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Part D Design and Construction Procedures
Chapter 5 Construction Requirements**

1.0 GENERAL

This chapter is intended to provide guidance to Developers and Consultants in respect of a number of key Council requirements, from the construction phase to the sealing of survey plans (for subdivisions) or the issuance of a certificate of classification (for other developments).

2.0 CONTRIBUTIONS

Occasionally, Developers provide monetary contributions for specific works that cannot be constructed in isolation at the time of the subdivision or development and these funds are paid into Trust. In general, Council will not accept monetary contributions in lieu of undertaking the works unless there are exceptional circumstances. Further the approval of Council Delegate is required.

3.0 BONDING OF UNCOMPLETED WORKS

Bonding of uncompleted works by a Developer enables Council to permit early signing and sealing of survey plan. The following criteria should be met at the time of lodging the request for sealing of the survey plan to the Council:

1. All bulk earthworks are completed. Bulk earthworks include excavation and filling of the road formations and allotments.
2. Council has approved engineering and landscape drawings for all the works.
3. The total value of all uncompleted works, including internal water supply and sewerage works, does not exceed 50% of the total value of all subdivisional works.
4. All outstanding rates are paid to Council.
5. All monetary contributions required by the conditions of approval (water, sewerage, drainage, waterways, transport, public recreational land, etc) are paid.
6. The Superintendent (Consultant) should provide the following information:
 - Certification of the value of uncompleted works.
 - Detailed schedule of the scope and cost of the uncompleted works for auditing purposes.
 - Certification that all external and internal works can be completed and accepted On Maintenance within three (3) months of plan sealing.
 - Certification that the contract has been let for the construction of the remaining external and internal works and the name of the Contractor.
 - Proposed finish dates for remaining internal and external works.
7. An uncompleted works bond has been prepared and executed. The amount of the bond should be 125% of the certified value of the uncompleted works including the cost of any works to be carried out by the Council for which payments have not been received.



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The release of the uncompleted works bond can be arranged through the Licensing, Sealing & Certificates Unit on the advice by Council Delegate that works have been satisfactorily completed. Council will not bond minor one off item such as driveways or footpaths due to unnecessary administrative burden.

Where the amount of security for uncompleted works is \$200 000 or less, the Developer is required to provide a letter of undertaking and submit a bond document. The bond is executed by the bank in a standard Council format and incorporates a schedule of outstanding works and estimates.

Where the amount of security for uncompleted works exceeds \$200 000, the Developer is required to enter into a subdivision deed drawn up by Council at the Developer's expense and provide security, generally in the form of a bank guarantee.

4.0 NOTIFICATION AND INSPECTION PROTOCOLS

The Superintendent (Consultant) is responsible for undertaking inspections and certifying that:

- The design intent of the approved engineering drawings and relevant standards has been satisfactorily achieved.
- The works are constructed to within the tolerances specified in the approved engineering drawings, technical specifications and contract documents.

Council officers will not deal directly with the Contractor. The Superintendent is responsible for liaising with Council Delegate at the key joint inspections and sufficient notice should be given, as follows:

- Pre-start meeting (mandatory) - minimum 5 working days.
- Inspections during construction (as required) - minimum 48 hours.
- On Maintenance inspection (mandatory) - minimum 5 working days.
- Off Maintenance inspection (mandatory) - minimum 5 working days.

During the progress of the works on site, the Superintendent should notify Council Delegate of the information and requests for key activities outlined Table D5.1. It should be noted that joint inspection and submission of compliance certificates to Council are generally only required for the following developments.

- All subdivisions.
- Site developments incorporating one or more of the following activities:
 - Substantial quantities of contributed assets (external works) are involved.
 - Significant ecological constraints exist.
 - Significant landscape management works are involved.



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TABLE D5.1 JOINT INSPECTION PROTOCOLS

Timing	Activities
Prior to commencement of site works	<p>The Superintendent should submit letter advising:</p> <ul style="list-style-type: none"> ▪ Name, address and telephone number (including after hours contact) of the Superintendent (Consultant) for the development. ▪ Name, address and telephone number of the Contractor(s) and major Sub-Contractor(s) for the development (including after hour contact). ▪ Intended date of commencement of works.
Pre-start meeting	<p>The Superintendent should request pre-start meeting, noting that the meeting can only be held after all the engineering and landscape drawings have been approved. The agenda will generally include:</p> <ul style="list-style-type: none"> ▪ Introduction of stakeholders. ▪ Review of Development Approval conditions and approved engineering and landscape drawings. ▪ Inspection and identification of parks, waterways, and environmentally significant areas. ▪ Construction activities and program. ▪ Issues pertaining to Workplace Health & Safety Act and the Environmental Protection Act. ▪ Any other relevant matters.
Pavement boxed out to subgrade (subgrade box inspection)	<p>The Superintendent should submit subgrade CBR tests accompanied by pavement designs prior to the placement of pavement material. A courtesy phone call is required to advise the information have been sent.</p> <p>Council Delegate will advise the Superintendent within 48 hours from the receipt of notification advice, if he/she wishes to inspect the work at a joint inspection. The construction of the pavement should not proceed until Council Delegate responds.</p> <p>If the Superintendent decides on any changes to the pavement design as a result of the site inspection, a copy of the amended pavement design should be submitted.</p>
Prior to surfacing (pre-seal inspection)	<p>The Superintendent should ensure that all compliance requirements (eg construction tolerances, compaction standards, material quality test reports, etc) are met. The Superintendent should notify Council Delegate of the impending joint inspection.</p> <p>Council Delegate will advise the Superintendent within 48 hours from the receipt of notification advice, if he/she wishes to inspect the pavement at a joint inspection. The surfacing of the pavement should not proceed until Council Delegate responds.</p>
At practical completion (on maintenance inspection)	<p>The Superintendent should submit the On Maintenance Inspection Checklist (refer Appendix A) to Council Delegate and request an On Maintenance inspection.</p> <p>Refer Section 6 for details of the requirements to have the work formally accepted On Maintenance.</p>
Final acceptance of the works (off maintenance inspection)	<p>Following the expiry of the maintenance period (minimum 12 months), the Superintendent should notify Council Delegate of the impending Off Maintenance inspection. The Superintendent should inspect the site prior to the joint inspection to ensure that all the listed faults have been rectified. Refer Section 6 for details on the requirements.</p>



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5.0 COMPLIANCE REQUIREMENTS

The Superintendent is responsible for submitting compliance results (field and laboratory tests, and construction tolerances) and the relevant certificates (structural and geotechnical) to Council Delegate. These requirements are summarised in Table D5.2

TABLE D5.2 COMPLIANCE REQUIREMENTS CHECKLIST

Item	Description	Reference	Timing of submission to Council
1	Earthworks Eg compaction standards, select fill, construction tolerances	Specification S120 – Quality Specification S140 – Earthworks	Prior to acceptance On Maintenance and within 2 weeks from On Maintenance inspection
2	Pavement Design Eg 4 day soaked CBR values at subgrade	Chapter 1 of Part B of this document	Prior to placement of pavement material
3	Pavement Materials Eg grading, soaked CBR values, Atterberg limits, flakiness index	Specification S300 – Quarry Products Specification S310 – Supply of Dense Graded Asphalt	Prior to acceptance On Maintenance and within 2 weeks from On Maintenance inspection
3	Pavement Construction Eg compaction standards, delivery docket, AC core tests, construction tolerances	Specification S140 – Earthworks Specification S150 – Roadworks Specification S300 – Quarry Products Specification S320 – Laying of Asphalt	Prior to acceptance On Maintenance and within 2 weeks from On Maintenance inspection
4	Concrete Structures Eg construction tolerances, slump and strength tests, docket	Specification S120 – Quality Specification S200 – Concrete Work	Prior to acceptance On Maintenance and within 2 weeks from On Maintenance inspection
5	Stormwater Drainage Eg trench and backfill compaction results, construction tolerances, closed circuit television camera survey	Specification S140 – Earthworks Specification S160 – Drainage Chapter 2 of Part B of this document	Prior to acceptance On Maintenance and within 2 weeks from On Maintenance inspection
6	Landscaping and Park Infrastructure	Specification S190 – Landscaping Chapter 8 of Part B of this document	Prior to acceptance On Maintenance and within 2 weeks from On Maintenance inspection
7	On Maintenance Inspection Checklist	Appendix A	Prior to On Maintenance inspection
8	Request for development to go On Maintenance	Section 6	Prior to acceptance On Maintenance and within 2 weeks from On Maintenance inspection



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Item	Description	Reference	Timing of submission to Council
9	Structural/ Geotechnical Certificates	Where required	Prior to acceptance On Maintenance and within 2 weeks from On Maintenance inspection
10	Certificate of Completion	Appendix C	Prior to acceptance On Maintenance and within 2 weeks from On Maintenance inspection
11	As Constructed Drawings including Asset Register	Chapter 2 of Part D of this document and Section 6	Prior to acceptance On Maintenance and within 2 weeks from On Maintenance inspection
12	Bonding Arrangement	Section 3 and Section 6	Prior to acceptance On Maintenance and within 2 weeks from On Maintenance inspection
13	Request to take Off Maintenance	Section 6	Following expiry of maintenance period and rectification of all defects
14	Release of bonds and securities	Section 6	Following expiry of maintenance period and acceptance of works by Council

6.0 MAINTENANCE/ DEFECTS LIABILITY PERIOD

6.1 GENERAL

The maintenance or defects liability period is **twelve (12) months** minimum from the date of acceptance On Maintenance. However longer periods may be required for specific items on the development where problems have been encountered or where poor workmanship is evident or where non-standard methods or materials have been used. The minimum 12 month maintenance period has been selected for the following reasons:

- Ability to monitor performance of contributed (donated) assets over a full seasonal cycle.
- Ability to monitor performance of contributed (donated) assets for design loads. For example, roads in a new subdivision are not always subject to the design traffic loads (eg refuse collection vehicles) during the first 6 months.
- The nominated period is consistent with industry trend.
- Ability to evaluate the overall performance of contributed (donated) assets especially with the shift towards self certification. Further, maximising the use of ecologically sensitive solutions such as natural channels and wetlands often requires longer establishment and performance monitoring periods.



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During the maintenance period, responsibility and liability for rectification of defects and for any damage that may occur (including damages caused by builders or utility service provider) lies with the Developer and not with Council, unless the work may be directly related to Council activities. The Developer should undertake the necessary steps to minimise the occurrences of damages. In circumstances where Council has a duty of care to undertake emergency repair works to safeguard public safety and where the repair works are related defective works or materials, Council will recover costs from the Developer.

6.2 ON MAINTENANCE

Works, including the installation of street signs, street lights, speed control devices, traffic signs and pavement marking, should be completed in order to be accepted On Maintenance.

All park landscaping and infrastructure, including permanent fencing and barriers, should be installed prior to the commencement of the park On Maintenance. As the park will need to be publicly accessible and useable from this point, the Developer is required to maintain an appropriate public liability insurance cover during the maintenance period.

Where items such as playgrounds, electric barbecues, drinking fountains and buildings are installed in the park, agreement is to be reached between the Superintendent and Council Delegate over responsibility for day to day operational maintenance during the on maintenance period. Council may take responsibility for periodic operational inspections of items such as playgrounds and barbecues where this is a substantial responsibility. Any agreement reached will not reduce the responsibility of the Developer to maintain all soft landscaping (grass, garden beds, trees, etc), and to repair all defects that arise during the on maintenance period. Council will not accept any park operational maintenance responsibilities unless a formal agreement is signed by the Superintendent and the Council Delegate, based on the proforma template outlined in Appendix B.

Within two weeks from the date of On Maintenance inspection, the Superintendent should lodge the following documentation with Council Delegate, so that the formal acceptance of the development On Maintenance can be processed. If the documentation is not be supplied within the nominated period, the date of works being accepted On Maintenance will be deferred to the date when all the information is satisfactorily lodged.

- Letter confirming satisfactory completion of the On Maintenance inspection and requesting that the maintenance period commence from the date of inspection and acknowledge that any defects will be attended to as soon as possible within the maintenance period.
- A formal Certificate of Completion issued by the Principal Engineering Consultant, based on the proforma template outlined in Appendix C. The non-compliance records and remedial actions have been incorporated to the Certificate of Completion in order to expedite the checking and approval process by placing the responsibility for identifying and reporting non-conforming works with the Superintendent. Council will only undertake random audit checks.
- One set of hardcopy As Constructed drawings on paper, endorsed by a Licensed Surveyor. In future, hardcopies may be complemented by digital submission.
- As Constructed asset register. Refer Chapter 2 of Part D of this document.
- All quality control testing and monitoring results including construction tolerances.



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- A park maintenance program based on the proforma template outlined in Appendix B.
- Where applicable, building approvals and RPEQ certification of structures such as retaining walls and shade structures.
- Where applicable, certification of design, manufacture and installation of play equipment.
- Where applicable, maintenance manuals and reports for specialised infrastructure such as artwork and irrigation systems.
- Advise form of proposed maintenance security. Alternatives may include offsetting against an existing bond, additional cash payment, or bank guarantee. The maintenance security should be a minimum \$2000 but not less than 5% of the contract sum. An additional \$1.00 per m² of park area is required to cover the day to day maintenance demands on parks, including the cost of garden beds, mown areas, landscaping, cleaning of buildings and furniture, and regular inspection and maintenance to playgrounds installed in the park.
- Request to reduce performance bonds if applicable, and bond any uncompleted footpaths, if applicable.

Formal acceptance of On Maintenance will be in the form of a correspondence from the Council Delegate to the Superintendent, confirming the On Maintenance date and listing the defects requiring rectification during the maintenance period, and advising how the maintenance security will be executed.

6.3 OFF MAINTENANCE

Work that may have been bonded for construction during the maintenance period such as footpaths and bikeways should be completed prior to the development being taken Off Maintenance. All temporary facilities, such as irrigation systems installed for park establishment, should be removed. However deferred construction may be considered in multi-stage developments. Any outstanding quality control test results such as asphalt core tests and 28 day concrete strengths not available at the On Maintenance inspection should be supplied during the maintenance period.

The purpose of the Off Maintenance inspection is to ensure that the constructed works had performed satisfactorily during the maintenance period and that omissions and defects have been rectified. The Superintendent is responsible for making sure that all unsatisfactory work and defects have been rectified prior to the Off Maintenance inspection.

Where Council Delegate deems that the Off Maintenance inspection is satisfactory, the Superintendent should request in writing for the development be taken Off Maintenance and that the maintenance security and any other bond monies be released.

Formal acceptance of Off Maintenance and release of security deposit will be in the form of a correspondence from the Council Delegate to the Superintendent. At this time, the donated assets are formally transferred to Council ownership.



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7.0 AS CONSTRUCTED REQUIREMENTS

7.1 GENERAL

The Superintendent is responsible for ensuring that the As Constructed information (drawings and asset register) is accurate and reflects the actual construction, endorsed by a Licensed Surveyor.

Cadastre base

The cadastre base provides a graphical representation of property boundaries together with property identifiers such as lot on plan description, house numbers and street names. Drawings should be superimposed on the cadastre base where appropriate.

Earthworks

Submit certification that the As Constructed spot levels are generally in accordance with the approved design drawings and built to within the specified construction tolerances.

Roadworks

Submit certification that the As Constructed grade and cross sectional information is confirmed in areas where roadway overland flow capacities are critical, and built to within the specified construction tolerances. The As Constructed drawings should also:

- Confirm that the permanent street, warning and regulatory signs are installed in accordance with the approved engineering drawings.
- Incorporate the As Constructed pavement thickness and composition. The minimum CBR values for the pavement materials should be noted on the longitudinal sections.

Stormwater and roofwater drainage

The following survey information is required:

- Manholes/inspection pits - location established by two ties, surface level, invert level.
- Stormwater lines - diameter, class, material type, length, grade, alignment, bedding support type.
- Roofwater house connections - location established by two ties, surface level, invert level.
- Overland flow path - surface level.

Digital terrain model

To enable Council to progressively update the citywide levels and contours, the following submissions are required.

- Digital terrain model (xyz file with breaklines) of the development. The accuracy of the survey data should generally conform to the construction tolerances specified in the *Reference Specifications for Civil Engineering Work - S140 Earthworks*. However in non-critical areas such as allotments, the planimetric precision of 0.2 m and vertical precision of 0.15 m are usually sufficient.
- A hardcopy plan depicting the 0.5 m contour intervals and survey spot levels of the development. Certification by a licensed surveyor is required to ensure that the accuracy and reliability of the dataset is maintained.



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7.2 HARDCOPY LODGEMENT

One set of hardcopy As Constructed drawings for all asset categories should be submitted on paper. As the drawings are currently microfilmed, linework and lettering should be of suitable thickness and clarity (typically 0.25 mm black stencilled lettering) that maintains legibility in the microfilm. To enable comparison with the approved design drawings, numerical amendments are usually denoted as a diagonal line through the design value with the As Constructed value noted adjacent. Encircling with a notated cloud usually denotes other amendments.

7.3 ELECTRONIC LODGEMENT

In order to facilitate the direct electronic transfer into Council's geographic information database system, a geo-relational model has been developed to provide a link between the geographic features (graphics) and attribute data. Currently, the electronic lodgement process is only available for a limited number of assets including stormwater drainage, water and sewerage.

It will become mandatory to lodge electronic As Constructed files for larger developments. The lodgement procedure can be accessed on the Brisbane City Council Website by following these steps.

1. Go to Ourbrisbane.com (www.ourbrisbane.com).
2. Click on the "Visit Brisbane City Council Website" link on the left of page.
3. Once in the Brisbane City Council Website (<http://www.brisbane.qld.gov.au>), click "Business" drop down menu from top access bar.
4. Select "Building and development".
5. Select "On Maintenance approval" from the side menu.

8.0 IMPLICATIONS OF WATER RESTRICTIONS

Water restrictions may change the way construction and maintenance plans are implemented, particularly for works such as landscaping, grassing and cleaning. The use of a non-potable source of water is always preferred during development and maintenance works. However, changes to water restriction levels could place unreasonable constraints on the achievement of development requirements. Under exceptional circumstances, the Council Delegate may approve a variation to the construction and maintenance plan as a result of water restrictions.

A request to vary would usually be made as part of the development or operational works applications. Should the level of water restriction change during the construction or maintenance period, and sufficient notice is given, the Council Delegate may consider minor adjustments at the following times:

- Pre-start meeting
- Inspections during construction.
- On Maintenance inspection

The work must be undertaken with the requirements of any water restrictions applied by the Queensland Water Commission. For more information on water restrictions contact the Queensland Water Commission or visit their web site at www.qwc.qld.gov.au.



APPENDIX A ON MAINTENANCE INSPECTION CHECKLIST

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ON MAINTENANCE INSPECTION CHECKLIST

DEVELOPMENT NAME:

STAGE:

ADDRESS:

FILE REFERENCE:

Item	Description	Work Passed Yes/No/NA	Comments
A	ROOFWATER RETICULATION		
A1	Roofwater drainage system is constructed to plan.		
A2	Outlets to kerb and channel are satisfactory, installed with full height kerb adaptor.		
A3	Outlets other than to kerb satisfactory.		
A4	Each lot falling to the street has a full height kerb adaptor.		
A5	Roofwater system has been flow tested and is operating as designed.		
A6	Prefabricated lids are used on inspection pits.		
B	ENCLOSED STORMWATER DRAINS		
B1	Pipe layout is as per the plan or approved amendments with respect to pipe size, levels and location.		
B2	All pipeline joints and lifting plug holes are mortared, except for externally banded pipes (invert only) and rubber ringed joints.		
B3	All pipework is free of debris, siltation, etc.		
B4	Outlet/inlet structures are satisfactorily constructed and are protected from scour or siltation.		
B5	Trenches: <ul style="list-style-type: none"> ▪ No visual subsidence has occurred ▪ All density tests are available and satisfactory 		
B6	Closed circuit television camera (CCTV) inspection to demonstrate that the pipes do not sustain any premature cracking.		
B7	Pipe connections to gully pits are not constructed to the corner of two walls such that the pipe capacity is reduced.		
B8	All gully pits are constructed to the correct standards (including grate types, slots, backstones, etc).		
B9	Grates are seated in frames without movement.		
B10	All manhole roofs (aspros) are mortared to the manhole walls.		
B11	Manhole lids are seated in frames without movement.		
B12	All manhole and gully pit pipe connections are mortared flush with the walls and that no pipe reinforcement is exposed.		
B13	Manholes are constructed to standards and are satisfactory ie absence of any foreign		



ON MAINTENANCE INSPECTION CHECKLIST

DEVELOPMENT NAME:

STAGE:

ADDRESS:

FILE REFERENCE:

Item	Description	Work Passed Yes/No/NA	Comments
	materials or voids.		
B14	Step irons have been securely installed to provide easy access.		
B15	Step irons have been installed in gullies and manholes > 1.35 m deep.		
C	OPEN CUT CHANNELS		
C1	Open channels are constructed to design profiles.		
C2	Lining of channel is to the required thickness and reinforcement, with appropriate weepholes.		
C3	Low flow channel or pipe has been constructed satisfactorily.		
C4	Unlined sections are stable and/or grass/turf has been established.		
C5	Smooth transitions have been provided between new work and natural channels.		
C6	Cut-off walls have been constructed to all concrete channel edges and outlet or inlet structures.		
D	MISCELLANEOUS DRAINAGE		
D1	Appropriate overland flow paths are provided and clear of obstruction.		
D2	Outlets and outfalls have been constructed to control discharge flow in accordance with the plans.		
D3	Subsoil drainage discharges to gullies or other approved point of discharge.		
D4	Side drains have been checked hydraulically and found to operate satisfactorily.		
E	ROAD PAVEMENTS		
E1	Plan layout and geometry of road system is accordance with the drawings.		
E2	Finished levels at crown and channel are at design levels.		
E3	Crossfalls are to the approved plan.		
E4	AC surfacing is satisfactory in respect of finish and thickness.		
E5	Joints in the seal (especially where various development stages apply) are flush.		
E6	The sealed surface is free of blemishes, including those caused by the base of backhoe legs. When caused by utility service providers, the damage should be repaired during the maintenance period.		
E7	No areas of ponding around islands or adjacent manholes or channel.		



ON MAINTENANCE INSPECTION CHECKLIST

DEVELOPMENT NAME:

STAGE:

ADDRESS:

FILE REFERENCE:

Item	Description	Work Passed Yes/No/NA	Comments
F	SEGMENTAL PAVERS		
F1	All pavers are laid to the correct pattern to within allowable tolerance, compacted, and the joints filled.		
F2	Bedding sand for pavers drain to subsoil drainage.		
F3	Pavers adjacent to CKC, edge restraints etc are cut and laid as per the specified standards.		
F4	Weedicide has been placed on the bedding sand.		
G	STENCIL PATTERN CONCRETE		
G1	Level of concrete pavement joins neatly onto the AC surface and the CKC.		
G2	Good coverage of colour hardener have been applied as per the specification.		
G3	Two coat protective sealer have been applied.		
H	CONCRETE KERB & CHANNEL (CKC) AND MEDIANS		
H1	The correct type are used at all locations (including medians) in accordance with the specified standards.		
H2	Ponding of stormwater does not occur.		
H3	Transitions and connections to existing construction are smooth and to a satisfactory standard of workmanship.		
H4	Service markers are placed in kerb face. Conduits should be exposed for inspection purposes.		
H5	Lip and back of kerb are flush with the roadway and footpath respectively.		
H6	All channelisation works and medians have been satisfactorily completed.		
H7	Infill treatment of medians has been inspected and found satisfactory. Any landscaping has been completed as per approved drawings.		
H8	Backing Strips are provided to median kerbs where required.		
H9	Side drains are provided under medians.		
I	VERGES		
I1	Profiles are as per plan.		
I2	Verges are topsoiled in accordance with the specified standards.		
I3	Verges are grass seeded and fertilised or turfed to the specified standards.		
I4	All service fixtures (such as valves) are flush with the surrounding verge.		



ON MAINTENANCE INSPECTION CHECKLIST

DEVELOPMENT NAME:

STAGE:

ADDRESS:

FILE REFERENCE:

Item	Description	Work Passed Yes/No/NA	Comments
I5	Concrete footpaths are constructed to the specified standards. Note: Concrete footpaths can be bonded for the construction at a later date.		
I6	Pram ramps are constructed as required.		
J	BIKEWAYS		
J1	Location and width are as per the plan. Note: Bikeways can be bonded for the construction at a later date.		
J2	Kerb ramps and crossings are constructed.		
J3	Safety rails and signs are installed.		
K	FENCING AND FEATURES		
K1	All fences other than approved entrance features are constructed within allotments. Survey pegs are visible.		
K2	Specifically approved entrance features are constructed in accordance with the drawings.		
K3	Entrance features and fences have satisfied Building Approvals (if required).		
K4	Sound attenuation fences are contained wholly within the allotments and constructed in accordance with the drawings.		
L	EARTHWORKS		
L1	Toe of fill batters and top of cut batters are setback a minimum of 0.3 m from boundary of the public space.		
L2	Retaining walls are contained wholly within the allotments.		
L3	Retaining walls constructed in accordance with the approved drawings.		
L4	Batter slopes are constructed in accordance with the approved drawings.		
L5	Batter slopes stabilised against erosion.		
L6	Interim drainage is constructed in accordance with approved drawings.		
M	LANDSCAPING		
M1	Landscaping is placed as per the approved landscaping plan.		
M2	Irrigation system has been removed, or will be removed by (insert date)		
M3	Establishment program is implemented.		
N	WATER QUALITY		
N1	Implement the approved erosion and sediment control plan during construction phase.		
N2	If required, implement water quality		



ON MAINTENANCE INSPECTION CHECKLIST

DEVELOPMENT NAME:

STAGE:

ADDRESS:

FILE REFERENCE:

Item	Description	Work Passed Yes/No/NA	Comments
	sampling and analysis.		
N3	Other items.		
O	OTHER MISCELLANEOUS		
O1	Signs of Pavement Marking for roads and bikeways are installed as per the approved drawings.		
O2	Works have not resulted in problems on neighbouring properties.		
O3	All new lots have been surveyed and found to be correct as per approved layout plan and engineering drawings.		
O4	The quality control testing program has been implemented.		
O5	Works are constructed to within the specified tolerances.		
O6	Other items.		
P	PARKS		
P1	The park layout is in accordance with the approved Landscape Management & Siteworks Plan.		
P2	The park has been cleared of debris, old fences, noxious weeds, disused structures.		
P3	Contaminated land (if present) has been remediated and completed site investigations or evidence of removal from the Contaminated Land Register of the EPA has been provided.		
P4	Earthworks profile has achieved: <ul style="list-style-type: none"> ▪ Grassed open activity areas with a slope of less than 1V:20H and greater than 1V:150H. ▪ Sportsfields draining to the perimeter at a grade of 1V:100H. ▪ Maintained parkland with gradients no steeper than 1V:4V if grassed and 1V:3H where planted with vegetation (1V:6H preferred). 		
P5	Retaining earth structures (boulder walls, masonry and stone walls, timber sleeper walls) are constructed in accordance with the approved plans including: <ul style="list-style-type: none"> ▪ Subsoil drainage to back of walls connected to soakage trenches or stormwater. ▪ Geotextile fabric behind boulder walls. ▪ Edging and landscape strips. ▪ Barrier/balustrade at top of structure adjacent to park activity areas. 		



ON MAINTENANCE INSPECTION CHECKLIST

DEVELOPMENT NAME:

STAGE:

ADDRESS:

FILE REFERENCE:

Item	Description	Work Passed Yes/No/NA	Comments
P6	Batters, mounds, embankments and retaining structures do not encroach onto park activity spaces.		
P7	Existing vegetation designated for retention has been protected, dead-wooding and pruning of hazardous trees has been completed to required standard.		
P8	Proclaimed, noxious and environmental weeds are being controlled.		
P9	Rehabilitated surfaces of erosion prone and degraded areas including adjacent roadsides are stable and plants are well established at the required density and conditioned to survive dry periods.		
P10	Grassed areas have been trimmed to direct site drainage evenly and efficiently to the landscape, stormwater inlets or infiltration areas, drainage is not directed towards visitor and recreation facilities or neighbouring residences.		
P11	At least 80% grass cover is achieved on mown areas; potential hazards such as stones and boulders have been removed or covered with 100 mm of topsoil; new grassed areas are married into existing levels and to hard surfaces to avoid trip hazards; stabilising strips of turf are laid within overland flow paths, areas subject to regular inundation, alongside pathways and around visitor and recreation facilities.		
P12	Mulched areas have a nominal thickness of 100 mm and edge of the mulch is shaped to allow easy mowing, erosion control matting is used within overland flow paths and areas subject to regular inundation.		
P13	Concrete edging is provided around gardens and landscape beds (timber edging is only used where the tree and shrub canopy will extend beyond the edge of the beds), edging is straight or with long sweeping curves for ease of mowing, corners are between 45° and 90°.		
P14	Hollows have been eliminated in mown areas or field gullies provided in accordance with standard drawings.		
P15	Drainage from roads and car parks is dispersed into bio-retention swales the landscape, or to the stormwater network to approved plans.		
P16	Drains do not unduly impede maintenance operations.		



ON MAINTENANCE INSPECTION CHECKLIST

DEVELOPMENT NAME:

STAGE:

ADDRESS:

FILE REFERENCE:

Item	Description	Work Passed Yes/No/NA	Comments
P17	Stormwater discharge into the park (network stormwater pipes and open drains) is constructed to approved plans.		
P18	Tree planting and landscaping has been completed in accordance with approved drawings, individual trees in grassed areas have mulched zone of at least 0.3 m radius, trees and plants are well established and conditioned to survive dry periods.		
P19	Imported soils used in landscaping comply with required standards.		
P20	Temporary irrigation systems have been removed, or will be removed by (insert date)		
P21	Permanent irrigation systems (where provided) are installed in accordance with approved plans and to required standards.		
P22	At least one tap is provided adjacent to or within landscaped and garden beds requiring on going maintenance.		
P23	Infrastructure colours match existing BCC region or precinct selections, based on standard colours.		
P24	Vandalism and graffiti resistant materials are used for park infrastructure, vandalism and graffiti is being rectified during the construction and maintenance period.		
P25	Park facilities and access infrastructure complies with <i>AS 1428 Design for Access and Mobility</i> (eg continuous accessible path of travel).		
P26	Maintenance and emergency vehicle access points extends from road frontage into the park, and each access point provided with: <ul style="list-style-type: none"> ▪ A formed or constructed driveway. ▪ Appropriate queuing area. ▪ A removable bollard or lockrail. 		
P27	Access is available to all maintained sections of the park for maintenance and emergency vehicles.		
P28	Fencing is installed along road frontages and around potential hazards in accordance with approved plans.		
P29	Park entrances, pathways, bridges and boardwalks, roads and car parks and pavement areas (where provided) are constructed in accordance with approved drawings and to required standards (refer also to items E, F & H above).		



ON MAINTENANCE INSPECTION CHECKLIST

DEVELOPMENT NAME:

STAGE:

ADDRESS:

FILE REFERENCE:

Item	Description	Work Passed Yes/No/NA	Comments
P30	Signage is installed to promote safe and appropriate use of the park.		
P31	A 25 mm water connection is installed at the park boundary with a water meter and vandal proof tap.		
P32	An electricity supply pillar is installed at the park boundary within 25 m of a maintenance vehicle access point.		
P33	Lighting (where provided) is installed in accordance with approved plans and to required standards.		
P34	Playground (where provided) is manufactured and constructed in accordance with approved drawings.		
P35	Visitor facilities, park furniture, sport and recreation facilities, and other park infrastructure (where provided) are designed, manufactured and installed in accordance with approved plans and to required standards.		
P36	Detention basins intended for recreation use in parks are constructed to approved plans and required standards including surface drainage after rain.		
P37	Power, gas and oil easements over the park include safety measures such as fencing and signage and underground infrastructure is clearly marked.		
P38	Cultural heritage items have been protected during construction and required heritage conservation measures are implemented.		
P39	Temporary fences have been removed, or will be removed by (insert date)		
P40	Other items.		

PRINCIPAL CONSULTANT

Company Name

Contact Name

RPEQ No.

Signature

Certification Date



APPENDIX B PARK MAINTENANCE PROGRAM (TEMPLATE)

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PARK MAINTENANCE PROGRAM (TEMPLATE ONLY)

DEVELOPMENT DETAILS

Development Name _____
 Stage (if applicable) _____
 Development Approval Reference _____
 Park Address _____
 UBD Reference (eg 161 H16) _____
 Park Real Property Description _____

SUPERINTENDENT

Company Name _____
 Superintendent Name _____
 Address for Correspondence _____
 Telephone/Facsimile/Email _____

COUNCIL DELEGATE

Name _____
 Position _____
 Telephone/Facsimile/Email _____

AGREEMENT

We agree that that responsibility for park maintenance works for the above development during the maintenance period will be undertaken in accordance with the table below.

Date of commencement of agreement:

Signature _____
 Duly Authorised On Behalf of _____
 (insert name of Superintendent)
 Date _____

Signature _____
 Duly Authorised On Behalf of _____
 Brisbane City Council
 Date _____

PARK MAINTENANCE ACTIONS

Item Description	Maintenance Standard/ Action	Responsibility
Landscaping	Weed garden beds, rehabilitation sites and landscape areas at least once a quarter. Replace dead and poorly performing plants and replenish mulch at the same service frequency. Water young plants during dry periods to prevent wilting.	Developer / Not applicable
Vegetation management	Continue programs that have been specified in Council approvals to control proclaimed and environmental weeds.	Developer / Not applicable
	Trim back vegetation along paths and around park facilities to maintain surveillance opportunities and required clearance widths.	Developer / BCC / Not applicable



PARK MAINTENANCE PROGRAM (TEMPLATE ONLY)

Trees	Replace dead and poorly performing planted trees. Control weeds and replenish mulch around the base of young trees. Water young plants during dry periods to prevent wilting.	Developer / Not applicable
	Prune dead limbs and remove defective branches over park activity areas to reduce hazards.	Developer / BCC / Not applicable
Grass mowing and edge trimming	Mow grass at least 16 times a year with a mid-mounted mower or equivalent. Set cutting height at about 50 mm. Schedule one cut per month from March to October and two cuts per month from November to February. Hand trim around structures such as fences and signs in conjunction with each mowing service. Maintain grass growth along path edges to within 100 mm of the edge.	Developer / Not applicable
Turf	Top dress, fertilise, control weeds and replace worn or damaged turf as needed.	Developer / BCC / Not applicable
Irrigation	Check operation of valves, timers, pipes and sprinkler heads at least once a week and rectify defects. Adjust irrigation times during extended wet weather.	Developer / BCC / Not applicable
Park cleansing (Note: "Maintained parkland" includes all mown areas, roads, car parks, picnic areas, pathways, playgrounds and pavement areas.)	Pick up litter and large debris (fallen branches etc) from "maintained parkland" at least once a month in local parks and once a week in district and metropolitan parks. Dispose of the litter and debris to a legal place of tipping.	Developer / BCC / Not applicable
	Sweep leaves and small debris (eg eroded materials) from paths and pavement areas by blowing or sweeping at least once a month in metropolitan and district parks and once a quarter in local parks.	Developer / BCC / Not applicable
	Empty rubbish bins at least three times a week (Monday, Wednesday and Friday) in district and metropolitan parks and once a week in local parks.	Developer / BCC / Not applicable
	Clean toilets including pans, basins, tiled surfaces and floors at least once a day. Replenish supplies of toilet paper. Spot remove graffiti. Clean gutters of leaves at least once every six months.	Developer / BCC / Not applicable
	Clean electric barbecues and surrounds at least three times a week (Monday, Wednesday and Friday). Empty fat receptacles at least once a month.	Developer / BCC / Not applicable



PARK MAINTENANCE PROGRAM (TEMPLATE ONLY)

Playgrounds	Undertake a routine visual inspection to detect hazards from broken equipment, broken glass, vandalism, etc at least once a month in local parks and once a week in district and metropolitan parks.	Developer / BCC / Not applicable
	Undertake operational inspections to check the operation and stability of play equipment at least once a quarter in local parks and once a month in district and metropolitan parks. Inspections to be undertaken by a trained playground maintenance inspector or engineer.	Developer / BCC / Not applicable
	Check under-surfacing for trip hazards at least once a quarter and more frequently in high use playgrounds. Rake and replenish bark under-surfacing as required.	Developer / BCC / Not applicable
Park buildings, facilities and furniture	Repair or replace defective park visitor facilities (eg barbecues, shelters, tables, seats, rubbish bins) and fixtures and fittings in toilets (eg cistern, seats, toilet rolls, taps) on the same day in district and metropolitan parks, and within five working days at other locations. Safety hazards are to be repaired on same day (urgent) or barricade the site and arrange repairs within 20 working days.	Developer / BCC / Not applicable
	Check toilet operation including flushing mechanisms, door locks, leaking taps, lights, etc at least once a month. Repair or replace defective and vandalised fixtures and fittings, and remove graffiti.	Developer / BCC / Not applicable
	Check barbecue operation including hot plate temperature (thermostat and heating times) and fat drainage at least once a month.	Developer / BCC / Not applicable
	Sand and oil exposed timber surfaces (eg seats) every six months. Repair or replace damaged or defective furniture and remove graffiti.	Developer / BCC / Not applicable
Paved areas and pathways	Check paved surfaces (eg asphalt) at least once every six months. Repair potholes, trip hazards and failures. Check drainage of paths and pavement areas and rectify defects.	Developer / BCC / Not applicable
Bridges and boardwalks	Oil exposed timber surfaces as needed. Check structural stability, handrails and decking at least once every six months. Repair defective items and vandalism and remove graffiti.	Developer / BCC / Not applicable



PARK MAINTENANCE PROGRAM (TEMPLATE ONLY)

Utilities	Check operation of pumps, lights, drinking fountains and taps at least once every three months. Replace defective or damaged globes, washers and other utility components.	Developer / BCC / Not applicable
Signage	Check signage for vandalism and graffiti at least once every three months. Repair or replace damaged, missing, unreadable or faded signs.	Developer / BCC / Not applicable
Fence and barriers	Repair or replace sections of fence/barriers removed or damaged by vehicles etc. Rectify other defects.	Developer / BCC / Not applicable



APPENDIX C CERTIFICATE OF COMPLETION (TEMPLATE)

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CERTIFICATE OF COMPLETION (TEMPLATE ONLY)

DEVELOPMENT DETAILS

Development Name _____
 Stage (if applicable) _____
 Development Approval Reference _____
 Address _____
 UBD Reference (eg 161 H16) _____
 Real Property Description _____

PRINCIPAL CONSULTANT

Company Name _____
 Contact Name _____
 RPEQ No. _____
 Address for Correspondence _____
 Telephone/Facsimile/Email _____

CERTIFICATION

I certify that that the earthworks, roadworks, drainage, and other associated works for the above development:

- Have been constructed to the specified tolerances,
- Have complied with the quality control testing standards, and
- Have been completed in accordance with the approved engineering drawings, specifications and the relevant documents.

Further I (or a nominated representative) have diligently undertaken all the necessary supervision and inspection of works to ensure that the design intent has been achieved.

Signature _____
 Duly Authorised On Behalf of _____
 (insert name of Consultant)
 RPEQ No. _____
 Date _____

List reference details of the relevant drawings and any other relevant documents, including title, revision, date, etc

I hereby certify that the As Constructed drawings and asset register submitted herewith are accurate and have been prepared, checked and amended in accordance with the requirements of the *Subdivision and Development Guidelines*.

Signature _____
 Duly Authorised On Behalf of _____
 (insert name of
 Consultant/Licensed Surveyor)
 Professional Registration No. _____
 Date _____



CERTIFICATE OF COMPLETION (TEMPLATE ONLY)

NON-CONFORMANCE AND CORRECTIVE ACTIONS

I hereby advise Council of the following outstanding non-conforming works and the corresponding proposed corrective actions, which will be implemented during the maintenance period.

Table with 2 columns: Description of Defects, Proposed Corrective Actions. Contains 15 rows of horizontal lines for text entry.

Signature
Duly Authorised On Behalf of
(insert name of Consultant)
RPEQ No.
Date