

CORPORATE STANDARD

ROUTINE MAJOR WORKS – DEVELOPERS AND ACCREDITED SUPPLIERS



VERSION: 1.0



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Amendments since previous version

Section	Changes made



1. Introduction

Hunter Water's vision is to be a valued partner in delivering the aspirations of our region. This includes playing a key role supporting the NSW Government's *Hunter Regional Plan 2036*. To achieve this, Hunter Water encourages and supports the development and redevelopment of land throughout our area of operations.

Hunter Water has changed its delivery model for the creation of Developer-funded network infrastructure. This model is based on the recognition that simple, or Routine, Works present fewer risks than those of more technically challenging infrastructure projects, or Complex Works. Accordingly, Hunter Water wishes to focus more of its attention on projects which present higher risks, reducing its involvement in the delivery of Routine Works.

2. Purpose

This corporate standard's purpose is to ensure that quality water, recycled water, and sewerage assets are delivered to Hunter Water by Developers and their Accredited Suppliers in the creation of Routine Major Works. It describes the roles and expectations for Developers and their Accredited Suppliers while working on Routine Major Works projects. It also outlines the part Hunter Water plays in the asset-creation process.

Hunter Water is committed to maintaining a high level of reliability of its assets while efficiently providing services to the community. As part of this commitment, Hunter Water is certified to, or is in the process of becoming certified to, the following International Standards:

- ISO 9001 Quality management system
- ISO 14001 Environmental management system
- ISO 55001 Asset management system

It is critical to meet these quality standards so all assets meet their design service life. This includes design and construction to required standards including, but not limited to, relevant international and Australian standards, Water Services Association of Australia (WSAA) codes, and Hunter Water's Standard Technical Specifications. The Developer and their Accredited Suppliers for design, certification and construction must each contribute to these outcomes and be accountable for their actions.

Although less involved in the certification of Routine Major Works, Hunter Water continues to play a role in their delivery by providing oversight through a number of mechanisms, including the accreditation process, consultation, collaboration, audit, and performance monitoring to defined requirements.

3. Scope

This Corporate Standard outlines what Developers must do to deliver Routine Major Works infrastructure of an acceptable standard for integration into Hunter Water's network. It should be read in conjunction with the Routine Major Works process maps, which can be found in Appendices A to D. Also refer to 'Developer Works Deed – Routine Major Works', which can be found on [Hunter Water's website](#).



3.1 Audience

This Corporate Standard is directed to the following groups to guide them through the processes involved in Hunter Water's delivery model for Routine Major Works:

- Developers
- Accredited Design Consultants
- Accredited Construction Contractors
- Hunter Water
- Community/customers

4. Definitions

Term	Definition
Accreditation	<p>The declaration by Hunter Water that an Accredited Supplier is capable of delivering a particular category of design, engineering and/or audit services to the standard required by Hunter Water. Accreditation entitles:</p> <ul style="list-style-type: none"> • Accredited Suppliers to be listed on Hunter Water's Accredited Suppliers Registers, and • Accredited Suppliers to perform work within Hunter Water's area of operations.
Accreditation Administrator	A Hunter Water employee who manages the Supplier Management System and ensures supplier profiles are kept current with all relevant information, including audit results and non-conformance resolution activities.
Accreditation category	The precise nature of Works for which applicants are applying and for which they must be deemed to be competent before achieving accreditation status.
Accreditation conditions	The ongoing requirements which Accredited Suppliers must meet to maintain their accreditation. It includes, without limitation, compliance with all applicable laws and contracts, and such other requirements determined by Hunter Water.
Accredited Construction Contractor	A contractor approved by Hunter Water's accreditation process to perform construction services for Developer Works in a nominated subcategory or subcategories. The accreditation includes the contractor's key personnel.
Accredited Construction Contractor Register	The list of contractors acknowledged by Hunter Water as having the necessary skills, experience, qualifications, expertise, management systems, and capability to perform construction services in specified subcategories of Works within Hunter Water's area of operations.
Accredited Design Consultant	<p>A design consultant approved in accordance with Hunter Water's accreditation process for Developer Works. Accredited Design Consultants have a range of functions and duties:</p> <ul style="list-style-type: none"> • Design for Routine Works – completing the investigation, design and contract documentation for all water and sewerage Works in accordance with the Notice of Requirements and relevant design standards, and • Certification for Routine Works – acting as quality manager for the asset-creation process. This includes certifying the design, verifying the Works are constructed as per the design, including the use of any temporary Works and approved products. It also involves conducting inspections to ensure the Accredited Construction Contractor meets all quality, environmental and WHS requirements in the Developer Works Deed and its referenced documents and standards. When all requirements have been satisfactorily met, issuing the Certificate of Completion for the Works.
Accredited Design Consultant Register	The list of design consultants acknowledged by Hunter Water as having the necessary skills, experience, qualifications, expertise, management systems, and capability to perform engineering, certification and/or audit services in specified subcategories of Works within Hunter Water's area of operations.

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Term	Definition
Accredited Supplier	An Accredited Construction Contractor or an Accredited Design Consultant.
Accredited Supplier Application Form	A form submitted by an applicant to be considered for Accredited Supplier status, and to be included on Hunter Water's Accredited Suppliers Registers, in accordance with Hunter Water's accreditation process. It includes any other information or documents necessary to enable a proper consideration of an applicant's capacity to perform Works to the necessary standard.
Applicable requirements	Any conditions such as shutdown requirements, WSAA Codes, requirements provided by this document, and all relevant Australian standards.
Applicant	A party who applies to be an Accredited Supplier of Developer Works within Hunter Water's area of operations.
Approved product	An item in Hunter Water's Approved Products and Manufacturers Register, as listed on Hunter Water's website.
Area of operations	The geographic region in which Hunter Water operates.
Audit	A method or system for assessing Accredited Suppliers for Developer Works and the services they provide.
Auditor	A Hunter Water employee or nominated agent who performs an audit.
Authority	A governmental, semi-governmental, local or other body that exercises regulatory or legal power over Hunter Water and/or Accredited Suppliers.
Certificate of Completion	A document submitted by an Accredited Design Consultant to Hunter Water confirming all Works are complete and asset quality, safety and environmental performance requirements have been achieved for Routine Works.
Concept design completion	The stage when the Developer reasonably believes the design documentation includes sufficient detail for the Developer to prepare or procure the preparation of detailed documents that accord with the Deeds.
Inspection and Test Plans	A plan the Accredited Construction Contractor is required to prepare as outlined in the Project Plan.
Defects liability period	A period of time under a construction contract, commencing at issue of Certificate of Completion and ending at final completion, during which any defects identified by Hunter Water are rectified by the Developer at their own expense.
Design Checklist	A checklist an Accredited Design Consultant submits to Hunter Water which verifies the design documentation is compliant to all relevant standards and codes.
Design Compliance Certificate	A document submitted by an Accredited Design Consultant to Hunter Water confirming the design complies with the applicable Developer Works Deed and the documents and standards referred to in it. The Design Compliance Certificate must be submitted with the final design drawings, all supporting design documentation and the applicable design checklist.
Design documentation	All the output documents from the design phase, including the final design drawings, final design reports, completed design checklists, CAD checklists, Inspection and Test Plans with supporting quality-related paperwork, completed Entry Permits, Road Opening Permit Applications, approvals from other agencies, Reviews of Environmental Factors, and sign-offs by Accredited Design Consultants in the form of Certificates of Completion.
Design input	A requirement on which the design is based, including any statutory or regulatory conditions.
Design output	Design plans and associated documentation which enables an Accredited Construction Contractor to construct Works to the standards and satisfaction of the Developer and Hunter Water.
Developer	The owner of land on which a proposed development will take place, or a person or entity who has the consent of the owner.

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Term	Definition
Developer Works	The necessary Developer assets to be provided to meet the conditions set out by Hunter Water in the Notice of Requirements, including water, sewer, recycled water, and stormwater assets.
Developer Works Deed	A formal agreement between Hunter Water and a Developer for the design and construction of related assets. There are three types of Developer Works Deed: Routine Minor Works, Routine Major Works and Complex Works.
Environment	Legislative and administrative measures to protect and preserve the environment, including ecosystems and their constituent parts, communities and physical resources.
Equivalent Tenement	An Equivalent Tenement is a measure of the load a property places on water and sewerage systems. One Equivalent Tenement is considered to be the water consumption or sewage discharge for an average residential dwelling or house.
GIS	Geographic Information System. A system used to capture, store, manipulate, analyse, manage, and display spatial or geographic data.
Hunter Water	A statutory State Owned Corporation providing water and wastewater services to over half a million people in the Lower Hunter region, and some trunk stormwater services in the Cessnock, Lake Macquarie and Newcastle local government areas.
Law	<ul style="list-style-type: none"> • Commonwealth, NSW or local government legislation, including regulations, by-laws, and subordinate legislation • Principles of law or equity established by decisions of courts, and • Approvals (meaning any licence, permit, consent, approval, determination, certificate, or permission from any Authority or under any Law which must be obtained or satisfied to perform the Works, but does not include the exercise by Hunter Water or a Hunter Water representative of their right under either of the Routine Works deeds).
Licensed plumber	A qualified licensed tradesperson authorised by NSW Fair Trading to carry out plumbing and sanitary drainage Works.
Non-conformance Report	A report detailing a non-conformance or irregularity identified in an audit, review, inspection, or the like. The objective of the report is to make a clear, concise, unambiguous, and defensible definition of a problem so that corrective action can be initiated.
Notice of Requirements	An application made under Section 49 of the <i>Hunter Water Act 1991</i> , allowing Hunter Water to determine the project-specific requirements to extend and/or connect to its infrastructure. The Notice of Requirements is specific to the development consent issued by the determining authority, which in most cases is a local council.
Notification period	The time between when a customer is informed of a planned water or sewer outage, and the start of an outage.
Other accreditation requirements	Conditions such as training, qualifications, criteria or other necessities (either formal or informal) which must be completed or demonstrated by an Accredited Supplier applicant to attain or maintain accreditation.
Pre-connection Compliance Certificate	A document submitted by an Accredited Design Consultant on behalf of the Developer to Hunter Water.

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Term	Definition
Project Plan	<p>In accordance with the Developer Works Deeds, the licenced plumber or Accredited Construction Contractor is required to prepare a Project Plan. The purpose of the Project Plan is for the licenced plumber or Accredited Construction Contractor to describe in detail how the Works will be carried out in accordance with submitted documentation. The Project Plan, at a minimum, must include:</p> <ul style="list-style-type: none"> • a Work Health and Safety Management Plan, or equivalent • a Construction Environmental Management Plan, or equivalent • a Quality Plan, or equivalent, and • Inspection and Test Plans (ITPs). <p>The Project Plan may require further developing, amending and updating throughout the duration of the Works.</p>
Quality	Measures regarding the reliability of the delivery of assets, budget and timeliness.
Section 50 Compliance Certificate	A certificate issued by Hunter Water when all conditions in the Notice of Requirements are met by the Developer.
Standards	Applicable Hunter Water, WSAA and/or Australian standards, codes and practices relevant to design and construction of network infrastructure.
Supplier Management System	A tool for storing and managing information relating to Accredited Suppliers, such as licences, profiles, insurances, certifications, audit results, and the like.
Verification and Monitoring Plan	A plan used by an Accredited Design Consultant and an Accredited Construction Contractor that verifies and monitors the minimum requirements throughout the life of an asset delivery project which ultimately ensure a quality asset is delivered at the end of a project.
WHS	Work Health and Safety. Legislative and administrative measures to protect the health, safety and welfare of people engaged in work or employment.
Work As Constructed	All drawings defining the physical characteristics of the constructed Works and containing the information required to identify the location and provide specifications for surface fittings and linear assets.
WSAA	The Water Services Association of Australia.

5. The delivery of Developer Works model

5.1 Distinctions between Routine Minor, Routine Major and Complex Works

Table 1 shows how Developer Works have been divided into two main categories, Routine and Complex. Routine Works have been further divided into two subcategories, Minor and Major. Minor Works are able to be constructed by either a licensed plumber or an Accredited Construction Contractor. Major Works can only be constructed by an Accredited Construction Contractor. All Works must be designed by an Accredited Design Consultant. The table also shows the division of responsibilities within each category.

**Table 1: Distinctions between Routine and Complex Works**

Category	Description	Design	Construction	Quality Assurance	Audit
Routine Minor	Gravity sewerage and water assets less than 25m long, less than 1.5m deep, diameter of 150mm or less	Accredited Design Consultant	Licensed plumber or Accredited Construction Contractor, as nominated by Hunter Water in the Notice of Requirements	Accredited Design Consultant	Hunter Water conducts optional design and/or construction audit/s
Routine Major	Gravity sewerage reticulation and water assets of less than 300mm diameter	Accredited Design Consultant	Accredited Construction Contractor	Accredited Design Consultant	Hunter Water conducts optional design and/or construction audit/s
Complex	Trunk infrastructure of 300mm and greater diameter; telemetry; mechanical/electrical components; pressure sewer; wastewater pump stations; water booster stations	Accredited Design Consultant	Accredited Construction Contractor	Accredited Design Consultant	Hunter Water conducts design and construction audits for all projects

5.2 Roles and responsibilities

Table 2 outlines the roles and responsibilities of Developers, Accredited Design Consultants, Accredited Construction Contractors, and Hunter Water in the delivery of Routine Major Works.

Table 2: Roles and responsibilities

Role	Summary
Developer	Fully responsible for the design and construction of Works, and the engagement of Accredited Suppliers who meet individual project needs. Required to guarantee all quality objectives are achieved, including safety and environmental performance compliance.
Accredited Design Consultant	Responsible for ensuring compliance with design standards and collaborates with the Accredited Construction Contractor to certify the Works have been built in accordance with the design. Responsible for issuing the Certificate of Completion when Routine Works are finished.
Accredited Construction Contractor	Collaborates with the Accredited Design Consultant to ensure the Works are delivered as per the design. Required to certify the Works to Hunter Water.
Hunter Water	Receives and manages flow of documentation, accreditation, reimbursements, etc. Issues authority to proceed and controls how new assets physically connect to existing systems. Performs optional design and construction audits.



5.3 Phases of the asset-creation process

This section outlines the phases of the asset-creation process. The process is further illustrated in [Appendix A: Routine Major Works – Process Map](#).

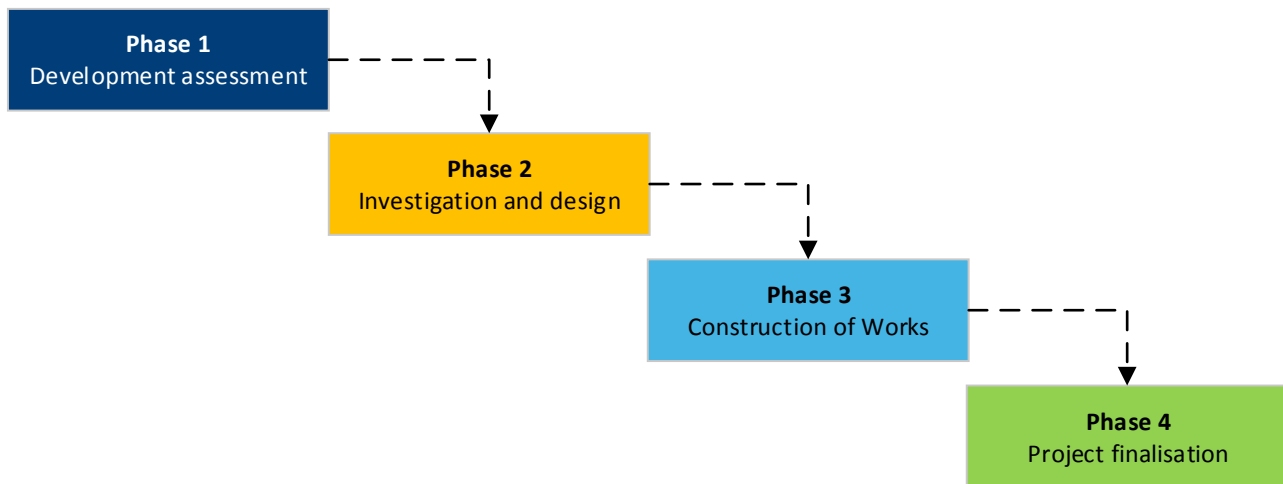


Figure 1: Phases of the asset-creation process

5.3.1 Phase 1: Development assessment

The process begins when a Developer submits an 'Application for Developer Services' form to Hunter Water. Hunter Water assesses the application and issues a 'Notice of Requirements'. The 'Notice of Requirements' contains all the formal conditions the Developer must fulfil for the project to be connected to Hunter Water's networks, including which is the appropriate 'Developer Works Deed' to complete.

The Developer completes a copy of the Deed, signs and returns it to Hunter Water to execute. Once executed, the Developer engages an Accredited Design Consultant to complete investigation, design phase services and construction surveillance, and an Accredited Construction Contractor to prepare construction documentation and build the Works.

5.3.2 Phase 2: Investigation and design

Design documentation is prepared by the Accredited Design Consultant, who finalises it and submits it to Hunter Water. The Developer finalises arrangements with an Accredited Construction Contractor.

The Accredited Design Consultant reviews and verifies the pre-construction documents prepared and submitted by the Accredited Construction Contractor. These documents include a Safety Management Plan, a Construction Environmental Management Plan, and a Quality Plan.

5.3.3 Phase 3: Construction of Works

The Accredited Design Consultant conducts construction surveillance, which includes gathering Work As Constructed information, and is responsible for coordinating connections to Hunter Water's networks.



The Accredited Construction Contractor constructs the Works as per the design and in accordance with the Project Plan. The Accredited Construction Contractor also captures Work As Constructed data throughout the construction before issuing a request to connect to Hunter Water's networks. Once connection is permitted, the Accredited Construction Contractor connects to the networks, then tests and confirms functionality.

Once functionality is confirmed, the Accredited Construction Contractor finalises the project. This includes submitting completed Work As Constructed drawings, a final inspection checklist and all other necessary documentation. The Accredited Design Consultant sends Hunter Water a 'Certificate of Completion' when satisfied the Works are complete and necessary asset quality, safety and environmental performance requirements have been achieved.

5.3.4 Phase 4: Project finalisation

Upon issue of the 'Certificate of Completion', ownership of the Works transfers to Hunter Water and the 12-month defects liability period (DLP) commences. All required asset information is provided to Hunter Water as part of the transfer of ownership.

The Accredited Design Consultant submits a request for Hunter Water to issue a 'Section 50 Compliance Certificate'. Provided all conditions in the 'Notice of Requirements' have been met, Hunter Water issues a 'Section 50 Compliance Certificate', and the asset-creation process is complete.

6. The Developer's role

6.1 Lodge Development Application

After lodging a Development Application, the Developer completes an 'Application for Developer Service's form and submits it to Hunter Water, together with payment of the specified fee. The form can be found on [Hunter Water's website](#). Following receipt of the form and payment, and providing all conditions are met, Hunter Water issues a 'Notice of Requirements' letter to the Developer. The process is further illustrated in [Appendix A: Routine Major Works – Process Map](#).

6.2 Execute Developer Works Deed

After receiving the 'Notice of Requirements', the Developer downloads and prints a copy of 'Developer Works Deed – Routine Major Works' from [Hunter Water's website](#). The Developer must review all its requirements, before completing, signing and returning it. Hunter Water encourages the use of digital signatures, electronic transmittal and completion of all Deeds and associated paperwork. Hunter Water then executes the Deed by completing and signing the relevant sections.

Hunter Water sends an executed copy of the Deed to the Developer. This authorises the Developer to initiate the process of engaging an Accredited Design Consultant.

6.3 Engage Accredited Suppliers

In accordance with the obligations set out in the Deed, the Developer prepares the necessary briefs and specifications for the Accredited Design Consultant. The Developer must engage the services of an Accredited Design Consultant listed on Hunter Water's Accredited Design Consultant Register. Following engagement of the Accredited Design Consultant, the Developer can initiate the construction phase and engage the services of an Accredited Construction Contractor listed on Hunter Water's Accredited Construction Contractor Register.



7. Hunter Water's role

This section details the activities that are performed by Hunter Water in the various processes involved in the certification of Developer-funded Works. The process is further illustrated in [Appendix B: Hunter Water's Role – Process Map](#).

7.1 Notify Developer of formal requirements

The process begins when a Developer submits an 'Application for Developer Services' form. The application form can be found on [Hunter Water's website](#) and once completed is submitted to developer.applications@hunterwater.com.au. When the applicable fee is received, the application is registered and scanned. The application is then processed.

An overlay is then prepared to assess such considerations as asset protection, property issues and easements. An email is sent to other groups within Hunter Water if there are any issues which may be of concern to them.

Various groups at Hunter Water may provide input into the conditions which are stipulated in the 'Notice of Requirements'. Hunter Water then calculates the system loading, determines the amount of planning required and considers whether the Equivalent Tenement threshold has been exceeded and what analysis may be necessary.

The 'Notice of Requirements', which includes information on what type of Developer Works Deed needs to be completed, is then prepared, reviewed and sent to the Developer.

7.2 Execute Developer Works Deed

The Developer emails the completed and executed Deed to developer.deed@hunterwater.com.au. When Hunter Water receives an executed Deed from a Developer, it is receipted, a document workflow is launched and a copy of the Deed is saved.

The Deed is then reviewed by Hunter Water. The review includes ensuring the correct type of Deed has been used, checking particulars to verify it has been filled out correctly, and determining whether there are any aspects of the project which might make an audit warranted.

After the review, the Deed is executed by completing all applicable sections, then dating and signing. A copy of the executed Deed is saved and emailed to the Developer.

7.3 Advise of project and shutdown requirements

The Accredited Design Consultant sends an email to design.submissions@hunterwater.com.au and is advised of project requirements. The Accredited Design Consultant develops design documentation based on this advice. If further advice is required, the Accredited Design Consultant should contact the Development Services Officer nominated in the Notice of Requirements.

For water main shutdown advice, the Accredited Design Consultant should send an application form to shutdownrequests@hunterwater.com.au. The 'Water Main Shutdown Request Form' can be found on [Hunter Water's website](#).

7.4 Determine if the project is to be audited

The Accredited Design Consultant submits the design documentation to Hunter Water. The documentation is receipted, a document workflow is launched, and a folder is created containing a copy of the documentation.



Hunter Water checks all necessary documentation has been provided and is complete using the 'Design Submission Checklist – Routine Works' ([Appendix K](#)). If there is any problem with the documentation, it is sent back to the Accredited Design Consultant, who rectifies any issues with it and resends it. When all documentation is complete, Hunter Water determines if the project should be selected for an audit.

These audits may be random or targeted. Hunter Water uses the prior performance of the Accredited Design Consultant as an input to the audit selection process.

7.5 Perform optional design audit until end of defects liability period

If the project is selected for a design audit, the Assessment and Review Team at Hunter Water performs the audit and the results are processed, recorded and sent to the Developer, Accredited Design Consultant and relevant groups within Hunter Water. Any defects or non-conformances identified by the audit are communicated to the Accredited Design Consultant, who must rectify them before the construction phase can commence.

Any reimbursement the Developer is due is calculated at the time of lodgement of the design package. The Accredited Design Consultant performs a CAD check and supplies a CAD check certificate as part of the final design package. Compliant designs are then entered into the GIS.

7.6 Perform optional construction audit until end of defects liability period

Hunter Water assesses the performance of both the Accredited Design Consultant and the Accredited Construction Contractor. This assessment is used to determine if a risk-based construction audit is warranted.

The Delivery Team at Hunter Water then performs the audit and the results are processed, recorded and sent to the Developer, Accredited Construction Contractor and relevant groups within Hunter Water. Any defects or non-conformances identified by the audit are communicated to the Accredited Construction Contractor, who must rectify them before connection to Hunter Water's networks can be allowed. When problems identified by the audit have been rectified, the Developer, Accredited Construction Contractor and relevant groups within Hunter Water are notified.

7.7 Allow connection – hold point

The Accredited Design Consultant informs Hunter Water the development has been validated as being ready for connection to existing infrastructure. Being a hold point, the connection cannot proceed until Hunter Water is satisfied the Works are compliant with all requirements.

7.8 Log shutdown request and notify customers

Relevant groups within Hunter Water are informed the development is allowed to be connected to existing infrastructure. A shutdown request is then logged and all customers who are to be affected by a water outage receive advance notification.

7.9 Complete Project Finalisation Checklist

After the project has been finalised, the Accredited Construction Contractor has submitted the Work As Constructed drawings and the Accredited Design Consultant has submitted a 'Certificate of Completion', Hunter Water opens an Issue Certificate workflow. It is then determined whether all requirements have been met by completing a 'Project Finalisation Checklist' ([Appendix L](#)) and checking the conditions of the 'Notice of Requirements'.



If all requirements have not been fulfilled, a list of outstanding requirements is prepared and sent by email to the Developer, Accredited Design Consultant and Accredited Construction Contractor, as necessary. The workflow does not proceed until all requirements have been met. Once met, Hunter Water prepares a 'Section 50 Compliance Certificate'.

7.10 Issue Section 50 Certificate to Developer

Hunter Water then reviews the 'Section 50 Compliance Certificate' to ensure all its details are correct. After the details have been checked, the Certificate is issued to the Developer. The council in whose local government area the Works were constructed is also sent a copy.

A PDF copy of the Certificate is then created, a digital signature inserted onto it and a copy is saved. The Issue Certificate workflow is then closed.

7.11 Integrate Work As Constructed drawings into the GIS

Once a 'Section 50 Compliance Certificate' has been issued to the Developer, the Work As Constructed drawings are integrated into the GIS. If any aspect of the Works is found to be defective during the 12-month DLP, Hunter Water directs the Developer to rectify the defect.

8. The Accredited Design Consultant's role

8.1 Initiate design phase services

The process of delivery of Routine Major Works begins when a Developer lodges an 'Application for Developer Services' form. The Developer then receives a 'Notice of Requirements' from Hunter Water. The process is further illustrated in [Appendix C: Accredited Design Consultant's Role – Process Map](#).

Once the Developer and Hunter Water execute the Developer Works Deed, establishing a formal contractual agreement between them, the Developer engages the services of an Accredited Design Consultant. The Accredited Design Consultant then initiates the design phase services.

8.2 Develop design documentation

The Accredited Design Consultant is responsible for, but not limited to:

1. developing the design, investigation and contract documentation in accordance with the 'Notice of Requirements', relevant Hunter Water and other applicable standards, and any other requirements of affected landowners, utility service providers and consent bodies
2. preparing a 'Design and Construction Verification and Monitoring Plan' ([Appendix I](#)), or equivalent documentation
3. requesting water and/or sewer shutdown advice from Hunter Water and incorporating these requirements into the design documentation, including preparing and submitting a 'Review of Environmental Factors' – a requirement for approval, which is generally given within 14 calendar days from receipt
4. verifying compliance of the design documentation by providing a signed-off 'Design Checklist – Routine Major Works' ([Appendix J](#))
5. complying fully with 'Permit to Enter' obligations, as outlined in Hunter Water's 'Manual – Land Development'
6. verifying the design of the Works, including temporary works, complies with the requirements of the Developer Works Deed and the design documentation



7. ensuring the design documentation is fully compliant prior to submission to Hunter Water for optional auditing of routine works
8. ensuring any design Non-conformance Reports (NCRs) raised have been resolved and incorporated into a revised design prior to issuing a 'Design Compliance Certificate' ([Appendix E](#)), and
9. issuing a 'Design Compliance Certificate' once the design has been validated.

8.3 Submit design documentation and Design Compliance Certificate

The Accredited Design Consultant certifies the design documentation by submitting a completed 'Design Compliance Certificate' and 'Design Checklist – Routine Major Works'. Following receipt of the 'Design Compliance Certificate', Hunter Water may choose to audit the design process and documentation at any stage during the design and construction phases until the end of the DLP.

8.4 Advise Hunter Water of construction starting

The Accredited Construction Contractor informs the Accredited Design Consultant when the construction phase is to begin. The Accredited Design Consultant advises Hunter Water of the construction schedule. Hunter Water is then able to perform an optional construction audit.

8.5 Review and verify pre-construction documents

As per the Developer Works Deed, the Accredited Construction Contractor is required to prepare a Project Plan outlining the following:

1. a WHS Management Plan
2. a Construction Environmental Management Plan
3. a Quality Plan, and
4. Inspection and Test Plans (ITPs).

The purpose of the Project Plan is for the Accredited Construction Contractor to describe in detail how the works will be carried out in accordance with the requirements of the design documentation. The Project Plan may require further developing, amending and updating throughout the duration of the works.

The Accredited Design Consultant maintains a register of all Project Plans received from the Accredited Construction Contractor and reviews and amends these as needed.

8.6 Construction surveillance

The Accredited Design Consultant verifies the works, including any temporary works, approved products, and processes comply with the requirements of the design documentation. The minimum requirements of construction surveillance are detailed in 'Construction Surveillance by Accredited Design Consultant' ([Appendix H](#)).

8.6.1 Site surveillance

The Accredited Design Consultant periodically monitors on-site construction activities and identifies, documents and raises observations which indicate non-compliance with the requirements of the design documentation and the Project Plan. These observations and comments of agreed actions with the Accredited Construction Contractor are recorded by the Accredited Design Consultant in a Construction Issues Register.



During each site inspection, the Accredited Design Consultant monitors and verifies the works are being constructed in accordance with the Work Health and Safety Management Plan and the Construction Environmental Management Plan.

8.6.2 Construction control

The Accredited Construction Contractor establishes ITPs for all construction activities, to ensure compliance with the requirements of the design documentation.

The Accredited Design Consultant reviews all ITPs issued based on the requirements of the design documentation, to ensure an adequate level of control of the construction process. The ITPs are also reviewed to ensure all hold points, witness points, acceptance criteria, methods of testing, frequency of testing, time limits for testing, time constraints for submissions, responsibilities, traceability, and evidence of conformance in quality records have been identified.

8.6.3 Hold points

Hold points are mandatory verification points beyond which construction cannot proceed without approval from a relevant authority. The Accredited Construction Contractor must be satisfied that all construction activities comply fully with the requirements of the design documentation before the works can proceed past any hold points. The Accredited Design Consultant is responsible for reviewing this compliance.

8.6.4 Non-conformances

The Accredited Construction Contractor is responsible for the selection of approved products, and establishing appropriate methods for identification and control of any products or services which fail an inspection or test.

When a non-conformance is identified during monitoring or surveillance audits, the Accredited Design Consultant documents it and immediately advises the Accredited Construction Contractor. All non-conformances identified through surveillance and monitoring must be recorded in the Construction Issues Register. The register should be a spreadsheet with records categorised under appropriate resolution processes, for example, NCRs and Requests for Information.

Any non-conformances which are time-consuming to fix should be documented in NCRs within two days of being identified. The Accredited Design Consultant may also request the Accredited Construction Contractor submits evidence of close-outs, to help prevent any recurrence of non-conformances.

The Accredited Design Consultant records the close-outs of NCRs in the Construction Issues Register, including the dates when the NCRs were closed out, and any other relevant documentation.

8.7 Validate ready for connection

In accordance with the design documentation and the Developer Works Deed, the Accredited Design Consultant validates all works are complete and ready for connection, and submits a 'Pre-connection Compliance Certificate' ([Appendix F](#)).

8.8 Coordinate connection

The Accredited Design Consultant is responsible for coordinating connection of the Works to Hunter Water assets. The responsibilities include, but are not limited to:



1. checking the Accredited Construction Contractor has all necessary personnel, plant and materials available and in place, and
2. confirming with Hunter Water the Network Operations team is ready to proceed and has issued water supply discontinuity notices to customers affected by connection activities.

8.9 Finalise and submit Certificate of Completion

In finalising the works, the Accredited Design Consultant signs off all matters in the project as complete. The Accredited Design Consultant compiles and submits to Hunter Water a final report which contains, at a minimum, the following:

1. all completion checklists and signed completion certificates
2. Work As Constructed drawings
3. completed ITPs
4. an up-to-date Construction Issues Register confirming all close-outs
5. documentation confirming all surface restorations are complete and the area has been restored as close as possible to its previous condition, and
6. a finalised 'Certificate of Completion'.

Once the 'Certificate of Completion' ([Appendix G](#)) has been submitted the DLP begins. The DLP for Routine Works is 12 months.

9. The Accredited Construction Contractor's role

9.1 Begin construction phase

Following the successful completion of a design by the Accredited Design Consultant, the Developer and the Accredited Construction Contractor engaged by the Developer are advised the construction phase can commence. The process is further illustrated in [Appendix D: Accredited Construction Contractor's Role – Process Map](#).

9.2 Prepare pre-construction documents

In accordance with the Developer Works Deed, the Accredited Construction Contractor is required to prepare a Project Plan. The purpose of the Project Plan is for the Accredited Construction Contractor to describe in detail how the works will be carried out in accordance with submitted documentation. The Project Plan at a minimum must include:

1. a Work Health and Safety Management Plan
2. a Construction Environmental Management Plan,
3. a Quality Plan, and
4. ITPs.

The Project Plan may require further developing, amending and updating throughout the duration of the works.

9.3 Construct Works

The Accredited Construction Contractor is responsible for, but not limited to, performing the following:

1. constructing the specified Works, including temporary Works, in accordance with approved design drawings provided by the Accredited Design Consultant, WSAA standards, and Hunter Water standard drawings and approved products



2. constructing the Works in accordance with the WHS Management Plan, and reporting any WHS-related incidents immediately to the Accredited Design Consultant
3. constructing the works in accordance with the Construction Environmental Management Plan
4. preparing ITPs for all construction activities to confirm the completed Works comply with the design documentation, including any hold or witness points nominated by the Accredited Design Consultant and/or Accredited Construction Contractor
5. establishing and implementing an appropriate method for identification and control of all occasions where the product or service fails any inspection or test
6. documenting all construction issues in a Construction Issues Register and categorising them under the appropriate resolution process, for example, Non-conformance Reports, Requests for Information, and Design Changes
7. closing out all items listed in the Construction Issues Register, and
8. capturing and recording Work As Constructed documentation and updating design drawings as construction of the Works progresses.

9.4 Issue request to connect

The Accredited Construction Contractor is responsible for, but not limited to, performing the following:

1. submitting completed ITPs, test certificates and a pre-connection checklist to the Accredited Design Consultant
2. ensuring the required personnel, plant and equipment are available
3. confirming Hunter Water has notified customers who are going to be affected by a water shutdown
4. preparing methodology for pressure/vacuum testing, flushing and dechlorinating water prior to disposal, and submitting methodology documentation to the Accredited Design Consultant, and
5. ensuring all Works are completed in accordance with the design documentation and the Developer Works Deed, and submitting a request to the Accredited Design Consultant for connection to the Hunter Water network.

9.5 Connect, test and confirm functionality

The Accredited Construction Contractor completes the connection to the Hunter Water network, performs a pressure test to confirm functionality of the system, and submits a final commissioning checklist to the Accredited Design Consultant.

9.6 Finalise project

The Accredited Construction Contractor is responsible for, but not limited to, completing and submitting to the Accredited Design Consultant:

1. Work As Constructed drawings and documentation
2. completed quality-related documents, including ITPs, a Construction Issues Register, Non-conformance Reports, Requests for Information, test certificates, and evidence restoration is complete, and
3. a completed final inspection checklist.

The Accredited Design Consultant checks the above documentation has been completed satisfactorily. When this has been confirmed, the Accredited Design Consultant finalises and submits a Certificate of Completion to Hunter Water and the DLP commences.

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9.7 The defects liability period

In accordance with the Developer Works Deed, the Developer is responsible for rectifying any defects identified until the end of the 12-month DLP. Defects must be rectified at the Developer's expense. Where a defect is rectified, a separate DLP will apply in respect to it and for another 12-month period.

10. Incorporated documents

This document and those listed below in this section are incorporated in 'Manual – Delivery of Developer Works':

Developer Works Corporate Standards

- Corporate Standard – Routine Minor Works – Developers and Accredited Suppliers
- Corporate Standard – Complex Works – Developers and Accredited Suppliers
- Corporate Standard – Auditing of Developer Works
- Corporate Standard – Accreditation of Suppliers for Developer Works

Developer Works forms, templates and checklists:

- Application Form – Accredited Design Consultant
- Application Form – Accredited Construction Contractor
- Application for Developer Services
- Drawing Template for Accredited Design Consultants (A3)
- Drawing Template for Accredited Design Consultants (A4)
- Certificate of Completion
- Design Compliance Certificate
- Pre-connection Compliance Certificate
- Construction Surveillance by Accredited Design Consultant
- Construction Inspection by Accredited Design Consultant
- Design and Construction Verification and Monitoring Plan
- Design Checklist – Routine Major Works
- Design Checklist – Routine Minor Works
- Water Main Shutdown Request Form
- Project Finalisation Checklist

To access Hunter Water's documents for Developer Works, go to the 'Certification and Delivery of Developer Works' page on [Hunter Water's website](#).

Developer Works-related Registers:

- Accredited Design Consultants Register
- Accredited Construction Contractors Register
- Approved Products and Manufacturers Register

To access Accredited Suppliers and Approved Products and Manufacturers Registers, go to the 'Developer Works Accredited Suppliers' page on [Hunter Water's website](#).



11. Related documents

Developer Works Deeds:

- Developer Works Deed – Routine Minor Works
- Developer Works Deed – Routine Major Works
- Developer Works Deed – Complex Works

To access the Developer Works Deeds, go to the 'Certification and Delivery of Developer Works' page on [Hunter Water's website](#).

External documents and references:

- ISO 9001:2015 Quality management system – Requirements
- ISO 14001:2004 Environmental management system – Requirements
- ISO 55001:2015 – Asset management – Management systems - Requirements
- Water Services Association of Australia (WSAA) www.wsaa.asn.au

12. Document control

TRIM: HW2015-1469/28/5.001

Table 3: Document governance

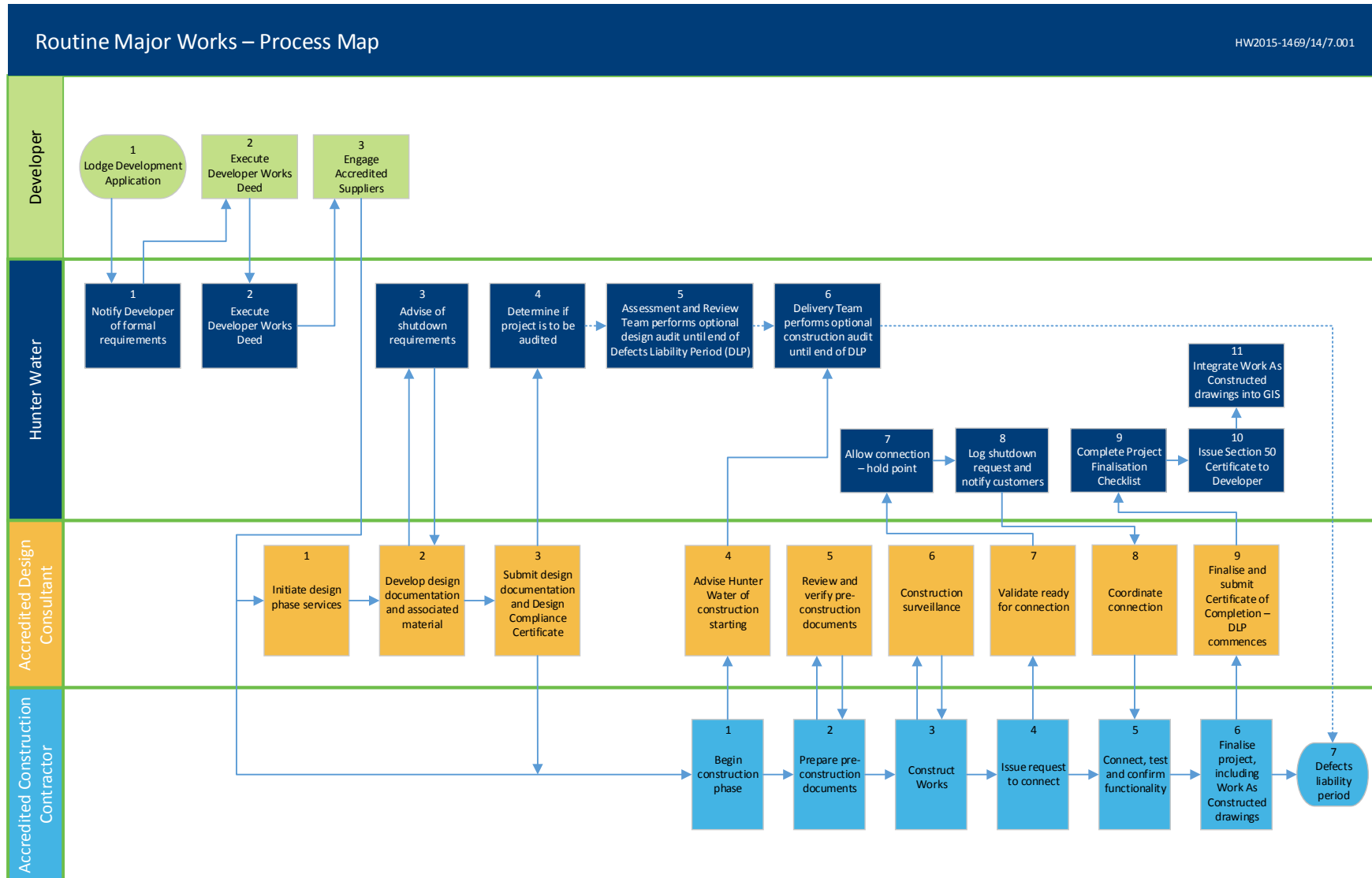
Document owner	Mandatory reviewers	Document approver
Group Manager Development Services	Group Manager Development Services	Executive Manager Customer Strategy and Retail

Table 4: Document version history

Version	Name of author	Summary of changes	Approval date	Approved by	Periodic review
1.0	Brett Lewis	Initial release	19 Jan 2018	Executive Manager Customer Strategy and Retail	1 year

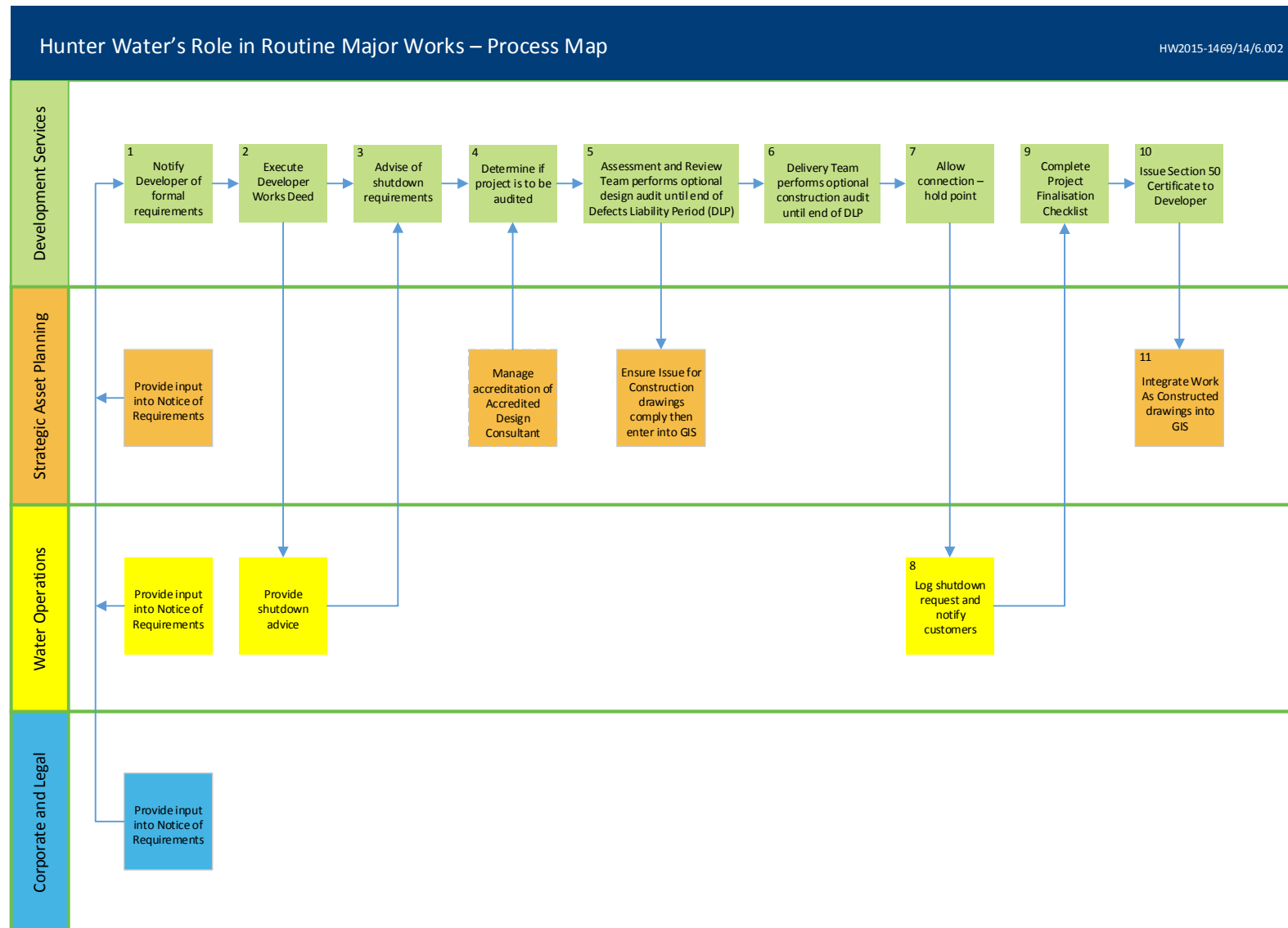
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Appendix A: Routine Major Works – Process Map



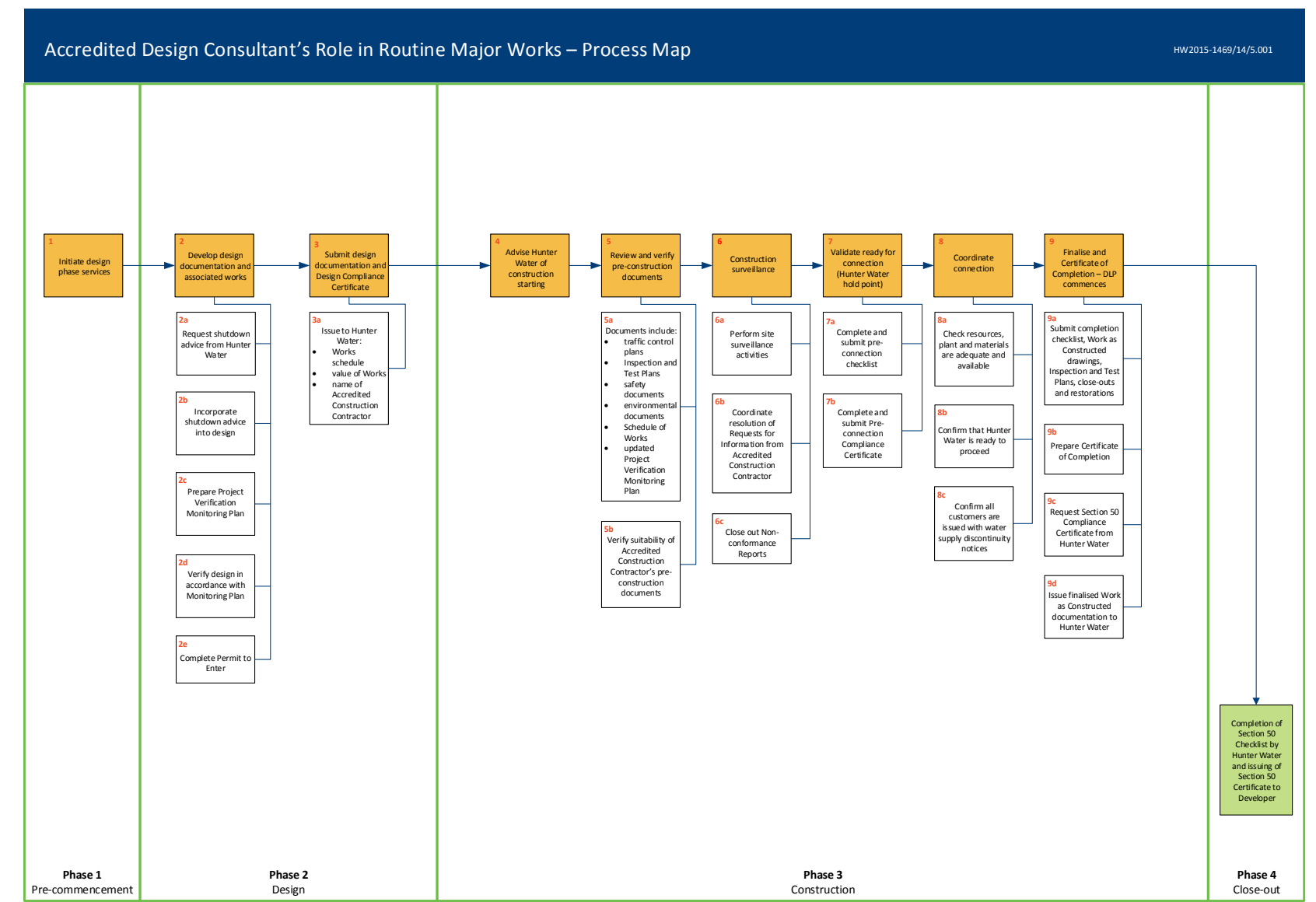
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Appendix B: Hunter Water's Role – Process Map



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Appendix C: Accredited Design Consultant's Role – Process Map

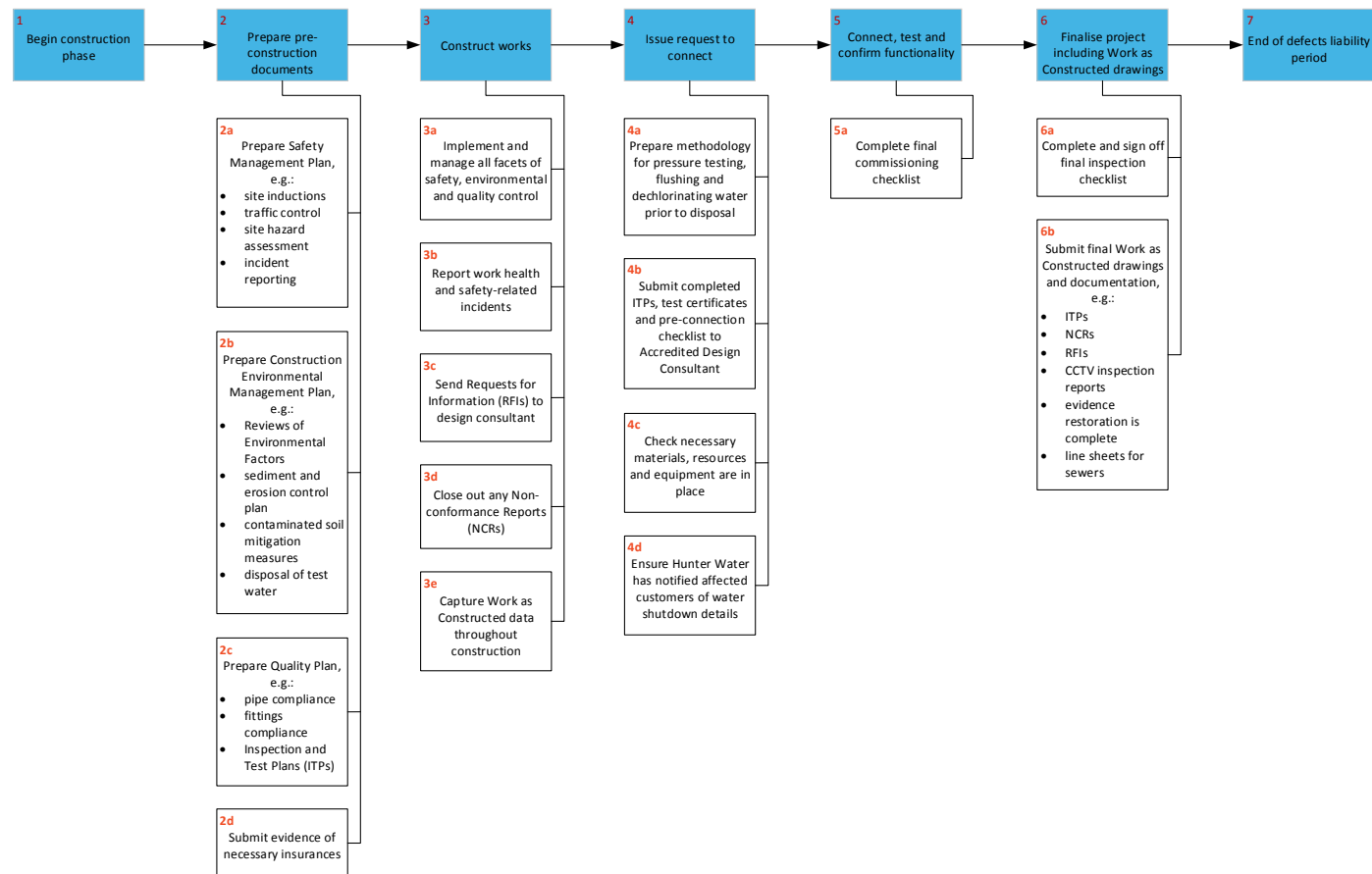


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Appendix D: Accredited Construction Contractor's Role – Process Map


Accredited Construction Contractor's Role in Routine Major Works – Process Map

HW2015-1469/14/4.001



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Appendix E: Design Compliance Certificate



Hunter Water Corporation Design Compliance Certificate

Send to: design_submission@hunterwater.com.au

Service (please select):

☐ Water supply ☐ Sewerage ☐ Stormwater

Development details:

Location/estate name: _____

Developer: _____

Accredited Design Consultant: _____

Accredited Design Consultant's nominated representative: _____

Accredited Design Consultant's nominated representative email: _____

Deed number: _____

Commencement date: _____

Completion date: _____

Value of Works (GST-exclusive): Water: _____ Sewer: _____

Documentation to be submitted:

☐ Electronic copy of final design drawings in PDF format

☐ Design Checklist

☐ All supporting design documentation

Accredited Design Consultant's assurance:

I verify the design is in accordance with the Developer Works Deed and its referred documents and standards.


Accredited Design Consultant or nominated representative:

Name: _____ Company position: _____

Signature: _____ Date: _____

TRIM number: HW2015/1469/12/6.002

Appendix F: Pre-connection Compliance Certificate



Hunter Water Corporation Pre-connection Compliance Certificate

Send to: finalise.project@hunterwater.com.au

Service (please select):

☐ Water supply ☐ Sewerage ☐ Stormwater

Development details:

Location/estate name: _____

Developer: _____

Accredited Design Consultant: _____

Accredited Design Consultant's nominated representative: _____

Accredited Construction Contractor: _____

Accredited Construction Contractor's nominated representative: _____

Deed number: _____

Documentation to be submitted:

☐ Pre-connection checklist signed by the Accredited Construction Contractor

☐ Completed Inspection and Test Plans and pressure test certificates from the Accredited Construction Contractor

☐ Formal request to connect to Hunter Water's network

Accredited Design Consultant's assurance:

I verify the pre-connection activities and checks by the Accredited Construction Contractor satisfy the following:

- the pre-connection tests, as per the relevant design codes, are in accordance with the Developer Works Deed
- the methodology for pressure testing, flushing and dechlorinating water prior to disposal is compliant with acceptable standards
- all necessary materials, personnel and equipment are in place, and
- all affected customers have been notified of planned water shutdown details.


Accredited Design Consultant or nominated representative:

Name: _____ Company position: _____

Signature: _____ Date: _____

TRIM number: HW2015/1469/12/6.003

Appendix G: Certificate of Completion



Hunter Water Corporation

Certificate of Completion

Send to: finalise_project@hunterwater.com.au

Service (please select):

☐ Water supply ☐ Sewerage ☐ Stormwater

Development details:

Location/estate name: _____

Developer: _____

Accredited Design Consultant: _____

Accredited Design Consultant's nominated representative: _____

Accredited Construction Contractor: _____

Accredited Construction Contractor's nominated representative: _____

Deed number: _____

Value of Works (GST-exclusive): Water: _____ Sewer: _____

Documentation to be submitted:

- ☐ Final Inspection checklist from the Accredited Construction Contractor
- ☐ Package of records including Work as Constructed drawings as per the Developer Works Deed, completed and closed-out Quality Assurance, Work Health and Safety, and environment-related records, and a Construction Issues Register documenting, for example, Inspection and Test Plans, Non-conformance Reports and Requests for Information
- ☐ Formal request to Hunter Water for Issue of Section 50 Compliance Certificate

Accredited Design Consultant's assurance:

As the Accredited Design Consultant appointed by the Developer, I verify the as-constructed works:

- comply with the requirements of the Developer Works Deed
- comply with the design and can be operated safely by Hunter Water under normal operating conditions
- were inspected and the Accredited Construction Contractor was observed to be compliant with relevant WHS and environmental requirements at the time of site inspection
- meet the requirement that all non-conformances have been satisfactorily resolved and corrective action has been implemented
- have been connected to Hunter Water's network in accordance with the Developer Works Deed and have passed the pre-completion tests, as per the relevant design codes, and
- meet all necessary approvals required by the Developer Works Deed.

Accredited Design Consultant or nominated representative:

Name: _____ Company position: _____

Signature: _____ Date: _____

TRIM number: HW2015-1469/12/4.001

Appendix H: Construction Surveillance by Accredited Design Consultant



Hunter Water Corporation Construction Surveillance by Accredited Design Consultant (minimum requirements)

Item no.	Surveillance activity	Minimum frequency
1	<p>WHS Inspection</p> <p>Periodically check the Accredited Construction Contractor's compliance with the Safety Management Plan. Observe, monitor and report on the Accredited Construction Contractor's work on the project site for compliance with the Work Health and Safety Act and Regulations. This report should include, but is not limited to:</p> <ul style="list-style-type: none"> • reviewing the Accredited Construction Contractor's Safety Management Plan • reviewing the Accredited Construction Contractor's Safe Work Method Statements • site inductions • traffic control measures • workers' PPE • public safety • trench support • working at height • overhead hazards • confined spaces, and • incident reporting process 	Prior to start of construction and once per site visit during construction surveillance
2	<p>Environmental Inspection</p> <p>Observe, monitor and report on the Accredited Construction Contractor's work on the project site for compliance with the Environmental Management Plan. This report should include, as applicable:</p> <ul style="list-style-type: none"> • reviewing the Accredited Construction Contractor's Environmental Management Plan • Reviews of Environmental Factors • sediment and erosion controls • noise/vibration/dust controls • disposal of test water • property access • temporary pedestrian pathways • acid sulphate soil treatment plans • contaminated soil treatment plans • spoil stockpiling and disposal plans • working within approved hours, and • working in and around sensitive waterways 	Prior to start of construction and once per site visit during construction surveillance

TRIM reference: HW2015/1468/12/6.004



Hunter Water Corporation

Construction Surveillance by Accredited Design Consultant (minimum requirements)

Item no.	Surveillance activity	Minimum frequency
3	Construction surveillance	
3.1	Observe, monitor and check implementation of Inspection and Test Plans, including: <ul style="list-style-type: none">• verification of test results• release of hold points/witness points• close out of all Non-conformance Reports, and• respond and close out Requests for information from the Accredited Construction Contractor	When pipes are laid and backfilled, at least every 200 metres All hold and witness points, at least weekly All non-conformances, at least weekly All Requests for information, at least weekly
3.2	Observe and verify the supplied pipework and fittings comply with the design drawings, the relevant WSAA codes and Hunter Water's Approved Products and Manufacturers Register.	As pipes are delivered to site and prior to installation
3.3	Observe and verify the supplied pipework and fittings are compliant and fit for purpose.	As pipes are delivered to site and prior to installation
3.4	Observe and verify the supplied bedding and trench fill material comply with WSAA codes and the design and standard drawings.	Prior to start of construction, and at least once during construction, or at least every 200 metres
3.5	Observe and verify the trench backfill has been compacted to the level specified in the design drawings.	At least every 200 metres
3.6	Observe and verify the thrust blocks are constructed in accordance with the design drawings, including: <ul style="list-style-type: none">• minimum bearing area is correct• soil conditions are acceptable• formwork is acceptable, and• concrete complies with the specified type, strength and design mix	Each thrust block
3.7	Observe and verify the trench stops/bulkheads are constructed in accordance with the design drawings.	Each trench stop/bulkhead grouping
3.8	Observe and verify the grade of the laid sewer pipe is in accordance with the design drawings.	At least once, or every 200 metres
3.9	Observe and verify the cover over the laid pipe is in accordance with the design drawings.	At least once, or every 200 metres
3.10	Observe and verify the hydrostatic, pressure and vacuum testing results of completed works are in accordance with the design drawings and WSAA standards.	Per test section nominated by Construction Contractor

TRIM reference: HW2015/1469/12/6.004



Hunter Water Corporation

Construction Surveillance by Accredited Design Consultant (minimum requirements)

Item no.	Surveillance activity	Minimum frequency
3.11	Observe and verify surface restoration is compliant with the design, and the area has been restored as close as possible to its prior condition.	At completion of construction
3.12	Observe and validate the works are ready for connection to Hunter Water's network.	At completion of construction

TRIM reference: HW2015/1469/12/6.004

Appendix I: Design and Construction Verification and Monitoring Plan



Hunter Water Corporation Design and Construction Verification and Monitoring Plan (minimum requirements)

The Design and Construction Verification and Monitoring Plan must at a minimum address the following requirements:

1. The management team structures, positions, nominated personnel, and subcontractors to be engaged, and the roles and tasks of the nominated personnel and subcontractors.
2. The minimum skills, expertise and experience levels of each position and details of personnel resource levels.
3. The Accredited Design Consultant's internal and external lines of authority, communication and reporting.
4. All compliance records to be maintained in the form of a schedule.
5. The proposed timing of progressive verification for the performance of separate elements of the works, including the timing for conducting audits of project plans, designs and any other project documents.
6. As applicable, hold point and witness point requirements, including the identification of all hold points and witness points on the licensed plumber's or Accredited Construction Contractor's Inspection and Test Plans, which are to be released by the Accredited Design Consultant.
7. The Accredited Design Consultant's comprehensive plans for the following:
 - a. Periodic observing, monitoring, auditing, reviewing, assessing, and testing of the licensed plumber's or Accredited Construction Contractor's compliance with design and construction obligations, including methodology for design documentation.
 - b. Off-site inspection of critical activities, including precast yards, pipe suppliers, concrete production plants, and steel fabrication.
8. The Accredited Design Consultant's strategies, processes, methodologies, procedures, and reporting protocols to achieve and satisfy the following:
 - a. Reviewing and assessing the project plans, design plans and any other project documentation prepared by the licensed plumber or Accredited Construction Contractor.
 - b. Audit, inspection and monitoring of on-site environmental protection.
 - c. Audit, inspection and monitoring of on-site WHS.
 - d. Audit, inspection and monitoring of the licensed plumber's or Accredited Construction Contractor's construction activities.
 - e. Identifying and managing any subcontracted work, including all quality, reporting and communication aspects.
 - f. Verification of the licensed plumber's or Accredited Construction Contractor's processes addressing safety in design.
 - g. Verification of the licensed plumber's or Accredited Construction Contractor's rectification of Non-conformance Reports.
 - h. Closing out all Requests for Information raised by the licensed plumber or Accredited Construction Contractor.

TRIM number: HW2015/1469/12/6.006

Appendix J: Design Checklist – Routine Major Works



Hunter Water Corporation Design Checklist – Routine Major Works

Project name: _____

Deed number: _____

Add or delete items as necessary

Design inputs:

Description	Yes	No	N/A	Notes
Project definition				
Location of subdivision/development				
Proposed subdivision/development information				
Existing real property information				
Existing Hunter Water services				For example: asbestos-cement main, pressure main, pressure system, sewer
Proposed Hunter Water services				Other services to be constructed for this subdivision/development
Easement required				
Land transfer required				
Existing services (other authorities)				For example: Dial Before You Dig
Proposed services (other authorities)				
Engineering plans				
Retention basin				
Contour plans				
Proposed building footprint				Where near existing or proposed Hunter Water asset
Hunter Water connection requirements				
Proposed connection type				
Property service (main to meter)				
Total catchment information				
Adjoining development				
Permanent marks and bench marks				
Specify datum				
Future roadworks				For example: widening
Zoning				
Mine subsidence area				
Filled ground				
Unstable ground				

TRIM number: HW2015/1468/12/6.008

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Hunter Water Corporation

Design Checklist – Routine Major Works

Description	Yes	No	N/A	Notes
Contaminated ground				
Urban salinity				
Boundary traps required (wastewater)				
Flood area				
Surcharge area				
Landfill area				
Previous problems				
Adjustment/deviation required				
Temporary pipework required				Must be noted on design plan
Asbestos-cement mains disuse in private property				
Asbestos-cement mains disuse in public property				
Disuse of mains, other than asbestos-cement				

Design inputs reviewed by:

Date:

Detailed design:

Description	Yes	No	N/A	Notes
Compliance with safe work plan				
Access to location				
Negotiate entry (including easement if necessary)				
Field check of site conditions (including date of visit)				Date:
Evidence of unauthorised interference with Hunter Water assets				
Locate existing fittings and services				
Locate origin (wastewater)				
Peg location of main and tie into boundaries				
Survey proposed route				
Review of heritage items				
Review of Environmental Factors				
Environmental Management Plan				
Flow schedule calculations (wastewater)				

TRIM number: HW2015/1469/12/6.008



Hunter Water Corporation

Design Checklist – Routine Major Works

Description	Yes	No	N/A	Notes
Critical main risk assessment				
Geotechnical assessment				
Assess alternate options				
Finalise proposed route				
Certification of special design				
Soffit requirements				
Self-cleansing grades				
Compaction test requirements				
Prepare plans to standards and special design				

Detailed design reviewed by:

Date:

Design outputs:

Description	Yes	No	N/A	Notes
Plan				
Temporary pipework plan				
Environmental Management Plan				
Review of Environmental Factors				
Entry agreement				
Land/leasehold specifications				
Construction specifications <ul style="list-style-type: none">Upfront cut-insReduced pressure zone device assembly				Must be noted on design plan
Property service (main to meter)				Must be noted on design plan
Construction notes/tender plan/tender evaluation report				
Construction inspection and test plans				
Construction checklists				
Compaction test requirements				
Flow schedule				
Non-standard design or non-code adherence				Written request for non-code proposal with design package required

Design outputs reviewed by:

Date:

TRIM number: HW2015/1469/12/6.008



Hunter Water Corporation

Design Checklist – Routine Major Works

Accredited Design Consultant verification:

Description	Yes	No	N/A	Notes
Review design inputs/outputs				
Review alternative options				
Review required engineers' documents				
Review other documentation				
Alternative calculations				
Compare with other projects				
Environmental Management Plan				
Review of Environmental Factors				
Environmental audit for land transfer				

I certify by the submission of this Design Checklist the design has been prepared in accordance with WSAA Water Supply and Sewerage Codes of Australia (Hunter Water editions, as amended).

Accredited Design Consultant (business name):

Name:

Signature:

Date:

TRIM number: HW2015/1469/12/6.008

Appendix K: Design Submission Checklist – Routine Works



Design Submission Checklist Routine Works

Date:			
Accredited Design Consultant:			
Developer Works Deed Number:			
Routine Minor or Routine Major Works:			
	Designer		HW
Pre-design checklist	Yes	N/A	Confirm
Executed Deed submitted	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Water main/sewer shutdown advice request submitted	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Review of Environmental Factors approved	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Design documentation	Yes	N/A	Confirm
Design Plan	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Design Checklist	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Verification and Monitoring Plan	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Entry Permit/s	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Design Compliance Certificate	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Shutdown fee paid (if applicable)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Asset creation			
Length of sewer mains proposed (m):			
Length of water mains proposed (m):			
Construction cost estimate (\$):			
Accredited Design Consultant's comments (if required)			
Hunter Water design submission package results – HUNTER WATER TO COMPLETE			
	Yes	No	
Design submission complete	<input type="checkbox"/>	<input type="checkbox"/>	
Email sent to Accredited Design Consultant advising correct	<input type="checkbox"/>	<input type="checkbox"/>	
Email sent to Accredited Design Consultant for additional requirements	<input type="checkbox"/>	<input type="checkbox"/>	
Assessment and Review Team Officer name:			
Date review completed:			
Assessment and Review Team Officer signature:			
Hunter Water comments (if required)			

TRIM number: HW2015/1469/12/6.009

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Appendix L: Project Finalisation Checklist



Project Finalisation Checklist Routine Major or Complex Works



Date:			
Accredited Design Consultant:			
Developer Works Deed Number:			
Routine Major or Complex Works:			
	Designer		HW
Work As Constructed	Yes	N/A	Confirm
WAC Checklist (STS 903, Appendix 2)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Junction sheets (STS 903, Appendix 1)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Location co-ordinates provided by a registered surveyor	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Required drawings sent by email or on CD/DVD/USB	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Drawings include location, type, size, co-ordinates, etc., of fittings	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Drawings in accordance with STS 911	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Red mark-ups in accordance with STS 904	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Schedules of technical data (STS 903, Appendices 3 and 4, Schedules A and C)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Draft copy of O&M Manual for review prior to equipment pre-commissioning	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Approved and updated copy of O&M Manual at and during commissioning (STS 906)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Acceptance testing – water (refer to WSA03-2011-3.1)	Yes	N/A	Confirm
Visual inspection (S. 19)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Compaction testing – open trench construction only (S. 19)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Hydrostatic pressure testing (S. 19)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Water quality testing (S. 19)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Special testing – e.g. block testing dual water supply systems (S. 19)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Acceptance testing – sewer (refer to WSA02-2014-3.1)	Yes	N/A	Confirm
Visual inspection – above ground (S. 21)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Compaction testing (S. 21)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Pressure testing – low pressure air, vacuum, hydrostatic (S. 21)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Infiltration testing (S. 21)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Deflection (ovality) testing of flexible sewers – e.g. physical, CCTV	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Measurement of sewer grade (S. 21)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Other required documents	Yes	N/A	Confirm
Construction Register	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
ITPs	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Restorations	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Certificate of Completion	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

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