Traffic lights control the flow of traffic and pedestrians to improve safety and access to roads. This fact sheet provides information on some common questions regarding traffic lights in Brisbane, and information on how they work.

WHERE DO WE USE TRAFFIC LIGHTS?
Brisbane City Council controls more than 6800 km of roads, which includes more than 50,000 intersections. In Brisbane, traffic lights are commonly used to improve pedestrian, cyclist and driver safety at significant road intersections. Traffic lights are most appropriate on major roads at intersections with roads that carry significant numbers of vehicles and pedestrians throughout the day. On major roads, traffic lights provide a safer environment for vulnerable road users such as cyclists and pedestrians and are more cost-effective than many other traffic treatments such as roundabouts. This is usually because there is less impact on underground services and less land required than for a roundabout.

Brisbane City Council installs a number of new traffic lights in Brisbane each year. Typical costs for the installation of traffic lights range from $500,000 to more than $5,000,000 depending on the amount of roadworks required. Brisbane City Council currently controls more than 850 sets of traffic lights. The Department of Main Roads controls traffic lights on some major roads in Brisbane, such as parts of Gympie Road and Moggill Road. To enquire about an intersection, phone Council on (07) 3403 8888.

HOW DO TRAFFIC LIGHTS WORK?
Traffic lights are controlled by a local computer at each intersection and is networked for remote access by traffic engineers or officers at the Brisbane Metropolitan Transport Management Centre. Vehicle sensors located in the road on each approach to the lights detect vehicles as they pass over them and either change the lights to green or extend the green light time for that approach. At busy times, the green light period may extend up to a pre-set maximum time and the lights will follow a set sequence. Some lights are programmed to respond to traffic as and when it arrives at the intersection.

TRAFFIC LIGHT COORDINATION
Traffic lights on major road corridors need to manage traffic flows at peak times and reduce vehicle delay and emissions, while providing opportunities for vehicles in side streets to enter or cross the major road. Improved traffic flow can be achieved if the green light at the next intersection on a major road is arranged to coincide with the arrival of traffic. To achieve this, traffic lights may be coordinated or linked. Not all intersections in Brisbane are linked; some operate in a stand-alone mode. If intersections are widely

PEDESTRIAN CROSSING AT LIGHTS
Special facilities including audible and tactile features, exist at most traffic light pedestrian crossings to assist pedestrians who have vision impairments to locate the push-button and crossing points. The push-buttons also determine when the walk symbol (green man) is displayed.
These features are not intended to assist sighted pedestrians. Pedestrians that are not impaired should take extra care when crossing at lights with these features and ensure they are crossing in the correct direction with the green man.

BMTMC
The Brisbane Metropolitan Transport Management Centre (BMTMC) is a joint transport management centre run by Brisbane City Council and the Queensland Government servicing road commuters and public transport patrons.
The centre provides real-time traffic management updates.
spaced, or if certain flow conditions exist, coordinating traffic lights may not be appropriate as it can introduce additional delays for side-street traffic without providing any benefit to a major road traffic flow.

HOW LONG DO I HAVE TO WAIT AT TRAFFIC LIGHTS?
The busiest approach is usually given the highest priority when two major roads intersect. Time varies for each location, but can be up to two minutes if you have arrived as the last cycle started.

TRAFFIC LIGHT DISPLAYS
The length of time green traffic lights are displayed varies depending on traffic conditions. However, it should always appear for a minimum of six seconds. On most major roads with a speed limit up to 60 km/h the yellow or amber light is displayed for four seconds. For higher speed roads, more time is provided for the yellow or amber traffic light.

An ‘all red’ light period then applies on all intersection approaches following the yellow signal to allow any vehicles within the intersection to clear it before conflicting traffic movements begin. This ‘all red’ time varies depending on the size of the intersection - a larger intersection requires longer ‘clearance time’. Traffic is not permitted to cross the stop line when the red traffic signal is displayed and is required to stop on display of the amber light if safe to do so.

VEHICLE DETECTION AT TRAFFIC LIGHTS
Vehicles can be detected by traffic lights in two ways. Most commonly, loop detectors buried in each approach traffic lane are used. Loop detectors sense when a large metallic object such as a car engine passes over them. In special circumstances other types of detectors such as push-buttons may be considered. Buses and emergency service vehicles have special transponders mounted to the vehicle that gives them priority at the lights.

BICYCLE DETECTION AT TRAFFIC LIGHTS
Bicycles can be detected by loop detectors, and by push buttons to cross some intersections in Brisbane. Loop detectors have a sensitivity setting that can be adjusted to detect smaller vehicles, including bicycles. The loop relies on iron-based metal to be present to trigger the lights, so if your bicycle is made of a lot of composite material such as carbon-fibre, fibreglass, plastic or aluminium it may not detect immediately. Bicycle push buttons may be installed at locations used by large numbers of cyclists to assist detection.

PEDESTRIAN WALK/DON’T WALK (GREEN/RED MAN) SYMBOLS
The green walk symbol is intended to notify pedestrians that it is lawful to commence crossing the road, after checking that it is safe to do so.

LED LANTERNS
Council is gradually replacing old incandescent traffic lights with high intensity LED (Light emitting diodes) to improve safety and reduce energy consumption at traffic lights across Brisbane.
Pedestrians are not required to complete the road crossing during the green walk time. The flashing red ‘don’t walk’ symbol allows enough time for pedestrians to complete their crossing but pedestrians should not start crossing the road. It is unlawful for a pedestrian to commence their crossing when the ‘don’t walk’ symbol is flashing or steady. Motorists are required by law to give way to pedestrians on traffic light crossings at all times. Drivers and pedestrians should always be alert and never assume other road users have sighted them.

**U-TURNS AT TRAFFIC LIGHTS**

U-turns are not permitted at traffic lights unless allowed by signs indicating “U-turn permitted”. Council engineers assess whether u-turns can be permitted based on an assessment of safety including road width, visibility, the number of oncoming traffic lanes and volume of traffic. Council does not install “no u-turn” signs at lights, as the ban on U-turns at lights is a road rule common across Australia. If there isn’t a “u-turn permitted” sign you cannot perform a u-turn at the lights. You will either need to turn into a side street and perform the u-turn safely in the side street or proceed away from the traffic lights and perform the u-turn where it is safe to do so.

**RED LIGHT CAMERAS**

Red light cameras are managed by the Queensland Police Service and are used to identify vehicles and drivers that enter a controlled intersection after travelling through a red traffic light. Brisbane City Council does not identify where red light cameras are installed in Brisbane. Locations for red light cameras are determined by the Queensland Police Service in consultation with Queensland Transport. If the camera is to be installed on a Council controlled road Brisbane City Council is consulted to coordinate the installation.

**TRAFFIC COUNTS**

Brisbane City Council is able to provide traffic volume counts for intersections with Council-owned traffic lights. A fee applies for this service. You can use traffic counts to find out about the volume of traffic passing through an intersection over a specific period of time.

Before you request a traffic count, you will need to find out:

- if the traffic lights are the responsibility of Council or Queensland Department of Main Roads. This can be done by phoning Council on (07) 3403 8888.

Some things to consider about the traffic count averages are:

- public holidays, school holidays or other events may significantly affect averages
- pedestrians or different types of vehicles can’t be identified
- turning vehicles cannot be identified from those that are travelling straight, except in designated turning lanes.
**FREQUENTLY ASKED QUESTIONS**

**TRAFFIC LIGHTS CHANGE WHEN THERE IS NO TRAFFIC. IS THIS NORMAL? WHY DOES IT HAPPEN?**

There are several reasons why the traffic lights can change in the absence of traffic. If from your experience the intersection normally operates differently, then it is likely to be occurring as a result of a fault with the equipment (for example, a faulty or severed detector loop). However, some controlled intersections are meant to operate this way and provide a fixed amount of green light time to each intersection approach. This is usually to aid traffic flow where several sets of lights are close together or near rail level-crossings where the lights are triggered by a train passing.

**CAN THERE EVER BE GREEN LIGHTS AT THE SAME TIME FOR TWO CONFLICTING TRAFFIC MOVEMENTS?**

No. It is not possible for two conflicting approaches to be green at the same time. Traffic lights are designed to automatically switch off within 100 milliseconds if this occurs.

**WHAT HAPPENS WHEN THE TRAFFIC LIGHTS ARE FLASHING YELLOW? WHO GIVES WAY TO WHO?**

A flashing yellow traffic light means that the signals have a fault. If you face a flashing amber or yellow traffic light or arrow, you may drive past it applying give way rules and caution to avoid a collision with other vehicles and pedestrians. Giving Way means: if a driver or pedestrian is stopped—remain stationary until it is safe to proceed. In any other case—slow down and, if necessary, stop to avoid a collision. Refer to the road rules or the Queensland Transport publication Your Keys to Driving in Queensland for more information.

**HOW DO I REPORT A TRAFFIC LIGHT PROBLEM? – FAULTS**

Faults in traffic lights such as lanterns not working should be reported to Council on (07) 3403 8888, so that we can arrange for the problem to be dealt with as soon as possible. When you report the problem we are looking for as much information as possible. Be precise about where the traffic light is (the unique intersection number is printed on the side of the controller cabinet), and include the direction of traffic and the direction the light is facing. Technicians are on call 24 hours a day to attend to these types of faults. Other concerns such as requests for traffic light modifications or changes to timing do not have the same urgency and may take some time to investigate and action.