Development manual planning scheme policy (PSP)
SC6.4.14 Public utilities and building over/near services

Index

SC6.4.14.1 Introduction

(1) Purpose

The purpose of the public lighting, utility services, and building over/near services section is to provide standards, advice and guidelines for the design, installation and construction of public lighting and utility services, and building over/near existing services.

(a) Public lighting

Public lighting is provided to:

(i) allow for the use of and safe movement in public spaces;

(ii) provide improved safety and security for the community at night; and

(iii) enhance the public amenity.

(b) Utility services

A purpose of a road reserve is to provide a corridor for the delivery of utility services such as water supply, sewerage, gas, telecommunications (including future telecommunications) and electricity, to all properties fronting the road, street, or rear lane. The verge or footpath area between the road reserve boundary and the edge of the roadway provides the space for these service corridors and these guidelines are designed to achieve the following aims:

(i) provide a convenient location for the installation and safe access to all utility services for maintenance and retrofitting purposes;

(ii) provide a corridor for street furniture including road lighting poles;

(iii) minimise possible conflict with other underground services; and

(iv) provide an opportunity for street landscaping.

Council standard drawings (Section SC6.4.3 Standard drawings) for service corridors provide details of utility alignments within the footpath/verge and should be read in conjunction with Section SC6.4.6 Road works and traffic control, Clause SC6.4.6.1 Geometric road design.

(2) Scope

(a) Public lighting includes:

(i) road lighting (urban, urban residential, and rural);

(ii) lighting for footpaths and cycle paths;

(iii) lighting for parks;

(iv) lighting for sports grounds and sports complexes;

(v) lighting for public buildings;

(vi) lighting for off-street car parks; and

(vii) feature lighting which may include bollards and in ground lighting.

(b) Utility services include (but are not limited to):

(i) reticulated water supply;

(ii) reticulated sewerage supply;

(iii) sewage pressure mains;

(iv) reticulated gas supply and its supporting infrastructure;

(v) reticulated telecommunications network, including future services (fibre optic);

(vi) reticulated electricity, both underground and overhead supply;

(vii) lighting networks, including road, open space, community facilities and off-street parking; and

(viii) traffic signals.

(3) Consultation

Developers and applicants are encouraged to consult with Council and the relevant servicing authority and determine any requirements these authorities may have before undertaking any detailed design.

Developers should obtain service plans from all relevant public utility authorities and organisations whose services may exist within the area of the proposed development. These services are to be plotted on the relevant drawings including the plan and cross-sectional views.

If there is an expectation that an application may have higher servicing demands, details of these additional demands should be provided to Council and the servicing authority.

(4) Reference and source documents

Reference and source documents that must be read in conjunction with this section are as follow:

(a) Council requirements and drawings:

Section SC6.4.2 Development application guidelines

Editor's Note - This policy section is to be read in conjunction to Section SC6.4.2 "Development application guidelines" for advice and guidelines relating to development applications to assist applicants in achieving Council's design objectives.

SC6.4.3 Standard drawings

SC6.4.6 Roadworks and traffic control

(b) Australian Standards:

AS/NZS 1158 *Lighting for roads and public spaces (set)*

AS/NZS 1596 *The storage and handling of LP gas*

(c) Other:

Australian Government, *Disability Standards for Accessible Public Transport 2002*

Electricity Act 1994

Electrical Safety Act 2002

SC6.4.14.2 Public lighting (urban, urban residential, and rural)

(1) Public lighting general

There are a number of types of public lighting infrastructure which meet a range of different needs. Infrastructure associated with public lighting generally consists of poles, outreach arms, lamps, luminaires, photoelectric cells, switch gear, footings, and connections to a supply. The size and type of lighting infrastructure will be determined by the size and type of the use, the intensity of lighting required, remoteness from supply and the time of operation.

All lighting designs must be prepared and certified by an appropriately qualified Registered Professional Engineer of Queensland prior to submission to Council with a development application. Lighting installation works must also be certified by an appropriately qualified Registered Professional

Engineer of Queensland following completion and prior to acceptance by Council.

Road and public space lighting must be designed in accordance with AS/NZS 1158 and Energy Queensland's requirements.

(2) Road lighting general

Lighting infrastructure (including poles, switch boards, and other infrastructure) must be of a design suitable to be accepted for ownership by Energy Queensland and billed to Council under a Tariff 71 rate 2 Tariff. The luminaires should be as shown on the Energy Queensland 'load table' and suitable for ownership by Energy Queensland, also billed to Council under Tariff 71 Rate 2. If alternative street lighting design, which is suitable for billing under a metered tariff or acceptable to Energy Queensland under Tariff 71 Rate 3, is proposed, this must be specifically agreed to by Council.

All lighting in new residential areas must be LED lights acceptable to Energy Queensland for billing under Tariff 71 rate 2.

If other road lighting infrastructure is preferred by a developer for aesthetic or other reasons including for environmental protection, which the developer expects to hand to Council for ongoing maintenance, justification must be provided on how this will fit into any lighting master plans for the area. Without approval Council gives no guarantee that this infrastructure will be adopted by Council, and if it is adopted, that it will be maintained in that form. Any "non-standard" road lighting would be on a Rate 3 Tariff. Metered Tariff connections are generally not acceptable.

Editor's Note - Council does not support shading of lights on the basis that it would be a penalty to road users, particularly cyclists and pedestrians.

(a) Road lighting in rural areas

Flag lighting is to be provided at:

(i) all intersections on roads;

(ii) on curves where the advisory speed through the curve is 15 km/h lower than the gazetted speed limit of the road; and

(iii) at the ends of cul-de-sacs.

Lighting on roads under the control of the Department of Transport and Main Roads must be designed to meet their requirements.

(b) Road lighting in rural residential areas

Lighting must be provided in accordance with the relevant sections of AS 1158.

Flag lighting shall be category PR5 and shall be provided at:

(i) all intersections on roads;

(ii) on curves where the advisory speed through the curve is 15 km/h lower than the gazetted speed limit of the road; and

(iii) at the ends of cul-de-sacs.

Lighting on roads under the control of the Department of Transport and Main Roads must be designed to meet their requirements.

(c) Road lighting in urban areas

Lighting must be provided in accordance with the relevant sections of AS 1158 and the following:

(i) Category V3 Lighting on arterial and sub arterial roads;

(ii) Category V5 Lighting on major collector streets;

(iii) Category PR3 Lighting on, access Streets, access Places, industrial streets, and commercial precincts unless otherwise determined by Council, E.g., higher lighting levels to assist with CCTV surveillance; and

(iv) lighting in public transport infrastructure (compliance to the *Disability Standards for Accessible Public Transport 2002*).

Lighting designs shall comply with AS1158.3 Clause 3.1.3.4 in relation to "Obtrusive Spill Lighting" onto adjoining properties.

(d) Lighting for bicycle, pedestrian, and shared paths

Lighting Category PP1-PP5 or bicycle, pedestrian and shared paths as advised by Council after consideration of location, hours of use and risk to the public.

(e) Lighting for parks

Lighting requirements for parks will be determined by Council based on where the park fits into the hierarchical structure. A point of supply is required to most parks, and where required, the precise location of the supply will be advised by Council. This lighting may have a sub metered supply.

(f) Lighting for sports grounds and sports complexes

Lighting requirements for sports grounds and sports complexes will be determined by Council based on where the park fits into the hierarchical structure.

A point of supply is required to most parks, and where required, the precise location of the supply will be advised by Council.

(g) Lighting for public buildings and spaces

Lighting requirements for public buildings and spaces will be determined based on a risk assessment considering location, time of use, number of people, relevant building codes and AS/NZS 1158.

(h) Lighting for off-street carparks.

Lighting must be provided in accordance with the relevant sections of AS 1158. A point of supply is required to most off-street carparks. Lighting shall be provided in accordance with the lighting masterplan for the area, unless otherwise approved by Council. This lighting must have its own separate metered point of supply.

(3) New subdivision marketing banners on light poles

It is common practice for developers to place marketing banners on light poles along local roads within the boundary of the new subdivision. Banners are lightweight and made of a non-rigid material.

The developer must obtain approval from Ergon Energy to erect marketing banners on light poles and comply with all Ergon Energy conditions. Banners on light poles must not be a driver distraction on the road or at an intersection. Banners must not interfere with an official traffic sign, distract a driver's attention at a critical time, obscure the drivers view of a road hazard, give instructions to stop, imitate an official traffic sign, nor be an obstruction to the road or a hazard to all other road users. A high level of safety for road users must be maintained.

At the time of on maintenance Council may accept the marketing banners on light poles, but the developer must indemnify Council for all matters arising from the banners erected on light poles. The banners may remain on the light poles for twelve (12) months. If banners are required beyond this

time, then the developer must submit a request to Council for a twelve (12) month extension of time. Council may request the developer to remove any marketing banner on any light poles at any time.

Editor's Note – there may be additional related requirements in Subordinate Local Law No. 1.4 (Installation of Advertising Devices) 2011.

Council will not give consent for advertising banners to be placed on streetlights that are owned and maintained by Council.

SC6.4.14.3 Utility Services

(1) All utility services to be underground.

All services to new developments must be constructed underground unless otherwise approved by Council. Layout plans for all service installations must be submitted to Council as part of the development application.

(2) Alterations to existing services

Care should be taken during the design to avoid other existing underground services, and where this is unavoidable it will be the developer's responsibility to undertake the necessary alterations to the satisfaction of the asset owner at the developer's cost.

Where it is necessary to install conduits under existing roads, this installation must be undertaken by boring unless otherwise approved by Council.

(3) Telecommunication cabinets and electricity supply transformers, pillars

The proposed location of on street telecommunication cabinets and electricity supply transformers, and pillars must be shown on plans and be located clear of access driveways to properties, and clear of any water and gas services in accordance with any requirements of the relevant authority.

(4) Electricity supply general

An overhead supply approved by the relevant energy authority where in the rural residential zone, special purpose zone or high impact industry zone or where on a lot of less than 2,500 m^2 within an area where the existing supply is overhead is acceptable.

In exceptional circumstances, remote access properties in the rural zone may be permitted to provide an electricity supply that is not connected to the grid. It shall be demonstrated by the applicant that an adequate and reliable supply that maintains standards for safety, environmental, health and amenity is achievable.

Acceptable alternatives may include solar or other similar self-generating system.

Electricity and/or telecommunications services must be designed in accordance with the relevant utility provider's guidelines, as well as designed to accommodate and have the load and augmentation capacity to integrate Council's Future City electricity supply-demand options (including ring mains, distributed solar, batteries, electric vehicles and dynamic sensors, metering, switching and load balancing (flow) devices), i.e. aligned with TCC Smart Infrastructure and Sustainable Energy Framework.

Electricity design plans submitted to Council with an RPEQ certification are only accepted by Council to permit the utility provider (E.g., Energy Queensland) to formally approve the design.

In the construction phase only conduits for both electricity and telecommunications utilities are installed, with the relevant utility provider installing the actual service after the works are complete.

(5) Gas supply

Where it is proposed to provide a reticulated gas supply to a development, the gas service pipe must be installed in the verge or footpath on the alignment shown on Section SC6.4.3 Standard drawings.

If a storage cylinder is proposed as part of the development, the cylinder must be installed and maintained on a separate freehold parcel of land in accordance with all safety regulations contained in the AS/NZS 1596 *The storage and handling of LP gas*. Details for servicing the gas cylinder must be provided to Council as part of the development application.

(6) Traffic signals

The design of a traffic signal installation must be undertaken by an appropriately qualified and competent Registered Professional Engineer Queensland (RPEQ) who has relevant experience in signal design.

Compliance with the statutes and regulations applicable for road use in Queensland is mandatory.

The design of traffic signals shall comply with the following:

(a) Manual of uniform traffic control devices (Queensland);

(b) Department of Transport and Main Roads standards and MRTS specifications for electrical and ITS;

(c) Austroads Standards; and

(d) Australian Standards.

The design of traffic signals and signal sequencing is to be based on existing and projected future traffic volumes determined through a traffic impact assessment (TIA) prepared by a qualified traffic engineer.

Where required the developer shall hold discussion with and obtain approval of the Department of Transport and Main Roads for the intersection layout and design of the signals system.

Where required, traffic signals shall be provided with CCTV camera/s and be connected to the TMR control centre via telemetry.

SC6.4.14.4 Building over/near services

(1) Introduction

(a) Purpose

This section outlines Council's standards and guidelines for building over or adjacent to Council's services. This document will supplement the Queensland Development Code (QDC) *Mandatory Part 1.4 – "Building over or near relevant infrastructure"* and identifies and provides additional guidance about any information that may be required to support a development application. This section does not replace or override any aspect of the QDC.

(b) Scope

This section applies to all building work proposed to be carried out over or near to a Council service or underground asset.

(c) Principles

The construction and erection of a structure or the creation of a residential allotment over or near to a Council service must be carried out in a way that ensures that:

(i) the function of the service is not adversely affected;

(ii) no additional load is placed on the service without Council approval; and

(iii) maintenance access (at all times) to the service is not interfered with or restricted.

Developers should obtain service plans from all relevant public utility authorities and organisations whose services may exist within the area of the proposed development. These services are to be plotted on the relevant drawings including the plan and cross-sectional views.

(2) Restricted development

(a) Without exception, Council will not permit building a structure over or near to:

(i) sewer pressure mains and overflow pipework; or

(ii) gravity sewer trunk mains; or

(iii) sanitary drainage connection points; or

(iv) water supply mains; or

(v) stormwater drainage conduits (pipes or culverts) with a capacity of less than 2% average exceedance probability (AEP) or stormwater pipelines with an internal diameter of less than 375 mm; or

(vi) open drainage channels or overland drainage paths.

(3) Allowable development over or adjacent to sewerage services

(a) Council may permit building a structure over or near to the following sewerage services:

(i) gravity sewer mains, other than gravity trunk mains excluded under Clause SC6.4.14.4 (2) The applicant is to carry out an internal closed circuit television inspection of the main and submit it to Council, prior to commencing any construction activities over or adjacent to the sewer. Post construction internal closed circuit television inspection is required to confirm no damage to the sewer as a consequence of the construction activities.

If the main is assessed to be in poor condition or liable to damage from the proposed construction, the applicant may be required to replace the main to the satisfaction of Council prior to commencement of any construction activities over or adjacent to the sewer; and

(ii) sewer maintenance holes in commercial or industrial buildings:

If approved, the chamber is to be raised to the floor level of the building. Maintenance holes must be sealed against gas leaks, bolted down, and kept clear of obstructions for maintenance access by Council at all times.

(4) Allowable development over or adjacent to stormwater services

(a) Council may permit building a structure over or near to the following stormwater services:

(i) drainage conduit with a minimum 2% AEP and with an internal diameter greater than 375 mm. The applicant must carry out an internal closed-circuit television inspection of the stormwater conduit and submit it to Council, prior to commencing any construction activities over or adjacent to the stormwater conduit. The applicant may be required to replace the main to the satisfaction of Council prior to commencement of any work If the stormwater conduit is assessed to be in poor condition or liable to damage from the applicant construction activities over or adjacent to the stormwater conduit. Council may permit a driveway or temporary or light steel framed structure to be constructed over a storm water drain where:

1. maintenance access to the drain can be retained;

2. the drain does not also form part of an overland flow path; and

3. no other option is available.

(5) Clearances

The following minimum clearances apply for structures permitted to be built over or adjacent to a service:

(a) a minimum clearance of 250 mm must be maintained between the outside edge of the service footprint and the nearest projection of the foundation of the proposed structure, excluding swimming pools. Swimming pools must be located to achieve a minimum clearance of 600 mm vertically and 1 m horizontally to the outer edge of the service footprint;

(b) a minimum horizontal clearance of 1.2 m must be maintained between the outer face of the service and the nearest point of the foundation of the structure;

(c) the foundation of any structure, excluding a swimming pool, located within the zone of influence must extend a minimum of 300 mm below the projected zone or on solid rock. Pier and beam footings are generally acceptable;

(d) a minimum clear vertical space above a sewer manhole of 2.4 m must be maintained above the finished ground surface level for access purposes;

(e) a minimum horizontal clear space of 2.0 m must be maintained between structure and connection point on sewer, connection point on sewer refers to oblique branch (OB), vertical jump-up (VJU) and centre line of sewer maintenance structure; and

(f) a minimum horizontal clear space of 2.0 m must be maintained between structure and outside face of gravity trunk sewer.

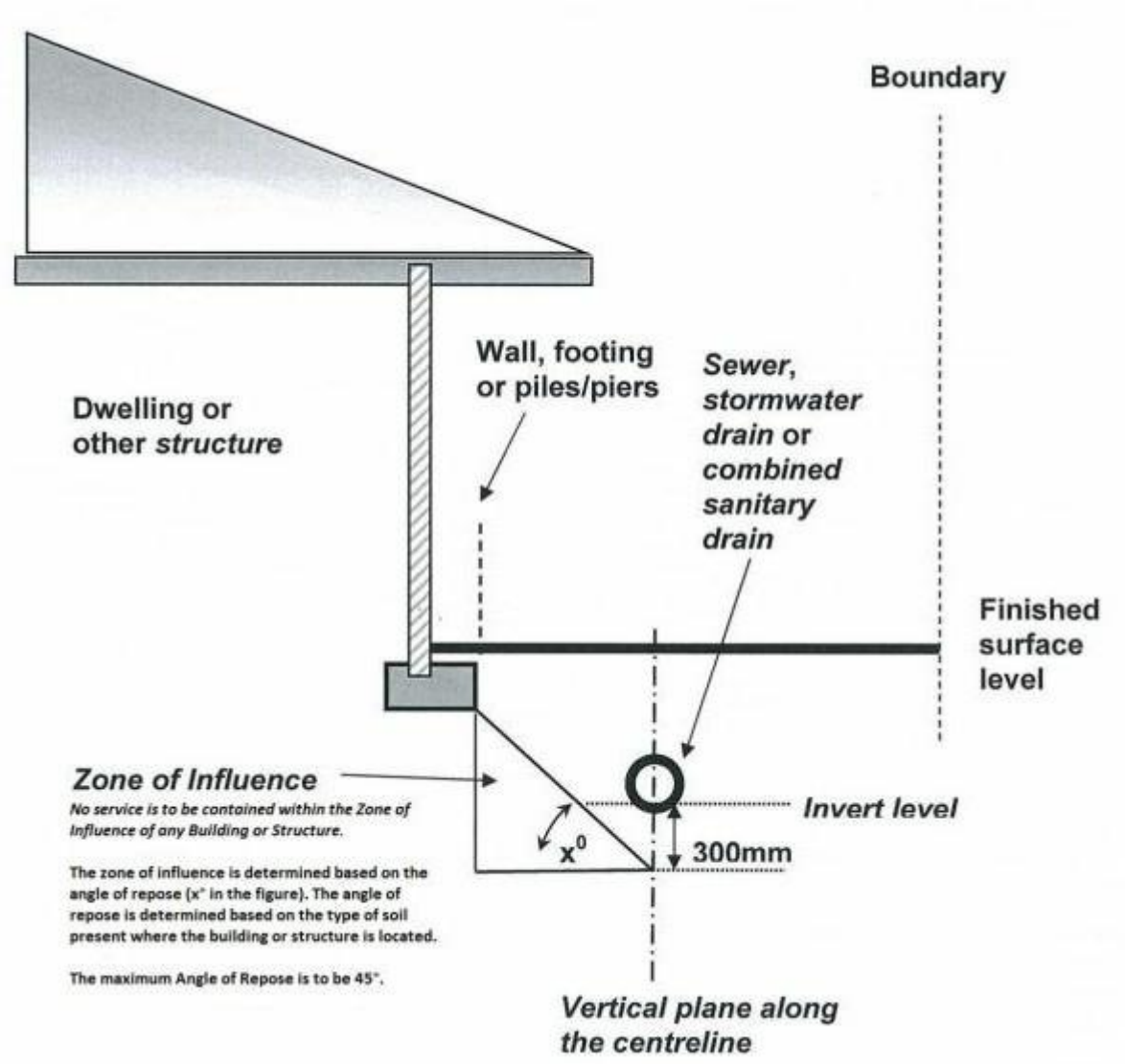

Figure SC6.4.14.1 - Zone of Influence

(6) Relocation of services

(a) Council will require that a service is relocated at the developer's expense where:

(i) no other site is reasonably available for the location of the proposed structure; and

(ii) the proposed structure is in conflict with, or likely to cause damage to, a Council service.

(b) If Council in its absolute discretion considers it necessary for a service to be relocated as a consequence of a proposed development, the re-design must consider:

(i) the feasibility of redesign or relocation;

(ii) terrain;

(iii) cost;

(iv) importance of the service; and

(v) suitability for future maintenance access.

(7) Access to services

(a) Council must be able to reach sewerage assets. Access to and working space around surface fittings and access points is required for routine operation and maintenance. Council may also require construction and excavation space for repair or renewal.

(b) Access to sewer maintenance structures shall be an unobstructed passageway with a minimum width of 1 m and minimum clear headroom of 2.4 m. A maintenance vehicle must be able to park not more than 50 m from the maintenance structures.

SC6.4.14.5 Conduit assessment

Conduit assessment of sewer and stormwater lines is required before the acceptance of these assets “on maintenance” (the defects liability period) or prior to the assessment of any development application (including a Building over Services application) which may impact upon a sewer or stormwater asset. Assessments may be required by Council prior to assessment or be conditioned by a development approval as part of construction. Inspections must be undertaken by means of closed-circuit television (CCTV) inspection and submission of the resultant video and assessment report.

Any development which proposes to construct a structure, building or undertake earthworks in the vicinity of or within the “zone of influence” of an existing conduit may be required to identify the condition of the conduit for assessment of serviceability and structural compatibility with the proposed development work. Any upgrading or replacement determined by Council will be carried out at the developer's expense prior to the commencement of any development works.

(1) CCTV inspection

(a) Sewer

(i) Major developments (refer to Clause SC6.4.2.2(1)):

1. immediately prior to commencement of the defects liability period and following the total completion, cleaning, and testing of the asset; and

2. if defects are identified they must be rectified, and the sewer, for the entire length between the upstream and downstream maintenance holes (MHs), must be assessed again prior to completion of the defects liability period.

(ii) Minor developments (refer to Clause SC6.4.2.2(2)):

1. systems containing two or more sewer lengths, or systems containing sewer lengths that exceed a combined service length of 60 m measured centre to centre between manholes require assessment immediately prior to commencement of the defects liability period and following the total completion and cleaning of the asset;

2. if defects are identified they must be rectified, and the sewer, for the entire length between the upstream and downstream maintenance holes (MHs), must be assessed again prior to completion of the defects liability period; and

3. where a defects liability period does not apply, CCTV assessment is mandatory prior to acceptance.

(b) Stormwater

(i) inter-allotment systems located on private property are exempt;

(ii) rubber ringed jointed pipe systems with flexible joints immediately outside chambers (includes PVC and Polythene pipe systems) will be visually assessed and are exempt subject to the system presenting defect free;

(iii) CCTV assessment of flush end RCP pipe systems is mandatory;

(iv) major developments (refer to Clause SC6.4.2.2(1)):

1. Immediately prior to commencement of the defects liability period and following the total completion and cleaning of the asset; and

2. prior to completion of the defects liability period.

(v) minor developments refer to Clause SC6.4.2.2(2)):

1. systems exceeding a service length of 60 m require assessment immediately prior to commencement of the defects liability period and following the total completion and cleaning of the asset; and

2. where a defects liability period does not apply, CCTV assessment of the system is mandatory prior to acceptance.

(2) Qualification and training of CCTV operators and supervisors

The assessment must be undertaken by a suitably trained and qualified Contractor, in accordance with the relevant sections of the current version of Water Services Association of Australia's *Conduit Inspection Reporting code of Australia* (WSA05) and the results are to be submitted to Council in CD, DVD or any digital storage device acceptable to Council accompanied by a written condition assessment report to be approved in writing by Council prior to the issuance of any Development Approvals.

In the event of non-compliance in preparation and submission of the conduit assessment, Council may require the developer to re-perform the inspections and re-submit. All costs incurred conducting these additional conduit assessments will be the responsibility of the Contractor.

(3) Site establishment

The Contractor is responsible for the following requirements:

(a) any necessary approvals from statutory authorities in order to complete the required work;

(b) any temporary electric light, power installations and water supply including all charges incurred;

(c) public notification if necessary

Contractor must notify affected residents/adjacent property owners/commercial business owners and Council (including if the area to be closed is public open space). Additional requirements may be necessary if closures are to be over an extended period of time. Notification is required prior to commencement of work;

(d) plans of existing services are to be verified by the Contractor. Council does not guarantee the accuracy of the information on these plans;

(e) environmental management plan

If necessary, the Contractor must prepare and implement a site-specific environmental management plan, for inspections which would involve interference to live services E.g., sewer line which poses an environmental risk. The Plan must detail activities and measures to

ensure that the inspection is performed in a manner which minimises risk of causing environmental nuisance or harm;

(f) reinstatement

clean-up, repair and reinstate any areas affected or impacted by the works, at their own cost;

(g) maintaining the service in all conduits being inspected;

(h) pipe cleaning

Conduits being inspected must be sufficiently clean to allow proper visual identification of existing defects. The proper disposal of debris from the cleaning shall be the responsibility of the Contractor;

(i) traffic management

Where the diversion of vehicular and pedestrian traffic is required, the Contractor is responsible for implementing an appropriate traffic management plan; and

(j) occupational health and safety

The Contractor is required to comply with all statutory and other current regulations relating to occupational health and safety.

(4) Inspection report

The production of reports (including mandatory information), detailing the condition of surveyed conduits, all coded and scored to standards that satisfy the requirements of current WSA05 Code.

(5) Inspection software

The preferred software for use in reporting on conduit inspections is the current version of WinCam, set up to report as per the current WSA 05 code. If a Contractor proposes to use alternative software, a full detail of the software must be provided to Council for approval which includes the capabilities must be provided and must be fully compatible with the WinCam software.

(6) Data ownership

Full ownership of the survey and report data including intellectual property rights to the digital visual records and its contents must be with Council.

SC6.4.14.6 Construction

All construction of development works undertaken over or near existing services shall be carried out in accordance with the requirements of the following SC6.4 Development manual planning scheme policy sections:

Section SC6.4.6 Roadworks and traffic control;

Section SC6.4.7 Clearing, grubbing and earthworks;

Section SC6.4.8 Stormwater management;

Section SC6.4.11 Water and sewerage; and

The requirements of relevant statutory authorities.

SC6.4.14.7 Verification of existing services

Applicants must physically locate, and level services impacted by proposed construction prior to commencing any works on site.

The applicant must carry out an internal closed circuit television inspection of impacted stormwater conduits, and sewers, and submit it to Council, prior to commencing any construction activities over or adjacent to the service.

Internal closed-circuit television inspection of impacted stormwater conduits, and sewers, must be undertaken on completion of construction and submit it to Council to ensure existing impacted services are not damaged.