BUILDING OVER/ADJACENT TO LOCAL GOVERNMENT SEWERAGE INFRASTRUCTURE TECHNICAL GUIDELINE

1. Scope:

This guideline applies to the technical criteria when assessing an Application to Build Over or Adjacent to Local Government Sewer Infrastructure seeking the consent to construct or erect a building or structure over or adjacent to sewerage infrastructure.

2. Purpose:

These guidelines enable two specific tasks:

2.1 Assist Fitzroy River Water employees (assessors/engineers) to risk assess applications to build over or adjacent to Fitzroy River Water's sewerage infrastructure and make the following determinations:

- approve an application to construct as proposed (and possibly with additional conditions specified in the construction approval);
- approve an application to construct, but with modifications to the proposed construction (and possibly with additional conditions specified in the construction approval);
- request modifications to the application in order to comply with FRW's policy and these guidelines.

2.2 Provide applicants and advising engineers with details of requirements to satisfy FRW's Policy on building over/adjacent to sewerage infrastructure.

3. Related Documents:

Sustainable Planning Act 2009
Standard Plumbing and Drainage Regulation 2003

Application to Build Over or Adjacent to Local Government Sewer Infrastructure (BOSI) Fitzroy River Water Website
Building Over/Adjacent to Local Government Sewerage Infrastructure Policy
Building Code of Australia
Capricorn Municipal Development Guidelines (CMDG)
Form 9 Easement Titles Registry forms - Department of Natural Resources and Mines
Queensland Development Code (MP 1.4 November 2013) MP1.4 Building Over or Near Relevant Infrastructure (herein referred to as the QDC1.4)

4. Definitions:

To assist in interpretation, the following definitions apply:

Access Chamber	Below ground structure with a sealed cover constructed in the line of the sewer or the sanitary drain to facilitate maintenance of the sewer or sanitary drain.
Applicant	A person who applies to FRW for its written consent to build over, interfere with access to, increase or reduce the cover over sewerage infrastructure.

Associated structure	Access chamber, connection point, water meter.
BOSI	Building Over/Adjacent to Local Government sewerage infrastructure
Building	As defined in the *Building Act 1975*. See also *"structure".*
CCTV Inspection	Closed Circuit Television Inspection in WinCan reporting format.
CMDG	Capricorn Municipal Development Guidelines.
Connection point	As defined in the *Standard Plumbing and Drainage Regulation 2003.*
Engineer	Registered Professional Engineer in Queensland (RPEQ).
FRW	Fitzroy River Water, a commercialised business unit of Council
Manager	General Manager of Regional Services
Horizontal distance	The minimum distance between the outermost edge of the walls, slab, footing, driven pile, bored pile and any integral parts of the building and the outside face of the service or associated structure.
IDAS	Integrated Development Assessment System under the *Sustainable Planning Act 2009*.
Insurance Disclosure	Disclosure of risk for building over/close to sewerage infrastructure to any relevant insurance party.
Interference	Dig up, expose or damage.
Invert level	The bottom, inside of the pipe, drain, etc.
Risk Assessment	Assessment statement of the likelihood and consequences of building over/close to sewerage infrastructure, in the event of a sewerage infrastructure collapse.
Service	For the purpose of this guideline includes sewer mains.
Sewer	Includes sanitary drain jump-ups and capped slope junctions and manholes.
Sewerage Infrastructure	Infrastructure used to receive, transport and treat sewage or effluent, including, for example, sewers, access chambers, maintenance holes, vents pumps, structures, machinery and outfalls vested in FRW.
Structure	Includes a masonry fence, deck, pergola, swimming and spa pool, satellite dish and water storage tank.
WinCan	Inspection and data validation software application specific to sewerage infrastructure.
Zone of influence	That area of strata likely to be affected by superimposed building loads. The boundary of the zone of influence is nominally defined as a line projected at a 45° angle from the invert of the sewer to the natural surface. The boundary of the zone of influence may be affected by factors including for example, groundwater and soil type and must be calculated by a Registered Professional Engineer of Queensland (RPEQ). Figure 1 provides an illustration of the approximate Zone of influence.

5. Guideline:

The guidelines are structured to assist in assessing applications (BOSI) (rather than the second task referenced in clause 2.2). Assessing officers/ engineers can work through the guidelines using the information contained in an application (BOSI) and produce an approvals certificate/ letter containing any additional conditions or requirements.

5.1 This guideline specifies performance criteria that have guided technical specifications and provide details of situations that allow all four of these performance criteria to be achieved. There may however be alternative options

to achieve these criteria and alternative options are to be approved by General Manager Regional Services or delegate.

These performance criteria are:

5.1.1 The carrying out of building work over or adjacent to sewer or associated structure must not:
- interfere with or adversely affect the function of the service; or
- place any additional load on the service;

5.1.2 Adequate access must be provided to the sewer main for future maintenance;

5.1.3 Adequate access must be provided to any access covers associated with the sewerage main; and

5.1.4 Access must be maintained to any sewer maintenance hole at all times.

5.2 It should be further noted that these guidelines are to be read in conjunction with the:

- Queensland Development Code (MP 1.4 November 2013); and
- MP1.4 Building Over or Near Relevant Infrastructure (herein referred to as the QDC1.4).

These guidelines deal with

- Building Classes 2 – 9; or
- Building Classes 1 and 10, where the application (BOSI) does not comply with an acceptable solution provided in the QDC1.4.

5.3 General

5.3.1 Application (BOSI) and Assessment Process

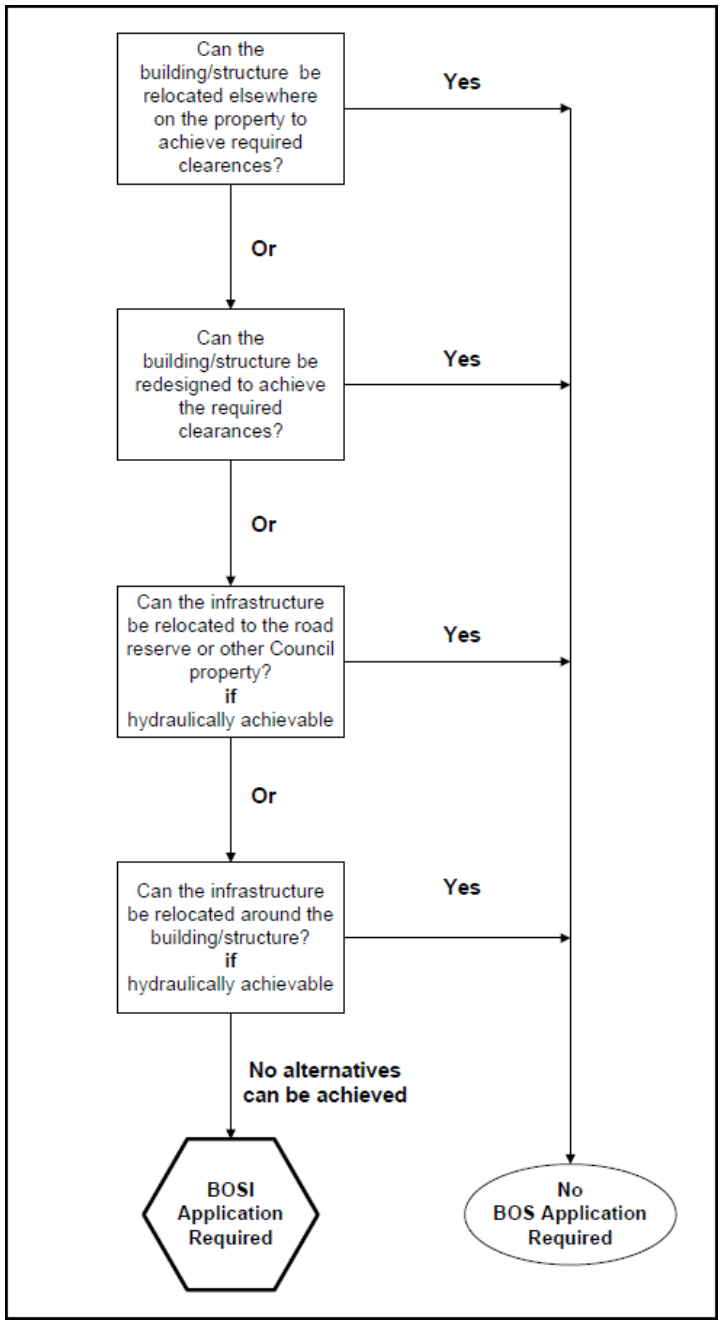
To assess thee conditions the applicant must submit to FRW an application (BOSI) available on Council's website.

FRW may impose alternative requirements, such as relocation of sewerage mains, for large commercial or multi-level buildings.
The process consists of:

- submission of an application (BOSI) and appropriate fee by the applicant;
- assessment by FRW including initial CCTV;
- signed easement documentation if applicable (refer to clause 3, Form 9 Easement);
- issuance of a "Construction permit" (conditional approval to construct after easement document has been forwarded to FRW), or not;
- construction works by the applicant;
- post construction CCTV; and
- issuance of "Building Over Sewer Infrastructure Permit" on completion of works.

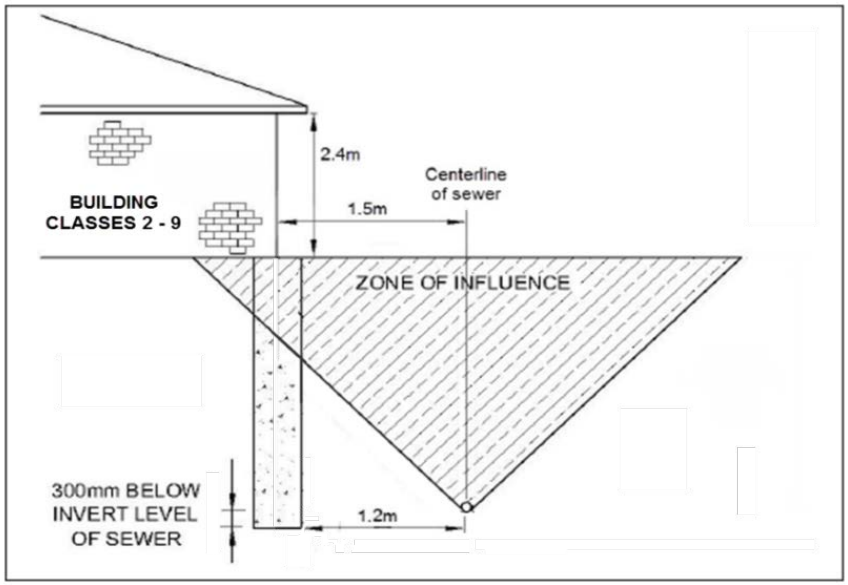
5.3.2 Alternatives Requiring No Application (BOSI)

Where the sewerage main is deeper than 1.5m and the proposed structure is located within the zone of influence (even though it is 1.5m clear of the infrastructure), the following alternatives are available for consideration and require no application (BOSI).



5.3.3 Minimum Clearance Guide

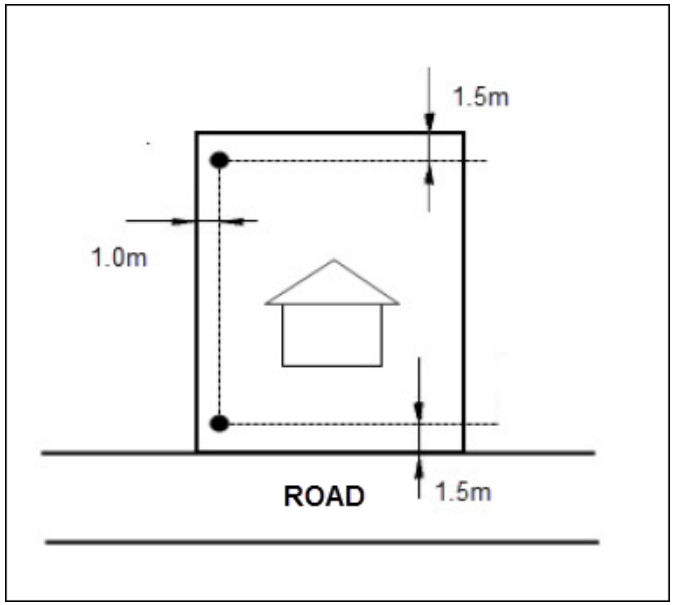
The minimum clearance from sewerage mains up to 225mm in diameter on a standard alignment is 1.5m from the face of any building or structure and 1.2m from the face of any footing to the centerline of the sewer main with a minimum unobstructed vertical clearance of 2.4m.



5.3.4 Easement or Allotment Boundary

An easement boundary or allotment boundary is considered to be a defining limit under this policy and any existing sewerage infrastructure beyond these boundaries will not influence an application (BOSI). Standard alignment is defined by the following criteria:

Location of Sewerage Pipe	Standard Alignment
Adjacent to side boundaries	1.0m
Adjacent to front and rear boundaries	1.5m



5.3.5 Sewerage Standard Alignments (Capricorn Municipal Development Guidelines)

When the sewerage infrastructure is not on a standard alignment, construction may be permitted over or adjacent to sewerage mains up to 225mm in diameter in accordance to the technical guidelines requirements.

Allowances or alternatives to the technical guidelines may be permitted with the consent of the manager or authorised delegate.

5.3.6 Consent Declined

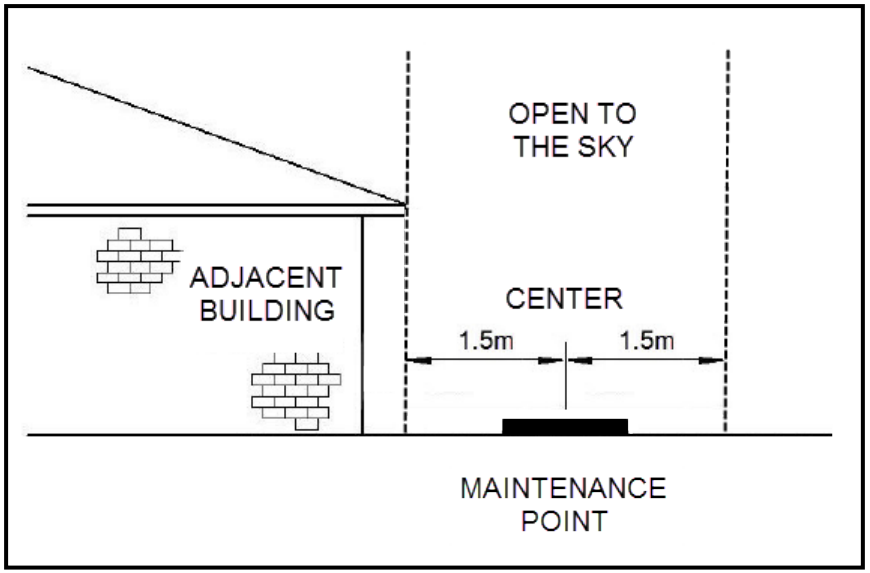
Consent will not be granted for the construction of a building or structure over or adjacent to sewerage infrastructure that is:

- greater than 225mm in diameter;
- pressure mains; or
- maintenance points (access chambers, lamp holes etc.).

5.3.7 Clearance from Maintenance Holes

All buildings or structures (including minor structures) will have the following clearances from all maintenance holes:

- Infinite height from the finished surface level.
- Minimum horizontal clearance of 1.5m from the outermost projection of any building or structure to the centre of any maintenance point.



5.3.8 Relocating FRW's Sewerage Pipes

These works must be conducted by FRW or an approved contractor. The design, materials and construction methods must also be approved by FRW. FRW will inspect all open trenches prior to backfilling.

5.3.9 Specific Requirements for Building within 1.5m or over FRW's sewerage infrastructure

Where construction is approved within 1.5m or over FRW's sewerage infrastructure any or all of the following conditions may be applicable for Building Classes 1-10:

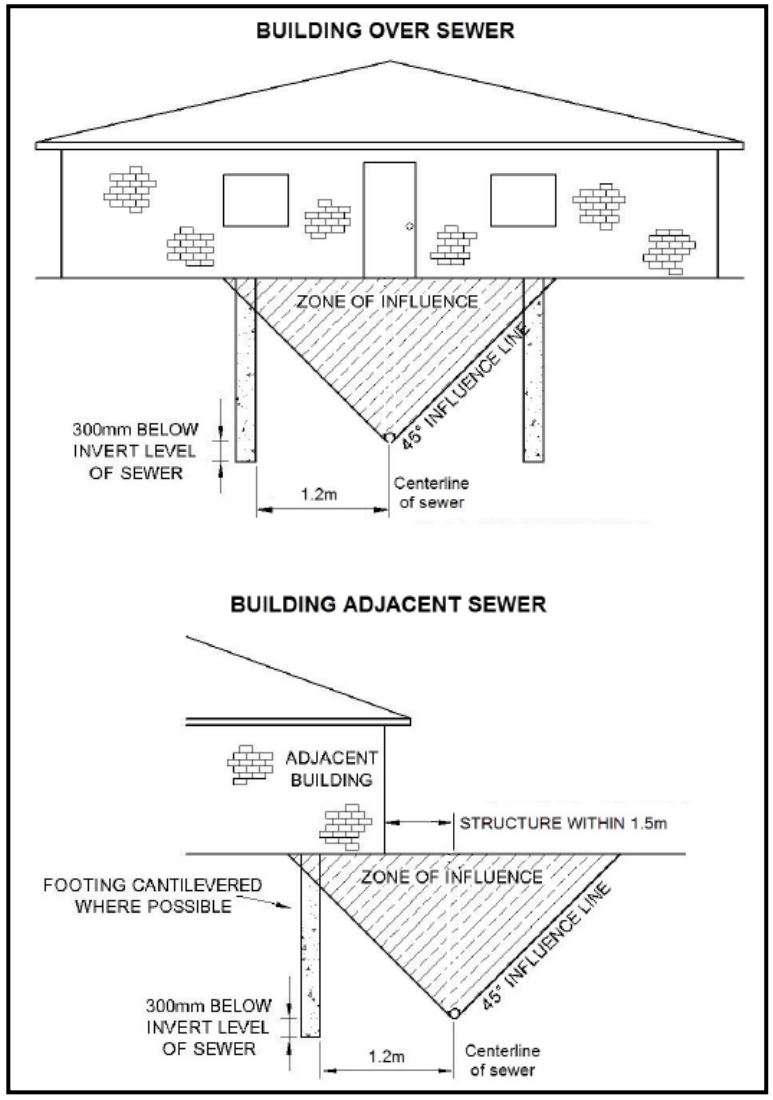
5.3.9.1 CCTV inspection of the sewerage infrastructure to be conducted prior to the commencement of the construction works and within seven (7) days of practical completion of the construction works to be submitted to FRW for review.

5.3.9.2 A structural footing design with engineering drawings authorised by an RPEQ will need to be submitted to FRW to allow for an assessment of the footing design's potential impact on the sewer. All footings/piers will maintain a minimum 1.2m horizontal separation from the sewerage infrastructure from the edge of the sewerage infrastructure to the edge of the footing.

5.3.9.3 Payment of the appropriate application fee.

5.3.9.4 Upgrade or relining of the existing infrastructure (subject to availability of relining contractors) if applicable.

5.3.9.5 Provision of an Easement if required.



5.3.10 Minor Structures

The minor structures identified below are generally not considered by FRW as interfering with its sewerage infrastructure, therefore consent from FRW is not required to construct or erect such minor structures, except where there is actual interference.

For the purposes of these guidelines, minor structures include:

- demountable fences;
- retaining wall less than or equal to 1.0m in height;
- sheds, bird aviaries and garages with a floor area 12 square metres or less;
- others as determined by the Manager or delegate. (This may include decks and carports);
- excavation and filling up to 1.0m.

5.3.10.1 All structures should be designed and constructed to ensure the sewerage infrastructure is adequately protected, as provided for in these guidelines. Further, all structures will be designed to ensure no additional loading is applied to FRW's sewerage infrastructure and full access is attainable.

5.3.10.2 It should be noted that all minor structures must not be constructed over or adjacent to any maintenance point and the clearances specified in these guidelines must be complied with.

5.3.10.3 Excavation or filling up to 1.0m is generally not considered by FRW as interfering with its sewerage infrastructure and consent therefore is not required, providing the cover requirements specified in the CMDG are achieved.

5.3.10.4 Consent of FRW must be sought, in accordance with this policy for any excavation or filling proposed greater than 1.0m or where the cover requirements specified in the CMDG cannot be achieved and will be given by the General Manager Regional Services or delegate at their discretion, prior to the commencement of any excavation or fill works on-site. Any fill placed over an access chamber will require the access chamber to be raised to the new surface level.

5.3.10.5 Any alterations proposed to the level of an existing access chamber are at the full cost to the applicant. A request must be made in writing to FRW for a quotation to be compiled for the works.

CMDG minimum cover requirements:

Location of Gravity Sewer Pipe	**uPVC**
Areas not subject to vehicular loading	600mm
Areas subject to vehicular loading:	
a) not in a roadway	900mm
b) in sealed roadway	900mm
c) in unsealed roadway	900mm

5.3.11 Installation and Construction

An Engineer (RPEQ) may be required for the design and/or approvals of the proposed building or structure. The supporting guidelines identify when this is required.

Works to any FRW sewerage infrastructure, such as relocation or relining of, must be conducted by FRW or by a FRW approved contractor.

5.4 Certification of Works

5.4.1 Preconstruction CCTV Inspections

FRW will require the condition of sewerage pipes to be inspected via CCTV prior to approval of any application to BOSI. The costs of any such inspections are the responsibility of the applicant.

5.4.2 Construction Inspections

Council must be given the option to conduct inspections at the following stages of construction:

5.4.2.1 All footing systems located within the zone of influence, of any of FRW's sewerage infrastructure must be inspected and certified by the Building Certifier or an Engineer (RPEQ) during construction.

5.4.2.2 All exposed sewer mains - prior to backfilling, FRW must first be given the option of inspecting the sewer. A minimum 24 hours notification of inspection is required.

5.4.2.3 All replaced / relocated sewers must be inspected and approved by FRW, at the applicant's expense, prior to backfilling. A minimum of 24 hours notification of inspection is required.

5.4.2.4 Access holes that are newly installed or moved, FRW must first be given the option of inspecting the sewer. A minimum 24 hours notification of inspection is required.

5.4.3 Permits

After completion of works and inspections and when FRW is satisfied the works were conducted as instructed in the Construction Permit and any remedial works have been completed to FRW's satisfaction, FRW will issue a Building Over/Adjacent Sewerage Infrastructure Permit, which will remain in perpetuity as long as no modifications are made to either the building or structure.

5.4.4 Enforcement

Should the applicant or property owner fail to correctly apply this policy or comply with the associated conditions for the relevant development category, then the approval of FRW to build over or adjacent to FRW's sewerage infrastructure must be taken to not have been obtained. In which case the owner will be in breach of the *Water Supply (Safety and Reliability) Act 2008* and will be subject to prosecution under the *Water Supply (Safety and Reliability) Act 2008*.

Existing unauthorised building work located over or adjacent to the sewerage system is also be bound by the provisions of this policy unless otherwise approved by FRW.

5.5 Construction Methods

5.5.1 Site Works

The approximate location and depth of FRW's sewerage infrastructure may be obtained from FRW plans relevant to the building site. FRW does not guarantee in any way the accuracy of these plans and provides them as a guide only.

The applicant/builder is to physically confirm the alignment of FRW's sewerage infrastructure on site prior to the commencement of any design works for proposed buildings or structures and the actual location and depth is recorded on a site plan. Dimensions will be taken from permanent buildings or

structures, or property boundaries on-site. The site plan must then be submitted to FRW for updating of records.

Adequate measures must be taken to ensure FRW's sewerage infrastructure is protected from damage at all times. In particular, heavy earthmoving equipment and driven piles must not be used near FRW's sewerage infrastructure and earth or other materials must not be piled in the zone of influence of FRW's sewer infrastructure. In the event that FRW's sewerage infrastructure is damaged, FRW must be notified immediately.

5.5.2 Costs for Works

All costs associated with the construction of the proposed building/structure (including any additional cost that may arise from additional design/ construction requirements as stipulated by the Building Over Adjacent To Local Government Sewerage Infrastructure Policy are the sole responsibility of the applicant. This includes, but is not limited to: materials and labour for the building, engineering designs, and inspections by engineers, FRW, Council or other agents of the Council, relocation of an existing service.

5.5.3 Repairs/Damage

In the event that FRW's sewerage infrastructure is damaged during construction through negligence of the contractor, FRW must be notified immediately. All costs associated with rectification of damage to FRW assets will be recovered from the applicant.

5.5.4 Access and Maintenance

The construction permit will detail conditions, such as those outlined in these supporting guidelines, associated with an approval to build over or adjacent to FRW sewerage infrastructure.

- Where the replacement or relocation of existing sewerage infrastructure is proposed, a suitable design and appropriate application must be submitted to FRW for assessment, in accordance with the *Sustainable Planning Act 2009* and the design must be in accordance with the requirements of the CMDG.
- The design must also include suitable methodology as to the temporary diversion of sewage flows during the construction of new sewerage infrastructure.
- The IDAS application forms (for applications under the *Sustainable Planning Act 2009* and the CMDG can be obtained from the office of FRW, Belmont Road, North Rockhampton or Rockhampton Regional Council, City Hall, Bolsover Street, Rockhampton or FRW's website (www.frw.com.au)).

5.5.5 Easement

The applicant must provide a registered easement where directed, to FRW. (refer to clause 3, Form 9 Easement);

The easement plan and document must be submitted to FRW for approval and endorsing prior to the Building Over or Adjacent to Sewerage Infrastructure construction permit being issued. The BOS construction permit will not be issued until a registered easement has been forwarded to FRW.

The easement is registered on the title and is attached to the land. The easement width will reflect the zone of influence of the sewerage infrastructure within the property and must be provided for the full length of the property from boundary to boundary.

6 Review Timelines:

This guideline will be reviewed when any of the following occur:

6.1 The related information is amended or replaced; or

6.2 Other circumstances as determined from time to time by the General Manager.

7 Responsibilities:

Sponsor	Chief Executive Officer
Business Owner	General Manager Regional Services
Guideline Owner	Manager Fitzroy River Water
Guideline Quality Control	Corporate Improvement and Strategy

ROBERT HOLMES
GENERAL MANAGER REGIONAL SERVICES