FIJIAN GOVERNMENT CONTINUES WITH THE PRIVATE SECTOR UTILITY ASSISTANCE TO ASSIST CONSTRUCTION EMPLOYMENT

The Fijian Government is continuing with the Private Sector Utility Assistance to spur construction and job creation by private sector investors. Under the initiative, government is subsidising utility-related development costs, namely EFL and WAF connections, for micro, small and medium enterprises.

A total budget of $1.0 million has been allocated for this initiative for the 2021-2022 financial year.

Assistance will be made available based on the criteria stipulated below:

Enterprise Type	Eligibility
New and existing micro enterprises earning less than $50,000 annually.	Government will subsidise 100% for EFL transformer cost (excluding internal wiring of premises and on-site property piping, regulatory fees, connection fees and consumer security deposit) and WAF connection (trenching cost).
New and existing small enterprises earning between $50,000 and $300,000 annually.	Government will subsidise 70% for EFL transformer cost (excluding internal wiring of premises and on-site property piping, regulatory fees, connection fees and consumer security deposit) and WAF connection (trenching cost).
New and existing medium enterprises earning between $300,000 and $1,250,000 annually.	Government will subsidise 50% for EFL transformer cost (excluding internal wiring of premises and on-site property piping, regulatory fees, connection fees and consumer security deposit) and WAF connection (trenching cost).

Application forms to apply for the assistance will be made available and can be submitted at any of the Energy Fiji Limited and Water Authority of Fiji offices. All required documents stipulated in the application form must be provided.

The application form will also be available online at:

1. www.fiji.gov.fj
2. www.economy.gov.fj
3. www.waterauthority.com.fj
4. www.efl.com.fj

For further clarification, please contact Mr. Hasmukh Patel (Energy Fiji Limited) on phone 9929990 or email: Hasmukh@efl.com.fj or Mr. Seru Soderberg (Water Authority of Fiji) on phone: 9104060 or email: ssoderberg@waf.com.fj

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ATTORNEY-GENERAL AND MINISTER FOR ECONOMY

Implementation Guidelines
for
Private Sector Utility Assistance

Ministry of Economy

17 September 2021

Implementation Guidelines for Private Sector Utility Assistance

1.0 Introduction

1.1 This paper outlines the Implementation Guidelines for the Private Sector Utility Assistance ('**PSUA**').

1.2 The Fijian Government is continuing with the Private Sector Utility Assistance to spur construction and job creation by private sector investors. Under the initiative, government is subsidising utility-related development costs, namely EFL and WAF connections, for micro, small and medium enterprises.

1.3 A total budget of $1.0 million has been allocated for this initiative for the 2021-2022 financial year.

2.0 Eligibility Criteria

2.1 PSUA is available to provide a conducive business environment for Fijians currently undertaking business operations or are interested in pursuing income generating businesses.

2.2 PSUA will be made available based on the criteria stipulated below:

Enterprise Type	Eligibility
New or existing enterprises earning less than $50,000 annually.	Government will subsidise 100% for EFL transformer cost (excluding internal wiring of premises and on-site property piping, regulatory fees, connection fees and consumer security deposit) and WAF connection (trenching cost).
New and existing small enterprises earning between $50,000 and $300,000 annually.	Government will subsidise 70% for EFL transformer cost (excluding internal wiring of premises and on-site property piping, regulatory fees, connection fees and consumer security deposit) and WAF connection (trenching cost).
New and existing medium enterprises earning between $300,000 and $1,250,000 annually.	Government will subsidise 50% for EFL transformer cost (excluding internal wiring of premises and on-site property piping, regulatory fees, connection fees and consumer security deposit) and WAF connection (trenching cost).

2.3 In relation to the above, an applicant may only apply for a single project.

2.4 Application forms to apply for the assistance will be made available and can be submitted at any of the Energy Fiji Limited and Water Authority of Fiji offices. All required documents stipulated in the application form and detailed guideline must be provided. The application form will also be available online at:

1. www.fiji.gov.fj
2. www.economy.gov.fj
3. www.waterauthority.com.fj
4. www.efl.com.fj

2.5 The following documents must be submitted with a completed application form:

Enterprise	Individuals
• Business Objective Plan; • Valid Company Registration; • FRCS and FNPF Compliance Letters; • Latest Audited Financial Statements for existing enterprise; • Declaration of Income; • Bank Statements; • Land Title to confirm ownership • Copy of necessary approvals for the project including approval from Department of Town and Country Planning; and • Engineering Plan (if applicable)	• Business Objective Plan; • Business Registration; • Copy of a valid photo ID; • FRCS and FNPF Compliance Letters; • Land Title to confirm ownership; • Bank Statements; • Declaration of Income; • Copy of necessary approvals for the project including approval from Department of Town and Country Planning; and • Engineering Plan (if applicable)

2.6 Once an application is deemed complete, and all requirements stipulated in Annex 1 and 2 are met, EFL and WAF will assess the application and notify the applicant within a reasonable period (maximum of 21 working days) of receipt whether the applicant is entitled to receive grant assistance under the PSUA.

2.7 A committee will be setup to look into the approval of applications once assessed by WAF and EFL and any other administrative works under the PSUA. The committee members will be made up of representatives from the Ministry of Economy ('**MoE**'), WAF, EFL, Department of Town and Country Planning, Ministry of Infrastructure and Transport and Fiji Revenue Customs Services.

2.8 EFL and WAF will make submission to Ministry of Economy providing the list of successful applicants/recipients who qualify for assistance.

2.9 The applicants/recipients who are intending to access these utilities must comply with the requirements set out by EFL and WAF as stipulated in Annex 1 and 2.

2.10 The grant will be given to recipients on a "first come, first serve" basis as $1.0 million is available in the 2021-2022 Budget.

2.11 In case of EFL, where the capital contribution for power supply is a refundable contribution (as per the determination by Fijian Competition and Consumer Commission (FCCC) authorisation on Capital infrastructure), such refunds shall be remitted back to the Government of Fiji (consolidated fund account).

According to the Fijian Competition and Consumer Commission authorization, the capital contribution is based on a 100% refundable deposit as per clause 3.2.2 of the policy. The customer under the policy will receive at the end of each period of 12 months from the date of commissioning of the extension, a refund equal to 50% of the total electricity revenue obtained from all the electrical loads considered in the original design of the extension, provided that the total amount so refunded shall not exceed the amount of the initial capital contribution and no further refunds will be made after the end of the sixth year from the date of commissioning.

3.0 Conditions and Utilisation of Government Grant

3.1 Subject to the terms and conditions of this guidelines, the Government agrees to make available the grant amount to EFL and WAF ('**Grant Recipients**') the amount not exceeding what has been appropriated in the Budget.

3.2 The Grant Recipients must submit to the Government requests for disbursement of the Government Grant. Such requests must be signed by the person(s) authorised by the Grant Recipient to do so.

3.3 The Government Grant must be paid as specified in paragraph 2.1 and 2.2 above.

3.4 The Grant recipients must submit acquittal reports to Government.

3.5 The Government Grant is to be used by the Grant Recipients for the sole purpose outlined in the guideline.

3.6 The Government may state conditions precedent to disbursement of Government Grant for a particular purpose, in excess of a specified amount or after a certain time and unless the Government and the Grant Recipients agree otherwise in writing, the Grant Recipients must satisfy the stated conditions, in form and substance satisfactory to the Government, before the Government will authorise disbursement of the relevant funds.

4.0 Exemption of Value Added Tax

4.1 The Government Grant is VAT inclusive.

4.2 The Grant Recipients must be registered with the Fiji Revenue and Customs Service.

5.0 Bank Account and Interest

5.1 The Grant Recipients must establish a dedicated bank account for the Government Grant to which payments must be made.

5.2 The Government must ensure that any bank in which the Government Grant is deposited shall comply with all applicable local and international banking standards and regulations, including capital adequacy requirements.

5.3 Any interest on the Government Grant, if any, disbursed by the Government to the Grant Recipients under this guideline then the Grant Recipients must be accounted for and used solely for the purpose of the Government Grant.

6.0 Audits and Records

6.1 The Grant Recipients must maintain proper files and accounting records relating to this grant (**'records'**), adequate to show, without limitation, all costs incurred under this initiative.

6.2 Unless the Government advises the Grant Recipients otherwise in writing, the records must be furnished by the Grant Recipients to the Government.

6.3 The records must cover all funds and activities financed under the Government Grant for that interval. In addition, the Grant Recipients must furnish to the Government any other relevant information at such times as the Government may reasonably request. The Government will from time to time specify in implementation letters or other means the guidelines for the contents and formats of the records.

6.4 The Grant Recipients must make the records available to the Government or the Office of the Auditor-General upon request.

6.5 The Grant Recipients must provide to the Government a final audit report in accordance with this clause no later than three months after the period under audit.

6.6 All records relating to this agreement must be retained and made available by the parties for examination by duly authorised law enforcement officials and agencies of the Government of the Republic of Fiji for a period of seven years. If an issue is raised during this time period, the parties must retain such records until the audit is concluded and all issues resolved.

7.0 Site Visits

7.1 The Government may, upon reasonable notice to the Grant Recipients and applicants conduct site visits, to review and comment on the utilisation of the Government Grant.

8.0 Refunds

8.1 Notwithstanding the availability or exercise of any other remedies, the Government may require the Grant Recipients to immediately refund to the Government any disbursement of the Government Grant in the currency in which it was disbursed, but allowing for time to honour commitments, in any of the following circumstances:

a) this initiative has been suspended;
b) there has been a breach by the Grant Recipients or applicants;
c) an Event of Default occurs;
d) the Government has disbursed an amount to the Grant Recipients in error;
e) the Grant Recipients has made a material misrepresentation with respect to any matter related to this initiative;
f) if there remains any unutilised funds in relation to the Government Grant by the Grant Recipients; and
g) if the Government Grant is used for a purpose other than a purpose set out in this guideline.

8.2 In case of EFL, where the capital contribution for power supply is a refundable contribution (as per the determination by Fijian Competition and Consumer Commission authorisation on Capital infrastructure), such refunds shall be remitted back to the Government of Fiji (consolidated fund account).

Annex 1

Energy Fiji Limited

1.0 Overview

1.1 The Fiji Competition and Consumer Commission (FCCC) authorisation on Capital infrastructure consumer deposits, commercial or industrial customers are required to pay 100% upfront the cost of the extension as an interest-free deposit, and receive annual refunds equal to 50% of the total revenue generated through the customer's electricity consumption, capped to the initial capital cost, over the next six years.

1.2 Under the same authorisation, a land sub-division developer provides a non-refundable capital contribution of 75% of the cost of extension as an interest-free deposit and EFL (EFL) contributes 25% of the cost of extension, capped at $250,000. The land sub-division developer would include the cost of providing utility services, including electricity, into the cost of developing the lot and would recover the same from the sale of the lots.

2.0 **Payment Scheduling**

2.1 Projects are categorised into three different categories, based on quantum of capital contribution. The quantum of capital contribution generally is an indicator of the magnitude of capital work. In any case, the following shall apply:

(i) EFL will commence design activities, including easement/ way leave acquisition upon receipt of the first progress payment.
(ii) EFL will progress the power supply infrastructure development based on the partial payments it receives from the developers and this work can only be completed and commissioned once full capital contribution is received.
(iii) Where there is delay in subsequent partial payments after first partial payment is received, this will accordingly impact the execution of capital works.
(iv) EFL at no time will be utilizing its cash flows to meet the shortfall in capital contributions to complete the capital works.

While the guidelines below are indicative, EFL will assess every project on a case by case basis.

3.0 **Quantum of Capital Contribution**

Quantum of Capital Contribution	**Type of Grid Extension / Power Supply Infrastructure Development**	**Suggested Payment Schedule**	**Timeframe for Power Supply Infrastructure Development**
Category 1A - Upto FJD $100,000	Only overhead extension of the HV network and installation of pole-mounted transformer(s)	30% - upfront 40% - within 1 month of first payment 30% - within 3 months of first payment	Within 3 months of receipt of full capital contribution, but no earlier than 4 months from receipt of first partial payment of capital contribution. Depending on the existing workload, this project will be programmed for commencement of construction on site accordingly.
Category 1B – Up to FJD $100,000	Either underground extension of HV network and pad-mounted transformer installation, OR, both underground and overhead HV extension and installation of pad-mounted or	30% - upfront 40% - within 1 month of first payment 30% - within 4 months of first payment	Within 4 months of receipt of full capital contribution, but no earlier than 5 months from receipt of first partial payment of capital contribution. Depending on the existing workload, this project will be programmed for commencement of

Quantum of Capital Contribution	Type of Grid Extension / Power Supply Infrastructure Development	Suggested Payment Schedule	Timeframe for Power Supply Infrastructure Development
	ground-mounted transformer		construction on site accordingly.
Category 2 - Greater than $100,000 but less than $250,000,	Either underground extension of HV network and pad-mounted transformer installation, or, both underground and overhead HV extension and installation of pad-mounted or ground-mounted transformer	30% - upfront 30% - within 1 month of first payment 20% - within 2 months of first payment 20% - within 6 months of first payment	Within 4 months of receipt of full capital contribution, but no earlier than 8 months from receipt of first partial payment of capital contribution. Depending on the existing workload, this project will be programmed for commencement of construction on site accordingly.
Category 3 - Greater than $250,000	Either underground extension of HV network and pad-mounted transformer installation, or both underground and overhead HV extension and installation of pad-mounted or ground-mounted transformer.	30% - upfront Remainder 70% based on project-specific implementation timetable	Dependent upon magnitude of grid extension works, but no earlier than 9 months from time of first partial contribution, and to be assessed on a case by case basis. Depending on the existing workload, this project will be programmed for commencement of construction on site accordingly.

4.0 Method of Power Supply

(i) Generally single substation or transformer is installed to supply a single development on one lot and more than one substations could be installed to supply a subdivision.

(ii) EFL will install power supply infrastructure with sufficient capacities, including transformer(s) to meet the assessed maximum demand of the premises or subdivisions.

(iii) The maximum demand will be assessed from the list of items of equipment to be connected, provided by the applicant's or developer's designer or electrical contractor, taking into account the rating and function of each item. The assessment of maximum demand shall be in accordance with the AS 3000-2018.

(iv) It is also essential that details of the proposed electrical load be provided at an early stage to enable the determination of power supply arrangement and avoid necessary delays.

(v) EFL generally provides a low voltage supply to customers, where there is adequate capacity in the low-voltage network to meet the power supply requirements of the development. However, under certain circumstances, i.e., size of load, access availability etc. EFL may decide that extension of the high-voltage network and installation of a transformer is required.

(vi) Once it is decided that power supply will be provided by establishment of a substation, the customer or the developer provides, free of cost, a suitable space(s) on the premises or in the subdivision for EFL use to accommodate transformers, switchgears and other equipment. The space shall be enclosed in an approved manner, and the customer or developer shall provide satisfactory arrangements for access. Necessary civil works for the installation of the substation or transformer shall be borne by the developer or customer/applicant.

(vii) The customer or developer must provide suitable space for EFL's extension of high voltage or low voltage network within the premises or subdivisions and ensuring that vegetation and no other structures or services within the customer's premises or subdivisions impedes within EFL's easements. Failure of the customer to comply will lead to additional costs in removal of vegetation.

5.0 Sequence of Events

(i) EFL receives a letter from the customer or the developer requesting supply with details of the development and load details, including maximum demand.
(ii) EFL assesses the load and determines the power supply infrastructure requirements, and where required, the size and the type of substation and magnitude of high-voltage network extension advises the developer or applicant of its requirements.
(iii) The space requirements for power supply infrastructure (including substation or transformer is discussed and a suitable location is mutually agreed upon and the details (engineering plans) are submitted by the developer for approval.
(iv) EFL issues customer/developer a quotation, detailing the terms and conditions under which the power supply will be established, including any capital contribution required, and the agreed capacity and the timetable to establish the power supply infrastructure.
(v) The customer/developer accepts EFL's quotation with terms and conditions.
(vi) Any capital contribution required is to be paid prior to EFL commencing final design and work. The developer of customer will also provide way-leave clearance if required for any EFL power supply infrastructure over its land.
(vii) The customer/developer advises EFL when substation plinth or building construction commences so that inspections can be carried out at various stages during construction.
(viii) The customer/developer arranges for the substation building or plinth to be inspected, approved and certified by a certified civil/structural engineer, prior to hand-over to EFL. A copy of the certificate shall be provided to EFL Construction Engineer.
(ix) As-built drawings and proof of easement creation shall be provided to EFL Construction Engineer.
(x) EFL installs all necessary equipment to provide supply to the customer.
(xi) Grid Extension is verified (inspection & testing) and supply is commissioned by EFL, up to the agreed point of connection.

6.0 Hand-over

6.1 Normally power supply infrastructure is made available within 6 months of payments of contribution, and timely construction of plinth or substation structures, commercial and industrial projects. Where non-standard equipment have to be procured, EFL will advise customers up-front on the likely procurement timetable for such equipment. Once the power supply infrastructure is commissioned, it becomes part of the EFL grid and is owned by EFL.

6.2 The customer or developer is required to lodge a permit (through a licenced electrical contractor) for inspection of wiring in its premises and approval for its connection to the EFL supply grid. All equipment and installations after the meter is owned by, maintained by and is the responsibility of the customer/developer.

7.0 Customer Responsibilities and Costs

7.1 The customer is responsible for the following:

- Supply and installation of any conduits, duct ways, cable pits and the like on the customer's property to EFL requirements.
- Substation civil works – civil works shall include any leveling of clearing of the site, erection of any building, plinth or enclosure or any foundations to meet EFL's requirements.

- Supply and installation of consumer mains from the substation.
- Registration of easements and right-of-ways.
- Payment of any capital contribution required under the FCCC Authorisation (1st December 2017).
- Wiring of its premises, its inspection and connection (through a licensed electrical contractor) as per requirements of the Electricity Act (2017) and Electricity Regulations (2019).

Annex 2

Water Authority of Fiji

1.0 Specific Requirements beyond Existing Service Level

1.1 Specific Pressure Requirements

1.1.1 If a development requires a specific minimum pressure beyond that present at the connection point, the developer shall be responsible for the design for works to satisfy the pressure requirement of the development.

1.1.2 This design shall be reviewed and subject to the approval by the Water Authority of Fiji prior to implementation. Any physical works required to increase pressure beyond that present at the connection point shall be carried out at the expense of the developer.

1.1.3 The developer shall provide a surety in the form of a bond equivalent to 30% of the estimated cost of works prior to commencement of any physical works.

1.2 Specific Storage Requirements

1.2.1 If a development requires a dedicated centralised storage facility (reservoir/tank) due to the lack of capacity of the existing storage presently supplying and meeting the current needs of areas within the development, the developer shall be responsible for the design and construction for works to satisfy the storage requirement of the development.

1.2.2 This design shall be reviewed and subject to the approval by the Water Authority of Fiji prior to implementation.

1.2.3 The developer shall provide a surety in the form of a bond equivalent to 30% of the estimated cost of works prior to commencement of any physical works.

1.3 Specific Flow Requirements

1.3.1 It shall be the responsibility of the developer to carry out works to satisfy flow requirements of the development beyond that present at the connection point. The developer shall be responsible for the design which shall be subject to the review and approval of the Water Authority of Fiji prior to implementation.

1.3.2 Any physical works required to increase the flow beyond that available at the connection point shall be carried out the expense of the developer.

1.3.3 The developer shall provide a surety in the form of a Bond to the Water Authority of Fiji equivalent to 30% of the estimated cost of works prior to any commencement of physical works.

1.4 Extension of Services

1.4.1 Any requirement for any extension of existing Water Authority of Fiji services with the intention to provide connection to a development or meet the requirements of the developer in terms of flow or pressure shall be carried out by the Water Authority of Fiji at the expense of the Developer.

1.4.2 The developer shall provide a surety in the form of a Bond to the Water Authority of Fiji equivalent to 30% of the estimated cost of works prior to any commencement of physical works. Note that ANY major developments that will negatively impact existing WAF customers, the developer MUST consult the Water Authority of Fiji prior to implementation.

1.5 Relocation of Services / Assets

1.5.1 Any relocation of Water Authority of Fiji services or assets as required by the developer shall be carried out by the Water Authority of Fiji at the cost of the developer. The developer shall cover the complete cost of relocation works including any necessary costs included during the shutdown, connection and restoration phases of work.

1.5.2 The developer shall provide a surety in the form of a Bond to the Water Authority of Fiji equivalent to 30% of the estimated cost of works prior to the commencement of any physical works. After the completion of the works the developer shall be invoiced in full the actual cost incurred in carrying out the works.

1.6 Subdivision Lodgement Process

1.6.1 The Department of Town and Country Planning and Local council may issue conditional approval on that basis that all requirements, procedures, standards and specifications set out by the Water Authority of Fiji is complied with by the Developer.

1.7 Scheme Plan

1.7.1 Approval of the Scheme plan by the Department of Town and County Planning or the Local council may be granted subject to certain conditions. These conditions may include obtaining comments from the Water Authority of Fiji with regards to the provision and availability of service within the proposed development area.

1.7.2 Developers may seek from the Water Authority of Fiji a Service Advice Notice which will detail the availability of services within the subject area.

1.8 Required Form of Submittal

1.8.1 In order to obtain a service advice notice from the Water Authority of Fiji the developer is required to provide the following information in addition the approved application form:

- Proposed Scheme Plan indicating the full extent of the proposed development.
- Locality Plan of the planned development
- Copy of Department of Town and Country Planning Application form

1.9 Service Advice Notice

1.9.1 For developers requiring information with regards to the presence and location of the Water Authority of Fiji's services within a particular subject area, a service advice notice may be requested from the Water Authority of Fiji by the following means:

i. Completing and submitting the approved Service Request Notice Application form; and
ii. Paying the fees stated within the Water Authority of Fiji's Fees and Charges Schedules.
iii. A service advice notice may be required by the local council or department of town and country planning before or after the lodgment of a development application.
iv. If specifically required or requested the Water Authority of Fiji can provide details (depending on the availability of data) within the Service advice notice relating to existing pressures and flows at the proposed connection point.
v. This information is however only valid at the time of issuance of the notice and is subject to change given the behaviour and change in the demand affecting the water reticulation network.
vi. Additional fees shall be applicable for Service advice notices requiring pressure and flow information, if data is not available.

1.10 Engineering Plan Approval

i. As part of the conditional approval for Engineering Plans issued by the Department of Town and Country Planning or local council a developer maybe required to obtain further approval from the Water Authority of Fiji.

ii. An Approval for Engineering Plans maybe requested by:

1. Completing and submitting the approved form and completing the accompanying checklist; and
2. Paying the fees stated in the Water Authority of Fiji's Fees and Charges Schedule.

iii. All engineering plans approval applications must contain the required information detailed in section 3.2 and be designed in accordance with the design criteria.

2.0 Design Criteria

2.1 The Water Authority of Fiji requires that all engineering design relating to Water and Sewerage systems carried out by the developer with regards to the Water Reticulation and Wastewater Collection systems be designed in accordance with the following:

	Design Standard
Water Reticulation Network	WSA 03-2011 Water Supply Code of Australia Version 3.1
Gravity Sewerage System	WSA 02-2014 Gravity Sewerage Code of Australia Version 3.1
Sewerage Pumping Station	WSA 04-2005 Sewerage Pumping Station Code of Australia Version 2.1

Table 1: Water & Wastewater Design Standards

2.2 Designs that fail to comply with the above listed design standards shall be subject to rejection by the Water Authority of Fiji.

3.0 Required Form of Submittal (Engineering Plans)

3.1 The following documents must be attached as part of the submittal list when requesting approval of Engineering Plans for construction from the Water Authority of Fiji.

- Detailed Hydraulic Calculation (Water), including anticipated water demands, anticipated flows, water mains sizing, pump sizing (if applicable) reservoir storage (if applicable), anticipated losses within the water mains located within the development area, etc.
- Detailed Hydraulic Calculation (Wastewater), including anticipated sewer loading (EP, PDWF, and PWWF), sewer mains or rising mains sizing, pump size and pump station design, etc.
- Detailed Engineering Plans, indicating subject area boundary, water and sewerage reserves proposed alignment of water mains and wastewater collection systems with chainages for each;
- Long Section of the proposed Water and or Sewerage Pipes, the long sections shall include information relating to existing surface, depth of cut, design level, pipe detail or description, chainage, grade and pipe length.
- Typical & Special Fittings Arrangement, including but not limited to: Air Valves, Hydrants, Washouts, Tee of Connection with associated chambering, thrust block and anchoring details;
- Detailed Engineering Drawings including pipe trench details;
- Detailed Material Listing which shall include, number and type of bends, valves, hydrants, booster pumps, pipes, etc.;

- Written confirmation from the developer for the ownership & responsibility of operations and maintenance of the assets (Maintained by body corporate or Handed over to WAF);
- Detailed cost estimate of the value of the pipes and fittings to be installed as part of the development;
- Material Brands & Specification in compliance with approved brands and specification of the Water Authority of Fiji as listed within the appendix A-1 & A-2 (Pipes, Fittings , Pumps and other ancillary materials required as part of construction);
- Construction and Pipe laying Specifications in accordance with the relevant Water Supply of Australia Code; and
- Soft copies of the Complete Engineering drawings provided in PDF and DWG or DXF formats provided in a Compact Disk or USB flash drive.
  An incomplete application shall be sufficient grounds for rejection of the Engineering Plan Approval Application

The Water Authority of Fiji reserves the right to request any additional information it may deem necessary but not included as part of the submittals from the developer.

4.0 Approval of Engineering Plans

4.1 The Water Authority of Fiji shall issue approval for complete engineering plans containing the required submittals and that comply with the above mentioned design criteria.

4.2 Issuance of approval by the Water Authority of Fiji shall indicate that Engineering plans are suitable for construction having meet the required design criteria and material and construction specification.

5.0 Conditions of Approval

5.1 All Approved Engineering plans shall be subject to the following conditions:

- The developer shall allow access to site for the Water Authority of Fiji to carry out required mandatory and random inspections required during construction;
- The developer shall allow personnel from the Water Authority of Fiji to inspect all pipes and fittings prior to assembly and installation;
- The developer shall allow personnel from the Water Authority of Fiji to carry out inspection during installation of pipes and fittings prior to burial;
- The developer shall allow personnel from the Water Authority of Fiji to inspect all pumps, civil fittings, and mechanical and electrical equipment prior to assembly and installation;
- The developer shall allow personnel from the Water Authority of Fiji to carry out inspection during civil works for the installation of sewerage pumping stations including the installation, testing, and commissioning of the electrical and mechanical components.
- The developer shall observe the mandatory hold points described in section; and
- All completed assets and registered easements shall be vested to the Water Authority of Fiji by the developers prior to handover and beginning of maintenance by the Water Authority of Fiji.

5.2 Approval is issued on the strict condition that the submitted designs, material and construction specification and standards are to be closely adhered to during construction. Any deviation from the approved design, materials and or construction specification and standard, shall be communicated formally to the Water Authority of Fiji in writing, the developer must receive an approval for the changes or a no objection from the Water Authority of Fiji prior to continuing with the works.

5.3 The Water Authority of Fiji may require that the developer re-seek approval for major deviations from the initially approved designs and or material and construction specification.

5.4 The developer shall be liable to rectify any works, at their own cost not complying with the approved engineering plans including replacement of materials not approved by the Water Authority of Fiji.

6.0 Applicable Fees & Charges

6.1 Application and lodgement of Engineering Plans for Approval by the Water Authority of Fiji shall be subject to fees stated within the Water Authority of Fiji's fees and charges schedule.

7.0 Construction

7.1 Only upon the receipt of Approval of the Engineering Plans from the Water Authority of Fiji the developer may then proceed with construction of the Water and Wastewater assets required as part of the development.

8.0 Approved Product and Material Specification

8.1 The developer must ensure that only approved product and materials compliant with those listed within appendix (A-1) are used during the construction of the Water and or Wastewater Network.

8.2 The developer is liable to replace and make good any works using products and materials not compliant with that listed in the appendix of this policy.

9.0 Inspections

Mandatory Inspections & Hold Points

9.1 The developer shall allow the Water Authority of Fiji to conduct mandatory inspections during construction and obtain the Water Authority of Fiji's approval at key hold points before progressing any further.

9.2 It shall be the responsibility of the developer to notify the Water Authority of Fiji and schedule the time and date for the mandatory inspection.

Mandatory Inspections shall include the following:

- Inspection of Pipes & Fittings prior to assembly and installation;
- Inspection of all pumps, civil fittings, and mechanical and electrical equipment prior to assembly and installation;
- Inspection of Pipes & Fittings during installation, prior to burial;
- Inspection of Backfilling and reinstatement works (Paying close attention to pipe bedding, marker tape presence and placement and compaction works); and
- Inspection during civil works for the installation of sewerage pumping stations including the installation, testing, and commissioning of the electrical and mechanical components.

9.3 The developer shall also observe specific construction hold points, where no work shall progress beyond the hold point unless prior approval by WAF is issued to continue indicating that the completed works have been completed in a manner deemed satisfactory to the Water Authority of Fiji.

9.4 The developer shall observe and notify the Water Authority of Fiji when works have reached the hold points discussed in 17.1.1 & 17.1.2

10.0 Random Inspections

10.1 The Water Authority of Fiji reserves the right to conduct random inspection at any date or time during the construction as part of the conditions of approval for any Engineering Plan.

11.0 Construction Hold Points

11.1 The approval issued by the Water Authority of Fiji for the Engineering Plans is issued on the condition that the developer must observe compulsory construction hold points during installations relating to water and wastewater infrastructure.

11.2 Upon reaching the hold points described in 12.0 & 13.0 shall halt all further work until such time that the Water Authority of Fiji has conducted an inspection and issued approval to continue.

11.3 The Water Authority of Fiji may reject the works, if the works are deemed unsatisfactory or non-compliant to the approved engineering plans. As such the developer must make good rejected works at their own cost.

12.0 Hold Points - Water

12.1 Inspection of Installed Assembly of Air valves, Washout, Hydrants and flow meters prior to chambering.

12.2 Inspection of pipeline before, during, and after hydrostatic pressure testing of pipelines.

12.3 WAF reserves the right to issue a stop work order notice if the developer fails comply with the conditions and/or required constructions standards stipulated in this guideline.

13.0 Hold Points - Wastewater

13.1 Inspection of Constructed Manhole Prior to Sealing.

13.2 Inspection of pump well base prior to placement of wall.

13.3 Inspection of pump well civil fittings installation.

13.4 Inspection of placement of pumps.

13.5 Inspection of installation of electrical switchboard.

13.6 Inspection of testing of electrical switchboard.

13.7 Inspection of commissioning of electrical switchboard and running of pumps.

13.8 WAF reserves the right to issue a stop work order notice if the developer fails comply with the conditions and/or required constructions standards stipulated in this guideline.

14.0 Practical Completion Certificate

14.1 A practical completion certificate shall be issued by the Water Authority of Fiji upon the successful completion of water and or wastewater assets constructed in accordance with the standards and specification approved by the Water Authority of Fiji.

14.2 The practical completion certificate indicates that the quality of works is to the satisfaction of the Water Authority of Fiji. The practical completion does not bind nor guarantee that the Water Authority of Fiji will subsequently takeover the assets for operation nor constitute approval to proceed with connection to the existing Water Authority of Fiji Water Reticulation and or Wastewater Collection system.

15.0 Applicable Fees and Charges

15.1 The developer shall be liable to pay fees associated with the inspections carried out during the construction as well as application for Practical completion. This shall be subject to the fees stated within the Water Authority of Fiji's fees and charges schedule.

16.0 Testing and Commissioning

16.1 Testing of the Water and Wastewater networks shall be carried out by the Water Authority of Fiji at the request of the developer.

16.2 The developer, depending on the scale of the development may request for testing to be conducted after the completion of the works, alternatively for large scale developments testing may be conducted as works progress through predefined milestones.

16.3 The Water Authority of Fiji may advise the developer of the optimum frequency of the testing for large scale developments due to availability of equipment, manpower and capability of the testing equipment.

17.0 Compulsory Testing

17.1 The Water and Wastewater networks shall be subject to the following tests:

17.1.1 Tests for Water Networks

1. Hydrostatic Pressure Testing (AS 2566.2) – Testing shall be conducted in sections or pipe networks longer than 1,000m, depending on the capability of being isolated and the availability of water and the spacing between sectioning valves or blank –ends. This test shall be applicable for Pressure pipelines.

17.1.2 Tests for Wastewater Networks

1. The testing of new waste water networks for sub divisions should be carried out by the developer/contractor under the supervision of the Water Authority of Fiji.
2. Methods of testing will include:
    a. Hydrostatic Pressure Testing (AS 2566.2) –This test shall be applicable for Waste Water Pressure Main and Gravity pipelines. Waste water gravity lines are tested up to a pressure of 8 psi.
    b. Light & Mirror Test – determines the straightness of the waste water pipeline.

18.0 Completion Certificate

18.1 Upon the successful completion of testing to the satisfaction of the Water Authority of Fiji, the developer shall be issued with a Completion Certificate.

18.2 The completion certificate shall indicate that the works have been successfully completed to the satisfaction of the Water Authority of Fiji. The completion certificate does not bind nor guarantee that the Water Authority of Fiji will subsequently takeover the assets for operation nor constitute approval to proceed with connection to the existing Water Authority of Fiji Water Reticulation and or Wastewater Collection system. A formal application is required for connections to Water and Wastewater systems.

19.0 Applicable Fees and Charges.

19.1 The developer shall be liable for the payment of fees associated with the Testing conducted by the Water Authority of Fiji. This shall be subject to the fees stated within the Water Authority of Fiji's fees and charges schedule.

20.0 Taking Over

20.1 Upon the completion of construction works the developer may formally apply to the Water Authority of Fiji to proceed with the Taking over of the newly constructed assets for operation and maintenance.

20.2 An Application of Taking Over by the Water Authority may be requested by:

1. Completing and submitting the approved form and completing the accompanying checklist; and
2. Paying the fees stated in the Water Authority of Fiji's Fees and Charges Schedule.

20.3 The Developer must submit and complete the following action in order to be eligible for taking over by the Water Authority of Fiji:

- Submission of Hard Copy and Soft Copy As-built drawings (both PDF and CAD drawings provided in DXF or DWG format geo-referenced to Fiji Map Grid);
- Provision of a bond equivalent to 10% of the actual construction cost of the water and or wastewater infrastructure or $2,000.00, whichever is greater;
- Submission of Material Certification for Materials used during construction (Certified by an Accreditation body recognized by the Joint Accreditation System of Australia and New Zealand or Appraised by the Water Services Association of Australia.); and
- Submission of Receipts from suppliers as proof of purchase of approved materials;
- Transfer of Water and or Wastewater Assets including complete registration of easements to vested in the Water Authority of Fiji

20.4 Failure of the developer to provide the above listed documentation in support of their application shall result in the application for Taking Over being rejected.

20.5 Developers that satisfy the requirements under this section shall be issued by the Water Authority of Fiji with at Beginning of Maintenance Certificate.

21.0 Beginning of Maintenance Certificate

21.1 The Upon the completion of the above process to the satisfaction of the Water Authority of Fiji's requirements, the Water Authority of Fiji shall issue the developer with a Beginning of Maintenance Certificate.

21.2 A Defects liability period shall be enforced for a period of 1 year from the issuance of the Beginning of Maintenance Certificate

22.0 Defects Liability Period

22.1 A defects liability period shall be enforced for a period of one year (365 calendar days) from the issuance of the Beginning of Maintenance Certificate. The developer shall furnish a bank guarantee, equivalent to 20% of the estimated cost for the works conducted. The bank guarantee is to be in place prior to the issuance of the Beginning of Maintenance Certificate.

22.2 Any defects that arise during the defects period shall be rectified by the developer. In the event that the developer fails to rectify the works the Water Authority of Fiji shall rectify the defect and issue a claim against the bank guarantee issued by the developer.

23.0 Applicable Fees and Charges

23.1 Application and lodgement for Taking over by the Water Authority of Fiji shall be subject to fees stated within the Water Authority of Fiji's fees and charges schedule.

24.0 WAF Sub Division Policy

24.1 The Investor shall refer to the WAF Sub Division Policy for further clarification.

Appendices

A-1 Approved Material Standards

Water Services Association of Australia	
Product Specification for Product and Materials (Alphabetical Order)	
Product Specification	**Product & Material Listing**
Access Covers & Frames	
WSA PS – 290	Ductile Iron Access Covers and Frames for Water Supply and Sewerage to WSA 132
WSA PS – 291	Ductile Iron Access Covers and Frames for Water Supply and Sewerage to EN 124
WSA PS – 292	Macro-Composite Access Covers and Frames for Water Supply and Sewerage to WSA 133
WSA PS – 293	Thermoplastic Access Covers and Frames for Water Supply and Sewerage
Acrylonitrile Butadiene Styrene (ABS) Pipe and Fittings	
WSA PS – 217	Acrylonitrile Butadiene Styrene (ABS) Pipes for Pressure Applications - Water Supply and Sewerage
WSA PS – 238	Acrylonitrile Butadiene Styrene (ABS) Pipes and Fittings for Non-Pressure Applications – Sewerage
Casting Spacers	
WSA PS – 324	Casing Spacers
Centrifugally Cast Glass Reinforced Plastics (CC-GRP) Pipe and Fittings	
WSA PS – 205J	Centrifugally Cast Glass Reinforced Plastics (CC-GRP) Pipes for Pressure and Non-Pressure Applications – Water Supply and Sewerage – Installed Using Trenchless Installation Methods
WSA PS – 237	Centrifugally Cast Glass Reinforced Plastics (CC-GRP) Pipes and Fittings (ISO Sized) for Pressure and Non-Pressure Applications – Water Supply
WSA PS – 237S	Centrifugally Cast Glass Reinforced Plastics (CC-GRP) Pipes and Fittings (ISO Sized) for Pressure and Non-Pressure Applications - Sewerage
Clamps	
WSA PS – 313	Repair and Off-Take Clamps for Pressure Applications – Water Supply
Collection Tanks	
WSA PS – 402	Collection Tanks for Pressure and Vacuum Sewerage
Concrete	
WSA PS – 357	Concrete, Pre-Mixed, Normal Class
WSA PS – 358	Concrete, Pre-Mixed, Special Class
WSA PS – 367	Steel Reinforcing Materials for Concrete

Corrosion Protection	
WSA PS – 335	Pipeline Cold-Applied Liquid Adhesives and Prefabricated Tapes
WSA PS – 336	Pipeline Heat-Shrinkable, Cross-Linked Polyolefin Coatings
Couplings	
WSA PS – 235	Couplings, Metal-Banded Flexible, for Non-Pressure Applications - Sewerage
WSA PS – 270	Mechanical Couplings, Non-End Thrust Restraint for Pressure Applications – Water Supply and Sewerage
WSA PS – 271	Mechanical Couplings and Flange Adapters, End Thrust Restraint, for Pressure Applications – Water Supply and Sewerage
Ductile Iron Pipe & Fittings	
WSA PS - 200	Ductile Iron Pipes (CIOD) for Pressure Applications - Water Supply and Sewerage
WSA PS - 201	Ductile Iron Pipes (CIOD) for Pressure and Non Pressure Applications - Water Supply and Sewerage
WSA PS - 202	Ductile Iron Pipes and Fittings (ISO Sized) for Pressure Applications - Water Supply
WSA PS - 202S	Ductile Iron Pipes and Fittings (ISO Sized) for Pressure and Non Pressure Applications - Sewerage
WSA PS – 212	Ductile Iron Fittings (CIOD) for Plastics Pressure Pipe for Pressure and Non-Pressure Applications - Water Supply and Sewerage
WSA PS – 244	Ductile Iron Fittings (CIOD) with Restrained Flexible Joints for Pressure and Non-Pressure Applications – Water Supply and Sewerage
WSA PS – 245	Ductile Iron Fittings with Restrained Flexible Joints for Polyethylene Pipe of Nominal Sizes 90 to 1000 in Pressure Applications – Water Supply and Sewerage
WSA PS – 320	Sleeving, Polyethylene (PE) for Ductile Iron Pipes and Fittings – Water Supply and Sewerage
Embedment Materials	
WSA PS – 369	Bottom Ash Sand for Pipe Embedment
WSA PS – 352	Controlled Low Strength Materials (CLSM) for Pipe Embedment
WSA PS – 350	Compaction Sand For Pipe Embedment
WSA PS – 360	Embedment / Concrete Sand
WSA PS – 361	Embedment / 5 mm Minus Fine Crushed Rock
WSA PS – 364	Graded Recycled Materials for Pipe Embedment
WSA PS – 366	Graded and Single Sized Recycled Materials for Pipe Embedment
WSA PS – 351	Processed Aggregates for Pipe Embedment
WSA PS – 368	Recycled Glass Sand for Pipe Embedment
WSA PS – 362	Well Graded Crushed Rock for Pipe Embedment
WSA PS – 359	7mm Processed Aggregate for Pipe Embedment

Extension Spindles	
WSA PS – 262	Extension Spindles for Gate Valves
WSA PS – 269	Extension Spindles for Valves (Other than Gate Valves)
Filament Wound Glass Reinforced Plastics (FW-GRP) Pipe and Fittings	
WSA PS – 205	Filament Wound Glass Reinforced Plastics (FW-GRP) Pipes and Fittings for Pressure Applications – Water Supply
WSA PS – 205S	Filament Wound Glass Reinforced Plastics (FW-GRP) Pipes and Fittings for Pressure and Non-Pressure Applications - Sewerage
WSA PS – 206J	Filament Wound Glass Reinforced Plastics (FW-GRP) Pipes for Pressure and Non-Pressure Applications – Water Supply and Sewerage – Installed Using Trenchless Installation Methods
Flange Gaskets and O-Rings	
WSA PS – 312	Flange Gaskets and O-Rings
Geotextile Filter Fabric	
WSA PS – 355	Geotextile Filter Fabric
Hydrants	
WSA PS – 267	Hydrants (Spring) for Pressure Applications - Water Supply
Ladders	
WSA PS – 315	Fixed Ladders for Man Entry Structures – Water Supply and Sewerage
Maintenance Chambers / Holes / Shafts	
WSA PS – 338	Maintenance Chambers (MC) – Polyethylene (PE) for Non-Pressure Applications – Gravity Sewerage
WSA PS – 337	Maintenance Chambers (MC) – Polypropylene (PP) for Non-Pressure Applications – Gravity Sewerage
WSA PS – 331	Maintenance Chambers (MC) - Pre-Cast Concrete for Non-Pressure Applications – Gravity Sewerage
WSA PS – 342 – Under review	Maintenance Holes (MH) – Glass Reinforced Plastics (GRP) for Non-Pressure Applications – Gravity Sewerage
WSA PS – 339 – Under review	Maintenance Holes (MH) – Polyethylene (PE) for Non-Pressure Applications – Gravity Sewerage
WSA PS – 340 – Under review	Maintenance Holes (MH) – Polypropylene (PP) for Non-Pressure Applications – Gravity Sewerage
WSA PS – 323	Maintenance Holes (MH) – Pre-Cast Concrete for Non-Pressure Applications – Gravity Sewerage
WSA PS – 322	Maintenance Shafts (MS) – Polyethylene (PE) for Non-Pressure Applications – Gravity Sewerage
WSA PS – 341	Maintenance Shafts (MS) – Polypropylene (PP) for Non-Pressure Applications – Gravity Sewerage
WSA PS – 321	Maintenance Shafts (MS) – Polyvinylchloride, Unplasticised (PVC-U) for Non-Pressure Applications – Gravity Sewerage
WSA PS – 333	Pre-Cast Concrete Conical Bases for Concrete Maintenance Holes (MH) for Non-Pressure Applications – Gravity Sewerage
WSA PS – 334	Vitrified Clay (VC) Maintenance Holes (MH), Maintenance Chambers (MC) and Maintenance Shafts (MS) for Non-Pressure Applications – Gravity Sewerage

Marking Tape	
WSA PS – 318	Marking Tape, Detectable
WSA PS – 319	Marking Tape, Non-Detectable
Piles	
WSA PS – 356	Piles
Polyethylene (PE) Pipe and Fittings	
WSA PS – 208	Plastics Moulded Fittings for Pressure Applications with PE Pipe – Water Supply and Sewerage
WSA PS – 207	Polyethylene (PE) Pipes for Pressure Applications - Water Supply and Sewerage
WSA PS – 215	Polyethylene (PE) Property Service Pipes for Pressure Applications – Water Supply
WSA PS – 216	Polyethylene (PE) Fabricated Fittings for Pressure Applications - Water Supply and Sewerage
WSA PS – 242	Polyethylene (PE), Plain Wall, Pipes and Fittings for Non-Pressure Applications - Sewerage
WSA PS – 241	Polyethylene (PE), Ribbed Construction, Pipes and Fittings for Non-Pressure Applications – Sewerage
Polypropylene Pipes and Fittings	
WSA PS – 240	Polypropylene (PP), Ribbed Construction, Pipe and Fittings for Non-Pressure Applications – Sewerage
Polyvinylchloride, Modified (PVC-M) Pipe	
WSA PS – 209	Polyvinylchloride, Modified (PVC-M) Pressure Pipes for Pressure Applications - Water Supply and Sewerage
Polyvinylchloride, Oriented (PVC-O) Pipe	
WSA PS – 210	Polyvinylchloride, Oriented (PVC-O) Pressure Pipes for Pressure Applications - Water Supply and Sewerage
Polyvinylchloride, Unplasticised (PVC-U) Pipe and Fittings	
WSA PS – 211	Polyvinylchloride, Unplasticised (PVC-U) Pressure Pipes for Pressure Applications - Water Supply and Sewerage
WSA PS – 243	Polyvinylchloride, Unplasticised (PVC-U) Fittings (EN 1401) for Non-Pressure Applications - Sewerage
WSA PS – 213	PVC Pressure Fittings, Moulded and Post-Formed for Pressure Applications - Water Supply and Sewerage
WSA PS – 230	Polyvinylchloride, Unplasticised (PVC-U) Pipes and Fittings for Non-Pressure Applications – Sewerage and Drainage
WSA PS – 236	Variable Bend, Post-Formed PVC-U Fittings for Non-Pressure Applications – Sewerage
Pre-Tapped Connectors	
WSA PS – 246	Pre-Tapped Connectors for Pressure Applications – Water Supply

Property Service Pipe	
WSA PS – 214	Copper (Cu) Property Service Pipes for Pressure Applications – Water Supply
WSA PS – 215	Polyethylene (PE) Property Service Pipes for Pressure Applications – Water Supply
Pumps	
WSA PS – 401	Grinder Pumps and Related Components for Pressure Sewerage
WSA PS – 403	ISO End Suction Centrifugal Pumps for Water Supply Booster Pumping Stations
WSA PS – 404	ISO End Suction Centrifugal Motor Pumps for Water Supply Booster Pumping Stations
WSA PS – 400	Submersible Electric Pumps for Sewage Pumping Stations
Reinforced Concrete (RC) Pipe	
WSA PS – 233	Reinforced Concrete (RC) Plastics-Lined Pipes for Non-Pressure Applications – Sewerage
Road base	
WSA PS – 354	Rock, Coarse Crushed for Road base
WSA PS – 353	Rock, Fine Crushed for Road base
Sleeving	
WSA PS – 320	Sleeving, Polyethylene (PE) for Ductile Iron Pipes and Fittings – Water Supply and Sewerage
Steel Pipes and Fittings	
WSA PS – 203	Steel Pipes for Pressure and Non-Pressure Applications - Water Supply and Sewerage
WSA PS – 204	Steel Fittings for Pressure and Non-Pressure Applications -Water Supply and Sewerage
Steel Reinforcing Materials	
WSA PS – 367	Steel Reinforcing Materials for Concrete
Steps / Step Irons	
WSA PS – 314	Steps for Underground Man Entry Chambers – Water Supply and Sewerage
Tapping Bands	
WSA PS – 329	Tapping Bands, Electro fusion for Use with Polyethylene (PE) Mains for Pressure Applications – Water Supply and Pressure Sewerage
WSA PS – 327	Tapping Bands, Mechanical for Use with Polyethylene (PE) Mains for Pressure Applications – Water Supply
WSA PS – 310	Tapping Bands – Mechanical for Pressure Applications – Water Supply

Trench Fill Materials	
WSA PS – 365	Recycled Materials for Trench Fill
WSA PS – 363	Trench Fill Materials
Valves	
WSA PS – 275	Air Valves for Pressure Applications - Sewerage
WSA PS – 265	Air Valves for Pressure Applications - Water Supply
WSA PS – 268	Automatic Control Valves for Pressure Applications – Water Supply
WSA PS – 274	Ball Valves for Pressure Applications – Water Supply
WSA PS – 263	Butterfly Valves for Pressure Applications – Water Supply
WSA PS – 279	European Gate Valves, Resilient Seated for Pressure Applications – Water Supply
WSA PS – 262	Extension Spindles for Gate Valves
WSA PS – 269	Extension Spindles for Valves (Other than Gate Valves)
WSA PS – 261	Gate Valves, Metal Seated for Pressure Applications – Water Supply and Sewerage
WSA PS – 260	Gate Valves, Resilient Seated for Pressure Applications – Water Supply and Sewerage
WSA PS – 278	Gate Valves, Resilient Seated, with Integral Polyethylene (PE) Ends for Pressure Applications – Water Supply and Sewerage
WSA PS – 266	Knife Gate Valves for Pressure Applications - Water Supply and Sewerage
WSA PS – 264	Non-Return (Reflux) Valves for Pressure Applications – Water Supply and Sewerage
WSA PS – 273	Vacuum Interface Valves for Pressure Applications – Sewerage
Vent Shafts	
WSA PS – 325	Vent Shaft – Educts for Non-Pressure Applications - Sewerage
WSA PS – 326	Vent Shaft – Induct for Non-Pressure Applications - Sewerage
Variable Bends	
WSA PS – 236	Variable Bend, Post-Formed PVC-U Fittings for Non-Pressure Applications – Sewerage
Vitrified Clay (VC) Pipes and Fittings	
WSA PS – 231	Vitrified Clay (VC) Pipes and Fittings for Non-Pressure Applications – Sewerage
WSA PS – 294 – Under Review	Composite Access Covers and Frames for Water Supply and Sewerage

A-2 Recommended Materials

Materials	Recommended Brands / Supplier
Ductile Iron Bends	Asmuss, Auslite, AVK, Clover, Crevet, Derwent, Iplex, Mallet, Sureflow
Ductile Iron Tees	Asmuss, Auslite, AVK, Clover, Crevet, Derwent, Iplex, Mallet, Sureflow
Non Return Valves	Auslite, AVK, Derwent, Hygrade, Sureflow
Flange Spigot Connectors	Asmuss, Auslite, Clover, Crevet, Daemco, Derwent, Mallet, Sureflow
Reducers (Socketed)	Asmuss, Auslite, Clover, Crevet, Iplex, Mallet
Concentric Reducers (Flanged)	Asmuss, Clover, Crevet, Derwent, Iplex, Mallet, Sureflow
Eccentric Reducers (Flanged)	Asmuss, Clover, Crevet, Derwent, Iplex, Mallet, Sureflow
Screw Down Hydrants	Auslite, AVK, Gillies, Sureflow
Hydrant Risers	Clover, Daemco, Mallet, Auslite, Asmuss
Flange Connectors with Puddle Pipe	Asmuss, Crevet, Iplex
Blank Flanges	Auslite, Clover, Daemco, Derwent, Mallet
Dressing Sets / Gaskets and Bolt Sets	Daemco, Hygrade, Shuk, Tyton
Super Flanged Adaptors	Asmuss, AVK, AVK Wang, Derwent, Mallet, Ultraquick, Saint-Gobain PAM, Viking Johnson
Resilient Seat Gate Valves	Asmuss, Auslite, AVFI, Betta, Daemco, Derwent, Hawle, Sureflow
Anti-Shock or Anti-Surge Air Valves	Vent-o-Mat
Multifit Couplings	AVK Wang, Daemco, Saint-Gobain PAM, Viking Johnson
Flow / Master Meters	Khrone
Reinforced Precast Concrete Culverts Pumps	Humes, Arrow Concrete Grundfos, Flygt, Lowara