

SC6.4.7 Acceptance of completed works

SC6.4.7.1 Release of the plan of survey

SC6.4.7.1.1 Introduction

The Release of the plan of survey sub-section details the requirements that must be met prior to the release of the Plan of Survey.

(1) Principles

Prior to the release of the Plan of Survey the developer must:

- (a) comply with all conditions of the development permit; and
- (b) ensure that all required fees, bonds, contributions, infrastructure charges and outstanding rates are paid.

Works will not be accepted on maintenance until the formal Plan of Survey has been released.

Where exceptional circumstances exist and an early release of the Plan of Survey is agreed to by the Director Planning and Development, the developer is required to bond any outstanding work.

(2) Terminology

Terms in this policy have the same definition as in the *Planning Act 2017*, unless otherwise defined.

DEHP

Department of Environmental and Heritage Protection

Plan of Survey

Includes all surveys undertaken by a cadastral surveyor as defined by the *Surveyors Act 2003* and for the purpose of:

- subdividing one or more lots; or
- dedicating land to public use; or
- redefining a lot by resurvey; or
- amalgamating two or more lots to create a smaller number of lots; or
- defining an area for an easement, lease, profit a prendre or covenant; or
- any other purpose that the Registrar may require the registered proprietor to undertake.

On maintenance date

The date the works have been inspected and are complete, relevant conditions of the Development Permit have been satisfied, council has accepted maintenance responsibility for agreed public infrastructure and the developer commences the defects liability period.

Off maintenance date

The date the works are fully accepted by council following an inspection by council, which considers that all works are satisfactory, and the defects liability period concludes.

Maintenance period

The period of time between when council accepts the works on-maintenance until council accepts the works off-maintenance. This includes any establishment periods and the defect liability period, the period of time during which the developer is required to repair defects that occur. A defect is an imperfection, fault of deficiency in the works and does not include general wear and tear of items or damage due to misuse.

SC6.4.7.1.2 Release of plan of survey requirements

The following must be received or completed prior to the release of the Plan of Survey.

(1) Certification

- (a) The developer must submit one print of each drawing, excluding council Standard Drawings:

- (i) as originally approved by council;
- (ii) including amendments incorporated in the construction of the development; and
- (iii) overprinted with a certificate from a Licensed Surveyor or Registered Professional Engineer of

Queensland (RPEQ) as detailed below.

- (b) An RPEQ and/or a Registered Landscape Architect must certify that the completed works comply with the development approval, the specific outcomes of the applicable regulations and good engineering practice.

The RPEQ and/or Registered Landscape Architect must also certify the 'as constructed drawings by including the following statement on each drawing:

"I/We (Name) of (Firm) hereby certify that the works as shown on the 'as constructed' drawings reflect any changes that were made during the course of construction (signed with RPEQ No and dated)".

- (c) A Registered Surveyor must certify that the locations, surface and invert levels of all works and infrastructure presented on the as constructed drawings and digital submissions have been surveyed and are true and accurate representations of the works by including the following statement on each as constructed drawing:

"I/We (Name) of (Firm) hereby certify that this drawing accurately describes and records the nature and the location of the works depicted hereon as they have been constructed for the purposes of the development (signed and dated)".

(2) As constructed drawings

One signed hard copy and digital copies of the as constructed drawings (AutoCAD DWG and a copy converted to PDF A1 format correctly scaled to A3 size) must be submitted and approved by council. As constructed information must be provided for all completed works, and must include the following information.

(a) Lot

- (i) The lot layout as approved and as shown on the Plan of Survey.
- (ii) Approved street names.

(b) Earthworks

- (i) As constructed contours or where allotments are under 2000m² spot levels will be adequate to verify a minimum as constructed surface gradient of 1 in 250.
- (ii) Denote location, extent and depth of fill.
- (iii) The maximum depth of fill on each lot must be indicated.
- (iv) Flood lines as adopted by council.
- (v) Street names as approved by council and noted on the Plan of Survey.

(c) Infrastructure

- (i) Pavement and kerb and channel information (e.g. edge of pavement and kerb and channel alignment and depths of pavement, kerb type, road surface type and depth, road pavement details, type and depth, road cross sections).
- (ii) Stormwater drainage information, including:
 - (A) pipe alignments denoting sizes and invert levels at each end;
 - (B) manhole location; and
 - (C) inlet pit types to be denoted.
- (iii) Major overflow paths and trunk drainage channels located and clearly shown.
- (iv) Invert levels and offsets of the junction points and manhole connections where roof water drainage systems have been used.
- (v) Sewerage 'as constructed plans', including all required details, lodged and approved.
 - (A) Location of maintenance structure (MH, MC, JU and end of PCS or house drain connection point); and
 - (B) Material type and sizes.
- (vi) Details of all water mains, fittings of consequence and markers, including relevant dimensions,

- included on as constructed plans, which are to be lodged and approved.
- (vii) Location and dimensioning of subsoil cleanout points.
- (viii) BOS data to detail location of house drain connection point - building envelop upgraded.

Editor's note: -

- a) The accuracy of as constructed plans locating house connections is essential.
- b) Council's Inspector, while on site, may take measurements that will permit some cross checking of as constructed plans. Should these checks indicate discrepancies, then reopening of the work will be required for checking measurement of the work.

(3) Ongoing operational requirements

Where requested, applicants are required to identify the ongoing operational requirements in a relevant Maintenance Plan, as detailed in Section SC6.4.2 Development application guidelines.

(4) The on maintenance inspection

The on maintenance inspection must be satisfactorily completed prior to the release of the Plan of Survey. The Consulting Engineer must undertake and report on the following prior to requesting the on maintenance inspection.

(a) Lodgement

- (i) Demonstrated full compliance with all conditions of relevant Development Approvals.
- (ii) Building approval for all buildings/structures, where required by the *Building Code of Australia* (BCA).
- (iii) Plan of Survey submitted in accordance with approved proposal plan and any approved amendments, or where the Plans of Survey differ from the approved proposal plan, details of any changes must be provided with the application.
- (iv) A Supervision Certificate from the Consulting Engineer and request to have the works accepted on maintenance.
- (v) Infrastructure Agreements, if required, must be in place for the provision of and/or connection to trunk infrastructure.
- (vi) Approval by other authorities, e.g. evidence of NBN Agreement, Certificate of Acceptance or Letter of Supply from Ergon.

(b) Sewer

Sewerage works

- (i) Pressure test all sewers and manholes to ensure the requirements of the specification are met.
- (ii) Check by internal examination (closed circuit television) that all sewers are straight, clean and to grade.
- (iii) Check that all manholes are sound, smooth and clean and benched as per the required standard.
- (iv) Check that house connection jump up construction complies with council's standards.
- (v) Performance testing of pumping equipment. This testing will require the connection of the electricity supply and water to the pump station.
- (vi) Obtain licences for overflows to the sewerage system from DEHP.

All sewerage works including pump stations, rising mains, trunk mains and the proposed sewers must have been inspected and certified by the supervising engineer as being 100 per cent complete and in full working order. Sewer systems must be installed, tested and operational. (Bonding of pump stations may be accepted; refer to SC6.4.7.3 Sewer pump-out agreements.

(c) Water

(i) Water reticulation

- (A) Pressure test and supervise the swabbing (if necessary) and sterilisation of the water mains.
- (B) Check location of hydrants and valves to ensure they are in their correct location.

- (C) Check that all valves and hydrants are working satisfactorily (include lid arrangement as per SD-350).
 - (D) When water mains have been constructed, mains must be commissioned in accordance with council requirements.
- (ii) All works associated with water supply on site must be 100 per cent complete, and all water mains must be tested and live. Reservoirs and associated pump stations must be commissioned prior to the lodgement of survey plans unless otherwise approved by council.
- (d) Earthworks
 - (i) All allotment preparation work and earthworks on allotments must be 100 per cent complete in accordance with the requirements of SC6.4.6.10 Earthwork construction, with finished surface levels, the degree of compaction achieved and geotechnical assessments required on any of the allotments submitted and approved by council. All works within allotments must be fully completed and no further disturbance required on the allotments. Appropriate erosion and sediment control measures must also be in place for all disturbed areas.
 - (ii) Where specific revegetation works have been bonded for future completion, the earthworks and top soiling must be complete prior to the release of the Plan of Survey.
 - (iii) All survey pegs placed.
- (e) Roads
 - (i) Roads must be completed and fully sealed.
 - (ii) Pavement line markings completed at major intersections.
 - (iii) All traffic control devices, including traffic islands to be completed.
 - (iv) All traffic signage to be in place and completed compliant with Manual of Uniform traffic control devices (MUTCD) requirements.
 - (v) Traffic signals, if present, to be installed, completed and fully functional, compliant with the relevant requirements and legislation.
 - (vi) Retaining walls within road reserve to be completed and maintenance requirements documented.
 - (vii) Fences and noise abatement/screening walls to be completed and maintenance requirements documented.
- (f) Stormwater
 - (i) Stormwater drainage works must be installed with all erosion controls in place and able to function without detriment to the system. Allotments must be provided with the nominated flood immunity. All stormwater systems must be constructed, including kerb and channel. Downstream drainage easements must have been executed in favour of council, necessary drainage and other easement documentation must have been submitted, and required reserves for drainage, parkland, etc. must have been provided.
 - (ii) This excludes large water sensitive urban design (WSUD) measures such as bio-retention basins and wetlands, where the acceptance of the asset and ongoing maintenance requirements is to be in accordance with SC6.4.3.9 Water sensitive urban design guidelines.
 - (iii) Performance testing of pumping equipment must be passed satisfactorily. This testing will require the connection of the electricity supply and water to the pump station.
- (g) Services

Evidence must be provided of street lighting, telecommunications and electrical supply works commitments. Satisfactory evidence must be provided to council of a negotiated agreement with service providers for telecommunications and NBN Co infrastructure, reticulation of electricity and the provision of street lighting, and gas service providers for provision of gas (if gas is provided).
- (h) Payments and Bonds
 - (i) The full payment of fees and bonds, including the maintenance bond and any bonds for incomplete works. The maintenance bond will be a minimum 5 per cent of the value of the works as certified by the RPEQ and accepted by council, and must be lodged with council until the development is accepted as off maintenance.

- (ii) All outstanding rates paid.
 - (iii) All infrastructure charges required by the conditions of the development permit must be paid.
 - (iv) Accompanied by the prescribed form and fee of an amount in accordance with council's fees and charges current at the time of payment.
- (i) Land

The developer must covenant that all transfers of land and interests in land to council are free of encumbrances and registered in the Title's Office at the same time as the Plan of Survey is registered at no cost to council.

SC6.4.7.1.3 Bonds

To enable early release of the Plan of Survey it will be necessary to bond all outstanding works and requirements. Security bonds for incomplete works will be subject to a minimum value of \$15,000.

- (1) Standard bond conditions
- (a) Estimates
 - (i) To verify the maintenance bond estimates, council must be supplied with a schedule of the works together with the appropriate estimated rates and amounts for all the items.
 - (ii) To verify the incomplete works bond estimates, council must be supplied with a schedule of the incomplete works together with the appropriate estimated rates and amounts for the incomplete works.
 - (iii) Such estimated prices must be fair and reasonable.
 - (b) Conditions
 - (i) The amount of the security for incomplete works must be for an amount of not less than one hundred and fifty per cent (150 per cent) of the certified cost of the works remaining to be completed as at the date of the release of the subject Plan of Survey.
 - (ii) Incomplete works must be itemised, valued and certified by an RPEQ.
 - (iii) All bonds submitted must be clearly identified as to the particulars of the site and the purpose of the bond.
 - (iv) Insurance and indemnity certificates must be current and valid to cover the period outstanding works are being completed.
 - (c) Acceptable security
 - (i) Cash bonds.
 - (ii) Unconditional bank guarantees.
 - (A) A bank guarantee must include:
 - a binding contractual relationship between council and the guaranteeing bank;
 - specific requirements for renunciation of the guarantee; and
 - a requirement of adequate notice of renunciation.
 - (B) Bank guarantees must not have expiration dates.
- (2) Incomplete works bond
- (a) Incomplete works condition

In addition to the standard bond conditions:

 - (i) Where council consents to the early release of a Plan of Survey in line with the minimum requirements listed in Section 3, the developer will be required to lodge a security (bond) and an undertaking to complete the works within an agreed timeframe. These works must be completed to the satisfaction of council and the security submitted in a format as detailed in this sub-section. Security bonds for incomplete works will be subject to a minimum value of \$15,000.
 - (ii) Outstanding works must be itemised, valued and certified by an RPEQ.
 - (iii) Potential purchasers of lots must be advised of the arrangements.
 - (b) Required information

The RPEQ must provide the following information:

- (i) certification of the value of incomplete works;
- (ii) detailed schedule of the scope and cost of the incomplete works for auditing purposes;
- (iii) certification that all external and internal works can be completed and accepted on maintenance within the timeframes detailed elsewhere in this Policy sub-section;
- (iv) certification that the contract has been let for the construction of the remaining internal and external works and the name of the Contractor;
- (v) proposed finish dates for remaining internal and external works; and
- (vi) security lodgement form completed clearly indicating that the purpose of the bond is for incomplete works.

(3) Revegetation bonds

Revegetation bonds may be required where conditioned by a development permit. At the time of on maintenance council may accept the drains and earth batters within a subdivision whereby the vegetation is not in accord with the objectives of this and other SC6.4 Development manual planning scheme policy sub-sections, subject to the following requirements.

(a) Revegetation performance bond

- (i) A bond for the incomplete revegetation must be included as a performance bond for incomplete works along with all other bonds for incomplete works upon that subdivision.
- (ii) The bond for the revegetation works must be 150 per cent of the approved estimated cost of the revegetation works to allow for the typical seasonal weather encountered in the region, due to the risk of erosion and scouring in areas of exposed earth.
- (iii) The revegetation performance bond will be considered for acceptance on and off maintenance separate to the general subdivision works.

(b) Revegetation maintenance bond

- (i) The revegetation performance bond will be reduced to a revegetation maintenance bond upon achievement of a minimum scour protection, which is deemed as 40 per cent vegetal coverage, which includes 15 per cent of the total area having the specified species. The revegetation maintenance bond must be equal to the approved estimate of the value of the works required to achieve the specified grass coverage by the off maintenance date.
- (ii) The acceptance of revegetation on maintenance will correspond with the reduction of the performance bond for revegetation works. The acceptance of the revegetation works off maintenance and release of the revegetation maintenance bond will require the specified grass coverage to be completed but will not occur prior to the remainder of the development being accepted off maintenance.

(4) Sewer pump station bonds

- (a) Where a sewage pump station is a pump station identified by council in the Priority Infrastructure Plan (PIP) and that sewage pump station is identified as minor trunk infrastructure, then consideration will be given to the release of the Plan of Survey prior to the completion of the works associated with that pump station.
- (b) The pump station must be located upon land that is or will be under the control of the council upon the registration of the subject Plan of Survey.
- (c) The working drawings and specifications must have been completed and approved by council for construction.
- (d) The Consultant Engineer acknowledges that with respect to the nominated works that they are working for council and not the developer, and that the specifications nominate council as the Principal of the Contract.
- (e) The tenderers must have been reported to council and council must have approved the successful tenderer.
- (f) The Contract must have been let, and a submitted works program must indicate that the trunk

infrastructure is programmed to be completed prior to when the commencement of dwelling construction is envisaged, including provision for a normal wet season.

- (g) The developer must enter into a Deed of Agreement with council, as detailed in SC6.4.7.3 Sewer pump-out agreements that includes provision for a pump-out service and a security for this pump-out. The template in Attachment A of SC6.4.7.3 Sewer pump out agreements may be used for the Agreement.

SC6.4.7.1.4 Early release of the plan of survey

- (1) Justification for early release

Council may elect to release plans of survey prior to satisfaction of the development permit on the basis that critical works are provided and security is afforded for the outstanding works. This process requires the developer to request the early signing in writing at the time of lodging a survey plan and payment of a fee, demonstrating how conditions of the development approval are satisfied or secured.

Early approval and dating of the Plan of Survey does not discharge the developer from obligations to satisfy the conditions of development approval, and the development may be subject to enforcement action for non-compliance with the development permit(s) and/or the undertaking given to complete the outstanding works.

The aim of this clause is to enable the developer to have the Plan of Survey released from the council as early as possible while at the same time ensuring that the allotments being constructed will be fully serviced at the time that the Plan of Survey is registered and subsequent sales of the allotment takes place.

- (2) Early release of survey fees

A fee for the early release of the Plan of Survey in accordance with council's schedule of fee's and charges at the time of payment will also be required as payment separate to the incomplete works bond.

- (3) Minimum requirements

Council will not sign any Plans of Survey where the relevant works or matters are incomplete, unless the following are completed:

- (a) Early Plan of survey on maintenance inspection

An on maintenance inspection must be satisfactorily completed in accordance with SC6.4.7.1.2(4) and as detailed below, however some minor defects may be outstanding, with minor defects defined as those not impacting on public safety and/or the ability of council to operate and maintain the infrastructure.

- (b) Earthworks

All allotment preparation work and earthworks on allotments to be 100 per cent complete in accordance with the requirements of SC6.4.6.10 Earthworks (construction), with finished surface levels, the degree of compaction achieved and geotechnical assessments required on any of the allotments submitted and approved by council. All works within allotments must be fully completed and no further disturbance required on the allotments. Appropriate erosion and sediment control measures must also be in place for all disturbed areas.

- (c) Sewerage

All sewerage works including pump stations, rising mains, trunk mains and the proposed sewers have been inspected and certified by the supervising engineer as being 100 per cent complete and in full working order. Sewer systems must be installed, tested and operational. (Bonding of pump stations may be accepted; refer to SC6.4.7.1.3(4)). Conduit inspection must be undertaken in accordance with SC6.4.2.2.6 Conduit assessment.

- (d) Water

All works associated with water supply on site are 100 per cent complete, and all reticulation has been pressure tested, sterilised, completed and connected to an existing supply. All water pumping stations must be certified by an RPEQ as being 100 per cent complete and in full working order.

- (e) Roads

Roads must be completed to the point where the pre-seal inspection has been carried out by council's inspectors and the pavements are approved for application of bitumen or asphalt.

- (f) Stormwater

- (i) Stormwater drainage works must be installed with all erosion controls in place and able to function without detriment to the system. Allotments must be provided with the nominated flood immunity. All stormwater systems must be constructed, including kerb and channel. Downstream drainage easements must have been executed in favour of council, necessary drainage, other easement documentation must have been submitted, and required reserves for drainage, parkland, etc. must have been provided.
- (ii) This excludes large WSUD measures such as bio-retention basins and wetlands, where the acceptance of the asset and ongoing maintenance requirements is to be in accordance with SC6.4.3.9 Water sensitive urban design guidelines.

(g) Services

Evidence must be provided of street lighting, telecommunications and electrical supply works commitments. Satisfactory evidence must be provided to council of a negotiated agreement with service providers for telecommunications and broadband infrastructure, reticulation of electricity (e.g. Letter of Supply) and the provision of street lighting and gas service providers for provision of gas (if gas is provided).

(h) Payments and bonds

- (i) The full payment of fees and bonds, including the maintenance bond and any bonds for incomplete works. The maintenance bond will be 5 per cent of the value of the works as certified by the RPEQ and accepted by council, and must be lodged with council until the development is accepted as off maintenance.
- (ii) All outstanding levied rates are paid.
- (i) All infrastructure charges required by the conditions of approval must be paid.
- (ii) Accompanied by the prescribed form and fee of an amount in accordance with council's fees and charges current at the time of payment.

(i) Land

The developer must covenant that all transfers of land and interests in land to council are free of encumbrances and registered in the Title's Office at the same time as the Plan of Survey is registered at no cost to council.

(j) As constructed plans

As constructed plans must be submitted in accordance with SC6.4.7.1.2(2) showing all works completed to date, including as a minimum, the requirements above in parts (a) – (i). All works not shown on the as constructed drawings at the time of submission for early release of Plan of Survey, will be required to be bonded in accordance with the requirements of this section.

(4) Timing

All incomplete works must be completed and ready for council inspection within 1 month of council releasing the Plan of Survey. Should the developer not be able to meet this requirement they must submit justification to council detailing exceptional circumstances. The RPEQ must submit for the approval of council, a program of works to certify that the incomplete works can be completed within 1 month (or longer as agreed by council).

(5) Sewer pump stations

Early release of the Plan of Survey may be considered if council developed sewer pump stations are almost complete. See SC6.4.7.1.3(4) for more information.

SC6.4.7.2 On maintenance/final completion/off maintenance requirements

SC6.4.7.2.1 Introduction

This sub-section provides guidance and advice for the requirement for on maintenance/final completion/off maintenance to facilitate the release of the plan of survey (see SC6.4.7.1 Release of the plan of survey).

SC6.4.7.2.2 Lodgement

(1) Requirements for on maintenance:

- (a) building approval for all buildings/structures, where required by the *Building Code of Australia* (BCA);
- (b) a supervision certificate from the Consulting Engineer and request to have the works accepted on maintenance;
- (c) a workmanship guarantee from the Contractor;
- (d) submission to and acceptance by council of as constructed information. The RPEQ must certify the “as constructed” drawings by including the following statement on each drawing:
I/We (Name) of (Firm) hereby certify that the works as shown on the as constructed drawings reflect any changes that were made during the course of construction (signed with RPEQ No and dated);
- (e) a Registered Surveyor must certify that the locations, surface and invert levels of all works and infrastructure presented on the as constructed drawings and digital submissions have been surveyed and are true and accurate representations of the works by including the following statement on each relevant as constructed drawing:
I/We (Name) of (Firm) hereby certify that this drawing accurately describes and records the nature and the location of the works depicted hereon as they have been constructed for the purposes of the development (signed and dated);
- (f) infrastructure agreements, if required, must be in place for the provision of and/or connection to trunk infrastructure;
- (g) approval by other authorities, e.g. evidence of NBN Agreement, or Certificate of Acceptance from Ergon;
- (h) the works must remain on maintenance for a minimum period of 12 months;
- (i) the works subject of other approvals for which the works of this approval are dependent must also have been accepted on maintenance; and
- (j) where on maintenance can be achieved within 1 month of the release of the plan of survey then the date for the on maintenance will be backdated to the date of the release of the plan of survey. Otherwise, on maintenance will be from the date that all requirements have been satisfied.

SC6.4.7.2.3 Sewer

(1) Requirements for on maintenance:

- (a) pressure test all sewers and manholes in accordance with WSA to ensure the requirements of the specification are met;
- (b) check by internal examination (closed circuit television) that all sewers are straight, clean and to grade. Conduit inspection must be undertaken in accordance with SC6.4.2.2.6 Conduit assessment;
- (c) check that all manholes are sound, smooth and clean and benched as per the required standard;
- (d) check that house connection “jump up” construction complies with council's standards;
- (e) performance testing of pumping equipment. This testing will require the connection of the electricity supply and water to the pump station;
- (f) certified results of pressure tests on all mains;
- (g) certified results of field tests on pumping equipment;
- (h) operations manual, performance specifications and maintenance requirements for all pump stations; and
- (i) certification from the Consultant that the pipes and fittings used are as per the drawings and specifications.

SC6.4.7.2.4 Water

- (1) Requirements for on maintenance:
 - (a) pressure test and supervise the swabbing and sterilisation of the water mains (if necessary);
 - (b) check location of hydrants and valves to ensure they are in their correct location;
 - (c) check that all valves and hydrants are working satisfactorily(include lid arrangement as per SD-350;
 - (d) when water mains have been constructed, mains must be commissioned in accordance with council requirements;
 - (e) certified results of pressure tests on all mains;
 - (f) certified results of field tests on pumping equipment;
 - (g) certification from the Consultant that the pipes and fittings used are as per the drawings and specifications; and
 - (h) no concrete footpaths installed over water main where property connections are yet to be constructed.

SC6.4.7.2.5 Earthworks

- (1) Requirements for on maintenance:
 - (a) all survey pegs placed; and
 - (b) compaction results of each layer of earthworks on roads and on each allotment where depth of fill exceeds 0.5 m. The maximum depth of fill on each lot must be indicated on the as constructed drawings. Allotment fill must be in layers no greater than 200 mm and compacted a minimum standard of 95% standard compaction for residential subdivision and 98% standard compaction for commercial subdivision. The fill material must be free of vegetation and organic material.

SC6.4.7.2.6 Roads

- (1) Requirements for on maintenance:
 - (a) roads must be completed and fully sealed;
 - (b) all tests and hold point documentation completed and finalised;
 - (c) pavement line markings completed, including passing and turning lanes at major intersections;
 - (d) where a double coat bitumen seal has been used, copies of bitumen spray sheets and calculated average spray rate and aggregate spread rate are required;
 - (e) where asphaltic concrete surfacing has been used, test results on samples of the material supplied to the site must be taken at the Asphalt Plant together with field tests to confirm asphalt depth and percentage of voids filled;
 - (f) all traffic control devices, including traffic islands, to be completed;
 - (g) all traffic signage to be in place and completed in accordance with *Manual of uniform traffic control devices'* requirements;
 - (h) traffic signals, if present, to be installed, completed and fully functional in accordance with the relevant requirements and legislation;
 - (i) retaining walls within road reserve to be completed and maintenance requirements documented;
 - (j) fences and noise abatement or screening walls to be completed and maintenance requirements documented;
 - (k) compaction results of subgrade and each course of pavement; and
 - (l) grading, Atterberg limits and a California Bearing Ratio (CBR) test of each course of pavement material in accordance with SC6.4.5.3 Quality management system.

SC6.4.7.2.7 Stormwater

- (1) Requirements for on maintenance:
 - (a) stormwater drainage works must be installed with all erosion controls in place and able to function without detriment to the system. Allotments must be provided with the nominated flood immunity. All

stormwater systems must be constructed, including kerb and channel. Downstream drainage easements must have been executed in favour of council, necessary drainage and other easement documentation must have been submitted, and required reserves for drainage, parkland, etc. must have been provided;

- (b) certification from the Consultant that the pipes and fittings used are as per the drawings and specifications. Conduit inspection must be undertaken in accordance with SC6.4.2.2.6 Conduit assessment;
- (c) performance testing of pumping equipment. This testing will require the connection of the electricity supply and water to the pump station;
- (d) certified results of field tests on pumping equipment;
- (e) operations manual, performance specifications and maintenance requirements for all pump stations; and
- (f) certification from the Consultant that the pipes and fittings used are as per the drawings and specifications.

This excludes large water sensitive urban design (WSUD) measures such as bio-retention basins and wetlands, where the acceptance of the asset and ongoing maintenance requirements is to be in accordance with SC6.4.3.9 Water sensitive urban design guidelines and SC6.4.6.1 Water sensitive urban design construction and establishment guidelines.

SC6.4.7.2.8 Landscaping and irrigation

(1) Introduction

This clause outlines the conditions and timeframes associated with acceptance by council of landscape and irrigation works (Works) constructed as part of a Development Permit.

(2) Principles

- (a) the establishment period will be included within the maintenance period;
- (b) council will accept works on maintenance that have reached practical completion and have met the relevant conditions of the Development Permit, but may still require time to establish;
- (c) the establishment date will be used to determine satisfactory establishment;
- (d) council will accept responsibility for maintenance of hard landscape assets from the on maintenance date;
- (e) the Developer will remain responsible for maintenance of soft landscape assets during the maintenance period;
- (f) the Developer is responsible for all defects in the works until the off maintenance date; and
- (g) council will accept responsibility for maintenance of soft landscape assets from the off maintenance date.

(3) Terminology

In addition to the terms previously defined in SC6.4.7.1.1(2) the following terms and definitions apply to this clause, specific to landscape and irrigation works:

Contractor A person or company who has entered into a contract with the developer to supply and install infrastructure, landscaping and/or an irrigation system.

Establishment period The period of time between when council accepts the works on-maintenance until when council accepts the works as established (the established date).

Works are deemed established when:

- (i) all the defects identified at the on-maintenance and practical completion;
- (ii) defects identified at inspection have been rectified unless agreed otherwise;
- (iii) all turfed areas have "taken root" and there are no obvious gaps between strips of turf;
- (iv) all turfed areas have been rolled and/or topdressed to fill any depressions;
- (v) all plants are showing signs of healthy, new growth, and that the planting design intent is starting to take shape;
- (vi) generally, the landscape works indicate that they are being maintained in accordance with the Development Permit; and
- (vii) revegetation areas have achieved specified cover.

Hard landscaping Structures, paths and facilities such as playground equipment constructed from building materials (but excluding irrigation systems).

Maintenance period The period of time between when council accepts the works on-maintenance until council accepts the works off maintenance. This includes any establishment periods and the defect liability period. This is to be:

- (i) a minimum of 12 calendar months; and
- (ii) include the establishment period and the defect liability period.

Off maintenance date The date the works are fully accepted by council following an inspection by council, which considers that all works are satisfactory, and the defects liability period concludes. This date must be:

- (i) after the established date;
- (ii) after all defects have been remedied;
- (iii) at least 12 months after the on maintenance date;
- (iv) after an inspection by council which considers that all works are satisfactory.

Soft landscaping Trees, plants, grass and vegetation generally and any irrigation system associated with such vegetation.

(4) Ownership and responsibilities

The ownership of the works transfers to council on the earlier of:

- (a) the date when the land on which the works are constructed is transferred to council; or
- (b) the on maintenance date.

(5) Typical timelines

(a) Construction

- (i) achieve practical completion;
- (ii) conduct inspections to determine the on maintenance date; and
- (iii) release Plan of Survey if applicable.

(b) 0 weeks

- (i) on maintenance date.

(c) 12 weeks

- (i) normal established date;

- (ii) landscape inspection to be carried out; and
 - (iii) if works are unsatisfactory, establishment date will be deferred.
- (d) 52 weeks
 - (i) normal off maintenance date;
 - (ii) landscape inspection to be carried out; and
 - (iii) if works are unsatisfactory the off maintenance date will be deferred.
- (6) Landscape works on maintenance/practical completion
 - (a) Requirements for on maintenance:
 - (i) maintenance inspection;
 - (ii) the Registered Landscape Architect must certify as constructed drawings by including the following statement on each drawing:
I/We (Name) of (Firm) hereby certify that the works as shown on the "as constructed" drawings reflect any changes that were made during the course of construction;
 - (iii) all asset transfer documentation is submitted and approved by council including the following:
 - (A) Open Space Asset Data Collection Form – This form contains the asset information relating to the construction of new assets; or
 - (B) Asset Change Form – This form contains information about minor changes to existing assets; and
 - (C) warranty details for all items with a value greater than \$500.00. This information is required by council to assist in future warranty claims;
 - (iv) plantings, gardens and turfed areas must be exhibiting a "strike", but compliance with full establishment requirements is not essential at on maintenance;
 - (v) the defects liability period for soft landscape works shall be concurrent with the defects liability period for any associated irrigation system; and
 - (vi) the defects liability period for landscape works shall not commence until:
 - (A) the associated irrigation system has been commissioned; and
 - (B) all requirements of the Special Conditions of Approval have been met.
- (7) Landscape works defects liability period
 - (a) Establishment
 - (i) All soft landscaping will be subject to a 12 week landscape establishment period. The landscape establishment period is included in the 12 month maintenance period. The Developer is responsible for establishing the works during the establishment period until the established date as advised by council.
 - (ii) The developer may be required to undertake additional works during the establishment period such as additional watering, formative pruning, topdressing, turfing, replenishment of mulch and replacement of plants.
 - (iii) At the conclusion of the landscape establishment period a landscape establishment inspection may be conducted, and if the landscaping establishment is not satisfactory additional works may be requested and/or the maintenance period may be extended.
 - (b) Landscape maintenance period requirements and responsibilities
 - (i) Council is responsible for maintenance of hard landscaping during the maintenance period.
 - (ii) The developer is responsible for maintenance of soft landscaping during the maintenance period until the off maintenance date.
 - (iii) Water costs
 - (A) The developer is responsible for the cost of water during the maintenance period.
 - (B) Council is responsible for cost of water from the off maintenance date.

- (iv) Vandalism, theft and damage caused by unexpected events or third parties
 - (A) For soft landscaping, the developer is responsible for rectification works to remedy vandalism, theft and damage caused by unexpected events during the maintenance period.
 - (B) For hard landscaping, the council is responsible for rectification works to remedy vandalism, theft and damage caused by unexpected events during the maintenance period.
- (v) Extended maintenance periods
 - (A) In addition to provisions detailed, where negotiated as conditions of the development approval, extended maintenance period beyond the 12 month period may apply.
 - (B) Where the landscape maintenance period is extended as a condition of development approval or due to provisions within this policy, this extension may concurrently apply to any irrigation system associated with the landscape works.
- (vi) General maintenance activity requirements
 - (A) All maintenance activities must be undertaken in accordance with council's public open space maintenance specifications. Any maintenance activities that deliver a level of service above and beyond council's specification is at the discretion and cost of the developer.

Editors Note - council's Public open space maintenance frameworks are currently under development.

- (B) Maintenance activities include, but are not limited to mowing, top dressing, litter collection, watering, pruning, fertilising, weeding, mulching, pest and disease control.
 - (C) All maintenance work to new and existing landscaping shall be carried out in accordance with the best horticultural practices.
- (vii) Watering requirements
 - (A) All soft landscaping shall be watered regularly (either by hand watering or by irrigation) to ensure the continuing healthy establishment and growth of all plants taking into account soil type, plant type and size, prevailing weather conditions and seasonal variations.
 - (B) Watering methods are to be suitable for watering the root ball of newly planted plants during the critical first several weeks of establishment.
 - (C) Watering shall not cause displacement of mulch or erosion of garden mix soil.
- (viii) Weeding, pest and disease control
 - (A) Gardens and turf shall be regularly weeded. Six weeks prior to the end of the defects liability period ("off maintenance"), the area shall be inspected for weed growth and treated with an appropriate selective herbicide. All chemicals shall be used in accordance with the manufacturer's recommendations.
 - (B) Plants shall be regularly inspected for pest and diseases throughout the defects liability period. Any pest or disease detected shall be reported to the Superintendent. Acceptable horticultural techniques shall be employed by the Contractor to manage any infestations as directed by the Superintendent. 12 weeks prior to the end of the defects liability period ("off maintenance"), the area shall be inspected for pests and disease and treated with an appropriate pest and disease control.
- (ix) Planting and tree maintenance
 - (A) All maintenance work to new and existing trees shall be carried out by an arborist with formal qualifications or at least 5 years recognised experience in Arboriculture. The works shall be carried out in accordance with the AS 4373 *Pruning of Amenity Trees* and shall not proceed without the written approval of the Superintendent.
 - (B) Stakes and ties and guying shall be checked for firmness and support and shall be adjusted as necessary to prevent any damage to the bark or roots of the tree. Stakes and ties or guying shall be removed when the tree is self-supporting and/or as directed by the Superintendent.
- (x) Planting, trees, turf and hydroseed failure and replacement

- (A) Plants and trees lost through vandalism, theft or that have died shall be replaced by the Contractor on a monthly basis.
- (B) Plants, trees, and turf supplied by the Contractor that have failed to become established during the defects liability period or are diseased and/or dying shall be removed and replaced by the Contractor twelve weeks prior to the end of the defects liability period ("off maintenance") and at no cost to council. If the loss is significant, it will be at the discretion of the Superintendent if an extension on the defects liability period for the failed landscaping is warranted.
- (C) Areas of hydro seeding/mulching that have failed to become established or have died during the defects liability period shall be removed and retreated by the Contractor at no cost to council. If the area is of significant size it will be at the discretion of the Superintendent if an extension to the defects liability period for the failed area is warranted.

(8) Landscaping inspections during the defects liability period

In addition to the requirements outlined in SC6.4.7.2.8(2) Principles, the following requirements apply to landscaping works:

- (a) any work inspected that does not comply with the specification and/or the design plans or has not been adequately maintained in accordance with SC6.4.7.2.8(2) will not be accepted by council and will be noted for rectification. The contractor is required to rectify these items as soon as is practical and as a minimum before the next scheduled inspection; and
- (b) failure by the Contractor to rectify unacceptable items prior to the next inspection may result in the defects liability period for those items being extended by the number of weeks that have lapsed prior to the rectification work being completed.

(9) Landscaping off maintenance/final completion

(a) Final inspection and completion

- (i) Soft landscaping shall be inspected by the Superintendent for acceptance ("off maintenance") at the end of the defects liability period, subject to any special conditions of approval.
- (ii) In addition to the requirements outlined in SC6.4.7.2.8(2), the final inspection and completion requirements apply as detailed below.

(b) Final acceptance criteria (Gardens)

The acceptance criteria for gardens shall be:

- (i) gardens shall be free from weeds, stones, roots, sticks, rubbish and other deleterious material;
- (ii) gardens shall be free of disease and pests;
- (iii) mulch shall be to the minimum thickness specified;
- (iv) plants shall be as specified; and
- (v) plants shall be placed at the spacings nominated and in the quantities nominated as detailed on the drawings or as specified.

(c) Final acceptance criteria (plantings)

The acceptance criteria for plants shall be:

- (i) plants shall exhibit signs of healthy active growth;
- (ii) plants shall show no signs of yellowing or wilting;
- (iii) plants shall be well formed;
- (iv) plants shall be free of disease and pests;
- (v) plants shall have healthy root systems and shall not be root bound; and
- (vi) plants are true to cultivar, type or form as specified.

(d) Final acceptance criteria (turf)

The acceptance criteria for turf areas shall be:

- (i) the achievement of an even green colour with a dense sward over the entire area with no open joints;

- (ii) turf shall exhibit signs of healthy active growth;
 - (iii) turf shall be free from weeds, stones, roots, sticks, rubbish and other deleterious material; and
 - (iv) turf shall be free of disease and pests.
- (e) Final acceptance criteria (hydro seeding/mulch)
- The acceptance criteria for hydro seeding/mulch areas shall be:
- (i) the achievement of an even green colour over the entire area and exhibiting healthy active growth with acceptable vegetative cover. Of this cover 95% shall be the nominated dominate grass species with the remaining 5% made up of annual and perennial grasses;
 - (ii) free from weeds, stones, roots, sticks, rubbish and other deleterious material;
 - (iii) free of disease and pests; and
 - (iv) the area shall not be mowed for at least 5 days prior to the inspection.
- (f) Final inspection documentation
- (i) Following the final inspection (off maintenance) council will issue a site inspection report (defects list). Any items not acceptable to council will be noted for rectification.
 - (ii) The Contractor is required to rectify these items and apply for a re-inspection when all rectification items have been completed.
 - (iii) A certificate off final completion will be issued by council following the rectification of all defects noted at the off maintenance inspection.

(10) Irrigation works on maintenance/practical completion

- (a) Requirements for on maintenance:
- (i) all as constructed drawings and documentation nominated in SC6.4.7.2.8(2) is submitted and approved by council;
 - (ii) all asset transfer documentation including the following:
 - (A) Irrigation Asset Data Collection Form – This form contains the asset information for the construction; or
 - (B) Irrigation Asset Change Form – This form contains information about minor changes to existing assets;
 - (C) Irrigation Network Controller Setup Request Form – This form is used to provide information to the infrastructure Services Irrigation Technician who will configure the telemetry network. The form shall be submitted to council a minimum of 4 working days prior to commissioning of the system;
 - (D) Irrigation Program Setup Request Form – This form is used to provide information to the infrastructure Services Irrigation Technician who will setup the irrigation controller program. The form shall be submitted to council a minimum of 4 working days prior to commissioning of the system. After the program has been set up, the Infrastructure Services Irrigation Technician will issue a copy of the program to the Contractor;
 - (E) Warranty details for all irrigation components with a value greater than \$500.00 excluding GST. This information is required by council to assist in future warranty claims; and
 - (F) Plumbing and Drainage Application Forms 1, 2 and 7 are to be completed by a licensed plumber and submitted to the Hydraulic and Building Services Unit of the Townsville City Council. The Backflow Test Certificate must be lodged with Hydraulic and Building Services Unit of the Townsville City Council. A copy of the Backflow Test Certificate must also be supplied to Infrastructure Services; and
 - (iii) commissioning of the irrigation system shall not proceed until all of the above documentation is submitted and approved by the council.

(11) Irrigation defects liability period

- (a) A defects liability period applies to all irrigation systems installed by contractors. The defects liability

period shall be undertaken in accordance with this policy and any special conditions of approval.

- (b) If applicable the defects liability period for the irrigation system shall be concurrent with the Defects Liability Period for any associated landscaping works.
- (c) The defects liability period for an irrigation system shall not commence until:
 - (i) all of the documentation nominated in SC6.4.7.2.8(10)(a) above is submitted and approved by council;
 - (ii) all requirements of the special conditions of approval have been met;
 - (iii) if applicable the associated landscaping works are accepted “on maintenance”;
 - (iv) the irrigation system has been commissioned; and
 - (v) the site has been jointly inspected by the council and contractor and the irrigation system is free of defects at the time of inspection.

(12) Irrigation inspections during the defects liability period

During the defects liability period, council may require access to the site to undertake the following tests:

- (a) main lines pressure test – the main line is pressurised to test for leaks. All valves are shut and the pressure is taken over a determined length of time;
- (b) sprinkler pressure test – the sprinkler pressure is taken at the nozzle using a pitot pressure gauge and is then compared to manufacturer recommendations;
- (c) dripper pressure test – measurement at flushing valves are taken and the pressure gauged to make sure it conforms to the manufacturer recommendations. The inlet pressure is then tested under the same conditions to check it does not exceed 300Kpa; and
- (d) lateral pressure loss test – the first and last sprinklers of the lateral line are pressure tested. The variation in flow is then calculated and compared with the limits nominated in the specification.

(13) Irrigation off maintenance/final completion

- (a) Final inspection and completion
Final completion shall be managed in accordance with this policy and any special conditions of approval.
 - (i) Following the final inspection, council will issue an irrigation inspection defects list detailing items that do not comply with the specification and/or design plan.
 - (ii) The contractor is required to rectify these items and apply for a reinspection when all rectification work has been completed.
 - (iii) After reinspection of the rectification work, and if the work is satisfactory to council an Irrigation Inspection Report (Defects List) will be issued with the status noted as “Ready to proceed to off maintenance”.
 - (iv) A Certificate of final completion will be issued by the Superintendent when the Contractor has met all obligations under the Contract.

SC6.4.7.2.9 Quality assurance documentation

(1) Requirements for on maintenance

- (a) Copies of the Test Certificates from a National Association of Testing Authorities (NATA) registered laboratory; and
- (b) A single quality control document must be submitted, including but not be limited to:
 - (i) pavement levels;
 - (ii) compaction tests;
 - (iii) pavement material tests;
 - (iv) concrete tests;
 - (v) asphalt tests;
 - (vi) sewer pressure tests;

- (vi) water pressure tests;
- (vii) water bacteriological tests;
- (ix) landscaping soil tests;
- (x) playground and fitness equipment certification;
- (xi) softfall under surfacing certification;
- (xii) structural certification (forms 15, 16 and 21);
- (xiii) electrical safety, testing compliance certification; and
- (xiv) backflow certificate.

SC6.4.7.2.10 Defects liability period

The defects liability period for all works is a minimum of 12 months from the date of the release of the formal plan of survey or from the date of acceptance on maintenance, whichever is later, at which time the bond will be refunded subject to the off maintenance requirements being completed to the satisfaction of council. If for any reason during the maintenance period, a defect of substantial proportions is discovered then council reserves the right to extend the defects liability period for a further 12 months from the date of correction of the defects, or as negotiated e.g. infrastructure is required to be reconstructed after a significant failure due to deficiency in design/construction.

SC6.4.7.2.11 Bonds and fees advice

(1) Requirements for on maintenance

- (a) A works inspection fee (at the rate applicable at the time of payment) must be paid prior to ~~the works being accepted~~ the On-Maintenance inspection. The inspection fee must be based on the final certified value of works.
- (b) A reinspection fee (at the rate applicable at the time of payment) will be applicable where an additional inspection is required due to works being incomplete or unsatisfactory at the initial inspection. The reinspection fee must be paid prior to the additional inspection being conducted.
- (c) A maintenance bond (5% of the value of the works as determined and certified by a Registered Professional Engineer of Queensland (RPEQ) or Registered Landscape Architect) and supporting Schedule of Works with costs certified by the RPEQ or Registered Landscape Architect must be lodged with council. The bond must be in favour of council and in the form of cash or an unconditional bank guarantee (non-expiring). If the security is in the form of a bank guarantee, the guarantor must be a bank or financial institution acceptable to council.
- (d) In the event of a default by the developer relating to defects, council may undertake whatever action required to secure compliance with the conditions of approval and may apply the security for that purpose. The security (or balance) will be returned to the developer upon satisfaction of the conditions of approval relating to maintenance responsibility.

SC6.4.7.2.12 On maintenance inspection and final inspection and compliance check

(1) Requirements for on maintenance:

- (a) The developer must provide council at least 5 business days' notice, requesting the works be checked for compliance with the approvals and be accepted on maintenance.
- (b) A report must be submitted, showing the scope of works, date and outcome of works inspected by the supervising Registered Professional Engineer of Queensland or supervising Registered Landscape Architect.
- (c) Council must be satisfied with the results of an on maintenance inspection and compliance checks against the development approvals. Council will issue an On Maintenance Certificate, identifying the relevant works and any defects applicable.
- (d) Prior to requesting an on maintenance inspection, the developer must correct any defects arising from faulty workmanship, materials or design identified in the On Maintenance Certificate or during the maintenance period (or extended period following rectification of such defects).
- (e) The on maintenance date may be backdated to the date of the initial on maintenance inspection date or the release of the plan of survey (whichever is the latter), if all outstanding requirements were met within 4 weeks of identification.

SC6.4.7.2.13 Off Maintenance

- (1) The works will become off maintenance subject to:
- (a) rectification of all defects identified at on maintenance or during the maintenance period;
 - (b) council being satisfied with the results of an off maintenance inspection and compliance check against development approvals conducted by council officers following the end of the maintenance period;
 - (c) the development will only be accepted off maintenance in its entirety and all works must be performing satisfactorily at this stage;
 - (d) the developer, or their representative, must arrange with council an inspection of all defects 1 month prior to the work being due off maintenance;
 - (e) the whole of the works must be inspected at the off maintenance inspection. The consulting engineer is responsible for thoroughly inspecting the development and any necessary remedial work prior to the off maintenance inspection; and
 - (f) acceptance of the works off maintenance does not discharge the developer from their obligation to provide a development free of defects. Any defect that is discovered after the acceptance off maintenance, which attributed to the failure to deliver a development in accordance with the conditions of the development permit, must be repaired at the developer's expense.

SC6.4.7.3 Sewer pump-out agreements

SC6.4.7.3.1 Introduction

(1) Purpose

In accordance with SC6.4.7.1 Release of the plan of survey, council may consider early sealing of the survey plan for a development if:

- (a) incomplete or non-commissioned trunk infrastructure is preventing the developer providing infrastructure from being fully commissioned; and
- (b) the non-delivery of this trunk infrastructure is impacting on council's process for signing of the survey plan.

(2) Scope

This sub-section sets out the circumstances in which a sewage pump out agreement may be entered into, and the mandatory requirements that will be included in such an agreement under the *Sustainable Planning Act 2009*.

(3) Reference and source documents

This section shall be read in conjunction with the following standards and legislation:

Environmental Protection Act 1994

Local Government Act 2009

Plumbing and Drainage Act 2002

Sustainable Planning Act 2009

Water Supply (Safety and Reliability) Act 2008

WSA 02-2002 2.3 *Sewerage Code of Australia*

WSA 04-2005 2.1 *Sewerage Pumping Code of Australia*

SC6.4.7.3.2 Sewage pump-out deed of agreement requirements

- (1) A Deed of Agreement relating to the incomplete or non-commissioned trunk infrastructure must be entered into. The agreement must ensure that all risks associated with the temporary pumping out and disposal of sewage are adequately addressed by the developer. The following sections must be addressed within the Deed of Agreement at a minimum:

(a) Timing

The trunk infrastructure must be programmed to be commissioned prior to when the completion of dwelling construction is envisaged.

(b) Supply of electricity

- (i) Sewer pump stations must be provided with a continuous and reliable electrical supply. Details of the provision of power supply must be provided with the sewage pump station design.
- (ii) Alternatively, if temporary power supply is proposed to be supplied by a generator, details of this arrangement must be included as part of the agreement.

(c) Lawful effluent disposal and access arrangements

Access arrangements for pump stations and/or other wastewater maintenance holes required for the pump-out service must be specified, and the wastewater maintenance hole or licensed septic disposal facility designated. The disposal of all sewage must be as directed by Townsville Water from time to time by a registered operator following agreed transport routes, for the duration of the agreement, and under the supervision of a suitably qualified engineering consultant.

(d) Developer's provision of pump-out service

A minimum standard for the developer's provision of a pump-out service must be specified.

(e) Management of odour complaints, fish kills and wastewater spills

Details of management of overflow/spills or environmental harm must be included in the Deed of Agreement and actions undertaken in accordance with the *Environmental Protection Act 1994*.

[Click here to obtain a copy of the following form.](#)

SC6.4.7.3.3 Template agreement

Council's Template Agreement for Sewage Pump-Out may be used to assist in the preparation of the Deed of Agreement (see SC6.4.7.3 Attachment A).