment caused from soil and pollutants emanating from a building site.
50	9.20 & 9.21	Defacing/ Damaging Council Land and Assets	Requires a permit to interfere, deface or damage Council land or assets.	Yes	Amended	Replaces 'public place' with 'Council land' and 'Roads' due to 'public place' having a definition that extends beyond Council's authority/ ability to regulate.
51	9.22	Trees and Plants on Council land and roads	Requires a permit to interfere, deface or damage Council land or assets.	Yes	Amended	Replaces 'public place' with 'Council land' and 'Roads' due to 'public place' having a definition that extends beyond Council's authority/ ability to regulate.
<b>Section F – Administration</b>				Yes	Amended	Replaces Part 7 – Administration, and updated to include a Security bond clause.
52	10.1 to 10.17	Permits	Outlines the requirements and process regarding a permit under the Local Law.	Yes	Amended	Provides greater clarity regarding the steps in obtaining a permit including the application process, fees and charges, duration of the permit, correction of permits, granting and refusal of permits and cancellation of permits. The amended clauses are intended to provide improved procedural fairness and understanding for permit applicants/ holders.

Clause Number					Amendments to the Local Law	
Old	New	Clause title	Summary of Clause	Retain	Status	Summary and explanation of changes
New	10.18 to 10.21	Security Bonds	Provides Council the authority to require a security bond if the circumstances support this.	New	New	This new clause is intended to be used as a bond temporarily held in circumstances where there is a risk that a Council asset (i.e. footpath, nature-strip, tree, road, school crossing infrastructure) may be damaged as a result of an activity.
<b>Section G – Enforcement</b>				New		New section regarding enforcement that groups some of the clauses previously in Part 7 – Administration, together with new clauses regarding Notices to Comply.
53	11.7	Direction of an authorised officer	Requires a person to comply with a direction of an authorised officer.	Yes	Amended	Amended to introduce clauses 11.8 to 11.13 regarding a direction of an authorised officer by way of a Notice to Comply (below).
New	11.8 to 11.13	Notice to Comply	Outlines the requirements and process regarding the issuing of a Notice to Comply under the Local Law.	New	New	Provides greater clarity regarding the requirements, process and consequences regarding a Notice of Comply issued by an authorised officer under this Local Law.
54	11.4 & 11.5	Power of authorised officer to act in urgent circumstances	Provides the authority for an authorised officer to act in instances that place a person, animal or thing at risk of danger.	Yes	Amended	Removes the authority to undertake an act including power to enter a dwelling when in the presence of a Victoria Police member. Ensures that a Council officer does execute powers beyond the appropriate legal authority.
55	Deleted	Cost Recovery	Provides the authority to recover the cost of undertaking works on behalf of a property owner by placing a charge against the property.	No	Deleted	Legal advice sought deems this provision to be beyond the power afforded to Council via a Local Law under the <i>Local Government Act 1989</i> .

Clause Number					Amendments to the Local Law	
Old	New	Clause title	Summary of Clause	Retain	Status	Summary and explanation of changes
56	11.16 to 11.19	Power of authorised officer to confiscate and impound	Outlines the requirements and process regarding the confiscation and disposal (if not retrieved) of items impounded by Council under the Local Law.	Yes	Amended	Provides greater clarity and procedural fairness regarding the process regarding the confiscation and disposal of items impounded by Council under the Local Law.
57	5.3	Council signs	Requires a person to comply with any sign erected by Council.	Yes	Unchanged	
58	12.1 & 12.2	Delegations	Provides the authority by way of delegation from Council to an authorised officer to exercise their duties under the Local Law.	Yes	Amended	References the instrument of delegation as the means by which the authority under the Local Law is provided to an authorised officer.
59	11.1	Offences	Outlines the actions and in-actions by a person that causes an offence under the Local Law.	Yes	Amended	Minor amendment to the wording, without change to the authority and intent of this clause.
New	11.2	Offences by corporations	Clarifies how the Local Law applies in regards to a breach by a corporation (rather than an individual person).	New	New	Provides greater clarity regarding how the Local Law applies where an offence is issued to a person managing a corporation (i.e. company director).
60	11.4	Infringement notices	Provides the ability to issue an infringement notice for offences under the Local Law.	Yes	Amended	Minor amendment to the wording to improve the readability of the clause.
New	11.5	Offences not in the penalty table	Provides the authority to apply an offence amount of 20% of the maximum penalty if not prescribed in Schedule 1.	New	New	Provides a penalty value for offences not included and separately referenced in the Schedule 1 penalty table.
New	11.6	Penalties	Provides the authority for a continuing offence after a finding of guilt or conviction.			Section 115 of the Local Government Act provides the authority to include this provision in a Local Law.

Clause Number					Amendments to the Local Law	
Old	New	Clause title	Summary of Clause	Retain	Status	Summary and explanation of changes
Schedule 1		Penalties	Provides a listing of each offence under the Local Law, including the penalty it attracts by way of an infringement notice, and the maximum penalty that can be imposed by a Court for a breach under the clause of this Local Law.	Yes	Amended	Updated to reflect the amended Local Law provisions and the penalty imposed for a breach of each provision.
Schedule 2		Smoke Free Areas	Outlines the Smoke Free areas and provides the guidelines for determining a Smoke-free area under this Local Law.	New	New	Provides transparency and clarification of what areas are deemed Smoke free and the factors Council will have regard to in determining whether to designate an area as Smoke-free under this Local Law.



# Use of Waste Collection Services Policy

Policy Number:	Issued by Governance	Directorate:	Engineering and Infrastructure
Approval by:	Council or EMT	Responsible Officer:	Waste Management Coordinator
Approval Date:	February 2020	Version Number:	1
Review Date:	February 2023		

## 1. Purpose

Knox City Council provides kerbside waste collection services for garbage, recycling, green waste and hard waste for eligible residential properties, and commercial properties who take up Councils landfill and recycling collection services. Unless a special arrangement has been made, Council supplied bins are to be placed on the naturestrip for collection by the owner/occupant. Council issues bins for landfill, recycling and green waste collections.

The frequency of collection varies dependent on the property type (residential or commercial) and what waste is being collected. There is daily, weekly and fortnightly collections.

There is an additional service available for green waste collection, which is the bundled or own container service. Residential owners or occupiers can place bundles of green waste, or green waste within their own containers on the naturestrip for collection once a fortnight.

Council also provides "at call" hard waste collections for eligible residential properties. Collections can be requested online, by phone, or by visiting Council. The usual allocation is 2 bookings available per residential property per financial year. Commercial properties are not eligible for hard waste collections.

This policy should be read in conjunction with Knox City Councils Policy *Eligibility for use of Waste Collection Services provided by Knox City Council* which outlines which services are available for various properties types.

The purpose of this policy is to

- Define the responsibilities of owners and occupiers of properties that use council supplied bins
- Define the way council supplied bins must be presented to be collected
- Reduce amenity issues and litter caused by poor presentation and use of council waste services

## 2. Context

This policy is to be used in conjunction with the Knox City Council Local Law, and Eligibility of Waste services XXXX

## 3. Scope

This recycling and waste collection policy applies to any residential or commercial premise that utilises the waste services provided by Knox City Council. This includes all landfill, recycle, green waste and hard waste services.



## 4. References

### 4.1 Community & Council Plan 2017-2021

Goal 1 – We value our natural and built environment

Goal 2 – We can move around easily

Goal 4 – We are safe and secure

Goal 5 - We are healthy happy and well

### 4.2 Relevant Legislation

Local Government Act 1989

Knox City Council Local Law

1.1.1.Related Council Policies

*Eligibility for use of Waste Collection Services provided by Knox City Council*

## 5. Definitions

Approved collection point	Means the naturestrip or any other location advised by Council for collection of waste
Commercial waste	Any landfill, rubbish, slops or other waste matter arising from or generated by any trade, industry or commercial activity
Community Group(s)	Means a legal entity who provide services, support or activities to the Knox community.
Council	Means Knox City Council, whether constituted before or after the commencement of this Policy.
Council supplied bin	Is a wheelie bin which has been provided by and is collected by Council, for the purposes of waste collection as charged within the annual rates notice
Green waste	Organics garden organics material deemed by Council as being suitable for the kerbside green waste collection services. Green waste (bin service and own container service) is described as flowers, garden prunings, weeds, leaves, bark and grass clippings, and excludes treated wood, logs, stumps and tree limbs larger than 10cm wide or longer than 30cm, soil or potting mix. Green waste (bundled collection) is deemed to be branches, that fit within the size criteria.
Hard waste	Household items that are too large or heavy to dispose of through the landfill or recyclable services, as specified and/or size or quantity restricted, and described in Appendix 1. It excludes items listed in Appendix 2.
ewaste	Any unwanted material that is powered by an electrical lead or battery operated
Landfill	Any unwanted materials and objects that accumulate in or about a property which is not prohibited waste and cannot be recycled. Referred also as garbage, and fits in the landfill bin.
Prohibited waste	Building Rubble, mechanical parts, hazardous waste, liquid waste, e-waste, any material likely to damage the council supplied bin.



Recyclables	Any material deemed by Council as being suitable for the kerbside recycling collection, as per the items listed in Appendix 2 and excluding the items listed in Appendix 3, and any additional items as reviewed by Council from time to time.
Collection day	The day designated by Council for landfill, recycling, and green waste collection for the relevant address, as advised by Council on Councils website or Recycling and Waste guide.
Collection week	The week designated by Council for hard waste collection for the relevant address, as advised by Council at the time of booking a collection, which starts on a Monday.
Public litter and recycling bin	A bin provided by Council in a public place such as a park or street for the use by the general public for disposal of litter and recycling generated in public areas.

## 6. Council Policy

### Part 1: Use of council supplied landfill, recycle and green waste bins

#### The owner or occupier of a property that uses council supplied bins:

- 1.1. Must leave the council supplied bins at an approved collection point, (or any location advised) to be emptied on day designated, or any manner specified or directed by Council from time to time.
- 1.2. Must not leave any council supplied bin outside the property for more than 24 hours before or after collection  
Must present only a Council supplied bin which contains the appropriate Council logo
- 1.3. Must put the bins out by 6am on collection day
- 1.4. Must maintain all council supplied bins in a clean and sanitary condition
- 1.5. Must notify Council as soon as possible if a council supplied bin is damaged, lost or stolen
- 1.6. Must ensure that the area where the council supplied bins are kept on the property is kept in a clean and sanitary condition
- 1.7. Must ensure that the lid of all council supplied bins is completely closed and the bin never overflowing other than when the waste is being deposited or being removed from the bin
- 1.8. Must not present a council supplied bin with a total weight exceeding 50 kilograms

#### A person must not:

- 1.9. Deposit waste in or tamper with council supplied bins from a property that they do not own or occupy
- 1.10. Remove any council supplied bins from a specific property to a different property
- 1.11. Damage or interfere with any council supplied bin

#### When placed out for collection a council supplied bin;

- 1.12. Must be as near as practicable to the kerb, with the handle facing away from the kerb and have at least 1 metre clearance from any object, obstruction, overhanging tree, or street sign.
- 1.13. Must be a minimum of 0.5 metres distance between the landfill, recycle or green waste bins
- 1.14. Which is a Green waste bin must only contain the items prescribed by Council as Green waste
- 1.15. Which is a Recycling bin must only contain the items prescribed by Council as Recyclables
- 1.16. Which is a Landfill bin must only contain the items prescribed by Council as landfill
- 1.17. Must not have Prohibited waste disposed within it



## Part 2: Use of bundled and own container green waste service

**The owner or occupier of a property that uses the bundled collection or own container green waste service must ensure that any green waste container presented;**

- 1.18. Must not exceed a volume of 55 litres and weight of 30 kilograms
- 1.19. Must not be a bag of any kind
- 1.20. Must be rigid and never overflowing
- 1.21. Must be presented for emptying at the Approved Collection Point on the days designated by Council
- 1.22. Must not be presented for emptying more than 24 hours prior to the Collection day as designated by Council
- 1.23. Must be presented by 6am on Collection day
- 1.24. Must be returned to the property within 24 hours after the collection has occurred
- 1.25. Must not be a wheelie bin

**The owner or occupier of a property that uses the bundled collection or own container green waste service must ensure that any bundled branches or prunings presented;**

- 1.26. Must be tied into bundles with biodegradable string
- 1.27. Must not be wider than 30cm per bundle
- 1.28. Must not be longer than 1.5metres in length
- 1.29. Must not weigh more than 30 kilograms per bundle
- 1.30. Do not contain individual branches that are thicker than 10cm

**A person must not:**

- 1.31. Tamper with any waste service from a property that they do not own or occupy

## Part 3. Hard Waste Service

**The owner or occupier of a property that is eligible for, and uses the Council hard waste service:**

- 1.32. Must make a booking prior to placing the items out for collection
- 1.33. Must put out items for collection no more than 48 hours prior to the Monday of the booked Collection Week
- 1.34. Must ensure that all items are placed out for collection by 6am on the Monday of the booked Collection week
- 1.35. Must put items out for collection in a neat and safe pile that does not encroach on the road or footpath, or pose a risk to the community. Small items are to be placed in non-returnable boxes.
- 1.36. Must put items for collection at an Approved Collection Point, being the naturestrip or other location designated or advised from time to time by Council
- 1.37. Must only place items that are eligible for hard waste collection out for collection. A current list of eligible hard waste items can be found in Appendix 1
- 1.38. Must not place items that are longer than 1.5 meters or heavier than 30 kilograms excluding whitegoods, mattresses and doors out for collection





**A person must not:**

- 1.39. Scavenge or remove items from hard waste collections for commercial gain. If an item is removed from a hard waste collection pile for personal use they must leave the pile in adherence to Clause 1.35.
- 1.40. Add material to a hard waste collection pile that is for a property that they do not own or occupy

#### Part 4: Public litter and recycling bin service

**A person must not:**

- 1.41 Place commercial or trade waste in a public litter and recycling bin

#### Part 5: Non Council Residential waste services

When a planning permit requires a Waste management plan it must be approved by Council. The services provided must comply with the Waste Management Plan.

**Where the endorsed Waste Management plan allows for collection by a private contractor from a public space, including a naturestrip, the owner or occupier of a property that uses a non-council provided supplied bins:**

- 1.42 Must not leave any bin outside the property for more than 24 hours before or after collection  
Must maintain all bins in a clean and sanitary condition
- 1.43 Must ensure that the lid of all bins is completely closed and the bin never overflowing other than when the waste is being deposited or being removed from the bin

**When placed out for collection a non- council supplied bin;**

- 1.44 Must be at least 1 metre clearance from any object, obstruction, overhanging tree, or street sign
- 1.45 Must not have Prohibited waste disposed within it

#### Part 6: Suspension of Services

**If an owner or occupier of a property:**

- 1.46 On more than one occasion contravenes or is persistently contravening any provision of this policy Council may suspend any waste collection service to the property

#### Part 7: Administrative Updates

From time to time, circumstances may change leading to the need for minor administrative changes to this policy. Where an update does not materially alter this policy, such a change may be made administratively. Examples of minor administrative changes include changes to names of Council departments or positions, change to names of Federal or State Government departments or a minor amendment to legislation that does not have material impact. Where any change or update may materially change the intent of this policy, it must be considered by Council.



## Appendix 1: Hard waste - list of acceptable items for the hard waste collection service

Air conditioning unit internal/external
Antennas
Bath ceramic/wrought Iron
BBQ - kettle, timber stand metal
Bean Bag - Beans must be contained
Bikes / Scooters / skateboard
Blanket / doona, Bedding
Blinds - Holland/timber/venetian/roman items no longer than 1.5 m
Books
Cane ware Baskets
Car parts metal small individual pieces no engines
Carpet/carpet underlay
CDs/CD/DVD covers
Christmas trees – artificial HT
Clothing & shoes
Color bond Roofing 1.5m length
Computers/monitors
Corrugated iron & Metal
Crockery / Glasses
Cubby House plastic
Curtain Rods, Tracks, brackets
Curtains
Dishwasher
Doors limit 1
Dryer/washing machine
Ducted heating ducts (metal)
DVD/CD/Video
DVDs/CDs/VCR Player
Electrical appliances
Filing cabinet metal or timber
Fly Screen door Security Door limit 1
Fridges/ Freezers – doors removed or taped shut for safety
Furniture
Garden tools
Glass sheets (wrapped & labelled)
Guttering Metal 1.5m
Heater - Oil
Heater - wall electric or gas / potable
Hot water unit
Iron Scrap metal
Ironing Board



Ladder timber/metal
Laundry Sink - metal Cupboard
Lawn Mower
Light Fittings
Manchester
Mannequins
Mattresses/base
Metal Sheds
Mirrors (wrapped & labelled)
Oil Heater
Outdoor Window Awnings
Ovens/Stove
Paint tins/drums (dry/empty)
Pillows
Plastic Pots/tubs/containers
Plastic Wrapping Bulk
Plate glass (wrapped)
Polystyrene large pieces
Pool blow up above ground Dismantled
Pool pump
Pots & Pans
Prams & Pushers
Scrap metal, inc roofing sheets
Security Door limit 2
Shoes
Shower Screens limit 1 wrapped & Labelled can be longer than 1.5m
Steel (other than cans/tins)
Stoves/Oven HT
Tree Stumps (maximum 1.5m length and 30 kilograms) without soil
Styrofoam
Televisions
Textiles/linen
Tiles/carpet
Timber max 10 pieces 1.5m
Toilet
Tools including power tools
Toys
Trampoline dismantled
Vacuum cleaner
Vinyl flooring
Washing machines
Whitegoods
Window Frames Metal (not timber) 1.5 m
Window glass (wrapped)



Appendix 2: Hard waste - list of unacceptable items for the hard waste collection service

Building, demolition and renovation waste
Commercial waste or commercial quantities of waste
Asbestos
Gyprock
Cement sheeting
More than 1 door
Soil
Green waste (excluding stumps less than 1.5m and 30 kilograms)
Gas bottles
Fuel containers
Oil
Gates
Fencing
Trellis
Pallets
Tyres
Car parts
Tiles
Bricks
Concrete
Household waste – landfill, recycling, and food waste



### Appendix 3: Recyclables - list of acceptable items for the Recycling bin collection service

Aluminium baking trays
Aluminium foil – scrunched into a loose ball
Cardboard
Compact disc cases (no discs)
Glass bottles and jars - empty
Hard plastic packaging and food containers and pots– eg. hard plastic packaging from batteries and electrical equipment, take away containers, biscuit trays, strawberry punnets
Paper
Pet food tins, seafood tins –
Pizza boxes –empty
Cans ( steel/aluminium/aerosol) – empty
Metal pots and pans ( no lids)

### Appendix 4: Recyclables – list of unacceptable items for the Recycling bin collection service

Nappies
e-waste (any item with a lead or battery operated)
Green waste
Tissues
Garbage or putrescible waste
Bagged Recycling
Polystyrene
Coffee cups
Syringes
Batteries
Chemicals
Hazardous waste
Bricks
Rocks
Concrete
Soil
Rubble
Timber
Clothes
Linen
Shoes
Crockery
Pyrex
Light globes



Mirrors
Broken Glass
Drinking glasses
Spectacles
Waxed cardboard
Plastic bags
Cling film
Plastic wrapping
Mirrors
Prohibited waste

## 6.3 Electromagnetic Radiation & 5G Mobile Technology

### **SUMMARY: Strategic Planner, David Cameron**

**This report responds to a Council call up item on 28 October 2019 regarding electromagnetic radiation and the rollout of 5G mobile technology. Federal Government agencies predominantly regulate telecommunication networks in Australia and have provided publicly accessible information regarding the ongoing 5G rollout, in addition to addressing perceived safety concerns. Statements from relevant federal agencies and research centres were recently submitted to an ongoing federal Inquiry into the deployment, adoption and application of 5G technology in Australia. These submissions articulate that existing regulatory measures are sufficient to prevent any adverse harm from 5G technology.**

### **RECOMMENDATION**

#### **That Council:**

- 1. Note the information contained within this report regarding the 5G rollout and the roles of specific Australian Federal Government authorities; and**
- 2. Note that it is the cumulative advice from the Australian Radiation Protection and Nuclear Safety Agency, the Australian Communications and Media Authority, and the Australian Centre for Electromagnetic Bioeffects Research that 5G will not impact human health, that it is safe, and that appropriate standards are in place to protect against any harm.**

### **1. INTRODUCTION**

Acronyms used in this report:

DITRDC – Department of Infrastructure, Transport, Regional Development and Communications (Australian federal department)

DCA – Department of Communications and the Arts (former Australian federal department now known as DITRDC)

ACMA – Australian Communications and Media Authority

ARPANSA – Australian Radiation Protection and Nuclear Safety Agency

ACEBR – Australian Centre for Electromagnetic Bioeffects Research

WHO – World Health Organisation

ICNIRP – International Commission on Non-Ionising Radiation

AMTA – Australian Mobile Telecommunications Association

RPS3 – Radiation Protection Series No.3 (2002)

RF-EMF – Radio frequency electromagnetic fields

Council requested a call up item on 28 October 2019 to address electromagnetic radiation and the roll out of 5G mobile technology. The item requested a report to be presented to Council by February 2020 with detail into the 5G rollout along with the roles of specific Australian Federal

Government authorities and the science detailing any impacts to health from 5G. The four specific points of the call up are addressed within the discussion section of this report. As part of undertaking the work required for this Call Up Item, officers have had regard to Council's Call Up Items at Council Meeting Policy and in particular, Item 6.5 which states:

*"Where preparing a report responding to a Call Up Item which will require more than three person days or \$5,000 in costs, then the matter which is subject to the Call Up Item should be referred by Council to the next budget considerations with a supporting business case for consideration along with competing priorities."*

This report provides the information outlined above as requested.

5G is the fifth-generation wireless technology for digital cellular networks that began wide deployment in 2019. The DITRDC (previously the DCA) is currently implementing a 5G telecommunication network, in accordance with the Australian Federal Government 5G strategy (5G – Enabling the Future Economy paper, October 2017 (Attachment 1)).

From this Strategy the Federal Government views the implementation of the 5G mobile communications network as providing *'...the underlying architecture that will enable the next wave of productivity and innovation across different sectors of the Australian economy'*. The Strategy notes that 5G means high data rates, massive connectivity, ultra-low latency, high reliability and mobility at high speeds, demonstrating *'a significant leap from the capabilities of previous generations and introduces a range of new technological possibilities'*.

The current rollout of 5G telecommunications technology is predominantly regulated by the Australian Federal Government through the ACMA, including the responsibility for allocation of the 5G spectrum (allocation of a pre-set radio frequency to a private telecommunications organisation). The complete 5G rollout is a combined effort in partnership with private industry, as telecommunications organisations implement their 5G compatible networks and infrastructure.

Both national and international attention has been given to regulating and researching the effects of 5G technology. Australian Federal agencies involved include DITRDC, ACMA and ARPANSA. Additionally, federally linked research centres, including the ACEBR, conduct research surrounding the effects of exposure to radio frequencies and electromagnetic fields. Internationally, organisations including the WHO and the ICNIRP produce information, standards and research regarding 5G technology with the aim of providing worldwide best practice and uniformity.

Each of these organisations have produced documentation surrounding the rollout of 5G technology, addressing any potential to cause adverse harm. In addition, efforts have been made by Australian federal agencies to provide publicly accessible information to clarify the current state of research regarding 5G to alleviate wider concerns of the technology. An example of this includes the ARPANSA webpage titled *'Misinformation about Australia's 5G network'* published on 3 June 2019.

Currently, the House of Representatives Standing Committee on Communications and the Arts is conducting an Inquiry into the Deployment, Adoption and Application of 5G in Australia. All of the previously mentioned Australian federal authorities (along with the ACEBR) have made submissions to this Inquiry. This report relies on these submissions, providing the views of federal agencies and scientists, to address the points raised within the call up item. This report is based on publicly available research conducted by officers. It reflects Federal Government statements and the opinions of Research Centres.



## 2. DISCUSSION

The Council call up item contained four distinct points. These points are addressed respectively below, and are summarised from a more systematic analysis provided in the attachments.

The full submissions to the Inquiry into the Deployment, Adoption and Application of 5G in Australia from the DCA (now known as the DITRDC), ACMA, ARPANSA and ACEBR are included as Attachments 2, 3, 4 and 5 respectively, along with the combined submission from the AMTA and Communication Alliance in Attachment 6.

a) How the new 5G mobile network technology will be rolled out.

The 5G rollout process will be a joint public/private process involving the management of the 5G spectrum, and implementation of compliant telecommunications infrastructure. ACMA manages the Australian radiofrequency spectrum under the Radiocommunications Act (1992) and has commenced allocating frequency banding for 5G application. ACMA auctions and sells spectrum when made available for 5G.

Federal regulation and direction will guide the telecommunication industry rollout of 5G technology. Information regarding individual telecommunication business practices are limited, however the locations of existing telecommunications infrastructure remains publicly accessible. Telecommunication industry associations AMTA and the Communications Alliance indicate that the 5G infrastructure required will include more macro cells (traditional base stations) and small cells. Small cells complement the 5G network over a small area, are small in size, and utilise lower power than base stations. Both small cells and base stations are required to meet the relevant ARPANSA standard (RPS3) for radiofrequency exposure.

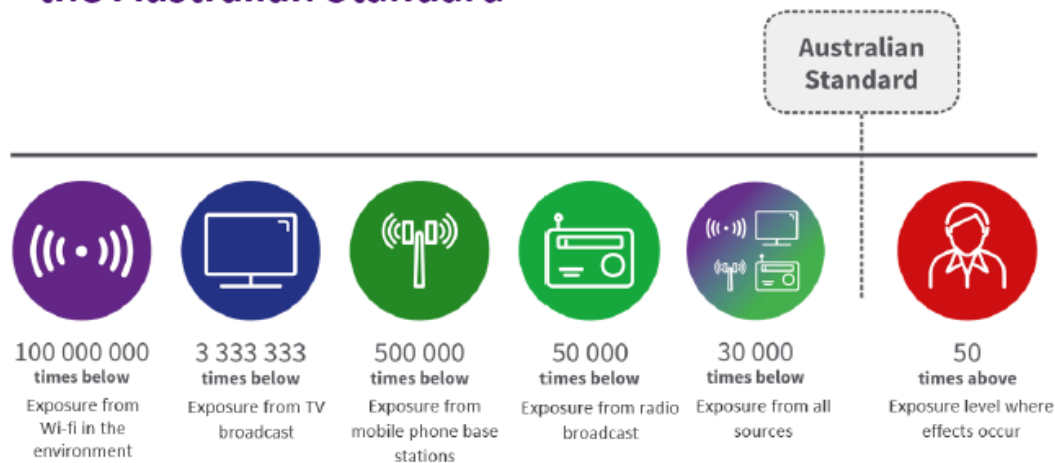
b) The role of the Australian Communications and Media Authority (ACMA) will be in guiding the roll out and regulating the technology under legislation, including any risks of Electromagnetic Radiation.

ACMA is the authority guiding the 5G rollout including 5G spectrum management (allocation of a pre-set radio frequency to a private telecommunications organisation) in accordance with the Radiocommunications Act (1992). It is ACMA's role to regulate electromagnetic energy and enforce compliance with the Mobile Base Station Deployment Code, which guides the location and design of new telecommunication facilities and devices.

The installation of such infrastructure is required to meet ARPANSA Standard RPS3, which as stated by ACMA is placed to *'protect people against all known adverse health effects from EME exposure'*.

Licensing conditions by ACMA require transmitters to not exceed the ARPANSA standard at any publicly accessible location. ARPANSA specifically notes in its submission to the Inquiry into the Deployment, Adoption and Application of 5G in Australia that exposure to radio waves would need to be 50 times higher than the RPS3 standard to have any recognised health effects:

## Typical public exposure to radio waves against the Australian Standard



Local Government involvement in regulating telecommunication facilities occurs when the installation of a new facility is not 'low impact' as defined by the Telecommunications Code of Practice – 2018. The role of Council is limited to assessing planning considerations. The safety and risk management aspects in association with electromagnetic radiation remains under the auspice of ACMA and ARPANSA.

- c) Any scientific research or studies that have been undertaken to determine any detrimental impacts to human health as a result of the new 5G technology, including the potential impacts of Electromagnetic Radiation.

Publicly available information on the potential impacts of electromagnetic radiation from ARPANSA and ACEBR was made available as part of the Inquiry into the Deployment, Adoption and Application of 5G in Australia convened by the Hon. Minister of Communications, Paul Fletcher MP.

ARPANSA identified approximately 30,000 studies and reviews in relation to electromagnetic fields and radio waves. Condensed responses from ACEBR and ARPANSA are as follows:

### ACEBR:

ACEBR is a Medical Research Council of Australia funded Centre of Excellence. The Centre conducts research into health effects from exposure to radiofrequency and electromagnetic fields, which include those emitted by telecommunications infrastructure (including 5G).

The relevant standard for RF-EMF is currently the ARPANSA Standard RPS3. It is important to note that the lowest determinable health impact of RF-EMF is used to inform the RPS3 limits. ACEBR further reports that the values of RPS3 are very conservative and would need to be substantially exceeded for any harmful health effects to occur.

Scientific research demonstrates that RF-EMF is capable of causing heating of the human body. This is regulated by the ARPANSA Standard RPS3 to prevent any adverse effects for radiofrequency fields associated with the 5G network. Other adverse health effects have failed to be demonstrated and attributed to RF-EMF through the research. It is noted by ACEBR that the initial rollout of 5G will use similar frequencies to 4G and will have the same effects as

existing network technology. ARPANSA and ACMA will continue regular monitoring and adjust regulations as appropriate.

This section of the call up item posed the question of 'Any scientific research...'. It is the advice of the ACEBR that singly pointing to individual scientific studies is problematic when related to RF-EMF. As RF-EMF exposure is a highly researched area, it is important that evaluation of the entire scientific literature is considered, as singular scientific studies can be flawed, and one of the cornerstones of empirical science is the reproducibility of scientific results.

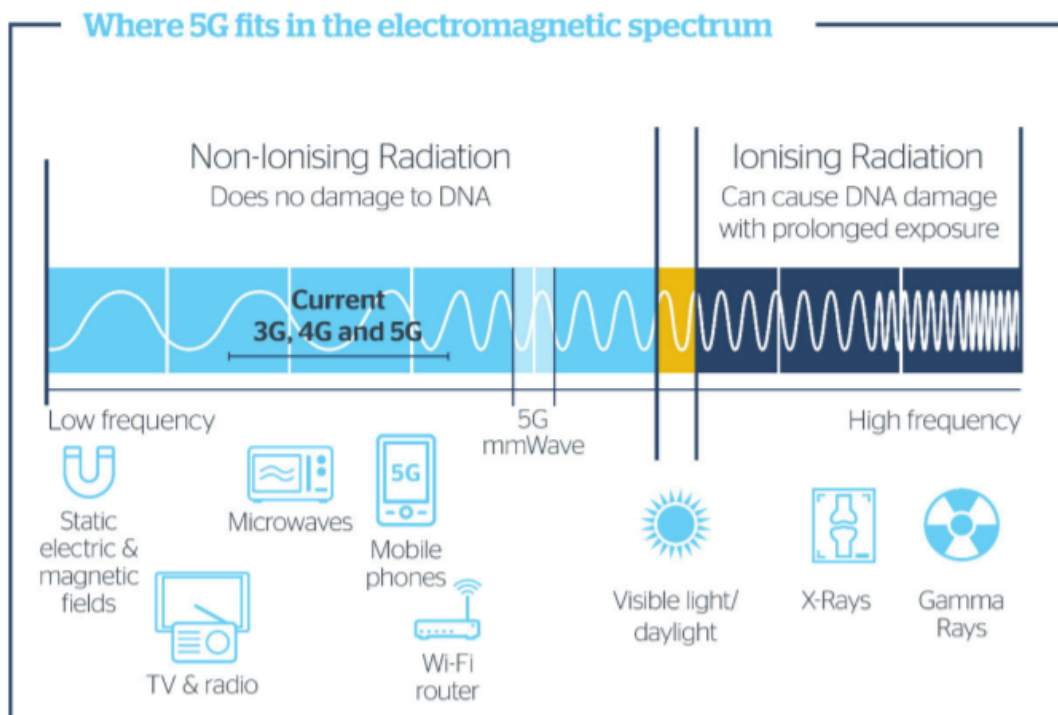
ACEBR reports that while '5G' appears new to a wide audience, science has already established the factors from RF-EMF that would impact human health. As the frequencies and power to be utilised for 5G technology are known, ACEBR states that the ARPANSA Standard RPS3 is '*...sufficient to ensure that exposures associated with 5G will not be able to adversely affect health*'.

#### ARPANSA:

ARPANSA is the Australian Government's primary authority surrounding radiation protection and nuclear safety. ARPANSA acts as a regulator in this regard, by promoting national uniformity and implementing international best practice. Additionally, ARPANSA has a function of conducting research related to radiation protection under the Australian Radiation Protection and Nuclear Safety Act 1998.

ARPANSA distinguishes between the radio frequencies utilised in telecommunications, and ionising radiation (not utilised within 5G) which is associated more broadly with nuclear energy or for medical uses. ARPANSA notes that radio waves are capable of causing tissue damage through thermal effects when used at high power (which is not applicable to 5G), and which is managed by appropriate safety measures. The public are exposed to levels of RF-EMF which ARPANSA considers too low to cause significant increases in temperature, and that '*the evidence for production of harmful biological effects is ambiguous and unsubstantiated*'.

In its submission to the Inquiry into the Deployment, Adoption and Application of 5G in Australia, AMTA included the following diagram to demonstrate where 3G, 4G and 5G sit on the Non-Ionising Radiation spectrum:



ARPANSA summarises the current body of research regarding exposure to radio waves as: *'Health authorities around the world, including ARPANSA and the World Health Organization (WHO), have examined the scientific evidence for possible health effects from telecommunications sources. Current research indicates that there is no established evidence for health effects from radio waves used in mobile telecommunications. This includes the upcoming roll-out of the 5G network. ARPANSA's assessment is that 5G is safe.'*

- d) The location of existing phone towers across the municipal district of Knox shown spatially, with towers within 100 metres of residential areas and schools specifically identified.

The location of existing telecommunication towers within a 100m radius to residential areas and schools are located as Attachments 7 and 8 respectively.

### 3. CONSULTATION

Officers initiated contact with major telecommunication organisations such as Telstra and Optus. No further information on the 5G rollout was obtained.

### 4. ENVIRONMENTAL/AMENITY ISSUES

Human health issues related to 5G have been discussed within the report. According to ARPANSA, limited ecological research indicates that, electromagnetic fields have *'...little or no evidence of a significant environmental impact'*.

### 5. FINANCIAL & ECONOMIC IMPLICATIONS

The rollout of 5G is considered to have significant economic benefits nationally. The DCA in their response to the Inquiry indicated that 5G could *'...provide an additional \$1,300 to \$2,000 in gross*

*domestic product per person after the first decade of the rollout*'. DCA noted that this is likely a conservative estimate and does not take into account all benefits (including cost and time savings) that better mobile telecommunications can afford households.

This report has been prepared within the current City Futures operational budget. Should further technical advice or research be required, qualified experts will need to be engaged subject to available budget and resources.

## **6. SOCIAL IMPLICATIONS**

It is considered there will be limited social implications as a result of this report.

## **7. RELEVANCE TO KNOX COMMUNITY AND COUNCIL PLAN 2017-2021**

### **Goal 4 - We are safe and secure**

Strategy 4.4 - Protect and promote public health, safety and amenity

### **Goal 5 - We have a strong regional economy, local employment and learning opportunities**

Strategy 5.3 - Promote and improve infrastructure and technology within the municipality and enhance strategic employment places for business

## **8. CONFLICT OF INTEREST**

Under section 80c of the Local Government Act 1989 officers providing advice to Council must disclose any interests, including the type of interest.

Author – Strategic Planner, David Cameron - In providing this advice as the Author, I have no disclosable interests in this report.

Officer Responsible – Director, City Development, Matt Kelleher - In providing this advice as the Officer Responsible, I have no disclosable interests in this report.

## **9. CONCLUSION**

The 5G rollout has commenced under the regulatory authority of the ACMA, and will involve telecommunications organisations implementing their own 5G compliant technology. The ACMA requires that 5G infrastructure meet ARPANSA standards in any publically accessible location, and that the applicable ARPANSA standard (RPS3) would need to be substantially exceeded for harm to occur.

ARPANSA identifies that telecommunication radio frequencies are capable of causing thermal effects which are managed through safety measures, and that '*...there is no established evidence for health effects from radio waves used in telecommunications*'. It is the cumulative opinion of the ACMA, ACEBR and ARPANSA that existing ARPANSA standards are positioned to sufficiently protect against any adverse health impacts from the 5G telecommunications rollout, and that 5G is safe.

## **10. CONFIDENTIALITY**

There are no items of a confidential nature in this report.

**Report Prepared By:** Strategic Planner, David Cameron

**Report Authorised By:** Director, City Development, Matt Kelleher

### **Attachments**

1. Attachment 1 - 5G Enabling the Future Economy [**6.3.1** - 15 pages]
2. Attachment 2 - DCA Submission 5G Inquiry [**6.3.2** - 17 pages]
3. Attachment 3 - ACMA Submission 5G Inquiry [**6.3.3** - 20 pages]
4. Attachment 4 - ARPANSA Submission 5G Inquiry [**6.3.4** - 10 pages]
5. Attachment 5 - ACEBR Submission 5G Inquiry [**6.3.5** - 5 pages]
6. Attachment 6 - AMTA Submission 5G Inquiry [**6.3.6** - 47 pages]
7. Attachment 7 - Map Mobile Base Stations - Residential Zones January 2020 [**6.3.7** - 1 page]
8. Attachment 8 - Map Mobile Base Stations - Schools January 2020 [**6.3.8** - 1 page]



Australian Government  
Department of Communications and the Arts



## 5G—Enabling the future economy

October 2017

## Disclaimer

The material in this paper is of a general nature and should not be regarded as legal advice or relied on for assistance in any particular circumstance or emergency situation. In any important matter, you should seek appropriate independent professional advice in relation to your own circumstances.

The Commonwealth accepts no responsibility or liability for any damage, loss or expense incurred as a result of the reliance on information contained in this paper.

This paper has been prepared for consultation purposes only and does not indicate the Commonwealth's commitment to a particular course of action. Additionally, any third party views or recommendations included in this paper do not reflect the views of the Commonwealth, or indicate its commitment to a particular course of action.

## Copyright

© Commonwealth of Australia 2017



The material in this paper is licensed under a Creative Commons Attribution—4.0 Australia license, with the exception of:

- the Commonwealth Coat of Arms
- this Department's logo
- any third party material
- any material protected by a trademark, and
- any images and/or photographs.

More information on this CC BY license is set out at the creative commons website:

<https://creativecommons.org/licenses/by/4.0/>. Enquiries about this license and any use of this paper can be sent to: Department of Communications and the Arts, GPO Box 2154, Canberra, ACT, 2601.

## Attribution

Use of all or part of this paper must include the following attribution:

© Commonwealth of Australia 2017

## Using the Commonwealth Coat of Arms

The terms of use for the Coat of Arms are available from the It's an Honour website (see [www.itsanhonour.gov.au](http://www.itsanhonour.gov.au) and click 'Commonwealth Coat of Arms').



## Contents

**Australia’s 5G vision ..... 1**

**What is 5G? ..... 3**

**The 5G economics case ..... 3**

Enhanced Mobile Broadband (eMBB) .....3

Massive machine type communications (mMTC).....4

Critical communications .....4

**What is different about 5G?..... 6**

Network slicing.....6

Mesh networks .....6

Spectrum sharing .....7

Antenna technology and network topology .....7

Business case .....8

**How are countries preparing for 5G? ..... 9**

Industry 5G preparations in Australia .....9

**The Government’s direction for 5G ..... 10**

Making spectrum available in a timely manner..... 10

Actively engaging in international spectrum harmonisation activities ..... 11

Streamlining arrangements to allow mobile carriers to deploy infrastructure more quickly ..... 11

Reviewing existing telecommunications regulatory arrangements to ensure they are fit-for-purpose... 12

**Next steps ..... 12**

## Australia's 5G vision

5G is the next step in the evolution of mobile wireless communications technology, promising improved connectivity, greater network speeds and bandwidth, and very low latency. It is the fifth generation in mobile technology which, at each step, has seen significant developments in communications networks:

- 1G—The first generation of mobile phone networks were deployed in the early 1980s, providing a basic voice service using analogue transmission.
- 2G—In 1991, second generation networks were deployed, making the switch to digital standards with improved voice messaging and the introduction of the short message service (SMS).
- 3G—The third generation launched in 2001 and introduced data services in addition to voice and SMS.
- 4G—In 2009, the fourth generation protocol, Long Term Evolution (LTE), was introduced, supporting improved mobile broadband which saw increased capacity and speed for data.

New capabilities of mobile communications networks enabled by 5G technology will allow for a variety of 'use cases':

- higher quality and more video services provided to multiple users with full mobility, even at high speed
- massive scale automation delivered through widespread sensor networks and multiple connected devices
- delivery of critical communications assured by low latency and ultra-reliable networks, and
- improved productivity assisted by high quality, real time data analytics.

Unlike existing mobile communications networks, 5G networks have the potential to allow tailoring of requirements for each of these different use cases within the same network.

The Government considers that 5G is more than an incremental change for mobile communications. Instead, it provides the underlying architecture that will enable the next wave of productivity and innovation across different sectors of the Australian economy. Efficient rollout of 5G and uptake of the services it supports has the potential to produce far-reaching economic and social benefits and support growth of Australia's digital economy. This will be supported by the rollout of the National Broadband Network (NBN) allowing greater capabilities for the seamless delivery of services across high speed mobile, fixed line and fixed wireless networks.

The Government wants to create an environment that allows Australia's telecommunications industry to be at the forefront of seizing the benefits of 5G across the economy. The communications sector will lead the rollout of 5G networks in Australia. However, the Government can create the policy and regulatory environment to support a more efficient rollout, given its potential benefits to the economy.

The Government's direction will be to support the timely rollout of 5G in Australia to enable the next wave of broad-based industry productivity, and support the growth of Australia's digital economy.

This includes immediate actions by Government that enable the communications market to introduce new 5G technologies in line with international developments. These include:

- making spectrum available in a timely manner
- actively engaging in the international standardisation process
- streamlining arrangements to allow mobile carriers to deploy infrastructure more quickly, and
- reviewing existing telecommunications regulatory arrangements to ensure they are fit-for-purpose.

The Government recognises that as 5G continues to develop, other issues relating to the technology will likely emerge which may require future Government action. In particular, while there are opportunities for 5G to create economy-wide transformation, this will require a broader examination of sectoral regulatory frameworks.

To that end, the Government will work collaboratively with industry to foster an ongoing dialogue on 5G beyond the launch of this paper to identify and remove sectoral barriers to its successful and timely rollout. Through this dialogue, the Government will also look at opportunities to build on other Government activities, such as the national Digital Economy Strategy which will more broadly focus on building the productivity of sectors across the economy.

## What is 5G?

The International Telecommunication Union (ITU) is the United Nations specialised agency for information and communications technologies. This body decides global spectrum allocation frameworks and harmonises international spectrum to ensure networks and connected devices can communicate seamlessly. The ITU will undertake the formal, international process to identify bands for 5G by 2020. It has developed draft technical specifications for 5G which include:<sup>1</sup>

- high data rates (1 Gbps for hotspots, 100 Mbps download and 50 Mbps upload for wide-area coverage)
- massive connectivity (1 million connections per square kilometre)
- ultra-low latency (1 millisecond)
- high reliability (99.999% for mission critical ‘ultra-reliable’ communications), and
- mobility at high speeds (up to 500 km/h i.e. high speed trains).

In working towards these specifications, 5G represents a significant leap from the capabilities of previous generations and introduces a range of new technological possibilities. The success of 5G in delivering new technologies and services will be supported by existing communications infrastructure, including the NBN. This convergence of high-speed fixed-line and mobile services will collectively produce a consistent and ubiquitous user experience.

## The 5G economics case

Unlike early generations of mobile networks, 5G will represent a significant shift in the telecommunications industry’s focus away from voice and more towards mobile broadband and increased industrial applications. These new use cases are expected to create benefits across a range of sectors—including transportation, health, manufacturing and agriculture—and have varying networking requirements. These use cases, as identified by the industry, can be divided into the following categories:

- enhanced Mobile Broadband
- massive Machine Type Communications, and
- critical communications.

### Enhanced Mobile Broadband (eMBB)

eMBB will deliver improved capacity to a greater number of devices. This will enable higher rates and volumes of data transmission per device and improve coverage to a broader range of locations. eMBB will likely be the focus of early 5G deployments as it can immediately support the growing communications requirements for the digital economy.

#### An improved mobile experience for consumers

5G networks will give consumers a better mobile experience in more locations. Increased network capacity will support more users, even in crowded areas, such as large public events, and at peak times. Faster network speeds will also enable consumers to view rich content in more places, supporting the streaming of live events and high resolution media.

<sup>1</sup> ITU, 23 February 2017, ‘[Press Release: ITU agrees on key 5G performance requirements for IMT-2020](#)’.

## Massive machine type communications (mMTC)

As 5G networks mature, they will support the widespread and dense deployment of sensors and other network-connected devices by significantly reducing their power requirements and providing flexible coverage across different spectrum bands. This proliferation of the Internet of Things (IoT) across industries is expected to produce significant productivity benefits and support integration between sectors.

### Supporting productivity and innovation

The term Industry 4.0 describes the next step in the advancement of the manufacturing sector (the 'fourth industrial revolution'). Industry 4.0 introduces autonomous systems supported by a combination of technologies such as IoT, artificial intelligence, continued technological improvements and digitalisation in manufacturing.

Australia stands to benefit from Industry 4.0, given our world-class manufacturing sector, which includes several high-value industries such as medical technology and aerospace. Australian manufacturers can improve their productivity and international competitiveness through Industry 4.0 processes by supporting their participation in global value chains. This is of particular benefit to SME manufacturers, opening them up to new markets and opportunities. 5G can support Industry 4.0, by providing communications infrastructure that is more accessible and flexible to suit specific industry needs.

5G can enable innovation in other sectors such as agriculture. A challenge for Australia's agricultural sector is identifying how to improve productivity while balancing environmental and commercial constraints. Precision agriculture, which focuses on improving yields and minimising economic risks, seeks to provide more control in the management of agricultural production. While precision agriculture requires a range of enablers—including data analysis, sensor networks and geographical information systems—5G can provide the supporting infrastructure for these technologies.

## Critical communications

Low latency and 'ultra-reliable' communications networks will support the delivery of critical communications, i.e. to support public safety use and playing role in the technology ecosystem supporting autonomous vehicles. In addition to automation, critical communications will also help to support technological advancement in areas including robotics and artificial intelligence.

### The social benefits from autonomous vehicles

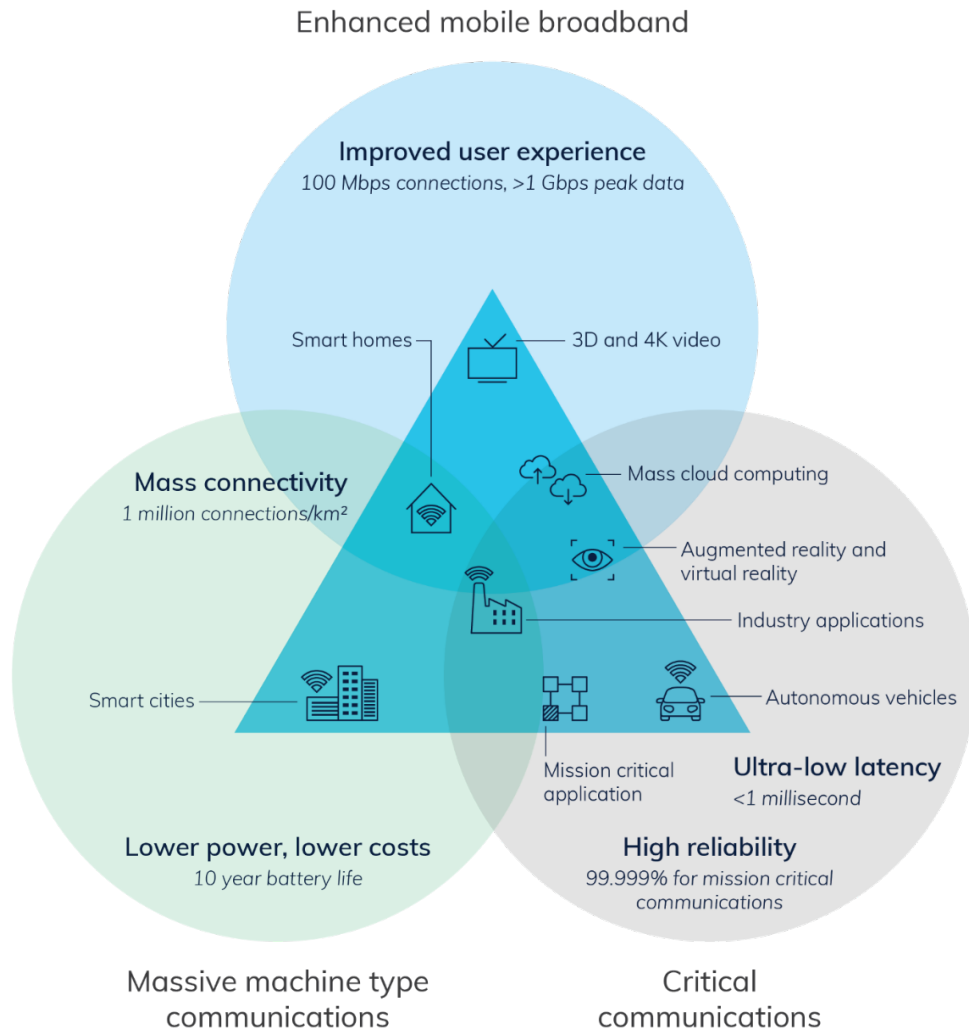
5G networks are expected to play a role in the technology ecosystem supporting the development of autonomous vehicles, which will enable a number of social benefits for transportation. Traffic congestion, which is estimated to cost Australia \$53 billion by 2031,<sup>2</sup> could be proactively reduced by smart city traffic management systems that are informed by machine-to-machine communications with autonomous vehicles.

Improved road safety is also expected to be a key outcome of autonomous vehicles, as the majority of car accidents involve human error. In the 12 months to July 2017, there were 1,235 deaths on Australian roads with road trauma costing the Australian community an estimated \$27 billion annually.<sup>3</sup> Autonomous vehicles can have a valuable role not just in terms of financial savings, but in saving human lives.

<sup>2</sup> Infrastructure Australia, 2015, '[Australian Infrastructure Audit](#)'.

<sup>3</sup> Bureau of Infrastructure, Transport and Regional Economics, August 2017, '[Road deaths—monthly bulletins](#)'.

Figure 1—Outline of the relationship between the technical requirements of 5G and expected services and applications it will deliver



Source: Based on figure 2 from the ITU paper, [‘IMT Vision—Framework and overall objectives of the future development of IMT for 2020 and beyond.’](#)

## What is different about 5G?

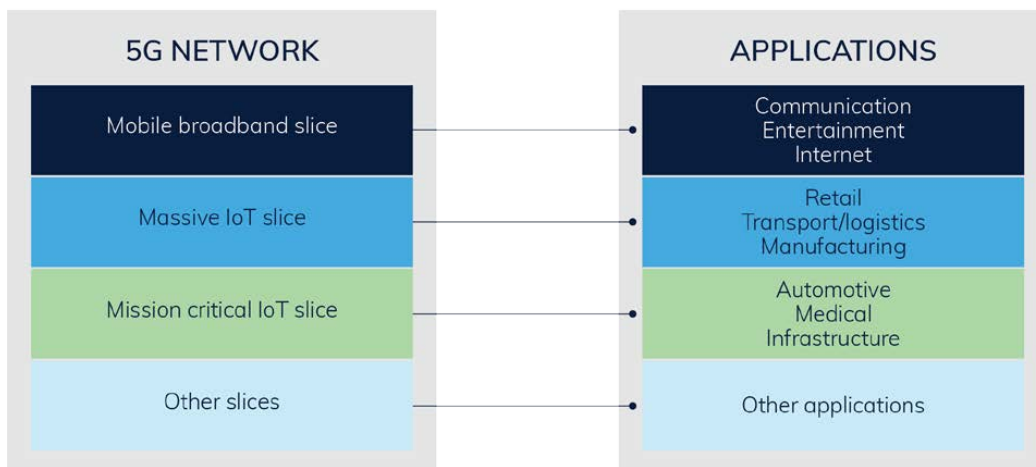
5G is expected to enable productivity outcomes across key verticals of the economy as a result of a range of characteristics, such as **network slicing** and **mesh networks**. However, it will need to overcome deployment challenges such as **spectrum acquisition** and **coverage**. This is expected to lead to new approaches for deployment to enable widespread 5G coverage in Australia. The industry will also need to develop a robust **business case** for 5G rollout, which will likely be demand driven, to support the significant capital expenditure required.

### Network slicing

Network slicing allows operators to split their network into separate sub-networks (also referred to as slices), enabling them to dedicate network resources to different users and applications. Sub-networks can ‘slice’ the infrastructure resources from the physical network to create virtual independent networks. This is a significant development from previous mobile network generations, as it enables an operator to deliver many different capabilities by creating slices that can be tailored for the intended usage. For example, an operator could create a network slice for IoT devices, or alternatively, a network slice for higher security for a higher quality of service for government or public safety uses.

Network slicing also provides a model for infrastructure sharing between network operators. In this case, a single transmitter’s network could be shared with more than one operator. Given the capital expenditure that will be associated with 5G rollout, network slicing can provide a cost effective, short-term solution for operators.

Figure 2—5G network slicing enables operators to create separate virtual networks to meet application requirements



Source: Based on figure 2 from the ITU article, [‘Why end-to-end network slicing will be important for 5G.’](#)

### Mesh networks

Mesh networks can be utilised to increase the range of coverage, where the ‘mesh’ is an interconnection among a network of devices. Only one device in the mesh needs to be connected to the network, which can then relay data to other nearby devices.

Mesh networks not only provide the opportunity to support 5G deployment but also have the additional benefit of providing efficient network speeds. Through dynamic routing, devices on a mesh network are able to seek the fastest and most reliable pathway to send and receive data. As such, this architecture can provide a cost effective solution for coverage in more remote areas. For example,

primary industries would benefit from this network approach by simplifying network connections and costs associated with deploying and managing an IoT sensor network. However, the application of mesh networks is still highly speculative as the industry considers how they will operate in practice and in different environments. This may contribute to the development of new business models for 5G.

## Spectrum sharing

Spectrum is a critical enabler of Australia's current and future communications infrastructure. The specific spectrum bands and quantity of spectrum required for 5G are still being considered. However, 5G will likely require a mix of low, medium and high frequency spectrum to meet different scenarios relating to coverage, connectivity, and latency:

- Low frequency (less than 1GHz)—providing widespread coverage across urban, suburban and rural areas and supporting IoT for low data rate applications.
- Medium frequency (1–6GHz)—providing good coverage and high speeds, and including the expected initial 5G range of 3.3–3.8GHz which has been identified as the most likely band for launching 5G globally.
- High frequency (above 6GHz)—providing ultra-high broadband speeds for advanced mobile broadband applications, and most suitable for applications in dense traffic hotspots.

5G technologies can be expected to deliver improvements in spectral efficiency (the data rate that can be supported per unit of spectrum). However, the use of 5G networks for applications such as widespread industrial applications is likely to require significantly more amounts of contiguous spectrum to be made available.

While some of the potential bands for 5G currently have unused spectrum, other bands would need to be 'refarmed', noting that it is likely that bands currently used for 2G, 3G and 4G in Australia will transition over time to 5G. Refarming enables spectrum to be transitioned to the highest value use as required. The refarming of spectrum already held by mobile broadband operators is a commercial decision for those operators. 5G is also expected to provide the opportunity for 'soft-refarming' where 4G and 5G technologies can both be supported simultaneously, minimising the impact to legacy devices during transition periods.

Spectrum sharing, that is spectrum accessed by numerous users on a shared basis, has also been identified as an option for 5G technology. Spectrum sharing encompasses a range of different aspects of spectrum management. Spectrum can be shared by geography, time, economic priority schemes, code modulation, polarisation, directionality or power. Access to spectrum is divided between users so it can be used without interference issues.

5G opens up new opportunities for increased spectrum sharing, through mechanisms such as network slicing. 5G technology is also designed to support shared arrangements, and allows for the sharing of the same spectrum ('unlicensed Wi-Fi' spectrum) with other technologies. Operators can augment their holdings in situations where existing exclusive holdings are insufficient to meet customer needs. Spectrum sharing in the 5G context is also supported by the expected use of highly directional antenna technology which would enable operators to operate in closer proximity without interference.

## Antenna technology and network topology

5G will require radically different structures of networks if it is to achieve successful deployment in Australia. As 5G will likely utilise different frequencies, new equipment will be necessary. Additionally, the higher frequency 5G spectrum can only travel a small distance and will need more cells to ensure adequate coverage. However, antennas and equipment will be smaller, making it easier to attach these cells to existing infrastructure such as street lights and buildings.



The more dense deployment of cells will also give rise to other approaches that improve the reliability of data transmission across a 5G network. Data may be divided into individual streams and transmitted through multiple antenna segments in a process called Multiple Input Multiple Output (MIMO) which allows for more information to be transmitted simultaneously. This technique is further empowered by 'beamforming' which allows base stations to direct focused beams of energy to a specific area rather than dissipate the available power of a larger area. These developments will enable more efficient transmission and increase overall throughput.

5G is also expected to assist the adoption of IoT by further reducing power consumption through extended discontinuous reception. In this scenario, IoT devices shift between active and inactive cycles, transmitting only when required. This will allow connected devices to operate for extended periods on a single charge, reducing operational costs.

5G will also increase the support for a greater density of devices that would have otherwise been limited by the capacity on 3G and 4G networks. They will also enhance IoT deployment through the use of network slicing to create virtual network configurations that are optimised for the low power and coverage requirements of IoT networks.

### Business case

For Australians to experience the benefits of 5G, the communications sector will need to explore and develop new business cases to attract investment and support the rollout of 5G services. As 5G becomes an integral part of the communications ecosystem, the sector will need to be agile to respond to the needs and expectations of other sectors which will be seeking to take advantage of these next generation networks.

While residential consumers will inevitably be attracted to the enhanced mobile broadband services offered by 5G, it is the industrial applications for 5G where industry expects to see the greatest opportunity for new business models.

Compelling industrial applications are still to be developed. For example, industry sectors can be expected to seek tailored solutions for their business needs such as enhancing their local area network or enabling autonomous systems, and small businesses will look for low cost deployments of IoT.

It is therefore expected that the model for 5G will be demand driven and will require the communications industry to foster new business opportunities.

## How are countries preparing for 5G?

In preparation for 5G, many countries have been taking steps to test the technology and review their spectrum arrangements.

### Examples of 5G work being undertaken by other countries

The United States is clearing the 600MHz band through an incentive auction for the potential early deployment of 5G. The United States has also identified reforms to infrastructure deployment as a priority for 5G rollout. Mobile network operators are also conducting trials of low-band spectrum for use in 5G services.

The Asia-Pacific Telecommunity (APT), the regional arm of the ITU, approved a recommendation for the use of the 700MHz band for 5G, with 26 countries in the Asia-Pacific region identifying this band for this use, including Australia, Japan, South Korea and New Zealand.

Korea and Japan have stated their intention to use some or all of the 26.5 to 29.5GHz range to trial enhanced mobile broadband applications ahead of the 2018 Winter and 2020 Summer Olympics respectively. It is expected that these trials will lead to commercial availability of 5G services.

The European Communications Commission (ECC) identified the 3.4–3.8 GHz and 26GHz band (from 24.25 to 27.5GHz) bands for the deployment of 5G in Europe. All European countries are expected to select at least part of this range to launch 5G by 2020.

In the United Kingdom, the government launched its 5G strategy in March 2017. It is funding testbeds to understand the different deployment requirements and security considerations for 5G. The United Kingdom is also working to make suitable spectrum available in the high (24.25 GHz–27.5 GHz, and other bands above 30 GHz), medium (3.4–3.8 GHz) and low frequency (700 MHz) bands.

### Industry 5G preparations in Australia

Australia is well positioned to harness the opportunities of 5G. Australia has an effective and competitive mobile communications market, with voice and data coverage available to more than 99 per cent of the population.<sup>4</sup> It is the top performer internationally in terms of having in place effective enablers—infrastructure, affordability, consumer readiness and content availability—to support mobile internet adoption.<sup>5</sup>

5G trials have already commenced in Australia, with each of the main carriers working with mobile equipment suppliers in testing the application and limits of the technology. These trials will continue and will inform the communications sector on how 5G can be effectively deployed for the Australian environment.

<sup>4</sup> Department of Communications and the Arts, accessed 1 September 2017, '[Mobile phone towers](#)'.

<sup>5</sup> GSM Association, 24 June 2016, '[Global Mobile Connectivity Index](#)'.

## The Government's direction for 5G

The Government has made significant investments to improve telecommunications infrastructure in Australia, through the NBN and the Mobile Black Spot Program. The Government is also working to create a policy and regulatory environment that supports a competitive and innovative communications market.

The Government recognises that 5G will enable innovation and productivity across industry sectors and can significantly contribute to Australian's growth and future prosperity. Therefore, the Government will focus on enabling the early deployment of this new generation of mobile networks in Australia and encourage its use in delivering new services and applications.

The Government will support the timely rollout of 5G in Australia to enable the next wave of broad-based industry productivity, and support the growth of Australia's digital economy.

Industry expects and needs to lead the deployment of 5G. However, the Government has a role in supporting network rollout by modernising policy and regulatory frameworks and removing barriers that would delay rollout and adoption unnecessarily.

In the first instance, the Government will support the early deployment of 5G in Australia by:

- making spectrum available in a timely manner
- actively engaging in international spectrum harmonisation activities
- streamlining arrangements to allow mobile carriers to deploy infrastructure more quickly, and
- reviewing existing telecommunications regulatory arrangements to ensure they are fit-for-purpose.

### Making spectrum available in a timely manner

A clear, efficient and flexible regulatory framework governing spectrum access will be essential to support the timely deployment of 5G networks in Australia.

The Government is currently undertaking work to modernise Australia's spectrum management framework to ensure it remains fit-for-purpose. In May 2017, it outlined its proposed reforms to the framework which are designed to simplify and streamline the processes for spectrum allocation and provide a transparent, efficient and flexible spectrum management framework. This will be the most significant change to the Australian spectrum management framework in the last 25 years.

The reforms will remove barriers between licence types, and enable flexible licensing issue and allocation processes. This strategic approach will remove outdated processes and support the Australian Communications and Media Authority (the ACMA) to more effectively respond to market demands and new technologies, such as 5G. This will help Australia remain internationally competitive with a modern, innovative economy over the coming decades.

#### **The Government will put in place its new spectrum management framework by 2019.**

In addition, the ACMA will continue to work on making spectrum available for 5G. The ACMA has been investigating the use of 1.5GHz and 3.6GHz and high frequency mmWave bands in considering additional spectrum for mobile broadband services. The ACMA has decided to prioritise refarming of the 3.6GHz band over the 1.5GHz band, citing industry submissions noting this band is likely to be a pioneer band for early 5G deployments and the need to provide greater clarity and investment certainty for incumbents and potential new band entrants alike. The ACMA is currently engaging with industry on which parts of the 3.6GHz band should be reallocated and on what terms. This approach also follows international trends which have seen the 3.6GHz band commonly used for 5G trials.

#### **The ACMA will work to bring 3.6GHz spectrum to auction in 2018.**

## Actively engaging in international spectrum harmonisation activities

There is already significant work underway globally with several countries trialling 5G, but standards for this new generation technology are yet to be finalised. The formal, international process to define 5G is led by the ITU. The ITU's Working Party 5D is responsible for shaping the standard for "futuristic mobile technologies" to support International Mobile Telecommunications (IMT) for 2020 and beyond.<sup>6</sup> This process is known as IMT-2020.

Stakeholders such as regulatory and policy setting bodies, hardware manufacturers and governments of countries in which they are based will be seeking to influence the international dialogue. A key body is the industry-driven 3GPP which undertakes technology standardisation. Collectively, the ITU and 3GPP will drive spectrum harmonisation activities: the ITU, led by administrations, will focus on the spectrum requirements; and the 3GPP, led by industry, will concentrate on equipment and device standards.

Industry is well-placed to lead the standardisation process particularly given its role identifying the application of 5G technologies. However, there is also an important role for the Government in these processes. This is particularly the case in the harmonisation of international spectrum arrangements which will have significant impact on the availability and cost of 5G devices in Australia and can be strongly contested.

In the past, Australia and the Asia-Pacific region have been influential in contributing to standards and spectrum plans that have been adopted across the world. This ensured that Australia was able to adopt new technologies quickly and that the Australian market could take advantage of the economies of scale and have a greater choice of mobile handset equipment.

**The Government will ensure strong participation by Australian in domestic and international discussions about 5G spectrum harmonisation.** Our continued involvement provides the opportunity to contribute to this dialogue and secure outcomes that will benefit the adoption of 5G in Australia.

## Streamlining arrangements to allow mobile carriers to deploy infrastructure more quickly

The design and deployment of mobile networks will be radically different from those of today. 5G is expected to require additional infrastructure in new forms, including smaller cells and more densely-located antennas, particularly in the use of high-band spectrum.

Carriers have specific powers and immunities relating to telecommunications infrastructure deployment and installation. These laws help carriers to rollout telecommunications infrastructure quickly in a nationally-uniform way, rather than having to follow state, territory and local government requirements. These laws have existed in their current form since 1997.

The Government has recently consulted on proposed new arrangements that take account of technology developments and changes in operating practices as well as identifying opportunities to streamline deployment processes. Under these new proposed arrangements, mobile carriers would be able to rollout new communications technologies such as 5G more efficiently.

The Government understands that some members of the community have expressed concerns about the impact on public amenity from increased telecommunications infrastructure. The Government considers that telecommunications providers should work with local communities to address concerns about their infrastructure plans and is encouraging industry to consider consultation requirements for future 5G networks.

**The Government continues to work with stakeholders and will implement the first tranche of changes to carrier powers and immunities following the conclusion of the consultation process.**

<sup>6</sup> ITU, accessed 1 September, ITU towards "[IMT for 2020 and beyond.](#)"

## Reviewing existing telecommunications regulatory arrangements to ensure they are fit-for-purpose

The pace of change in the communications sector is impacting on the effectiveness of the existing telecommunications regulatory framework. In response, the Government is progressively working to modernise the regulatory architecture to ensure that the regulatory and policy settings flexibly respond to the current and future needs of the communications sector.

In undertaking reform, the Government is cognisant that the communications regulatory framework will need to be sufficiently flexible to address the emergence of new technologies and business models.

5G deployment will benefit from the Government's reform efforts, including updates to the regulatory framework for telecommunications and radio spectrum and modernising the ACMA. In these cases, the Government has been revising regulation to shift it away from the traditional vertical telecommunications sectors to principles based, flexible arrangements. This will provide the versatility necessary to account for 5G developments and services.

**The Government will continue to work with industry to modernise current telecommunications regulatory arrangements to ensure they encourage competition and innovation in the sector.**

As with previous mobile networks, cybersecurity will be a critical consideration as 5G is deployed. Security will be even more so a challenge for 5G, as the reliability of communications will be pivotal in the technology's ability to deliver benefits, particularly in the case of critical communications.

Additionally, in providing the architecture for automation, 5G networks will trigger an ever-increasing volume of data. While the bulk of data will be machine-to-machine communications, users will want assurance that their personal information is protected. User consent will be an area of growing complexity due to the intersection between autonomous systems and the individual.

Industry has strong incentives to address cybersecurity risks in 5G's new types of network deployments and systems. However, **the Government will continue to assess cybersecurity and privacy issues as they evolve to ensure Australians have confidence in using 5G.**

## Next steps

The Government recognises the opportunities presented by 5G for economy-wide transformation, creating productivity benefits in sectors such as transportation, health, manufacturing and agriculture. However, realising the benefits of 5G in sectors other than communications will need the right sectoral regulatory settings.

**The Government will work to ensure that sectoral regulatory frameworks are updated to take advantage of 5G.** The communications portfolio is well-placed to facilitate an ongoing strategic dialogue on 5G that will support sectors to identify and work towards unlocking the potential benefits of the technology. This dialogue would provide a starting point for greater engagement across Government and with industry and the community.

To that end, **the Government will establish a 5G working group that will bring together representatives from across Government and industry.** The working group will create a platform for this strategic dialogue with a mandate to seek out opportunities and emerging issues on 5G. This will provide better coverage across Government of the evolving policy and regulatory challenges associated with 5G.

Inquiry into the deployment, adoption and application of 5G in Australia  
Submission 330



**Australian Government**  
**Department of Communications and the Arts**

# **House of Representatives Standing Committee on Communications and the Arts: Inquiry into the deployment, adoption and application of 5G in Australia**

## **Submission**

November 2019

Inquiry into the deployment, adoption and application of 5G in Australia  
Submission 330

Department of Communications and the Arts

November 2019

## Introduction

Digital connectivity is a key enabler of Australia's social and economic activity. The mobile and fixed telecommunications networks that provide this connectivity are critical to our lives. Mobile services have long outnumbered fixed services, although fixed services carry greater volumes of data. The direct contribution from the technology sector in Australia is around \$69 billion while the broader total contribution from the technology sector is around \$122 billion (including both direct and indirect contributions).<sup>1</sup>

While still at an early stage, the fifth generation of mobile technology, or 5G, promises to be a significant advance on current 3G and 4G networks. 5G is designed to provide greater network capacity, higher speeds and lower latency. It is expected to be a transformative technology that could have significant implications; supporting greater innovation, productivity and international competitiveness. However, there is a need to keep 5G in perspective and balance hype with the reality.

The Government recognises the potential of 5G and put in place Australia's first 5G Strategy in October 2017. The Department of Communications and the Arts (the Department) is working with industry to implement the 5G Strategy, through spectrum allocation and improving regulations such as powers and immunities in order to facilitate the rollout of 5G and its operation. The establishment of the 5G Working Group is another example of this collaboration.

A large amount of material has been published about 5G as a technology and its potential uses. We also expect many other submitters will cover these matters in detail with the Committee. Our submission therefore discusses 5G technology and its uses only briefly, and largely where this helps explain 5G's capabilities and related policy issues. In the main, our submission focusses on the potential benefits of 5G for Australia and what the Government is doing to support its rollout, up-take and productive use.

## 5G technology and network design

5G represents a step change in mobile communications, with several characteristics that differentiate it from 4G. In particular, 5G will offer significantly greater capacity and faster data speeds, significantly lower signal latency or delay, and will support much larger numbers of devices in a given area.

5G also promises better outcomes in terms of spectrum efficiency, energy usage (both in the network and in devices), mobility at high speed and reliability.

It has been deliberately designed to deliver greater capabilities to support improved and new applications, not only for the mass market, but also industrial and enterprise users. As such 5G is seen as a potential general purpose technology that can underpin a range of industrial, agricultural and other commercial applications.

To achieve these outcomes 5G will operate over several different spectrum bands, including low bands (sub 1 GHz), mid bands (1 to 6 GHz) and high, or millimetre wave (mmWave), bands (24 to 86 GHz). The reason for this is that signals can travel longer distances at low frequencies but carry less data, while they can carry large amounts of data at high frequencies but only over shorter distances.

---

<sup>1</sup> AlphaBeta, September 2019, *Australia's Digital Opportunity: Growing a \$122 billion a year tech industry*, Page 12, [www.alphabeta.com/wp-content/uploads/2019/09/australias-digital-dividend-final.pdf](http://www.alphabeta.com/wp-content/uploads/2019/09/australias-digital-dividend-final.pdf)



Inquiry into the deployment, adoption and application of 5G in Australia  
Submission 330

Department of Communications and the Arts

November 2019

5G network operators will draw on the complementary properties of these different spectrum bands to deliver the full potential of 5G.

This use of spectrum will see a different approach to network design to prior generations of mobile telecommunications. 5G will continue to use towers with transmitters using lower bands, providing wide area coverage. In areas with greater concentrations of users and traffic, 5G will use high band frequencies to carry larger amounts of data with less latency but over shorter distances, and will use more small cells to do this. Typically small cells are used in high traffic areas such as transport hubs or office buildings, as is common with 4G today.

Generally established carriers like Telstra, Optus and Vodafone in Australia will operate commercial networks offering services to the public. However, 5G can also be used to operate private networks. For example, 5G can be used to provide networking in a specific area such as a factory or warehouse. Apart from its high performance, 5G could reduce costs associated with more typical cabled approaches.

Features such as the use of different spectrum and new network design approaches raise new issues for Government, for example, in spectrum management and access to transmission sites.

In addition to its use of mmWave bands, 5G's capabilities are attributable to technologies like multiple input, multiple output (MIMO) antennas, beamforming, edge computing and network slicing. MIMO antennas have multiple constituent antennas to send and receive more data simultaneously. Beamforming uses MIMO and advanced signal processing algorithms to direct radio signals to users and devices using the best path, rather than transmitting signals in all directions.

With edge computing, data is processed near the edge of the network, where the data is generated, rather than a distant centralised data-processing facility, improving performance. Network slicing allows the network to be segmented or sliced allowing particular services and applications to particular users like consumers, businesses or utilities on a dedicated basis. This makes it feasible for a 5G customer to be assigned a dedicated 5G network slice and rely on 5G for their communications rather than building their own dedicated network infrastructure.

As well as being a significant technological advance in its own right, 5G will also be able to work with other emerging technologies like cloud computing, artificial intelligence and robotics to provide powerful new tools for consumers and enterprise.

The International Mobile Telecommunications-2020 (IMT-2020) is the international technical framework supported by the International Telecommunications Union (ITU) to underpin 5G, including broadband networks and customer devices. The development of 5G as a concrete technology is, however, largely driven by industry, through the 3rd Generation Partnership Project (3GPP). In April 2019, 3GPP announced that work had been completed on Release 15, the first full set of 5G standards. Release 15 enables vendors to progress chip design and initial network implementation.<sup>2</sup> The second of the two 5G technical specifications, Release 16, is due for release in March 2020. Release 16 will provide the technical specifications for full-scale 5G networks.<sup>3</sup> Development of specifications will continue to be enhanced even after Release 16 is completed.<sup>4</sup>

---

<sup>2</sup> 3GPP, *Release 15*, [www.3gpp.org/release-15](http://www.3gpp.org/release-15)

<sup>3</sup> 3GPP, *Release 16*, [www.3gpp.org/release-16](http://www.3gpp.org/release-16)

<sup>4</sup> Ericsson, *5G NR release 16 – start of the 5G Evolution*, [www.ericsson.com/en/blog/2018/9/5g-nr-release-16--start-of-the-5g-evolution](http://www.ericsson.com/en/blog/2018/9/5g-nr-release-16--start-of-the-5g-evolution)





Inquiry into the deployment, adoption and application of 5G in Australia  
Submission 330

Department of Communications and the Arts

November 2019

At present, 5G is at a relatively early stage of deployment. Its standards are still being finalised, spectrum is still being allocated and equipment and handsets are still being developed. 5G is currently operating in conjunction with 4G infrastructure in what is known as non-standalone mode, with full 5G standalone operation to come. As such the full potential of 5G is still some time off. This needs to be taken into account in assessing 5G's performance today.

## Economic potential of 5G

Given its capabilities, 5G is widely seen as a platform for improved productivity growth around the world. The potential for new and improved products, and better efficiency in their production, means that 5G is likely to have an economic effect well beyond any short-term commercial return. Depending on the scale and pace of the rollout, and the development and uptake of the services it supports, it has the potential to produce far-reaching economic benefits by supporting, and even accelerating, Australia's digital transformation.

The overall productivity effect of 5G will stem from how inputs and outputs change as a result of the technology. On the outputs side, the benefits from 5G are expected to lead to more efficiently produced goods and services—a greater volume of production for given inputs. On the inputs side, there will be additional investment and costs to build the physical infrastructure of the network (upgrading new and existing base stations, and upgrading backhaul capacity) as well as purchasing access to spectrum.

In April 2018, the Department's Bureau of Communications and Arts Research (BCAR) examined publicly available sources on the likely costs and benefits of 5G in order to model the impact of the technology on productivity and economic growth. Based on this evidence, the BCAR estimated 5G could provide an additional \$1,300 to \$2,000 in gross domestic product per person after the first decade of the rollout.<sup>5</sup> The sooner 5G networks are deployed, the sooner these economic opportunities are likely to be realised.

This estimate of the economic benefit is likely to be conservative in that it does not fully take into account the consumer and non-market benefits that are not captured in economic statistics. These include cost and time savings for households enabled by better mobile telecommunications. The sharing economy (which harnesses household assets for market production) is also likely to increasingly blur the line between productive and household sectors in terms of the drivers of output, innovation and productivity growth.

Other research has identified the economic value and importance of 5G in the future. A 2019 report released by Deloitte estimated that the economic benefits of mobile connectivity (including 5G and other generations of technology) to the Australian economy by 2023 would be \$65 billion or approximately \$2500 for every Australian.<sup>6</sup> From a global perspective, a 2017 report commissioned by Qualcomm found that 5G could enable US\$12 trillion in economic activity by 2035.<sup>7</sup>

<sup>5</sup> BCAR, 2018, *Impacts of 5G on productivity and economic growth: Working paper*, Page 1, [www.communications.gov.au/departamental-news/impacts-5g-productivity-and-economic-growth](http://www.communications.gov.au/departamental-news/impacts-5g-productivity-and-economic-growth)

<sup>6</sup> Deloitte Access Economics, 2019, *Mobile Nation 2019: The 5G future*, Page 1, [www2.deloitte.com/content/dam/Deloitte/au/Documents/Economics/deloitte-au-economics-mobile-nation-2019-080419.pdf](http://www2.deloitte.com/content/dam/Deloitte/au/Documents/Economics/deloitte-au-economics-mobile-nation-2019-080419.pdf)

<sup>7</sup> IHS Economics & IHS Technology, January 2017, *The 5G economy: How 5G technology will contribute to the global economy*, Page 4, [www.qualcomm.com/media/documents/files/ihs-5g-economic-impact-study.pdf](http://www.qualcomm.com/media/documents/files/ihs-5g-economic-impact-study.pdf)



Inquiry into the deployment, adoption and application of 5G in Australia  
Submission 330

Department of Communications and the Arts

November 2019

## 5G use cases

5G has three core capabilities around which use cases are built:

- Enhanced mobile broadband (eMBB);
- Ultra reliable, low latency communications (URLLC); and
- Massive machine to machine communications (MMMC) – commonly associated with the enhanced Internet of Things (IoT).

5G has the potential to better support existing applications as well as new and emerging applications.

5G promises to significantly improve many existing uses of mobile and wireless broadband, both for the everyday consumer and businesses. This includes more data intensive applications like video conferencing, video streaming, online gaming, teleworking and extended reality. This is because 5G will provide much greater capacity and thus minimal congestion as well as low latency and high reliability. Moving traffic to 5G will also improve the performance of 4G services. The capability of enhanced mobile broadband was recently demonstrated by Telstra at this year's AFL Grand Final at the Melbourne Cricket Ground.<sup>8</sup> Telstra has indicated that 5G users experienced three to four times the speeds available on 4G, and 4G users also had improved performance due to traffic moving to 5G.<sup>9</sup>

Telstra's Chief Executive Officer, Andy Penn, has been reported as saying for 5G "the business case for the technology stands up purely on the increased capacity and throughput it gives to our networks".<sup>10</sup>

5G is being used to provide fixed broadband services in many countries. Optus has actively pursued this option in Australia, as has Verizon in the USA<sup>11</sup> and BT in the UK.<sup>12</sup>

Beyond the familiar mass market uses, 5G is seen as providing a wide range of new capabilities for commercial, industrial and other business users.

5G can significantly enhance the use of IoT, improving the use of networked remote sensors and actuators for data collection, analytics and control. IoT has been in operation for some time, using a range of communication platforms. However, 5G will facilitate new IoT applications as it can support more devices per square kilometre and will be able to utilise the ultra-low latency communications to support applications existing technologies cannot facilitate. Smart factories and warehouses, logistics management and autonomous vehicles are some examples expected to be able to leverage these capabilities.

<sup>8</sup> Nikos Katinakis, 22 September 2019, *5G arrives at the MCG, just in time for the AFL Grand Final*, Telstra Exchange, [www.exchange.telstra.com.au/5g-arrives-at-the-mcg-just-in-time-for-the-afl-grand-final/](http://www.exchange.telstra.com.au/5g-arrives-at-the-mcg-just-in-time-for-the-afl-grand-final/)

<sup>9</sup> Nikos Katinakis, 21 October 2019, Communications Day Congress, *Communications Day*, Page 9

<sup>10</sup> 25 February 2019, 5G price hike unlikely, say's Telstra's Andy Penn, *The Australian*, [www.theaustralian.com.au/business/technology/telstra-cba-team-for-5g-finance-applications/news-story/c056eed2ca7d0bc614944aedd2b12ea3](http://www.theaustralian.com.au/business/technology/telstra-cba-team-for-5g-finance-applications/news-story/c056eed2ca7d0bc614944aedd2b12ea3)

<sup>11</sup> George Paul, 13 September 2019, Verizon's fixed 5G improvements will boost the appeal of its broadband service, *Business Insider*, [www.businessinsider.com/verizons-fixed-5g-rollout-will-shake-up-home-internet-2019-9/?r=AU&IR=T](http://www.businessinsider.com/verizons-fixed-5g-rollout-will-shake-up-home-internet-2019-9/?r=AU&IR=T)

<sup>12</sup> Manny Pham, 9 October 2019, BT rings in convergence changes with Halo offer, *Mobile World Live*, [www.mobileworldlive.com/featured-content/home-banner/bt-rings-in-convergence-changes-with-halo-offer/](http://www.mobileworldlive.com/featured-content/home-banner/bt-rings-in-convergence-changes-with-halo-offer/)

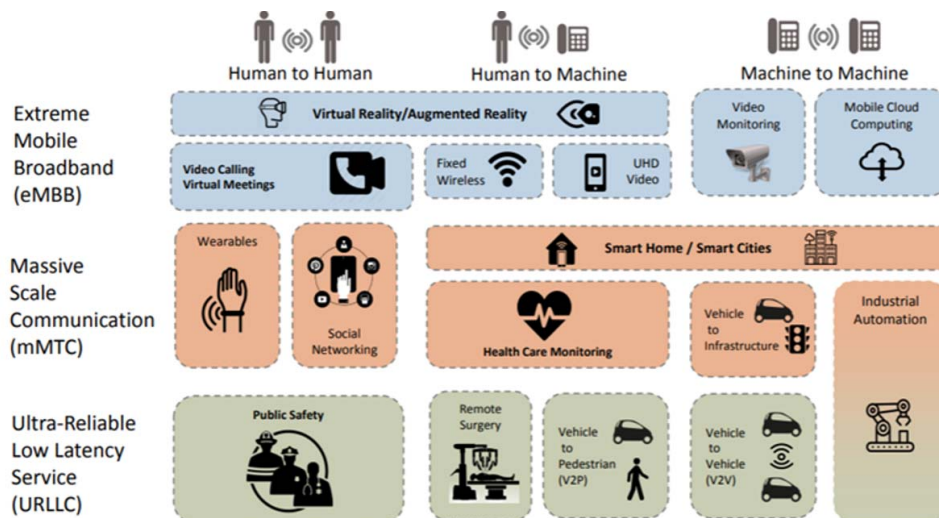


Inquiry into the deployment, adoption and application of 5G in Australia  
Submission 330

Department of Communications and the Arts

November 2019

5G’s capabilities lend themselves to a wide range of other new use cases. The diagram below provides a sample of applications that may be enhanced or supported by 5G.



Source: 5G Americas, 5G Services and Use Cases<sup>13</sup>

While 5G will provide a connectivity platform of greater capability, users, particularly in the commercial sector who best understand their business needs, will play a key role. They can best determine how 5G’s capabilities can be best employed to innovate to improve production and distribution process and capture savings and productivity gains. Given 5G’s technological and commercial potential, particularly if combined with artificial intelligence and automation, significant work to develop use cases continues around the world. This includes work by vendors, carriers, software developers and retail service providers, typically collaborating closely.

Early reporting has already indicated a strong interest by business in 5G. For example, the recent *5G for Business in Australia* report identified that in the next 18 months 24 per cent of Australian businesses plan to adopt 5G services. Nearly 80 per cent of Australian businesses in the next three years are looking to adopt 5G.<sup>14</sup>

There are opportunities for Australian businesses to develop services and applications that leverage 5G. In this context, Telstra established its 5G Innovation Centre on the Gold Coast in 2018. Amongst other things, Telstra has been reported as working with the Commonwealth Bank on how to use 5G to provide better banking experiences.<sup>15</sup> Optus has access to SingTel’s 5G Garage in Singapore.<sup>16</sup> Global

<sup>13</sup> 5G Americas, November 2017, *5G Services and Use Cases: 5G Americas Whitepaper*, Page 19, [www.5gamericas.org/wp-content/uploads/2019/07/5G\\_Service\\_and\\_Use\\_Cases\\_FINAL.pdf](http://www.5gamericas.org/wp-content/uploads/2019/07/5G_Service_and_Use_Cases_FINAL.pdf)

<sup>14</sup> Eliza Booth, 18 October 2019, *Research explores the 5G readiness of Australian Businesses*, Infrastructure Magazine, [www.infrastructuremagazine.com.au/2019/10/18/research-explores-the-5g-readiness-of-australian-businesses/](http://www.infrastructuremagazine.com.au/2019/10/18/research-explores-the-5g-readiness-of-australian-businesses/)

<sup>15</sup> Telstra Media Release, 25 February 2019, *Telstra, CBA and Ericsson to trial 5G for the banking sector*, [www.telstra.com.au/aboutus/media/media-releases/Telstra\\_CBA\\_Ericsson\\_trial\\_5G\\_banking\\_sector](http://www.telstra.com.au/aboutus/media/media-releases/Telstra_CBA_Ericsson_trial_5G_banking_sector)

<sup>16</sup> Singtel News Release, 22 February 2019, *Singtel, Optus, Ericsson and OPPO achieve ground-breaking Augmented Reality 5G video call between Singapore and Australia*, [www.singtel.com/about-us/news-releases/singtel-optus-ericsson-and-oppo-achieve-ground-breaking-augmented-reality-5g-vi](http://www.singtel.com/about-us/news-releases/singtel-optus-ericsson-and-oppo-achieve-ground-breaking-augmented-reality-5g-vi)

Inquiry into the deployment, adoption and application of 5G in Australia  
Submission 330

Department of Communications and the Arts

November 2019

software developer, InfoSys, opened one of five 5G innovation labs globally in Melbourne in June 2019.<sup>17</sup>

In December 2018, the Minister for Industry, Innovation and Science, the Hon Karen Andrews MP, launched Australia's Tech Future.<sup>18</sup> The document sets out a vision for a strong, safe and inclusive economy, boosted by digital technology, identifying four key areas of focus – people, services, digital assets and the enabling environment. 5G is identified as a potential general purpose technology. The document notes the opportunities and challenges of new technologies and seeks to ensure that Australia's digital infrastructure, such as 5G, is built on the principle of 'secure-by-design'.

How to foster the productive use of 5G across the economy and society is a key priority for the Government. As businesses see their competitors looking to use 5G to gain a commercial edge, they too will need to do so, opening up the prospective of a wave of 5G-based innovation. With an early lead in 5G in the field, there may be scope for Australian firms to leverage this intellectual property more widely around the world.

### Government's 5G Strategy

Recognising the transformative potential of 5G, the Australian Government released a 5G Strategy 'Enabling the Future Economy', in 2017.<sup>19</sup>

The 5G Strategy is set within the context of Australia's competitive mobile communications market and competition is fundamental to the overall Strategy. This is discussed below.

The Strategy highlighted four key actions the Government would take to support the timely rollout of 5G in Australia:

- making spectrum available in a timely manner;
- actively engaging in global spectrum harmonisation processes;
- streamlining arrangements for the deployment of infrastructure; and
- reviewing other regulatory arrangements to ensure they are fit-for-purpose.

The Strategy also flagged the formation of the 5G Working Group to enable an ongoing dialogue between industry and Government on 5G issues.

In targeting these matters, Australia's 5G Strategy is similar to many others in developed countries around the world.

The following is a short report on progress against the Strategy, noting that its elements are under constant review, with a view to updating it as appropriate. We envisage the Committee's report will provide useful guidance in this regard.

<sup>17</sup> Infosys Newsroom, 6 June 2019, *Infosys launches Melbourne 5G Living Lab*, [www.infosys.com/newsroom/features/Pages/launches-5G-living-lab-melbourne.aspx](http://www.infosys.com/newsroom/features/Pages/launches-5G-living-lab-melbourne.aspx)

<sup>18</sup> Department of Industry, Innovation and Science, December 2018, *Australia's Tech Future*, [www.industry.gov.au/data-and-publications/australias-tech-future](http://www.industry.gov.au/data-and-publications/australias-tech-future)

<sup>19</sup> Department of Communications and the Arts, October 2017, *5G—Enabling the future economy*, [www.communications.gov.au/departmental-news/5g-enabling-future-economy](http://www.communications.gov.au/departmental-news/5g-enabling-future-economy)



Inquiry into the deployment, adoption and application of 5G in Australia  
Submission 330

Department of Communications and the Arts

November 2019

### *Competition*

Competition is the foundation of Australia's 5G Strategy. Competition in Australia's mobile market has been highly successful in delivering investment in infrastructure across both metropolitan and regional Australia, strong consumer take-up of mobile services and positive consumer outcomes on pricing and inclusions. This has occurred with minimal regulation. Australia has been assessed as having some of the world's best mobile services.<sup>20</sup>

As noted above, 5G is being used as a fixed broadband option by Optus and in markets overseas. Such competition is welcome. 5G's ability to compete in this market may, however, be constrained by its carrying capacity relative to that of fixed lines. That is, the vast majority of data in Australia is currently delivered over the fixed line networks, notwithstanding the vast majority of services being mobile.<sup>21</sup> In this context, 5G may be a more attractive option for users needing a high speed service with relatively low data consumption.

The Department's preference is to continue to foster strong competition and minimal regulation as the best means of promoting network investment and delivering consumer benefits. In this context, it is important that competitors are strong and robust and have appropriate flexibility to determine their mode of operation. The spectrum allocation framework takes into account the promotion of competition (as a relevant policy objective of the Government, and through the imposition of allocation limits to prevent monopolisation of the spectrum and promote competitive market outcomes). Mobile network operators are treated equally in other relevant areas like numbering and powers and immunities. The 5G Strategy should be understood as operating in this broader pro-competitive framework.

### *Spectrum*

Spectrum is key to the rollout of 5G. Spectrum allocations involve a number of complex decisions regarding existing users and future usage and can take a number of years to plan and undertake.

The rollout of 5G services in Australia is being facilitated by Government actions to make 5G-suitable spectrum available in a timely manner.

In December 2018, the Government successfully auctioned 125 MHz of the 3.6 GHz spectrum which mobile network operators are starting to use for 5G via early access arrangements to the band.

Optus and Telstra also hold spectrum in the 3.4 GHz band which we understand they are currently using for early 5G services. The Government is working to optimise the 3.4 GHz band to make it better suited for 5G services. As the existing wireless broadband arrangements in the band are fragmented and not optimally configured for future technologies, including 5G, the Australian Communications and Media Authority (ACMA) is considering restacking apparatus licences in regional areas and undertaking a defragmentation of the band. This will improve spectral efficiencies for incumbents, and in turn, support the deployment of 5G infrastructure. The Government also anticipates the optimisation of the band will free up further spectrum, which ACMA can allocate via market-based mechanisms.

<sup>20</sup> GSMA, 2018, *State of Mobile Internet Connectivity 2018*, Page 7 [www.gsma.com/mobilefordevelopment/resources/state-of-mobile-internet-connectivity-2018/](http://www.gsma.com/mobilefordevelopment/resources/state-of-mobile-internet-connectivity-2018/)

<sup>21</sup> ACMA, 2019, *ACMA Communications Report 2017-18*, Page 61, [www.acma.gov.au/publications/2019-02/report/communications-report-2017-18](http://www.acma.gov.au/publications/2019-02/report/communications-report-2017-18)



Inquiry into the deployment, adoption and application of 5G in Australia  
Submission 330

Department of Communications and the Arts

November 2019

The Government has also recently taken steps to bring 5G-suitable mmWave spectrum to market. On 25 October 2019, the Minister for Communications, Cyber Safety and the Arts, the Hon Paul Fletcher announced his decision to issue a spectrum re-allocation declaration for the 26 GHz band, consistent with advice from ACMA. This decision paves the way for ACMA to auction 2.4 GHz of 5G-suitable spectrum in the 26 GHz band in early 2021. This will give carriers access to mmWave band spectrum with high data carrying capacity, which will be important for achieving 5G's full potential. The spectrum will be auctioned in geographic areas covering 29 cities and regional centres. Pending access to spectrum in the 26 GHz band, carriers and others can make use of scientific licences to trial services in new bands, including mmWave.

Spectrum in the 3.4 GHz, 3.6 GHz and 26 GHz bands will be vital to ensuring that mobile network operators can optimally deploy 5G networks around Australia. The 3.4 GHz and 3.6 GHz bands will provide broader geographic coverage for 5G services, while the 26 GHz band will provide for shorter-range, higher capacity services.

The Department continues to work with ACMA to determine required spectrum, undertake spectrum auctions for allocation and to provide the regulatory framework to prevent monopolies and promote competition. ACMA's Five Year Spectrum Outlook 2019-2023 (FYSO) provides details of its forward looking spectrum management priorities and work plan. This includes optimisation of existing holdings in the 3.4 GHz, and the allocation of spectrum in the 26 GHz band, as mentioned above.

### *Global spectrum harmonisation*

The Government is further supporting 5G through its work internationally on spectrum harmonisation. This includes engagement in international forums such as the World Radiocommunication Conference (WRC), where member states of the International Telecommunication Union (ITU), and key industry experts, are working to identify frequency bands for use by 5G International Mobile Telecommunication (IMT) services, and coordinate the development of telecommunication standards.

The ITU is the United Nations' specialised agency for information and communication technologies. Every three to four years, the ITU holds the WRC to review and, if necessary, revise the Radio Regulations, the international treaty governing the use of the radio-frequency spectrum and satellite orbits.

A multi-stakeholder Australian delegation is currently attending the World Radiocommunication Conference 2019 (WRC-19) in Sharm El-Sheikh, Egypt. One of the key issues being considered at WRC-19 is the identification of several frequency bands above 24 GHz for use by IMT services. Australia supports identification (and associated spectrum allocations) in the 24.25-27.5 GHz, 40.5-42.5 GHz, 42.5-43.5 GHz, 47.2-50.2 GHz and 66-71 GHz frequency bands, subject to varying band-specific conditions.

Additionally, several other countries have made proposals for bands between 3.3 GHz and 24 GHz to be studied for use by IMT over the next four years.

### *Deployment*

Carriers can choose to deploy facilities under relevant state and territory planning laws or Commonwealth laws in some cases. Where a carrier chooses to deploy under state or territory planning laws, they must follow the processes for community and local government consultations set out in those laws. Approvals for the installation of free-standing towers, for example, are the responsibility of state, territory and local governments.



Inquiry into the deployment, adoption and application of 5G in Australia  
Submission 330

Department of Communications and the Arts

November 2019

However, there are laws at the Commonwealth level that are designed to assist carriers to deploy their networks and support ready access to telecommunications services. Telecommunications carriers have certain specific legal powers under Schedule 3<sup>22</sup> of the *Telecommunications Act 1997* (the Act) to undertake inspections and to install and maintain facilities, and have immunity from some state and territory laws, such as planning, when doing so. These laws are known as carrier “powers and immunities” and primarily relate to low-impact facilities which are specified in the *Telecommunications (Low-impact Facilities) Determination 2018*<sup>23</sup> (LIFD). Powers and immunities are important as they provide a nationally consistent framework for the deployment of facilities that helps reduce the time and cost involved for carriers in delivering services to the wider community.

The types of facilities that are listed as low-impact are those considered to be essential to the effective and efficient operation of telecommunications networks in providing services to the public, but are considered to be of low visual impact and unlikely to cause significant disruption to the community during installation or operation. Low-impact facilities include cabinets, antennas, or underground cables, but exclude other kinds of facilities such as free standing towers, which are covered by state and territory arrangements as noted above.

The specification of low-impact facilities encourages carriers to roll out networks using components that fall within strict type, size, colour and location limitations, thereby minimising the impact of telecommunications infrastructure on the community generally while expediting the supply of services.

The powers and immunities framework has safeguards built in so the interests of landowners and the community are taken into account. In exercising their powers, carriers must adhere to strict requirements including notifying landholders and land occupiers of their intention to install telecommunications infrastructure on land. Carriers must also advise landholders of their right to object, the grounds for objection (for example, the use of the land or the location of the facility on the land), the right to have a decision reviewed by the Telecommunications Industry Ombudsman (TIO) and timeframes for lodging objections.

In addition to the conditions in the Act, the *Telecommunications Code of Practice 2018*<sup>24</sup> (Code of Practice) sets out further obligations on carriers. For example, under the Code of Practice, carriers must comply with good engineering practice and consider noise limits, the environment, and obstruction of essential services when installing or maintaining facilities. Obligations on carriers under the Act and Code of Practice also apply to contractors acting on behalf of carriers.

The Act makes provision for the payment of compensation in certain circumstances. Clause 42 of Schedule 3 to the Act specifically provides that if a person suffers financial loss or damage because of a carrier’s actions in exercising its powers and immunities, compensation is payable. If an affected party is dissatisfied with the amount of compensation offered, it may apply to a court of competent jurisdiction. The laws also allow for compensation with regard to an acquisition of property.

Telecommunications carriers installing low-impact facilities for mobile phone networks must also comply with the Industry Code for *Mobile Phone Base Station Deployment C564:2018*<sup>25</sup> (the Industry

<sup>22</sup> *Telecommunications Act 1997*, [www.legislation.gov.au/Details/C2019C00273/Html/Volume\\_2#\\_Toc19539643](http://www.legislation.gov.au/Details/C2019C00273/Html/Volume_2#_Toc19539643)

<sup>23</sup> *Telecommunications (Low-impact Facilities) Determination 2018*, [www.legislation.gov.au/Details/F2018C00150](http://www.legislation.gov.au/Details/F2018C00150)

<sup>24</sup> *Telecommunications Code of Practice 2018*, [www.legislation.gov.au/Details/F2018L00171](http://www.legislation.gov.au/Details/F2018L00171)

<sup>25</sup> Communications Alliance, 2018, *Industry Code C564:2018 Mobile Phone Base Station Deployment*, [www.commsalliance.com.au/data/assets/pdf\\_file/0018/62208/C564\\_2018-181206.pdf](http://www.commsalliance.com.au/data/assets/pdf_file/0018/62208/C564_2018-181206.pdf)



Inquiry into the deployment, adoption and application of 5G in Australia  
Submission 330

Department of Communications and the Arts

November 2019

Code). The Industry Code sets out additional processes that mobile carriers are to follow when they are installing low-impact facilities.

Following public consultation, in early 2018 the Government amended the powers and immunities framework with a number of changes to help carriers rollout new infrastructure, including 5G. The amendments clarified a facility is a co-located facility where it is installed on or in a telecommunications facility or public utility infrastructure. They also specified omnidirectional antennas as low-impact facilities in residential and commercial areas, not just industrial and rural areas. In addition, they replaced the technology-specific term 'microcell' with 'radiocommunications facility' to be more inclusive of small cellular and non-cellular transmitters, including WiFi.

The Department is working to identify further opportunities to streamline deployment processes to support the timely rollout of 5G in Australia, whilst ensuring that the views of landowners and the community are taken into account.

To further help with the deployment of telecommunications infrastructure so it is readily available for users, the Department has proposed in various forums that state and territory planning regimes give greater consideration in their early stages to the provision of telecommunications facilities. This could include, for example, working with carriers to identify sites for facilities, rights of way for ducts and conduits and require the installation of ducts and conduits. This has gained some traction, particularly through the digital commitments in the Western Sydney City Deal (see below). Such engagement will be an ongoing focus for the Department.

The rollout of 5G facilities could also be facilitated by infrastructure owners like councils, state and territory governments or other authorities providing access to their assets. However, this would need to be at a cost and using arrangements that make it viable for carriers. Carriers, such as Telstra<sup>26</sup> and Optus,<sup>27</sup> have recently expressed concerns about rental arrangements proposed by NSW's Independent Pricing and Regulatory Tribunal for communication towers on Crown land.

Another area of interest to the Department, industry and other stakeholders is improving the visual amenity of telecommunications facilities. With 5G's network design there are opportunities to deploy facilities, like small cells, by integrating them into street furniture or co-locating on existing infrastructure with minimal visual impact. The Department is engaged in the Western Sydney City Deal, which includes a commitment to develop uniform local government engineering design standards and telecommunications planning to enhance connectivity outcomes.<sup>28</sup> Through mechanisms such as this there are opportunities to advocate for improvements in visual amenity.

### *Reviewing other regulation*

The 5G Strategy also provides for the review of other regulation relevant to 5G. This has taken three main forms to date.

First, the Government has been reviewing and revising the *Radiocommunications Act 1992*, which governs the management of the spectrum so important to the operation of 5G and many other

<sup>26</sup> Itnews, 29 July 2019, *Telstra warns NSW influencing Australia-wide mobile costs*, [www.itnews.com.au/news/telstra-warns-nsw-influencing-australia-wide-mobile-costs-528807](http://www.itnews.com.au/news/telstra-warns-nsw-influencing-australia-wide-mobile-costs-528807)

<sup>27</sup> Optus, 2019, *Review of Rental Arrangements for Communication Towers on Crown Land*, [www.ipart.nsw.gov.au/files/sharedassets/website/shared-files/investigation-section-9-submissions-rental-arrangements-of-communication-towers-on-crown-lands-draft-report/online-submission-optus-l.-van-hooft-6-sep-2019-160414510.pdf](http://www.ipart.nsw.gov.au/files/sharedassets/website/shared-files/investigation-section-9-submissions-rental-arrangements-of-communication-towers-on-crown-lands-draft-report/online-submission-optus-l.-van-hooft-6-sep-2019-160414510.pdf)

<sup>28</sup> *Western Sydney City Deal Implementation Plan*, 2018, [www.infrastructure.gov.au/cities/city-deals/western-sydney/files/western-sydney-city-deal-implementation-plan.pdf](http://www.infrastructure.gov.au/cities/city-deals/western-sydney/files/western-sydney-city-deal-implementation-plan.pdf)





Inquiry into the deployment, adoption and application of 5G in Australia  
Submission 330

Department of Communications and the Arts

November 2019

services. A key aim of this work has been to develop a more efficient process for the allocation of spectrum. This work is well advanced, following public consultation on draft legislation in May 2017. The Department now expects amendments to the existing legislation will be put forward in early 2020.

Second, a focus of the 5G Working Group is identifying regulatory enablers and barriers to 5G, including in industry sectors or 'verticals' in which 5G is expected to play a keen role. To date, the Working Group has focussed on the potential use of 5G in health, transport and agriculture, but has not identified significant regulatory issues at this time. A generic issue which has arisen is whether regulation governing the use of data could unduly inhibit the use of data collected by IoT applications. This is something the Department is continuing to explore. The role of the Working Group is discussed further below.

In considering 5G's potential use in various industry sectors, it is apparent that there may be issues outside the Commonwealth's jurisdiction and the regulation of 5G itself that are relevant to its success. If 5G is to be used to support downstream technologies they also need to have appropriate sectoral frameworks. For example, if 5G is to support autonomous vehicles there needs to be a framework for autonomous vehicles so there is scope for 5G to support them. In the case of autonomous vehicles, Australia is well advanced in this regard, in that several jurisdictions have relevant legislation in place, all have trials underway and there are Guidelines for Trial of Autonomous Vehicles in Australia.<sup>29</sup>

Third, the Department has recently established a deregulation review as part of the Government's wider deregulation agenda. This will be another mechanism by which possible regulatory enablers and barriers to 5G and its use can be explored.

### *5G Working Group*

In October 2017, the Government announced the formation of a 5G Working Group to bring together industry and Government. The Group was established in February 2018.

The Working Group provides a forum for ongoing dialogue between industry and the Government on 5G issues. A key focus of the group is to identify enablers and barriers to 5G and use cases that can help with sectoral productivity.

Membership of the 5G Working Group includes relevant Government departments, mobile carriers, equipment vendors and industry peak bodies.

The 5G Working Group's terms of reference are:

1. identify enablers and barriers to the deployment and effective use of 5G in Australia, including at the sector and industry level
2. examine how the Commonwealth regulatory settings in sectors, including but not limited to communications, can be optimised for 5G networks and technologies
3. provide a platform for collaboration across Government and industry on 5G matters
4. engage, with the input of subject matter experts, in ongoing strategic dialogue about 5G matters.<sup>30</sup>

<sup>29</sup> NTC, *Automated Vehicle Trial Guidelines*, [www.ntc.gov.au/codes-and-guidelines/automated-vehicle-trial-guidelines](http://www.ntc.gov.au/codes-and-guidelines/automated-vehicle-trial-guidelines)

<sup>30</sup> Department of Communications and the Arts, 2017, *5G Working Group membership and terms of reference*, [www.communications.gov.au/departmental-news/5g-working-group-membership-and-terms-reference](http://www.communications.gov.au/departmental-news/5g-working-group-membership-and-terms-reference)



Inquiry into the deployment, adoption and application of 5G in Australia  
Submission 330

Department of Communications and the Arts

November 2019

The Working Group has met four times to date and focussed on 5G's use in the transport, agricultural and health sectors as well as its ongoing role.

The Group's terms of reference have recently been reviewed and its role going forward is being considered.

## Western Sydney City Deal

In recognition of the importance of telecommunications in modern cities and in particular to the Western Parkland City that's growth is being supported by the construction of the Western Sydney International (Nancy-Bird Walton) Airport, the Western Sydney City Deal includes a number of digital commitments. These are developing a Western City Digital Action Plan, delivering a Smart Western City Program for smart and secure technology, developing a 5G Strategy including the trialling of 5G, and making data publicly available in line with open-data principles. Also relevant is the planning and housing commitment to develop uniform, best practice local government engineering design standards to simplify the development assessment process, including for telecommunications.

These commitments seek to raise awareness of the potential of 5G in our cities, demonstrate its utility through early use trials, streamline rollout through forward looking community-sensitive planning arrangements, and maximise its utility through appropriate open data arrangements. It is envisaged that the lessons learnt in Western Sydney may be of benefit in other contexts and the Department is interested in the role of 5G being considered in future City and Regional Deals.

## Concerns about the health effects of 5G

Radio transmitters on telecommunications equipment emit electromagnetic energy (EME) emissions to function. Importantly, these emissions are in the non-ionizing part of the electromagnetic energy spectrum.<sup>31</sup> There is nevertheless strict regulation of the EME from telecommunications facilities, so the community can have reassurance that there are no negative health effects from the EME from telecommunications facilities.

There are a number of agencies involved in the regulation of EME emissions from telecommunications equipment. These include the Australian Radiation and Nuclear Protection Agency (ARPANSA) and the National Health and Medical Research Council (NHMRC) in the Health portfolio. Within the Communications portfolio, the Department sets the policy and legislative framework for deployment of telecommunications equipment, and ACMA regulates industry's compliance with legislative requirements.

ARPANSA is the Australian Government's independent authority on radiation protection and nuclear safety. ARPANSA's role is to protect people and the environment from the harmful effects of radiation, which is done through a range of activities, including setting standards on the emission of radiation. The Department and ACMA, like industry, rely on the expert scientific advice of ARPANSA on EME.

The ARPANSA *Radiation Protection Standard for Maximum Exposure Levels to Radiofrequency Fields – 3 kHz to 200 GHz* (the RF Standard)<sup>32</sup> limits the amount of radio frequency EME telecommunications facilities can emit. The RF Standard is based on decades of Australian and international peer-reviewed research into EME and is set well below the level at which adverse health effects occur, it includes a

<sup>31</sup> ARPANSA, *What is radiation?*, [www.arpansa.gov.au/understanding-radiation/what-is-radiation](http://www.arpansa.gov.au/understanding-radiation/what-is-radiation)

<sup>32</sup> ARPANSA, 2002, *Maximum Exposure Levels to Radiofrequency Fields – 3 KHz to 300 GHz*, [www.arpansa.gov.au/sites/g/files/net3086/f/legacy/pubs/rps/rps3.pdf](http://www.arpansa.gov.au/sites/g/files/net3086/f/legacy/pubs/rps/rps3.pdf)



Inquiry into the deployment, adoption and application of 5G in Australia  
Submission 330

Department of Communications and the Arts

November 2019

wide safety margin to further protect the public, and covers the frequency ranges that 5G technology will use.

The *Radiocommunications Act 1992* allows ACMA to determine conditions in relation to a particular type of apparatus licence. The *Radiocommunications Licence Conditions (Apparatus Licence) Determination 2015* (LCD) sets the licence conditions for apparatus licences, including a requirement that transmitters operating under an apparatus licence must comply with the RF Standard.

Regarding spectrum licences, a standard licence condition for those licences requires compliance with the LCD. This regulatory approach means that transmitters being operated under a spectrum licence must also comply with RF Standard.

ACMA also regulates portable equipment, such as mobile phone handsets, through the *Radiocommunications (Compliance Labelling – Electromagnetic Radiation) Notice 2014* and the *Radiocommunications (Electromagnetic Radiation – Human Exposure) Standard 2014*, which also requires compliance with the RF Standard.

Telecommunications devices and facilities are also subject to testing and compliance checks to ensure that they do not exceed the ARPANSA exposure limits. Equipment deployed as part of a 5G network will need to comply with the RF Standard and ACMA regulations just as other equipment does today.

### **Research into EME**

The effects of EME exposure have been the subject of extensive and rigorous scientific study around the world for many decades. ARPANSA consults with the world's peak health bodies, such as the World Health Organization and the International Commission on Non-Ionizing Radiation Protection (ICNIRP), so that Australia can contribute to and benefit from the best international research and guidance on this matter. Based on the best available research, ARPANSA and other leading health authorities advise that there are no known health effects of EME at levels below the RF Standard.

There have been many studies done on electromagnetic energy, by a host of national and international bodies, which cover but are not necessarily restricted to the range in which 5G technology will operate. ARPANSA published an independent review of the state of research on RF health effects, covering a large number of studies, in its *Review of Radiofrequency Health Effects Research – Scientific Literature 2000-2012*.<sup>33</sup> These studies cover research on EME overall, including the frequency ranges where 5G technology will operate.

The Australian Government also directs funding to the NHMRC to implement a domestic research program about exposure to EME from mobile phones, mobile phone towers and broadcast towers. NHMRC has granted \$2.5 million over five years to the Australian Centre for Electromagnetic Bioeffects Research (ACEBR) to undertake a range of EME research projects. ACEBR's programs include research into human neurophysiology, cellular response studies, dosimetry, and social sciences<sup>34</sup>.

There has been an increased level of misinformation spread about EME and 5G through social media, including claims that research studies prove that EME is dangerous. Internationally, it has been noted that on occasion low-quality studies have been put forward as evidence that the deployment of 5G

<sup>33</sup> ARPANSA, 2014, *Review of Radiofrequency Health Effects Research – Scientific Literature 200-2012*  
[www.arpansa.gov.au/sites/default/files/legacy/pubs/technicalreports/tr164.pdf](http://www.arpansa.gov.au/sites/default/files/legacy/pubs/technicalreports/tr164.pdf)

<sup>34</sup> Further information about ACEBR's research is available through its website at [www.acebr.uow.edu.au](http://www.acebr.uow.edu.au).



Inquiry into the deployment, adoption and application of 5G in Australia  
Submission 330

Department of Communications and the Arts

November 2019

will be dangerous.<sup>35</sup> Where a particular study raises community interest, ARPANSA and ACEBR may publish position statements about the implications of the study. For example, ARPANSA published a paper in 2018 in the *British Medical Journal Open* on mobile phone use and incidence of brain tumours. The research reported no increase in brain tumours that can be attributed to mobile phone use in Australians aged 20-59. The article received significant attention and some criticism. As a result, ARPANSA undertook further research to address the identified gap in their sample group and released its results in August this year<sup>36</sup> which showed that any increases in older people are minor and consistent with improvements in diagnosis.

Similarly, ACEBR has published an analysis of a US Toxicology Program study on rats. This study is often referred to by people who are concerned about EME. However, ACEBR's position statement notes several methodological and interpretational issues with the study, including abnormalities in the control group.<sup>37</sup>

### *Information for the community*

Depending on the particular nature of their concern, individuals and community groups may seek information about the safety and regulation of EME from a range of sources. Residents who have been notified of a proposed installation or maintenance activity may be supplied with information about a particular site from the relevant telecommunications carrier. This information usually includes a report of the expected EME from the site. Interested parties can also find this information by searching on the industry-managed Radio Frequency National Site Archive.<sup>38</sup> ACMA's website contains a range of information for both industry and consumers relating to EME from telecommunications facilities.<sup>39</sup> ARPANSA's website<sup>40</sup> provides a range of resources at a more technical level. ARPANSA also operates a program, accessible online, where the public can talk directly with scientific experts on EME exposure.<sup>41</sup>

If a person is concerned about a facility's compliance with EME requirements, they should contact the carrier in the first instance. If those concerns are not resolved, then they can contact ACMA at [info@acma.gov.au](mailto:info@acma.gov.au), which can investigate whether the relevant carrier is meeting its regulatory obligations.

### Progress of the 5G rollout

The rollout of 5G is fundamentally a commercial activity of private sector carriers like Telstra, Optus and Vodafone, however, the Department is monitoring its rollout, take-up and performance because of its potential benefits for everyday consumers, business and productivity.

<sup>35</sup> David Robert Grimes, 28 October 2019, *Don't Fall Prey to Scaremongering about 5G*, [www.blogs.scientificamerican.com/observations/dont-fall-prey-to-scaremongering-about-5g/](http://www.blogs.scientificamerican.com/observations/dont-fall-prey-to-scaremongering-about-5g/)

<sup>36</sup> BMJ Open, [www.bmjopen.bmj.com/content/8/12/e024489.responses](http://www.bmjopen.bmj.com/content/8/12/e024489.responses)

<sup>37</sup> ACEBR, *Position Statements*, [www.acebr.uow.edu.au/position-statements/index.html](http://www.acebr.uow.edu.au/position-statements/index.html)

<sup>38</sup> AMTA, *Welcome to the Radio Frequency National Site Archive*, [www.rfnsa.com.au](http://www.rfnsa.com.au)

<sup>39</sup> ACMA, *Emehub*, [www.acma.gov.au/emehub](http://www.acma.gov.au/emehub)

<sup>40</sup> ARPANSA, *ARPANSA website landing page*, [www.arpansa.gov.au](http://www.arpansa.gov.au)

<sup>41</sup> ARPANSA, *Talk to a Scientist*, [www.arpansa.gov.au/contact-us/talk-to-a-scientist](http://www.arpansa.gov.au/contact-us/talk-to-a-scientist)



Inquiry into the deployment, adoption and application of 5G in Australia  
Submission 330

Department of Communications and the Arts

November 2019

Telstra and Optus have started offering 5G services in select centres. Vodafone is expected to start offering services in 2020. Dense Air's business model is around extending mobile coverage on a neutral host basis for carriers, rather than direct marketing to consumers.<sup>42</sup>

Optus has built around 230 5G sites in six areas in Southeast Queensland, Sydney and the central coast of NSW, Canberra, Melbourne and surrounds, Adelaide and Perth. It is aiming for 1,000 sites by March 2020.<sup>43</sup> Optus launched its initial 5G services on 31 January 2019 on a fixed basis in select locations in Canberra and Sydney. Optus has been using a range of fixed customer devices and launched its first 5G mobile handset, the Samsung Galaxy Note 10, in late September 2019.

Telstra is offering 5G in ten cities across Australia, including Sydney, Adelaide, Brisbane, Canberra, Gold Coast, Hobart, Launceston, Melbourne, Perth and Toowoomba. Over the next 12 months it expects its 5G service area to increase almost five-fold<sup>44</sup> and include an additional 20 cities. It has launched a number of commercial devices including an HTC 5G Hub and three 5G phones.

The map below shows the locations of 5G infrastructure deployed across Australia as at October 2019.

Telstra and Optus 5G Australian Coverage Map



Source: Departmental analysis of announced 5G deployments

## Consumer expectations and experience

Earlier rollouts of new mobile technologies have generally been smooth for consumers, but ensuring consumers have realistic expectations and a positive experience will be important to 5G's reception.

<sup>42</sup> Cision PR Newswire, 26 September 2019, *Dense Air Partners With Spark to Launch 5G Services*, [www.prnewswire.com/news-releases/dense-air-partners-with-spark-to-launch-5g-services-300926129.html](http://www.prnewswire.com/news-releases/dense-air-partners-with-spark-to-launch-5g-services-300926129.html)

<sup>43</sup> Optus, *Optus 5G*, <https://www.optus.com.au/for-you/5g>

<sup>44</sup> Andrew Penn, 22 May 2019, *Providing our customers with more choice as we build 5G*, [www.exchange.telstra.com.au/providing-our-customers-with-more-freedom-as-we-build-5g/](http://www.exchange.telstra.com.au/providing-our-customers-with-more-freedom-as-we-build-5g/)

Inquiry into the deployment, adoption and application of 5G in Australia  
Submission 330

Department of Communications and the Arts

November 2019

As 5G is in its early stages and much is yet to be done, it will be important that carriers do not over promise and under deliver.

There may be concerns in the community, such as how long deployment will take, coverage, performance, service and prices of handsets.

The rollout of 5G will take time. Spectrum needs to be secured and infrastructure installed. It is expected that the rollout will take a number of years and that not all areas in Australia will be covered. Even now, while more than 99% of people in Australia have access to 3G and 4G, their geographical coverage is around 31% of Australia's area.

The full capabilities of 5G are dependent on finalisation of its specifications and its deployment in a manner that allows the performance goals to be achieved.

As with other new technologies, the price of 5G handsets initially may be higher compared to 3G and 4G phones, but prices are expected to reduce over time.

Appropriate information and good customer service from carriers and service providers will be important to consumer's experience, particularly if 5G is marketed and viewed as a premium product, particularly in its earlier stages.

## Conclusion

The Department considers that 5G is a potentially transformative technology that could contribute significantly to Australia's future innovation, productivity and international competitiveness. As well as a platform for mass market communications, it may also be a new general purpose technology for wider business use.

5G is however in its early stages and its full potential is as yet uncertain. Nevertheless, given its potential significance, it is important that we seek to capture the opportunities that it offers. Other countries are introducing 5G and Australia is currently one of the global leaders in this regard. We should seek to leverage this advantage and not allow Australia to fall behind.

The Department is seeking to support 5G in a balanced way as set out in our submission. This includes implementing the Government's 5G Strategy and identifying further measures that may be of assistance.

The Department would be happy to provide the Committee with further information on matters that may be of interest to it.

We look forward to the Committee's report and its ideas on how the benefits of 5G can be captured for the advantage of the Australian community.



Inquiry into the deployment, adoption and application of 5G in Australia  
Submission 232



Australian  
Communications  
and Media Authority

# **ACMA Submission**

## **Inquiry into the Deployment, Adoption and Application of 5G in Australia**

OCTOBER 2019

[acma.gov.au](https://www.acma.gov.au)

Inquiry into the deployment, adoption and application of 5G in Australia  
Submission 232

**Canberra**  
Red Building  
Benjamin Offices  
Chan Street  
Belconnen ACT  
  
PO Box 78  
Belconnen ACT 2616  
  
T +61 2 6219 5555  
F +61 2 6219 5353

**Melbourne**  
Level 32  
Melbourne Central Tower  
360 Elizabeth Street  
Melbourne VIC  
  
PO Box 13112  
Law Courts  
Melbourne VIC 8010  
  
T +61 3 9963 6800  
F +61 3 9963 6899

**Sydney**  
Level 5  
The Bay Centre  
65 Pirrama Road  
Pyrmont NSW  
  
PO Box Q500  
Queen Victoria Building  
NSW 1230  
  
T +61 2 9334 7700 or 1800 226 667  
F +61 2 9334 7799

**Copyright notice**



<https://creativecommons.org/licenses/by/4.0/>

With the exception of coats of arms, logos, emblems, images, other third-party material or devices protected by a trademark, this content is made available under the terms of the Creative Commons Attribution 4.0 International (CC BY 4.0) licence.

We request attribution as © Commonwealth of Australia (Australian Communications and Media Authority) 2019.

All other rights are reserved.

The Australian Communications and Media Authority has undertaken reasonable enquiries to identify material owned by third parties and secure permission for its reproduction. Permission may need to be obtained from third parties to re-use their material.

Written enquiries may be sent to:

Manager, Editorial Services  
PO Box 13112  
Law Courts  
Melbourne VIC 8010  
Email: [REDACTED]



Inquiry into the deployment, adoption and application of 5G in Australia  
Submission 232

# Contents

<b>Executive summary</b>	<b>1</b>
<b>Introduction</b>	<b>2</b>
Key characteristics of 5G networks	2
<b>Spectrum Management</b>	<b>5</b>
Planning new frequency bands for 5G services	5
Optimising existing mobile broadband frequency bands for 5G	6
International cooperation and harmonisation efforts	8
<b>Regulating Electromagnetic energy (EME) from facilities and devices</b>	<b>9</b>
<b>Enforcing industry compliance with the Mobile Base Station Deployment Code</b>	<b>12</b>
Low-impact facilities and 5G	12
Mobile phone base station deployments	12
Community consultation for 5G and small cell mobile infrastructure	13
Small-cell deployment and EME compliance priority	14
<b>Consumer information and advice</b>	<b>15</b>
Consumer information on 5G and small cells	15
Consumer safeguards	15
<b>Appendix A</b>	<b>16</b>

Inquiry into the deployment, adoption and application of 5G in Australia  
Submission 232

Inquiry into the deployment, adoption and application of 5G in Australia  
Submission 232

## Executive summary

The Australian Communications and Media Authority (ACMA) welcomes the opportunity to contribute to the House of Representatives Standing Committee on Communications and the Arts' inquiry into the deployment, adoption and application of 5G in Australia.

As the communications regulator, the ACMA is aware of the heightened industry and community interest in the rollout of 5G networks – particularly with the productivity benefits these networks offer to sectors across the Australian economy.

The ACMA has three roles of relevance to the Inquiry's terms of reference:

### **1. Spectrum management**

The ACMA plans and manages Australia's radiofrequency spectrum in accordance with the *Radiocommunications Act 1992*. 5G has emerged as one of the major drivers of change to spectrum demand and existing spectrum arrangements. The ACMA is committed to planning and managing spectrum to ensure that Australia is well placed to maximise the benefits of 5G. Our planning activity is focused on the development of technical and licensing frameworks that will support the use of 5G in 'new' frequency bands (bands previously unused for wireless broadband), as well as optimising existing spectrum bands for 5G uses.

### **2. Regulating Electromagnetic energy (EME) from facilities and devices**

The ACMA is responsible for regulating radiofrequency electromagnetic energy (EME) for consumer devices such as mobile phones and telecommunications facilities such as mobile phone towers. To make sure EME exposure is kept low, the ACMA applies the exposure limits set by Australia's authority on radiation protection, the Australian Radiation Protection and Nuclear Safety Agency (ARPANSA).

### **3. Enforcing industry compliance with the Mobile Base Station Deployment Code**

The Code ensures that mobile carriers inform, consult and engage with local communities, councils, and interested and affected parties when a mobile phone base station is being proposed or built in their local area. We are closely monitoring how carriers are rolling out small cells to support the 5G.

More recently, we have an increased focus on consumer information about the rollout of 5G and small cells in coordination with industry and government agencies. We are cognisant of community concerns about the potential impacts of 5G and EME and will continue to work with stakeholders to distribute information within the community.

Inquiry into the deployment, adoption and application of 5G in Australia  
Submission 232

# Introduction

5G refers to the fifth generation of mobile technology, in line with the International Mobile Telecommunications-2020 (IMT-2020) Standard of the International Telecommunications Union and the associated releases of the 3rd Generation Partnership Project (3GPP). 5G wireless broadband includes both fixed and mobile broadband services.

## Key characteristics of 5G networks

Key characteristics of 5G that distinguish it from previous developments include:

- > **Peak data rates**—peak data rates of 1–10 Gbit/s (and in some cases up to 20 Gbit/s), which is a step change for mobile networks and is expected to facilitate a high quality and a more seamless user experience. By comparison, 4G networks in Australia provide advertised data rates of between 2–100 Mbit/s.<sup>1</sup>
- > **Ultra low latency**—reduce latency to a one millisecond end-to-end round trip delay. This is also a step change for mobile networks. By comparison, 4G networks can theoretically achieve a minimum latency of 10 milliseconds.<sup>2</sup>
- > **Bandwidth**—provide 1000 times more bandwidth per unit area than available on existing mobile networks. This will support faster data rates and increase network capacity to support data intensive applications in both the uplink and downlink.
- > **Connections**—support the growth of between 10 to 100 times more connected devices than is now supported by existing networks. This is also theoretically possible on evolving 4G networks and mass connectivity is identified as a key enabler for the Internet of Things (IoT).
- > **Always on**—be available everywhere (100 per cent coverage) at all times (99.999 per cent of the time). This requirement is also theoretically achievable using evolving 4G technologies. It is necessary for high mobility applications and coverage indoors and outdoors as well as high reliability requirements for services where network outage could have catastrophic consequences.
- > **Energy usage**—reduce network energy usage by 90 per cent.
- > **Battery life**—facilitate up to 10 years battery life for low power, machine-type devices. Both the energy usage and battery life requirements are theoretically achievable using evolving 4G technologies and are aimed at ensuring future networks are cost effective for network operators.<sup>3</sup>

5G usage scenarios could include enhanced mobile broadband, ultra-reliable low latency communications and massive machine type communications (see Figure 1 below).

---

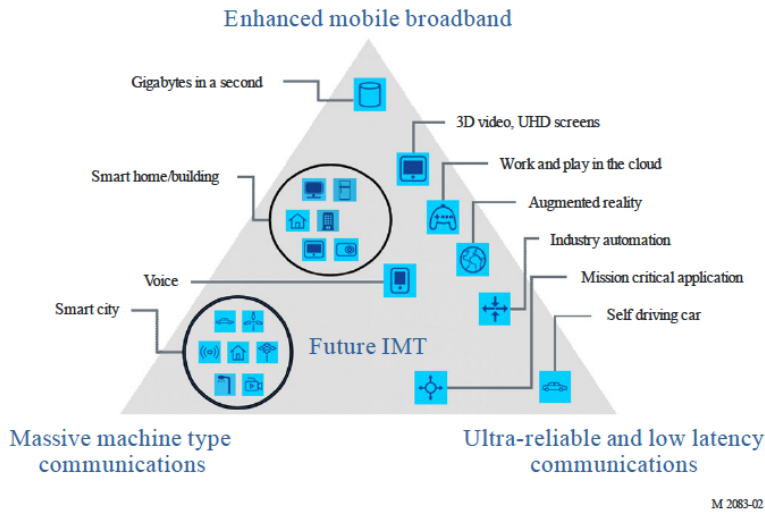
<sup>1</sup> Australian mobile network operator websites.

<sup>2</sup> GSMA Intelligence, [Understanding 5G: perspectives on future technological advancements in mobile](#), December 2014, page 13.

<sup>3</sup> [5G and mobile network developments—Emerging issues](#), ACMA February 2016

Inquiry into the deployment, adoption and application of 5G in Australia  
Submission 232

**Figure 1: Usage scenarios of International Mobile Telecommunications (IMT) for 2020 and beyond. Source: Recommendation ITU-R M.2083-0 (09/2015)**

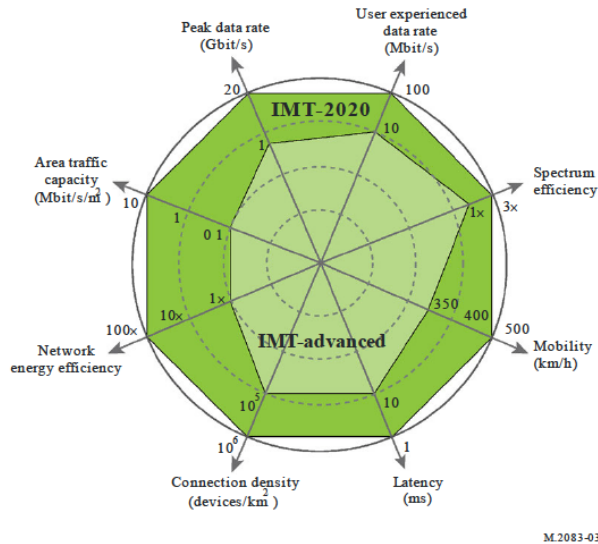


5G is intended to improve on every network performance metric compared to 4G (see Figure 2 below). Essentially this translates to much higher:

- > capacity broadband for consumers and business
- > reliability to support automated vehicles and public safety communications
- > numbers of interconnections such as for very large numbers of low bandwidth devices under the IoT.

Inquiry into the deployment, adoption and application of 5G in Australia  
Submission 232

**Figure 2: Enhancement of key capabilities from IMT-Advanced (4G/LTE) represented by the light green area to IMT-2020 (5G) represented by the dark green area. Source: Recommendation ITU-R M.2083-0 (09/2015)**



### Benefits and use cases in the Australian economy

A range of 5G uses cases are emerging in Australia. To date, Australian telecommunication carriers are focused on mobile and fixed broadband with satellite operators also developing 5G uses cases.

The particular characteristics of 5G provide flexibility and options for new use cases meaning that it has the potential to be adopted by non-traditional users and uses such as private 5G networks supporting healthcare, manufacturing and transportation.

The Australian Government is actively supported 5G deployment through measures such as the release of Australia’s first 5G strategy in October 2017 and the establishment of the 5G Working Group.

The establishment of the working group recognises the transformative potential of 5G across disparate parts of the Australian economy. The group brings together representatives from across Government and industry to foster an ongoing discussion on 5G issues. It is particularly focused on how 5G can best be used in in agriculture, health and transport and provides a mechanism to identify and remove sectoral barriers to 5G’s successful and timely rollout.

The ACMA is working closely with industry to maximise the social and economic benefits of 5G while minimising the impact on existing services and customers. This includes through the [IoT Alliance Australia](#).

Inquiry into the deployment, adoption and application of 5G in Australia  
Submission 232

# Spectrum Management

The ACMA is committed to ensuring that Australia is well placed to maximise the benefits of 5G and spectrum use. The ACMA continues to implement arrangements to support the rollout of 5G services in Australia, across a number of bands. 5G will utilise spectrum across an unprecedentedly wide range of frequency bands. This will include:

- > 'low-band' spectrum below 1 GHz, much of which is already used for mobile broadband networks
- > 'mid-band' spectrum between 1 and 6 GHz, some of which is already used for wireless broadband
- > 'high-band' spectrum, above 6 GHz, specifically the mmWave bands, until recently unused for widespread wireless broadband purposes.

Each of the broad bands identified for 5G (sub 1 GHz, 1–6 GHz, above 6 GHz) requires a specific approach by the ACMA. This is because different considerations apply, such as intrinsic features of the band—for example, propagation characteristics, as well as international harmonisation and standardisation, domestic policy, legacy planning and allocation arrangements, and other incumbency factors.

The ACMA is facilitating 5G applications in Australia by

- > planning new frequency bands for 5G services
- > optimising bands currently available for wireless broadband
- > working internationally to identify new bands capable of supporting its use.

## Planning new frequency bands for 5G services

### *Mid-band spectrum*

The mid-band between 1 and 6 GHz is currently the focus of near-term 5G deployments.

In December 2018, the ACMA successfully allocated 125 MHz of spectrum in the 3.6 GHz band (3575–3700 MHz), in metropolitan and regional areas. All 350 lots available in the auction were sold, realising total revenue of approximately \$853 million. Further information about the results of this auction is available at:

<https://www.acma.gov.au/theACMA/3-6-ghz-band-spectrum-auction-results>.<sup>4</sup>

Spectrum in the 3700–4200 MHz band has been the subject of considerable interest internationally as well as domestically from large mobile network operators and Fixed Wireless Access (FWA) operators (such as Wireless Internet Service Providers), with several processes underway considering arrangements in the band. The ACMA is paying close attention to the global environment in this band and has released a discussion paper to commence a broad review of arrangements in the 3700–4200 MHz band.<sup>5</sup>

---

<sup>4</sup> <https://www.acma.gov.au/theACMA/australias-5g-auction-concludes>

<sup>5</sup> <https://www.acma.gov.au/theACMA/planning-of-the-3700-4200-mhz-band>

Inquiry into the deployment, adoption and application of 5G in Australia  
Submission 232

The ACMA is alert to the needs of existing fixed satellite and point-to-point uses of this band, as well as the potential for both wide area and site based—for example, FWA, wireless broadband. Considering the whole band simultaneously will maximise the opportunity for balanced approaches that take appropriate account of all interests.

*High-band spectrum*

The ACMA's consideration of high-band spectrum for wireless broadband is focused on the mmWave in the bands above 24 GHz.

We have completed planning decisions for the 26 and 28 GHz and are now preparing allocation arrangements. The ACMA released two consultation papers in September 2018, which considered planning options for 5G in the 26 GHz band (24.25–27.5 GHz) and discussed the suitability of the 28 GHz band (27.5–29.5 GHz) for a broad range of users and service types, including 5G. A decision paper on the 26 GHz band was released in April 2019,<sup>6</sup> and a decision paper for the 28 GHz band was released in September.<sup>7</sup> On 25 October 2019, the Minister for Communications, Cyber Safety and the Arts announced that he had made a spectrum re-allocation declaration for the 26 GHz band.<sup>8</sup> As a result, the ACMA is proceeding to allocate 2.4 GHz of spectrum in the 26 GHz band in defined cities and regional centres through spectrum licences.

Overall, the ACMA's recent decisions on the 26 GHz and 28 GHz bands have established new planning arrangements for over 5 GHz of mmWave spectrum of great interest for both terrestrial and satellite broadband services.

Satellite services are also expected to contribute to the 5G ecosystem. The ACMA continues to ensure that appropriate spectrum is available for satellite services including in the 28 GHz and 11 GHz bands.

Higher in the spectrum, the ACMA has recently consulted<sup>9</sup> on changes to class-licensing arrangements to support additional spectrum in the 60 GHz range for wireless data communications systems (including those supporting 5G). An update to [Radiocommunications \(Low Interference Potential Devices\) Class Licence 2015](#) (the LIPD class licence) was recently released which varied and expanded existing 60 GHz arrangements.

*Further re-planning for 5G wireless broadband services*

In addition to the planning and allocation activities currently underway, the ACMA continues to monitor several other bands for possible replanning for 5G wireless broadband services, including the 1.5 GHz band (1427–1518 MHz). These bands are generally less mature in terms of harmonisation, standardisation and international implementation of 5G. Some stakeholders have indicated interest in planning for private LTE networks in mid-band spectrum, such as 1.5 GHz.

Spectrum between 37–43.5 GHz is of significant interest for both terrestrial 5G and satellite broadband services. The United States (US), for example, has established arrangements supporting both services. The ACMA will consider global trends and local circumstances, including domestic and international take-up of mmWave 5G services, in determining whether replanning for possible 5G in the 37–43.5 GHz band

---

<sup>6</sup> <https://www.acma.gov.au/theACMA/options-for-wireless-broadband-in-the-26-ghz-band>

<sup>7</sup> <https://www.acma.gov.au/theACMA/planning-options-for-the-28-ghz-band>

<sup>8</sup> <https://www.minister.communications.gov.au/minister/paul-fletcher/news/opening-more-5g-spectrum>

<sup>9</sup> <https://www.acma.gov.au/theACMA/class-licensing-updates-supporting-5g-and-other-technology-innovations>



Inquiry into the deployment, adoption and application of 5G in Australia  
Submission 232

is appropriate. The ACMA notes that the case for replanning of part of this band for satellite services may be appropriate regardless.

### **Optimising existing mobile broadband frequency bands for 5G**

Achieving more efficient configuration and use of bands that are already licensed for wireless broadband is a vital adjunct to the clearance and reallocation of new bands to address rising demand for wireless broadband. In part, this work falls on existing licensees, as well as the regulator, to use market mechanisms to reconfigure existing holdings to maximise the overall utility of bands.

In addition, there are continuing opportunities for spectrum users to enter into commercial arrangements to share infrastructure or spectrum in a way that will realise more efficient spectrum use.

#### *Low-band spectrum*

In the bands below 1 GHz, the ACMA has two primary short-to-medium-term objectives:

- > working with industry to optimise the efficient configuration of the existing 850 MHz (825–845 MHz and 870–890 MHz) and 900 MHz (890–915 MHz and 935–960 MHz) band allocations, already licensed for mobile broadband purposes, including by securing a 1 MHz downshift of the 850 MHz spectrum licences
- > implementing the existing planning decision to make additional spectrum available for mobile broadband in the 850 MHz expansion band (809–824 MHz and 854–869 MHz).

#### *Mid-band spectrum*

The ACMA recognises that optimising spectrum and apparatus licence arrangements in the 3400–3575 MHz bands, adjacent to the 3.6 GHz band auctioned in 2018, is an important priority. This is expected to result in more efficient use of spectrum and a reduction in deployment costs, supporting the implementation of 5G services in Australia.

Reviewing the arrangements in bands that are already licensed for wireless broadband is important to ensure existing allocations are efficient and can cater for new technology developments such as 5G. For example, the ACMA is considering updating the technical framework for the 2.3 GHz band.

The combination of planning decisions across the low, mid and high band spectrum will position Australia well for wireless broadband services (for mobile and fixed wireless), including use for 5G services.

### **International cooperation and harmonisation efforts**

As 5G is an emerging technology with global reach, it is important that the ACMA's activities in spectrum management and equipment regulation are consistent with international developments. International harmonisation allows Australian networks and equipment suppliers the benefits of internationally recognised standards and supply chains, and gives Australian consumers the benefit of global economies of scale in the development and manufacture of devices, and helps roaming capabilities for Australian devices overseas.

The 2019 World Radiocommunication Conference (WRC-19) will be held from 28 October to 22 November 2019 in Sharm El-Sheikh, Egypt. WRCs are held every

Inquiry into the deployment, adoption and application of 5G in Australia  
Submission 232

three to four years, and WRC-19 will consider a large agenda concerning a range of new frequency allocation and procedural matters, including possible allocations for satellite services and identification of spectrum suitable for 5G services. The Department of Communications and the Arts (the Department) will lead the Australian delegation to this meeting, with the ACMA providing technical expertise.

Since 2016, the ACMA has engaged with stakeholders via WRC preparatory processes to develop Australian positions on WRC-19 agenda item 1.13. This agenda item focuses on spectrum harmonisation requirements for 5G mobile broadband technologies. Developments in Europe, other regions and countries (such as the US) are being monitored for possible early implementation bands for 5G.

Separately, the 4940–4990 MHz band is included in Institute of Electrical and Electronics Engineers (IEEE) standard 802.11y Public Safety Wireless Local Area Network but has also been included in 5G standards (3GPP band n79). This may enable public safety agencies in Australia to deploy their own 5G capabilities under the [Radiocommunications \(Public Safety and Emergency Response\) Class Licence 2013](#). To help foster markets for public safety-grade 5G equipment in this band, the ACMA recently led an Australian proposal to update the relevant ITU-R band plan (Recommendation ITU-R M.1826) to include provisions for 5G channel bandwidths of up to 50 MHz. This proposal was agreed at the May 2019 meeting of ITU-R Working Party 5A.

Inquiry into the deployment, adoption and application of 5G in Australia  
Submission 232

# Regulating Electromagnetic energy (EME) from facilities and devices

The ACMA regulates the EME from telecommunications facilities and wireless devices, including those used in 5G networks and small cell deployments. We do this in two ways:

- > through technical performance requirements at the point of supply for radiocommunications equipment that is portable or mobile and has integral antennas (e.g. mobile phones and wi-fi devices)
- > through licence conditions on transmitters at radiocommunications installations (e.g. mobile phone towers, small cells and radio transmission towers).

The Australian Radiation Protection and Nuclear Safety Agency (ARPANSA) is the government agency which provides expert advice on exposure to electromagnetic energy. ARPANSA establishes exposure limits, which it states sit well below the level at which adverse health effects are known to occur and includes a wide safety margin to protect the public.<sup>10</sup> This includes EME from all existing communications deployments such as small cell networks and 5G.

## Equipment standards

EME from radiocommunications equipment that is portable or mobile with integral antennas is regulated through the *Radiocommunications* (Compliance Labelling – Electromagnetic Radiation) Notice 2014 which places obligations on suppliers of the equipment that need to be met before the equipment can be supplied to the Australian market. These obligations include:

- > ensuring the equipment complies with the levels set in the ARPANSA document Radiation Protection Standard for Maximum Exposure Levels to Radiofrequency Fields – 3 kHz to 300 GHz (2002) (the ARPANSA Standard)
- > to label the equipment
- > to hold compliance documents including a declaration of conformity, test report stating compliance, and a description of the equipment, which the ACMA may audit.

The ACMA has recently consulted on amending the equipment arrangements to adopt the latest international and European test method standards for equipment operating on frequencies below 6 GHz. These amendments are expected to be completed by the end of 2019.

The ACMA is monitoring the development of international standards for EME of equipment that operates on frequencies above 6 GHz and is participating in the Standards Australia committee that provides Australian input into the international standards. The ACMA plans to consult on adopting international standards for testing

---

<sup>10</sup> See for example, <https://www.arpansa.gov.au/news/5g-new-generation-mobile-phone-network-and-health>.

Inquiry into the deployment, adoption and application of 5G in Australia  
Submission 232

equipment that is used in close proximity to the head and body and operates on frequencies above 6 GHz when suitable standards are available.

## Facilities regulation

Every mobile phone base station, including small cells and 5G base stations, must comply with the ARPANSA Standard.

The ARPANSA Standard is designed to protect people against all known adverse health effects resulting from EME exposure. It is based on scientific research that has determined the levels at which harmful effects occur and is consistent with internationally accepted guidelines endorsed by the World Health Organization and widely adopted by the European Union and various governments around the world. The ARPANSA Standard sets allowable EME exposure levels which are significantly below the levels at which potential harm may occur. In the case of radiocommunications installations, such as mobile phone towers, the Radiocommunications Licence Conditions (Apparatus Licence) Determination 2015 (the LCD) requires licensees to:

- > ensure that EME exposure from a transmitter does not exceed the levels set in the ARPANSA Standard at any location accessible by a member of the general public
- > to hold compliance documents including a declaration of conformity, details of any person who assessed the transmitter's compliance, results of assessments, and details of the transmitter, which the ACMA may audit.

It is also a requirement of the Communications Alliance Ltd Industry Code C564:2018 Mobile Phone Base Station Deployment code, which has been registered by the ACMA under Part 6 of the *Telecommunications Act 1997*, that network operators produce an EME environmental report prior to the proposed installation of a facility.

The EME environmental report contains information about the location of the site, the transmission facilities installed and maximum levels of EME based on predictive modelling. These reports are made available to the general public on the Radio Frequency National Site Archive (RFNSA) website, maintained by the Australian Mobile Telecommunications Association.

The Code also requires that network operators obtain a compliance certificate from an accredited provider stating that the facility is EME compliant post-installation.

### *Recent compliance activities*

In response to community concerns about small cell deployments, in January 2019 the ACMA conducted a formal audit of TPG's EME compliance records for 30 of its proposed small cell deployments. The results of the audit program indicated EME levels well below the exposure limits set by the ARPANSA Standard for all 30 sites audited. There were no significant issues of non-compliance identified. The audit did identify an administrative issue relating to delays in the production of compliance documents, due to clarification being required about the nature and volume of the records required to be produced.

TPG demonstrated a high level of knowledge of its EME compliance obligations and associated record-keeping requirements. TPG also demonstrated that it has processes in place to ensure that compliance assessments accurately reflected environmental and site conditions.

Inquiry into the deployment, adoption and application of 5G in Australia  
Submission 232

*2018-19 compliance priority*

Given community concerns about the rollout of 5G technologies, the ACMA has made EME and small cell base stations a compliance priority for 2019-20.

The ACMA has sought details from Telstra, Optus and Vodafone about their deployments of small cells to inform our compliance program. This information will assist us to:

- > identify any systemic patterns or emerging trends
- > assess whether the carriers changed or altered their proposed small cell deployments in response to community feedback received.

We have also commenced an audit program to measure the level of compliance with their licence conditions with reference to the EME human exposure limits developed by ARPANSA. The program will be based on the previous TPG audit and will use a combination of desk-based assessments, formal compliance records audits with a number of spot measurements for reference. The ACMA will report on the results of the program in 2020.

Inquiry into the deployment, adoption and application of 5G in Australia  
Submission 232

# Enforcing industry compliance with the Mobile Base Station Deployment Code

## Low-impact facilities and 5G

Low-impact facilities include, among other things, mobile phone base stations used for 3G, 4G and 5G mobile technologies. These facilities are commonly installed on structures such as light and power poles, building rooftops, masts or towers.

Low-impact facilities may also be used for other 5G-related technologies such as 5G fixed-wireless access services. For example, one carrier is currently offering high-speed fixed wireless services in some metro areas using 5G technology.

Under Schedule 3 to the *Telecommunications Act 1997*, licensed telecommunications carriers have the power to enter onto someone's land to:

- > inspect the land
- > install low-impact facilities
- > maintain facilities, including low-impact facilities

without a need to obtain State or Local government planning approvals.

The Telecommunications (Low-impact Facilities) Determination 2018, made by the Minister, specifies what a low-impact facility is and defines the category of land these types of facilities can be installed on.

When entering land for the purposes specified above, carriers must also comply with the Telecommunications Code of Practice 2018, made by the Minister under Schedule 3. The code of practice sets out additional notification and objection procedures for landowners and occupiers affected by the land access process.

If a facility is not a low-impact facility, such as a free-standing telecommunications tower, the carrier must install it in accordance with the applicable local government, State or Territory planning laws.

## Mobile phone base station deployments

The current version of the Communications Alliance Ltd Industry Code C564:2018 Mobile Phone Base Station Deployment (the Code) was registered by the ACMA in December 2018. The Code is designed to ensure that communities are informed and consulted about proposed mobile infrastructure deployments.

As small cell and 5G deployments are increasing, concerns are more frequently being expressed by local councils and communities. These concerns mainly focus on the perceived health effects of electromagnetic energy exposure, visual impact, and perceived deficiencies in the carriers' consultation processes.

The Code ensures that mobile carriers inform, consult and engage with local communities, councils, and interested and affected parties when a mobile phone base station is being proposed or built in their local area.

Inquiry into the deployment, adoption and application of 5G in Australia  
Submission 232

The Code contains several important provisions, including:

- > a requirement that mobile carriers collaborate with local councils and the community when they deploy mobile phone base stations in their community
- > ensuring that local councils and the community are informed and given the opportunity to voice any concerns about new mobile phone base stations, or an upgrade to existing mobile phone base stations
- > requiring mobile carriers to identify community sensitive locations at an early stage in planning for mobile phone base station deployments
- > making EME information about mobile phone base stations available through the RFNSA website
- > requiring mobile carriers to apply a precautionary principle<sup>11</sup> to the site selection, design and operation of mobile phone base stations.

### **Community consultation for 5G and small cell mobile infrastructure**

The Code specifies the community consultation requirements for 5G mobile phone base station installations at new sites (section 6) and existing sites (section 7), while small cell deployments have separate and more streamlined consultation requirements (section 5.2).

#### *5G mobile phone base station installations at new sites*

In these circumstances, the carrier must consider whether the 5G mobile phone base station requires development application approval in accordance with state or local council planning laws, or whether it is a low-impact facility. In the majority of cases:

- > low-impact mobile phone base station facilities require a mobile carrier to follow the consultation requirements under section 6 of the Code
- > free-standing mobile phone base station poles or towers will require a mobile carrier to follow applicable state or local council planning laws, where it is expected that the public consultation will occur through that process.

#### *5G mobile phone base station installations at existing sites*

In accordance with section 7 of the Code, the carrier must notify the relevant local council and the local community about the proposed installation. They must also provide EME information about the 5G mobile phone base station and make an invitation for written comments on the proposed work. Before a mobile carrier commences any works, it must have regard to any comments received from the public and the local council.

### **Small cell deployments**

A more streamlined approach to community notification requirements is available for small cell deployments under clause 5.2 of the Code. This is because they are generally smaller, require less auxiliary equipment to operate, are generally mounted on existing infrastructure (e.g. light and power poles) and have lower power output.

---

<sup>11</sup> The precautionary principle offers mobile carriers advice about how to act responsibly in the face of uncertainty and lack of full scientific knowledge.

Inquiry into the deployment, adoption and application of 5G in Australia  
Submission 232

### **Small-cell deployment and EME compliance priority**

As referred to earlier in the submission, the ACMA has identified 5G and small cell deployment as a compliance priority for 2019–20. As part of this program, the ACMA will be scrutinising mobile carriers' practices in informing and consulting local communities before installing small cell base stations. This will assist the ACMA in identifying any systemic patterns and/or emerging trends in relation to small cell deployments.

This builds upon the ACMA's previous monitoring and compliance program.

- > In December 2018, the ACMA directed PIPE Networks (a subsidiary of TPG) to comply with the small cell provisions of the Code.
- > In May 2019, the ACMA formally warned Telstra for not fully consulting with interested and affected parties and for not acknowledging a complaint within the prescribed timeframe.

More information including media release, formal warning and investigation report is on the ACMA's website at <https://www.acma.gov.au/theACMA/telstra-fails-to-consult-community>.



Inquiry into the deployment, adoption and application of 5G in Australia  
Submission 232

## Consumer information and advice

Australian carriers are already deploying 5G networks and some commercial services are already available to consumers. Carriers and equipment suppliers are also starting to introduce 5G devices onto the Australian market.

With the increasing rollout of networks, we are aware of concerns in some segments in the community about the potential health impacts of 5G.

### Consumer information on 5G and small cells

The ACMA is working to give communities the information they need to understand the infrastructure deployment and EME requirements that apply to the rollout of small cells and 5G.

This is being undertaken through a collaborative and complementary approach to communication on 5G and EME emissions with industry, the Department and ARPANSA.

In response to increased community concern about small cells and 5G, the ACMA:

- > has developed an “EME hub” on our website including information with respect to specific devices and technologies, such as mobile phones, wifi and smart meters
- > has developed a fact sheet for consumers (**Appendix A**) that explains small cells and 5G and provides information about EME
- > will be providing authoritative information about 5G, small cells and EME to local communities.

We also plan to undertake a small-scale, social media campaign (targeting several areas where small cells are being deployed) and search engine advertising. The objective of these communications is to provide clear, relevant and independent information about small cells, EME and 5G.

While the ACMA is taking steps to be more proactive with communities, these activities are not a substitute for carrier consultation and community engagement, as per their regulatory requirements.

### Consumer safeguards

The ACMA also monitors industry compliance with a range of safeguards to improve consumers’ experience with their telecommunications services. Existing safeguards such as the Telecommunications (Consumer Complaints Handling) Industry Standard 2018 and Telecommunications Consumer Protections Code 2019 apply to 5G services deployed to consumers and small businesses.

Inquiry into the deployment, adoption and application of 5G in Australia  
Submission 232

# Appendix A

*A guide to small cells.*

Inquiry into the deployment, adoption and application of 5G in Australia  
Submission 317



**Australian Government**  
**Australian Radiation Protection  
and Nuclear Safety Agency**



# **Submission to the House of Representatives Standing Committee on Communications and the Arts Inquiry into 5G in Australia**



arpansa.gov.au

Inquiry into the deployment, adoption and application of 5G in Australia  
Submission 317

Contents

**Introduction..... 3**

**Impact of EME RF on Health and Environment ..... 3**

Wireless radiation and 5G ..... 3

What the science says about impact on humans ..... 4

*The future use of millimetre waves by 5G..... 4*

*Electromagnetic hypersensitivity ..... 4*

*Do radio waves cause cancer? ..... 5*

How ARPANSA and other health authorities consider the science and provide advice ..... 5

*Expertise required..... 5*

*Approach taken ..... 5*

*Unsubstantiated views ..... 6*

Impact on the environment..... 6

Recommendations for further research..... 6

**ARPANSA and our role in mobile telecommunications ..... 7**

Role in 5G ..... 7

The ARPANSA RF Standard ..... 7

National EME program ..... 8

ARPANSA’s communication activities on 5G and EME generally ..... 8

*Website content and fact sheets..... 9*

*Direct public engagement ..... 9*

*Media engagement ..... 9*

*Advice to key stakeholders..... 9*

Key ARPANSA research..... 10

Inquiry into the deployment, adoption and application of 5G in Australia  
Submission 317

## Introduction

The Australian Radiation Protection and Nuclear Safety Agency (ARPANSA) is the Australian Government's primary authority on radiation protection and nuclear safety. ARPANSA regulates Commonwealth entities using radiation with the objective of protecting people and the environment from the harmful effects of radiation. A key function of the CEO as described in the *Australian Radiation Protection and Nuclear Safety Act 1998* (ARPANS Act) is to undertake research in relation to radiation protection. ARPANSA also provides services and promotes national uniformity and the implementation of international best practice across all jurisdictions.

With the deployment of 5G technology, ARPANSA has observed an increase in public interest with regard to health impacts from the radio waves that are emitted from mobile telecommunications. With approximately 30,000 studies and reviews in the area of electromagnetic fields, including radio waves, it is a widely researched area.

This submission is aimed at providing information to the inquiry on health and environmental impacts of radio waves to assist with consideration around the deployment of 5G technologies including the planned shift to higher frequency radio waves, and to outline the role of ARPANSA.

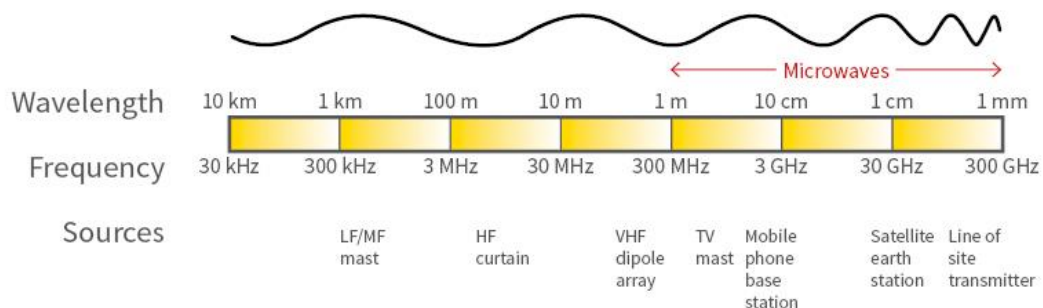
## Impact of EME RF on Health and Environment

### Wireless radiation and 5G

Mobile phone networks and other wireless telecommunications emit low-powered radio waves also known as radiofrequency (RF) electromagnetic energy (EME). These radio waves lie in the frequency range between 3 kilohertz (kHz) to 300 gigahertz (GHz). RF EME is different from ionising radiation, which is associated with nuclear energy or use in medicine.

Wireless telecommunications operate using radio waves at different frequencies. The 5G network will initially use similar frequencies as the current mobile phone networks (3G and 4G) which operate at lower microwave frequencies. In the future, 5G will use a higher microwave frequency band, sometimes called 'millimetre waves'. Higher frequencies do not mean higher exposure levels.

### The radiofrequency radiation spectrum



Inquiry into the deployment, adoption and application of 5G in Australia  
Submission 317

### **What the science says about impact on humans**

Very high levels of exposures to radio waves (more than 50 times above the limit in the ARPANSA RF standard) can heat biological tissue and cause tissue damage. For example, in applications such as industrial use of radio waves for welding, or close occupational exposure to AM radio towers that operate at a low frequency but high power to provide vast coverage. In these applications, appropriate safety measures are taken to manage risk to the public and workers.

The exposure to radio waves routinely encountered by the general public in the environment is too low to produce significant heating or increased body temperature. For the very low level of exposure from radio waves used in telecommunications, the evidence for production of harmful biological effects is ambiguous and unsubstantiated. Although there have been studies reporting biological effects ('bio-effects') at these levels, there has been no indication that such effects might constitute a human health hazard. Biological effects are physiological responses that can occur for a broad range of reasons, and are differentiated from 'health effects', which result in adverse conditions to the human body that may require medical treatment.

Health authorities around the world, including ARPANSA and the World Health Organization (WHO), have examined the scientific evidence for possible health effects from telecommunications sources. Current research indicates that there is no established evidence for health effects from radio waves used in mobile telecommunications. This includes the upcoming roll-out of the 5G network. ARPANSA's assessment is that 5G is safe.

### ***The future use of millimetre waves by 5G***

At the frequencies where current mobile phone technology operates (including 4G and 5G), some of the energy is absorbed into the body. However, it is too low to produce any significant heating of tissue. The millimetre waves that are planned to be used by 5G in the future do not penetrate past the skin. The power level will be low and no appreciable heating will occur in the skin. Millimetre wave frequencies, while higher than current frequencies used, are covered by the current *Radiation Protection Standard for Maximum Exposure Levels to Radiofrequency Fields – 3 kHz to 300 GHz* (ARPANSA RF Standard).

### ***Electromagnetic hypersensitivity***

Some individuals have reported a wide range of non-specific health problems that they attribute to low-level radio waves and other electromagnetic sources. The symptoms most commonly reported include headaches, body pain, lethargy, tinnitus (ringing in the ear), nausea, burning sensation, heart arrhythmia and anxiety. This self-proclaimed sensitivity to electromagnetic fields is termed 'electromagnetic hypersensitivity' or EHS, which in medical literature is also known as idiopathic environmental intolerance attributed to electromagnetic fields (IEI-EMF). EHS is not a medically recognised syndrome.

While ARPANSA and the WHO recognise that the symptoms of EHS are real and can have a disabling effect for the affected individual, EHS has no clear diagnostic criteria and the science so far has not provided evidence that RF exposure is the cause. The majority of scientific studies published to date have found that under controlled laboratory conditions, EHS individuals cannot detect the presence of RF sources any more accurately than non-EHS individuals. Several studies have indicated a placebo effect i.e. an adverse effect due to the belief that something is harmful.

Inquiry into the deployment, adoption and application of 5G in Australia  
Submission 317

### ***Do radio waves cause cancer?***

Radio waves are classified as non-ionising radiation, meaning that they have insufficient energy to break chemical bonds, and in doing so cause DNA damage that may lead to cancer. There is no established evidence that low-level exposure to radio waves causes cancer. However, the assessment of potential health risks of exposure to radio waves includes a level of uncertainty. Some epidemiological studies have shown an association between heavy mobile phone use and brain cancer; however, limitations of the methods of these studies prevent conclusions of causality being drawn from these observations. Based largely on this limited evidence, the International Agency for Research on Cancer (IARC) in 2011 classified RF EME as possibly carcinogenic to humans. This classification is not intended to cause alarm, but to encourage further research in this area. Other things that IARC classify at this level include pickled vegetables and aloe vera.

Even when taking the IARC decision into account, the overall evidence suggests that the radio waves from mobile phone handsets and other wireless devices are not harmful to the user. A recent study led by ARPANSA, published with the British Medical Journal Open, found that the wide use of mobile phones in Australia has not increased the rate of brain cancer.

### **How ARPANSA and other health authorities consider the science and provide advice**

#### ***Expertise required***

To study the biological effects of radio waves, various disciplines of expertise need to be utilised, including biology, epidemiology, medicine, physics, engineering and social sciences. All of these disciplines play important individual and collective roles in evaluating possible adverse effects on health, and provide information on the need for, and approaches to, protection. ARPANSA has expertise in many of these areas and collaborates with a number of key organisations including universities, other health authorities (WHO, the International Commission for Non-Ionizing Radiation Protection (ICNIRP)), and various national agencies, that collectively have expertise in all of the specialised disciplines relevant to health research.

To determine any health effects in human or other biological populations, a key area of expertise required is epidemiology. This is the scientific study and research of causes and distribution of disease across populations, including ways to reduce the impact of diseases on the health of communities. ARPANSA employs staff with epidemiological expertise to assess the state of the science on EME and population health.

#### ***Approach taken***

No single scientific study, considered in isolation, will provide a meaningful answer to the question of whether or not radio waves can cause (or contribute to) adverse health effects in people, animals or the environment. The relevance of individual studies to health and environmental protection also varies. In order to draw an informed conclusion from research studies, it is critical to weigh-up the science in its totality.

Scientific evidence is deemed to be established when it is consistent and generally accepted by the broader scientific community. This usually follows an evaluation of the available data by expert scientific bodies, using a 'health risk assessment' approach. In a health risk assessment, all available studies with either positive or negative effects need to be evaluated and judged on their own merit, and then collectively using the weight-of-evidence approach. It is important to determine how much a single set of new evidence may change the probability that exposure to radio waves causes an effect that has not been shown across the

## Inquiry into the deployment, adoption and application of 5G in Australia Submission 317

existing body of evidence. Generally, studies must be replicated, or be in agreement with similar studies to exclude the possibility that the results were random or caused by an external factor. The evidence for an effect is further strengthened if the results from different types of studies (epidemiology and laboratory) point to the same conclusion.

Health authorities like ARPANSA, or international organisations such as WHO and ICNIRP, assess scientific evidence and provide appropriate advice. Individual studies are usually published as peer-reviewed journal papers, however conclusions from these can often vary. Science continually evolves, and ARPANSA reviews new research into the potential health effects of radio waves on an ongoing basis, and consults relevant stakeholders in order to provide accurate up-to-date health advice.

### **Unsubstantiated views**

Opinions on health risks, which are not peer-reviewed, are often provided in the media and on the internet. This includes the possible health effects of radio waves from some scientists that are contrary to the assessment of ARPANSA and the WHO.

For example, the 2007 Bioinitiative Report, including updated versions, is an online document reporting on the relationship between the electromagnetic fields associated with power lines and wireless devices and health. It has not been peer-reviewed and has been heavily criticised by governments and independent research groups for its lack of balance in formulating views, selective use of scientific data and claims that lack a scientific basis. ARPANSA supports the critical assessment of this Report.

The 5G Appeal was prepared in 2017 by some scientists and doctors around the world (including in Australia) who are calling for the European Union to 'halt the roll out of 5G due to serious potential health effects from this new technology'. The Appeal is selective in the use of the available literature and scientific data on radio waves and health. Neither the 5G Appeal nor the Bioinitiative report follow the weight of evidence approach described earlier.

### **Impact on the environment**

A common theme ARPANSA has observed in arguments by anti-5G groups is the impact this network would have on flora and fauna. As an example, a common argument is that bee populations are being impacted by exposure to current mobile networks and this will be made worse under 5G.

The majority of studies investigating the effects of radio waves or electromagnetic fields in general are usually performed on standard laboratory animals used in toxicological studies, such as rats and mice. However, some studies have also included other species such as short-living flies for the investigation of genotoxic effects. There is limited research on the effects of electromagnetic fields on the diversity or abundance of insects or bees. The few ecological studies that do exist generally report little or no evidence of a significant environmental impact. The studies that do show an effect, such as the ones listed, suffer from poor scientific method and the reported effect of electromagnetic field exposure cannot be separated from other environmental factors.

### **Recommendations for further research**

Although the body of science demonstrates there are no health effects from radio waves in mobile telecommunications, it is important to continue the research in radiation safety. ARPANSA has made recommendations for areas where the body of knowledge can be expanded. The research



Inquiry into the deployment, adoption and application of 5G in Australia  
Submission 317

recommendations include ongoing assessment of personal and environmental exposure to radio waves from new and emerging technologies.

The WHO's Radiation Programme has an ongoing project to assess potential health effects of exposure to radio waves in the general and working population. The WHO has identified areas of further research and will commission in 2020 systematic reviews to analyse and synthesise the evidence.

## ARPANSA and our role in mobile telecommunications

### Role in 5G

ARPANSA is not a proponent of technology and does not have a regulatory role for public mobile telecommunications. Our role as a radiation health authority is the development of the safety standard for exposure to radio waves from telecommunications sources like 5G. ARPANSA also provides information and advice on the safety of sources emitting radio waves. In order to provide the best advice on the protection of the Australian public from the effects of radio waves, ARPANSA undertakes its own research and reviews the relevant scientific research. ARPANSA's role is not to convince people of the science, rather to provide our assessment based on the body of the evidence and where possible, respond to questions or provide information to highlight this information.

### The ARPANSA RF Standard

To address the health risks of radio waves, in 2002, ARPANSA published the *Radiation Protection Standard for Maximum Exposure Levels to Radiofrequency Fields – 3 kHz to 300 GHz* (ARPANSA RF Standard). The ARPANSA RF Standard is designed to protect people of all ages and health status against all known adverse health effects from exposure to radio waves. It is based on scientific research that shows the levels at which harmful effects occur and it sets safety limits, based on international guidelines that are considered best practice, well below these harmful levels. The ARPANSA RF Standard applies a precautionary approach in setting exposure limits. In order to compensate for uncertainties in the scientific knowledge, large safety factors are incorporated into the exposure limits i.e. the limits are set well below the level at which all known adverse health effects occur.

Using this standard, the Australian Communications and Media Authority (ACMA) establishes EME exposure limits under its *Radiocommunications (Electromagnetic Radiation-Human Exposure) Standard 2014* and *Radiocommunications Licence Conditions (Apparatus Licence) Determination 2015* under which all licence holders must operate. Radio wave exposure to the public from all wireless telecommunications sources including 5G have to comply with the limits set by the ARPANSA RF Standard and enforced via the ACMA regulatory instruments.

The ARPANSA RF Standard is closely aligned with international guidelines prepared by the International Commission for Non-Ionising Radiation Protection (ICNIRP) in 1998 and endorsed by the World Health Organization (WHO). The ICNIRP guidelines form the basis for regulations for the majority of countries. Some regions worldwide have, without any scientific justification, developed limits that are lower than the ICNIRP guidelines. Health authorities like ARPANSA, or international organisations such as WHO and ICNIRP, do not support such an approach, and the WHO has in response developed its Framework for Developing Health-Based EMF Standards.

### Inquiry into the deployment, adoption and application of 5G in Australia Submission 317

Since 2000, research in the area of RF and health has grown rapidly and several major research programs and reviews have been undertaken internationally. Through the national EME Program, ARPANSA was able to undertake a review in 2014 of the current level of evidence which was published in the 'Review of Radiofrequency Health Effects Research – Scientific Literature 2000–2012'. The review concluded that, while the exposure limits of the ARPANSA RF Standard are still valid for protection against known adverse effects, under some circumstances the margin of safety between these limits and the threshold for harmful effects may be less than originally intended. This review provided a level of confidence to concerned members of the public that the Standard remained fit for purpose.

At the time, the ARPANSA RF Standard was prepared, it was recognised that new scientific research may indicate that changes may need to be made to the limits or the implementation of the Standard. Since then, the rationale for known health effects has remained the same. However, there have been advances in the measurement of radio wave absorption by the human body and ICNIRP is currently revising its guidelines. ARPANSA is planning to revise its RF Standard following the publication of the revised ICNIRP Guidelines. It should be pointed out that changes are expected to refine the maximum exposure limits and are not expected to impact exposure from telecommunications (including 5G) which tend to be much lower than the maximum exposure limits.

#### **National EME program**

Commencing in 1997, the Australian Government established the EME Program. This program provides \$1 million per annum to support research into, and provide information to the public, about health issues associated with telecommunications devices and equipment. The program is indirectly offset by a levy on radiocommunication licensees collected by the ACMA.

The program has three elements:

- an Australian research program managed by the National Health and Medical Research Council (NHMRC) to conduct research into EME issues of relevance to Australia and to complement overseas research activities,
- international engagement with Australian participation in the WHO Electromagnetic Fields Project through ARPANSA's role as a WHO Collaborating Centre for Radiation Protection, and
- a public information program (managed by ARPANSA) to provide information to the public on EME and health.

Of the total \$1m funding, \$700,000 is allocated to NHMRC for research, and \$300,000 allocated to ARPANSA for international engagement and public information programs. This set amount has not been changed since 1997. This funding allocation is part of ARPANSA's government appropriation.

The program however has evolved considerably from when it first started with ARPANSA taking on an expanded role in the NHMRC grant program and development of standards.

#### **ARPANSA's communication activities on 5G and EME generally**

ARPANSA's communication activities on radio waves centres around four key focus areas: website content and fact sheets, direct public engagement, media engagement and advice to key stakeholders.

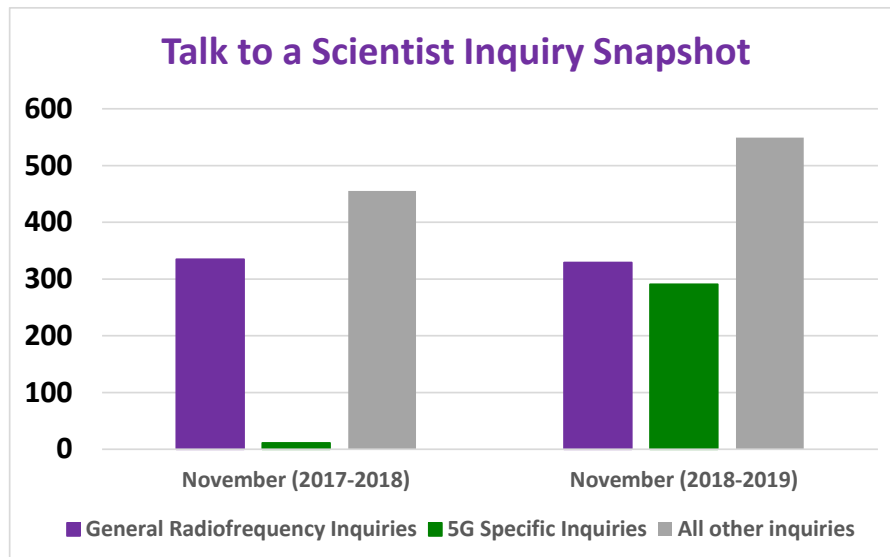
## Inquiry into the deployment, adoption and application of 5G in Australia Submission 317

### **Website content and fact sheets**

ARPANSA has developed a large range of information for its website and flyers covering the issue of radio waves. While 5G is currently being discussed, prior focus has been on other types of technologies using radio waves that has been topical including smart meters, NBN fixed wireless and mobile phone towers. With increasing discussion in the community around 5G, ARPANSA has also increased its use of social media and news articles on the ARPANSA website. This included a 3 June 2019 post on 'Misinformation about Australia's 5G network' that was reported widely in media.

### **Direct public engagement**

ARPANSA provides a unique opportunity for the public and community to talk directly with our scientists on issues about radiation exposure and protection in Australia via its Talk-to-a-Scientist Program. This service offers members of the public the opportunity to find answers to science-related questions that they have been unable to find using other resources. While covering all issues to do with both ionising and non-ionising radiation, the service receives a high volume of calls and email enquiries around radio waves with a particular increase in those related to 5G.



### **Media engagement**

With increased interest in 5G, ARPANSA have actively worked to ensure that the Australian media have access to accurate information. Since January 2019, ARPANSA has been interviewed by print, online, radio and television media on this topic on more than 40 occasions. More broadly ARPANSA advice (including our misinformation statement) or research has been referenced in 151 Australian news articles with a calculated average potential reach of 1.22 million readers, and 105 broadcasts on radio with a calculated national viewership of 1.74 million listeners/viewers. Internationally ARPANSA has been widely reported with 72 articles in the same period reaching a calculated average of 2.15 million readers.

### **Advice to key stakeholders**

ARPANSA has prioritised the provision of information to key stakeholders as a cost-efficient way of reaching a broader audience. ARPANSA has played a key role in supporting broader Australian Government, through

Inquiry into the deployment, adoption and application of 5G in Australia  
Submission 317

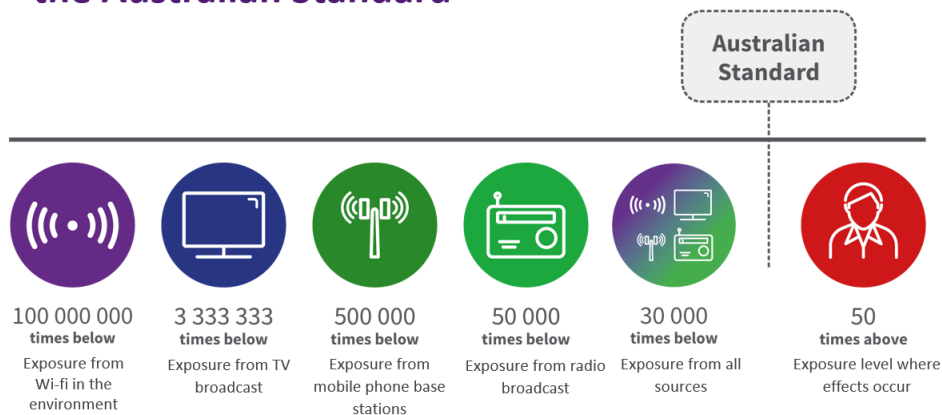
the provision of expert advice including supporting the development of content on the ACMA website, and the Department of Communications and the Arts video ‘Electromagnetic energy (EME) and you’<sup>1</sup>. ARPANSA has also supported state and territory, and local government through the provision of information and technical briefings.

**Key ARPANSA research**

As mentioned previously, ARPANSA has recently completed a study (published in the British Medical Journal Open) comparing the incidence of brain cancer in Australia from 1982 to 2013 to mobile phone use during the same period. The study found that there was no increase in brain tumours that can be attributed to mobile phone use.

ARPANSA has also conducted its own measurements of environmental radio waves from various sources (radio, mobile phone towers, TV, Wi-Fi etc.) detectable in urban areas. All the measurements have shown radio wave exposure in the everyday environment is typically much lower than the safety limits prescribed in the ARPANSA RF Standard and international guidelines. As an example, the Wi-Fi in schools measurement study conducted in 2016 found that in a schoolyard, the dominant exposure continued to be from AM radio with the combined exposure of all sources including mobile networks still 30,000 times below these limits.

**Typical public exposure to radio waves against the Australian Standard**



<sup>1</sup> [https://www.youtube.com/watch?v=XGI\\_LcqtDIQ](https://www.youtube.com/watch?v=XGI_LcqtDIQ)

Inquiry into the deployment, adoption and application of 5G in Australia  
Submission 167

House of Representatives Standing Committee on Communications and the Arts  
Committee Secretariat  
PO Box 6021  
Parliament House  
CANBERRA  
Canberra ACT 260

Re: Submission to Inquiry into 5G in Australia  
Date: 30<sup>th</sup> October 2019

Dear Secretariat,

On behalf of the Australian Centre for Electromagnetic Bioeffects Research, a National Health and Medical Research Council of Australia *Centre of Research Excellence*, I would like to submit comment on the proposed deployment, adoption and application of 5G in Australia. Please note that this submission is restricted to the issue of *potential health consequences* of exposure to the electromagnetic fields that will emanate from 5G.

**1. Competence to comment on the relation between 5G exposure and health**

The Australian Centre for Electromagnetic Bioeffects Research (ACEBR) is a Centre of Excellence funded by the National Health and Medical Research Council of Australia since 2005. ACEBR's remit is, among other things, to conduct cutting-edge research into potential health effects associated with exposure to the radiofrequency (RF) electromagnetic fields (EMFs) emitted by telecommunications devices, such as 5G. The ACEBR board is comprised of senior Australian academics with expertise ranging from mechanisms (e.g. how does RF-EMF affect the body), to experimental animal research (e.g. does RF-EMF cause pathology in mice) and experimental human research (e.g. does RF-EMF cause symptoms in those who report being 'electro-hypersensitive'). Importantly, the ACEBR board has substantial experience addressing this issue in terms of both national and international science evaluation, including roles within the International Commission on Non-Ionising Radiation Protection (ICNIRP) and the World Health Organisation (WHO). For example, the lead ACEBR researcher (Croft) chairs the current ICNIRP revision of the ICNIRP (1998) RF-EMF Guidelines, which cover the EMF exposures relevant to 5G.

**2. How will RF-EMF exposures from 5G technologies differ from previous technologies (e.g. 4G)?**

Wireless telecommunications devices, such as 4G and 5G mobile phones and base stations, emit EMFs within the RF range (circa 100 kHz to 300 GHz). This is essentially the same as those from technologies that have been around for many years, such as from radio and television broadcast towers, as well as from a range of more recent conveniences such as microwave ovens, Wi-Fi and Bluetooth.

There is a substantial body of science that has demonstrated that RF-EMFs cause heating in the body, and that health can be adversely affected by this heating. There is also a substantial body of science that has failed to find evidence of RF-EMF induced health effects that do not depend on this heating. Indeed the potential for adverse health effects arising from exposure to the RF-EMFs from 5G is entirely dependent on heating, with the only factors relevant to such harm the *power* and *frequency* of the RF-EMFs – the higher the power the more heating, and the higher the RF-EMF frequency the more superficial will be this heating.

Inquiry into the deployment, adoption and application of 5G in Australia  
Submission 167

The initial 5G roll-out will occur using RF-EMF powers and frequencies that are essentially the same as those from 4G technologies. The effect of the RF-EMF from 5G technologies on the body will thus be the same as from the current 4G technologies. However, it should be noted that both 4G and 5G differ from older technologies such as FM radio and TV, in that the RF-EMFs from 4G and 5G do not penetrate into the body as deeply as do the RF-EMFs from FM radio and TV. In terms of RF-EMF power, a recent investigation found that in Australia, the RF-EMF from 4G mobile phone base stations was substantially lower than that due to FM radio and TV (*Environment International* 2018, 114:297-306).

It is anticipated that in the coming years 5G technologies will be developed further to utilise higher RF-EMF frequencies, such as those that have been extensively utilised for radar. Although not relevant to the current 5G roll-out, if/when this development occurs, the heat caused by the RF-EMF will be restricted to more superficial layers of the body (e.g. skin) than results from current 4G/5G technologies. If this development occurs, this difference would mean that it would be important to ensure that the change in heating profile is accounted for in mandated RF-EMF restrictions (see Section 4).

**3. Will RF-EMF exposure from 5G technologies pose a health risk?**

Australia has safety standards to ensure that EMF exposure does not adversely impact on health. The relevant RF-EMF standard is currently the ARPANSA RPS3 (2002), which provides protection against all adverse health effects in the frequency range 3 kHz to 300 GHz (i.e. it includes the RF-EMFs relevant to 5G). This is based upon the Guidelines set by the International Commission on Non-Ionising Radiation Protection (an NGO independent of industry, and in official relations with the World Health Organisation), and as such the RPS3 represents international best practice. The ARPANSA RPS3 sets limits that are lower than the lowest exposure levels that have been shown to cause harm. That is, similar to 4G, 5G technologies are not permitted to expose people to RF-EMF levels that can cause harm.

It is noted that although the ARPANSA RPS3 sets limits below which no harm will result, the limit values are very conservative in that they would need to be exceeded by a substantial margin in order for harm to occur. Indeed at the RPS3 limits, the biological effects that might arise under worst-case conditions for the general public would be a localised temperature rise in the skin of up to 0.5°C, and a body core temperature rise that would be too small to be detected (< 0.1°C), which are not sufficient to adversely affect health.

**4. What type of adverse health effect does the ARPANSA RPS3 (2002) Standard protect against?**

The ARPANSA RPS3 (2002) is based on research that has looked for *any* harm that could result from RF-EMF exposure. This includes those where mechanisms of action are known (e.g. the thermal effects described in Section 3), but also research that has made no assumptions about mechanisms of action. Cancer is a good example of the latter type, where a huge investment has been made to determine whether there is a relationship between RF-EMF exposure and cancer, with no assumptions made about whether such an effect is feasible. That is, the research has been entirely empirically driven, merely asking such questions as ‘is mobile phone usage related to cancers in the general population’ (using epidemiological methods), and ‘does the RF-EMF from mobile phones cause cancer’ (using randomised control trials in rodents).

From this research, the ‘lowest’ RF-EMF exposure levels found to be relevant to health have been used to derive the RPS3 limits. These were based on thermal effects, merely because the thermal effects

Inquiry into the deployment, adoption and application of 5G in Australia  
Submission 167

resulted from the lowest RF-EMF exposure levels that were found to cause harm (i.e. no other effects occur at lower exposure levels). Thus although it is often said that the RPS3 limits are only based on thermal effects, this is not true – it is merely that the lowest exposure levels found to cause harm are thermally mediated. However, it is noted that cancer, which is of great concern to the community, has not been found to be caused by RF-EMF exposure, even at far higher exposure levels than those known to cause thermally-mediated adverse health effects. The ARPANSA RPS3 Standard thus protects against ‘all’ adverse health effects, regardless of mechanism.

In terms of potential developments in 5G technologies and the associated move to higher RF-EMF frequencies (e.g. 26 GHz), this would result in the RF-EMF induced temperature rise being restricted to more superficial regions of the body (primarily the skin). This is accounted for within the ARPANSA RPS3 in that limits have been set that restrict the peak temperature rise in the body across the entire RF-EMF spectrum, which includes the potential for higher frequencies of 5G EMFs in the future. Consequently, the highest worst-case temperature rises at 26 GHz would be the same as at the current 5G RF-EMF frequencies (see Section 3).

#### **5. Clarification regarding common complaints from the community about 5G**

There are a number of views about RF-EMF exposure and health that have been raised by the community in relation to concerns about RF-EMF emitting devices. As ACEBR has encountered many of these views through its community interaction and have thus had the opportunity to address these in terms of the radiation science, it may be useful to comment briefly on these.

##### ***5.1. “But ARPANSA RPS3 only protects against thermal effects”***

As described in Section 4, the ARPANSA RPS3 protects against ‘all’ adverse health effects caused by RF-EMF exposure. The limits have indeed been set to protect against thermal effects, but this is merely because these represent the lowest RF-EMF exposure levels capable of adversely affecting health, and so if there are any other adverse health effects that require higher RF-EMF exposure levels to occur, these will also be protected against.

##### ***5.2. “But ARPANSA RPS3 does not protect against cancer”***

As described in Section 4, the ARPANSA RPS3 protects against ‘all’ adverse health effects caused by RF-EMF exposure, which would include cancer if it was found to be related to RF-EMF exposure. However, after careful consideration of the literature, all independent international reviews have concluded that there is no evidence that RF-EMF exposure causes cancer. This includes consideration of: 1/ the IARC 2011 evaluation on carcinogenicity (which, although classifying RF-EMF as ‘possibly carcinogenic’, did not find any evidence that RF-EMF in fact caused cancer); and 2/ the US National Toxicology Program carcinogenicity studies (which, although reporting that RF-EMF exposure was carcinogenic, suffered from too many scientific flaws to be able to provide any evidence for this assertion; see for instance the critical review by the International Commission on Non-Ionising Radiation Protection, *Health Physics* 2019, doi: 10.1097/HP.0000000000001137).

##### ***5.3. “But why would some other countries have lower RF-EMF limits if ARPANSA RPS3 was safe”***

It is true that there are countries that have lower RF-EMF limits than are in the ARPANSA RPS3. However, these are not science-based. That is, they do not show that there is science that has

Inquiry into the deployment, adoption and application of 5G in Australia  
Submission 167

demonstrated that the RF-EMF limits used in the RPS3 are not safe, but have adopted non-scientific reasons for lowering their limits. For example, although limits are lower in Russia, there is no evidence in support of there being adverse health effects at levels lower than the RPS3 limits. Similarly, India has taken the limits specified in RPS3 and divided them by 10 to set their limits, but there is no science to justify this position. This has resulted in substantial difficulties in terms of providing efficient network coverage, but presumably this is an intended consequence of balancing the wishes of some concerned community members against the functionality of the technology. Thus, the fact that a few countries have adopted lower limits does not provide any reason for concern about the ARPANSA RPS3 limits, it merely suggests that considerations other than science have been important in those countries. It is noted that most countries do use equivalent RF-EMF exposure limits to those specified in the RPS3.

**5.4. *'But 5G will need lots more base stations, and this will increase RF-EMF exposure'***

It is true that 5G technologies would require the number of base stations to increase. This is in part because the 5G base stations would be directional, focusing the exposure to areas that need the RF-EMF to communicate, and reducing RF-EMF exposure in other areas. However, regardless of the number of base stations, the RF-EMF levels would still need to be kept within the ARPANSA RPS3 limits, and so protection against any adverse health effects would be maintained. Indeed the early evidence suggests that, similar to the current situation for 4G technologies, 5G technologies would still result in exposures many times lower than the RPS3 limits, and thus there would be no opportunity for 5G-related RF-EMFs to adversely affect health.

**5.5. *'But there is lots of literature listed on the web that shows that the RPS3 limits are not protective'***

It is true that there are many papers that are referred to on the web as evidence that RF-EMF exposure below the RPS3 limits causes harm. However, it is important to note that a study claiming to have shown that RF-EMF caused an adverse health effect does not provide sufficient evidence to conclude that RF-EMF can in fact cause an adverse health effect. The reason for this is that science does not rely on one particular study, but must consider a range of such studies, because there are many reasons why individual studies (and indeed groups of studies) can be flawed. Science thus relies on verification to determine the facts, such that if a study has made an error, the results will typically not be replicated in the follow-up study. It is noted that such erroneous claims are not merely due to poorly designed or executed research designs, but science itself is probabilistic, and is set up so that it will often arrive at erroneous conclusions due to chance alone. Indeed the scientific process is set up so that one in every twenty tests will *incorrectly* claim that there is an effect, and as most studies will conduct many tests, there will be many false conclusions reported in the scientific literature. By repeating the study to test the claim, we then have an opportunity to reduce the impact that chance has on the results. Therefore, it is crucial to consider the entire scientific literature, and not merely a selection of studies without consideration of both methodological adequacy and chance.

Such overall evaluation of the literature is a challenging task given that the science is one of the most heavily funded to date. However, a number of good scientific reviews have been conducted, and each of these has concluded that there is no evidence that RF-EMF below RPS3 limits can cause adverse health effects. Examples of these include those by the Scientific Committee on Emerging and Newly Identified Health Risks (Opinion on potential health effects of exposure to electromagnetic fields (EMF), 27 January, 2015), the Swedish Radiation Safety Authority (SSM's Scientific Council on Electromagnetic Fields. Recent Research on EMF and Health Risk, 2015; 2016; 2018), the World Health Organisation (Radiofrequency Fields; Public Consultation Document, released October, 2014. Geneva, Switzerland),



Inquiry into the deployment, adoption and application of 5G in Australia  
Submission 167

and the International Commission on Non-Ionising Radiation Protection (Public Consultation Document, July 2018).

**5.6. 'But there is not enough research on 5G to determine whether it is safe'**

It is true that the latest instantiation of mobile telecommunications technology has only recently been designated as '5G'. However, from the perspective of science, the critical issue is whether the RF-EMF that enables 5G communication is harmful, and there is a substantial literature addressing this issue. That is, science has clearly established that the critical factors that determine whether RF-EMF will adversely affect health are its frequency and power. As we know the RF-EMF frequency and power that will result from 5G, we can use this to determine whether there will be any adverse health effects on humans.

In terms of RF-EMF frequency, the initial 5G roll-out will be at the same frequency as that used by the current (4G) technology, and so will result in the same biological effect that results from current (4G) technology; the ARPANSA RPS3 Standard will protect against harm in both cases. It is anticipated that the RF-EMF frequency that 5G will utilise will increase in the next few years, to approximately 26 GHz. When this occurs, the distribution of RF-EMF power in the body will become more superficial than that from current (4G) technology, with most power absorbed within the skin. These superficial exposure scenarios and their effects on health are already known to science. Thus, although the term '5G' has not been used until recently, a substantial body of science is available concerning the RF-EMF exposures that will be produced by 5G technologies, and based on this research, the ARPANSA RPS3 Standard is sufficient to ensure that exposures associated with 5G will not be able to adversely affect health.

**6. Conclusions**

As can be seen from the above discussion, the RF-EMFs resulting from 4G and current 5G technologies can be treated as equivalent in terms of health, and the ARPANSA RPS3 Standard will provide protection against all adverse health effects associated with RF-EMF exposures, including those arising from 5G technologies. There is thus no impediment to 5G deployment in Australia on the basis of concerns regarding potential adverse health effects from the technology.



Professor Rodney Croft  
30<sup>th</sup> October, 2019

Acting Director  
The Australian Centre for Electromagnetic Bioeffects Research  
University of Wollongong  
Wollongong 2522  
Australia

Inquiry into the deployment, adoption and application of 5G in Australia  
Submission 335



## **AMTA and Communications Alliance Submission**

House Standing Committee on Communications and the Arts

# **Inquiry into 5G in Australia**

**1 November 2019**

Inquiry into the deployment, adoption and application of 5G in Australia  
Submission 335

## Contents

<b>1. Introduction – 5G will transform the way we live and work</b> .....	7
<b>2. Economic impact of 5G</b> .....	8
5G is enabling the digital revolution .....	8
Demand for mobile continues to grow .....	8
Mobile contribution to Australia’s economy and productivity .....	10
Mobile’s global impact .....	12
Social benefits of mobile technology .....	13
Growing demand for 5G drives continued investment in spectrum and networks .....	14
<b>3. What is 5G?</b> .....	15
Enhanced mobile broadband (eMBB) .....	16
Ultra-reliable low latency communications (URLLC) .....	16
Massive machine-type communication (MMTC) .....	16
4G/5G ecosystem and development of technical standards .....	18
5G base stations .....	19
Network slicing – a key differentiator .....	20
<b>4. Health and safety</b> .....	22
International safety limits for 5G .....	22
How safety standards are set .....	23
Precautionary limits used in other countries .....	24
Health effects research for 5G .....	25
5G, small cells and health .....	26
Working safely with EME .....	27
<b>5. 5G Technologies and use cases</b> .....	28
5G will drive innovation in enterprise .....	28
Financial services .....	29
Factories of the future .....	29
Precision drives decisions in agriculture .....	29
Transforming transport and logistics .....	30
Government .....	31
More time for patients .....	31
Emergency services – responding in real time with 5G .....	31
The connected ambulance – real time interaction .....	31
Smarter cities .....	32
<b>6. How can Government pave the way for a smooth 5G evolution?</b> .....	33
Government and industry partnership .....	33

Inquiry into the deployment, adoption and application of 5G in Australia  
Submission 335

Promoting industry and public awareness of 5G..... 33

5G needs a fit for purpose regulatory framework..... 34

Spectrum required for 5G ..... 35

Reform of the spectrum management framework ..... 36

Network deployment reform..... 37

Communications is the 4<sup>th</sup> utility ..... 38

Infrastructure sharing – passive and active ..... 38

Support for EME health research and the agencies regulating EME safety ..... 39

Funding for Australian EME research ..... 39

ARPANSA..... 39

Opportunities for enterprise and government ..... 40

**7. Conclusion – Ensuring Australia reaps the benefits of 5G ..... 41**

**Appendix A - Spectrum Management reforms needed for 5G ..... 42**

Inquiry into the deployment, adoption and application of 5G in Australia  
Submission 335

## Background

This submission is made jointly by the Australian Mobile Telecommunications Association (AMTA) and Communications Alliance (the Associations).

[AMTA](#) is the peak industry body representing Australia's mobile telecommunications industry. Its mission is to promote an environmentally, socially and economically responsible, successful and sustainable mobile telecommunications industry in Australia.

[Communications Alliance](#) is the primary telecommunications industry body in Australia. Its vision is to provide a unified voice for the telecommunications industry and to lead it into the next generation of converging networks, technologies and services. The prime mission of Communications Alliance is to promote the growth of the Australian communications industry and the protection of consumer interests by fostering the highest standards of business ethics and behaviour through industry self-governance.

The combined membership of the two Associations includes Australia's mobile network operators, mobile service providers, network equipment vendors, handset manufacturers, retailers and suppliers as well as telecommunications carriers, carriage and internet service providers, content providers, IT companies, consultants and business groups.

Inquiry into the deployment, adoption and application of 5G in Australia  
Submission 335

## Executive Summary

5G networks will transform the way Australians live and work by delivering unprecedented digital connectivity across the community and economy.

5G will deliver substantial improvements in the speed, latency and reliability of mobile networks in order to meet the current and forecast strong and ever-increasing demand for mobile services including new capabilities that will be enabled by this next generation of services.

5G is expected to transform industries and sectors including agriculture, transport and logistics, manufacturing, health, education and emergency services. It will change the way both Government and enterprise deliver goods and services as we transition to smarter cities and an increasingly connected world.

Mobile technology has long been recognised for its enabling impact on our economy and productivity. 5G has the potential to magnify that impact in a transformative fashion as the world moves towards Industry 4.0.

Eighty percent of Australian businesses report that they have already implemented at least one emerging technology, or that they expect to do so in the next 3 years.

The mobile industry directly contributed \$8.2 billion to our economy in 2017-18 and directly employed almost 25 000 FTE people. For every FTE role employed by the mobile industry there are also 3.7 people employed in flow-on industries.

Mobile technologies are also driving productivity. Deloitte Access Economics estimates that the productivity impact of mobile will be equivalent to \$2500 for every Australian by 2023. This amounts to a total of \$65 billion of additional GDP by 2023, or a 3.1% increase in GDP.

The growing demand for 5G is driving continued industry investment in radiocommunications spectrum and the deployment of network infrastructure.

It is in Australia's national interest that the transition to 5G is fast-tracked so that the economic, productivity and social benefits can be realised sooner.

As a small, agile economy with a history of early adoption of digital technology and innovation, Australia is uniquely positioned to take advantage of the potential that 5G has to offer to develop our role in the region and globally as a leading technology nation. For the last four years, Australia has consistently ranked 1<sup>st</sup> in an index that includes 165 countries (representing 99% of global population) for its mobile connectivity. 5G is the innovation platform that will grow the mobile industry's capacity as a key contributor to Australia's future global competitiveness.

This will require a co-ordinated policy approach from all levels of Government, working with industry and across key portfolios, to ensure that policy and regulatory settings support efficient network deployment. This includes timely spectrum allocation and broad community support for and understanding of the economic and social benefits of 5G.

Ensuring a pipeline of new spectrum is made available for 5G and progressing reviews of technical frameworks so that in-market spectrum is 'fit for 5G' is critical to meet forecast demand.

AMTA estimates that each mobile operator will need additional low band spectrum, around 100 MHz of mid band spectrum and an initial 1GHz of mmWave spectrum for 5G to reach its full potential and deliver what it is designed to do.

Inquiry into the deployment, adoption and application of 5G in Australia  
Submission 335

Similarly, timely and efficient deployment of network infrastructure requires a flexible regulatory framework including thoughtful consideration and timely decision-making by policy makers to ensure that the benefits of 5G are realised. It is imperative that industry has certainty on the regulatory inputs to its investment decision making processes to encourage 5G infrastructure deployment.

5G services will be as critical as power, gas and water. Indeed, communications is commonly regarded as the fourth utility. Long term reform is required so that telecommunications can be treated in a manner consistent with the other utilities with regard to access to public property, just as we are seen as vital infrastructure in national security matters and by consumers and businesses alike.

Industry is keenly aware that the deployment of 5G mobile networks has caused concern among some members of the community, both in Australia and overseas, in relation to health and safety.

Australian mobile network operators and equipment suppliers all adhere to and operate conservatively within the safety standards set by the regulator – the Australian Radiation Protection and Nuclear Safety Agency ([ARPANSA](#)) as endorsed by the World Health Organisation ([WHO](#)).

Industry relies on the expert opinions and guidance of leading health, safety and research agencies such as ARPANSA and the WHO in relation to electromagnetic energy (EME). Following extensive global research both ARPANSA and the WHO note that there are no established health effects from the radio waves that the 5G network uses.

Industry regards safety as paramount, both for customers and employees, and prioritises compliance with the requisite health and safety standards across all business operations to ensure safe, reliable networks and mobile devices.

Finally, we believe there is scope for Government to play a greater role in leading a strategy to work with all levels of government and industry to promote a pathway to 5G including building awareness around the potential benefits of 5G within the public sector itself as well as across industries and enterprise.

Inquiry into the deployment, adoption and application of 5G in Australia  
Submission 335

## 1. Introduction – 5G will transform the way we live and work

5G networks will transform the way Australians live and work by delivering unprecedented digital connectivity across the community and economy.

As a small, agile economy with a history of early adoption of digital technology and innovation, Australia is uniquely positioned to take advantage of the potential that 5G has to offer to develop our role in the region and globally as a leading technology nation. For the last four years, Australia has consistently ranked 1<sup>st</sup> in an index that includes 165 countries (representing 99% of global population) for its mobile connectivity.<sup>1</sup> 5G is the innovation platform that will grow the mobile industry's capacity as a key contributor to Australia's future global competitiveness.

5G will deliver substantial improvements in the speed, latency and capacity of mobile networks in order to meet the current and forecast strong and ever-increasing demand for mobile services including new capabilities that will be enabled by this next generation of services.

5G has the potential to transform industries and sectors including agriculture, transport and logistics, manufacturing, health, education and emergency services. It will change the way both Government and enterprise deliver goods and services as we transition to smarter cities where everything that can be connected is connected.

This submission:

- outlines the potential benefits of 5G for Australian society and the economy;
- highlights a few of the many use cases for 5G;
- addresses community health concerns about 5G and small cells; and
- outlines how Government can work with industry and across key portfolios, to ensure that policy and regulatory settings support efficient deployment of networks, including timely spectrum allocation, and that there is broad community support for and understanding of the economic and social benefits of 5G.

*5G will connect our communities and transform the way Australians live and work*



<sup>1</sup> GSMA Mobile Connectivity Index, [The State of Mobile Internet Connectivity Report](#), July 2019



Inquiry into the deployment, adoption and application of 5G in Australia  
Submission 335

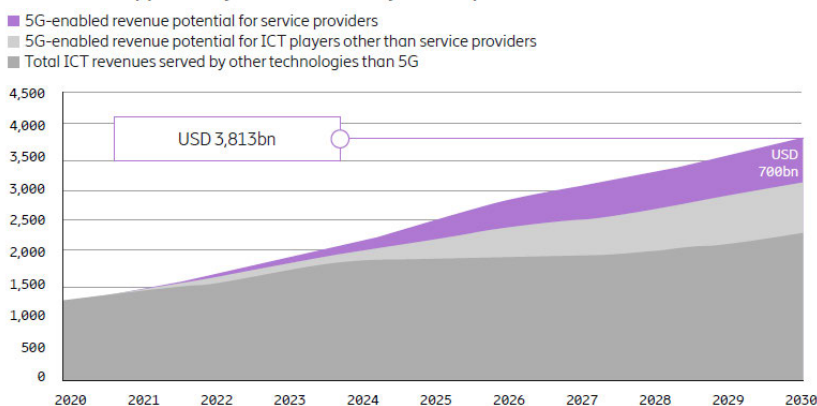
## 2. Economic impact of 5G

### 5G is enabling the digital revolution

Mobile telecommunications have historically had an enabling impact on other industries, across the economy and society. Latest generation mobile technologies, applications and services continue to change the way we work, live and play by enabling a mobile and data rich dimension to our connectivity. 5G has the potential to drive economic growth further as it enables service providers to offer cost-effective technology to meet consumer demand for data and new advanced 5G services.<sup>2</sup> Digitisation is forecast to generate USD 3.8 trillion in revenue for the ICT industry by 2030, with USD 700bn to be addressable by mobile service providers. The graph below shows up to 18 per cent of this 5G enabled opportunity is addressable by mobile service providers.<sup>3</sup>

ii 5G enabled global revenue potential for service providers

**Figure 2: Of the total ICT revenue expected in 2030, up to 18 percent of the 5G-enabled opportunity is addressable by service providers**



Source: Ericsson and Arthur D. Little

4

### Demand for mobile continues to grow

The total number of global mobile subscriptions has surpassed 7.9 billion.<sup>5</sup> This takes global mobile subscription penetration to 104% with smartphone users accounting for almost 70% of subscriptions.

Ericsson reports that mobile data traffic continues to grow strongly with an increase of 78% from Q2 2018 to Q2 2019. This growth is being driven by increasing use of data on smartphones and other mobile devices with video content driving the increasing average data volume per subscription.<sup>6</sup>

Ericsson also reports that the adoption of 5G is happening at a faster pace than previously predicted. In terms of forecast demand, by the end of 2024, it is now estimated that globally there will be 1.5

<sup>2</sup> Ericsson and Arthur D. Little, [5G for business: a 2030 market compass](#), Oct 2019, page 3

<sup>3</sup> Ericsson, [5G for business: a 2030 market compass, Oct 2019](#), page 4

<sup>4</sup> Ericsson, [5G for business: a 2030 market compass, Oct 2019](#), page 4

<sup>5</sup> [Ericsson Mobility Report, Q2 Update](#), August 2019

<sup>6</sup> [Ericsson Mobility Report, Q2 Update](#), August 2019

Inquiry into the deployment, adoption and application of 5G in Australia  
Submission 335

billion 5G subscriptions for enhanced mobile broadband, with 5G networks covering 40 percent of the world's population and carrying 25% of the world's mobile data traffic.<sup>7</sup>

South Korea, one of the early adopters of 5G, acquired 1 million 5G subscribers in only 69 days, which is faster than the 80 days it took to get the country's first 1 million 4G subscribers in 2011.<sup>8</sup>

As of 9 September 2019, South Korea had:

- surpassed 3 million 5G subscribers, with coverage expected to reach 93 per cent of the population by the end of the year.<sup>9</sup>
- deployed 90,000 5G base stations deployed, nearly double the number installed at launch with a choice of two 5G smartphone models from Samsung and LG.<sup>10</sup>

Looking ahead, in the first five years, 5G subscription uptake is expected to be significantly faster than that of LTE, following its launch in 2009.<sup>11</sup>

5G will deliver substantial improvements in the speed, latency and capacity of mobile networks in order to meet the current and forecast strong and ever-increasing demand for mobile services including new capabilities that will be enabled by this next generation of services.

Ensuring a pipeline of new spectrum is made available for 5G at a price that will not deter investment and progressing reviews of technical frameworks so that in-market spectrum is 'fit for 5G' is critical to meet forecast demand.

AMTA estimates that each mobile operator will need additional low band spectrum, around 100 MHz of mid band spectrum and an initial 1GHz of mmWave spectrum for 5G to reach its full potential and deliver on what it is designed to do.<sup>12</sup>

Recent research points to the potential of 5G for consumers<sup>13</sup> with a key finding that data usage for one in five users could reach more than 160GB per month on a 5G device by 2025. Other key findings were:

- Australian consumers expect 5G to provide relief from urban network congestion in the near term - *especially in Australia's bigger cities, where nearly half (47%) smartphone users report facing network issues in crowded areas* - and to create new home broadband choices.
- Current 4G usage patterns are not indicative of future usage behaviours. Video consumption is set to rise significantly with 5G. Australian consumers expect to not only stream video in higher resolutions but also use immersive video formats such as Augmented reality (AR) and Virtual reality (VR), resulting in an additional two hours of video content

<sup>7</sup> [Ericsson Mobility Report](#), Special Edition, World Economic Forum, January 2019

<sup>8</sup> Venture Beat 2019, [South Korea hits 1 million 5G subscribers in 69 days](#)

<sup>9</sup> Mobile World Live, 24 Sept 2019, [South Korea hits 3m 5G subs as base stations double](#)

<sup>10</sup> Mobile World Live, 24 Sept 2019, [South Korea hits 3m 5G subs as base stations double](#)

<sup>11</sup> Ericsson Mobility Report June 2019, [Mobile subscriptions outlook](#). The peak of LTE subscriptions is projected for 2022, at around 5.3 billion subscriptions, with the number declining slowly thereafter. However, LTE will remain the dominant mobile access technology by subscription for the foreseeable future, and it is projected to have nearly 5 billion subscriptions at the end of 2024.

<sup>12</sup> [AMTA submission](#) to ACMA's Five Year Spectrum Outlook, 16 May 2019.

<sup>13</sup> Ericsson [5G Consumer Potential](#) report, 2019

Inquiry into the deployment, adoption and application of 5G in Australia  
Submission 335

being watched weekly on mobile devices by users in the 5G future when they are out and about, including half an hour wearing AR glasses or VR headsets.

- Consumers are willing to pay a premium on 5G, with Australian smartphone users stating that they are willing to pay 20 percent more for fifth-generation services, and early adopters as much as 42 percent more.

**Mobile contribution to Australia’s economy and productivity**

Australia’s mobile sector is an integral part of the broader telecommunications industry. It is a significant component of the critical infrastructure that facilitates our ability to connect, work and transact.

The mobile industry directly contributed \$8.2 billion to our economy in 2017-18. The industry also directly employed almost 25 000 FTE people in 2017-18.

Indirectly, the industry contributed \$14.7 billion of economic activity, through contributions to revenue and employment in other sectors.<sup>14</sup>

And for every FTE role employed in the mobile industry there are 3.7 employed in flow-on industries.<sup>15</sup>

Beyond the total \$22.9 billion value added to GDP by mobile in 2017-18 and the employment contribution, mobile technologies, including 5G, continue to drive productivity throughout the Australian economy. While productivity has generally declined over the last decade, mobile technologies have boosted both labour and capital productivity as shown in the diagram below.

*iii Productivity benefits of mobile*



16

<sup>14</sup> Deloitte Access Economics, [Mobile Nation 2019: the 5G Future](#), chapter 2

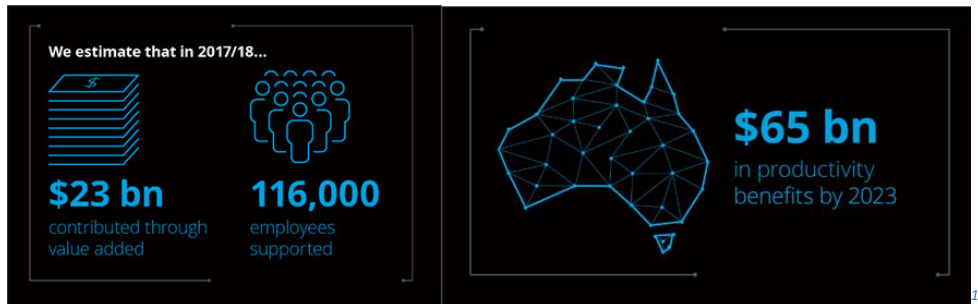
<sup>15</sup> Deloitte Access Economics, [Mobile Nation 2019: the 5G Future](#), chapter 2

<sup>16</sup> Deloitte Access Economics, [Mobile Nation 2019: the 5G Future](#), page 18

Inquiry into the deployment, adoption and application of 5G in Australia  
Submission 335

Deloitte Access Economics estimates that the productivity impact of mobile will be equivalent to \$2500 for every Australian by 2023. This amounts to a total of \$65 billion of additional GDP by 2023, or 3.1% increase in GDP.

*iv Forecast productivity benefits by 2023*



The Bureau of Communications and Arts Research also recognises that:

“Digital transformation has long held the promise of improving productivity outcomes, and the planned rollout of 5G internationally has been viewed as the next development continuing the critical enabling capacity of communications services across the economy.”<sup>18</sup>

The Bureau’s own research forecast a \$1300-2000 per capita benefit to GDP after the first decade of a 5G roll-out in Australia, noting that this is a conservative estimate that did not fully consider consumer and indirect benefits. The Bureau, however, concludes that 5G has the potential to transform the economy by “supporting, and even accelerating, Australia’s digital transformation”.<sup>19</sup>

The Bureau also notes in its findings that the Government’s stated 5G strategy,

“...details the actions that are to be taken to allow for the introduction of 5G in line with international developments, including:

- Making spectrum available in a timely manner
- Actively engaging in the international standardisation process
- Streamlining arrangements to allow mobile carriers to deploy infrastructure more quickly, and
- Reviewing existing telecommunications regulatory arrangements to ensure they are fit-for-purpose.<sup>20</sup>

In addition to the direct and indirect impacts on productivity and connectivity 5G will play a central role in an increasingly convergent and intelligent technology ecosystem that will drive the 4<sup>th</sup> Industrial Revolution.

<sup>17</sup> Deloitte Access Economics, [Mobile Nation 2019: the 5G Future](#), chapter 2

<sup>18</sup> Bureau of Communications and Arts Research, [Impacts of 5G on productivity and economic growth](#), April 2018

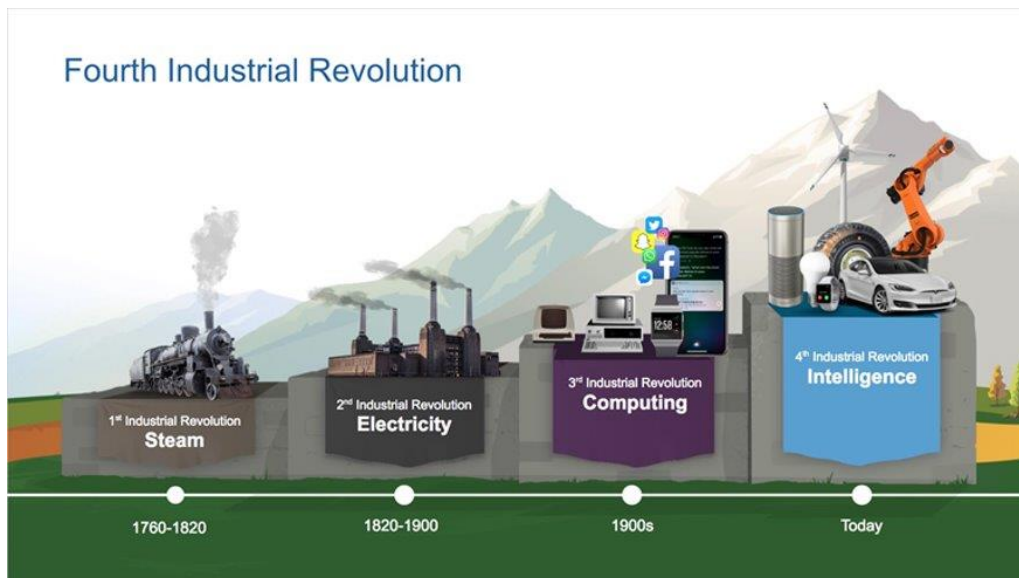
<sup>19</sup> Bureau of Communications and Arts Research, [Impacts of 5G on productivity and economic growth](#), April 2018, page 6

<sup>20</sup> Bureau of Communications and Arts Research, [Impacts of 5G on productivity and economic growth](#) April 2018

Inquiry into the deployment, adoption and application of 5G in Australia  
Submission 335

In addition to the direct and indirect impacts on productivity and connectivity 5G will play a central role in an increasingly convergent and intelligent technology ecosystem that will drive the 4<sup>th</sup> Industrial Revolution as illustrated below.

*v Industry 4.0*



We believe that 5G will enable the infrastructure to underpin Australia's transition to Industry 4.0 as businesses move to increase automation and become ever increasingly reliant on data. Australian businesses will increasingly rely on mobile derived data to drive innovation, develop new revenue streams, and streamline operations. In a 2018 survey of 550 Australian businesses by Deloitte Access Economics, 80% of enterprises reported that they had already implemented at least one emerging technology, or that they expect to implement one in the next 3 years.<sup>21</sup>

#### Mobile's global impact

A less conservative global forecast by Qualcomm predicts \$USD12.3 trillion worth of goods and services will be enabled by 5G by 2035, as illustrated in the graph below.<sup>22</sup> In the same timeframe, Qualcomm found that 22 million jobs could be supported globally with \$3.5 trillion revenue generated by the mobile supply chain alone. And the overall contribution of 5G to global GDP could be as high as \$3 trillion.<sup>23</sup>

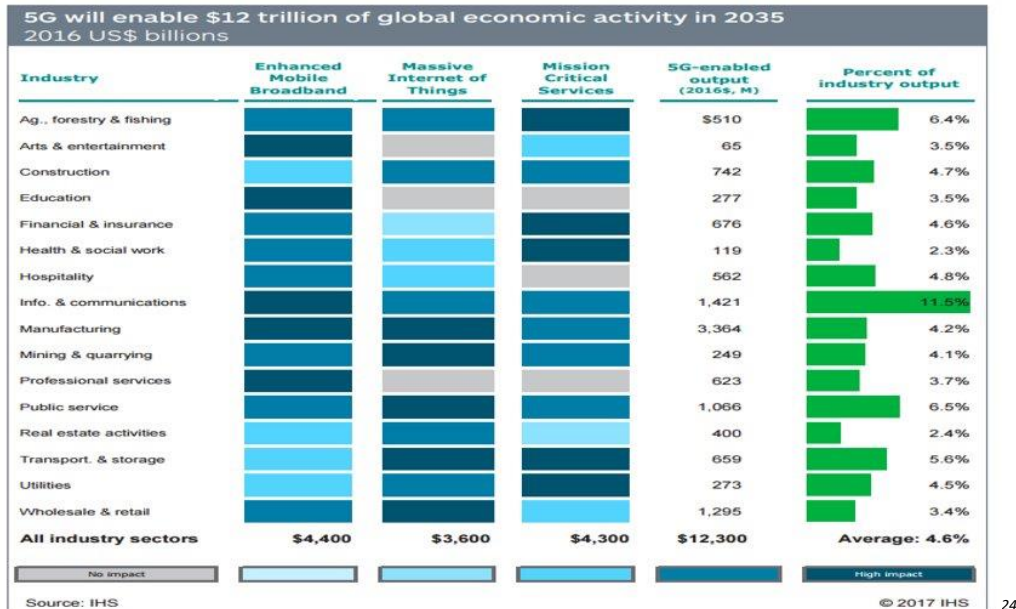
<sup>21</sup> Deloitte Access Economics, [Mobile Nation 2019: the 5G Future](#), chapter 4

<sup>22</sup> Qualcomm, [The 5G Economy](#), 2018

<sup>23</sup> Qualcomm, [The 5G Economy](#), 2018

Inquiry into the deployment, adoption and application of 5G in Australia  
Submission 335

vi 5G impact on global economic activity



Social benefits of mobile technology

Mobile technology also provides significant social benefits with 60% of Australians reporting that their smartphone has replaced 3 or more other devices or items, such as cameras, street directories, or calendars. And 94% of mobile users do not leave the house without taking their smartphone with them. Mobiles are now a multi-purpose utility tool that enable us to remain connected both at work and socially.

5G promises applications and use cases that will revolutionise the health, transport and education sectors. Mobile devices provide social connectivity as well as enable flexible work arrangements, promoting greater workforce participation.<sup>25</sup> Wearable mobile devices can help Australians track their health and reach fitness goals, and can also provide more critical health monitoring, enabling older Australians to live in their own homes for longer. Transport and logistics will be able to rely on IoT smart trackers to improve efficiency and autonomous vehicles will reduce costs as well as improve safety and accessibility for all road users. The NRMA notes that autonomous vehicles will deliver improved safety, decrease congestion, provide options for young, elderly and disabled people, as well as reduce pollution and emissions.<sup>26</sup>

<sup>24</sup> Qualcomm, [The 5G Economy](#), 2018, IHS Report 2017

<sup>25</sup> Deloitte Access Economics, [Mobile Nation 2019: the 5G Future](#), page 33

<sup>26</sup> NRMA, [Driverless cars: the benefits and what it means for the future of mobility](#)

Inquiry into the deployment, adoption and application of 5G in Australia  
Submission 335

### Growing demand for 5G drives continued investment in spectrum and networks

Some Australian mobile carriers began deploying 5G mobile services in 2019 and all have flagged their commitment to invest in 5G networks.<sup>27</sup> The deployment of 5G requires significant capital investment in both spectrum resources and network infrastructure to both densify and expand network capacity.

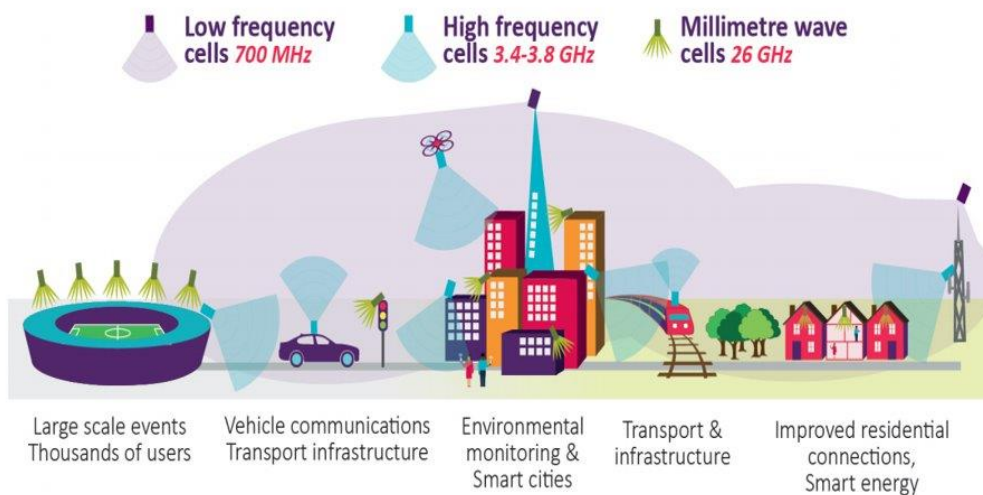
AMTA notes the Government's recognition that spectrum must be made available in a timely manner to enable innovation and productivity across industry sectors with a particular focus on enabling the early deployment of 5G mobile networks in Australia.<sup>28</sup>

Ensuring a pipeline of new spectrum is made available for 5G and progressing reviews of technical frameworks so that in-market spectrum is 'fit for 5G' is critical to meet forecast demand.

It will also ensure Australia remains at the forefront of rolling out the next generation of mobile technologies to enable transformative social and economic benefits across industries such as transport and logistics, health, agriculture, education, emergency services and the automotive industry,<sup>29</sup> as well as consumer benefits.

We welcome the Government's recent decision to bring the 26 GHz band to market, however it is critical that more spectrum for 5G is progressed to market in a timely manner (see *Spectrum required for 5G* - page 35). Note the diagram below refers to 'High frequency cells' which are more commonly referred to as mid-band/frequency in the Australian market.

vii *Spectrum frequencies for 5G*



<sup>27</sup> [Optus](#), [Telstra](#), [Vodafone](#) Hutchison Australia;

<sup>28</sup> Department of Communications and the Arts, [5G-Enabling the future economy](#), Directions paper, Oct 2017.

<sup>29</sup> AMTA Mobile Minute ['5G A connected future for Australia'](#) June 2017

Inquiry into the deployment, adoption and application of 5G in Australia  
Submission 335

### 3. What is 5G?

5G is about enhancing mobile broadband and connecting things to people and other things.

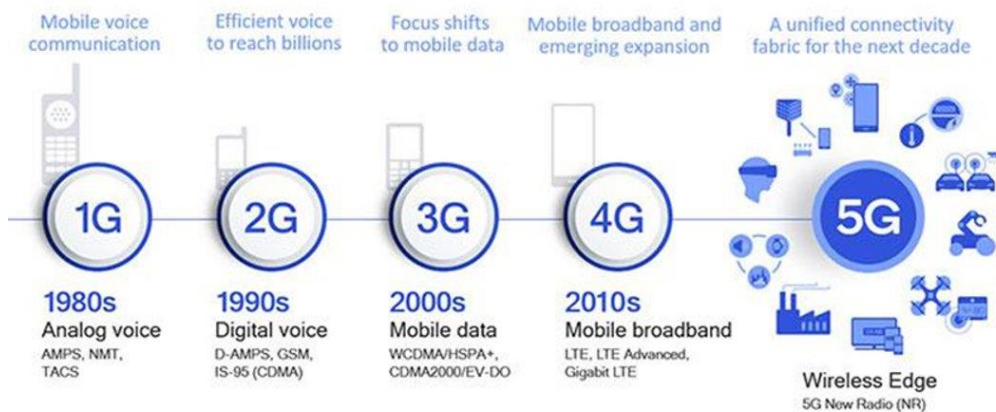
Previous generations of mobile networks, as illustrated in the diagram below, delivered predominantly voice and SMS in 2G, email and web-browsing in 3G, and higher-speed data and video streaming in 4G.

5G is focused on the both the requirements of people and industries - and is in effect the 1<sup>st</sup> generation of mobile for machines.

2019 has seen the initial deployment and availability of 5G services in many countries, including Australia, with widespread global availability expected by 2025.

The transition to 5G will not only deliver an enhanced mobile broadband experience to consumers but also deliver technology tools for enterprises and government services to move to Industry 4.0 and increased digitisation. 5G will deliver data rates up to 100 times faster than 4G, network latency will be lowered by a factor of 5, data volumes expanded by a factor of 1000, and battery life will be improved by a factor of 10. 5G networks will be more sustainable and will enable the use of remote devices for IoT applications on a much wider scale.

viii. Mobile generations - 1G to 5G



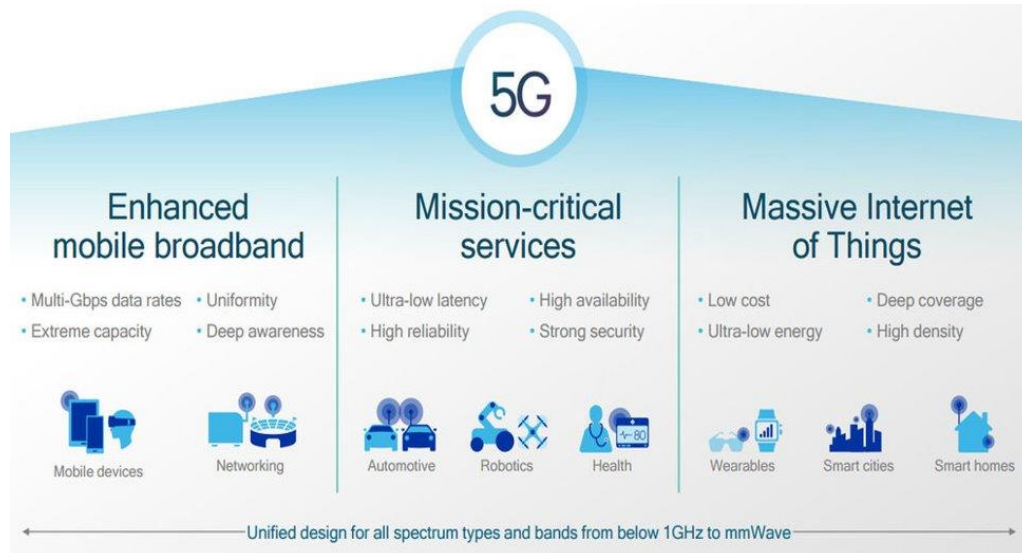
This [video](#)<sup>30</sup> from Ericsson explains 5G and its primary use cases – eMBB (enhanced mobile broadband), URLLC (ultra-reliable low latency communications) and MMTC (massive machine type communication).

<sup>30</sup> Ericsson, [This is 5G](#), Jan 16, 2019.



Inquiry into the deployment, adoption and application of 5G in Australia  
Submission 335

*ix 5G Primary Use Cases – eMBB, URLLC and MMTTC*



#### Enhanced mobile broadband (eMBB)

**Enhanced mobile broadband** will provide substantially faster data speeds as well as greater capacity for networks.

#### Ultra-reliable low latency communications (URLLC)

5G will also enable **ultra-reliable low latency communications** for mission critical applications, as illustrated in the diagram above. This has the potential to open up a new world where remote medical care, procedures and treatment are all possible.

#### Massive machine-type communication (MMTC)

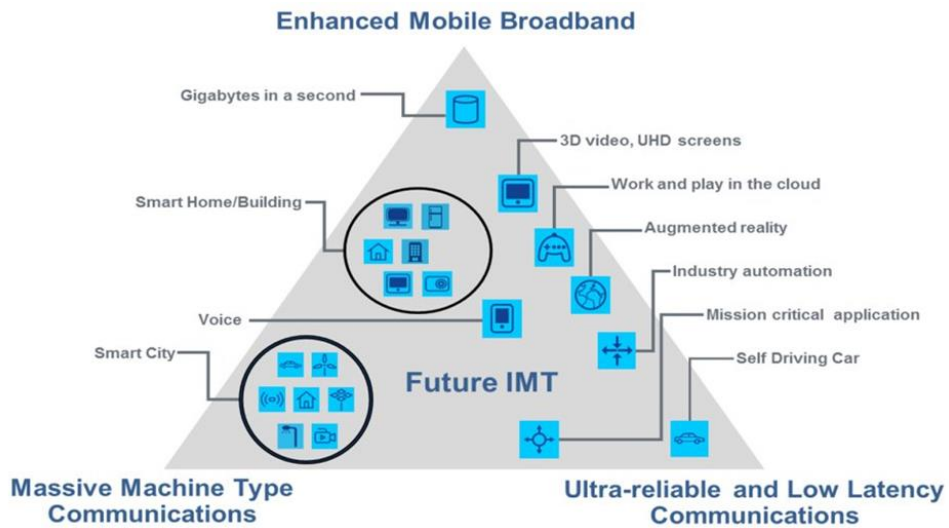
**Massive machine type communication** with 5G will enable a truly connected world, meeting the growing demand for data and enabling innovations that will build on the Internet of Things (IoT) to connect billions of devices without human intervention at a never before seen scale. As shown in the diagram above, this has the potential to revolutionise modern industrial processes and applications, including agriculture, manufacturing, transport and business communications.

The 5G ecosystem will also make use of the characteristic strengths of satellite services as part of the service delivery matrix, including in areas such as coverage extension (including for IoT), remote-area backhaul, content caching, multi-casting and additional resilience.

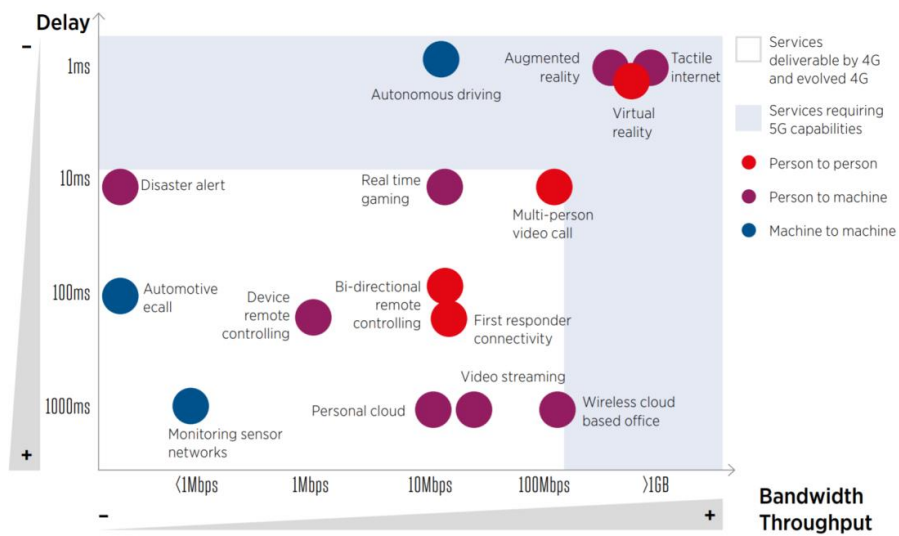
The prime benefits of 5G, compared to 4G, will be significantly faster speeds in data access, downloading and streaming content. 5G devices will have increased computing power and make use of lower latency, meaning that devices will enjoy virtually instantaneous connections to the network, as well as greater connectivity when on the move due to the use of antenna beam steering.

Inquiry into the deployment, adoption and application of 5G in Australia  
Submission 335

x The key benefits delivered by 5G – eMBB URLLC and mMTC



xi Services supported by 5G



31

As shown above, two of the key mobile technical characteristics are the speed of data transmission (the throughput) and the time taken for the data to be transmitted across the network (the delay – also termed latency). Many applications today are supported on existing 4G networks, however as requirements for lower latency and higher bandwidth increase so the demand for 5G will grow.

<sup>31</sup> [GSMA Intelligence](#)

Inquiry into the deployment, adoption and application of 5G in Australia  
Submission 335

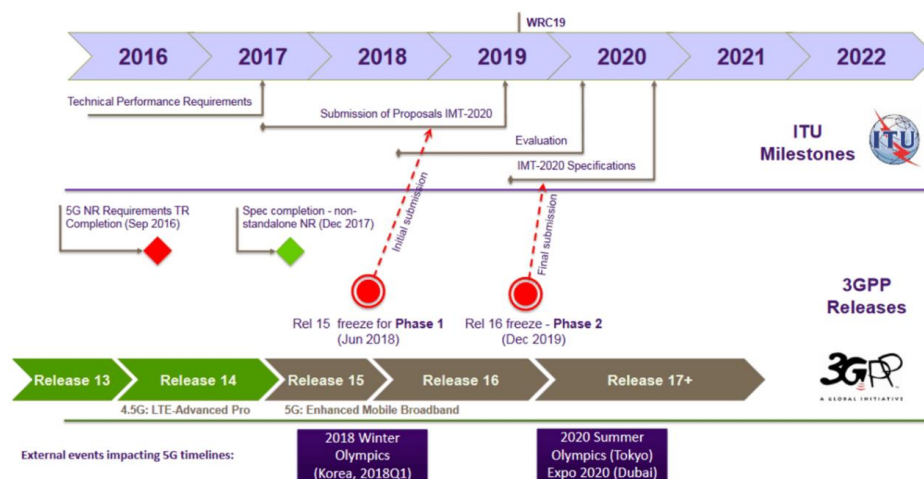
### 4G/5G ecosystem and development of technical standards

5G has been designed to meet the very large growth in data and connectivity of today's modern society, the internet of things (IoT) with billions of connected devices and tomorrow's innovations.

As with 4G, 5G mobile networks will complement the NBN, fixed wireless and satellite services, as an essential part of the nation's interconnected system of telecommunications networks. Mobile networks deliver a connectivity capability to consumers and businesses alike, while still relying on interconnection with fixed and microwave networks to provide the requisite backhaul and capacity.

The 3<sup>rd</sup> Generation Partnership Program (3GPP) has already developed the requisite initial technical standards for 5G. This includes several standards, including those for the wireless over the air interface and the network architecture which will be released in stages as per the diagram below. In parallel, the ITU will specify 5G requirements in 2020. Commercial deployments of 5G have been and will continue to be made while the Standards are in development.

*xii 5G technical standard releases (3GPP)*



32

5G networks will initially integrate with 4G networks to provide a continuous connection. A mobile network has two components: the radio access network (RAN) and the core network. The border between the RAN and Core network is blurred in 5G, with many of the components running as virtual network functions.

The RAN consists of various types of infrastructure including small cells, towers, masts and dedicated in-building and home systems that connect mobile users and devices to the main core network.

When transitioning from 4G to 5G, operators have two options, Non-standalone (NSA) and standalone (SA). At a high level, 5G NSA refers to a 5G network that requires a 4G one to work. 5G stand-alone (SA) is not linked to a 4G network and will provide support for a wider set of use cases.

Most operators are initially launching with NSA and it is expected they will evolve to SA over time.

<sup>32</sup> 3GPP website – [Specifications releases and freezes](#).

Inquiry into the deployment, adoption and application of 5G in Australia  
Submission 335

## 5G base stations

**Small cells** are mini base stations that will be a feature of 5G networks particularly where the new mmWave frequencies are used as the connection range is very short. Small cells will provide additional capacity and coverage over a small geographic area, utilising lower power than a traditional mobile phone base station and using smaller equipment. Small cells will therefore complement the macro network that provides wide area coverage. Small cells are already used in today's 4G networks in order to provide coverage and capacity in areas not adequately serviced by the macro network, for example, as illustrated in the images below.

*xiii Small cells*



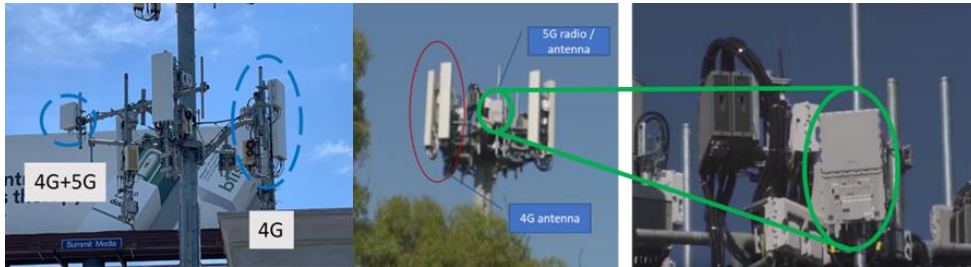
**Macro cells** (traditional base stations) will also continue to be used for 5G and will utilise MIMO (multiple input, multiple output) antennas that have multiple elements or connections to send and receive more data simultaneously. This enables more users to simultaneously connect to the network and maintain high throughput. Where MIMO antennas use very large numbers of antenna elements they are referred to as 'massive MIMO' although their actual physical size is similar, or smaller, to existing 3G and 4G base station antennas, as can be seen in the images below.

**Beam steering** is a technology that allows the massive MIMO base station antennas (pictured in the images below) to direct the radio signal to the users and devices rather than in all directions. The beam steering technology uses advanced signal processing algorithms to determine the best path for

Inquiry into the deployment, adoption and application of 5G in Australia  
Submission 335

the radio signal to reach the user. This increases efficiency as it reduces interference (unwanted radio signals). Greater efficiency, in turn, will mean lower power and therefore generally lower EME emissions than used today.

xiv MIMO 5G Antennas – smaller than 4G antennas

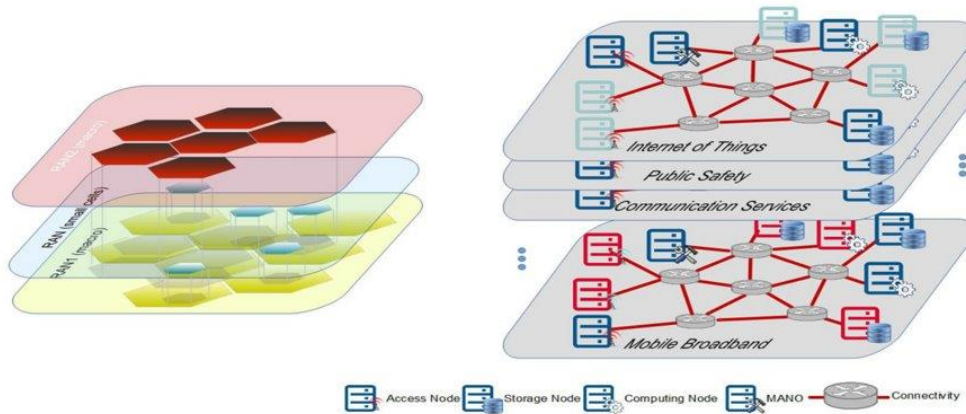


Network slicing – a key differentiator

**Network slicing** is a key differentiator that will be enhanced by 5G, as compared to 4G. Network slicing enables a smart way to segment the network for a particular industry, business or application. For example, emergency services could operate on a network ‘slice’ that is independent of other users, as illustrated below, thus avoiding congestion and providing dedicated services. Network slicing therefore has much potential for both enterprise and government services that require guaranteed connectivity, security and reliability.

xv Network slicing enables secure segmenting of 5G networks for various applications

Figure 16: Example of network slicing

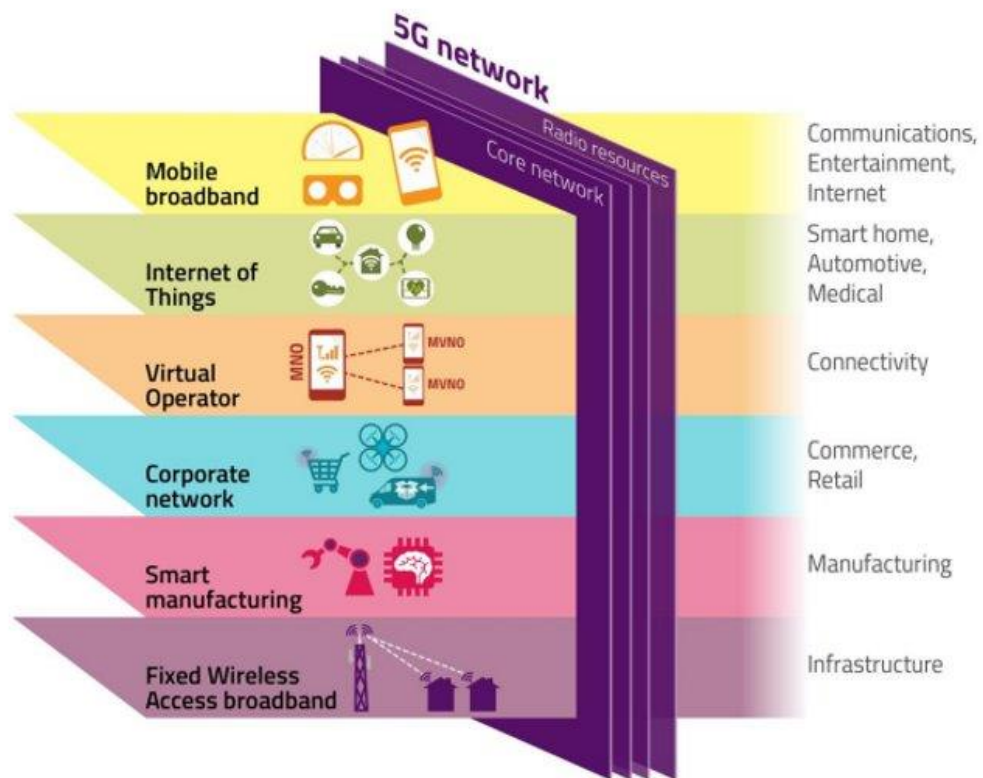


33

<sup>33</sup>GSMA: [Unlocking Commercial opportunities from 4G evolution to 5G](#)

Inquiry into the deployment, adoption and application of 5G in Australia  
Submission 335

*xvi Network slicing enables various uses in different network segments*



Inquiry into the deployment, adoption and application of 5G in Australia  
Submission 335

### 4. Health and safety

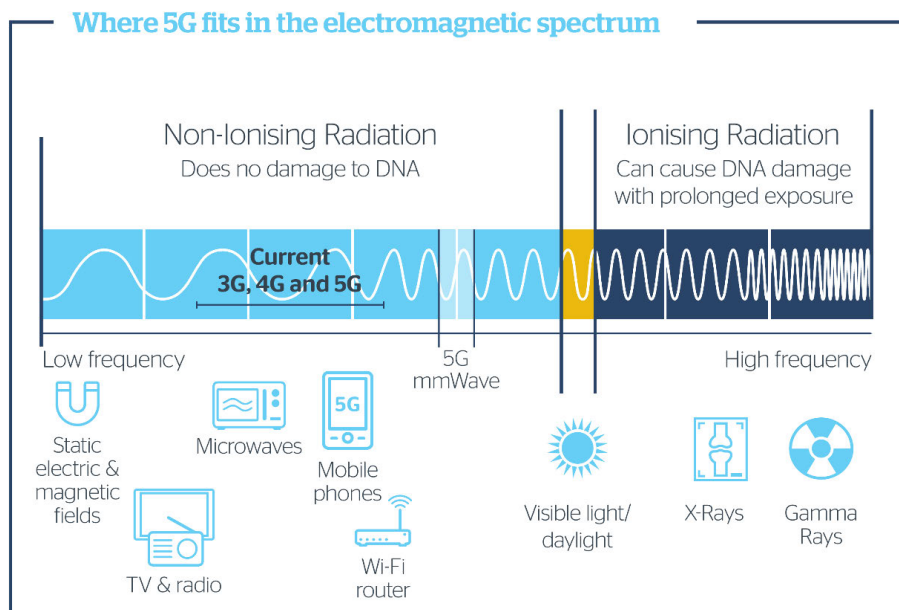
Industry is keenly aware that the deployment of 5G mobile networks has caused concern among some members of the community, both in Australia and overseas, in relation to health and safety.

Australian mobile network operators and equipment suppliers all adhere to and operate within the safety standards set by the regulator – the Australian Radiation Protection and Nuclear Safety Agency ([ARPANSA](#))<sup>34</sup> as endorsed by the World Health Organisation ([WHO](#))<sup>35</sup>.

Safety is paramount, both for our customers and employees, and industry complies with the requisite health and safety standards across all business operations to ensure we deliver safe, reliable networks, customer equipment and devices.

Electromagnetic frequencies used for 5G are part of the non-ionising range of radio frequency spectrum which has been extensively researched in terms of health and environmental impacts for decades. The diagram below (not to scale) illustrates where the spectrum used for 5G sits in the electromagnetic spectrum – well within the non-ionising range.

xvii 5G spectrum - where it fits



#### International safety limits for 5G

Comprehensive international guidelines exist governing exposure to radio waves including the frequencies proposed for 5G. The limits have been established by independent scientific organisations, such as the International Commission on Non-Ionizing Radiation Protection (ICNIRP),

<sup>34</sup> ARPANSA [website](#)

<sup>35</sup> WHO [website](#)

Inquiry into the deployment, adoption and application of 5G in Australia  
Submission 335

and include substantial margins of safety to protect all people including children and the elderly at all times.

These guidelines have been widely adopted in standards around the world, including in Australia by the Australian Radiation Protection and Nuclear Safety Agency (ARPANSA) and are endorsed by the World Health Organization (WHO).

In relation to 5G, ARPANSA note for their standard:<sup>36</sup>

*The operating frequencies of the 5G network are included within the limits set by the ARPANSA safety standard. 5G infrastructure and devices emitting RF EME are regulated by the Australian Communications and Media Authority (ACMA), and emissions are required to comply with the limits of the ARPANSA safety standard.*

#### How safety standards are set

In most Western countries, safety standards for human exposure to EME are based on the guidelines produced by [ICNIRP](#)<sup>37</sup>. ICNIRP is a special commission of the World Health Organisation and is made up of a wide range of independent scientists who are expert in the key areas that the guidelines address (i.e. the whole body of research on the health effects of EME). ICNIRP periodically undertakes an extensive review of the new EME research literature to determine that its guidelines remain current and appropriate for the protection from the known effects of EME on human health for all members of the public, including children. The guidelines apply across all RF applications at all frequencies in the range 100kHz-300GHz, including those frequencies used by 5G now, and into the foreseeable future.

ICNIRP's guidelines are in turn adopted by national and international agencies to implement in regulation within respective jurisdictions to ensure public and worker exposure to EME is within the guidelines. In Australia, the agency responsible for adopting these limits in a safety standard is ARPANSA, while the regulating bodies who implement the standard are the Australian Communications and Media Authority (ACMA) for general public exposure, and the Federal and State Work Health and Safety agencies for occupational exposures.

The current ICNIRP guidelines and Australia's own safety standard (the [ARPANSA standard](#)<sup>38</sup>) is based on guidelines first published by [ICNIRP in 1998](#)<sup>39</sup>. These guidelines were again reviewed in [2009](#)<sup>40</sup> when ICNIRP published an update having reviewed research up to that time and found the guidelines remained protective with a significant safety margin although some detailed adjustments may be warranted to provide greater scientific consistency with advances in EME measurement and calculation. Importantly, there was no new health research that suggested any changes to the limits were required.

---

<sup>36</sup> ARPANSA, [5G new generation mobile phone network and health](#)

<sup>37</sup> ICNIRP [website](#)

<sup>38</sup> ARPANSA 2002. Maximum exposure levels to radiofrequency fields – 3 kHz to 300 GHz, Radiation protection Series No. 3 (RPS3), available [here](#).

<sup>39</sup> ICNIRP 1998, ICNIRP Guidelines for limiting exposure to time varying electric, magnetic and electromagnetic fields (up to 300 GHz), Health Physics 74 (4):494-522; 1998, available [here](#).

<sup>40</sup> ICNIRP 2009, ICNIRP Statement on the "ICNIRP Guidelines for limiting exposure to time varying electric, magnetic and electromagnetic fields (up to 300 GHz)", Health Physics 97 (3):257-258, 2009, available [here](#).



Inquiry into the deployment, adoption and application of 5G in Australia  
Submission 335

ARPANSA also reviewed its own standards, making similar findings in their [2014 report](#)<sup>41</sup> that the limits continued to provide ample protection but could be improved with some detailed adjustments arising out of improved measurement and calculation techniques.

Following their 2009 update, ICNIRP conducted an exhaustive review of the scientific research up to the present time, and again examined their guidelines for any required adjustments, issuing a [draft new guideline in 2018](#)<sup>42</sup> for public and scientific review. ICNIRP presented the draft guidelines at the 2018 BioEM Conference and emphasised the thorough review of the science to support the new guidelines, the conservative nature of the guidelines and that they cover the existing and new mmWave 5G frequencies. The draft guidelines maintained a conservative approach and made no major departures from the previous guidelines even though a further 10 years of scientific study had been undertaken, indicating the basis for the original and current guideline remains sound and appropriate for protection of the public. ICNIRP have indicated the completed new guideline will be published in the peer reviewed scientific journal [Health Physics](#)<sup>43</sup> in the coming months.

#### Precautionary limits used in other countries

Some countries, including several European jurisdictions, choose to adopt precautionary limits which are more stringent than those recommended in the ICNIRP and Australian standards. These limits are adopted for political and social reasons and are not based on any new or different scientific basis. Therefore, these limits also provide no benefit for those countries' citizens in terms of safety from exposure to EME, although in several cases the limits have frustrated the deployment of mobile networks in those countries, and if retained, will also inhibit the deployment of 5G.

The WHO have warned against such precautionary limits, noting in their [framework document](#)<sup>44</sup> that

*'Large disparities between national limits and international guidelines can foster confusion for regulators and policy makers and increase public anxiety.'*

Further, the guidelines already incorporate significant precautionary or safety factors, as the [WHO note](#)<sup>45</sup>:

*'International guidelines and national safety standards for electromagnetic fields are developed on the basis of the current scientific knowledge to ensure that the fields humans encounter are not harmful to health. To compensate uncertainties in knowledge (due, for example, to experimental errors, extrapolation from animals to humans, or statistical uncertainty), large safety factors are incorporated into the exposure limits.'*

No further benefit to the public can therefore be gained from any additional precautionary limits but the societal benefit of mobile technology may be lost.

For example, in Switzerland, an Ordinance relating to Protection from Non-Ionising Radiation (ONIR) specifies a precautionary 'Installation Limit' (i.e. applying to installed base stations only) about 100 times below the international exposure limit values. Swiss authorities acknowledge these limits are

<sup>41</sup> Report by the ARPANSA Radiofrequency Expert Panel on Review of Radiofrequency Health Effects Research – Scientific Literature 2000–2012 (ARPANSA 2014) available [here](#).

<sup>42</sup> <https://www.icnirp.org/en/activities/public-consultation/consultation-1.html>

<sup>43</sup> <https://journals.lww.com/health-physics/pages/default.aspx>

<sup>44</sup> WHO 2006, Framework for developing health-based EMF standards, available [here](#).

<sup>45</sup> WHO, [What is EMF](#)

Inquiry into the deployment, adoption and application of 5G in Australia  
Submission 335

not suggested by the established EME science, noting that for the ICNIRP limits, ‘...if these limits are complied with, none of the scientifically accepted negative effects on our health can occur.’

Similarly, in Brussels (Belgium), a limit of about 400 times less than the ICNIRP guidelines has been imposed on top of the international limits. It was not possible to deploy 4G in Brussels under these restrictive limits and in 2014 the Brussels Environment Minister relaxed the limits (to about 100 times less than ICNIRP) to allow 4G to proceed although much delayed. A 2018 report ([PDF](#))<sup>46</sup> by the Federal Belgian Institute for Postal Services and Telecommunications (BIPT) concluded that the present Brussels limits negatively impact current 4G indoor coverage and would need to be at least relaxed by a factor of two to allow the deployment of 5G. The commercial deployment of 5G is consequently currently on hold.

The conclusion from the experience in these two countries alone is that there is a very significant loss of benefit in economic and social productivity that 4G and 5G services can bring, with no benefit to the population in terms of health and safety from the unnecessarily low limits their governments have imposed.<sup>47</sup>

#### Health effects research for 5G

The electromagnetic frequencies used for 5G are part of the radio frequency spectrum which has been extensively researched in terms of health impacts for decades. Over 50 years of scientific research has already been conducted into the possible health effects of the radio signals used for mobile phones, base stations and other wireless services including frequencies planned for 5G and mmWave exposures.

In relation to radio frequency exposures and wireless technology and health, including frequencies used for 5G, the World Health Organization (WHO) states<sup>48</sup>:

*“Despite extensive research, to date there is no evidence to conclude that exposure to low level electromagnetic fields is harmful to human health.”*

ARPANSA states<sup>49</sup>:

*“This [5G] network currently runs on radio waves similar to those used in the current 4G network, and in the future will use radio waves with higher frequencies. It is important to note that higher frequencies does not mean higher or more intense exposure. Higher frequency radio waves are already used in security screening units at airports, police radar guns to check speed, remote sensors and in medicine and these uses have been thoroughly tested and found to have no negative impacts on human health.”*

<sup>46</sup> BIPT 2018, Study of 12 September 2018 on the impact of the radiation standards in Brussels on the deployment of mobile networks, available at [https://www.ibpt.be/public/files/en/22619/Study\\_impact\\_radiation\\_standards\\_Brussels\\_deployment\\_mobile\\_networks.pdf](https://www.ibpt.be/public/files/en/22619/Study_impact_radiation_standards_Brussels_deployment_mobile_networks.pdf)

<sup>47</sup> A PwC [analysis](#) conducted on behalf of the Swiss operators compared the deployment costs in Switzerland to those of Germany, France, Italy and Austria (all of which are neighbouring countries). Costs were estimated to be 40-110% higher with about one third of the extra costs linked to complying with the restrictive installation limit values.

<sup>48</sup> World Health Organization: [What are ElectroMagnetic Fields](#)

<sup>49</sup> ARPANSA. 3 June 2019. [‘Misinformation about Australia’s 5G network’](#).

Inquiry into the deployment, adoption and application of 5G in Australia  
Submission 335

ARPANSA also states:

*“ARPANSA and the World Health Organization (WHO) are not aware of any well-conducted scientific investigations where health symptoms were confirmed as a result of radio wave exposure in the everyday environment.”, and in regards to 5G, “... there are no established health effects from the radio waves that the 5G network uses.”*

Australia’s leading academic research centre in this area is the Australian Electromagnetic Bioeffects Research Centre ([ACEBR](#)), a federally funded Centre of Research Excellence, headquartered at the University of Wollongong. In their recent [fact sheet](#)<sup>50</sup>, ACEBR note:

*“Extensive research has been conducted on the 5G frequencies soon to be introduced, including specifically on mobile phone applications. For future 5G frequencies, there has been extensive research on other applications using these frequencies (for example, radar and military applications) which have been using these frequencies for many decades at power levels far higher than those used in mobile telecommunications. No indication of any health impacts from exposures at the intensities related to mobile communications have been observed.”*

International authorities have also considered the potential health effects of 5G technology. In a recent [statement](#)<sup>51</sup> from the UK health authority, Public Health England, PHE note that:

*“Exposure to radio waves is not new and health-related research has been conducted on this topic over several decades.”*

And although in future 5G may be implemented at higher frequencies (mmWave) than used for current technologies:

*“... the biophysical mechanisms that govern the interaction between radio waves and body tissues are well understood at higher frequencies and are the basis of the present ICNIRP restrictions. The main change in using higher frequencies is that there is less penetration of radio waves into body tissues and absorption of the radio energy, and any consequent heating, becomes more confined to the body surface.”*

PHE conclude:

*“It is possible that there may be a small increase in overall exposure to radio waves when 5G is added to an existing network or in a new area. However, the overall exposure is expected to remain low relative to guidelines and, as such, there should be no consequences for public health.”*

In Australia, preliminary testing on Australian 5G networks conducted with commercial devices in real-world settings shows levels similar to 3G, 4G and Wi-Fi. In many cases, levels from 5G network base stations measured in the street and in homes and apartments were around 1,000 times below the safety limits.<sup>52</sup>

### 5G, small cells and health

A key feature of the infrastructure required to deliver future 5G services, and currently already a feature of 4G deployments, is the use of small cells. Small cells operate at lower power than a traditional mobile phone base station and use smaller equipment. Small cells can be deployed with

<sup>50</sup> ACEBR Nov 2018, 5G Wireless Technology Fact Sheet, available [here](#).

<sup>51</sup> Public Health England, 2019 available at <https://www.gov.uk/government/publications/5g-technologies-radio-waves-and-health/5g-technologies-radio-waves-and-health>

<sup>52</sup> Telstra Exchange, July 2019, [5 Surveys of 5G show EME levels well below safety limits](#).

Inquiry into the deployment, adoption and application of 5G in Australia  
Submission 335

minimal visual impact as they use smaller antennas, smaller equipment and can be co-located on existing infrastructure such as electricity and light poles.

Some members of the public have expressed concern that this new type of deployment will bring EME sources closer to their homes and workplaces and therefore increase their exposure to EME.

The deployment of small cells, like all mobile network infrastructure, must comply with strict science-based safety standards set by ARPANSA. These limits protect the community, including children and the elderly, 24 hours a day. The environmental EME levels from small cells, the levels typically experienced by the public and which are many times below the safety standards, are reported in an ARPANSA environmental report, and are available at [www.rfnsa.com.au](http://www.rfnsa.com.au).

#### Working safely with EME

In a world-leading initiative, in partnership with the industry, AMTA has developed an RF safety program, which is based on a publicly accessible database of all Carriers' mobile network radiocommunications facilities called the Radio Frequency National Site Archive ([RFNSA](http://RFNSA))<sup>53</sup>. The website documents the details of all Australian mobile network base stations, including environmental EME reports (the ARPANSA report) for public information, site safety documentation for safe work on site, site locations, carrier contact details for existing sites and community consultation information for new sites, including 5G. The database is also used by the Carriers to assist them meet their regulatory obligations for EME safety under their licence conditions<sup>54</sup> with the ACMA, and also their regulatory obligations under the industry code for mobile base station deployment.

---

<sup>53</sup> RFNSA [website](http://www.rfnsa.com.au)

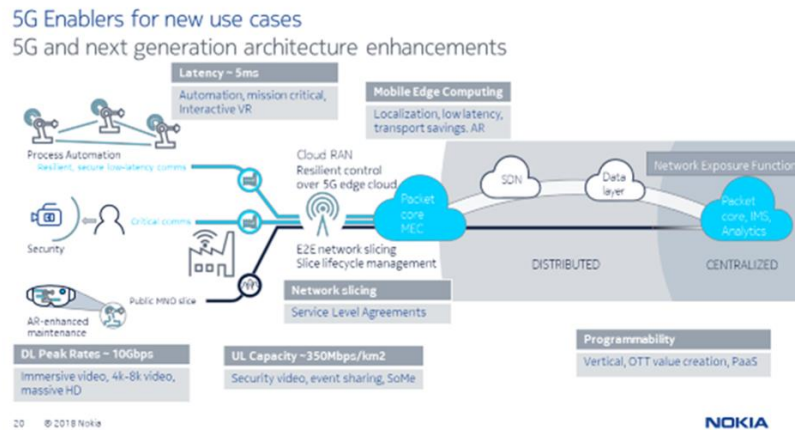
<sup>54</sup> Radiocommunications Licence Conditions (Apparatus Licence) Determination 2015.

Inquiry into the deployment, adoption and application of 5G in Australia  
Submission 335

### 5. 5G Technologies and use cases

5G’s key capabilities - low latency, increased speed and more efficient, stable and secure networks and network slicing – will either significantly enhance or make possible a broad range of use cases for enterprise and government, as illustrated in the diagram below.

*xviii 5G enablers for new use cases*

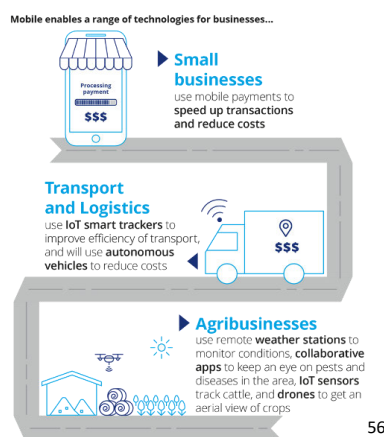


Provided below are use cases that explain 5G’s potential for both Government and enterprise.

#### 5G will drive innovation in enterprise

A survey of 550 businesses by Deloitte in 2018 found that 80% of them have already implemented, or expect to implement in the next 3 years, at least one emerging technology in their enterprise.<sup>55</sup> This willingness to implement emerging technology by Australia’s business sector bodes well for early adoption of 5G technology by small to medium businesses.

*xix Emerging technologies for businesses*



<sup>55</sup> Deloitte Access Economics, [Mobile Nation 2019: the 5G Future](#), page 24

<sup>56</sup> Deloitte Access Economics, [Mobile Nation 2019: the 5G Future](#), page 23

Inquiry into the deployment, adoption and application of 5G in Australia  
Submission 335

### Financial services

The Commonwealth Bank (CBA) has partnered with Telstra and Ericsson to trial 5G edge computing across its network of branches. This will reduce the need for IT infrastructure at individual branch locations, enabling branches to set up more easily, responding to local needs.

“5G has the potential to transform the financial services sector and deliver innovation in a faster and more efficient manner,” said Nikos Katinakis, Telstra’s Group Executive, Networks & IT.<sup>57</sup>

“5G edge computing is all about bringing the network closer to the user or application. For financial institutions like Commonwealth Bank, it will help to enhance existing banking applications as well as deliver new use cases such as artificial intelligence, all supported by a range of software defined networking solutions,” explained Mr Katinakis.<sup>58</sup>

### Factories of the future

This [video](#) from Nokia shows how 5G will transform manufacturing.

### Precision drives decisions in agriculture

The high-level global challenge in agriculture is to increase food production by 70% to meet projected population levels (9.6 billion) by 2050.

Related challenges such as falling productivity, limited land supply, climate change, water supply, energy supply/cost and labour/skills shortages – all point to a critical role for technology in so-called smart farming or precision agriculture.

5G will be central to precision agriculture with applications servicing real time data for on-farm needs such as monitoring, analysis and control of crops/stock, water/soil, pathogens/disease, planting/harvest cycles, vehicles safety maintenance (incl. drones), and power usage.

In addition, linking the smart farm to real-time data sources off-farm such as market trends and prices, options for transport, freight or logistics as well as climate conditions and weather forecasts further expand the role of technology and data in driving higher productivity, sustainability and international competitiveness.

For example, Australian start-up, [Smart Paddock](#)<sup>59</sup> is using IoT to track and monitor animal related health issues in cattle herds to identify animals that are sick (or especially healthy). As around 450,000 cattle die prematurely in herds across Australia each year – amounting to around 7 percent of cows in the country, or more than \$700 million in lost revenue - this data helps to identify the causes of illness, and to reduce spread of disease within a herd, so that those premature death numbers can head as close to zero as possible.

Australia’s agricultural sector, represented by 15 Rural Research and Development Corporations, have estimated that precision digital-driven agriculture could lift the gross value of production by 25% above 2014/15 levels. The role of 5G and Internet of Things (IoT) will be central to this degree of enhancement in future agricultural output and efficiency.

5G networks also have the potential to enable dynamic, end-to-end food traceability. Embedded IoT sensors can trace food from farm to table. The food supply chain will be able to further modernize

<sup>57</sup> Telstra, CBA and Ericsson to trial 5G for the banking sector, [media release](#), 25 Feb 2019.

<sup>58</sup> Telstra, CBA and Ericsson to trial 5G for the banking sector, [media release](#), 25 Feb 2019.

<sup>59</sup> Telstra, Oct 2018, [IoT in focus: transforming the agriculture industry](#).

Inquiry into the deployment, adoption and application of 5G in Australia  
Submission 335

its practices and processes, becoming super-interconnected and better equipped to leverage technologies like blockchain and AI. This can increase the accountability of food businesses in the event of foodborne illness outbreaks, help organizations better mitigate food safety risk and streamline costs for companies and, in turn, benefit consumers.<sup>60</sup>

The combination of mobility and IoT provided by the 4G/5G ecosystem is key to smart farming just as it is for smart cities/homes.

### Transforming transport and logistics

IoT smart trackers to improve efficiency and autonomous vehicles will reduce costs as well as improve safety and accessibility for all road users. The NRMA notes that autonomous vehicles will deliver improved safety, decrease congestion, provide options for young, elderly and disabled people, as well as reduce pollution and emissions.<sup>61</sup>

Autonomous vehicles are being used now with 4G, particularly in mining and agriculture, but 5G and ultra-reliable low latency communications will greatly enhance the use of autonomous vehicles across industries and the general community.

Telstra, Ericsson and Lexus have recently trialled Vehicle-to-Everything (V2X) technology over Telstra's 4G network in Victoria.<sup>62</sup> V2X technology lets cars talk to the environment around them using both short range communications and Telstra's 4G network. The 'environment' around the car could be other cars and trucks, traffic lights, roadworks or even pedestrians and cyclists. The use and development of V2X, over 4G and 5G networks will help create clever transport systems to support more efficient use of roads, better traffic management (i.e. reduced congestion) and, in the future, coordinated and safer driverless vehicle operation.

4G and IoT have already delivered benefits to the transport and logistics industry.

The transport and logistics industries are using mobile enabled IoT systems to improve tracking, cut costs and deliver a more transparent, reliable service for customers. DHL's Smartsensor technology monitors temperature and humidity, while also indicating shock and light events that help ensure goods are not damaged during transportation.<sup>63</sup>

Similarly, Linfox's advanced fleet monitoring system, FoxTrax, uses precise GPS tracking and real-time communication between drivers and control room staff to improve safety, security and operational efficiency.<sup>64</sup>

In the public sector, Transport for NSW tracking data provides customers using the TripView app with live timetabling and capacity data to ensure a comfortable commute on public transport.<sup>65</sup>

5G, by providing ultra-reliable low latency communications will enhance the ability to track vehicles and goods being transported in real time and provide live information to business operators and customers alike.

---

<sup>60</sup> RT Insights, July 2019, [How 5G could improve food traceability](#).

<sup>61</sup> NRMA, [Driverless cars: the benefits and what it means for the future of mobility](#)

<sup>62</sup> Telstra, June 2019, [Making our roads safer with connected vehicles](#).

<sup>63</sup> Deloitte Access Economics, [Mobile Nation 2019: the 5G Future](#) page 26

<sup>64</sup> Deloitte Access Economics, [Mobile Nation 2019: the 5G Future](#), page 26

<sup>65</sup> Deloitte Access Economics, [Mobile Nation 2019: the 5G Future](#), page 26

Inquiry into the deployment, adoption and application of 5G in Australia  
Submission 335

## Government

### More time for patients

Nokia has provided a solution to Oulu University Hospital that allows doctors and staff to focus their time on providing care for patients by automating many routine tasks that can be better performed by robots. This [video](#) shows how it is working.<sup>66</sup>

Another [video](#) from Nokia illustrates how radiology can be performed remotely, so that the specialist can actually review the patient's scan as it is happening. This eliminates the need to wait for the radiologist to review each patient's case and can enable 24/7 support from the specialist. 5G networks can enable technology like this that has the potential to improve accessibility to expert healthcare in Australia's regions.<sup>67</sup>

### Emergency services – responding in real time with 5G

In Portugal, Ericsson has partnered with network operator, Altice to [demonstrate](#) how 5G technology can optimise and co-ordinate an emergency services response to a critical incident in real-time. As pictured below, first responders from several agencies were equipped with body kit, comprising of cameras and sensors connected via a 5G test network to a command centre, as they responded to a staged incident involving a driver trapped in a vehicle. Connected drones provided an aerial view. The extremely low latency of the 5G video allowed instant feedback from the scene, enabling the command centre to co-ordinate and monitor first responders and their actions.<sup>68</sup>

*xx Ericsson live demonstration in Portugal*



### The connected ambulance – real time interaction

In a collaboration between Ericsson, Kings College and British Telecom, this [connected ambulance](#) shows how a doctor, paramedic and patient can interact in real time via 5G to expedite diagnosis.<sup>69</sup>

With 4G, near real time communication was via voice and video. 5G brings the capability to touch and move in real time over the network.

<sup>66</sup> Nokia, [More time for people – Oulu University Hospital](#), Dec 2018

<sup>67</sup> Nokia, [See the future in action – remote radiology](#), May 2019

<sup>68</sup> Ericsson News, Sept 2019, [5G emergency response abilities highlighted by Altice and Ericsson](#)

<sup>69</sup> Ericsson North America, [Real time interaction with 5G: mobile ultrasound](#) (the connected ambulance), March 4, 2019.



Inquiry into the deployment, adoption and application of 5G in Australia  
Submission 335

In this demonstration a patient is in an ambulance with a suspected blood clot on their way to hospital.

The paramedic adds a 5G data channel to the VoLTE call to connect to the Doctor at the emergency room.

Acting as a surrogate arm for the Doctor, the paramedic uses a haptic glove, controlled in real-time by the Doctor, to undertake an ultrasound examination.

By the time the patient arrives at the hospital diagnosis is complete and next treatment steps are clear.

The connected ambulance has the potential to save lives and improve both the efficiency and cost of healthcare diagnosis protocol.

#### Smarter cities

5G will enable smarter cities, homes, schools and communities. The technology will enable autonomous vehicles and smart parking meters. IoT sensors can be used to enable smart lighting of public spaces, guide emergency responses in crowded areas, monitor air quality and traffic patterns. Maintenance drones can be deployed to repair infrastructure and restore public services without endangering workers.<sup>70</sup>

The NSW Government is working collaboratively with 8 local councils, the Commonwealth, industry and community stakeholders to ensure that the Western Sydney City Deal delivers a 5G ready Western Parkland City.

This [video](#) shows how the Western Parkland City will deliver innovative digital connectivity across education, transport, the airport, manufacturing and an agribusiness precinct that will connect farmers to air transport and create a truly smart city.

---

<sup>70</sup> Ericsson, [5G will be the platform for tomorrow's smart cities](#), Aug 28, 2018

Inquiry into the deployment, adoption and application of 5G in Australia  
Submission 335

## 6. How can Government pave the way for a smooth 5G evolution?

### Government and industry partnership

The Government has already indicated its strong support for the deployment of 5G networks by establishing the 5G Industry Working Group (the Working Group) – a partnership between Government and industry to enable a co-ordinated approach to the efficient deployment of infrastructure to ensure the benefits of 5G technology are fully realised.

The Terms of Reference of the Working Group indicate how such a partnership will work:

*Having regard to the transformative potential of 5G networks for the Australian economy and how Australians live, and the facilitative role that communications technology plays in driving productivity and innovation, the working group's role is to:*

*identify enablers and barriers to the deployment and effective use of 5G in Australia, including at the sector and industry level;*

*examine how the Commonwealth regulatory settings in sectors, including but not limited to communications, can be optimised for 5G networks and technologies;*

*provide a platform for collaboration across Government and industry on 5G matters;*

*engage, with the input of subject matter experts, in ongoing strategic dialogue about 5G matters.*

AMTA and Communications Alliance have both been active participants in the Working Group, to date, and we see potential for the Working Group to guide the Government's stated 5G direction including a specific role in building awareness of the economic and social benefits of 5G across Government portfolios. We also see a role for the Working Group in relation to building awareness among the small business community and with consumers. 5G has the potential to revolutionise the way Australians live and work, but we need to ensure that businesses and communities are aware of the opportunities that exist so that these are not missed. We believe an awareness campaign similar to those that have supported the roll-out of the NBN could be very helpful in both allaying community concerns about health and safety as well as ensure that the positive impact of 5G is understood, enabled and shared.

### Promoting industry and public awareness of 5G

Globally governments are very focussed on the evolution of 5G including initiatives to support local industry via timely allocation of suitable spectrum and rules that allow efficient network infrastructure deployment. The Australian Government is also focussed in these areas as outlined in the 5G Directions Paper<sup>71</sup> and by the establishment of the Working Group.

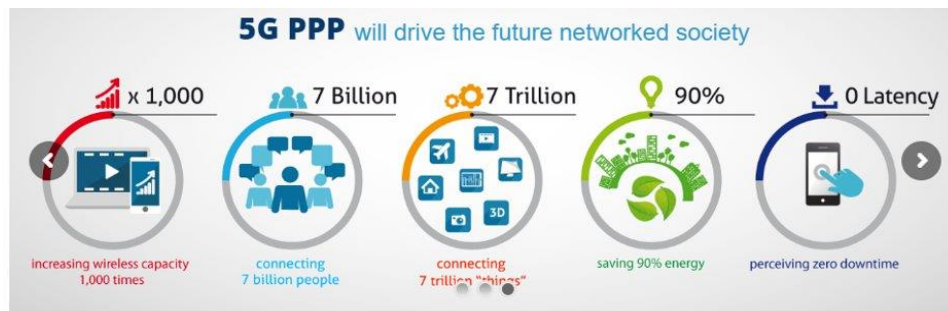
In addition, the role of government in some jurisdictions extends to direct and/or joint funding of 5G programs ranging from test beds to public awareness and education campaigns.

For example, the European Commission has funded a multi-billion Euro Public Private Partnership (PPP) which is in its 3<sup>rd</sup> phase, aiming to secure 5G leadership position for Europe.

<sup>71</sup> Department of Communications and the Arts, 2017, [5G Directions Paper](#).

Inquiry into the deployment, adoption and application of 5G in Australia  
Submission 335

xxi EU's 5G Public Private Partnership



Similarly, the UK Government has contributed substantial resources to support the evolution of 5G. The UK regulator, OfCom is working with government and industry on a strategy “*Enabling 5G in the UK*”.<sup>72</sup>

In the USA the President and Chairman of the FCC have several policies in play, most notably, the 5G FAST Plan.<sup>73</sup>

xxii The USA's FAST Plan

## The FCC's 5G FAST Plan



Under Chairman Pai, the FCC is pursuing a comprehensive strategy to Facilitate America's Superiority in 5G Technology (the 5G FAST Plan). The Chairman's strategy includes three key components: (1) pushing more spectrum into the marketplace; (2) updating infrastructure policy; and (3) modernizing outdated regulations.

***"Forward-thinking spectrum policy, modern infrastructure policy, and market-based network regulation form the heart of our strategy for realizing the promise of the 5G future." – FCC Chairman Pai***

As a leading early adopter of mobile technology, the Australian mobile industry is at the forefront of 5G deployment with the opportunity to further develop a national leadership position. This opportunity will need support from the Australian Government, including strategic engagement with industries as well as State and local Governments. The Inquiry should consider how to best enable this level of collaboration and its focus, including learnings from other countries where public 5G programs have been implemented.

### 5G needs a fit for purpose regulatory framework

The deployment of 5G networks requires significant investment by industry in both physical infrastructure and spectrum resources. It is critical that Government supports and encourages this

<sup>72</sup> OfCom, March 2018, [Enabling 5G in the UK](#).

<sup>73</sup> FCC, [5G Fast Plan](#).

Inquiry into the deployment, adoption and application of 5G in Australia  
Submission 335

investment with a policy approach that streamlines regulation, removes regulatory barriers and makes the necessary reforms to the existing legislative and regulatory framework.

Fit for purpose deployment related policy and regulatory settings will be critical inputs to support the implementation of 5G. Timely and efficient deployment of infrastructure requires a flexible regulatory framework as well as thoughtful consideration and timely decision-making by policy makers to ensure that the benefits of 5G are fully realised.

Industry is already building the first 5G networks, with critical investment decisions being made now and in the very near future. It is imperative that there is certainty around the ability to deploy the requisite infrastructure to provide certainty for the associated long-term investment decision-making processes.

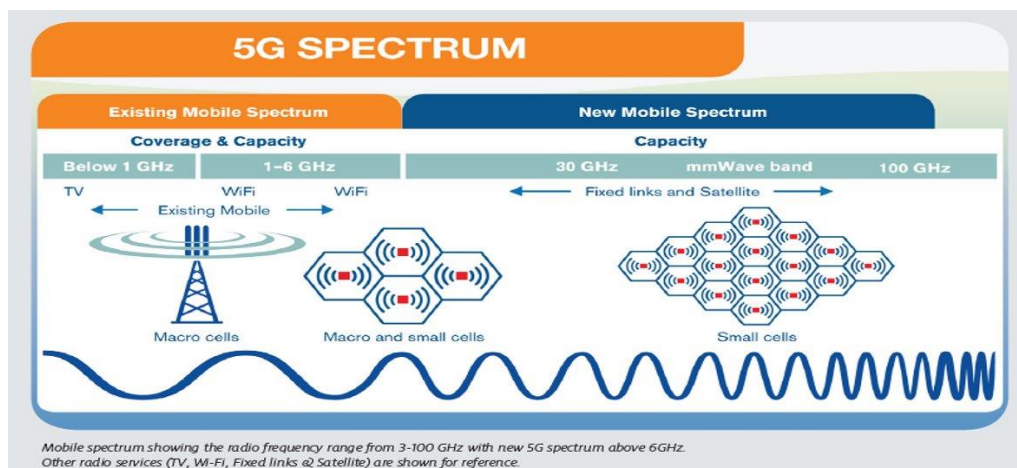
### Spectrum required for 5G

In Australia 5G is initially utilising spectrum in the bands below 6 GHz as well as additional spectrum in the mmWave bands in the 26-28 GHz range.

We therefore welcome the Government's recent decision to bring the 26 GHz band to market, however it is critical that more spectrum for 5G is progressed to market in a timely manner.

The mmWave spectrum will supply the additional spectrum that 5G networks require to deliver ultra-high-speed capacity. Further work is needed in relation to existing bands to enable the deployment of 5G services, including reallocation of low band spectrum and licence reform in mid band spectrum.<sup>74</sup>

*xxiii Spectrum ranges for 5G*



AMTA estimates that each mobile operator will initially require additional low band spectrum and around 100 MHz of mid band spectrum and an initial 1GHz of mmWave spectrum for 5G to reach its full potential and deliver on what it is designed to do.<sup>75</sup>

<sup>74</sup> Includes, 2.1 GHz, 2.3 GHz and 2.6 GHz bands

<sup>75</sup> [AMTA submission](#) to ACMA's Five Year Spectrum Outlook, 16 May 2019

Inquiry into the deployment, adoption and application of 5G in Australia  
Submission 335

Industry notes the Government's recognition that spectrum must be made available in a timely manner to enable innovation and productivity across industry sectors with a particular focus on enabling the early deployment of 5G mobile networks in Australia.<sup>17</sup>

We strongly believe this is needed to ensure ongoing demand for all types of services can be met and Australia remains at the forefront of rolling out the next generation of mobile technologies to enable transformative social and economic benefits across industries such as transport and logistics, health, education and the automotive industry,<sup>18</sup> as well as consumer benefits.

5G has been designed to operate in the *operating bands* defined in 3GPP TS 38.104<sup>76</sup>. It is important that the spectrum allocations in Australia are aligned with the global standards. There is also the possibility to support 5G on spectrum currently utilised for 3G and 4G, potentially through a software upgrade to existing base stations.

The mobile industry notes the ACMA's spectrum work plan and supports the continuing work to bring additional spectrum to market. We also support increased focus on the timely reallocation of low band spectrum to enable the deployment of national 5G networks, especially in regional areas. We note the potential for use of spectrum in the 600 MHz band in the longer term.

We also support the work to optimise the 3.4 GHz band and the progression of planning work in relation to the 3.8 GHz (3700-4200 MHz) band.

The Associations have been working closely with the ACMA and Department of Communications, Cyber-safety and the Arts with regard to preparation of Australia's position and delegation to the World Radiocommunication Conference in 2019 (WRC-19).

AMTA has supported the development of an Australian position for WRC-19 Agenda item 1.13 that supports international harmonisation of key bands 24.25-27.5 GHz, 37-43.5 GHz, 66-76 GHz and spectrum around 50 GHz, for longer term use by 5G.

#### Reform of the spectrum management framework

The Government has been reviewing the way spectrum is managed under the current *RadioCommunications Act 1992*<sup>77</sup> with a view to reforming or replacing the Act to reflect a more contemporary spectrum management and planning framework.

The Associations have identified the following principles as key to reforming the current radiocommunications legislative framework to make it fit for purpose and encourage investment in a 5G world:

1. The licensing framework needs to be flexible as well as provide sufficient certainty to encourage continued investment.
2. Flexibility means technology neutral, and multi-purpose use.
3. Certainty means – spectrum licence tenure of up to at least 20 years; with renewal pathway certainty.

---

<sup>76</sup> 3GPP TS 38.104 NR; [Base Station \(BS\) radio transmission and reception](#)

<sup>77</sup> [Radiocommunications Act 1992 \(Cth\)](#)

Inquiry into the deployment, adoption and application of 5G in Australia  
Submission 335

4. Allocations need to be efficient through streamlining processes (in terms of cost, timeliness and complexity of engagement), using market forces where appropriate, and supporting secondary trading.
5. Property rights of licence holders need to be enforced.
6. Sharing should never be imposed on spectrum licence holders. Sharing of spectrum licences should be at the licence holder's discretion on a commercial basis. Introduction of sub-licence, as part of the spectrum reform agenda, would facilitate such sharing.<sup>78</sup>

The Associations have previously advocated for certainty in the radiocommunications licensing framework, and specifically, certainty around the licence renewal processes. Given the slow progress with drafting a new Act, the Government's recent decision to re-consider amendments to the existing Radiocommunications Act is welcomed as a way to expedite this important reform.

Please see **Appendix A** for more details regarding the spectrum management framework and future spectrum bands for 5G.

#### Network deployment reform

5G promises to be a comprehensive advance in mobile technology and the step from 4G to 5G will deliver broader and more diverse impacts on all sectors of the economy and community. 5G services require the deployment of new 5G networks.

Deployment related policy and regulatory settings are critical inputs to support the implementation of 5G. Timely and efficient deployment of infrastructure requires a flexible regulatory framework as well as thoughtful consideration and timely decision-making by policy makers to ensure that the benefits of 5G are fully realised.

Industry is already building the first 5G networks, with critical investment decisions being made now and in the very near future. It is imperative that there is certainty around the ability to deploy the requisite infrastructure to provide certainty for the associated long-term investment decision-making processes.

The regulatory framework should be agnostic to technology or deployment types, thereby relieving the need to constantly update the regulations as technology and deployment practices evolve. Issues of visual and other amenity, which are the real impact on communities, can be governed by a more constant over time set of principles based on what a deployment looks like and where it occurs. What function it performs or what technology it supports is not relevant to this consideration.

AMTA and Communications Alliance have been advocating for a package of reforms which would relieve a highly constrained system where only a few "permitted" developments are excluded from a regulatory process (i.e. not requiring planning approval) to a more inclusive and technology agnostic specification of permitted developments that is flexible enough to keep pace with the rapid

---

<sup>78</sup> The Associations are not opposed to spectrum sharing outside of spectrum licences where this could improve the efficiency of spectrum use. Sharing should involve cooperation and coordination between all relevant spectrum users.

Inquiry into the deployment, adoption and application of 5G in Australia  
Submission 335

evolution of mobile technology and infrastructure types. We continue to work with Government to finalise these reforms, and we welcome its finalisation in a timely fashion.

#### Communications is the 4<sup>th</sup> utility

As described above, 5G networks have the potential to be a key input into the 4<sup>th</sup> industrial revolution. 5G services will be as critical as power, gas and water. Indeed, communications is commonly regarded as the fourth utility. However, the communications industry does not have the same rights as utility companies to deploy assets in a timely and cost-effective manner. The industry is concerned that continuation of this approach risks making 5G networks commercially unviable

Communications is no longer a luxury but a key utility for all businesses. Too many local and state bodies see communications assets as a potential income stream rather than a facilitator of vital community services. Long term reform is required so that telecommunications can be treated in a manner consistent with the other utilities with regard to access to public property, just as we are seen as vital infrastructure in national security matters and by consumers and businesses alike.

#### Infrastructure sharing – passive and active

There is a well-established industry practice across fixed and mobile networks where operators share passive infrastructure such as towers, poles, buildings and housings. AMTA members expect sharing of passive infrastructure to continue on throughout the 5G era where it is technically feasible (e.g., physical space, wind-loading, matching equipment rack types, etc) and makes economic sense to do so. However, sharing active infrastructure such as electronics including radio transmitters and antennas, has a range of technical and economic constraints that make it generally not feasible to share.

One example of the type of technical challenge that can arise in active equipment sharing is the ability to build radio transmitters capable of spanning the spectrum holdings of multiple network operators. In the 3.6 GHz band, where operators are using 60-100 MHz, or worse, in the 26 GHz band where operators are likely to be using 800 MHz or more each, it is simply not possible to build a single radio system capable of spanning such a wide frequency range. Thus, multiple cells are still required in a 1:1 relationship for each carrier. A further example relates to the physical placement and orientation of antennas to avoid interference to/from other operators in the same or adjacent band(s). In practice, this means sharing of passive infrastructure such as a single tower is possible, but restrictions on the orientation of antennas mean separate electronics as one transmitter cannot drive two separate antennas.

As we move to deploying small cells, precise placement is critical for them to be effective. It will be rare that the needs of all carriers align for any small cell to a sufficient extent for sharing the small cell to be viable. The factors requiring precise small cell site placement include amount and geographic focus of customer demand and location of surrounding network elements (macros and other small cells) and these are unique to each carrier.

There are also economic challenges to be overcome. Most of the economic gains derived from sharing are made in the sharing of passive infrastructure given the cost of physical infrastructure such as towers and buildings. The incremental savings realised from sharing active infrastructure are marginal at best after compensating for the increased complexity arising from the need to coordinate between multiple operators. When offset against the yield and market share, reductions arising from the loss of competitive differentiation means there are strong economic incentives against sharing of active infrastructure.

Inquiry into the deployment, adoption and application of 5G in Australia  
Submission 335

While passive infrastructure sharing has and will continue to play a role in current network generations, even there, it is worth observing that carriers do not share every tower or facility. The reason is each carrier has a unique set of evolving constraints ranging from specific spectrum holdings, vendor capabilities (and limitations), engineering expertise, through to unique and changing target markets, customer demands and service offerings.

#### Support for EME health research and the agencies regulating EME safety

To ensure the continued confidence of the public in mobile networks in general and 5G deployment in particular, it is important that the public continue to hear the reasoned voice of Australia's world leading academic EME research bodies (such as the Australian Centre for Electromagnetic Bioeffects Research, ACEBR) and the government's own expert health agency (ARPANSA). It is important therefor that these bodies are suitably resourced to undertake the necessary research and review activities to allow them to remain at the forefront of knowledge on EME and health effects research and standards setting.

#### Funding for Australian EME research

While extensive research activities over many decades have not found any scientifically established health effects from exposure to EME from mobile network technologies, health bodies such as ARPANSA continue to note that while no health effects are expected from radio frequency exposures below the limits set in the ARPANSA standard, *"it is important to continue the research in order to reassure the Australian population."*<sup>79</sup> In 2017, ARPANSA published a [research agenda](#)<sup>80</sup> recommending future research topics including some specifically aimed at 5G (in particular the methods of measurement and calculation to ensure compliance with the ARPANSA safety standard for 5G applications).

The Associations strongly support ongoing funding of EME research in Australia. The National Health and Medical Research Council (NHMRC) funded centres of research excellence such as ACEBR continue to address public concerns about the safety of mobile network technologies through their publications, seminars fact sheets and other communications about the state of the EME science. This is particularly the case in the media, both traditional and digital, where often misinformed commentary can unnecessarily alarm the public, who may then seek to frustrate mobile network deployments within their communities. The continued ability of both research and health agencies to impact positively on such debates is vital to the efficient and effective deployment of 5G and realisation of the many benefits it brings to Australian communities and businesses.

#### ARPANSA

Likewise, ARPANSA as the primary health body responsible for the development of Australia's EME exposure standard, must also have a strong and authoritative voice in debates concerning the science of EME and plays an important role in ensuring public confidence in health standards and their implementation in Australia. The ARPANSA environmental EME report remains an important public information tool to assure typical EME levels in the community are not only in compliance with the ARPANSA safety limits, but base station EME is typically 100s of times below these limits. ARPANSA's RF survey activities play an important role in both informing the public about EME in their environment and also corroborating the industry's activities in assessing and communicating

<sup>79</sup> <https://www.arpansa.gov.au/news/5g-new-generation-mobile-phone-network-and-health>

<sup>80</sup> ARPANSA 2017, Radiofrequency Electromagnetic Energy and Health: Research Needs, Technical Report 178, June 2017 available at <https://www.arpansa.gov.au/research-and-expertise/technical-reports/radiofrequency-electromagnetic-energy-and-health-research>



Inquiry into the deployment, adoption and application of 5G in Australia  
Submission 335

the compliance of all mobile network infrastructure, including 5G and small cells, with the science-based safety limits. The Associations therefore support a well-resourced ARAPNSA so that it can continue its valuable program of EME activities, especially at this critical time as 5G networks are rolled out.

#### Opportunities for enterprise and government

The opportunities for enterprise are clear as illustrated by the case studies outlined in section 5. There are also opportunities across all levels of government in Australia to be an early adopter of 5G. Government services are increasingly digitising and this is transforming how people interact with Government. There is also potential for 5G to further enhance how some of these services are delivered to the public.

Adoption of 5G at all levels of Government could be encouraged by requiring tenders for the provision of services to consider what role 5G technology could play.

Inquiry into the deployment, adoption and application of 5G in Australia  
Submission 335

## 7. Conclusion – Ensuring Australia reaps the benefits of 5G

The potential benefits of 5G for Australian society and the economy have been clearly outlined in this submission.

As a small, agile economy with a history of early adoption of digital technology and innovation, Australia is uniquely positioned to take advantage of the potential that 5G has to offer to develop our role in the region and globally as a leading technology nation. For the last four years, Australia has consistently ranked 1<sup>st</sup> in an index that includes 165 countries (representing 99% of global population) for its mobile connectivity.<sup>81</sup> 5G is the innovation platform that will grow the mobile industry's capacity as a key contributor to Australia's future global competitiveness.

It is in Australia's national interest that the transition to 5G is fast-tracked so that the economic, productivity and social benefits can be realised sooner

This will require a co-ordinated policy approach from all levels of Government, working with industry and across key portfolios, to ensure that policy and regulatory settings support efficient network deployment, including timely spectrum allocation and that there is broad community support for and understanding of the economic and social benefits of 5G.

5G networks will transform the way Australians live and work and we must ensure that the enabling effects of this next generation technology are fully realised and shared across the whole community.

---

<sup>81</sup> GSMA Mobile Connectivity Index, [The State of Mobile Internet Connectivity Report](#), July 2019

Inquiry into the deployment, adoption and application of 5G in Australia  
Submission 335

## Appendix A - Spectrum Management reforms needed for 5G

AMTA has identified the following principles as key to reforming the current radiocommunications legislative framework to make it fit for purpose in a 5G world:

- The licensing framework needs to be flexible as well as provide sufficient certainty to encourage continued investment.
- Flexibility means technology neutral, and multi-purpose use.
- Certainty means – spectrum licence tenure of up to at least 20 years; with renewal pathway certainty.
- Allocations need to be efficient through streamlining processes (in terms of cost, timeliness and complexity of engagement), using market forces where appropriate, and supporting secondary trading.
- Property rights of licence holders need to be enforced.
- Sharing should never be imposed on spectrum licence holders. Sharing of spectrum licences should be at the licence holder's discretion on a commercial basis. Introduction of sub-licence, as part of the spectrum reform agenda, would facilitate such sharing.<sup>82</sup>

AMTA has previously advocated for certainty in the radiocommunications licensing framework, and specifically, certainty around the licence renewal processes.

We note that while the current legislation<sup>83</sup> (the Act) does contain a pathway to spectrum licence renewal,<sup>84</sup> the gaps are:

- an absence of a clear entitlement of incumbent licence holders to renewal;
- uncertainty about the policy guidance for the criteria and mechanism for evaluation of spectrum licence renewal eligibility; and
- the determination of the renewal price.

AMTA would prefer to see a rebuttable right of renewal inserted in the Act. AMTA considers that this would balance the need for investment certainty against the public interest in ensuring highest value use of spectrum. Failing that, the next best solution would be timely, transparent and public Ministerial guidance on the criteria and the process to be followed for the re-issue of spectrum licences.

We accept that it is unlikely to be in the public interest to renew spectrum which does not support substantial existing investment. However, where such investment exists, it is not desirable to have a

---

<sup>82</sup> The Associations are not opposed to spectrum sharing outside of spectrum licences where this could improve the efficiency of spectrum use. Sharing should involve cooperation and coordination between all relevant spectrum users.

<sup>83</sup> [Radiocommunications Act 1992](#)

<sup>84</sup> [Radiocommunications Act 1992](#), (Act) s82.

Inquiry into the deployment, adoption and application of 5G in Australia  
Submission 335

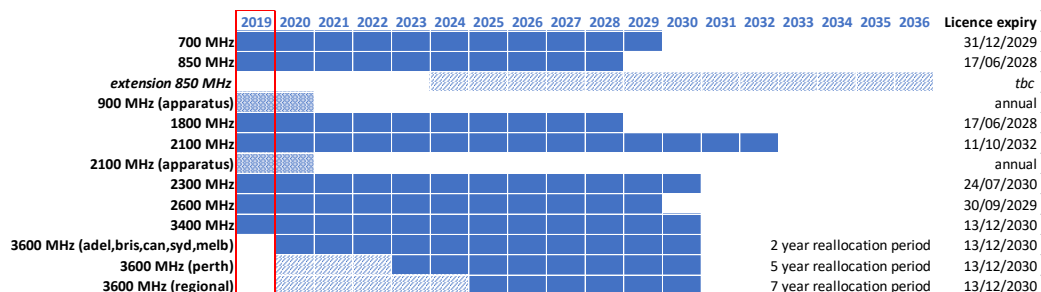
'presumption' of the return of spectrum to the market upon licence expiry, for the following reasons:

- Returning in-use spectrum to market will add cost to licensees as their investment in network infrastructure will have a shorter expected period of recovery (i.e. licensees should expect the spectrum will not be renewed and they may have to reinvest in alternative infrastructure after the licence term) and the cost of obtaining replacement spectrum is likely to be greater. The additional cost will be factored into bidding strategies, meaning lower returns to government from spectrum auctions. The shorter recovery period will also result in higher prices for consumers and/or reduced investment, particularly towards the end of a licence term.
- If the in-use spectrum is not re-issued, then the provider will either not compete in the related downstream markets (as it would not have any spectrum) and will be displaced by a rival, or it will need to find alternative spectrum and potentially displace another rival. This means that competition won't be enhanced, but rather competitors will just be replaced, and with a high deadweight loss given the real costs associated with replacing competitors.
- Even if the incumbent wins part of the spectrum being renewed and the remainder goes to a new entrant, it is most likely (given the increasing demand for spectrum to support mobile capacity) that the two providers now operating on spectrum previously held by one provider, will be capacity constrained. Competition is more likely when each has spare capacity – i.e. the incremental benefit of filling the spare capacity is high relative to the cost of leaving it unused. Providers that are capacity constrained have little incentive to compete with each other, as lowering price will increase congestion and worsen customer experience, so is less likely to attract any new customers.

AMTA also sees merit in codifying the process and timelines around licence renewal. For example, making clear in the Act that the renewal process must begin at least 5 years prior to the licence expiry date; and is to be completed within 12 months.

Making such decisions any closer to the licence expiry would reduce incentives for investment and secondary trading during the later years of the licence term and, if reallocation is required, may not leave sufficient time for the ACMA to complete a reallocation process before the expiry of the existing licences and potentially leaving the spectrum unused for a period of time.

The chart below illustrates the allocated mobile spectrum bands and licence expiry deadlines. The next tranche of spectrum licence expiries occurs in 2028 so a renewal pathway needs to be defined now to provide licence holders with the requisite certainty for ongoing investment in this spectrum.



Inquiry into the deployment, adoption and application of 5G in Australia  
Submission 335

AMTA has several suggestions for ways to improve the flexibility of the licencing framework that we have outlined below:

***Align maximum licence terms to at least 20 years***

The maximum available licence terms, which are currently hardwired into the Act at five years for apparatus licences<sup>85</sup> and fifteen years for spectrum licences,<sup>86</sup> should be aligned and extended to at least twenty years. It would then be a matter for the ACMA to appropriately determine licence terms, with Ministerial policy guidance where appropriate.

***Greater flexibility for the ACMA in spectrum allocation***

The existing legislation has highly prescriptive timelines for spectrum designation, conversion and re-allocation, as well as prescribed involvement of the Minister at several points in these processes.<sup>87</sup> These highly codified processes cause unnecessary cost and delay to the ACMA's work, and also restrict its discretion in respect of matters where repeated Ministerial involvement should not be required. AMTA's view is that relatively simple amendments to the relevant parts of the Act would remove these pain points and enable the Minister's role to be focused on policy guidance to the ACMA, with Ministerial decisions on allocation matters only to be retained (if appropriate) for the most sensitive and contentious aspects such as allocation limits<sup>88</sup> and reserve pricing.<sup>89</sup> We recognise that greater flexibility for the ACMA in releasing and re-allocating spectrum requires diligent consultation with all stakeholders, especially potentially affected licensees. However, this process does not need to be micro-managed in the Act with repeated Ministerial involvement, as is currently the case. Appropriate consultation is a fundamental principle of our administrative law that is already subject to adequate legal safeguards. Elimination of this detail in the Act would enable the removal of numerous provisions, which would amount to a significant reduction of 'red tape'.

***Existing licence categories should be made more flexible in their use***

Apparatus licensing has traditionally been applied to specific bands where supply exceeded demand and no single user required exclusive or consistent access across large portions of geographic area, and therefore over-the-counter assignment and coordination was sufficient. But congestion has arisen in some apparatus licensed bands, e.g. the 400 MHz band, and this has been addressed by the ACMA adopting Administrative Incentive Pricing.<sup>90</sup> This example illustrates the ACMA is able to work within the existing licence categories to continue the effective functioning of the regulatory regime. Indeed, the ACMA is now investigating the creation of a new 'area wide' type of apparatus licence.<sup>91</sup>

For this reason, AMTA considers that it should not be a reform priority to consolidate the apparatus and spectrum licensing categories into a single licence type. Such consolidation would likely involve high transition costs along with unnecessary complexity and uncertainty without significant benefit.

---

<sup>85</sup> Act, s103(3).

<sup>86</sup> Act, s65(3).

<sup>87</sup> For example, the highly prescriptive steps in Part 2.2 of the Act (designation and conversion) and Part 3.6 of the Act 're-allocation).

<sup>88</sup> Currently s60(5) of the Act.

<sup>89</sup> Currently s294(3) of the Act.

<sup>90</sup> ACMA, Regulation Impact Statement - Opportunity Cost Pricing in the high density areas of the 400 MHz Band, June 2012, <https://ris.pmc.gov.au/sites/default/files/posts/2012/08/ACMA-400MHz-RIS-20120717.pdf>

<sup>91</sup> Consultation IFC 19/2019, Proposed area-wide apparatus licence. <https://www.acma.gov.au/theacma/proposed-area-wide-apparatus-licence>.

Inquiry into the deployment, adoption and application of 5G in Australia  
Submission 335

A similar outcome could be achieved through the ACMA continuing to exercise regulatory flexibility, possibly supported by minor changes to the legislation for the two licence types and Ministerial policy guidance.

A further step towards increasing flexibility between spectrum and apparatus licences would be to remove the restrictions which prevent segments of spectrum and apparatus licensed space being restacked into more efficient arrangements without requiring the prior conversion of apparatus licences to spectrum licenses. If equivalent quantities of spectrum are being reshuffled, and incumbent licensees do not object, then it should be possible for ACMA to do this administratively.

Licences should be neutral in technology terms so that licence holders can deploy any technology provided it meets the current licence conditions. With long duration licences there will be a need to refresh the Licence Technical Frameworks since these are always based on some assumptions around the technology expected to be most used. Most of the existing spectrum licences have assumed 4G technology, which may not be appropriate as new technology cycles are introduced. Previously, re-issue of a licence often resulted in some changes to licence conditions, however, with a 10-year technology cycle and 20-year licence duration we will need a way to update the licence conditions without detriment to the rights of spectrum licence holders. AMTA notes that this issue may be partly addressed through Issue 2 above, providing greater flexibility to the ACMA to amend licence conditions to reflect technology developments.

We also suggest that creating an ability for licensees to subdivide and sub-licence spectrum within their holdings would be a useful tool to further enable spectrum trading and sharing. This could also be extended to the sub-licensing of class licences which would give mobile operator licensees flexibility to control the authorisation and use of various types of ubiquitous user devices (e.g. handsets and mobile repeaters) within their holdings.

***Allocation limits need to have one standard – i.e. section 50 of the CCA***

The advice provided to the Minister by the ACCC on allocation limits for spectrum auctions,<sup>92</sup> has been carried out on the basis of differing criteria and considerations over time. AMTA's view is that the relevant criteria for advice should be made explicit and public at the time advice is sought from the ACCC. AMTA supports a public process, where the request for advice, industry submissions, and ACCC advice are made public. Further, where Ministerial action differs from the ACCC advice, AMTA sees value in requiring a statement explaining reasons for any difference.

AMTA also supports the Minister providing advice outlining the framework under which the ACCC is to undertake the work. At a minimum, this should require that the ACCC provide its advice on the basis of the criteria set out in section 50 of the *Competition and Consumer Act (Cth) 2010* (CCA). However, the Ministerial may also seek advice on further grounds contained in the CCA, for example the long-term interest of end-users (s.152AB of the CCA).

Further, it would be helpful to have a 'safe harbour' provision for any spectrum acquisition that has been subject of an allocation limit, to avoid any post-auction challenges that the quantity of spectrum a bidder has legitimately acquired is anti-competitive under s.50 of the Act.

---

<sup>92</sup> Act, s60(5).

Inquiry into the deployment, adoption and application of 5G in Australia  
Submission 335

***Use of early access arrangements under section 153P of the Act should be formalised***

AMTA welcomes the ACMA's innovative use of its discretion under section 153P of the Act to speed up access to spectrum that has been re-allocated, through early access licensing arrangements. This approach has now become a critical aspect of the flexibility of the bringing to market of spectrum by the ACMA. We think the Act could benefit from minor amendment to making this approach the default position, rather than requiring the administrative step of having the successful bidder apply for confirmation that it satisfies the 'special circumstances' requirement.

***Introduce a graduated enforcement regime for compliance***

The draft Bill<sup>93</sup> addressed the need for the ACMA to have graduated enforcement powers, rather than the current situation where only criminal enforcement is available.<sup>94</sup> AMTA's view is that this drafting can be used to amend the existing legislation, with the same outcome. A graduated enforcement scheme would enable more effective ACMA enforcement against devices causing harmful interference in an increasingly congested spectrum environment. While we think the ACMA should be devoting more resources to technical radiocommunications enforcement, our view is that even existing resources would be far better used if a graduated enforcement scheme (starting with a 'parking ticket' style option) was implemented. These reforms should also include better linkage between device standards and prohibitions, and the triggering of Border Force action under the relevant provisions.

***Create an ability for the ACMA to accept enforceable undertakings from licensees on facilitating spectrum defragmentation***

The mobile carriers have participated in successful spectrum defragmentation initiatives in both the 1800 MHz and 3.6 GHz bands. However, there are other bands in which defragmentation would result in considerable efficiency and community benefit, but which are frustrated by strategic and transaction timing hurdles, for example the need for a 1 MHz downshift in the 850 MHz band to support changes to licensing in the 900 MHz band. The provision and acceptance of undertakings by parties is a well-known and often used mechanism in Australian regulation. If incumbent licensees were able to provide undertakings to the ACMA regarding future participation in defragmentation activity based on potential allocations by the ACMA this would provide the ACMA with a strengthened capability to enable defragmentation. The ability to accept such undertakings would require only a minor addition to the Act. It would then be possible for the ACMA to make participation in future auctions and spectrum conversions in the relevant band, conditional on such cooperation by incumbents to defragment the band, in circumstances where secondary market failure would stymie this outcome.

***Clarify stamp duty on secondary market trades***

State and territory stamp duty continues to pose a material cost on and disincentive to secondary market trading of spectrum. There remains some uncertainty as to the instances in which stamp

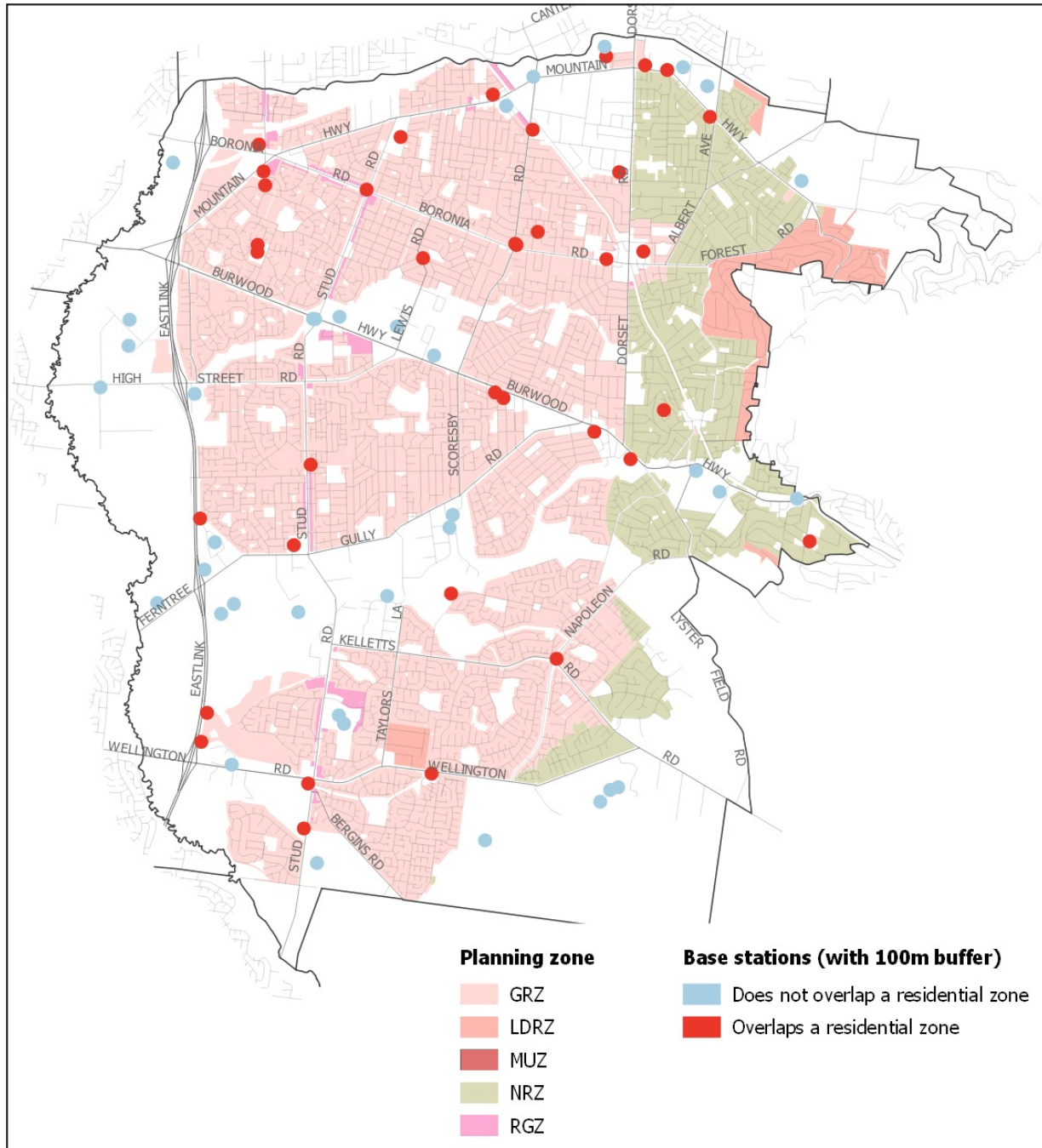
<sup>93</sup> Exposure Draft, Radiocommunications Bill, 2017

<sup>94</sup> See, for example, the unlicensed operation offence in s46(1)(a) of the Act only allows for criminal prosecution, which is impractical in circumstances where mobile operators' customers are using illegal repeaters despite repeated request to shut down the infringing device. Given that authorised legal repeaters can be purchased for less than \$1,000, amendment of the Act to provide for an administrative fine of up to \$1,000 would be an effective means to obtain greater compliance. We believe that actual enforcement action would be rare -- mere awareness of the risk of this fine would be sufficient deterrent.

Inquiry into the deployment, adoption and application of 5G in Australia  
Submission 335

duty will be imposed by the states and territories which still apply this impost to spectrum trades. AMTA proposes a simple amendment to the Act which would prohibit the application of stamp duty to spectrum trades. We appreciate that this is a matter for COAG however we submit that it is important for the Department and the Minister to continue to highlight the issue.



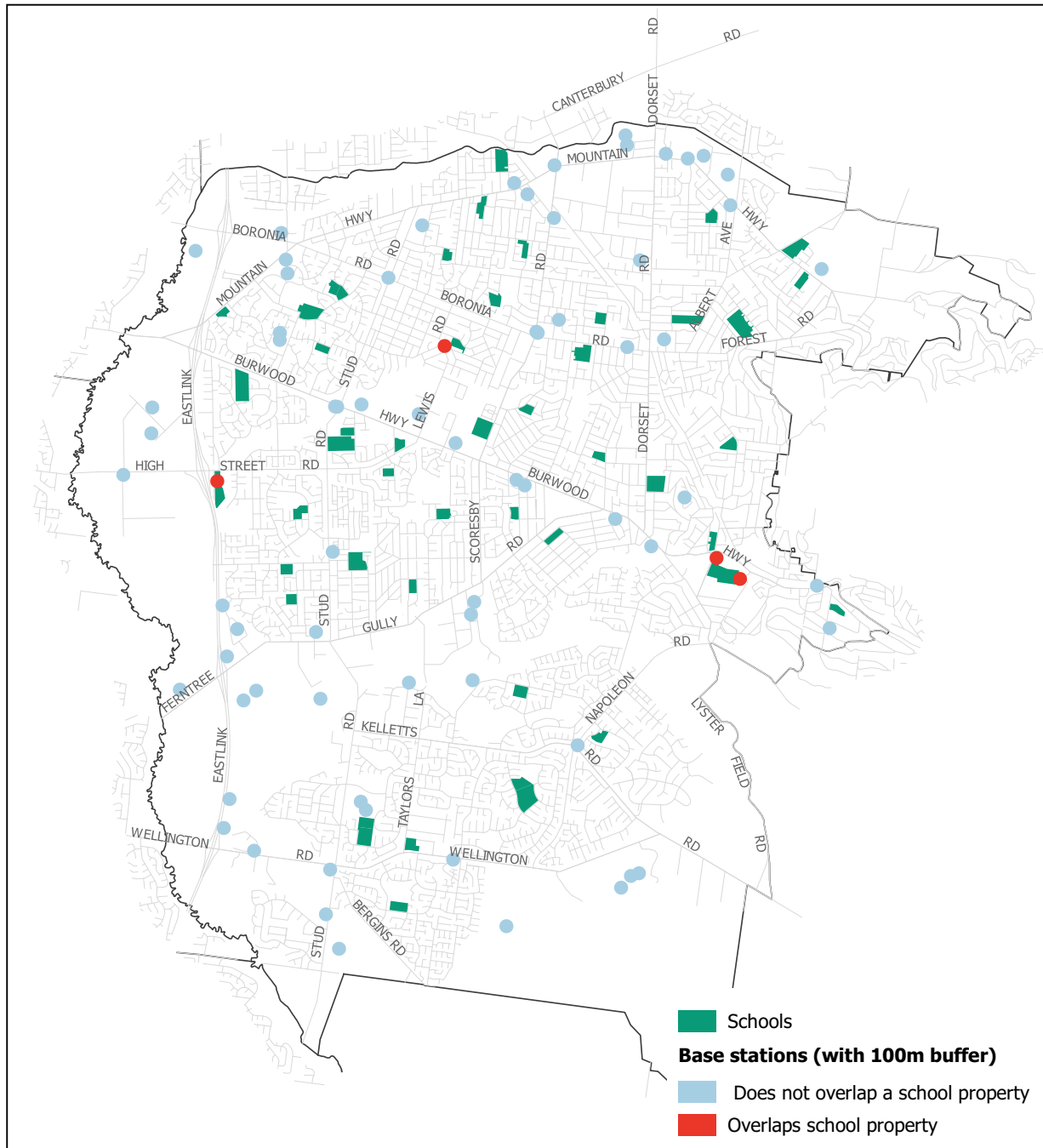


### Mobile base stations and residential zones - December 2019

Disclaimer:  
 Roads and Title Boundaries - State of Victoria, Knox City Council  
 Planning Scheme Information - DELWP, Knox City Council  
 Mobile Base Station Locations - Radio Frequency National Site Archive (December 2019)

1. Whilst every endeavour has been made to ensure that the mapping information is current and accurate, no responsibility or liability is taken by Knox City Council or any of the above organizations in respect to inaccuracy, errors, omissions or for actions based on this information.
2. Planning information should be used only as a means of preliminary investigation. For accurate overlay information please obtain a Planning Certificate from the Department of Infrastructure.
3. This print contains information from Vicmap Property (Copyright State of Victoria). The State of Victoria does not warrant the accuracy or completeness of information in this product. Any person using or relying on this information does so on the basis that the State of Victoria shall bear no responsibility or liability whatsoever for any errors, faults, defects or omissions in the information.





## Mobile base stations and schools - December 2019

**Disclaimer:**  
 Roads and Title Boundaries - State of Victoria, Knox City Council  
 Planning Scheme Information - DELWP, Knox City Council  
 Mobile Base Station Locations - Radio Frequency National Site Archive (December 2019)  
 School locations - My School website (December 2019)

1. Whilst every endeavour has been made to ensure that the mapping information is current and accurate, no responsibility or liability is taken by Knox City Council or any of the above organizations in respect to inaccuracy, errors, omissions or for actions based on this information.
2. Planning information should be used only as a means of preliminary investigation. For accurate overlay information please obtain a Planning Certificate from the Department of Infrastructure.
3. This print contains information from Vicmap Property (Copyright State of Victoria). The State of Victoria does not warrant the accuracy or completeness of information in this product. Any person using or relying on this information does so on the basis that the State of Victoria shall bear no responsibility or liability whatsoever for any errors, faults, defects or omissions in the information.



**7 Public Question Time**

Following the completion of business relating to Item 6, City Development, the business before the Council Meeting will now be deferred to consider questions submitted by the public.

## 8 Engineering & Infrastructure Officers' Reports for consideration

### 8.1 Boronia Parking Management Plan

#### **SUMMARY: Senior Traffic Engineer, Deborah Wilding**

**A draft Boronia Parking Management Plan for the Boronia Activity Centre has been developed after consultation phases in April 2018 and July/August 2019. The draft Boronia Parking Management Plan has been refined in response to the consultation and is now presented to Council for endorsement.**

#### **RECOMMENDATION**

**That Council adopt the Boronia Parking Management Plan as presented in Attachment 1**

#### **1. INTRODUCTION**

The draft Boronia Parking Management Plan for Boronia Activity Centre was developed in response to the Knox Parking Policy to better manage the increasing demand for parking throughout the municipality, particularly around activity centres.

In preparing the draft Parking Management Plan for Boronia, an independent parking study and two public consultation periods were conducted.

The draft Boronia Parking Management Plan has been prepared after a consultation process and having regard to the endorsed Knox Parking Policy, recommendations from the independent parking study and comments received from residents, visitors, commercial and retail proprietors and rail commuters. Refer to Attachment 1.

#### **2. DISCUSSION**

##### **2.1 Background**

Parking demand across Knox continues to increase, especially in activity centres where there is increasing development, retail and commercial activity and demand from rail commuters. This creates challenges in providing for the movement of people and goods through the municipality while still maintaining a safe and pleasant environment for people to live, work and play.

The Knox Parking Policy was endorsed by Council in February 2018 to better manage the parking needs of the community and to shift from being reactive to strategic when managing parking issues. The Knox Parking Policy outlines a framework for progressively preparing parking management plans for each activity centre over a five year period.

The Parking Management Plan has been prepared for the Boronia Activity Centre after conducting two community consultation periods and undertaking an independent parking study for the centre.

Once endorsed, proposed parking changes within the commercial area of the Parking Management Plan will be implemented within a 3 month period (Stage 1). Restrictions proposed within surrounding residential areas (Stage 2) will be implemented according to community demand and following further consultation with residents of each affected street.

## **2.2 Stage 1 Consultation – Parking Survey**

The initial consultation survey was conducted as part of the Boronia Renewal Project in April 2018. This was a general online survey on community parking needs and issues for residents, visitors, workers and business owners who use the activity centre. The survey was available on Council's website and advertised via: the Boronia /Basin Community News, Boronia E-newsletter, social media, Boronia Renewal webpage and emails sent to community groups and people who registered interest in the Boronia Renewal Project. The same data was used for both the Boronia Renewal Project and the initial draft Boronia Parking Management Plan. The survey generated 357 responses.

The comments and suggestions received from the survey, letters, emails and Facebook posts were aggregated into related issue responses. The main issues were then listed for feedback on the draft parking management plan for the community to view. These issues were similar to those raised for the Ferntree Gully and Upper Ferntree Gully Parking Management Plans:

- Longer parking times outside working hours;
- Longer parking times around the shopping centre;
- Through access in local roads for emergency services;
- Advocacy by Council for the State Government to provide more commuter parking;
- Greater enforcement of parking restrictions by Council; and
- More community education on parking road rules.

The main issues raised and how they can be addressed are shown in Attachment 2 - Table 1.

Many comments raised from the general survey on community parking needs related to specific restrictions in local streets. These were given consideration in development of the Parking Management Plan in accord with the parking policy, the reasonableness of the request and the best fit for parking in the area.

## **2.3 Independent Parking Study**

The Parking Management Plan was originally planned to be completed in parallel with the Boronia Renewal Project with a combined movement and access study and parking study. There were however difficulties coordinating and funding both studies with the Boronia Renewal Project. This meant that the parking study was conducted separately for the draft Boronia Parking Management Plan in September 2018.

The independent parking study has however provided data and feedback on existing parking conditions within the activity centre. This consisted of:

- Identifying all existing parking restrictions within the study area including the location and number of specialty parking zones (such as 'accessible', 'loading', 'taxi' and 'bus');
- Determining the extent of parking in car parks and on local streets within the study area;
- Analysing the observed car parking demand in the study area; and
- Providing recommendations for parking improvements for the study area in line with the Knox Parking Policy.

Recommendations from the independent parking study were also summarised for the community to view and presented as part of the draft Boronia Parking Management Plan. The recommendations which could be accommodated on local roads and Council carparks were included in the parking management plan. Those recommendations relating to advocacy will require separate discussion with the various stakeholders.

The issues raised in the independent parking study and how they can be addressed are shown in Attachment 2 - Table 2.

#### **2.4 Stage 2 Consultation – Draft Boronia Parking Management Plan**

Through the consultation process, the draft Boronia Parking Management Plan was presented in a map form with coloured lines indicating different types of restrictions. This allowed residents to view individual restrictions in each street. The draft Boronia Parking Management Plan was available for public comment during July/August 2019. Community consultation was undertaken using Council's website – 'Have Your Say' page, social media posts, and distributions through Knox E-news and Knox biz E-news.

As a result of the second consultation process, 12 emails were received for the draft Boronia Parking Management Plan providing support and comment on the draft plan. A summary of comments and responses are shown in Attachment 2 – Table 3.

Other parking enquiries for the area received throughout the last year relate to: requests for parking permits, staff parking, additional commuter parking, parking for residents and access along local streets.

#### **2.5 Key Issues raised from the draft Boronia Parking Management Plan**

Responses received from presenting the draft parking management plan for public comment have prompted the following changes to the draft Boronia Parking Management Plan.

**Accessible bays** - Include an action stating Council will work toward providing at least one accessible bay in each Council carpark. Meet the number of car parking spaces required for people with disabilities stated in the Australian Building Codes Board.

**Orchid Avenue** – Raise an action to consult with residents of the street about changing the parking restrictions from '2 hour 8am to 6pm Monday to Friday' to '4 hour 8am to 6pm Monday to Friday'. This will provide longer parking times outside residential properties. Unrestricted parking outside commercial premises will remain unchanged. The 'No Stopping' restrictions need to remain near the intersection with Erica Avenue and the bend in the road to ensure access.

**Henry Street** – Raise an action to consult with residents to determine if they would prefer 'No Stopping 8am-6pm Monday to Friday' or '4 hour parking 8am-6pm Monday to Friday' on the south side of the street. Providing unrestricted parking on the north side of the street allows for longer term parking for residents and reduces all day parking creeping into other nearby streets. Permit parking is not supported as there are more properties than parking spaces available in the street, several units which would not be eligible for permits and unrestricted parking available on the north side of the street.

**Power Road** – Unrestricted parking on the railway side of Power Road has been assessed. Short sections of 'No Stopping' restrictions provide opportunities for cars to prop while an oncoming vehicle is passing. The 'No Stopping' area near Catherine Street can be extended for approximately 10 metres further north near the bend in the road to improve sight distance for drivers.

**Genista Avenue** – Currently there is a Council resolution from the Council meeting on 12 June 2018 to ‘place a moratorium on parking enforcement of the green zone parking restrictions in Genista Avenue Boronia until such time as the planned Boronia Parking Management Plan is implemented’. A review of the existing restrictions does not indicate a need for any changes to the restrictions. The ‘4 hour 8am-6pm Monday to Friday’ allows residents and their visitors to find parking in the street and to park overnight if needed. Unrestricted parking is also available for longer term parking. Permit parking is not supported as there are more properties than parking spaces available in the street, several units which would not be eligible for permits and unrestricted parking available within the street. Enforcement of parking restrictions in this street will resume on endorsement of this plan.

**In ground sensors** – Greater enforcement was raised as a public comment in the initial consultation survey and as a recommendation from the independent parking study. The Parking Compliance Strategy was endorsed at the Council meeting on 26 August 2019 which aims to address parking enforcement. The strategy includes an action to consider parking technology in the parking management plans. As such, an action to consider a trial installation of in ground sensors in some of the short-term parking spaces is proposed.

### **3. CONSULTATION**

The development of the parking management plan was undertaken in consultation with Council officers and independent traffic consultants. Two public consultation phases were provided. Feedback from this process was reviewed and where appropriate included in the parking management plans.

The draft plan was presented to Council at its 11 November 2019 Issues Briefing for purpose of information and comment. Ward councillors have been consulted about the proposed parking changes in the Parking Management Plan.

The Boronia Renewal Strategy (developed from the Boronia Renewal Project) was approved by Council on 26 August 2019 and is currently awaiting authorisation from the minister to commence the planning scheme amendment. This authorisation is currently on hold. It is unlikely that there would be any conflict between a future public exhibition as part of the amendment process and the adoption of the Boronia Parking Management Plan.

Further consultation with residents within individual streets will be provided as required.

### **4. ENVIRONMENTAL/AMENITY ISSUES**

Parking availability affects the quality of life of residents and the operation of businesses. It is therefore important that all parking needs are considered in a fair and equitable manner. This is particularly important given the growing demand for on street parking within the municipality.

### **5. FINANCIAL & ECONOMIC IMPLICATIONS**

Some costs relating to the traffic study and consultation for the area have already been taken from existing budgets. Funding for future traffic studies, the implementation of parking signs and line marking changes has been requested as part of the Capital Works budget under Local Road Safety Initiatives.

## **6. SOCIAL IMPLICATIONS**

Providing a manageable parking environment encourages safe and equitable access and movement for various users.

## **7. RELEVANCE TO KNOX COMMUNITY AND COUNCIL PLAN 2017-2021**

### **Goal 3 - We can move around easily**

Strategy 3.1 - Enable improved transport choices supported by integrated and sustainable transport systems and infrastructure.

## **8. CONFLICT OF INTEREST**

Under section 80c of the Local Government Act 1989 officers providing advice to Council must disclose any interests, including the type of interest.

Author – Senior Traffic Engineer – Deborah Wilding - In providing this advice as the Author, I have no disclosable interests in this report.

Officer Responsible – Director, Engineering and Infrastructure – Ian Bell - In providing this advice as the Officer Responsible, I have no disclosable interests in this report.

## **9. CONCLUSION**

The draft Boronia Parking Management Plan provides an opportunity to strategically manage parking controls, having regard to balancing competing demands for parking within and around the Boronia Activity Centre. The plan presented accords with Council's adopted Parking Policy and has responded to community feedback through the development process, providing transparency and clarity surrounding future management.

## **10. CONFIDENTIALITY**

There are no items of a confidential nature in this report.

**Report Prepared By: Senior Traffic Engineer – Deborah Wilding**

**Report Authorised By: Director, Engineering and Infrastructure – Ian Bell**

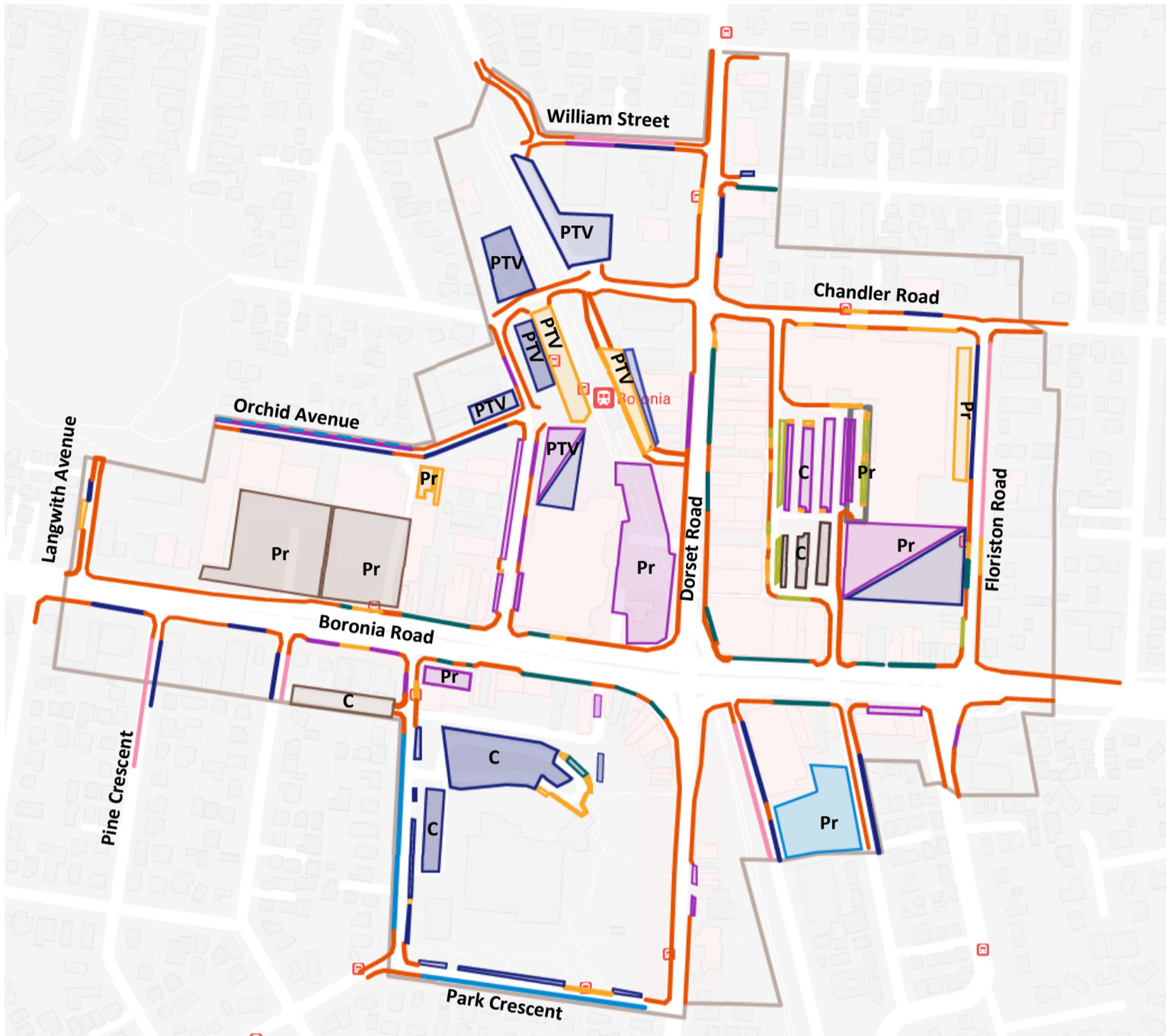
### **Attachments**

1. Draft - Boronia Parking Management Plan - revised [8.1.1 - 3 pages]
2. Consultation Comments Traffic Study Recommendations and Responses [8.1.2 - 5 pages]



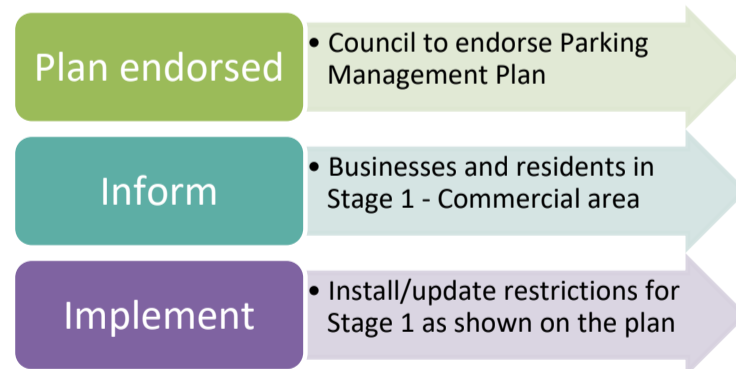
### Boronia Parking Management Plan

#### Stage 1 - Inner Commercial Area



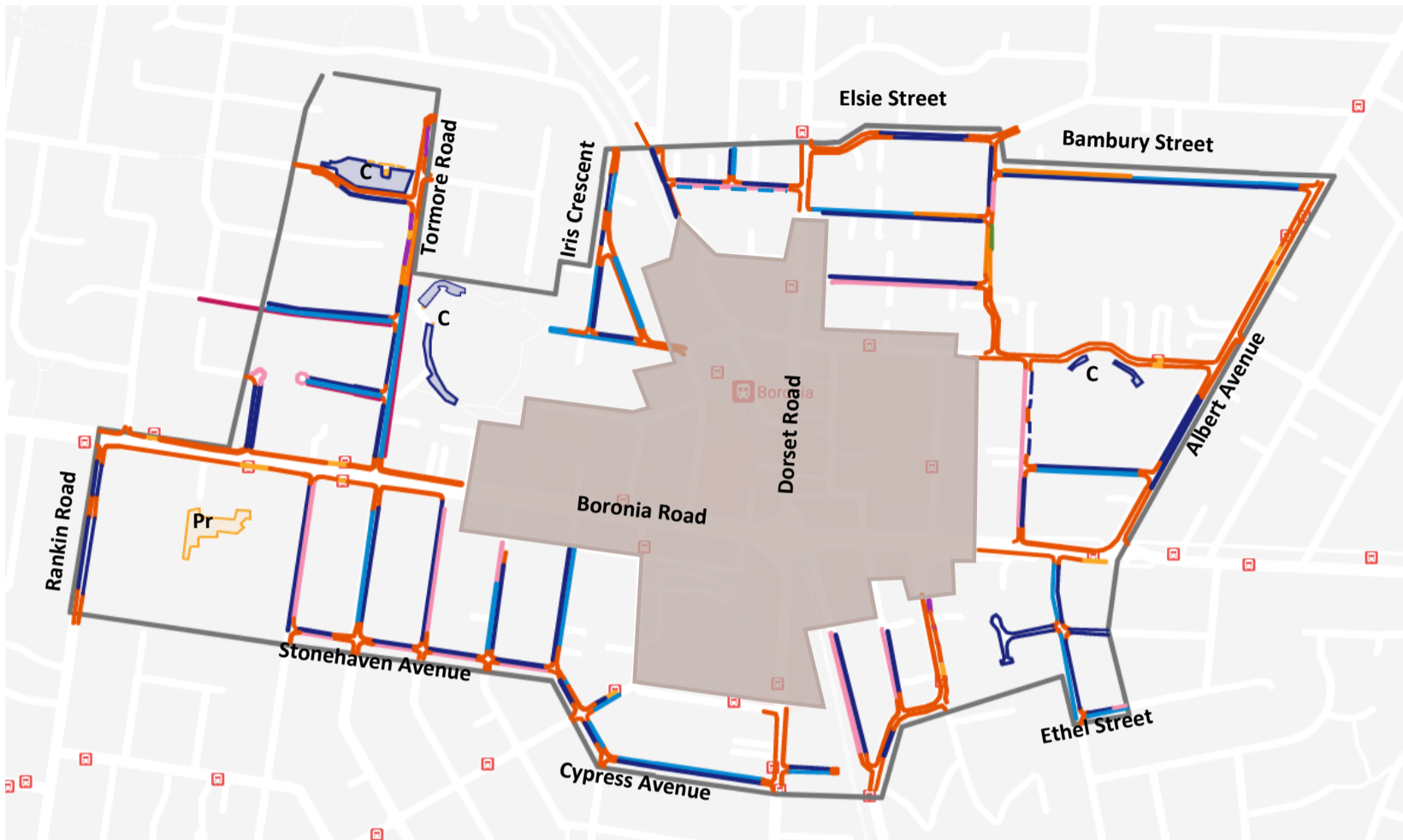
LEGEND	
	No Stopping
	No Parking
	Special Needs (Accessible, Bus, Loading, Mail Zone)
	½ Hour 6am-8pm
	1 Hour 6am-8pm
	2 Hour 6am-8pm (except Dorset Square 7am-7pm)
	3 Hour 6am-8pm (except Dorset Square 7am-7pm)
	4 Hour 6am-8pm
	Unrestricted
	Council car park
	PTV car park
	Privately owned car park
	Boundary of Inner commercial section - Activity Centre

#### Stage 1 - Implementation for Inner Commercial Area



## Boronia Parking Management Plan

### Stage 2 - Outer Residential Area



LEGEND	
<span style="color: orange;">—</span>	No Stopping
<span style="color: orange;">—</span>	No Stopping 8.15-9.15am 3-4pm School Days
<span style="color: pink;">—</span>	No Parking
<span style="color: purple;">—</span>	No Parking 8am-6pm Sat-Sun (Sept Only)
<span style="color: yellow;">—</span>	Special Needs (Accessible, Bus, Loading, Mail Zone)
<span style="color: purple;">—</span>	2 hour 8am-6pm Mon-Fri
<span style="color: blue;">—</span>	4 Hour 8am-6pm Mon-Fri
<span style="color: green;">—</span>	2 minute 8.15-9.15am school days
<span style="color: blue;">—</span>	Unrestricted
<b>C</b>	Council car park
<b>Pr</b>	Privately owned car park
<span style="background-color: #d3d3d3; border: 1px solid black; display: inline-block; width: 15px; height: 10px;"></span>	Inner commercial section - Activity Centre
<span style="border: 1px solid black; display: inline-block; width: 15px; height: 10px;"></span>	Boundary of outer residential section - Activity Centre

### Stage 2 Implementation for Outer Residential Area



## Boronia Parking Management Plan

### Proposed Timeline

The following timeline collates the actions identified as part of the investigation and consultation process for the development of the Boronia Parking Management Plan and indicates the approximate time frames for the projects.

Action involving changes to parking restrictions on public roads can be managed by Council and completed within a 3 month period while actions involving advocacy are generally outside Council’s jurisdiction.



## Consultation Comments, Traffic Study Recommendations and Responses

**Table 1 - Key Issues raised through the community survey**

<b>Issue raised</b>	<b>Response to Comment</b>
<b>Longer parking times outside working hours</b>	Where feasible, parking restrictions are limited between 8am and 6pm in residential areas and between 6am and 8pm in commercial areas
<b>Longer parking times around the shopping centre</b>	Where car parking areas are under-utilised, not affecting residents or other businesses, the car parking times can be extended.
<b>Through access in local streets for emergency services</b>	The width of each street is checked to ensure that where parking is allowed, there is still access for residents and emergency vehicles On roads with a bus route or a major traffic route, the road width allows for two way traffic.
<b>Advocacy by Council for the State Government to provide more commuter parking</b>	Council from time to time advocates to the state government requesting improvements to the public transport system. The federal government has also recently made a commitment for up to 500 additional car parking spaces at Boronia. Planning work on this matter is progressing.
<b>Greater enforcement of parking restrictions by Council</b>	Council has endorsed a Parking Compliance Strategy which includes actions to address this matter. Council to consider trialling in ground sensors in some short term parking spaces.
<b>More community education on parking road rules</b>	Council currently works to raise awareness of driver behaviour around schools through community programs. A media campaign to address common road rules related to parking could be further investigated.

**Table 2 - Key recommendations from the parking study**

<b>Recommendation</b>	<b>Response</b>
<b>1. To manage high parking demand near the station, consider medium-term parking in local streets to reduce commuter parking.</b>	4 hour parking on one side and unrestricted parking on the other reduces commuter parking in local roads and allows parking for residents and visitors during the day.
<b>2. To manage high parking demand near the library, consider some medium-term parking to enable access for library users</b>	There is existing short term parking restrictions for library visitors as well as permits for staff.
<b>3. Tormore Reserve- To manage parking related to sports events:</b>	
<b>a. Continue to provide parking restrictions on Tormore Rd, Laurel Ave and Conway Ct during sports finals</b>	a. Continue to provide temporary restrictions during the football finals. Residents are notified each year.
<b>b. Consider a further review of on-street parking when sports finals are not operating</b>	b. A recent parking survey has indicated that nominal residential parking occurs in the street.
<b>4. Pine Cr – consider a further parking review to determine how long motorists are parking</b>	There are existing parking restrictions near the intersection with Boronia Rd. A recent parking survey indicates that all day parking is occurring in the street.
<b>5. Zagames – to manage high parking demand on Saturday – consider discussions with property owner to install some short-term parking restrictions.</b>	No issues have been raised by the public in this location and the property is currently under renovation. Consultation to be arranged with owners should there be any parking concerns raised.
<b>6. Dorset Sq – greater enforcement of short term (1/2 hour) restrictions.</b>	Council has endorsed a Parking Compliance Strategy which includes actions to address this matter. Council to consider trialling in ground sensors in some short term parking spaces.
<b>7. Restrict parking on one side of the following roads which are not wide enough to accommodate parking on both sides: Stonehaven Avenue, Tulip Crescent, Woodvale Road and Maryville Way.</b>	Major access concerns in Woodvale Rd and Tulip Cr meant that parking has already been restricted on one side. The parking management plan includes restrictions on one side in Stonehaven Ave and Maryville Way.

**Table 3 - Key Issues/Comments raised through the Draft Parking Management Plan**

<b>Issue/Comment raised</b>	<b>Response to Comment</b>
<b>1. Parking on street outside units is causing parking problems</b>	Requirements for the number of parking spaces for units are set in the state planning scheme.
<b>2. Orchid Ave –</b> <b>a. Private rubbish pick up after 7am</b> <b>b. Stop access alongside Dan Murphy Store</b> <b>c. Parking for residents outside homes</b> <b>d. Consider parking in unit developments</b> <b>e. Dumped supermarket trolleys</b>	<p>a. Noise pollution from private waste collection can be investigated by the Health team.</p> <p>b. Council is unable to restrict drivers using an existing private access way.</p> <p>c. 2 hour parking is currently permitted outside resident properties. Can consider 4 hour parking with the residents surveyed.</p> <p>d. Requirements for the number of parking spaces for units are set in the state planning scheme.</p> <p>e. Supermarket trolleys are managed by major supermarket chains.</p>
<b>3. Henry St and Power Rd Congestion</b> <b>a. Henry St one-way westbound</b> <b>b. No Parking on one side</b> <b>c. Resident/visitor permits</b> <b>d. No Parking on Power Rd from William St to Central Ave</b>	<p>a. One way streets restrict access for residents. Not needed for a low volume local street.</p> <p>b. No parking on south side was proposed in parking management plan. Can consider 4 hour parking with residents surveyed.</p> <p>c. Permit parking is not supported as there are more properties than parking spaces available in the street. Some units are not eligible under the Knox Parking Policy. Unrestricted parking is still available in the street.</p> <p>d. 'No Stopping' restrictions exist from William Rd to Henry St. Existing No Stopping areas provide space for vehicles to prop while another vehicle passes. No Stopping can be extended for 10m near the bend at Catherine St. Further restrictions may push commuter parking into nearby residential streets.</p>
<b>4.</b> <b>a. Advise the length &amp; width of parking spaces as stated in the Australian Standards</b>	a. The dimensions vary depending on the circumstances. The Australian Standards are used for all Council car parks.

<ul style="list-style-type: none"> <li><b>b. What are the number and location of accessible bays</b></li> <li><b>c. Review permission to park on naturestrips</b></li> </ul>	<ul style="list-style-type: none"> <li>b. Council is working toward ensuring all Council car parks to have at least one accessible parking bay. The number of car parking spaces required for people with disabilities is met as stated in the Australian Building Codes Board.</li> <li>c. Not parking on naturestrips is a regulation in the Victorian Road Rules. This protects underground services and trees from damage.</li> </ul>
<p><b>5.</b></p> <ul style="list-style-type: none"> <li><b>a. Planning issues- Provide adequate parking on site for at least 2 cars</b></li> <li><b>b. Difficult to utilise train outside peak hours as no parking available</b></li> </ul>	<ul style="list-style-type: none"> <li>a. Requirements for the number of parking spaces for units are set in the state planning scheme.</li> <li>b. 4 hour and unrestricted parking is available in local streets. Discuss with Metro an option for 10 minute drop off/pick up 6am-9am and unrestricted at other times</li> </ul>
<p><b>6. More commuter parking needed</b></p>	<p>Council advocates with State Government for commuter parking.</p>
<p><b>7. More spaces in Boronia Shopping Centre needed.</b></p>	<p>Cost of multilevel car park by Council is currently prohibitive.</p>
<p><b>8. Better cycling path connection from station to Zagames</b></p>	<p>Continue to advocate with land owners and state government for a better solution</p>
<p><b>9. More parking at Station. Advocate with State Government</b></p>	<p>Council advocates with State Government for commuter parking. The Federal Government have pledged funds for additional parking at Boronia station.</p>
<p><b>10. Pine Crescent</b></p> <ul style="list-style-type: none"> <li><b>a. Include parking restrictions for the whole length of Pine Crescent</b></li> <li><b>b. No stopping from Boronia Road to Stonehaven on one side</b></li> <li><b>c. No Stopping both side near child care and Scope</b></li> </ul>	<ul style="list-style-type: none"> <li>a. Pine Cr from Boronia Rd to Stonhaven Ave is included in the parking management plan.</li> <li>b. Existing No Parking restrictions on one side of road. 4 hour parking proposed for one side from the existing restrictions near Boronia Rd to Stonehaven Ave.</li> <li>c. Parking is restricted outside child care centre and 10 m from the intersection on the other side. Further restrictions may push all day parking further along street outside residential properties.</li> </ul>
<p><b>11. Henry Street</b></p> <ul style="list-style-type: none"> <li><b>a. Resident parking permits</b></li> <li><b>b. No Parking on south side</b></li> <li><b>c. 2 or 4 hour parking on north side</b></li> </ul>	<ul style="list-style-type: none"> <li>a. Permit parking is not supported as there are more properties than parking spaces available in the street. Some units are not eligible under the Knox Parking Policy. Unrestricted parking is still available in the street.</li> </ul>

---

	<ul style="list-style-type: none"> <li>b. No parking on south side was proposed in the parking management plan. Can consider 4 hour parking with residents surveyed.</li> <li>c. One side unrestricted to cater for longer term parking. Can consider 4 hour parking with residents surveyed on the south side.</li> </ul>
<b>12. Don't charge for parking</b>	No paid parking currently proposed

---



## 8.2 Call Up Item - Modifications and Upgrades to Tormore Reserve

**SUMMARY: Coordinator – Facilities, Brett Anderson**

**This report has been prepared in response to a Call Up Item from the Ordinary Council meeting on 28 October 2019, requesting that Council receive a report at the February 2020 Ordinary Meeting of Council that gives an estimate costing for a new two (2) storey pavilion at the Boronia Football Netball Club and an alternative stand-alone club room, using Modern Methods of Construction (MMC); how a new pavilion can be included in the Tormore Reserve Masterplan and that these options be included in 2020 budget discussions for Council's five (5) year infrastructure plan.**

### **RECOMMENDATION**

**That Council:**

- 1. Receives this Call Up Item report as resolved by Council on 28 October 2019 regarding desktop estimates for proposal for a two (2) storey pavilion, alternate proposal of stand-alone pavilion both using Modular Construction methods and methodology for adoption of a new pavilion in Tormore Reserve Masterplan; and**
- 2. Refers the estimates for consideration as a part of the 2020/21 budget process.**

### **1. INTRODUCTION**

This report responds to Agenda Item 14.2.2 from the Ordinary Meeting of Council, held on 28 October 2019, as follows:

*That Council receive a report at the Ordinary Council meeting in February 2020 that:*

- 1. Gives a desktop estimate of the cost of a new 2 storey pavilion proposed by the Boronia Football Netball Club using Modern Methods of Construction (MMC);*
- 2. Gives a desktop estimate of an alternate proposal to build a stand-alone clubroom using Modern Methods of Construction (MMC);*
- 3. Outlines the method by which we can include a new pavilion in the Tormore Reserve Masterplan; and*
- 4. Include these proposals in 2020 budget discussions for inclusion in Council's 5-year infrastructure plan.*

This report provides the information outlined above as requested.

### **3. DISCUSSION**

While Council has some experience in the provision and maintenance of single-storey modular buildings for sports facilities, there are few examples of two-storey modular buildings for public/sporting purposes.

Indications are engineering and materials requirements raise the costs and complexity of two-storey modular buildings.

Consequently, estimates are indicative only, based on current knowledge and would require further detailed assessment and scoping to achieve both a feasible and cost-confident result.

### **2.1 New Two-Storey Pavilion (MMC)**

The proposal for a two (2) storey pavilion using modern methods of construction is estimated at a total cost of \$4.847 million, based on the prepared concept plan.

Detailed items are provided in the Financial and Economic Implications section of this report.

In preparation of desktop estimates for both a new two (2) storey pavilion and a stand-alone clubroom, concept plans have been prepared for modular construction with building footprints overlaid on the existing pavilion location to:

- Reduce impact and costs of services provision;
- Reduce associated civil works for the construction (carpark, access pathways, etc.); and
- Be in line with the pavilion location of the approved Council Tormore Reserve Masterplan.

The concepts (and subsequent costings) are in line with the concept plan provided by Boronia Football Netball Club for a two (2) storey traditional build pavilion (copy attached) and Leisure Facilities standards for a municipal sports facility (with one sporting ground provision).

The siting of the proposed new pavilion near the existing pavilion, would contribute to a reduction of costs in both services provision and associated civil works. This is estimated at approximately \$100K when compared with recent secondary change room modular constructions, i.e. Batterham, Knox Gardens, Wally Tew and Colchester.

### **2.2 Stand-alone Clubroom (MMC)**

The alternative proposal to construct a stand-alone clubroom, using modern methods of construction, is estimated at a total cost of \$3.964 million, as per the prepared concept plan.

The difference of approx. \$883,632 in costs between item 2.1 and 2.1 is attributed to no lift requirements, reduction in fire services provisions, reduction in overall floor square meterage, reduction in verandah requirements/weather protection and less engineering design.

Both proposals have reduced allowances for services provision and associated civil works.

To ensure the veracity of the cost estimates, they have been compared with cost estimates for Lakesfield Pavilion, currently at design stage, which is similarly a full pavilion based on Facilities Standards provisions. Total cost has been estimated at \$2.2 million, for the Lakesfield Pavilion.

However, it should be noted, that the Lakesfield project is based on a total square meterage of 475sqm.

The proposals for Tormore are more than double the square meterage (1,067sqm for double story and 934sqm for single story) which is similarly reflected in the total costs being higher in comparison with Lakesfield Pavilion.

### **2.3 Traditional Alternative**

Although not requested, a further option for consideration would be to provide a stand-alone change room facility and keep the existing pavilion. This would involve keeping the existing building shell and refurbishing the existing pavilion, keeping the external shell and providing necessary change room/amenities in a secondary stand-alone facility.

A desk top estimate for this option provides a total cost of \$2.9 million.

This option would give further cost reductions; meet requirements for female sporting participation; meet accessibility requirements, prolong the life of existing infrastructure and total square meterage of existing pavilion (746sqm) and add a secondary change facility (265sqm).

However, further work would be required on commissioning concept plans, further consultation with the Boronia Football Netball Club and refining costs for this option.

#### **2.4 Tormore Reserve Masterplan**

The final stages of masterplan works identified at Tormore Reserve, namely play space upgrades, are expected to be completed by June 2020.

In addition, as part of the Public Toilets in Open Space Report to Council, Tormore Reserve was identified as a high priority site for delivery of a new public toilet. This is proposed for Design and Construction in 2020/21, subject to budget approval.

Consideration could be given to include the delivery of the new public toilet as a co-locatable facility, depending on timing and budget considerations.

The Tormore Reserve Masterplan would require review, only if the proposed building/pavilion location differs from the existing pavilion location in the North West corner of the Reserve.

Preparation of concept plans and desktop estimates are based on both proposals being located near the existing pavilion.

#### **2.5 Five-Year Infrastructure Plan**

Subject to Council support, both proposals may be considered as a part of the 2020/21 budget discussions, in Program 3000 – Major Projects as part of Council’s five (5) year Capital Works Program.

### **3. CONSULTATION**

Consultation, predominantly undertaken by Council’s Leisure Services Unit, has been undertaken with the community sporting groups that tenant Tormore Reserve, particularly in relation to expected growth and championing female participation in sports.

The clubs have provided a draft concept plan (for a traditional build) detailing their needs and requirements, which has formed the basis for this report. Consultation was also undertaken with residents in close proximity and passive reserve users, with the development of the Tormore Reserve Masterplan.

As the project progresses, consultation with tenant clubs and adjoining residents would continue.

### **4. ENVIRONMENTAL/AMENITY ISSUES**

Environmental issues were not specifically considered as part of this report as the project is at concept/feasibility stage.

However, if the project developed, considerations on infrastructure location, native surrounds of the Reserve and Council’s Sustainable Building and Infrastructure Policy will be referenced and considered in project development.

## 5. FINANCIAL & ECONOMIC IMPLICATIONS

Estimated costs outlined below are based on current industry prices. These estimated costs have been obtained by Council's Major Initiatives projects and from Council's current modular building projects. Costings can be refined subject to the development of detailed designs.

<b>Tormore Reserve (modular, full pavilion, double story)</b>	Services provision (water, electricity and gas)	\$35,000.00
	Building Permit & Levies	\$18,000.00
	Civil Works including additional Carpark and DDA carpark/landscaping	\$55,000.00
	Design	\$135,000.00
	Demolition existing building	\$30,000.00
	Building Floor area (1067sqm)	\$3,414,400.00
	Covered Veranda (110sqm)	\$254,000.00
	Project Management 3%	\$118,242.00
	Project Contingency 20%	\$788,280.00
	<b>Total Anticipated Cost</b>	<b>\$4,847,922.00</b>
<b>Tormore Reserve (modular, full pavilion, single story)</b>	Services provision (water, electricity and gas)	\$35,000.00
	Building Permit & Levies	\$17,000.00
	Civil Works incl additional Carpark and DDA carpark/landscaping	\$55,000.00
	Design	\$110,000.00
	Demolition existing building	\$30,000.00
	Building Floor area (934sqm)	\$2,802,000.00
	Covered Veranda (174sqm)	\$174,000.00
	Project Management 3%	\$96,690.00
	Project Contingency 20%	\$644,600.00
	<b>Total Anticipated Cost</b>	<b>\$3,964,290.00</b>
<b>Tormore Reserve (full pavilion to Facilities Standards based on Lakesfield Pavilion Concept) (cost comparison only)</b>	Service Provision (water, electricity and gas)	\$100,000.00
	Building Permit & Levies	\$15,000.00
	Civil Works incl. additional Car parking and DDA carpark/landscaping	\$285,000.00
	Design	\$80,000.00
	Demolition existing building (and trees)	\$130,000.00
	Building Floor area (475sqm)	\$1,200,000.00
	Covered Veranda (183sqm)	Inc above
	Project Management 3%	\$54,300
	Project Contingency 20%	\$362,000
	<b>Total Anticipated Cost</b>	<b>\$2,226,300.00</b>

As a part of preparing this report, consideration has been given to Council's 'Call Up Items at Council Meetings Policy', and in particular, Item 6.5 which states:

*Where preparing a report responding to a Call Up Item that will require more than 3 person days or \$5,000 in costs, then the matter which is subject to the Call Up Item should be referred by Council to the next budget considerations with a supporting business case for consideration along with other competing priorities.*

During the development of modular buildings, Council gave consideration to the expected lifespan of modulars, compared with traditional builds.

While traditional builds carry an expected life of 75 years, they are often refurbished and/or extended a number of times over their service life.

However, modular buildings are expected to have a service life of 25-30 years.

While modular buildings have an advantage of costing less to build with shorter completion times, over time, their service life (profile) differs from traditional builds, ie. extensions and refurbishment tends to favour traditional, existing buildings where new structures tend to favour modular construction.

## **6. SOCIAL IMPLICATIONS**

Promoting new and upgraded infrastructure will accommodate increased use among the community and meet anticipated growth in female participation in sports and accessibility for all whilst delivering a number of social benefits to the community, including:

- Improved access to quality sport and recreation opportunities;
- Improved physical and mental wellbeing outcomes;
- Culture of improved gender equity;
- Greater connectivity for individuals to engage within community based projects;
- Maximisation of community and Council facilities; and
- Increased capacity for local organisations to deliver activities and programs to the community.

## **7. RELEVANCE TO KNOX COMMUNITY AND COUNCIL PLAN 2017-2021**

### **Goal 1 - We value our natural and built environment**

Strategy 1.3 - Ensure the Knox local character is protected and enhanced through the design and location of urban development and infrastructure

### **Goal 6 - We are healthy, happy and well**

Strategy 6.1 - Mitigate lifestyle risks such as smoking, risky alcohol consumption and drug use, obesity, lack of physical activity and poor nutrition

Strategy 6.2 - Support the community to enable positive physical and mental health

### **Goal 7 - We are inclusive, feel a sense of belonging and value our identity**

Strategy 7.2 - Celebrate our diverse community

Strategy 7.3 - Strengthen community connections

Strategy 7.4 - Promote and celebrate the contribution of our volunteers

## **8. CONFLICT OF INTEREST**

Under section 80c of the Local Government Act 1989 officers providing advice to Council must disclose any interests, including the type of interest.

Author - Coordinator – Facilities, Brett Anderson - In providing this advice as the Author, I have no disclosable interests in this report.

Officer Responsible – Director, Engineering and Infrastructure, Ian Bell - In providing this advice as the Officer Responsible, I have no disclosable interests in this report.

## **9. CONCLUSION**

The preparation of this report is in response to Call Up Item (14.2.2) from the Ordinary Council meeting on 28 October 2019. The request was for the provision of desktop costings for a two-storey pavilion and an alternative, stand-alone clubroom using Modern Methods of Construction (MMC) and detailing what was required to review Tormore Reserve Masterplan for the provision of a new pavilion.

Concepts were commissioned and prepared based on the provision of a concept for a two-storey traditional build by the Boronia Football Netball Club and footprints overlaid on the existing pavilion location.

Desktop estimates based on these concepts are:

1. Two story pavilion – total cost                      \$4.84 million
2. Stand-alone clubroom – total cost                      \$3.96 million

Based on these proposals being sited in location of the existing pavilion, that is, the North-West corner of the reserve, the existing Masterplan would not require review.

Subject to Council support, these proposals may be referred to 2020/21 budget discussions for consideration under Program 3000 – Major Projects, as part of Council’s five (5) year Capital Works Program.

## **10. CONFIDENTIALITY**

There are no confidentiality issues attached to this report

**Report Prepared By:**                      **Coordinator – Facilities, Brett Anderson**

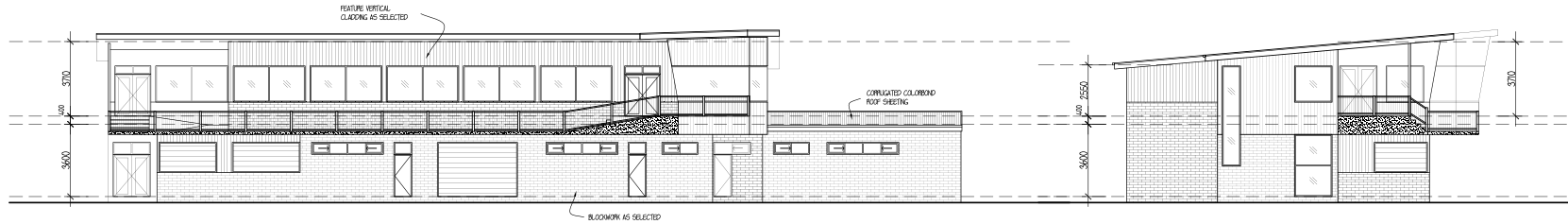
**Report Authorised By:**                      **Director – Engineering & Infrastructure, Ian Bell**

### **Attachments**

1. Attachment - Tormore Reserve Call Up Item Report - BFNC Concept Plans 30 7\_2019 [8.2.1 - 1 page]

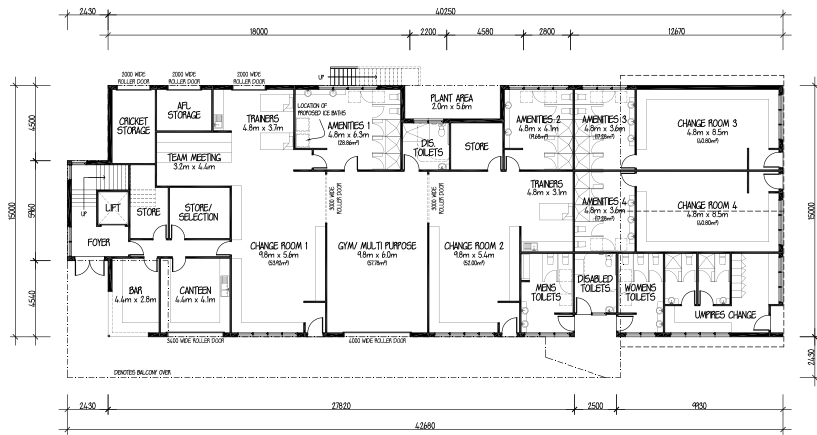


# CONCEPT PLANS



ELEVATION 1

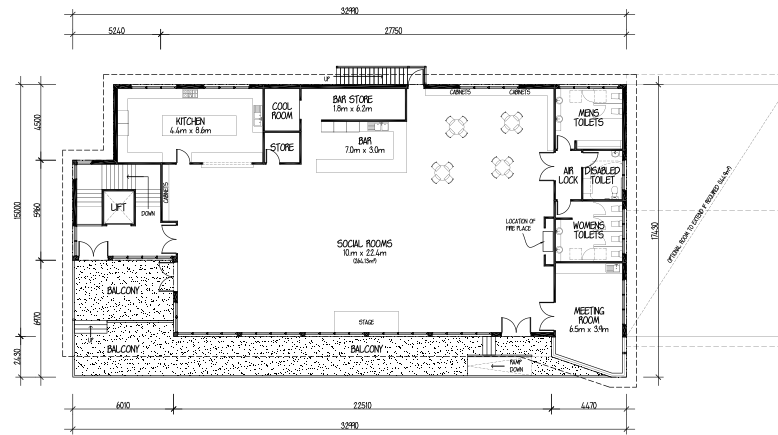
ELEVATION 2



PROPOSED GROUND FLOOR PLAN

AREAS:	
PROPOSED GROUND FLOOR	610.48m <sup>2</sup> 66.71 SQUARES
PROPOSED UPPER FLOOR	446.21m <sup>2</sup> 50.18 SQUARES
PROPOSED BALCONY	80.53m <sup>2</sup> 8.64 SQUARES
TOTAL AREA	1137.22m <sup>2</sup> 124.54 SQUARES

PRELIMINARY



PROPOSED UPPER FLOOR PLAN

AREAS:	
PROPOSED GROUND FLOOR	610.48m <sup>2</sup> 66.71 SQUARES
PROPOSED UPPER FLOOR	446.21m <sup>2</sup> 50.18 SQUARES
PROPOSED BALCONY	80.53m <sup>2</sup> 8.64 SQUARES
TOTAL AREA	1137.22m <sup>2</sup> 124.54 SQUARES

PRELIMINARY

PROPOSED NEW CLUBROOMS  
AT TORMORE ROAD, BORONIA  
FOR BORONIA FOOTBALL/ NETBALL & CRICKET CLUBS

**GENERAL NOTES:**  
 \* WRITTEN DIMENSIONS TAKE PRECEDENCE OVER SCALE  
 \* ALL MATERIALS & WORK PRACTICE SHALL COMPLY WITH BUT NOT LIMITED TO THE BUILDING REGULATIONS 2018, THE CURRENT B.C.A. AND ALL RELEVANT CURRENT AUSTRALIAN STANDARDS  
 \* THESE PLANS SHALL BE READ IN CONJUNCTION WITH ANY RELEVANT STRUCTURAL AND/OR SOIL ENGINEERING COMPUTATIONS, DRAWINGS AND REPORTS RELATING TO THIS PROJECT  
 \* THE BUILDER SHALL CHECK ALL DIMENSIONS, LEVELS & COMPONENTS INDICATED ON THIS DRAWING AND VERIFY ON SITE PRIOR TO COMMENCEMENT OF WORK  
 \* STRUCTURAL TIMBERS TO COMPLY WITH A.S. 1684-2010: HARDWOOD F8, RADIATA PINE F5 & F7, MACHINE GRADED PINE MCP 10 & 12 & KLN DRIED HARDWOOD F17  
 \* TERMITES PROTECTION IS REQUIRED TO COMPLY WITH A.S. 3660-2014  
 \* WINDOW SIZES NOMINATED ARE NOMINAL ONLY. ACTUAL SIZE MAY VARY WITH MANUFACTURER WINDOWS TO BE FLASHED ALL AROUND

**REVISIONS:**  
 MEMBER  
  
 BUILDING DESIGNERS ASSOCIATION OF VICTORIA

PROJECT NO: 19-1621 P3  
 SCALE: 1:100  
 DATE: 24/06/2019  
 SHEET NO: 1 OF 3  
 DRAWN: T. JONES  
 CHECKED: G.BICKNELL  
 BUILDING PRACTITIONER  
 REG NO. DP-AD 1285  
 COPYRIGHT - THESE DRAWINGS ARE NOT TO BE REPRODUCED IN PART OR WHOLE WITHOUT EXPRESS PERMISSION

Graeme Bicknell Pty. Ltd.  
 Architectural Drafting & Building Design  
 Phone: (03) 9762 3456 Fax: (03) 9762 3459  
 Mobile: 0409 147 348

## 9 Community Services Officers' Reports for consideration

### 9.1 Minor Grants Program 2019-20 Monthly Report

#### **SUMMARY: Community Partnerships Officer, Deb Robert**

This report summarises the grant applications recommended for approval in February 2020 for the Minor Grants Program. All applications have been assessed against the criteria set out in the Minor Grants Program Policy.

Applications under the Minor Grants Policy are limited to a maximum of \$3,000, which has been the current limit since the commencement of the 2019-2020 financial year.

#### **RECOMMENDATION**

**That Council:**

- Note that the following three applications have been approved and will be paid under delegated authority in accordance with Cl.6.6 of the Minor Grants Policy:

Applicant Name	Project Title	Amount Requested	Amount Recommended
Mountain Gate Tennis Club	Family Open Day	\$500.00	\$ 500.00
Panda Rounds Dance Club	Introduction to Round Dancing – Zest for Life Event	\$208.00	\$ 208.00
Ferntree Gully Bowls Club	Lights Launch	\$470.00	\$ 470.00
<b>TOTAL</b>			<b>\$1,178.00</b>

- Refuse one ineligible application for a total of \$1,000 as detailed below:

Applicant Name	Project Title	Amount Requested	Reason for Refusal
Dream Bridge Foundations	Rajesh Khanna:-Zindagi Kaisi Hai Paheli Community Music Program.	\$1000.00	Organisation is not incorporated or auspiced by an incorporated body (Cl 6.11)
<b>TOTAL</b>			<b>\$1,000.00</b>

- Note that, including the above recommended grants which total \$1,178.00, a total of \$102,497 has been awarded to date under the 2019-20 Minor Grants Program to support 53 different community groups and services across the municipality.



## **INTRODUCTION**

The Minor Grants Program provides a pool of grant funding that can respond on a monthly basis to requests for small amounts of funding to assist with short term, one-off projects or initiatives that are relatively minor in nature.

The objectives of the Minor Grants Program are:

- To increase and sustain participation in a wide range of quality services within the municipality; to build and strengthen local networks and partnerships; and to support community leadership, learning and skill development;
- To support new initiatives or the expansion of an existing service that will address a clearly identified community need and contribute to the development, promotion and accessibility of a diverse range of quality community services and community resources within Knox; and
- To increase the level of resources of community organisations that provide, help, advice or support to the Knox community.

Applications are assessed against criteria specified in the Minor Grants Program Policy (approved October 2018) to determine the eligibility of the applicant organisation and the eligibility of the grant application.

The Policy sets out an open and transparent grant program that meets the principles of good governance and is compliant with the requirements of the Local Government Act 1989 (Vic).

In accordance with the Policy, applications for funding have been assessed by the Chief Executive Officer, or delegate, for Council's approval.

## **1. DISCUSSION**

This report presents to Council the recommendations for recent Minor Grant Program applications in accordance with the Minor Grants Program Policy.

Four grant applications were received since January, requesting grants to a total of \$2,178. Three applications meet the Minor Grants Policy eligibility requirements and address the objectives of the Program and one did not.

The three applications – Mountain Gate Tennis Club (\$500 for Family Fun Day), Panda Rounds Dance Club (\$208 for Zest4Life Over55's activity) and Ferntree Gully Bowls Club (\$470 for an event to launch new lighting) - have been approved under delegation, in accordance with CI 6.6 of the Minor Grants Program Policy.

Officers refused one application - Dream Bridge Foundations (\$1,000 for Rajesh Khanna:-Zindagi Kaisi Hai Paheli Community Music Program) under Clause 6.11 as the organisation is not incorporated or auspiced by an incorporated body. It is noted that Council officers have contacted the applicant to discuss incorporation or auspicing requirements and have forwarded the Auspice Declaration Form. The applicant will arrange as soon as possible.

## **2. CONSULTATION**

Consultation is undertaken with relevant organisations in relation to their grant applications, if necessary, to seek clarity regarding their applications prior to Council's consideration.

Advice or information may be sought from officers across Council in relation to either the applying organisation or the proposed project or both, if considered necessary.

The Policy specifies assessment can occur by the Chief Executive Officer, or delegate, and make recommendation for Council's determination.

### **3. ENVIRONMENTAL/AMENITY ISSUES**

There are no environmental or amenity issues associated with this report.

### **4. FINANCIAL & ECONOMIC IMPLICATIONS**

The approval of Minor Grants is managed within Council's adopted budget. The 2019/2020 budget provides \$148,500 for the Minor Grants Program. Recommended applications for the February period total \$1,178. If approved, the remaining Minor Grants budget for 2019/20 will total \$51,566 prior to GST adjustments.

### **5. SOCIAL IMPLICATIONS**

The Minor Grants Program allows Council to respond promptly to requests from Knox- based community groups for small amounts of funding to assist a variety of community-based programs, projects or activities. The Minor Grants is a simple and streamlined source of funding that can make a significant difference for local community organisations in need of short-term, specific purpose assistance.

### **6. RELEVANCE TO KNOX COMMUNITY AND COUNCIL PLAN 2017-2021**

#### **Goal 6 - We are healthy, happy and well**

Strategy 6.2 - Support the community to enable positive physical and mental health.

#### **Goal 7 - We are inclusive, feel a sense of belonging and value our identity**

Strategy 7.3 - Strengthen community connections

Strategy 7.4 - Promote and celebrate the contribution of our volunteers.

### **7. CONFLICT OF INTEREST**

Under Section 80c of the Local Government Act 1989, officers providing advice to Council must disclose any interests, including the type of interest.

Author - Community Partnerships Officer, Deb Robert – In providing this advice as the Author, I have no disclosable interests in this report.

Officer Responsible – Director Community Services, Tanya Scicluna - In providing this advice as the Officer Responsible, I have no disclosable interests in this report.

### **8. CONCLUSION**

This report contains the recommendation for funding through the Minor Grants program.

**9. CONFIDENTIALITY**

A confidential attachment is circulated under a separate cover.

**Report Prepared By: Community Partnerships Officer, Deb Robert**

**Report Authorised By: Director Community Services, Tanya Scicluna**

**Attachments**

A confidential attachment has been circulated under separate cover.

## 9.2 Community Partnership Funding Review - Emergency Services

**SUMMARY:** Saskia Weerheim, Coordinator Community Partnerships and  
Raini Nailer, Community Development Officer – Access and Equity

Knox City Council acknowledges the vital role that our Emergency Services play in protecting the community from fire, natural disasters and other hazards as well as building the capacity of the community through volunteering. Knox City Council has historically funded the Country Fire Authority (CFA) and Victoria State Emergency Services (SES) through the Community Partnership Fund (previously known as Community Operational Funding), as well as through in-kind support such as the provision of premises. A four-yearly review of the Community Operational Funding Program was undertaken and at the Ordinary Meeting of Council, held on 22 January 2018, Council resolved to:

- Reduce operational funding to the local State Emergency Services (SES) from 2018-19 to 2020-21 by \$16,000 which represents an offset to the additional funding provided by the State Government in 2017-18 (relieving Council burden of covering local operational costs);
- Maintain the current level of aggregated funding to the Knox CFA group and brigades up until the 2020-21 financial year;
- Increase advocacy to the State Government to ensure that they commit to providing full operational funding for Knox Volunteer Based Emergency Services; and
- Conduct a review in 2019-20 to assess the impact of Council ceasing ongoing funding with the expectation that the operational needs of the Volunteer Based Emergency Services will be fully funded by the State Government by 2020-21

This Report outlines the findings of the Review.

### RECOMMENDATION

That Council maintain current funding arrangements under this Community Partnerships Funding round (2018-2022) and continue to provide funding to the seven CFA brigades located in Knox, the Knox Fire Brigades Group and the Knox SES.

### 1. INTRODUCTION

The CFA and SES provide vital services to keep our community safe from fires, natural disasters and other hazards. The mission of the SES is to: “Partner with communities, Government, other agencies and business to provide timely and effective Emergency Management Services, building community preparedness, disaster resilience and contributing to risk prevention”, while the CFA’s mission is to simply “protect and save lives” in the context of fire response and prevention.

These agencies are primarily funded by State Government for the purpose of training, equipment purchase and maintenance, and general operational costs. In addition to this, many local councils across the state provide additional funding to both of these services in a variety of ways, often through grants, donations and/or in-kind support.

At the time that Council was reviewing its Community Operational Funding Program, the State Government was undertaking a review of the provision of fire services across the State and there were concerns about funding being duplicated. This report outlines Knox City Council's current funding arrangements with the SES and CFA in the context of State Government reform.

## **2. DISCUSSION**

### **2.1 Council's Current Funding Arrangements**

Council currently supports the seven CFA brigades in Knox namely The Basin, Bayswater, Boronia, Upper Ferntree Gully, Scoresby, Rowville, Ferntree Gully as well the Knox Fire Brigades Group and the SES. It is estimated that approximately 500 to 600 volunteers are involved in emergency service provision in Knox.

Council provides a budget allocation each financial year through the Community Partnership Funding Program (CPF) to assist a range of community organisations across the municipality. The CPF grants assist with ongoing operational costs incurred in the delivery of agreed community outcomes that benefit Knox residents by addressing local community priorities. This grant has provided the SES and CFA services in Knox with \$76,312 in the 2018-19 financial year, and \$77,075 in 2019-20, which is 10.6% of the CPF budget in each period. This grant money is largely used for operational costs, volunteer training and support and equipment needs.

The CFA and SES are also eligible to apply for Council's Community Development Fund Grants and Minor Grants. Several CFA brigades have successfully applied for specific projects in the last two years.

### **2.2 Fire Services Reform**

Victoria's fire services have been going through a period of reform. A new organisation, Fire Rescue Victoria, will bring together MFB and CFA career firefighters to service metropolitan Melbourne and major regional centres.

The CFA will be restored as a volunteer firefighter organisation and serves rural, regional and urban areas. Victoria's 1,220 CFA volunteer brigades will be strengthened and supported to serve and protect their communities as they always have. It is noted that within the number of CFA volunteer brigades, there are 38 integrated stations staffed by career firefighters and volunteers. Both Boronia and Rowville are integrated stations. CFA volunteers currently serving at these integrated stations will be able to remain at that station if they choose to, co-locating with Fire Rescue Victoria services under the altered boundaries.

At the inception of the reform, the Labor Government designated a CFA Support Fund to strengthen volunteer recruitment, training, brigade support and leadership. There is also an annual State Government Volunteer Emergency Services Equipment Program, which provides funding to Victorian emergency services volunteer groups to purchase essential operational equipment, vehicles and appliances and minor facility improvements. Volunteer emergency services can apply for grants of up to \$150,000 with funding provided at a rate of \$2 for every \$1 of funding contributed by local volunteer groups.

### **2.3 Victorian State Emergency Services (SES)**

A key function of the SES is to assist municipal councils in emergency management. Historically, SES units have been dependent on local governments for unit accommodation and funding. This

arrangement was formalised through an agreement made between the MAV and State Government in 1989. Similar to funding arrangements for fire services, the State Government provides funding, facilities and equipment to the SES. Knox, along with other local Councils, have continued to maintain support for the local SES unit and its volunteers. Additionally, the SES are eligible to apply for grants through the State Government Volunteer Emergency Services Equipment Program (mentioned above).

### 3. CONSULTATION

This project was undertaken in consultation with Council's Emergency Management team and the Knox Group CFA Secretary. Benchmarking was conducted with other Councils to determine their level of support for emergency services. The below table shows the responses from the surveyed councils:

Council	Funding	Agency	Kind of funding	Purpose	Total Amount \$
Shire of Yarra Ranges	Yes	CFA	Monthly Small Grants Program Annual Grants Community Program	Events and celebrations, community information sessions	\$1000 \$10,000
		SES	Historical Agreement	Utilities and facilities	Unknown (in-kind)
Manningham City Council	Yes	CFA and SES	In-kind support	Facilities	Unknown
Maroondah City Council	Yes	SES	In-kind support		Unknown
Kingston City Council	Yes	SES	Partnership Grant (Triennial)	Operational Support	Chelsea \$52,000 Moorabbin \$27,000
<b>Knox City Council</b>	<b>Yes</b>	<b>SES and CFA</b>	<b>CPF, other grants and in-kind support</b>	<b>Equipment, Operational Support, Events</b>	<b>\$77,075 (19/20 CPF)</b>

### 4. ENVIRONMENTAL/AMENITY ISSUES

There are no environmental or amenity issues relating to the review of the grant funding.

### 5. FINANCIAL & ECONOMIC IMPLICATIONS

There are no financial implications for Council to maintain current funding levels for the CFA and SES as sufficient budget resources have already been allocated up until June, 2022 (when the current Community Partnership Round concludes).

## **6. SOCIAL IMPLICATIONS**

Council grant money provides vital support to local, volunteer-based community emergency services. Withdrawal of these funds may negatively impact the services provided to our community. Further, reduction or withdrawal of Council support at a time of increased demand and pressure on emergency services will be viewed unfavourably by our community who rely on these services in times of crisis.

## **7. RELEVANCE TO KNOX COMMUNITY AND COUNCIL PLAN 2017-2021**

### **Goal 4 - We are safe and secure**

Strategy 4.3 - Maintain and manage the safety of the natural and built environment.

Strategy 4.5 - Support the provision of emergency services.

### **Goal 7 - We are inclusive, feel a sense of belonging and value our identity**

Strategy 7.3 - Strengthen community connections.

Strategy 7.4 Promote and celebrate the contribution of our volunteers.

## **8. CONFLICT OF INTEREST**

Under section 80c of the Local Government Act 1989 officers providing advice to Council must disclose any interests, including the type of interest.

Authors - Coordinator Community Partnerships, Community Wellbeing, Saskia Weerheim and Community Development Officer – Access and Equity, Community Wellbeing, Raini Nailer – In providing this advice as the Officers Responsible, we have no disclosable interests in this report.

Officer Responsible – Director, Community Services, Tanya Scicluna – In providing this advice as the Officer Responsible, I have no disclosable interests in this report.

## **9. CONCLUSION**

The SES and CFA provide essential services to the community. The State Government is the main funder of the fire services, while both the State and Local Governments have a role to play in funding the core services of the SES.

The purpose of Knox City Council's grant funding is to facilitate social inclusion, cohesion and capacity building through community-led means such as volunteer participation. It is appropriate that Council continue to fund such opportunities. The local social connections and skill development available through volunteer participation within the CFA and SES are invaluable contributors to social capital within Knox; and clearly align with Council's goals and purpose of our grants.

At this time, it is evident that the local operational needs of emergency services in Knox are not yet being fully met by current funding arrangements. This means that volunteers continue to raise funds locally to support emergency service provision. For this reason, it is recommended that Council maintain current funding arrangements under this Community Partnerships Funding round (2018-2022) and continue to provide funding to the seven CFA brigades located in Knox, the Knox Fire Brigades Group and the Knox SES.

**10. CONFIDENTIALITY**

There are no items of a confidential nature in this report.

**Report Prepared By:** Coordinator Community Partnerships, Saskia Weerheim and  
Community Development Officer – Access and Equity, Raini Nailer

**Report Authorised By:** Director Community Services, Tanya Scicluna

**Attachments**

Nil



## 10 Corporate Services Officers' Reports for consideration

### 10.1 Conduct of 2020 Municipal General Elections

#### **SUMMARY: Governance Officer, Damian Watson**

**In accordance with section 41A(2A) of the Local Government Act 1989, voting at a general election must be conducted by the same means as the previous general election unless Council determines otherwise. Councils are required to pass a resolution at least eight months before election day (24 October 2020) if they intend to change the method of voting from the method used at the previous general election.**

**The 2016 municipal general election for Knox City Council was conducted by means of attendance voting.**

#### **RECOMMENDATION**

**That Council retain the method of attendance voting when conducting the 2020 Municipal General Elections for Knox City Council.**

#### **1. INTRODUCTION**

The next general council election will be on Saturday 24 October 2020. Section 41A of the Local Government Act 1989 (the Act) provides that Council can determine whether the election is to be conducted by attendance voting or by postal voting.

Council is required to pass a resolution at least eight months before election day (i.e. 24 February 2020) if it intends to change the method of voting from the method used at the previous general election.

This report considers the advantages and disadvantages of the two voting methodologies and recommends the attendance method adopted in 2016 be retained.

It is important to note that section 262(1) of the tabled *Local Government Bill 2019* provides the Minister for Local Government the power to determine the voting system to be used for general elections and by-elections. If the Bill is enacted and the Minister determines that postal voting is to be used for general elections, the Minister's decision would override any resolution of Council.

#### **2. DISCUSSION**

##### **2.1 Methods of Voting**

While the Act permits councils to select between two voting methods (postal and attendance), the default position in the legislation encourages continuity in voting methods between elections.

Knox City Council has traditionally conducted its municipal elections by attendance voting, with two exceptions being the 2004 and 2015 By-Elections which used postal voting.

Whilst against the trend towards the postal voting method for Local Government elections in Victoria, Knox's high voter turnout for attendance votes (discussed in more detail later in this

report) is also contrary to trend, and demonstrates strong support for the continuation of attendance elections.

### 2.1.1 Postal Voting

Postal voting requires voters to return their ballots by mail. Each voter is sent a ballot pack that contains the voting instructions, candidate statements, ballot papers and an envelope for returning the completed ballot paper. Voting for postal elections closes at 6.00pm on the Friday before election day.

Based upon research and officer experience, the following advantages and disadvantages are associated with postal voting:

<b>Advantages</b>	<b>Disadvantages</b>
Typically increased average voter participation rates	Perception of decreased security and confidentiality
Typically decreased average informal voting rates	Alleged increase in 'dummy' candidates
Greater convenience for voters	Lack of face-to-face interaction between voters and candidates at voting centres
	Greater isolation from community members and advocates while undertaking the voting process
	Less access to information on relevant candidates when voting

As stated above, the key advantage of the postal technique is an increased average voter participation rate. This advantage does not apply to the Knox municipality which has an attendance rate for elections and by-elections significantly higher than the state attendance average.

### 2.1.2 Attendance Voting

Attendance voting requires most voters to cast their vote at one of a number of voting centres by 6.00pm on election day. The locations of voting centres are advertised in local papers and online. It is also possible to vote early at an early voting centre or by applying for a postal vote, thereby providing greater choice and flexibility to the voter in casting their vote.

Based on research and officers' experience, the following general advantages and disadvantages are associated with attendance voting:

<b>Advantages</b>	<b>Disadvantages</b>
Same system used for Federal and State elections	Increased costs associated with running election
Demonstrates the commitment from a candidate towards nomination	Typically lower average voter participation rates
Candidates have the opportunity to influence voters right up to election day	Typically higher average informal voting rate

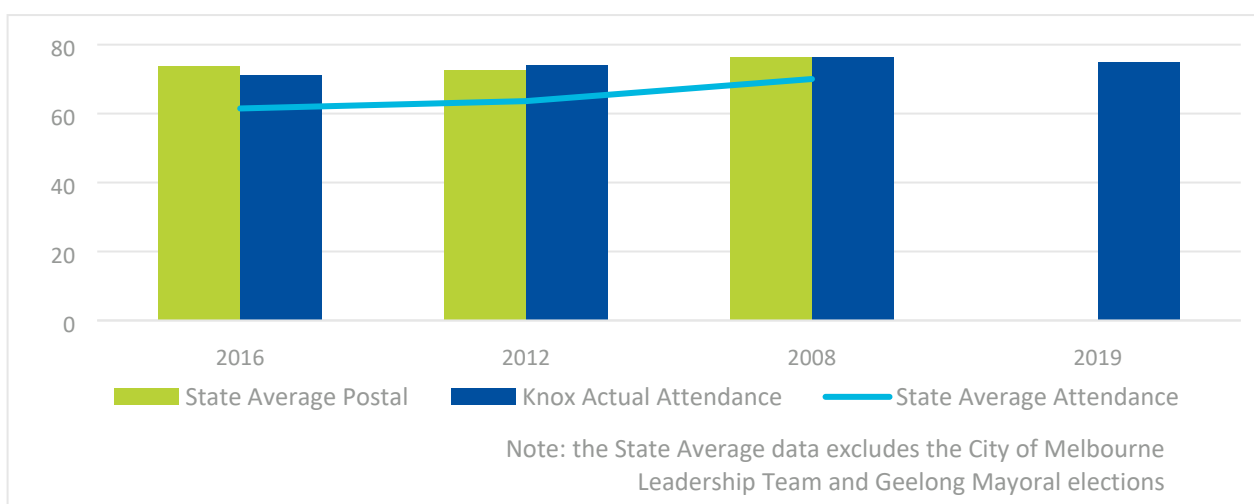
Advantages	Disadvantages
Opportunities for community interaction	Less convenient for ratepayers residing outside of municipality
Includes pre-poll and postal and voting options for those who cannot attend	Increased resources required by Council to provide multiple polling locations
Allows Schools and community groups to conduct event such as barbeques and foster an inclusive community feeling	

Specifically for Knox, there is a general advantage that attendance voting in 2020 would be consistent with the recent Collier Ward by-election and the previous 2016 general election.

## 2.2 Voter Turnout and Informal Voting Rates

Voter turnout is measured as the number of formal and informal votes received by the close of voting, as a percentage of voters on the roll. In their *Report on Conduct of the 2016 Local Government Elections*, the VEC identified voter turnout is impacted by the method of voting used by Council. Results typically indicate postal voting generates a higher voter turnout.

As shown below however, the voter participation rate at Knox general elections is consistent with the state average for postal elections; and exceeds the state average for attendance elections.



The graph also shows the strong participation rate trend continued for the 2019 Collier Ward by-election which was also conducted as an attendance election. In contrast, the previous Scott Ward By-Election in 2015 was a postal vote and achieved only a 70.53% turnout.

This data reflects a strong desire and practice in the Knox community to participate in attendance voting.

An informal vote is one where the voter has not completed their ballot paper according to instructions or where their voting intention is not clear. Ballot papers that do not comply with the formality rules are not admitted to count.

In 2016, the state average for informality was 8.44% in attendance elections. Informal voting at Knox’s attendance election however was 6.07%, significantly better than the state average, and better even than the average for postal elections which was 6.29%.

Again, the data reflects a strong desire in Knox to participate in the democratic process.

### **2.3 Conclusion**

A change to postal voting is not recommended for the 2020 elections. Past results indicate postal voting is unlikely to significantly improve voter turnout and formality in Knox. In contrast to a change in voting method, the continuation of attendance voting in 2020 may in fact minimise voter confusion as it will be consistent with voters' previous experience in Knox, and in state and federal elections.

Attendance voting will also continue to provide a range of voting options (i.e. attendance, pre-poll and postal) and the additional benefit of promoting inclusivity by allowing not just candidates but also community groups and schools to engage with the community at polling stations.

This is also consistent with Council's previous advocacy positions, for example on submissions to the Review of the Local Government Act 1989

### **3. CONSULTATION**

The election process requires substantial advertising throughout the electoral period which will be carried out on behalf of Council by the VEC.

### **4. ENVIRONMENTAL/AMENITY ISSUES**

There are no direct environmental or amenity issues associated with this report.

### **5. FINANCIAL & ECONOMIC IMPLICATIONS**

Council's decision on the voting system to be adopted for the election will inform how Council officers and the Victorian Electoral Commission prepare for the October 2020 municipal general elections and therefore the cost of the election.

Council has received cost estimates from the VEC for elections conducted using both the attendance and postal method of voting. These estimates have been prepared using key parameters that were agreed with Knox City Council for the conduct of the 2016 general elections.

The estimate provided by the VEC is in two parts. The first part is an estimate for the preparation of the municipal voters' roll and conduct of the elections, which will be invoiced during the 2020-21 financial year. The second part is an estimate for compulsory voting enforcement, which will be invoiced during the 2020-21 and 2021-22 financial years with the possibility that some contingency costs (i.e. prosecution of non-voters) will continue into the out-years.

The cost variance relates to the preparation of the municipal voters' roll and conduct of the elections. For these elements, a contested attendance election in nine Wards has an estimated cost of \$772,000 (excluding GST). For the equivalent postal ballot the estimated cost is \$571,000 (excluding GST).

## **6. SOCIAL IMPLICATIONS**

This report supports Council's commitment to being open, fair, equitable and transparent in the conduct of Council elections and will further enhance good governance practices.

## **7. RELEVANCE TO KNOX COMMUNITY AND COUNCIL PLAN 2017-2021**

### **Goal 8 - We have confidence in decision making**

Strategy 8.1 - Build, strengthen and promote good governance practices across government and community organisations

## **8. CONFLICT OF INTEREST**

Under section 80c of the Local Government Act 1989 officers providing advice to Council must disclose any interests, including the type of interest.

Author - Governance Officer, Damian Watson - In providing this advice as the Author, I have no disclosable interests in this report.

Officer Responsible – Director, City Development, Matt Kelleher - In providing this advice as the Officer Responsible, I have no disclosable interests in this report.

## **9. CONCLUSION**

In light of Knox community's engagement at recent attendance-based elections, it is recommended that Council resolve to retain the attendance method of voting for the 2020 municipal general election.

## **10. CONFIDENTIALITY**

There are no items of a confidential nature in this report.

**Report Prepared By:** Governance Officer, Damian Watson

**Report Authorised By:** Director, City Development, Matt Kelleher

## **Attachments**

Nil

## 10.2 Live Streaming of Council Meetings Policy

### **SUMMARY: Coordinator Governance, Andrew Dowling**

**The draft Live Streaming of Public Meetings Policy has been developed to provide an appropriate policy framework within which to implement the recording and broadcasting of public meetings.**

### **RECOMMENDATION**

**That Council:**

- 1. Adopt the Live Streaming of Public Meetings Policy as shown in Attachment 1 to this report; and**
- 2. Note that live streaming of Council and Strategic Planning Committee meetings shall commence from the Ordinary Council Meeting of Monday 30 March 2020.**

### **1. INTRODUCTION**

A resolution enabling the recording and broadcasting of meetings, effective from the first quarter of 2020, was passed at the Ordinary Council meeting on 23 September 2019.

The Live Streaming of Public Meetings Policy (the Policy) is the key document in the framework within which Council will deliver live streaming of its Ordinary and Special Council meetings and Special Committee meetings.

### **2. DISCUSSION**

The Policy as presented establishes that:

- All Ordinary and Special Council meetings and Special Committee meetings will be live streamed, unless they are closed to the public.
- Recordings will generally be made available on Council's website for a minimum period of two years.
- License is provided to use live streams and recordings for personal and non-commercial use and that Council retains copyright for all recordings.

The Policy acknowledges the relevant privacy issues and provides for appropriate notice to affected parties and is considered the appropriate balance between the competing private and public interests associated with broadcasting Council meetings.

The Policy includes appropriate information for Councillors, staff and the public attending a meeting, regarding "inappropriate material" (which in general terms includes defamatory and offensive content, confidential or privileged content and content which would breach privacy).

The Policy ensures that the Chairperson and/or Chief Executive Officer have appropriate discretion and authority in certain circumstances:

- To terminate the live stream during a meeting; or
- Not to publish a recording following a meeting.

Subject to Council's determination, officers will proceed to ensure the community, and attendees of future Council and Special Committee meetings, are appropriately informed regarding the commencement and implications of live streaming.

### **3. CONSULTATION**

The draft Live Streaming of Public Meetings Policy has been prepared with reference to similar policies adopted by other Victorian Local Governments.

### **4. ENVIRONMENTAL/AMENITY ISSUES**

Nil.

### **5. FINANCIAL & ECONOMIC IMPLICATIONS**

The purchase and installation of the live streaming infrastructure was \$16,980, with an annual subscription of \$15,120.

### **6. SOCIAL IMPLICATIONS**

While recognising there are privacy implications arising as a consequence of Council's decisions to live stream Council meetings, the Policy acknowledges that live streaming meetings contributes to improved transparency, accessibility and awareness of Council's decision making processes, promoting confidence in the integrity and accountability of the decision makers and the Council.

### **7. RELEVANCE TO KNOX COMMUNITY AND COUNCIL PLAN 2017-2021**

#### **Goal 8 - We have confidence in decision making**

Strategy 8.2 - Enable the community to participate in a wide range of engagement activities

### **8. CONFLICT OF INTEREST**

Under section 80c of the Local Government Act 1989 officers providing advice to Council must disclose any interests, including the type of interest.

Author – Coordinator, Governance, Andrew Dowling - In providing this advice as the Author, I have no disclosable interests in this report.

Officer Responsible – Director, City Development, Matt Kelleher - In providing this advice as the Officer Responsible, I have no disclosable interests in this report.

### **9. CONCLUSION**

The Policy as presented is considered an appropriate and necessary policy framework to support the commencement of live streaming scheduled for 30 March 2020.

## **10. CONFIDENTIALITY**

There are no items of a confidential nature in this report.

**Report Prepared By:                   Coordinator Governance, Andrew Dowling**

**Report Authorised By:               Director, City Development, Matt Kelleher**

### **Attachments**

1. Policy - DRAFT - Live Streaming Policy ( D 19-328751) [**10.2.1** - 5 pages]





# Live Streaming of Public Meetings

Policy Number:	2019/10	Directorate:	Corporate Services
Approval by:	Council	Responsible Officer:	Manager Governance
Approval Date:	Meeting Date	Version Number:	1
Review Date:	3 Years from Meeting Date		

## 1. Purpose

The purpose of this policy is to:

- affirm Council's commitment to transparent and accessible decision making; and
- set out the requirements for the recording, live streaming and archiving of Ordinary and Special Council meetings and Special Committee meetings.

## 2. Context

Council and Special Committee meetings are a forum for decision making and, while written minutes capture the decisions and other outputs of these meetings, they do not generally reflect the deliberations or debate.

The recording and live streaming of public meetings will ensure that the robust decision making in the Council Chamber is accessible to all interested members of the public, rather than just those who attend meetings.

Increased community awareness of Council's decision making process can promote confidence in the integrity and accountability of the decision makers and the Council.

The Meeting Procedure and Use of Common Seal Local Law 2018 (Local Law) provides the procedures governing the conduct of Council and Special Committee meetings. Section 65 of the Local Law prohibits a person from recording or broadcasting a meeting without the consent of the Mayor or Chairperson or a resolution of the meeting. A resolution enabling the recording and broadcasting of meetings, effective from the first quarter of 2020, was passed at the Ordinary Council meeting on 23 September 2019.

## 3. Scope

This policy applies to:

- Councillors, officers and members of the public who attend Ordinary and Special Council meetings and Special Committee meetings.
- Live streams and recordings made of Ordinary and Special Council meetings and Special Committee meetings at the Civic Centre.



## 4. References

- 4.1 Community & Council Plan 2017-2021
- Goal 8 – We have confidence in decision making
- 4.2 Relevant Legislation
- Local Government Act 1989
  - Privacy and Data Protection Act 2014
  - Freedom of Information Act 1982
- 4.3 Charter of Human Rights
- This policy has been assessed against and is consistent with the charter of Human Rights.
- 4.4 Related Council Policies
- Meeting Procedure and Use of Common Seal Local Law 2018
  - Councillor Code of Conduct
  - Staff Code of Conduct
- 4.5 Related Council Procedures
- Nil

## 5. Definitions

Chairperson	means the Chairperson of the Meeting and includes an acting, temporary or substitute Chairperson.
Civic Offices	Council's offices at 511 Burwood Hwy Wantirna South
Confidential meeting	means a meeting which has been closed to members of the public under section 89(2) of the Local Government Act 1989.
Council	means Knox City Council, whether constituted before or after the commencement of this Policy.
Event	means an activity, presentation, forum or celebration organised and hosted by Knox City Council
Inappropriate Material	means material considered to be: <ul style="list-style-type: none"> <li>• defamatory;</li> <li>• an infringement of copyright;</li> <li>• a breach of privacy;</li> <li>• offensive;</li> <li>• vilification or inciting hatred;</li> <li>• discriminatory; and/or</li> <li>• confidential or privileged.</li> </ul>
Live Stream	means the transmission of live audio visual coverage of a event over the Internet.
Public Meeting	means an Ordinary Meeting or a Special Meeting of Council or a Special Committee meeting that is open to the public.



Officer	means a person employed by Knox City Council, including the Chief Executive Officer, Directors, Managers and any person engaged as a short term employee or a contractor undertaking duties on behalf of Council.
Recording	means the saving of the live stream.

## 6. Council Policy

All public meetings will be live streamed live and recorded for viewing at a later date via Council's website.

The Chief Executive Officer may authorise the live streaming of events held in the Council Chamber or applicable function rooms outside the operation of this policy.

## 7. Confidential Public Meetings

If a Council or Special Committee has resolved that a public meeting be closed to members of the public in accordance with section 89(2) of the Act, live streaming of that meeting will cease.

Council officers may continue to operate a recording device for the purpose of production of the minutes of the meeting. Subject to any relevant laws, a recording of a confidential meeting must not be published by Council or its service provider, or otherwise released to the public, and should be destroyed once the confidential minutes have been produced.

## 8. Privacy and Notice of Live Streaming

Where a public meeting is to be live streamed and recorded, reasonable notice must be given, including where practicable, on the agenda for the meeting, and on any invitations and/or promotional material for the meeting including on Council's relevant website/social media channels.

Signs notifying the public must also be placed at various highly visible locations within the Civic Centre.

As soon as practicable during a public meeting, the Chairperson will advise those in attendance that the meeting is being live streamed and that a video and audio recording will be published on Council's website.

The standard positioning of the cameras are intended to only capture the Councillors, Council's Executive Management Team and Governance staff seated at the Council table. While Council has endeavoured not to capture visual images of members of the gallery or other staff present at a public meeting it is possible that members of the public gallery and Council officers may be incidentally captured on the live stream and recording.

Members of the public who address a public meeting during public question time will be heard and may be seen on the live stream and any audio and video captured will be in the recording. Additional notice regarding live streaming will therefore be included on all public question time forms.

By attending a Council meeting, attendees will be taken as having consented to their image, speech or statements being live streamed and published on Council's website.

If a member of the public does not wish to be filmed or recorded they may contact a Council officer to discuss alternative options prior to the public meeting or event.

If a member of staff does not wish to be filmed or recorded they should discuss their concerns with their respective Manager, Executive Manager or Director, or the Chief Executive Officer.



## 9. Access to Recordings of Meetings

Recordings of all public meetings will be processed by Council's service provider and, in ordinary circumstances, made available for viewing within two (2) working days of the meeting.

Recordings of public meetings will generally be available through Council's website and for a minimum of two (2) years.

Viewing live or recorded audio and video over the internet consumes data. Public meetings are often hours long, consequently viewing the live stream or recordings over the internet can consume large amounts of data. The user is responsible for any charges that a service provider may impose for data usage, particularly over a mobile internet connection.

Council will make reasonable effort to ensure the availability of a live stream and recording of a public meeting. However, there may be instances where they are not available, due to technical difficulties. Technical issues may include, but are not limited to, the availability of the internet, network or device failure or malfunction, unavailability of the website or power outages. There may also be other, non-technical circumstances that prevent the live streaming or recording of meetings.

Council takes no responsibility for and accepts no liability in the event that live streaming of a meeting, a recording of a meeting, or Council's website is unavailable.

## 10. Licence and Use of Recordings

Access to live streams and recordings of public meetings is provided on Council's website for personal and non-commercial use. Video, images and audio contained in a live stream or recording of a Council meeting or event must not be altered, reproduced or republished without the permission of Council.

Copyright of all recordings remains with Council.

## 11. Inappropriate Material

Public meetings are a forum of statements, debate, questions and answers and there is a risk that contributions made by Councillors, officers or the public may include inappropriate material. Such contributions are not protected or privileged, and Councillors, employees and members of the public may therefore be the subject of legal proceedings in relation to statements they make.

The live streaming of public meetings and the publishing of any recordings made increases the potential audience, and the potential risks associated with publishing inappropriate material.

Councillors, Council officers and members of the public are solely responsible for their own comments which are live streamed and/or recorded and therefore may be liable for any loss or damage they cause.

Opinions expressed and statements made during a Council meeting are those of the individuals making them, and not those of Council. Unless set out in a resolution of Council, Council does not endorse or support the views, opinions, standards, or information that may be expressed by individuals at a public meeting and which may be contained in a live stream or recording of a public meeting.

The Chief Executive Officer may determine to either not publish the recording of a meeting or publish an edited version, where they believe that recording contains inappropriate material. Notice of such a decision will be published on Council's website.



## 12. Termination of Live Streaming

Council is responsible for the act of publishing the material on Council's website and therefore may be liable for any loss and damage caused to a person due to the publishing of the inappropriate material.

Consequently, the Chairperson and/or Chief Executive Officer have the discretion and the authority at any time, to direct the termination or interruption of the live streaming of a public meeting if they consider the content or conduct of the meeting has, or is likely to, cause the live streaming of inappropriate information.

In addition, the Chairperson and/or Chief Executive Officer have the discretion and the authority at any time, to direct the termination or interruption of the live streaming of a public meeting if they consider there has been, is, or is likely to be:

- a risk or threat to public health and safety or the health and safety of an individual;
- a threat of violence or aggression by one or more people attending the meeting against others;
- unlawful conduct by an attendee of the meeting;
- significant disruption of the meeting by the conduct of an attendee; and/or
- a reputational risk to the Council.

## 13. Standing of Live Streams/Recordings

Endorsed Council minutes provide the definitive record of Council's resolutions at Ordinary or Special Council meetings, and Special Committee meetings.

Viewers should exercise caution before using or relying upon information or statements provided in a live stream or recording of a Council meeting.

## 14. Administrative Updates

From time to time, circumstances may change leading to the need for minor administrative changes to this policy. Where an update does not materially alter this policy, such a change may be made administratively. Examples of minor administrative changes include changes to names of Council departments or positions, change to names of Federal or State Government departments or a minor amendment to legislation that does not have material impact. Where any change or update may materially change the intent of this policy, it must be considered by Council.

## 10.3 Financial Performance Report for the Period Ended 31 December 2019

**SUMMARY: Coordinator Management Accounting, James Morris**

**The Financial Performance Report for the period ended 31 December 2019 is presented for consideration.**

### **RECOMMENDATION**

**That Council receive and note the Financial Performance Report for the period ended 31 December 2019.**

### **1. INTRODUCTION**

The provision of the quarterly Financial Performance Report to Council ensures that associated processes are accountable, transparent and responsible resulting in sound financial management.

The attached Financial Performance Report (Attachment 1) has been prepared in accordance with Australian Accounting Standards and contains the following financial statements:

- Comprehensive Income Statement;
- Balance Sheet;
- Cash Flow Statement; and
- Statement of Capital Works.

The Financial Performance Report is aimed and designed to identify major variations against Council's year to date financial performance (actual results) and the Adopted Budget. Council adopted its 2019-20 Annual Budget at its Ordinary Council Meeting held 24 June 2019.

The financial year-end position of Council is anticipated by way of forecasts. The full year Adopted Budget is compared against the full year projected position as reflected by the Forecast. The 2019-20 Forecast includes the following details:

- The 2019-20 Adopted Budget;
- Carry forward funding from 2018-19 into 2019-20 for both operational and capital works expenditure items. These funds are required for the successful completion and delivery of key outcomes and projects; and
- Adjustments as a result of officers periodically assessing Council's budgetary performance taking into account emerging events and matters.

### **2. DISCUSSION**

General discussion in regards to this report is detailed under Section 5 'Financial & Economic Implications'.

### **3. CONSULTATION**

This report does not necessitate community consultation. A copy of the quarterly Financial Performance Report is provided to Council's Audit Committee.

#### **4. ENVIRONMENTAL/AMENITY ISSUES**

This report does not have any environmental or amenity issues for discussion.

#### **5. FINANCIAL & ECONOMIC IMPLICATIONS**

The overall financial position at 31 December 2019 is satisfactory and indicates that Council, after taking into consideration carry forward funding requirements from 2018-19 into 2019-20, is on track to complete the current financial year within the targets established in the 2019-20 Adopted Budget.

For the period ended 31 December 2019, Council has achieved an operating surplus of \$70.298 million. This is \$2.346 million favourable to the year to date (YTD) Adopted Budget. Council's forecast year-end position is an operating surplus of \$10.390 million, which is \$6.752 million more than the Adopted Budget primarily due to the carry forward of Land Sales relating to Kingston Links from 2018-19 into 2019-20.

The total capital works expenditure for the period ended 31 December 2019 is \$28.896 million. This is \$7.496 million more than the YTD Adopted Budget. The forecast capital works expenditure for the year is \$101.759 million and includes \$44.556 million in carry forward funding requirements from 2018-19 into 2019-20, and excludes \$12.118 million in anticipated carry forward expenditure from 2019-20 into 2020-21.

Further detail and discussion of the financial performance of Council for the period ended 31 December 2019 is provided in the attached Financial Performance Report (Attachment 1).

#### **6. SOCIAL IMPLICATIONS**

There are no direct social implications arising from this report.

#### **7. RELEVANCE TO KNOX COMMUNITY AND COUNCIL PLAN 2017-2021**

##### **Goal 8 - We have confidence in decision making**

Strategy 8.1 - Build, strengthen and promote good governance practices across government and community organisations

#### **8. CONFLICT OF INTEREST**

Under section 80c of the Local Government Act 1989 officers providing advice to Council must disclose any interests, including the type of interest.

Author – Coordinator Management Accounting, James Morris - In providing this advice as the Author, I have no disclosable interests in this report.

Officer Responsible – Director, City Development, Matt Kelleher - In providing this advice as the Officer Responsible, I have no disclosable interests in this report.

## **9. CONCLUSION**

Council has achieved an operating surplus of \$70.298 million for the period ended 31 December 2019, which compares favourably with the year to date Adopted Budget operating surplus of \$67.951 million. An operating surplus of \$10.390 million is forecast for 2019-20.

## **10. CONFIDENTIALITY**

There are no items of a confidential nature in this report.

**Report Prepared By:** Coordinator Management Accounting, James Morris

**Report Authorised By:** Director, City Development, Matt Kelleher

## **Attachments**

1. Attachment 1 - Financial Performance Report - 2019-12 [**10.3.1** - 19 pages]



**KNOX**  
your city



# **Financial Performance Report**

## **For year to date ended 31 December 2019**

## Contents

### Financial Performance Report for year to date ended 31 December 2019

---



<b>Title</b>	<b>Page</b>
Executive Summary	2
Comprehensive Income Statement	6
Summary of Net Income and Expenditure	7
Statement of Capital Works	10
Balance Sheet	12
Statement of Cash Flows	14
Financial Performance Indicators	16
Investment Analysis	18

# Executive Summary

## Financial Performance Report for the year to date ended 31 December 2019

---



### Introduction and Purpose

The Financial Performance Report for the year to date ended 31 December 2019 has been prepared in accordance with Australian Accounting Standards and contains the following financial statements:

- Comprehensive Income Statement;
- Balance Sheet;
- Cash Flow Statement; and
- Statement of Capital Works.

This report is aimed and designed to identify major variations against Council's year to date financial performance (actual results) and the Adopted Budget and anticipate the financial position of Council as at financial year end by way of forecasts. Council adopted its 2019-20 Annual Budget at its Ordinary Council Meeting held 24 June 2019.

The full year Adopted Budget is compared against the full year projected position as reflected by the Forecast. The 2019-20 Forecast includes carry forward funding from 2018-19 into 2019-20 for both operational and capital works expenditure items. These funds are required for the successful completion and delivery of key outcomes and projects.

### Discussion of Financial Results

#### Forecast

Access to the live budgetary forecast screen in magIQ for the 2019-20 financial year went live on 1 November 2019 in line with the launch of the 2020-21 budget process. Forecasts can now be updated at any stage throughout the remainder of the financial year.

The 2019-20 Forecast includes the following adjustments:

#### *Income*

- \$7.600M increase in Land Sales relating to Kingston Links, carried forward from 2018-19 into 2019-20;
- \$3.538M increase in Capital Grants and Contributions carried forward from 2018-19 into 2019-20; and
- \$0.900M decrease in Public Open Space Contributions – income of this nature is unpredictable and is directly contingent on Developer activities in the municipality.

#### *Expenses (Operating and Capital Works)*

- \$23.076M in additional carry forward funding from 2018-19 into 2019-20 for both operational expenditure (\$4.297M) and capital works expenditure (\$18.779M). These funds are required for the successful completion and delivery of key outcomes and projects;
- The above carry forward of capital works expenditure is in addition to the \$25.777M of carry forward capital works expenditure included in the Adopted Budget (making a total capital carry forward expenditure of \$44.556M); and
- Anticipated \$12.118M in carry forward funding from 2019-20 into 2020-21 for approved capital works expenditure identified as being required to carry forward. This anticipated carry forward in capital works includes \$7.719M relating to the Stamford Park redevelopment, \$3.200M relating to the Westfield Library Upgrade, \$0.800M relating to the BAMP Facility Upgrades, and \$0.399M relating to information technology.

# Executive Summary (continued)

## Financial Performance Report for the year to date ended 31 December 2019



### Year-to-Date Operating Results

Operating Results	Year to Date			Full Year		
	Adopted			Adopted	Forecast	Variance
	Budget	Actual	Variance	Budget	Forecast	Variance
	\$'000's	\$'000's	\$'000's	\$'000's	\$'000's	\$'000's
Income	148,809	149,440	631	174,292	179,175	4,883
Expense	80,858	79,142	1,715	170,654	168,785	1,869
<b>Surplus (Deficit)</b>	<b>67,951</b>	<b>70,298</b>	<b>2,346</b>	<b>3,638</b>	<b>10,390</b>	<b>6,752</b>

Full year Forecast for Operating Results includes \$4.297M in carry forward net expenditure from 2018-19 into 2019-20, together with \$0.997M in additional carry forward expenditure for capital works that is operational in nature.

Overall there is a \$2.346M favourable variance between the YTD actual figures and the Adopted Budget.

The major variances include:

#### Income

- Favourable variance of \$0.447M in Capital Grants due to the receipt of grants carried forward from 2018-19.

#### Expenses (Operating and Capital Works)

- Favourable variance of \$0.802M in Materials and Services due to the timing of activities and incoming invoices within various departments, in particular in Waste Management (\$0.355M) and Information Technology (\$0.342M)
- Favourable timing variance of \$1.137M in Borrowing Costs as budgeted borrowings have yet to be taken up
- Favourable variance of \$1.044M in Net Gain/Loss on Disposal of Property due to the timing of asset disposals
- Unfavourable variance of \$1.164M in Employee Costs, with some of this variance being offset by increases in income or reductions in Materials and Services, while the timing of employees taking leave has also impacted.

### Capital Works Program

Capital Works Expenditure	Adopted			Adopted		
	Budget	Actual	Variance	Budget	Forecast	Variance
	\$'000's	\$'000's	\$'000's	\$'000's	\$'000's	\$'000's
Property	4,582	10,573	(5,991)	45,280	43,447	1,833
Plant and Equipment	2,748	2,315	433	8,642	13,833	(5,190)
Infrastructure	14,071	16,007	(1,937)	40,776	44,479	(3,703)
<b>Total Capital Works Expenditure</b>	<b>21,400</b>	<b>28,896</b>	<b>(7,496)</b>	<b>94,698</b>	<b>101,759</b>	<b>(7,061)</b>

Full year Forecast for Capital Works Expenditure includes \$44.556M in carry forward expenditure from 2018-19 into 2019-20, and excludes \$12.118M in carry forward expenditure from 2019-20 into 2020-21.

The performance of the Capital Works Program including details of variances is reported in the Statement of Capital Works.

# Executive Summary (continued)

## Financial Performance Report for the year to date ended 31 December 2019



For the quarter ended 31 December 2019 the Capital Works Program shows an expenditure of \$28.896M – this is \$7.496M more than the expected YTD Adopted Budget position. After taking into consideration the capital works projects carried forward from 2018-19 into 2019-20, and also taking into account the capital works projects expected to be carried forward from 2019-20 into 2020-21, the forecast Capital Works Expenditure for the year is \$101.759M.

### Balance Sheet

Balance Sheet	Year to Date			Full Year		
	Adopted Budget \$'000's	Actual \$'000's	Variance \$'000's	Adopted Budget \$'000's	Forecast \$'000's	Variance \$'000's
Current Assets	135,986	122,632	(13,353)	64,038	76,233	12,195
Non-Current Assets	2,033,932	2,037,938	4,006	2,081,307	2,110,413	29,106
<b>Total Assets</b>	<b>2,169,918</b>	<b>2,160,571</b>	<b>(9,347)</b>	<b>2,145,345</b>	<b>2,186,646</b>	<b>41,301</b>
Current Liabilities	30,077	25,545	4,532	41,070	38,138	2,932
Non-Current Liabilities	21,320	5,913	15,407	50,068	51,229	(1,161)
<b>Total Liabilities</b>	<b>51,397</b>	<b>31,458</b>	<b>19,939</b>	<b>91,138</b>	<b>89,367</b>	<b>1,771</b>
<b>Net Assets</b>	<b>2,118,521</b>	<b>2,129,112</b>	<b>10,592</b>	<b>2,054,207</b>	<b>2,097,279</b>	<b>43,072</b>
Accumulated Surplus	746,700	730,377	(16,323)	698,282	702,618	4,336
Asset Revaluation Reserve	1,335,985	1,360,569	24,584	1,335,985	1,360,569	24,584
Other Reserves	35,835	38,167	2,331	19,940	34,093	14,153
<b>Total Equity</b>	<b>2,118,521</b>	<b>2,129,112</b>	<b>10,592</b>	<b>2,054,207</b>	<b>2,097,279</b>	<b>43,072</b>
<b>Working Capital Ratio</b>	<b>4.52</b>	<b>4.80</b>		<b>1.56</b>	<b>2.00</b>	

The Balance Sheet as at 31 December 2019 indicates a sustainable result. A comparison of total Current Assets of \$122.632M with total Current Liabilities of \$25.545M continues to depict a sustainable financial position (Working Capital Ratio of 4.80 to 1). The Working Capital Ratio for the same period last year was 4.87. Current Assets primarily comprises Cash and Cash Equivalents (\$9.636M), Other Financial Assets (\$14.300M) and Trade and Other Receivables (\$96.539M). Trade and Other Receivables includes \$86.851M of rates debtors (of which \$5.657M relates to arrears pre July 2019) and \$8.965M in other debtors.

Trade and Other Receivables	Ageing				Total \$'000
	Current - 30 Days \$'000	31 Days - 60 Days \$'000	61 Days - 90 Days \$'000	More than 90 Days \$'000	
Rates Debtors	81,194	0	0	5,657	86,851
Special Rate Assessment	0	0	0	52	52
Parking and Animal Infringement Debtors	243	106	48	274	671
Other Debtors	7,974	268	86	637	8,965
<b>Total Trade and Other Receivables</b>	<b>89,411</b>	<b>374</b>	<b>134</b>	<b>6,620</b>	<b>96,539</b>

Rate amounts owing are a charge over the property and therefore Council has recourse to collect these debts. Penalty interest at 10.0% per annum also applies. The due date for rates being paid in full is 15 February 2020, while the third instalment due date is 29 February 2020.

# Executive Summary (continued)

## Financial Performance Report for the year to date ended 31 December 2019



The majority of outstanding parking and infringement debtors outstanding for more than 90 days are on payment plans after being to either the Magistrates Court or Perin Court.

Trade and Other Payables are \$6.313M as at 31 December 2019, which is \$0.288 unfavourable to the Adopted Budget. Trade and Other Payables has decreased from \$14.131M as at 30 June 2019.

The working capital ratio of 4.80 compares favourably to the Adopted Budget working capital ratio of 4.52. The Working Capital Ratio is anticipated to continue to reduce over the course of the financial year, reflecting the utilisation of funds by Council to deliver on its operating programs and capital works. The forecast working capital ratio is anticipated to remain healthy at 2.00 at year end. This is slightly more than the Adopted Budget working capital ratio of 1.56 as a result of the carry forward of capital and operational expenditure from 2018-19.

### Investment Analysis

Investment	Year to Date			Full Year		
	Adopted Budget \$'000's	Actual \$'000's	Variance \$'000's	Adopted Budget \$'000's	Forecast \$'000's	Variance \$'000's
Cash and Cash Equivalents	43,475	9,636	(33,839)	48,306	36,756	(11,550)
Other Financial Assets	0	14,300	14,300	0	20,600	20,600
<b>Total Funds Invested</b>	<b>43,475</b>	<b>23,936</b>	<b>(19,539)</b>	<b>48,306</b>	<b>57,356</b>	<b>9,050</b>
<b>Earnings on Investments</b>	<b>642</b>	<b>281</b>	<b>(362)</b>	<b>1,285</b>	<b>1,285</b>	<b>0</b>

There was \$23.936M invested with various financial institutions as at 30 September 2019 – this includes Cash and Cash Equivalents (\$9.636M) and Other Financial Assets (\$14.300M). These funds include monies from trust funds and deposits and specific purpose reserves.

There are currently thirteen specific purpose reserves totalling \$38.167M as at 31 December 2019.

The earnings on investments for the period ended 31 December 2019 was \$0.281M and is \$0.362M unfavourable to the YTD Adopted Budget as a result of lower interest rates and current holdings of Cash and Cash Equivalents and Other Financial Assets.



## Comprehensive Income Statement

for year to date ended 31 December 2019

Description	Notes	Year-to-Date				Full Year			
		Adopted Budget	Actual	Variance Fav/(Unfav)		Adopted Budget	Forecast	Variance Fav/(Unfav)	
		\$000'S	\$000'S	\$000'S	%	\$000'S	\$000'S	\$000'S	
<b>Income</b>									
Rates and Charges		116,928	117,178	250	0.21%	✓	117,231	117,651	421
Statutory Fees and Fines		1,604	1,567	(38)	(2.35%)	⚠	3,177	3,474	297
User Fees		11,255	10,942	(313)	(2.78%)	⚠	16,912	16,724	(188)
Grants - Operating		11,640	11,581	(60)	(0.51%)	⚠	22,465	23,857	1,392
Grants - Capital		1,464	1,911	447	30.55%	✓	1,960	4,363	2,403
Contributions - Monetary		4,838	4,965	127	2.62%	✓	8,420	8,551	131
Contributions - Non-Monetary		0	0	0	0.00%	✓	2,000	2,000	0
Increment on investment in associates		0	0	0	0.00%	✓	0	0	0
Other Income		1,078	1,296	218	20.19%	✓	2,127	2,555	429
<b>Total Income</b>		<b>148,809</b>	<b>149,440</b>	<b>631</b>	<b>0.42%</b>		<b>174,292</b>	<b>179,175</b>	<b>4,883</b>
<b>Expenses</b>									
Employee Costs		36,178	37,342	(1,164)	(3.22%)	⚠	70,861	72,125	(1,264)
Materials and Services		26,452	25,650	802	3.03%	✓	63,941	68,581	(4,641)
Depreciation and Amortisation		12,147	12,141	6	0.05%	✓	24,295	24,295	0
Contributions and Donations		3,197	3,259	(63)	(1.96%)	⚠	5,620	5,661	(41)
Borrowing Costs	1	1,142	5	1,137	99.54%	✓	2,284	2,284	0
Bad and Doubtful Debts		28	149	(121)	(440.94%)	✗	66	66	0
Other Expenses		785	711	74	9.41%	✓	1,729	1,516	213
Net (Gain) Loss on Disposal of Property, Infrastructure, Plant and Equipment	2	929	(115)	1,044	112.38%	✓	1,858	(5,744)	7,602
<b>Total Expenses</b>		<b>80,858</b>	<b>79,142</b>	<b>1,715</b>	<b>2.12%</b>		<b>170,654</b>	<b>168,785</b>	<b>1,869</b>
<b>Surplus (Deficit)</b>		<b>67,951</b>	<b>70,298</b>	<b>2,346</b>	<b>3.45%</b>		<b>3,638</b>	<b>10,390</b>	<b>6,752</b>
<b>Total Comprehensive Income for the Year</b>		<b>67,951</b>	<b>70,298</b>	<b>2,346</b>	<b>3.45%</b>		<b>3,638</b>	<b>10,390</b>	<b>6,752</b>

Indicators of the variances between year to date (YTD) Adopted Budget and Actual results:

- ✓ 0% or greater.
- ⚠ Less than 0% and greater than negative 10%.
- ✗ Negative 10% or less.

Notes have been provided for the following variances:

1. Favourable variances between year to date (YTD) Adopted Budget and Actual results are equal to or greater than positive \$500K and equal to or greater than positive 10%.
2. Unfavourable variances between year to date (YTD) Adopted Budget and Actual results are equal to or less than negative \$500K and equal to or less than negative 10%.

### Notes:

1	<b>Timing Variance:</b> - \$0.1137M favourable variance in Borrowing Costs as budgeted loans have not been taken up at December 2019
2	<b>Timing Variance:</b> - \$1.044M favourable variance in Net (Gain) Loss on Disposal of Property due to the timing of asset sales

The 2019-20 Forecast includes \$4.297M in carry forward expenditure from 2018-19 into 2019-20 required for the completion and delivery of key operational projects. Also included is \$0.997M in carry forward expenditure for capital works that is operational in nature.

## Summary of Net Income and Expenditure by Department

for year to date ended 31 December 2019



Net (Income) / Expenditure	Notes	Year-to-Date				Full Year		
		Adopted Budget	Actual	Variance Fav/(Unfav)		Adopted Budget	Forecast	Variance Fav/(Unfav)
		\$000'S	\$000'S	\$000'S	%	\$000'S	\$000'S	\$000'S
<b>Rates</b>								
Rates and Valuation		(103,498)	(103,828)	330	0.32%	(103,596)	(104,000)	404
<b>Net (Income) / Expense - Rates</b>		<b>(103,498)</b>	<b>(103,828)</b>	<b>330</b>	<b>0.32%</b>	<b>(103,596)</b>	<b>(104,000)</b>	<b>404</b>
<b>CEO and Council</b>								
Chief Executive Officer		299	268	31	10.39%	598	598	0
Councillors		359	347	12	3.33%	718	718	0
Strategy, People & Culture	1	2,972	3,177	(205)	(6.89%)	5,056	5,952	(897)
<b>Net (Income) / Expense - CEO and Council</b>		<b>3,630</b>	<b>3,792</b>	<b>(162)</b>	<b>(4.46%)</b>	<b>6,372</b>	<b>7,269</b>	<b>(897)</b>
<b>City Development</b>								
Directorate City Development		252	242	9	3.72%	500	500	0
City Planning & Building	2	(2,415)	(1,748)	(668)	(27.64%)	(4,860)	(3,834)	(1,027)
City Safety and Health		1,233	1,145	88	7.12%	2,771	2,384	387
City Futures	3	1,791	1,645	147	8.18%	3,602	3,631	(29)
<b>Net (Income) / Expense - City Development</b>		<b>860</b>	<b>1,284</b>	<b>(424)</b>	<b>(49.27%)</b>	<b>2,013</b>	<b>2,681</b>	<b>(669)</b>
<b>Knox Central</b>								
Knox Central	4	493	367	126	25.54%	982	1,235	(253)
<b>Net (Income) / Expense - Knox Central</b>		<b>493</b>	<b>367</b>	<b>126</b>	<b>25.54%</b>	<b>982</b>	<b>1,235</b>	<b>(253)</b>
<b>Community Services</b>								
Directorate Community Services		133	48	85	63.79%	263	263	0
Community Wellbeing		4,796	4,652	144	3.00%	8,910	9,005	(95)
Family and Children's Services	5	2,195	2,968	(774)	(35.26%)	4,703	5,310	(606)
Active Ageing and Disability Services	6	1,248	(33)	1,281	102.67%	2,343	2,363	(20)
Youth, Leisure and Cultural Services	7	1,596	2,212	(615)	(38.53%)	3,413	3,913	(501)
<b>Net (Income) / Expense - Community Services</b>		<b>9,968</b>	<b>9,847</b>	<b>121</b>	<b>1.21%</b>	<b>19,633</b>	<b>20,854</b>	<b>(1,222)</b>
<b>Corporate Development</b>								
Directorate Corporate Services		218	208	11	5.01%	434	434	0
Business & Financial Services	8	(474)	882	(1,356)	(285.93%)	(1,252)	(993)	(259)
Governance		1,179	1,185	(6)	(0.48%)	2,351	2,351	0
Information Technology		3,919	3,979	(61)	(1.55%)	6,708	6,935	(227)
Transformation	9	1,477	1,184	293	19.84%	2,934	2,934	0
Communications	10	994	779	215	21.62%	1,978	1,946	32
<b>Net (Income) / Expense - Corporate Development</b>		<b>7,313</b>	<b>8,217</b>	<b>(904)</b>	<b>(12.36%)</b>	<b>13,153</b>	<b>13,607</b>	<b>(454)</b>
<b>Engineering and Infrastructure</b>								
Directorate Engineering and Infrastructure		348	282	66	18.88%	688	680	9
Sustainable Infrastructure	11	(8,308)	(9,508)	1,200	14.44%	2,277	2,439	(162)
Community Infrastructure		3,109	3,212	(103)	(3.30%)	6,503	7,211	(708)
Operations		7,662	7,593	69	0.90%	15,045	15,480	(434)
<b>Net (Income) / Expense - Engineering and Infrastructure</b>		<b>2,811</b>	<b>1,579</b>	<b>1,232</b>	<b>43.83%</b>	<b>24,513</b>	<b>25,809</b>	<b>(1,295)</b>



## Summary of Net Income and Expenditure by Department

for year to date ended 31 December 2019



Indicators of the variances between year to date (YTD) Adopted Budget and Actual results:

- ✔ 0% or greater.
- ⚠ Less than 0% and greater than negative 5%.
- ✘ Negative 5% or less.

Notes have been provided for these variances:

1. Favourable variances between year to date (YTD) Adopted Budget and Actual results are equal to or greater than positive \$100K and equal to or greater than positive 5%.
2. Unfavourable variances between year to date (YTD) Adopted Budget and Actual results are equal to or less than negative \$100K and equal to or less than negative 5%.

### Notes:

1	<p><b>Permanent Variance:</b></p> <ul style="list-style-type: none"> <li>- \$180K unfavourable variance for insurance costs, including an unfavourable variance of \$127K for public liability and professional indemnity insurance</li> <li>- This is offset by a favourable variance of \$178K for insurance proceeds</li> <li>- \$196K unfavourable variance in legal fees</li> <li>- \$188K unfavourable variance in employee costs and oncosts</li> </ul> <p><b>Timing Variance:</b></p> <ul style="list-style-type: none"> <li>- \$158K favourable variance in contracts</li> </ul>
2	<p><b>Timing Variance:</b></p> <ul style="list-style-type: none"> <li>- \$292K unfavourable variance in Public Open Space Contributions; income of this nature is unpredictable and is directly contingent on Developer activities in the municipality</li> <li>- \$111K unfavourable variance in Statutory Planning Application Fee, this is reflective of development activities</li> </ul>
3	<p><b>Timing Variance:</b></p> <ul style="list-style-type: none"> <li>- \$144K favourable variance in employee costs and oncosts throughout the department due to staff vacancies</li> </ul>
4	<p><b>Timing Variance:</b></p> <ul style="list-style-type: none"> <li>- \$87K favourable variance in employee costs due to staff vacancies</li> <li>- \$39K favourable variance in Contractors &amp; Services costs due to the timing of the program's activities</li> </ul>
5	<p><b>Timing Variance:</b></p> <ul style="list-style-type: none"> <li>- \$668K unfavourable variance in Government grant and subsidy income due to the delay in receipt of the teacher supplement and lower than anticipated preschool grant</li> <li>- \$410K unfavourable variance in Fees for Integrated Early Years Hubs, offset by a Favourable variance of \$689K in Government grants and childcare subsidy; this is reflective of service utilisation</li> <li>- \$208K unfavourable variance in employee costs for the Integrated Early Years Hubs is offset by the increase in income</li> <li>- \$154K unfavourable variance in employee costs for Preschools is impacted by the timing of annual leave entitlements</li> </ul>
6	<p><b>Timing Variance:</b></p> <ul style="list-style-type: none"> <li>- \$1,164K favourable variance in Grant revenue due to January to March 2020 funding being received in December 2019</li> </ul>
7	<p><b>Timing Variance:</b></p> <ul style="list-style-type: none"> <li>- \$461K unfavourable variance in Knox Leisureworks external contract income due to delays in the signing of contracts</li> <li>- \$122K unfavourable variance for Carols by Candlelight contractors, with expenditure paid in December but budgeted for January</li> </ul>
8	<p><b>Permanent Variance:</b></p> <ul style="list-style-type: none"> <li>- \$1,528K unfavourable variance in Grants Commission Funds, mainly due to 50% of the 2019-20 Victoria Grants Commission funding being received in June 2019 (there will be a \$852K variance per quarter for the year due to the early payment)</li> <li>- \$1,142K favourable variance in interest expense due to the delay in budgeted borrowings</li> <li>- \$362K unfavourable variance in interest income, impacted by lower interest rates and lower cash holdings due to the delay in borrowings</li> <li>- \$335K unfavourable variance in oncost distribution, offset by oncosts distributed throughout the organisation</li> </ul>
9	<p><b>Timing Variance:</b></p> <ul style="list-style-type: none"> <li>- \$231K favourable variance in employee costs due to vacancies within Transformation</li> <li>- \$162K favourable variance in Business Transformation contract costs due to timing of expenditure</li> </ul>
10	<p><b>Permanent Variance:</b></p> <ul style="list-style-type: none"> <li>- \$106K favourable variance due to movement of Community Engagement role to the Strategy team</li> </ul> <p><b>Timing Variance:</b></p> <ul style="list-style-type: none"> <li>- \$80K favourable variance in employee costs due to staff vacancies</li> <li>- \$49K favourable variance in marketing costs due to the timing of incoming invoices</li> </ul>

# Summary of Net Income and Expenditure by Department

for year to date ended 31 December 2019



Notes (continued):	
11	<p><b>Permanent Variance:</b></p> <ul style="list-style-type: none"> <li>- \$242K favourable variance in Grants received for Recycling Rebate for Councils Program from State Government</li> <li>- \$181K favourable variance in Recyclable Materials Sales due to a one-off invoice to SKM Recycling for additional costs of temporary provider for recycling service</li> <li>- \$151K favourable variance in Green Bin Charges reflective of green bins' uptake</li> </ul> <p><b>Timing Variance:</b></p> <ul style="list-style-type: none"> <li>- \$356K favourable variance in Waste Management Contractors and Services due to the timing of activities and the receipt of incoming invoices</li> </ul>

## Statement of Capital Works

for year to date ended 31 December 2019



Description	Notes	Year-to-Date				Full Year		
		Adopted Budget	Actual	Variance Fav/(Unfav)		Adopted Budget	Forecast	Variance Fav/(Unfav)
		\$000'S	\$000'S	\$000'S	%	\$000'S	\$000'S	\$000'S
<b>Expenditure - Capital Works Program</b>								
<b>Property</b>								
Land		0	0	0	0.00%	8,000	8,235	(235)
Buildings	1	4,582	10,573	(5,991)	(130.76%)	37,280	35,212	2,068
<b>Total Property</b>		<b>4,582</b>	<b>10,573</b>	<b>5,991</b>	<b>130.76%</b>	<b>45,280</b>	<b>43,447</b>	<b>1,833</b>
<b>Plant and Equipment</b>								
Artworks		0	53	(53)	(100.00%)	52	222	(169)
Plant, Machinery and Equipment		1,382	887	495	35.80%	2,463	2,463	0
Fixtures, Fittings and Furniture		0	0	0	0.00%	664	664	0
Computers and Telecommunications		1,366	1,375	(9)	(0.66%)	5,463	10,484	(5,021)
<b>Total Plant and Equipment</b>		<b>2,748</b>	<b>2,315</b>	<b>(433)</b>	<b>(15.75%)</b>	<b>8,642</b>	<b>13,833</b>	<b>(5,190)</b>
<b>Infrastructure</b>								
Roads (including Kerb and Channel)	2	4,022	5,779	(1,757)	(43.69%)	9,305	9,506	(201)
Drainage		1,050	1,303	(253)	(24.08%)	3,456	4,238	(782)
Bridges		3,067	2,707	360	11.73%	6,140	4,964	1,176
Footpaths and Cycleways		1,665	1,615	51	3.04%	5,247	5,330	(83)
Off Street Car Parks		250	214	36	14.47%	678	678	0
Recreation, Leisure, Parks and Playgrounds		3,828	4,158	(329)	(8.61%)	15,339	19,052	(3,713)
Other Infrastructure		188	232	(44)	(23.35%)	612	711	(99)
<b>Total Infrastructure</b>		<b>14,071</b>	<b>16,007</b>	<b>1,937</b>	<b>13.77%</b>	<b>40,776</b>	<b>44,479</b>	<b>(3,703)</b>
<b>Total Expenditure - Capital Works Program</b>		<b>21,400</b>	<b>28,896</b>	<b>(7,496)</b>	<b>(35.02%)</b>	<b>94,698</b>	<b>101,759</b>	<b>(7,061)</b>
<b>Represented by:</b>								
Extension / Expansion		207	130	77	37.15%	1,062	1,482	(420)
Legal Requirements		0	51	(51)	(100.00%)	0	0	0
New		5,803	11,133	(5,330)	(91.84%)	32,868	35,607	(2,740)
Renewal		10,795	13,387	(2,592)	(24.01%)	32,712	39,831	(7,119)
Upgrade		4,596	4,195	401	8.72%	28,056	24,839	3,217
<b>Total Expenditure - Capital Works Program</b>		<b>21,400</b>	<b>28,896</b>	<b>(7,496)</b>	<b>(35.02%)</b>	<b>94,698</b>	<b>101,759</b>	<b>(7,061)</b>
<b>Funding Source for Capital Works Program</b>								
<b>External Funding</b>								
Contributions - Monetary - Capital		1,140	1,606	466	40.88%	1,195	2,330	1,135
Grants - Capital	3	1,464	1,977	513	35.03%	1,960	4,363	2,403
User Fees - Capital		0	0	0	0.00%	0	0	0
Proceeds from Loan Borrowings		0	0	0	0.00%	31,285	31,285	0
Other Income - Capital		0	0	0	0.00%	0	0	0
<b>Total External Funding</b>		<b>2,604</b>	<b>3,583</b>	<b>979</b>	<b>37.59%</b>	<b>34,440</b>	<b>37,978</b>	<b>3,538</b>
<b>Internal Funding</b>								
Proceeds from Sale of Property, Infrastructure, Plant and Equipment	4	2,551	402	(2,149)	(84.23%)	5,102	12,702	7,600
Reserves	5	2,478	4,556	2,079	83.90%	21,705	18,338	(3,367)
Rate Funding	6	13,768	20,354	6,587	47.84%	33,452	32,741	(710)
<b>Total Internal Funding</b>		<b>18,796</b>	<b>25,313</b>	<b>6,517</b>	<b>34.67%</b>	<b>60,258</b>	<b>63,781</b>	<b>3,523</b>
<b>Total Funding Source for Capital Works Program</b>		<b>21,400</b>	<b>28,896</b>	<b>7,496</b>	<b>35.02%</b>	<b>94,698</b>	<b>101,759</b>	<b>7,061</b>
Carry forward expenditure from 2018-19							44,556	
Carry forward expenditure to 2020-21							(12,118)	
<b>Movement in carry forward expenditure</b>							<b>32,438</b>	

## Statement of Capital Works

for year to date ended 31 December 2019



Indicators of the variances between year to date (YTD) Adopted Budget and Actual results:

- ✔ 0% or greater.
- ⚠ Less than 0% and greater than negative 10%.
- ✘ Negative 10% or less.

Notes have been provided for the following variances:

1. Favourable variances between year to date (YTD) Adopted Budget and Actual results are equal to or greater than positive \$500K and equal to or greater than positive 10.00%.
2. Unfavourable variances between year to date (YTD) Adopted Budget and Actual results are equal to or less than negative \$500K and equal to or less than negative 10%.

### Notes:

1	<p><b>Permanent Variance:</b> - Unfavourable variances due to utilisation of carry forward funds for the Operations Centre Relocation (\$3.403M); Modular Building Program (\$1.869M); Building Renewal Program (\$1.086M); Placemakers Site Upgrade Program (\$0.373M); Knox BMX New Storage and Start Gate (\$0.291M); and Aimee Seebeck Hall Amenities Upgrade (\$0.176M)</p> <p><b>Timing Variance:</b> - Favourable variances relating to timing of activities for projects mainly for Stamford Park (\$0.571M); Energy Performance Audits (\$0.400M); and BAMP Facility Upgrades (\$0.100M)</p>
2	<p><b>Timing Variance:</b> - Unfavourable variance for Road Surface Renewal Program (\$1.064M), reflective of work in progress - Unfavourable variance due to timing of activities for Albert Avenue, Boronia (\$0.382M); Selman Avenue, FTG (\$0.275M); and Forest Road from Stockton to Dorian (\$0.214M)</p>
3	<p><b>Permanent Variance:</b> - Favourable variance of \$377K in grants received carried forward from 2018-19; Knox BMX New Storage and Start Gate (\$0.149M); Kings Park New Floodlighting (\$0.090M); Bayswater Early Years Hub (\$0.080M); George Street Bicycle Improvements (\$0.048M); and Egan Lee Reserve Pavilion Upgrade Design (\$0.010M)</p>
4	<p><b>Timing Variance:</b> - \$2.149M unfavourable variance mainly due to the timing of asset sales</p>
5	<p><b>Permanent Variance:</b> - \$0.582M favourable variance for the transfer from reserves of the early payment of the 2019-20 VGC local roads funding - Favourable variances due to utilisation of carry forward funds, mainly for Modular Building Program (\$1.467M); Marie Wallace Reserve Masterplan (\$0.178M); Playground Renewal Program (\$0.169M) and Fairpark Reserve Masterplan (\$0.110M)</p> <p><b>Timing Variance:</b> - Favourable variances relating to timing of activities for projects mainly for Playground Renewal Progra, (\$0.286M - on top of carry forward funds); Quarry Reserve Masterplan (\$0.212M); and Stud Park Reserve Masterplan (\$0.130M) - Unfavourable variances relating to timing of activities for projects mainly for Stamford Park (\$0.571M); Tormore Reserve Masterplan (\$0.237M); and Templeton Reserve Masterplan (\$0.186M)</p>
6	<p><b>Timing Variance:</b> - Council generates cash from its operating activities which is used as a funding source for the capital works program - It is forecast that \$32.741M will be generated from operations to fund the 2019-20 capital works program (inclusive of projects carried forward into 2019-20)</p>

The 2019-20 Forecast includes \$44.556M in carry forward expenditure from 2018-19 into 2019-20 required for the successful completion and delivery of key capital works projects (including \$0.997M in carry forward expenditure for capital works that is operational in nature). As at 31 December 2019, a total of \$12.118M of approved capital works projects for 2019-20 have been identified as being required to be carried forward into 2020-21.

# Balance Sheet

as at 31 December 2019



Description	Notes	Year-to-Date				Full Year		
		Adopted Budget	Actual	Variance Fav/(Unfav)		Adopted Budget	Forecast	Variance Fav/(Unfav)
		\$000'S	\$000'S	\$000'S	%	\$000'S	\$000'S	\$000'S
<b>Current Assets</b>								
Cash and Cash Equivalents	1	43,475	9,636	(33,839)	(77.84%)	48,306	36,756	(11,550)
Other Financial Assets	2	0	14,300	14,300	100.00%	0	20,600	20,600
Trade and Other Receivables		90,868	96,539	5,672	6.24%	14,089	17,725	3,636
Other Current Assets		1,636	954	(682)	(41.68%)	1,636	1,143	(493)
Non-Current Assets classified as Held for Sale	3	0	1,194	1,194	100.00%	0	0	0
Inventories		7	8	1	19.61%	7	9	2
<b>Total Current Assets</b>		<b>135,986</b>	<b>122,632</b>	<b>(13,353)</b>	<b>(9.82%)</b>	<b>64,038</b>	<b>76,233</b>	<b>12,195</b>
<b>Non-Current Assets</b>								
Investment in Associates		4,422	4,604	182	4.11%	4,422	4,604	182
Property, Infrastructure, Plant and Equipment		2,028,068	2,032,930	4,862	0.24%	2,075,443	2,104,875	29,432
Intangible Assets	4	1,442	405	(1,037)	(71.93%)	1,442	934	(508)
<b>Total Non-Current Assets</b>		<b>2,033,932</b>	<b>2,037,938</b>	<b>4,006</b>	<b>0.20%</b>	<b>2,081,307</b>	<b>2,110,413</b>	<b>29,106</b>
<b>Total Assets</b>		<b>2,169,918</b>	<b>2,160,571</b>	<b>(9,347)</b>	<b>(0.43%)</b>	<b>2,145,345</b>	<b>2,186,646</b>	<b>41,301</b>
<b>Current Liabilities</b>								
Trade and Other Payables		6,025	6,313	(288)	(4.78%)	15,283	14,428	855
Trust Funds and Deposits	5	3,832	2,639	1,193	31.12%	3,832	2,110	1,722
Provisions - Employee Costs		15,040	16,049	(1,009)	(6.71%)	15,944	15,719	225
Defined Benefits Superannuation		0	0	0	0.00%	0	0	0
Provision - Landfill Rehabilitation		532	544	(12)	(2.31%)	532	544	(12)
Interest-Bearing Loans and Borrowings	6	4,506	0	4,506	100.00%	5,336	5,336	0
Other Provisions		143	0	143	100.00%	143	0	143
<b>Total Current Liabilities</b>		<b>30,077</b>	<b>25,545</b>	<b>4,532</b>	<b>15.07%</b>	<b>41,070</b>	<b>38,138</b>	<b>2,932</b>
<b>Non-Current Liabilities</b>								
Provisions - Employee Costs		807	801	6	0.80%	807	819	(12)
Interest-Bearing Loans and Borrowings	7	16,550	0	16,550	100.00%	45,298	45,298	0
Provision - Landfill Rehabilitation	8	3,963	5,113	(1,150)	(29.01%)	3,963	5,113	(1,150)
Defined Benefits Superannuation		0	0	0	0.00%	0	0	0
Other Provisions		0	0	0	0.00%	0	0	0
<b>Total Non-Current Liabilities</b>		<b>21,320</b>	<b>5,913</b>	<b>15,407</b>	<b>72.26%</b>	<b>50,068</b>	<b>51,229</b>	<b>(1,161)</b>
<b>Total Liabilities</b>		<b>51,397</b>	<b>31,458</b>	<b>19,939</b>	<b>38.79%</b>	<b>91,138</b>	<b>89,367</b>	<b>1,771</b>
<b>Net Assets</b>		<b>2,118,521</b>	<b>2,129,112</b>	<b>10,592</b>	<b>0.50%</b>	<b>2,054,207</b>	<b>2,097,279</b>	<b>43,072</b>
<b>Equity</b>								
Accumulated Surplus		746,700	730,377	(16,323)	(2.19%)	698,282	702,618	4,336
Asset Revaluation Reserve		1,335,985	1,360,569	24,584	1.84%	1,335,985	1,360,569	24,584
Other Reserves		35,835	38,167	2,331	6.51%	19,940	34,093	14,153
<b>Total Equity</b>		<b>2,118,521</b>	<b>2,129,112</b>	<b>10,592</b>	<b>0.50%</b>	<b>2,054,207</b>	<b>2,097,279</b>	<b>43,072</b>

Indicators of the variances between year to date (YTD) Adopted Budget and Actual results:

- ✓ 0% or greater.
- ⚠ Less than 0% and greater than negative 10%.
- ✗ Negative 10% or less.

Notes have been provided for items with the following variances:

1. Favourable variances between year to date (YTD) Adopted Budget and Actual results are equal to or greater than positive \$1M and equal to or greater than positive 10%.
2. Unfavourable variances between year to date (YTD) Adopted Budget and Actual results are equal to or less than negative \$1M and equal to or less than negative 10%.

## Balance Sheet

as at 31 December 2019



Notes:	
1	<p><b>Timing Variance:</b>            - \$19.539M unfavourable variance in the cash and cash equivalents balance (including other financial assets) is mainly due to forecast borrowings of \$21.056M in 2018-19 being deferred to the 2019-20 financial year, and have yet to be taken up</p>
2	<p><b>Timing Variance:</b>            - Other financial assets are term deposits currently held with an original maturity date of more than 90 days</p>
3	<p><b>Timing Variance:</b>            - \$1.194M favourable variance for land and buildings that have been agreed to sell</p>
4	<p><b>Timing Variance:</b>            - Intangible Assets incorporates Corporate Software; Corporate Software purchased during this financial year will be capitalised at the end of June 2020</p>
5	<p><b>Timing Variance:</b>            - Trust funds and deposits primarily reflects the cash holdings for refundable deposits            - This includes \$0.727M collected for the fire services levy; this amount is payable to the State Revenue Office by the 28th March 2020</p>
6	<p><b>Timing Variance:</b>            - The \$21.056M forecast borrowings for the 2018-19 financial year have been deferred to the 2019-20 financial year, and have yet to be taken up</p>
7	<p><b>Timing Variance:</b>            - The \$21.056M forecast borrowings for the 2018-19 financial year have been deferred to the 2019-20 financial year, and have yet to be taken up</p>
8	<p><b>Timing Variance:</b>            - Provision for Landfill Rehabilitation reflects net present value of estimated future rehabilitation costs as at 30 June 2019</p>



## Cash Flow Statement

for year to date ended 31 December 2019

Description	Notes	Year-to-Date				Full Year		
		Adopted Budget	Actual	Variance Fav/(Unfav)		Adopted Budget	Forecast	Variance Fav/(Unfav)
		\$000'S	\$000'S	\$000'S		\$000'S	\$000'S	\$000'S
<b>Cash Flows from Operating Activities</b>								
<b>Receipts</b>								
Rates and Charges		47,454	45,872	(1,583)	(3.34%)	116,857	117,278	421
Statutory Fees and Fines		1,604	1,567	(38)	(2.35%)	3,177	3,474	297
User Fees		7,363	7,139	(225)	(3.05%)	16,860	16,672	(188)
Grants - Operating		8,552	8,411	(141)	(1.65%)	22,448	23,840	1,392
Grants - Capital		1,078	1,515	437	40.54%	1,958	4,361	2,403
Contributions - Monetary		4,453	4,569	117	2.62%	8,418	8,549	131
Interest Received		642	281	(362)	(56.30%)	1,285	1,285	0
Other Receipts	1	436	1,015	579	132.93%	842	1,270	428
Net Movement in Trust Deposits	2	75	604	529	705.55%	75	75	0
Employee Costs		(36,714)	(36,661)	53	0.14%	(70,492)	(71,756)	(1,264)
Materials and Services		(33,648)	(32,591)	1,057	3.14%	(63,768)	(68,409)	(4,641)
Contributions and Donations		(4,989)	(4,823)	166	3.33%	(5,560)	(5,602)	(41)
Other Payments		(785)	(711)	74	9.41%	(1,729)	(1,516)	213
<b>Net Cash Provided by / (Used in) Operating Activities</b>		<b>(4,476)</b>	<b>(3,813)</b>	<b>664</b>	<b>14.83%</b>	<b>30,371</b>	<b>29,520</b>	<b>(850)</b>
<b>Cash Flows from Investing Activities</b>								
Payments for Property, Infrastructure, Plant and Equipment	3	(21,400)	(28,896)	(7,496)	(35.02%)	(82,403)	(89,464)	(7,061)
Proceeds from Sales of Property, Infrastructure, Plant and Equipment	4	2,551	404	(2,147)	(84.15%)	5,102	12,704	7,602
Payments for investments	5	0	(14,300)	(14,300)	(100.00%)	0	(20,600)	(20,600)
Proceeds from sale of investments	6	20,600	23,100	2,500	12.14%	20,600	23,100	2,500
<b>Net Cash Used in Investing Activities</b>		<b>1,751</b>	<b>(19,692)</b>	<b>(21,442)</b>	<b>(1,224.88%)</b>	<b>(56,701)</b>	<b>(74,260)</b>	<b>(17,559)</b>
<b>Cash Flows from Financing Activities</b>								
Proceeds of Borrowings	7	21,056	0	21,056	100.00%	52,341	52,341	0
Repayment of Borrowings		0	0	0	0.00%	(1,707)	(1,707)	0
Finance costs	8	(1,142)	(5)	(1,137)	(99.54%)	(2,284)	(2,284)	0
<b>Net Cash Provided by / (Used in) Financing Activities</b>		<b>19,914</b>	<b>(5)</b>	<b>19,919</b>	<b>100.03%</b>	<b>48,350</b>	<b>48,350</b>	<b>0</b>
<b>Net increase / (decrease) in Cash and Cash Equivalents</b>		<b>17,188</b>	<b>(23,509)</b>	<b>40,697</b>	<b>236.78%</b>	<b>22,019</b>	<b>3,610</b>	<b>(18,409)</b>
Cash and Cash Equivalents at the Beginning of the Financial Year		26,287	33,146	6,859	26.09%	26,287	33,146	6,859
<b>Cash at the End of the Year</b>		<b>43,475</b>	<b>9,636</b>	<b>(33,839)</b>	<b>(77.84%)</b>	<b>48,306</b>	<b>36,756</b>	<b>(11,550)</b>

Indicators of the variances between year to date (YTD) Adopted Budget and Actual results:

- ✔ 0% or greater.
- ⚠ Less than 0% and greater than negative 10%.
- ✘ Negative 10% or less.

Notes have been provided for items with the following variances:

1. Favourable variances between year to date (YTD) Adopted Budget and Actual results are equal to or greater than positive \$500K and equal to or greater than positive 10%.
2. Unfavourable variances between year to date (YTD) Adopted Budget and Actual results are equal to or less than negative \$500K and equal to or less than negative 10%.

## Cash Flow Statement

for year to date ended 31 December 2019



### Notes:

1	<p><b>Permanent Variance:</b></p> <ul style="list-style-type: none"> <li>- \$181K favourable variance in Recyclable Materials Sales due to a one-off invoice to SKM Recycling for additional costs of temporary provider for recycling service</li> <li>- \$187K favourable variance for insurance proceeds across Council</li> <li>- \$128K favourable variance in WorkCover salaries recouped across Council</li> </ul>
2	<p><b>Timing Variance:</b></p> <ul style="list-style-type: none"> <li>- Trust funds and deposits primarily reflects the cash holdings for refundable deposits</li> </ul>
3	<p><b>Timing Variance:</b></p> <ul style="list-style-type: none"> <li>- Unfavourable variance of \$7.496M mainly due to utilisation of carry forwards for capital works program</li> </ul>
4	<p><b>Timing Variance:</b></p> <ul style="list-style-type: none"> <li>- \$2.147M unfavourable variance mainly due to the timing of asset sales</li> </ul>
5	<p><b>Timing Variance:</b></p> <ul style="list-style-type: none"> <li>- Payments for investments are term deposits with a maturity of greater than 90 days that have been invested during the 2019-20 financial year and have yet to mature</li> </ul>
6	<p><b>Timing Variance:</b></p> <ul style="list-style-type: none"> <li>- Proceeds from the sale of investments are term deposits held at 30 June 2019 with a maturity of greater than 90 days that have matured during the 2019-20 financial year</li> </ul>
7	<p><b>Timing Variance:</b></p> <ul style="list-style-type: none"> <li>- The \$21.056M forecast borrowings for the 2018-19 financial year have been deferred to the 2019-20 financial year, and have yet to be taken up</li> </ul>
8	<p><b>Timing Variance:</b></p> <ul style="list-style-type: none"> <li>- The \$21.056M forecast borrowings for the 2018-19 financial year have been deferred to the 2019-20 financial year, and have yet to be taken up</li> </ul>





## Financial Performance Indicators

as at 31 December 2019

The following table highlights Council's current and forecasted performance across a range of key financial performance indicators. These indicators provide a useful analysis of Council's financial position and performance and should be interpreted in the context of the Council's objectives.

Indicator	Calculation of Measure	Full Year			Notes
		Expected Bands	Adopted Budget	Forecast	
<p><b>Operating Position - Measures whether a council is able to generate an adjusted underlying surplus.</b></p>					
<p><b>Adjusted Underlying Result</b></p>					
Indicator of the broad objective that an adjusted underlying surplus should be generated in the ordinary course of business. A surplus or increasing surplus suggests an improvement in the operating position. The adjusted underlying surplus and the adjusted underlying revenue exclude the following types of income: grants - capital (non-recurrent), contributions - monetary (capital) and contributions - non-monetary.	[Adjusted Underlying Surplus (Deficit) / Adjusted Underlying Revenue] x 100	(20%) to 20%	0.12%	1.98%	✓ 1
<p><b>Liquidity - Measures whether a council is able to generate sufficient cash to pay bills on time.</b></p>					
<p><b>Working Capital</b></p>					
Indicator of the broad objective that sufficient working capital is available to pay bills as and when they fall due. High or increasing level of working capital suggests an improvement in liquidity.	[Current Assets / Current Liabilities] x 100	100% - 400%	155.92%	199.89%	✓ 2
<p><b>Unrestricted Cash</b></p>					
Indicator of the broad objective that sufficient cash which is free of restrictions is available to pay bills as and when they fall due. High or increasing level of unrestricted cash suggests an improvement in liquidity.	[Unrestricted Cash / Current Liabilities] x 100	10% - 300%	79.62%	104.88%	✓ 3
<p><b>Obligations - Measures whether the level of debt and other long term obligations is appropriate to the size and nature of the Council's activities.</b></p>					
<p><b>Loans and Borrowings</b></p>					
Indicator of the broad objective that the level of interest bearing loans and borrowings should be appropriate to the size and nature of a council's activities. Low or decreasing level of loans and borrowings suggests an improvement in the capacity to meet long term obligations.	[Interest Bearing Loans and Borrowings / Rate Revenue] x 100	0% - 70%	43.19%	43.04%	⚠ 4
<p><b>Debt Commitments</b></p>					
Defined as interest and principal repayments on interest bearing loans and borrowings as a percentage of rate revenue.	[Interest and Principal Repayments / Rate Revenue] x 100	0% - 20%	3.40%	3.39%	⚠ 5
<p><b>Indebtedness</b></p>					
Indicator of the broad objective that the level of long term liabilities should be appropriate to the size and nature of a Council's activities. Low or decreasing level of long term liabilities suggests an improvement in the capacity to meet long term obligations	[Non Current Liabilities / Own Source Revenue] x 100	2% - 70%	35.90%	35.05%	⚠ 6

## Financial Performance Indicators

as at 31 December 2019



Indicator	Calculation of Measure	Full Year			Notes
		Expected Bands	Adopted Budget	Forecast	
<b>Asset Renewal</b> Indicator of the broad objective that assets should be renewed as planned. High or increasing level of planned asset renewal being met suggests an improvement in the capacity to meet long term obligations	$\frac{\text{[Asset Renewal Expenditure / Depreciation]} \times 100}{}$	40% - 130%	106.01%	135.31%	✓ 7
<b>Stability - Measures whether a council is able to generate revenue from a range of sources.</b>  <b>Rates Concentration</b> Indicator of the broad objective that revenue should be generated from a range of sources. High or increasing range of revenue sources suggests an improvement in stability.	$\frac{\text{[Rate Revenue / Adjusted Underlying Revenue]} \times 100}{}$	30.00% - 80.00%	68.61%	68.32%	! 8

✓ Forecasts improvements in Council's financial performance / financial position indicator compared to the Adopted Budget position.  
 ! Forecasts that Council's financial performance / financial position indicator will be reasonably steady and is within Expected Bands.  
 ✗ Forecasts deterioration in Council's financial performance / financial position indicator compared to the Adopted Budget position.

**Notes:**

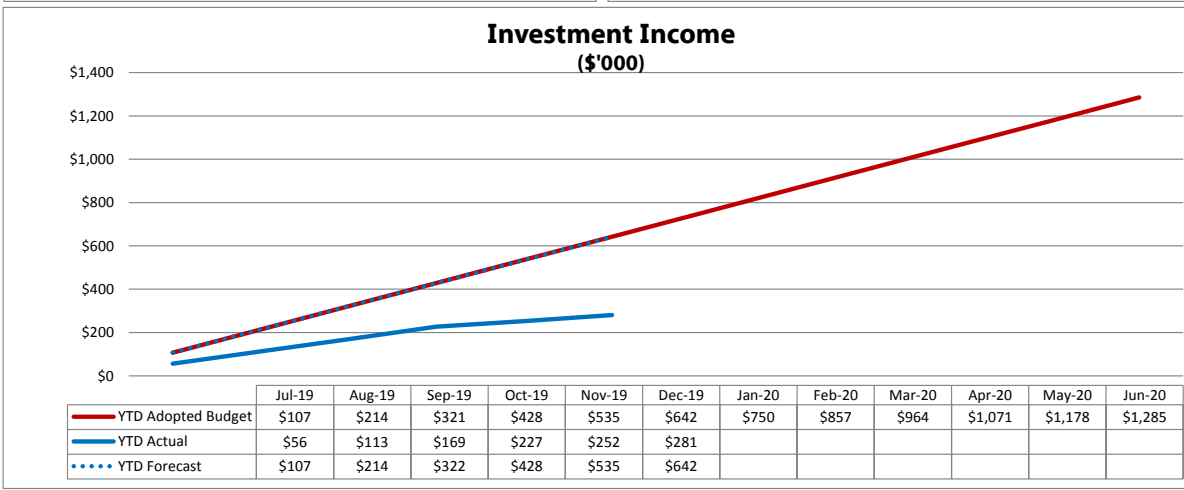
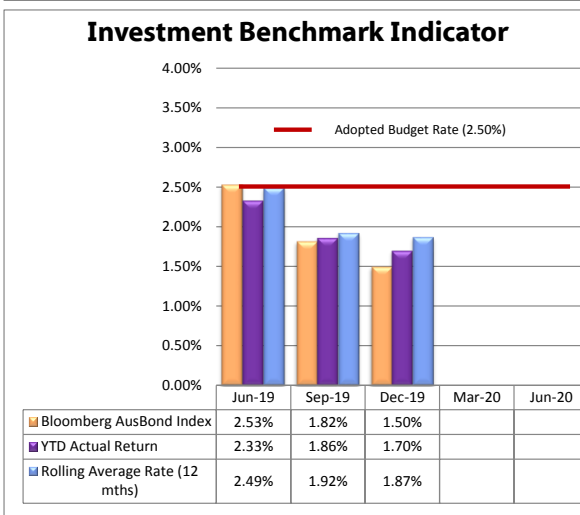
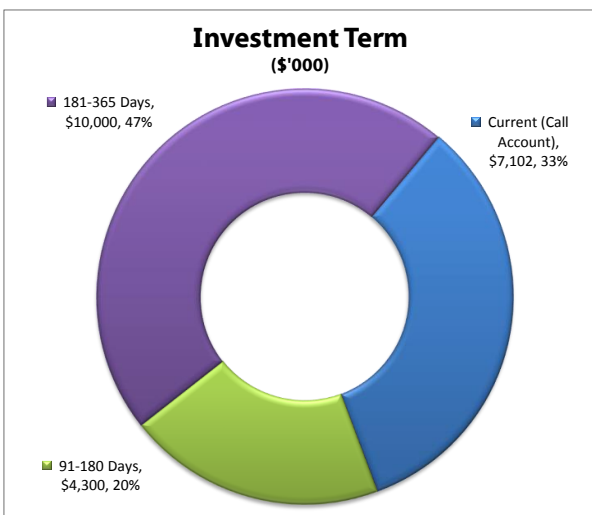
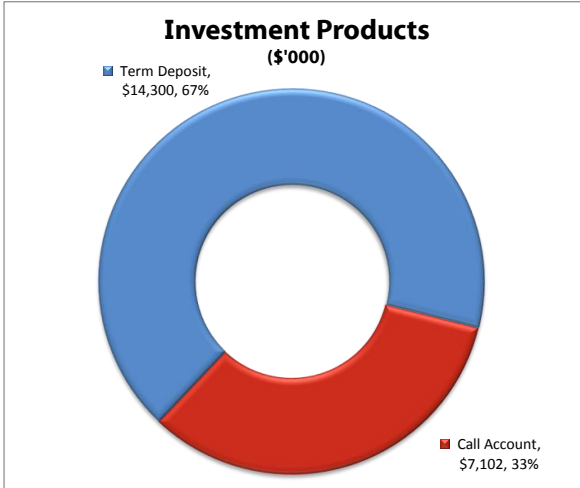
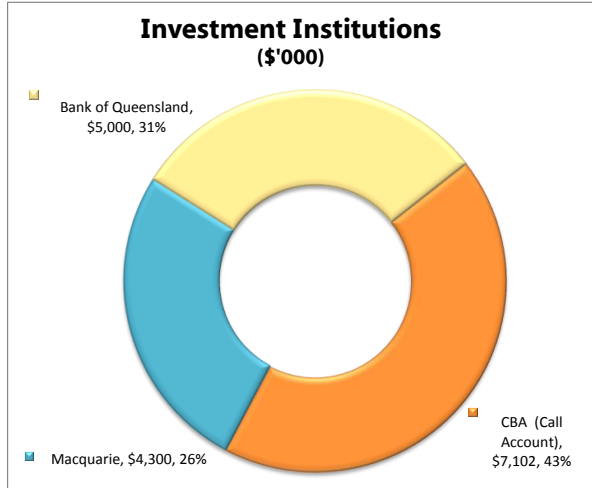
1	<b>Timing Variance:</b> - The adjusted underlying result ratio is within expected bands
2	<b>Timing Variance:</b> - The working capital ratio is within the expected bands
3	<b>Timing Variance:</b> - The unrestricted cash ratio is within expected bands
4	<b>No Variance:</b> - The loans and borrowings ratio is within expected bands
5	<b>No Variance:</b> - The debt commitments ratio is within expected bands
6	<b>Timing Variance:</b> - The indebtedness ratio is within expected bands
7	<b>Timing Variance:</b> - Forecast asset renewal is within the expected band - The anticipated increase in the ratio is due to the carry forward of capital works from 2018-19 in to 2019-20
8	<b>No Variance:</b> - The rates concentration ratio is within the expected bands



# Investment Analysis

as at 31 December 2019

A total amount of \$21.402 million in funds were invested with various financial institutions as at 31 December 2019



## 11 Items for Information

### 11.1 Assemblies of Councillors

**SUMMARY: Manager Governance, Phil McQue**

**This report provides details of Assembly of Councillors as required under section 80A(2) of the Local Government Act 1989.**

#### **RECOMMENDATION**

**That Council:**

- 1. Note the written record of Assemblies of Councillors as attached to this report; and**
- 2. Incorporate the records of the Assemblies into the minutes of the meeting.**

#### **1. INTRODUCTION**

Under section 80A(2) of the Local Government Act 1989, the Chief Executive Officer must present a written record of an Assembly of Councillors to an ordinary meeting of Council as soon as practicable after an Assembly occurs. This written record is required to be incorporated into the minutes of the meeting.

**Report Prepared By: Manager Governance, Phil McQue**

**Report Authorised By: Director City Development, Matt Kelleher**

#### **Attachments**

- 1. Attachment 1 - Assemblies of Councillors [11.1.1 - 6 pages]**



## Record of Assembly of Councillors

(Section 80A Local Government Act)

### Complete this Section

**Date of Assembly:** 9/12/2019

**Name of Committee or Group (if applicable):** Issues Briefing

**Time Meeting Commenced:** 6.30pm

#### Name of Councillors Attending:

Cr Nicole Seymour, Mayor

Cr Adam Gill

Cr Marcia Timmers-Leitch, Deputy Mayor

Cr Jake Keogh

Cr Peter Lockwood

Cr Tony Holland

Cr John Mortimore

Cr Lisa Cooper

#### Name of Members of Council Staff Attending:

Tony Doyle

Judy Chalkley (Item 1)

Ian Bell

Stuart Ireland (Item 1)

Michael Fromberg

Jodie Saisanas (Item 2)

Matt Kelleher

Ingo Kumic (Item 2)

Tanya Scicluna

Sam Sampanthar (Item 3)

Phil McQue

Trish Winterling (Item 3)

Andrew Dowling

#### Matters Considered:

1. Aged Care Reform CHSP
2. Wantirna Health Precinct
3. Climate Response Plan Scope
4. State Basketball Centre Progress Update

#### Any conflict of interest disclosures made by a Councillor attending:\* Yes

Name	Disclosure	Relevant Matter	Left Assembly **
Cr Keogh	Conflicting Duty	State Basketball Centre	Yes

**Name of Person Completing Record:** Joanne Ellis

\* Note: A Councillor making a disclosure must (80A(3)) make a disclosure under s79 and complete a Disclosure of Conflict of Interest Form.

\*\* Councillor disclosing to an assembly that he or she has a conflict of interest must leave the assembly prior to the matter being discussed and not return until the item has been considered.



**Record of Assembly of Councillors**  
(Section 80A Local Government Act)

Complete this Section

**Date of Assembly:** 29/1/2020

**Name of Committee or Group (if applicable):** Knox Active Ageing Advisory Committee

**Time Meeting Commenced:** 6.00pm

**Name of Councillors Attending:**

Cr Nicole Seymour, Mayor

**Name of Members of Council Staff Attending:**

Judy Chalkley

Linda Keenahan

**Matters Considered:**

1. Group Reflection and Annual Report
2. Key Priorities for 2020
3. Age Friendly Cities Project Plan

**Any conflict of interest disclosures made by a Councillor attending:\*** Nil

Name	Disclosure	Relevant Matter	Left Assembly **

**Name of Person Completing Record:** Stuart Ireland

\* Note: A Councillor making a disclosure must (80A(3)) make a disclosure under s79 and complete a Disclosure of Conflict of Interest Form.

\*\* Councillor disclosing to an assembly that he or she has a conflict of interest must leave the assembly prior to the matter being discussed and not return until the item has been considered.



**Record of Assembly of Councillors**  
(Section 80A Local Government Act)

Complete this Section

**Date of Assembly:** 30/1/2020  
**Name of Committee or Group (if applicable):** Chief Executive Officer Performance Evaluation Committee  
**Time Meeting Commenced:** 12.30pm

**Name of Councillors Attending:**

Cr Nicole Seymour, Mayor  
 Cr Marcia Timmers-Leitch, Deputy Mayor  
 Cr Peter Lockwood  
 Cr John Mortimore

**Name of Members of Council Staff Attending:**

Tony Doyle

**Matters Considered:**

1. Confirmation of Previous Minutes 12 December 2019 and CEO KPI Scoring
2. Status Report of CEO's Key Performance Indicators to 31 December 2019
3. Presentation by CEO
4. Feedback Provided to CEO
5. Other Matters

**Any conflict of interest disclosures made by a Councillor attending:\*** Nil

Name	Disclosure	Relevant Matter	Left Assembly **

**Name of Person Completing Record:** Tony Doyle

\* Note: A Councillor making a disclosure must (80A(3)) make a disclosure under s79 and complete a Disclosure of Conflict of Interest Form.  
 \*\* Councillor disclosing to an assembly that he or she has a conflict of interest must leave the assembly prior to the matter being discussed and not return until the item has been considered.



## Record of Assembly of Councillors

(Section 80A Local Government Act)

Complete this Section

**Date of Assembly:** 3/2/2020

**Name of Committee or Group (if applicable):** Issues Briefing

**Time Meeting Commenced:** 6.30pm

**Name of Councillors Attending:**

Cr Nicole Seymour, Mayor	Cr Jake Keogh
Cr Marcia Timmers-Leitch, Deputy Mayor	Cr Tony Holland
Cr Peter Lockwood	Cr Darren Pearce
Cr John Mortimore	

**Name of Members of Council Staff Attending:**

Tony Doyle	Judy Chalkley (Item 1)
Ian Bell	Imogen Kelly (Item 1)
Matt Kelleher	Nicole Columbine (Item 2)
Tanya Scicluna	Monica Micheli (Item 2)
Phil McQue	Janet Simmonds (Item 3)
Andrew Dowling	Steven Dickson (Item 3)

**Matters Considered:**

1. Aged Care Reform CHSP
2. State Basketball Centre Progress Update
3. Draft Amenity Local Law 2020

**Any conflict of interest disclosures made by a Councillor attending: \* Yes**

Name	Disclosure	Relevant Matter	Left Assembly **
Cr Keogh	Conflicting Duty	State Basketball Centre	Yes

**Name of Person Completing Record:** Joanne Ellis

\* Note: A Councillor making a disclosure must (80A(3)) make a disclosure under s79 and complete a Disclosure of Conflict of Interest Form.

\*\* Councillor disclosing to an assembly that he or she has a conflict of interest must leave the assembly prior to the matter being discussed and not return until the item has been considered.





## Record of Assembly of Councillors

(Section 80A Local Government Act)

### Complete this Section

**Date of Assembly:** 4/2/2020

**Name of Committee or Group (if applicable):** Issues Briefing

**Time Meeting Commenced:** 6.30pm

#### Name of Councillors Attending:

Cr Nicole Seymour, Mayor

Cr Adam Gill

Cr Marcia Timmers-Leitch, Deputy Mayor

Cr Jake Keogh

Cr Peter Lockwood

Cr Tony Holland

Cr John Mortimore

Cr Darren Pearce

#### Name of Members of Council Staff Attending:

Tony Doyle

Petrina Dodds Buckley (Item 1)

Matt Kelleher

Anthony Petherbridge (Item 1 and 2)

Tanya Scicluna

Cliff Bostock (Item 2)

Phil McQue

Madeleine Cheah (Item 2)

Andrew Dowling

Elissa Pachacz (Item 3)

Matthew Hanrahan (Item 1)

Ellen Ramsay (Item 3)

Mark Cini (Item 1)

Angela Morcos (Item 4)

Linda Merlino (Item 1)

Liz Stafford (Item 4)

#### Matters Considered:

1. Bayswater Activity Centre Strategic Assets and Multipurpose Community Facility Update
2. Bayswater Plan
3. Political Parties at Council Events
4. Update 3 Year Old Kindergarten Expansion Project
5. Live Streaming of Council Meetings Policy

#### Any conflict of interest disclosures made by a Councillor attending:\* Nil

Name	Disclosure	Relevant Matter	Left Assembly **

**Name of Person Completing Record:** Joanne Ellis

\* Note: A Councillor making a disclosure must (80A(3)) make a disclosure under s79 and complete a Disclosure of Conflict of Interest Form.

\*\* Councillor disclosing to an assembly that he or she has a conflict of interest must leave the assembly prior to the matter being discussed and not return until the item has been considered.



**Record of Assembly of Councillors**  
(Section 80A Local Government Act)

Complete this Section

**Date of Assembly:** 6/2/2020

**Name of Committee or Group (if applicable):** Knox Community Safety, Health and Wellbeing Advisory Committee

**Time Meeting Commenced:** 9.30am

**Name of Councillors Attending:**

Cr John Mortimore

**Name of Members of Council Staff Attending:**

Lisette Pine

Rosie Tuck

Tony Justice

Sam Spooner

Rachel Phillips

**Matters Considered:**

1. 2020 Priorities for the Committee
2. 2020-2022 Municipal Disability Plan
3. Feedback from Joint Advisory Committee and Sustainable Development Group Meeting

**Any conflict of interest disclosures made by a Councillor attending:\* Nil**

Name	Disclosure	Relevant Matter	Left Assembly **

**Name of Person Completing Record:** Lisette Pine

\* Note: A Councillor making a disclosure must (80A(3)) make a disclosure under s79 and complete a Disclosure of Conflict of Interest Form.

\*\* Councillor disclosing to an assembly that he or she has a conflict of interest must leave the assembly prior to the matter being discussed and not return until the item has been considered.

## 11.2 ICT Capital Works Report

**SUMMARY: Acting Manager Information Technology, Paul Barrett**

**The ICT Works Report shows projects on Council's ICT Capital Works Program and indicates the status of each project as at 13 February 2020.**

### **RECOMMENDATION**

**That Council receive and note the ICT Capital Works Report, as at 13 February 2020.**

### **1.INTRODUCTION**

This report summarises Councils ICT Capital Works Program for the 2019/2020 financial year. The aim of this report is to provide a regular and succinct status summary of each project over the last month. The Capital Works Report, as of 13 February 2020 is attached in Confidential Attachment 1.

Highlights of the Works Report as at 13 February 2020 Include:

#### **1242 - Website Channel Transformation**

User Experience (UX) and Design stage near completion, work will conclude end of February. Finalising user testing to validate and refine future website. Intranet navigation and design has commenced early for Project Phase 2 development.

#### **812 - Asset Management System**

Contract negotiations/departures are near completion with preferred vendor. Strategic Procurement and Knox legal team are reviewing the updated response from preferred vendor. Implementation phase kick off slightly delayed by a month, however Go Live milestones are expected to be recovered.

#### **1036 – HR System Enhancement**

User Acceptance testing for Work Package 2 (Humanforce) has commenced. Kick off meeting for PageUp Work Package 3 (Performance & Talent) occurred and initial project planning has commenced. The project is within budget and the revised timeline.

#### **1034 - Business Intelligence**

Implementation phase slightly delayed to next month due to recruitment of Implementation Manager (interviews underway). Recruitment to commence for business resources required to support roll out.

### **1031 – ICT Spatial Capability**

Project focus is on contract renegotiations, infrastructure upgrades and software upgrades. Testing continues. Scope review scheduled for 1-Apr to 14-May period with re-submission to ICT governance bodies in Jun 2020.

### **1369 – Master Data Management**

Project kick off with immediate project team completed 5 Feb. EMT project presentation completed 4/Feb. PM continues networking across LGA's. Project planning around stakeholder workshops, scheduling for late February and throughout March.

**Report Prepared By:                    Acting Manager Information Technology, Paul Barrett**

**Report Authorised By:                Executive Manager Strategy, People & Culture, People & Culture,  
Sam Stanton**

### **Attachments**

1.    ICT Status Report #9 [**11.2.1** - 3 pages]

## Knox City Council Project Status Report

13-Feb-2020

<b>Project Number</b>	<b>Project Name</b>
<b>789</b>	<b>FACILITIES BOOKING SOLUTION</b>
All Wards	Project kick off completed with business stakeholders and project is progressing well. An open market (tender) procurement activity is planned to commence on Saturday 8 February and due for completion on Monday 2 March (3 week duration).
<b>812</b>	<b>Asset Management Information System</b>
All Wards	Contract Negotiations/departures are near completion with preferred vendor. Strategic Procurement and Knox Legal team are reviewing the updated response from preferred vendor. Implementation phase kick off slightly delayed by a month, however Go Live milestones are expected to be recovered.
<b>827</b>	<b>Digital Customer Channels Transformation - DCCT Ph3</b>
All Wards	Phase 3 - Expand the secure portal to Knox staff, deliver a Knox business hub, and fully integrate with Knox systems. Will commence 2021.
<b>977</b>	<b>Pathway Program</b>
All Wards	Completed in January - ePathway Visual Identity refresh and ePathway BPOINT payment gateway integration. Reporting requests transition to Operations team. In Progress - Food and Health process review sessions, Snap Send Solve council site visits with Transformation. Late with Low Impact - Online Property Information Certificates due to test system set up delay, to resume in February 2020.
<b>1031</b>	<b>Spatial Capability</b>
All Wards	Project focus is on contract renegotiations, infrastructure upgrades and software upgrades. Testing continues. Scope review scheduled for 1-Apr to 14-May period with re-submission to ICT governance bodies in Jun 20.
<b>1034</b>	<b>Business Intelligence</b>
All Wards	Implementation phase slightly delayed to next month due to recruitment of Implementation Manager (interviews are underway). Recruitment to commence for business resources required to support roll out.
<b>1036</b>	<b>HR System</b>
All Wards	User Acceptance testing for Work Package 2 (Humanforce) has commenced. Kick off meeting for PageUp Work Package 3 (Performance & Talent) occurred and initial project planning has commenced. The project is within budget and the revised timeline.
<b>1037</b>	<b>Project Management Office - ICT Governance</b>
All Wards	Tracking as planned
<b>1242</b>	<b>Digital Customer Channels Transformation - DCCT Ph1</b>
All Wards	User Experience (UX) and Design stage near completion, work will conclude end of February. Finalising user testing to validate and refine future website. Intranet navigation and design has commenced early for Project Phase 2 development.

## Knox City Council Project Status Report

13-Feb-2020

<b>Project Number</b>	<b>Project Name</b>
<b>1245</b>	<b>Corporate Reporting Solutions</b>
All Wards	Project will commence in new calendar year to coincide with the formation of the new Strategy and Business Intelligence team. Team will work with Transformation team to define operating model ahead of IT assessment.
<b>1250</b>	<b>Point Fix - Storage System</b>
All Wards	Tracking to plan
<b>1255</b>	<b>Server Infrastructure Upgrade</b>
All Wards	Project waiting to be scheduled
<b>1257</b>	<b>Project Management Office - Not Major</b>
All Wards	Project tracking to plan
<b>1368</b>	<b>Widen Utilization of ION</b>
All Wards	Project awaiting scheduling
<b>1369</b>	<b>Master Data Management</b>
All Wards	Project kick off with immediate project team completed 5/Feb. EMT project presentation completed 4/Feb. PM continues networking across LGA's. Project planning around stakeholder workshops, scheduling for late February and throughout March.
<b>1370</b>	<b>Data Integration Tools</b>
All Wards	Project awaiting scheduling
<b>1371</b>	<b>Participation Platform</b>
All Wards	This project will commence in the new calendar year, scheduled to coincide with the formation of the Strategy and Business Intelligence team. Team will work with Transformation to define their operating model ahead of technical assessment.
<b>1372</b>	<b>Point Fix - M(Device)M</b>
All Wards	Tracking to plan
<b>1373</b>	<b>Active Aging System Platform</b>
All Wards	Following conversations with the Business Unit, this initiative will commence in March / April 20 time frame to align with the definition of their operating model and a readiness assessment to commence the technical assessment.

## Knox City Council Project Status Report

13-Feb-2020

Project Number	Project Name
1374	<p><b>Early Years Platform</b></p> <p>Transformation team have facilitated the first process identification session with Family and Children's Services. Current processes and pain points will be mapped out. A readiness assessment will be completed to recommend an ICT Project start date.</p>
1375	<p><b>Point Fix - Virtual Desktop</b></p> <p>All Wards Project waiting to be scheduled</p>
1376	<p><b>Digital Customer Channels Transformation - DCCT Ph2</b></p> <p>All Wards Phase 2 - Deliver a new staff Intranet and a secure portal for residents within our new website, as well as continued rollout of services. Will commence end of 2020.</p>
1377	<p><b>Cloud Solutions</b></p> <p>All Wards Project awaiting scheduling</p>
1378	<p><b>Point Fix - Single Sign-on (First Pass)</b></p> <p>All Wards Tracking to plan</p>
1379	<p><b>Customer Relationship Management (CRM)</b></p> <p>All Wards This project is due to commence in FY 20/21</p>
1380	<p><b>EDRMS - KX INTEGRATION TO OTHER MODULES</b></p> <p>Tracking to plan</p>

## 11.3 Capital Works Program Works Report as at 7 February 2020

### **SUMMARY: Coordinator, Capital Works, Gene Chiron**

The Works Report shows projects on Council's Capital Works Program and indicates the status of each project as at 7 February 2020.

### **RECOMMENDATION**

**That Council receive and note the Works Report, as at 7 February 2020.**

### **1. INTRODUCTION**

This report summarises Council's Capital Works Program for the 2020/2021 financial year.

The aim of this report is to provide a regular and succinct status summary of each project over the last month. The Capital Works Report, as of 7 February 2020, is attached as Attachment A.

Highlights of the Works Report as at 7 February 2020 include:

- Waterford Valley Lakes, Rowville – Construction completed.
- Road Reconstruction program – Completed well ahead of schedule.
- Operations Centre Relocation – Progressing on schedule for a late March completion.
- Aimee Seebeck Hall – Amenities upgrade completed.
- Billoo Park and Flamingo Preschools – Upgrades completed.
- Bicycle Repair and Pump Station Program Installations completed.

**Report Prepared By: Coordinator, Capital Works, Gene Chiron**

**Report Authorised By: Director, Engineering and Infrastructure, Ian Bell**

### **Attachments**

1. Capital Works Program - Works Report as at 7 February 2020 [**11.3.1** - 21 pages]



**Knox City Council Project Status Report**

07-Feb-2020

<b>Project Number</b>	<b>Project Name</b>	<b>Total Approved</b>
<b>1</b>	<b>Bridges Renewal Program</b>	<b>\$500,000</b>
All Wards	The Ferntree Gully Community Centre bridge renewal project is due to be released for tender in February 2020. Construction is scheduled to commence in April 2020.	
<b>4</b>	<b>High Risk Road Failures</b>	<b>\$500,000</b>
All Wards	Works in progress in relation to latest condition audits from 2019.	
<b>7</b>	<b>Road Surface Renewal Program</b>	<b>\$4,550,000</b>
All Wards	Works in progress in relation to latest condition audits from 2019.	
<b>8</b>	<b>Drainage Pit and Pipe Renewal Program</b>	<b>\$2,200,000</b>
All Wards	Program on track with drainage renewal projects at various locations.	
<b>9</b>	<b>Footpath Renewal Program</b>	<b>\$2,400,000</b>
All Wards	The footpath renewal program is progressing well with 65% of the program already completed.	
<b>10</b>	<b>Bicycle / Shared Path Renewal Program</b>	<b>\$625,000</b>
All Wards	Shared path renewal program is expected to be delivered during March/April. Locations include Wellington Road, Power Road, Stud Road and Liberty Reserve.	
<b>16</b>	<b>Building Renewal Program</b>	<b>\$6,738,342</b>
All Wards	Program is 30% committed/expended. Works commencing or nearing completion over December 2019/January 2020 include accessible ramp at F.W.Kerr, kitchen refit at The Basin and Haering Road Children and Family Centre, amenities refit at Kings Park Baseball Pavilion; Eastgate North and South, Aimee Seebeck Tennis Pavilion - external painting, Liberty Ave Children centre, Alexander Magit - internal painting, Knox Leisure Works – external walls and roof works; Carrington Park Football Pavilion – kitchen/pantry refit.	
<b>17</b>	<b>Playground Renewal Program</b>	<b>\$1,743,504</b>
All Wards	18/19 Playground renewals currently in maintenance period. 19/20 Playground renewals in detailed design phase. Marie Wallace Playground Renewal is out to public tender.	
<b>22</b>	<b>Fire Hydrant Replacement Program</b>	<b>\$134,000</b>
All Wards	Payment to South East Water due in June.	
<b>24</b>	<b>Carpark Renewal</b>	<b>\$530,000</b>
All Wards	Carpark renewal works about to commence at Batterham Reserve and Carrington Park. These will complete the 2019/2020 program.	
<b>25</b>	<b>Plant &amp; Machinery Replacement Program</b>	<b>\$2,463,000</b>
All Wards	Program progressing - funds 55% committed and 38% expended.	

**Knox City Council Project Status Report**

07-Feb-2020

<b>Project Number</b>	<b>Project Name</b>	<b>Total Approved</b>
<b>26</b>	<b>Street Tree Replacement Program</b>	<b>\$628,457</b>
All Wards	Consultation completed. Nursery visits completed with stock on hold. Bulk removals to commence February.	
<b>31</b>	<b>Stamford Park Redevelopment</b>	<b>\$9,418,580</b>
Tirhatuan	Adventure Play precinct tender package currently being finalised with a view to release for tender in February. Melbourne Water design review has now been received so progressing design works on the wetlands package. Planning permit anticipated to be received in February pending no VCAT objections.	
<b>104</b>	<b>Roadside Furniture Renewal Program</b>	<b>\$100,000</b>
All Wards	Program on schedule and retaining wall repair works are planned for various locations.	
<b>147</b>	<b>Energy Retrofits for Community Buildings</b>	<b>\$115,875</b>
All Wards	Further scoping underway for car park lighting to Civic Centre.	
<b>229</b>	<b>Building Code Australia Compliance</b>	<b>\$100,000</b>
All Wards	In progress, 70% completed. Works completed include replacement of doors/door furniture to 13 Scout Halls on Council's Land.	
<b>345</b>	<b>Asbestos Removal</b>	<b>\$100,000</b>
All Wards	In progress, 20% committed as part of renewal projects/capital.	
<b>347</b>	<b>Miscellaneous Industrial Roads - Pavement Rehabilitation</b>	<b>\$250,000</b>
All Wards	Works in progress in relation to latest condition audits from 2019.	
<b>409</b>	<b>Parks Furniture Renewal</b>	<b>\$102,000</b>
All Wards	Work progressing as expected.	
<b>410</b>	<b>Parks Signage Renewal</b>	<b>\$20,000</b>
All Wards	Works progressing as expected, audits on schedule.	
<b>412</b>	<b>Water Sensitive Urban Design Renewal</b>	<b>\$531,669</b>
All Wards	Construction of Waterford Valley lakes completed. The sluice valves will be installed in the following month. The quotation is being prepared for Koolamara wetland, sedimentation clean up.	
<b>441</b>	<b>Tim Neville Arboretum Renewal</b>	<b>\$427,107</b>
Dobson	Works proceeding as expected.	
<b>443</b>	<b>Reserves Paths Renewal</b>	<b>\$65,000</b>
All Wards	Works continuing as expected.	

**Knox City Council Project Status Report**

07-Feb-2020

<b>Project Number</b>	<b>Project Name</b>	<b>Total Approved</b>
<b>492</b>	<b>Food Act Compliance - Kitchen Retrofitting</b>	<b>\$50,000</b>
All Wards	In progress, 60% committed include Talaskia Pavilion kitchen refit project.	
<b>516</b>	<b>Rumann and Benedikt Reserves - Open Space Upgrade Stage 2</b>	<b>\$181,390</b>
Tirhatuan	Design documentation, schedules and specifications and tender documents completed. Public tender phase to commence in February.	
<b>536</b>	<b>Parkland Asset Renewal</b>	<b>\$45,000</b>
All Wards	Works proceeding as expected.	
<b>537</b>	<b>Bush Boulevard Renewal</b>	<b>\$65,000</b>
All Wards	Scoping of works complete, works will commence from January 2020.	
<b>566</b>	<b>Artwork Renewal</b>	<b>\$61,238</b>
All Wards	Ongoing renewal work on Placemakers public artwork restoration is on track; Cinema Lane Boronia light boxes are for planned renewal February 2020; Renewal of the arts collection management database platform is in progress and soon to be accessible as a digital resource on the Council website.	
<b>576</b>	<b>Emergency Warning Systems in Early Years Facilities</b>	<b>\$50,000</b>
All Wards	In progress, 30% committed include F.W. Kerr Preschool and Upper Ferntree Gully Children and Family Centre.	
<b>587</b>	<b>Upper Ferntree Gully Neighbourhood Activity Centre - Design</b>	<b>\$815,752</b>
Dobson	Drainage renewal works in progress. Streetscape tender closed end of December. Clarifications currently being sought and anticipate tender to be awarded early February.	
<b>593</b>	<b>Marie Wallace Reserve - Masterplan Implementation Stage 4</b>	<b>\$771,421</b>
Dinsdale	(1) Car park works have now been completed. (2) Repairs to bike training area in progress including new artificial turf. (3) Masterplan works for stage 3 are being revised waiting on award of playground renewal contract.	
<b>630</b>	<b>Early Years Hubs - Bayswater</b>	<b>\$115,000</b>
Dinsdale	Construction and handover completed. Awaiting Ausnet to complete group metering upgrade.	
<b>649</b>	<b>Scoresby (Exner) Reserve - Masterplan Implementation Stage 3</b>	<b>\$450,000</b>
Tirhatuan	Tender has been awarded. Construction to start on site in February.	
<b>664</b>	<b>Stormwater Harvesting Program Development</b>	<b>\$249,925</b>
All Wards	Detailed Designs to retrofit 'outdated' stormwater harvesting systems at Eildon Park, Knox Gardens, Batterham and Fairpark have been completed. Public Tender in progress, with contractor to undertake works, scheduled for March-May 2020.	

**Knox City Council Project Status Report**

07-Feb-2020

<b>Project Number</b>	<b>Project Name</b>	<b>Total Approved</b>
<b>667</b>	<b>Dobson Creek Catchment - Streetscape Water Sensitive Urban Design</b>	<b>\$7,391</b>
Chandler	Project completed.	
<b>675</b>	<b>Public Art Project</b>	<b>\$206,100</b>
All Wards	Framed by Gender and Immerse public artworks now complete; Stamford Park Public Artworks near contract signing stage; Public art project planned for Knox Festival involving 6 local secondary schools; Boronia major public artwork planned for 2020/21 as part of Boronia renewal.	
<b>708</b>	<b>Cricket Run Up and Goal Square Renewal Works</b>	<b>\$55,000</b>
All Wards	Fertilising commenced.	
<b>717</b>	<b>Knox Central Package</b>	<b>\$8,235,000</b>
Dinsdale	Negotiations to acquire parcels for future road corridor and delivery of Knox Central Masterplan continue. Residual funding from the Operations Centre land acquisition to remain allocated to the project should additional land be required.	
<b>724</b>	<b>Knox (Interim) Library</b>	<b>\$664,205</b>
Dinsdale	Project on hold pending Westfield Development Application approval and Investment Board sign off of redevelopment.	
<b>725</b>	<b>Placemakers Site</b>	<b>\$289,920</b>
Dobson	Further minor works required to complete fittings and fixtures, to be completed by EOFY.	
<b>733</b>	<b>Preschool Office/Storage - Minor Works</b>	<b>\$45,881</b>
All Wards	Project completed.	
<b>737</b>	<b>Meals on Wheels site reconfiguration - Stage 2</b>	<b>\$50,000</b>
Dinsdale	Relocation completed.	
<b>746</b>	<b>Revegetation Plan</b>	<b>\$270,631</b>
All Wards	Scoping and planning of project has commenced. Plant list being ordered.	
<b>747</b>	<b>Chandler Park, Boronia - Masterplan Implementation Stage 3</b>	<b>\$100,000</b>
Chandler	Scope of final path/planting works scheduled for early 2020.	
<b>755</b>	<b>Talaskia Reserve, Upper Ferntree Gully - Masterplan Implementation Stage 2</b>	<b>\$400,000</b>
Dobson	Detailed design for new DDA path access, outdoor gym equipment and sensory planting/sculptural art currently being finalised.	
<b>761</b>	<b>Dandenong Creek Gateways - Strategic Road Corridors Revegetation</b>	<b>\$173,196</b>
All Wards	Design of suitable bush planting to commence in February.	

**Knox City Council Project Status Report**

07-Feb-2020

<b>Project Number</b>	<b>Project Name</b>	<b>Total Approved</b>
<b>799</b>	<b>Windermere Drive, Ferntree Gully - Reconstruction</b>	<b>\$407,000</b>
Friberg	Project part of Contract 2465 - packaged as one construction tender. Contract works completed and PC Inspection carried out.	
<b>834</b>	<b>Oversowing of Sports Fields</b>	<b>\$50,000</b>
All Wards	Grounds selected. Seed ordered. Contractor engaged. Works to begin late March.	
<b>837</b>	<b>Westfield (Permanent) Library - Design and Fitout</b>	<b>\$3,200,000</b>
Dinsdale	The project is currently on hold, awaiting for Westfield to provide new base build design drawings to allow us to complete our concept design.	
<b>838</b>	<b>Bayswater Community Hub - Scoping</b>	<b>\$120,000</b>
Dinsdale	Councillor engaged to discuss potential location for concept plan. On track for officers to commission plans by June 30th.	
<b>844</b>	<b>Score Boards - Design and Installation</b>	<b>\$425,814</b>
All Wards	In progress, 60% completed.	
<b>849</b>	<b>Repurposing Scoping of Facilities from Hub Projects.</b>	<b>\$106,454</b>
All Wards	Officers continue to work through actions from November 2018 Council meeting. Relevant projects have been included in the Draft 20/21 Capital Works Program. Consideration of rezoning of early years facilities to occur throughout 2020/2021.	
<b>853</b>	<b>Aimee Seebeck Hall, Amenities Upgrade</b>	<b>\$238,347</b>
Taylor	Project completed and invoices paid.	
<b>867</b>	<b>Knox Regional Netball Centre Extension</b>	<b>\$158,001</b>
Dobson	Initial concepts received (5), works proceeding to further develop 2 selected options.	
<b>868</b>	<b>H V Jones, Ferntree Gully - Masterplan Implementation Stage 2</b>	<b>\$716,617</b>
Friberg	Contract has now been awarded and is due to commence onsite mid February.	
<b>869</b>	<b>Gilbert Park, Knoxfield - Masterplan Implementation Stage 2</b>	<b>\$509,208</b>
Friberg	Contract has now been awarded and is due to commence onsite early February.	
<b>871</b>	<b>Energy Performance Contract Implementation</b>	<b>\$1,994,255</b>
All Wards	Works specifications for each of the projects within the Energy Performance Contract are currently being developed for approval.	
<b>889</b>	<b>Wally Tew Reserve, Ferntree Gully - Floodlighting Upgrade</b>	<b>\$10,933</b>
Dobson	Project completed.	

**Knox City Council Project Status Report**

07-Feb-2020

<b>Project Number</b>	<b>Project Name</b>	<b>Total Approved</b>
<b>891</b>	<b>Henderson Road Bridge, Rowville</b>	<b>\$4,324,406</b>
Friberg	Bridge construction completed and road open. Melbourne Water drain still requires relocation. Awaiting their final design to enable those works to be completed.	
<b>907</b>	<b>Manson Reserve - Wetland Construction</b>	<b>\$418,305</b>
Collier	The Construction of Manson Reserve wetland has started and is anticipated to be completed in 12 weeks. Schedule is subject to change due to weather condition and/or unforeseen interruptions.	
<b>925</b>	<b>1101 Burwood Hwy, Ferntree Gully (Forest Rd to Toyota) - Reconstruction</b>	<b>\$90,000</b>
Dobson	Project part of Contract 2465 - packaged as one construction tender. Contract works completed and PC Inspection carried out.	
<b>928</b>	<b>Barmah Drive, Wantirna (No. 49 to No. 57) Reconstruction</b>	<b>\$60,000</b>
Collier	Project part of Contract 2465 - packaged as one construction tender. Contract works completed and PC Inspection carried out.	
<b>929</b>	<b>Albert Avenue, Boronia (Chandler Rd to Bambury St) Reconstruction</b>	<b>\$380,000</b>
Chandler	Project part of Contract 2465 - packaged as one construction tender. Contract works completed and PC Inspection carried out.	
<b>930</b>	<b>Forest Road, Ferntree Gully Reconstruction Stage 1 &amp; 2</b>	<b>\$860,000</b>
Dobson	Project part of Contract 2465 - packaged as one construction tender. Contract works completed and PC Inspection carried out.	
<b>932</b>	<b>Burwood Highway - service road, Ferntree Gully Stage 1 &amp; 2</b>	<b>\$505,000</b>
Dobson	Project part of Contract 2465 - packaged as one construction tender. Contract works completed and PC Inspection carried out.	
<b>934</b>	<b>Sheraton Crescent, Ferntree Gully - Reconstruction</b>	<b>\$200,000</b>
Friberg	Project part of Contract 2465 - packaged as one construction tender. Contract works completed and PC Inspection carried out.	
<b>939</b>	<b>Millers Reserve, Boronia Oval Renewal</b>	<b>\$48,186</b>
Chandler	Project completed.	
<b>941</b>	<b>Knox Regional Netball Centre - Court Renewals</b>	<b>\$70,302</b>
Dobson	Resurfacing complete. 2 grandstands installed. Vegetation works commenced and expected to finish next week.	
<b>942</b>	<b>Tree Management</b>	<b>\$99,321</b>
All Wards	Works undertaken as required in conjunction with Council initiatives.	

**Knox City Council Project Status Report**

07-Feb-2020

<b>Project Number</b>	<b>Project Name</b>	<b>Total Approved</b>
<b>944</b>	<b>Knox Central (Operations Centre Relocation)</b>	<b>\$14,986,608</b>
Dinsdale	New Operations Centre - structural building works completed, internal fitout commenced. Site works well advanced. Scheduled completion late March. Existing Operations Centre - remediation is progressing however further digging is dependent on the relocation due to proximity to the building.	
<b>946</b>	<b>Boronia Precinct Planning</b>	<b>\$186,124</b>
Baird	Council has endorsed the draft Strategy on 26 August 2019 and requested authorisation from the Minister for Planning to commence the planning scheme amendment process to implement the Strategy. Subject to receiving Ministerial authorisation, Council will undertake public consultation on the draft Strategy and the amendment documents to seek feedback from the community.	
<b>948</b>	<b>Modular Building Program (Modern Construction Systems)</b>	<b>\$3,653,420</b>
All Wards	Wally Tew Reserve and Colchester Reserve are nearing completion with completion expected mid February. Seebeck and Liberty Reserve secondary change rooms are expected to be awarded by end of March. Lakesfield Pavilion (full modular pavilion) will be tendered mid 2020.	
<b>950</b>	<b>Family &amp; Childrens Services Buildings &amp; Facilities</b>	<b>\$398,833</b>
All Wards	Bathroom upgrades at Bernie Seebeck Preschool and UFTG Preschool are underway with expected completion by April 2020.	
<b>951</b>	<b>Community Toilet Replacement Program</b>	<b>\$430,818</b>
All Wards	Wally Tew public toilet module is completed and fitted onsite. Wicks Reserve tender is expected by end of February 2020 and expected construction completion by June 2020. Liberty Pavilion co-locatable public toilet module is expected to be awarded by April 2020 with some carry forward into 2020/2021.	
<b>954</b>	<b>Knox BMX Track - New Storage &amp; Start Gate Structure</b>	<b>\$226,282</b>
Friberg	Project completed.	
<b>957</b>	<b>Kings Park, Upper Ferntree Gully - New Floodlighting (Oval 2)</b>	<b>\$14,008</b>
Dobson	Construction underway. Expected to be completed Feb/March 2020.	
<b>958</b>	<b>Liberty Avenue Reserve, Rowville - New Floodlighting</b>	<b>\$18,000</b>
Taylor	Project completed.	
<b>961</b>	<b>Knox Regional Netball Centre Floodlight Outdoor Courts 5 to 8</b>	<b>\$198,130</b>
Dobson	Part of masterplan works currently under concept design.	
<b>965</b>	<b>Billoo Park Preschool - Toilet and Storage Upgrade</b>	<b>\$175,000</b>
Collier	Project completed.	

**Knox City Council Project Status Report**

07-Feb-2020

<b>Project Number</b>	<b>Project Name</b>	<b>Total Approved</b>
<b>968</b>	<b>Flamingo Preschool, Wantirna South - Verandah Extension</b>	<b>\$57,840</b>
Collier	Project completed.	
<b>969</b>	<b>Orana Neighbourhood House Kitchen Upgrade</b>	<b>\$25,000</b>
Dinsdale	Project completed.	
<b>982</b>	<b>Anne Road, Knoxfield LATM Stage 1 - Installation</b>	<b>\$89,217</b>
Friberg	To be completed in conjunction with Stage 2 line marking works and road resurfacing program.	
<b>994</b>	<b>Picketts Reserve, Ferntree Gully Masterplan Implementation Stage 3</b>	<b>\$296,200</b>
Baird	Further scoping of project required. Timelines adjusted to reduce impact on stakeholders.	
<b>995</b>	<b>Peregrine Reserve, Rowville - Masterplan Implementation Stage 1</b>	<b>\$521,078</b>
Taylor	Contract has now been awarded & is due to commence onsite February 2020	
<b>997</b>	<b>Llewellyn Reserve, Wantirna South - Masterplan Implementation</b>	<b>\$122,080</b>
Scott	New gate and fence works to commence on site early February.	
<b>998</b>	<b>Templeton Reserve, Wantirna - Masterplan Implementation Stage 3</b>	<b>\$460,184</b>
Collier	(1) Masterplan Stage 2 construction close to completion. (2) Works on car park upgrade completed.	
<b>999</b>	<b>Lewis Park, Wantirna South - Masterplan Implementation</b>	<b>\$538,762</b>
Dinsdale	Site investigations have been completed to inform the waterways design component. A workshop is to be held with Melbourne Water on concept options in late February. Artefacts have been found within the Community Gardens area as part of the mandatory Cultural Heritage Management Plan investigation. A concept plan for the g	
	ardens is being progressed with this in mind.	
<b>1000</b>	<b>Stud Park Reserve, Rowville - Masterplan Implementation Stage 3</b>	<b>\$417,584</b>
Tirhatuan	Stage 3 works completed. Awaiting quotes for footpath connection.	
<b>1001</b>	<b>Scoresby Village Reserve, Masterplan Implementation</b>	<b>\$382,500</b>
Tirhatuan	Tender awarded. Construction to commence in coming months.	
<b>1002</b>	<b>Egan Lee Reserve, Knoxfield Masterplan Implementation</b>	<b>\$300,000</b>
Scott	Tender documents completed. Public tender phases to commence in February.	
<b>1003</b>	<b>Wantirna Reserve - Masterplan</b>	<b>\$15,320</b>
Collier	This project is on hold while Council investigates past land use and waste issues.	



**Knox City Council Project Status Report**

07-Feb-2020

<b>Project Number</b>	<b>Project Name</b>	<b>Total Approved</b>
<b>1005</b>	<b>Neighbourhood Green Streets</b>	<b>\$91,999</b>
All Wards	Project on schedule. Planting along Dorset Road and Scoresby Road to commence in April 2020.	
<b>1006</b>	<b>Bush Boulevards</b>	<b>\$141,999</b>
All Wards	Design of gravel parking areas along Boronia Road with suitable bush planting to commence in February.	
<b>1009</b>	<b>Talking Tanks Initiative - Flood Protection</b>	<b>\$265,592</b>
All Wards	The DELWP Integrated Water Management Forum has confirmed the acceptance of this project. This project will be delivered in collaboration with South East Water, DELWP, Melbourne Water in next 2 years.	
<b>1016</b>	<b>Kings Park Solar Panel Installation</b>	<b>\$9,091</b>
Dobson	Project completed.	
<b>1046</b>	<b>Scoresby Recreation Reserve - New DDA Toilet</b>	<b>\$150,000</b>
Tirhatuan	Scope and design for provision of DDA toilet has commenced with documentation expected at end of February 2020.	
<b>1054</b>	<b>Knox Regional Sports Park - Stages 2 and 3</b>	<b>\$149,428</b>
Scott	Design and cost estimate work for Victorian Association of Radio Model Soaring (VARMS) club relocation is nearing completion.	
<b>1068</b>	<b>Rowville (Seebeck) Reserve - Multipurpose Community Workshop</b>	<b>\$342,328</b>
Taylor	The contractor for the construction of the new building has been selected and the building permit application has been submitted.	
<b>1097</b>	<b>Wally Tew Reserve - Storage Facility</b>	<b>\$52,976</b>
Dobson	Module has been delivered to site with handover expected mid February 2020.	
<b>1105</b>	<b>Batterham Reserve, The Basin - Cricket Nets Replacement</b>	<b>\$240,995</b>
Chandler	Cricket nets installation completed with remainder of footpath works to be completed after lighting of nets is completed.  Lighting contractor nearing completion of lighting works and expects erection and activation of lighting poles to occur February following delays due to adverse weather.	
<b>1106</b>	<b>Batterham Reserve, The Basin - Residual Works</b>	<b>\$304,759</b>
Chandler	Works commenced onsite with expected completion in April 2020.	

**Knox City Council Project Status Report**

07-Feb-2020

<b>Project Number</b>	<b>Project Name</b>	<b>Total Approved</b>
<b>1112</b>	<b>Selman Avenue (2), Ferntree Gully (Spring St to Station St)</b>	<b>\$280,000</b>
Dobson	Project part of Contract 2465 - packaged as one construction tender. Contract works completed and PC Inspection carried out.	
<b>1114</b>	<b>Studfield Shopping Centre Pavement Renewal</b>	<b>\$413,940</b>
Dinsdale	Detailed design plans finalised. Trader engagement underway and ongoing with input to influence construction methodology. Once approved anticipate construction to commence from late February 2020.	
<b>1115</b>	<b>Milpera Reserve, Wantirna - Oval Renewal</b>	<b>\$850,000</b>
Collier	Soil importation nearly completed, planting will occur mid-February.	
<b>1117</b>	<b>Batterham Reserve, The Basin - Tennis Court Renewals</b>	<b>\$100,000</b>
Chandler	Project on hold while scoping discussions continue with Leisure and Tennis Club. This is likely to lead to a report to Council.	
<b>1118</b>	<b>Wantirna Reserve, Wantirna - Cricket Net Renewals</b>	<b>\$30,000</b>
Collier	All works on this site are on hold pending soil condition report.	
<b>1119</b>	<b>Wantirna Reserve, Wantirna - Tennis Court Renewals</b>	<b>\$539,594</b>
Collier	Initial scoping discussions have been held with Leisure and the Tennis Club. Concept layout prepared.  Design on hold pending outcome of soil geotechnical investigations in relation to waste investigations and overall development of Wantirna Reserve.	
<b>1120</b>	<b>Templeton Reserve, Wantirna - Tennis Court Renewals</b>	<b>\$583,550</b>
Collier	Detailed design completed and tenders have closed with evaluation underway. Anticipate being in a position to present a report recommending an appointment at the March SPC Council meeting. Construction expected to commence around early April 2020.	
<b>1121</b>	<b>Eildon Park, Rowville - Cricket Net Renewal</b>	<b>\$260,000</b>
Taylor	Works to commence March 2020.	
<b>1122</b>	<b>Knox Regional Sports Park - Soccer Cages Renewal</b>	<b>\$20,000</b>
Scott	Board replacement commencing in February.	
<b>1123</b>	<b>Public Tennis / Netball / Basketball Court Renewals</b>	<b>\$137,360</b>
All Wards	Project completed.	
<b>1124</b>	<b>Sporting Oval Fencing Renewals</b>	<b>\$120,000</b>
All Wards	Install of Seebeck Reserve to start in February.	

**Knox City Council Project Status Report**

07-Feb-2020

<b>Project Number</b>	<b>Project Name</b>	<b>Total Approved</b>
<b>1125</b>	<b>Stormwater Harvesting Infrastructure Renewal</b>	<b>\$72,560</b>
All Wards	Miller Reserve central controller installed. Bayswater works to commence in February.	
<b>1126</b>	<b>Knox Skate &amp; BMX Park – New Youth Pavilion</b>	<b>\$673,612</b>
Friberg	Design completed. Project expected to be tendered by end of February 2020. Some carry forward may be required to 2020/21.	
<b>1128</b>	<b>Gilbert Park Reserve, Knoxfield - New Drainage</b>	<b>\$36,500</b>
Friberg	This project is under review, current drainage is coping adequately.	
<b>1129</b>	<b>Picketts Reserve, Ferntree Gully - Floodlighting Upgrade</b>	<b>\$250,000</b>
Baird	Works commenced on site. Expected completion by March 2020.	
<b>1130</b>	<b>Wantirna Reserve, Wantirna - Floodlighting and Security Lighting</b>	<b>\$300,000</b>
Collier	Deferred to 2020/21.	
<b>1131</b>	<b>Carrington Park Reserve, Knoxfield - Floodlighting Upgrade</b>	<b>\$250,000</b>
Friberg	Works commenced on site. Expected completion by March 2020.	
<b>1132</b>	<b>Arcadia Reserve (Scouts), Rowville - Carpark Upgrade</b>	<b>\$100,000</b>
Tirhatuan	Survey and geotech investigation completed and design underway.	
<b>1133</b>	<b>Arts Facility Planning Documentation</b>	<b>\$15,474</b>
All Wards	Purchase of equipment upgrades for theatre in response to facility and asset audit will expend this budget by EOFY.	
<b>1134</b>	<b>Ferntree Gully Arts Centre &amp; Library Deck Enclosure</b>	<b>\$50,000</b>
Dobson	Facility functional audit is underway to identify the most effective ways to improve and enlarge usable space at FTGCAC - scoping options with stakeholders presently. Unlikely to be deck enclosure - more likely to be carry forward for internal reconfiguration of space during 20/21.	
<b>1135</b>	<b>Theatre Lighting Upgrades</b>	<b>\$30,000</b>
Dinsdale	Project completed, all theatre house lights upgraded.	
<b>1136</b>	<b>Arts Facility Upgrades</b>	<b>\$95,978</b>
All Wards	Works are planned, some now in progress. Still aiming for completion within 2019/20.	
<b>1140</b>	<b>Community Facility Signage Upgrade</b>	<b>\$2,500</b>
All Wards	Project expected to be completed by end of June.	

**Knox City Council Project Status Report**

07-Feb-2020

<b>Project Number</b>	<b>Project Name</b>	<b>Total Approved</b>
<b>1144</b>	<b>Boronia Road, Bayswater (Edinburgh Rd to Scoresby Rd) - Footpath - Construction</b>	<b>\$106,040</b>
Dinsdale	Concept plan prepared. Awaiting feedback on outcome of consultation process with property owners and VicRoads.	
<b>1145</b>	<b>Glenfern Road, Ferntree Gully (Norman St to Trafalgar St) - Footpath - Construction</b>	<b>\$79,228</b>
Dobson	Review of initial detailed design completed. Section of pathway requires a re-design as a result. This project has now been delayed.	
<b>1146</b>	<b>Wellington Road, Rowville (Straughan Close to Napoleon Road) - Footpath Construction</b>	<b>\$95,000</b>
Taylor	Design has been completed.	
<b>1148</b>	<b>Montana Avenue, Boronia - Footpath - Construction</b>	<b>\$69,379</b>
Chandler	Possible layouts have been prepared. A road safety audit on proposals is being sought.	
<b>1150</b>	<b>Knoxfield LATM Precinct Stage 2 - Installation</b>	<b>\$180,000</b>
Scott	Installation of treatments is progressing with approximately 60% already installed and further works programmed.	
<b>1151</b>	<b>Forest Road - Stockton to Dorian Isolated Traffic Treatment (Hot Spot) Program - Installation</b>	<b>\$94,412</b>
Dobson	Project completed.	
<b>1152</b>	<b>Burwood Hwy, Upper Ferntree Gully Shared Path Link 1 (Construct)</b>	<b>\$161,806</b>
Dobson	On hold pending result of Burwood Hwy Shared Path Overpass Bridge feasibility study.	
<b>1155</b>	<b>Kelletts Road, Rowville (Stud Rd to Taylors Lane) - Shared Path - Design</b>	<b>\$25,000</b>
Taylor	Design plan finalised.	
<b>1158</b>	<b>Timothy Drive, Wantirna South Underpass - Solar Lighting Upgrade</b>	<b>\$17,865</b>
Scott	Construction started.	
<b>1162</b>	<b>Templeton Street, Wantirna - Linemarking and Intersection Treatments (Design)</b>	<b>\$70,000</b>
Collier	Consultant working on detailed design	
<b>1163</b>	<b>Renou Road, Wantirna South - Intersection Treatments</b>	<b>\$197,000</b>
Collier	Detailed design has been completed.	
<b>1164</b>	<b>Coleman Road, Boronia - Linemarking and Sharrows</b>	<b>\$45,000</b>
Dinsdale	Consultant working on detailed design.	

**Knox City Council Project Status Report**

07-Feb-2020

<b>Project Number</b>	<b>Project Name</b>	<b>Total Approved</b>
<b>1165</b>	<b>Mowbray Drive, Wantirna South - Parking and Intersection Treatments</b>	<b>\$16,992</b>
Scott	Consultant working on detailed design.	
<b>1166</b>	<b>Timothy Drive, Wantirna South - Intersection Treatments</b>	<b>\$35,000</b>
Scott	Consultant working on detailed design.	
<b>1170</b>	<b>Mountain Highway, Boronia (near Scoresby Rd) - Footpath Connection 4</b>	<b>\$80,000</b>
Baird	Undertaking negotiations for license agreement.	
<b>1171</b>	<b>Fairpark Reserve, Ferntree Gully - Masterplan Implementation Stage 3</b>	<b>\$678,326</b>
Baird	Melbourne Water are progressing with the Blind Creek Day lighting works. Rockwork continues and foundations for the platform in progress.	
<b>1172</b>	<b>Tormore Reserve, Boronia - Masterplan Implementation Stage 4</b>	<b>\$489,619</b>
Baird	Stage 2 has reached Practical Completion. 13 week maintenance period in progress.	
<b>1173</b>	<b>Quarry Reserve, Ferntree Gully - Masterplan Implementation Stage 2</b>	<b>\$1,123,508</b>
Dobson	(1) Masterplan works - Construction of picnic area, lookout and playspace have commenced on site. Works on the fishing platforms have also now commenced. (2) Security Fencing - Contract works well underway for perimeter fencing. Works around 40% complete and expected to be completed by mid-February 2020.	
<b>1174</b>	<b>Principal Avenue - Dorset Road Streetscape Upgrade</b>	<b>\$36,802</b>
Chandler	Trees have been ordered. Planting along Dorset Road and Scoresby Road to commence in April 2020.	
<b>1175</b>	<b>Orson Street, Scoresby (Flood Protection) - Detailed Design</b>	<b>\$50,000</b>
Tirhatuan	The proposed solution was discussed with internal stakeholders and endorsed. The detailed design will be completed by Jun 2020 for the construction in next financial year.	
<b>1176</b>	<b>Solar in Community Facilities</b>	<b>\$90,000</b>
All Wards	Installation of Solar at Liberty Ave Children's Centre completed, Knox Gardens Pavilion and Murrindal Children's Centre underway.	
<b>1180</b>	<b>Koolunga Reserve, FTG - Wetland Construction</b>	<b>\$282,306</b>
Chandler	Construction is anticipated to start in May 2020, with proposal to secure funding in the next year.	
<b>1182</b>	<b>Norvel Quarry Reserve Water Quality System - Design &amp; Construction</b>	<b>\$40,000</b>
Baird	Awaiting developer response to Council comments on submitted Stormwater Quality Management Plan, prior to approval.	

**Knox City Council Project Status Report**

07-Feb-2020

<b>Project Number</b>	<b>Project Name</b>	<b>Total Approved</b>
<b>1183</b>	<b>Peregrine Reserve - Wetland treatment system - Design</b>	<b>\$50,000</b>
Taylor	Detailed Design process underway and due for completion by 30 June, for construction delivery in 2020-2021 in line with the Peregrine Reserve Master Plan priorities.	
<b>1184</b>	<b>Egan Lee Reserve Masterplan - Wetland treatment system - Design</b>	<b>\$50,000</b>
Scott	Detailed Design well underway and should be completed end February in readiness for construction delivery in 2020-2021.	
<b>1195</b>	<b>Boronia Safer Communities</b>	<b>\$120,411</b>
Baird	Project completed awaiting invoice.	
<b>1207</b>	<b>Eildon Park Reserve, Rowville - Drainage Renewal Works Oval 2</b>	<b>\$150,000</b>
Taylor	Works commenced first week in December. Contractor finished and awaiting final invoice.	
<b>1208</b>	<b>Fairpark Reserve, Ferntree Gully - Drainage Renewal Works Oval 1</b>	<b>\$150,000</b>
Baird	Works to commence 24 February 2020.	
<b>1216</b>	<b>Carrington Park Reserve, Knoxfield - Cricket Net Renewal</b>	<b>\$250,000</b>
	Works to commence in March 2020.	
<b>1217</b>	<b>Boronia Activity Centre and Station Precinct Renewal Project</b>	<b>\$95,000</b>
Baird	Project has commenced and an evaluation process is underway to appoint consultants to undertake the consultation.	
<b>1222</b>	<b>Ramon Cowling Bushland Reserve - New Walkway</b>	<b>\$58,000</b>
Chandler	Planning underway for the design and installation of bronze discs for the boulders and signage for the site.	
<b>1225</b>	<b>Commercial Road, Ferntree Gully (Burwood Highway to Wilson St) - Design</b>	<b>\$70,000</b>
Baird	Detailed design underway - scope to be determined by funds.	
<b>1226</b>	<b>Lewis Road, Wantirna South (Tilba Pl to Kanooka Rd) - Design</b>	<b>\$35,000</b>
Dinsdale	Survey completed and detailed design underway.	
<b>1227</b>	<b>Albert Street, UF'tree Gully (Talaskia Rd to Townley Place) - Design</b>	<b>\$33,000</b>
Dobson	Detailed design and design review completed. Minor design alterations with pavement scope to be finalised.	
<b>1228</b>	<b>Malvern Street, Bayswater (Edelmaier St to Scoresby Rd) - Design</b>	<b>\$35,000</b>
Baird	Survey underway with detailed design to follow.	

**Knox City Council Project Status Report**

07-Feb-2020

<b>Project Number</b>	<b>Project Name</b>	<b>Total Approved</b>
<b>1229</b>	<b>Sullivan Court, Wantirna (Rachelle Drive to End) - Design</b>	<b>\$12,000</b>
Collier	Survey planned for March 2020.	
<b>1230</b>	<b>Wanaka Close, Rowville (Erie Avenue to End) - Design</b>	<b>\$10,000</b>
Tirhatuan	Survey planned for April 2020.	
<b>1231</b>	<b>Winnifred Crescent, Knoxfield (Allister Close to Christie Close) - Design</b>	<b>\$18,000</b>
Friberg	Survey planned for March 2020.	
<b>1232</b>	<b>Chandler Road, Boronia (Floriston Rd to Albert Ave) - Design</b>	<b>\$35,000</b>
Chandler	Survey due early New Year with detailed design due to commence in May 2020. Internal meeting to be arranged with Boronia Renewal Project Team to discuss concept plan for Chandler Rd.	
<b>1233</b>	<b>Knox Park, Knoxfield - Turf Renewal</b>	<b>\$125,000</b>
Friberg	Stripping turf successful. Santa Anna couch supplied and laid. Fertilisers to be added over the coming weeks.	
<b>1234</b>	<b>Knox Athletics Track, Knoxfield - Pathway Renewals</b>	<b>\$30,000</b>
Friberg	Works completed.	
<b>1235</b>	<b>Lakesfield Reserve. Lysterfield - Drainage Renewal Works</b>	<b>\$150,000</b>
Dobson	Works commenced last week. Rain delayed 3 days worth of works. Contractor expected to finish mid February.	
<b>1236</b>	<b>Windermere Reserve, Ferntree Gully - Oval Renewal - Design</b>	<b>\$15,000</b>
Friberg	Contractor engaged to design. Awaiting design.	
<b>1237</b>	<b>Carrington Park Senior Citizen Centre - Design</b>	<b>\$85,000</b>
Friberg	The tender for the detailed design closed at the end of January. Evaluation of the submissions to follow.	
<b>1238</b>	<b>BAMP Facility Upgrades</b>	<b>\$1,200,000</b>
All Wards	Projects identified on program continuing to be scoped, designed and tendered for initial construction to commence in late 2019/20. Expectation is that proportion of funding will be carried forward as program development is progressed.	
<b>1247</b>	<b>Boronia Youth Hall Demolition and Pop Up Park</b>	<b>\$18,951</b>
Baird	Project now completed and handed over to community wellbeing team.	
<b>1258</b>	<b>Ferntree Gully Bowls Club - New Floodlighting</b>	<b>\$135,000</b>
Dobson	Works commenced on site. Expected completion by March 2020.	

**Knox City Council Project Status Report**

07-Feb-2020

<b>Project Number</b>	<b>Project Name</b>	<b>Total Approved</b>
<b>1259</b>	<b>Carrington Park Reserve, Knoxfield - Paving and Pathway Upgrade</b>	<b>\$85,000</b>
Friberg	Works being managed in conjunction with Major Initiatives Unit.	
<b>1260</b>	<b>Bayswater Bowls Club - New Accessibility Pathway</b>	<b>\$60,000</b>
Dinsdale	Met club representatives on site and scope clarified and adjusted. Gas & Electrical services to bowling club to be proved. Re-survey to be scheduled and design to follow.	
<b>1261</b>	<b>Wantirna Reserve - Car Park Upgrade (Design)</b>	<b>\$40,000</b>
Collier	Initial scoping discussions have been held with Leisure, Open Space and Waste. Design on hold pending outcome of further discussions and soil geotechnical investigations.	
<b>1262</b>	<b>Cultural Facilities - Knox Pop Up Events Trailer &amp; Kit</b>	<b>\$20,000</b>
All Wards	Purchases continue to be processed and planned, will be expended within 2019/20.	
<b>1263</b>	<b>Cultural Facilities - Theatre Equipment Upgrade</b>	<b>\$26,000</b>
All Wards	Theatre equipment upgrade purchases now completed.	
<b>1264</b>	<b>Knox Regional Netball Centre - Amenities Upgrade</b>	<b>\$50,000</b>
Dobson	Female and male amenities completed.	
<b>1265</b>	<b>Park Crescent Children and Family Centre Refurbishment, Boronia - Design</b>	<b>\$78,500</b>
Baird	Design process underway with detailed design/cost plans expected by mid May 2020.	
<b>1266</b>	<b>Rowville Children and Family Centre Refurbishment</b>	<b>\$92,000</b>
Tirhatuan	Detailed design process underway with designs/cost plan now expected mid May 2020	
<b>1267</b>	<b>Early Years Facilities - Landscaping Upgrades</b>	<b>\$150,000</b>
All Wards	Works on schedule, further scoping required.	
<b>1268</b>	<b>The Fields Preschool (north side), Rowville - Verandah</b>	<b>\$10,000</b>
Taylor	Design only project. Scoping to be completed by end of May 2020	
<b>1269</b>	<b>Rosa Benedikt Community Centre, Scoresby - Minor Upgrade</b>	<b>\$25,000</b>
Tirhatuan	Project completed.	
<b>1270</b>	<b>Heany Park Scout/Community Pavilion, Rowville - Scoping</b>	<b>\$50,000</b>
Taylor	Scoping is now complete. Concept plans will be developed for Scouts Vic. Project will be completed by June 30th.	



**Knox City Council Project Status Report**

07-Feb-2020

<b>Project Number</b>	<b>Project Name</b>	<b>Total Approved</b>
<b>1271</b>	<b>Wantirna Community Infrastructure Planning</b>	<b>\$60,000</b>
Collier	On hold until hockey assessment is complete.	
<b>1272</b>	<b>Valerie Street, Boronia (Icase Court - Boronia Road) - Footpath - Construction</b>	<b>\$60,000</b>
Baird	Works almost completed for this project.	
<b>1273</b>	<b>Myrtle Crescent, Ferntree Gully (West Side at Moore Street) - Footpath - Scoping</b>	<b>\$15,000</b>
Dobson	In negotiation with property owners to acquire small section of property.	
<b>1274</b>	<b>Mountain Hwy, The Basin (Wicks Road - Claremont Ave) - Footpath - Design</b>	<b>\$40,000</b>
Chandler	Scope of project to be confirmed.	
<b>1275</b>	<b>Old Belgrave Road, Upper Ferntree Gully (Talaskia Road - Edward Street) - Footpath - Scoping</b>	<b>\$15,000</b>
Dobson	Walk-through on site suggests a very complex project. Recommendation made to significantly alter scope and to defer project until this is confirmed. Awaiting outcome.	
<b>1276</b>	<b>Liverpool Road, The Basin (Mountain Hwy to Liverpool Rd retarding basin) - Footpath - Design</b>	<b>\$25,000</b>
Chandler	Feature survey has been undertaken.	
<b>1277</b>	<b>Blackwood Park Drive, Ferntree Gully - Bridge (Design)</b>	<b>\$140,000</b>
Dobson	Tender for Design & Construction contract underway. Cultural Heritage Management Plan not required with approval received on Preliminary Aboriginal Heritage Test. Service locations also clarified. Tender to close 18 February 2020.	
<b>1278</b>	<b>Clausen Drive, Rowville LATM - Design</b>	<b>\$15,000</b>
Tirhatuan	Undertaking design.	
<b>1279</b>	<b>Elton Road and Holme Road, Ferntree Gully, Isolated Traffic Treatment (Hot Spot) Program</b>	<b>\$50,000</b>
Friberg	Design is currently being finalised.	
<b>1281</b>	<b>Ferntree Gully Road (Stud Road - Henderson Road) - Shared Path - Scoping</b>	<b>\$32,000</b>
Tirhatuan	Investigating lease agreement.	
<b>1282</b>	<b>Ferntree Gully Road (Rushdale Street - Bunjil Way), Knoxfield - Shared Path - Scoping</b>	<b>\$10,000</b>
Friberg	Establishing ownership of service road.	
<b>1284</b>	<b>Blind Creek Trail, Boronia - Road Crossing Improvement</b>	<b>\$60,000</b>
	Investigation undertaken. Works are currently being programmed for construction.	

## Knox City Council Project Status Report

07-Feb-2020

Project Number	Project Name	Total Approved
1285	<b>Collier Reserve, Wantirna - Bicycle Repair Station</b> Collier Completed in October 2019.	\$7,000
1286	<b>Power Road, Bayswater - Bicycle Repair Station</b> Baird Completed in October 2019.	\$7,000
1287	<b>Liberty Reserve, Rowville - Bicycle Repair Station</b> Taylor Installed.	\$7,000
1288	<b>Tim Neville Arboretum, Ferntree Gully - Bicycle Pump Station</b> Dobson Installed.	\$7,000
1289	<b>The Basin Triangle Bicycle Repair Station</b> Chandler Completed in October 2019.	\$7,000
1290	<b>Colchester Reserve, Boronia - Bicycle Repair Station</b> Chandler Completed in October 2019.	\$7,000
1291	<b>Fairpark Reserve, Ferntree Gully - Bicycle Pump Station</b> Baird Completed in October 2019.	\$7,000
1292	<b>Blind Creek Lane, Wantirna South - Bicycle Repair Station</b> Scott Completed in October 2019.	\$7,000
1293	<b>Henderson Road Link, Rowville - Bicycle Repair Station</b> Friberg Installed.	\$7,000
1294	<b>Gresford Road, Wantirna - Wayfinding Link</b> Collier Scheduling installation works with contractor.	\$1,000
1295	<b>Freedman Avenue, Boronia - Wayfinding Connection</b> Baird Currently scheduling installation with contractor.	\$1,000
1296	<b>Pumps Road, Wantirna South - Wayfinding to Eastlink</b> Collier Installation not approved by ConnectEast. Installation of remaining signage currently being scheduled in with contractor.	\$1,000
1297	<b>Amesbury Avenue, Wantirna - Intersection Treatments Design</b> Collier Awaiting final design for Wantirna Cycling Link from consultant to inform the design of Amesbury Avenue.	\$20,000

**Knox City Council Project Status Report**

07-Feb-2020

<b>Project Number</b>	<b>Project Name</b>	<b>Total Approved</b>
<b>1298</b>	<b>Wentworth Avenue at Lansell Ct, Rowville, Splitter Island</b>	<b>\$10,000</b>
Taylor	Works completed.	
<b>1299</b>	<b>Albert Avenue, Boronia - School Crossing Relocation</b>	<b>\$30,000</b>
Chandler	Consulting with residents directly affected by proposal.	
<b>1300</b>	<b>Parking Management Plan Implementation</b>	<b>\$50,000</b>
All Wards	Further signage installation in Upper Ferntree Gully after community consultation	
<b>1301</b>	<b>Mountain Hwy, Boronia (Macquarie PI to Bus Stop 15853) - Footpath Connection</b>	<b>\$60,000</b>
Chandler	Design is currently being finalised.	
<b>1302</b>	<b>Forest Road, Ferntree Gully (Lane Rd to Bus Stop 15625) - Footpath Connection</b>	<b>\$15,000</b>
Dobson	Works Completed	
<b>1303</b>	<b>Napoleon Road, Rowville (Bus Stop 15209 to School Crossing) - Footpath Connection</b>	<b>\$40,000</b>
Taylor	Design is being reviewed. Requires additional consultation with PTV regarding possible funding opportunities.	
<b>1304</b>	<b>Mountain Highway, Boronia (GSK site to Colchester Rd) - Footpath Connection 3 - Design</b>	<b>\$5,000</b>
Chandler	Concept plan to be prepared.	
<b>1305</b>	<b>Mountain Highway, Boronia (981 to 1019 Mnt Hwy ) - Footpath Connection 5 - Design</b>	<b>\$5,000</b>
Chandler	Concept plan to be prepared.	
<b>1306</b>	<b>Dog Park - Designs</b>	<b>\$60,000</b>
All Wards	Concept designs scheduled to commence in February 2020.	
<b>1307</b>	<b>Batterham Park, The Basin - Masterplan Implementation</b>	<b>\$60,000</b>
Chandler	Planting design concepts in progress.	
<b>1308</b>	<b>Kevin Ave, FTG UFTG Flood Investigation - Scoping</b>	<b>\$30,000</b>
Dobson	Catchment analysis completed. Mitigation options are reviewed prior to modelling.	
<b>1309</b>	<b>1825 Ferntree Gully Road - Flood Mitigation Works</b>	<b>\$50,000</b>
Friberg	Quotes were requested for the drainage upgrade works. Anticipated start March 2020.	
<b>1310</b>	<b>Flood Mitigation Reactive Complaints Upgrade Works</b>	<b>\$250,000</b>
All Wards	Drainage upgrade of Allenby Avenue, Oasis CI, Kanooka Rd completed in December 2019.	

**Knox City Council Project Status Report**

07-Feb-2020

<b>Project Number</b>	<b>Project Name</b>	<b>Total Approved</b>
<b>1311</b>	<b>Major Roads LED Streetlight Replacement - Design</b>	<b>\$100,000</b>
All Wards	Draft business case report has been submitted for review by officers.	
<b>1312</b>	<b>Landfill Sites as Solar Farms - Feasibility Study</b>	<b>\$50,000</b>
All Wards	Part A (interim report) has been completed and work on the final report is underway. Final report expected in early April 2020.	
<b>1313</b>	<b>Alexander Cres Reserve FTG - Wetland Treatment System - Scoping &amp; Analysis</b>	<b>\$20,000</b>
Friberg	Investigation of this site completed. The Integrated Water Management solution would not cater for flood mitigation. The catchment analysis for the pipe upgrades in underway.	
<b>1315</b>	<b>Fairpark Reserve - Pavilion Upgrade (incorporating U3A extension)</b>	<b>\$60,000</b>
Baird	Procurement of architectural consultants for the provision of concept design work is underway.	
<b>1316</b>	<b>Rowville Recreation Reserve - Car Park Upgrade (Design)</b>	<b>\$8,000</b>
Taylor	Scoping of a number of infrastructure works at this reserve is in progress. Detailed design of car park will be initiated following completion of this stage.	
<b>1317</b>	<b>Batterham Reserve, The Basin - Oval/Turf Renewal</b>	<b>\$45,000</b>
Chandler	Engaged contractor unable to supply required Santa Anna Couch. On hold.	
<b>1318</b>	<b>Miller Park Reserve - Cricket Net Renewal - Design</b>	<b>\$18,750</b>
Chandler	Contractor engaged to design. Awaiting design.	
<b>1319</b>	<b>Gilbert Park Reserve, Knoxfield - Batting Cage Renewal</b>	<b>\$7,500</b>
Friberg	Works scheduled for early 2020.	
<b>1320</b>	<b>Eildon Park Reserve, Rowville - Tennis Court Renewals</b>	<b>\$43,750</b>
Chandler	Design scheduled for May/June.	
<b>1321</b>	<b>Millers Reserve, The Basin - Tennis Court Renewals - Design</b>	<b>\$37,375</b>
Chandler	Survey completed and design has commenced - delays expected due to vegetation issues.	
<b>1322</b>	<b>Glenfern Park (FTGTC) - Tennis Court Renewals - Design</b>	<b>\$26,250</b>
Chandler	Survey completed.	
<b>1357</b>	<b>Batterham Reserve, The Basin - Pavilion Refurbishment &amp; Path and Access Works</b>	<b>\$400,000</b>
Chandler	Works commenced on site. Expected completion by April 2020.	
<b>1363</b>	<b>Shared Zone Lupton Way – Erica Avenue to Dorset Road.</b>	<b>\$9,000</b>
Baird	Engaged a contractor. Consultation process currently being undertaken.	

**Knox City Council Project Status Report**

07-Feb-2020

<b>Project Number</b>	<b>Project Name</b>	<b>Total Approved</b>
1367	<b>Rowville Tennis Courts 1-4 Repairs</b>	<b>\$30,000</b>
Taylor	Project completed.	
<b>Total: \$102,950,725</b>		

12 Motions for Which Notice has Previously Been Given

13 Supplementary Items

14 Urgent Business

14.1 Urgent Business

14.2 Call Up Items

15 Questions Without Notice

## 16 Confidential Items

### 16.1 State Basketball Centre

A confidential report is circulated under separate cover.

### 16.2 Recognition Function - Victorian and New South Wales Fires

A confidential report is circulated under separate cover.