GUIDELINE FOR HYDRAULIC PLANS WITH TRADE WASTE DRAINAGE

FOR COUNCIL PLUMBING SERVICE OFFICERS AND HYDRAULIC CONSULTANTS

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1. PURPOSE

A. This guideline describes Urban Utilities' (UU) requirements for the content and assessment of hydraulic plans incorporating trade waste drainage and pre-treatment equipment for hydraulic consultants and Council plumbing services officers.

B. This guideline ensures that:

a) applicants and hydraulic consultants are made aware of their trade waste requirements before completion of the plumbing assessment process; and

b) Council plumbing assessment of hydraulic plans is consistent with UU's trade waste requirements.

2. TRADE WASTE LEGISLATION AND AUTHORITY

2.1 Legislative Framework

A. To the extent that UU permits the discharge of trade waste to sewer, its management is regulated by Queensland legislation including the Water Supply (Safety and Reliability) Act 2008 (the Water Supply Act), the South-East Queensland Water (Distribution and Retail Restructuring) Act 2009 (the DR Act) and the Environmental Protection Act 1994 (the EP Act).

B. Under the Water Supply Act, UU may conditionally approve the discharge of trade waste to sewer in its service territory.

C. Trade waste drainage must be compliant with the Plumbing and Drainage Act 2018 and AS/NZS 3500.2 (Plumbing and Drainage: Sanitary plumbing and drainage), as assessed by Council plumbing services branches.

D. The Queensland Plumbing and Wastewater Code provides performance solutions that comply with the Plumbing and Drainage Act 2018, within which UU is provided the authority to describe its requirements for:

a) connection of appliances and fixtures to passive grease arrestors; and

b) requirements for passive grease arrestors.

E. The South East Queensland Water Supply and Sewerage Design and Construction Code (or the SEQ Code) technical standards is used to standardise and streamline the design and construction process for new retail water and sewerage assets across South East Queensland.

2.2 Environmental Authority

A. UU is granted Environmental Authorities by the Queensland Department of Environment and Science, which contain conditions regarding the discharge of pollutants from sewage treatment plants. A change to an Environmental Authority condition may require that changes be made to Trade Waste Approval conditions granted by UU.

3. TRADE WASTE REQUIREMENTS FOR HYDRAULIC PLANS

Refer to TWEMP section 7.1

3.1 Hydraulic Consultants

A. If trade waste drainage or pre-treatment infrastructure is proposed for Premises, the Owner of the Premises or their Authorised Agent must submit hydraulic plans to the relevant local government for plumbing compliance assessment prior to the commencement of any works.

B. It is necessary to apply separately to UU for a Trade Waste Approval, and UU may request copies of your trade waste hydraulic plans.

C. It is the responsibility of the person preparing the hydraulic plans to ensure that the plans also meet UU's requirements for Trade Waste Approval.

D. Trade Waste Hydraulic Plans **must** contain:

a) site location plan showing site and location of trade waste areas on site;

b) details of trade waste hydraulics and drainage;

c) details of the tenancies connected including business activity and waste generating processes;

d) pre-treatment type, size and compliance with UU's authorised product list;

e) loading schedule for passive grease arrestors with all tenancy loadings as per the National Guideline for Managing FFOG (Foods, Fats, Oils and Grease) from Food Premises (WSAA 2018)(the FFOG Guideline) if applicable; and

f) facilities required for pre-treatment maintenance (e.g. hose cock, hardstand access etc.);

g) details of grades and falls, bunding, roofing and diversion systems for wash bays only;

h) a statement confirming that the pretreatment system is accessible for waste removal and maintenance; and,

i) details of fixed remote suction lines (if applicable).

E. Upon request by UU, Applicants or Approval Holders may be required to submit detailed facility plans in a form and with content acceptable to UU for review of trade waste generating processes, chemical storage, spill containments, monitoring or metering facilities, and pre-treatment facilities.

F. UU may require that the plans, certifications or attestations be prepared by a registered engineer or other suitably qualified person[1].

[1] A suitable qualified person means a registered professional engineer or a member of the Association of Hydraulic Services Consultants Australia (AHSCA) or such persons as UU may reasonably determine to be qualified hydraulic consultants.

G. It is recommended that trade waste solutions for complex pre-treatment issues or effluents unlikely to meet Sewer Acceptance Criteria undertake preliminary advice through a Service Advice Notice (SAN). Details of the SAN process can be found at https://urbanutilities.com.au/development/our-services/how-to-connect-water-and-sewerage/services-advice-notice .

H. Where trade waste fit out plans are submitted for approval, UU may also request a copy of the primary plan showing the connected pretreatment device.

3.2 Council Plumbing Services Officers

A. By agreement between Councils and UU, Council plumbing inspectors may deem hydraulic plans acceptable for basic pre-treatment requirements by business type. Refer to Table 1 for further details.

B. Council may require further information from UU with regard to trade waste hydraulic plans meeting trade waste requirements prior to issuing a plumbing compliance notice.

3.3 Consent to Vary from Trade Waste Hydraulic Plan Requirements

Refer to TWEMP section 7.2

A. Consideration may be given to non-standard trade waste solutions on a site by site basis through the Consent to Vary process.

B. If an applicant is unable to meet the standard requirements for hydraulic plans with trade waste drainage, they must apply to UU for consent to vary. In particular, Consent to Vary is required if the plan includes:

   a) non-standard basic pre-treatment device sizing (e.g. an undersized passive grease arrestor); or

   b) non-compliance with any of the conditions listed in the Trade Waste Hydraulic Plan Requirements.

   c) No pretreatment installed, where pretreatment would generally be required (i.e. food service businesses).

C. To obtain a Consent to Vary, the applicant must apply in writing (email) to trade.waste@urbanutilities.com.au. The applicant must provide satisfactory justification for the non-standard design, and may be required to provide supporting evidence supplied by a qualified hydraulic consultant or other suitably qualified person.

D. UU may audit the site to confirm the need to vary from plan requirements, and may accept or refuse to provide consent at its sole discretion.

E. The Trade Waste Consent may contain conditions which will be transferred to the Trade Waste Approval (i.e. more frequent servicing of grease arrestor, installation of sub-metering, etc.).

F. The Trade Waste Consent can be cancelled at any time by Urban Utilities Trade Waste if it is found that the conditions of the approval are not being complied with.

3.4 Register of Authorised Basic Pre-Treatment Devices

Refer to TWEMP section 7.3

A. UU maintains a register of authorised basic pre-treatment products (the Register) that are permitted to be used in connection with the sewerage system https://urbanutilities.com.au/business/business-services/trade-waste/requirements-for-hydraulic-plans .

B. Approval Holders and their representatives must ensure that basic pre-treatment devices installed on trade waste drainage are authorised by UU (i.e. are on the Register). UU may request removal of unauthorised basic pre-treatment devices that are installed in connection with the sewerage system.

3.5 Obtaining Authorisation for Basic Pre-Treatment Products

Refer to TWEMP section 7.4

A. Suppliers of basic pre-treatment products for use in connection with the sewerage system are required to have each device accepted by UU for inclusion in the Register.

B. Application forms and a copy of the current Register can be found on UU's website www.urbanutilities.com.au/business/business-services/trade-waste.

C. Authorisation of basic pre-treatment products is not to be constituted as an endorsement of such products or of any claims made for it by any person.

D. If in practice the product is the subject of repeated failures or non-compliances in service, UU may cancel or suspend authorisation until the cause of the non-compliances is properly addressed by the manufacturer, supplier or their agents.

3.6 Authorised Device Review Criteria

Refer to TWEMP to section 7.5

A. Following receipt of a properly made application for inclusion in the Register, UU will review the product's acceptability for use in connection with the sewerage system.

B. For passive grease arrestors, the device must be manufactured in accordance with section 39 of the Standard Plumbing and Drainage Regulation 2003.

C. UU will notify the applicant within two months of the application being made, advising whether further information is required or whether the application has been approved, approved on condition or disapproved.

D. Where a product has been conditionally approved or rejected, the applicant may request a review of a decision in writing within one month of the decision notification date. However, any further decision of UU is final.

3.7 Monitoring Facilities

Refer to TWEMP section 7.6

A. Approval Holders must provide a sampling location that allows for collection of samples representative of the Approval Holder's trade waste discharge.

B. UU may require the Approval Holder to construct and maintain in good operating condition, at the Approval Holder's sole expense, flow monitoring, constituent monitoring, and/or sampling facilities.

C. The location of the monitoring facilities shall be subject to approval by UU.

D. The monitoring facilities may be required to include a security enclosure that can be locked with a UU provided lock.

E. All monitoring facilities must be kept clean and maintained in good operating condition.

F. The Approval Holder shall provide immediate, clear, safe access to UU to the monitoring or metering facilities.

G. For all sites with Trade Waste Approval, domestic wastewater shall be kept segregated from trade waste until the trade waste has passed through any required pre-treatment system or device and the Approval Holder's sample point.

H. Unless otherwise described in the Trade Waste Approval, the monitoring facility provided at Trade Waste Billing Category D Premises shall:

   a) be located on the trade waste line within the Premises' boundary in an area that is accessible at all times;

   b) incorporate a 240 Volt external power supply suitable for powering sampling and monitoring equipment;

   c) incorporate an electromagnetic (mag-flow type) flow meter with pulse output to enable flow-proportional composite sampling;

   d) the flow meter or its readout must be accessible to UU meter readers without requirement to provide notice to the Owner or Occupier of the site;

   e) incorporate a standard water supply outlet with compliant backflow prevention (i.e. Part 1 AS 3500 and AS 2845.3); and

   f) avoid requirements for confined space entry.

3.8 Protection of Monitoring and Metering Equipment

Refer to TWEMP section 7.7

A. Approval Holders must ensure adequate security is put in place to prevent interference with any monitoring or metering equipment placed onsite.

3.9 Ensuring Proper Chemical Storage

Refer to TWEMP section 7.8

A. Chemical storage areas, such as dangerous goods and flammable goods stores and petroleum-dispensing areas must not be directly connected to UU's sewerage system (i.e. any leaks or spillage or overflows cannot be drained by gravity or by any automated means to the sewerage system).

B. Hazardous waste (including liquid hazardous waste) contained or collected in such areas cannot be discharged to UU's sewerage infrastructure unless specific written approval is granted by UU. Applications for approval will be considered by UU on a case by case basis.

3.10 Design and Construction of Infrastructure

Refer to TWEMP section 7.9

A. The Approval Holder is solely responsible for the design and construction of the Approval Holder's trade waste related infrastructure.

B. The Approval Holder's trade waste related infrastructure must be capable of discharging trade waste in compliance with the Trade Waste Environmental Management Plan and relevant Trade Waste Approval.

4. PRE-TREATMENT

4.1 Discharge and Pre-Treatment

Refer to TWEMP section 8.1

A. The Approval Holder must ensure that the trade waste:

   a) is only discharged from approved trade waste generating processes;

   b) is pre-treated and monitored as required by this TWEMP and the relevant Trade Waste Approval; and

   c) is within the approved quantity, quality and rate of discharge limits specified in the relevant Trade Waste Approval.

B. All Approval Holders shall provide wastewater pre-treatment as necessary to comply with the TWEMP and the Sewer Acceptance Criteria (including Prohibitions), unless otherwise approved in writing by UU Trade Waste.

C. Any pre-treatment facilities necessary for compliance shall be provided, operated by a qualified operator, and maintained in good operating condition at the Approval Holder's expense.

D. Approval Holders may be required to submit operational plans, wastewater analysis, and contingency plans, and meet other necessary requirements to verify Good Operating Practice for their pre-treatment equipment.

4.2 When No Pre-Treatment is Required

Refer to TWEMP section 8.2

A. Pre-treatment is not required for business types whose discharge is deemed by UU to comply with Sewer Acceptance Criteria without pre-treatment.

B. Where a food service business:

   a) can demonstrate that it generates less than 250 L/day of trade waste; or

   b) is not a Licensable Food Business per section 48(2) of the Food Act 2006

   UU may suspend the requirement to install a passive grease arrestor. Such suspension may be temporary.

C. A food service business may demonstrate the volume of trade waste generated by applying a standard fraction to input water metering, or installing sub-metering to the trade waste generating area.

D. UU has the sole discretion to determine whether the discharge complies with its Sewer Acceptance Criteria without pre-treatment.

4.3 When Basic Pre-Treatment is Deemed to Comply

Refer to TWEMP section 8.3

A. Where business types listed in Appendix A properly install and maintain a correctly sized and authorised pre-treatment device as nominated, their discharge is deemed to comply with the billing parameters of the UU Sewer Acceptance Criteria, provided the discharge does not exceed a flow of 25 kL/day or a mass load of 25 kg/day BOD.

4.4 Where Food Service Businesses Require Pre-Treatment

Refer to TWEMP section 8.5

A. Licensable Food Service Businesses (as per section 48 of the Food Act 2006) that are:

   a) permanently connected to sewer; and

   b) generate more than 250 L/day of Trade Waste

   must install a properly sized and authorised passive grease arrestor, unless otherwise agreed in writing by UU.

4.5 When a Required Grease Arrestor cannot be Installed

Refer to TWEMP section 8.6

A. UU may, at its sole discretion, agree to suspend the requirement for an authorised passive grease arrestor where:

a) a request and justification is made in writing by a qualified registered engineer or hydraulic consultant representing the applicant (write to trade.waste@urbanutilities.com.au); and

b) the justification for suspension of the requirement includes that the Premises:

   i) is heritage listed and constrained for that reason; or

   ii) there is insufficient access, space or drainage fall to install an arrestor; and

c) the Approval Holder shall be required to install and maintain a properly sized and authorised active Grease Arrestor.

4.6 Sizing of Basic Pre-Treatment Devices

Refer to TWEMP section 8.7

A. Passive grease arrestors must be properly sized in accordance with the FFOG Guideline.

B. Existing non-compliant passive grease arrestors need not be replaced retrospectively, except where required by UU at their sole discretion.

C. The minimum capacity for new or replacement basic pre-treatment devices (passive grease arrestors and oil silt traps) is 1000 L.

D. The maximum allowable capacity of any individual basic pre-treatment device (passive grease arrestor and oil silt traps) is 5000 L.

E. UU may, at its sole discretion, consent to non-standard passive grease arrestor sizing if a request and justification is made in writing by a registered professional engineer or qualified hydraulic consultant representing the applicant (write to trade.waste@urbanutilities.com.au).

F. UU does not specify minimum pre-treatment capacity allocations for new developments where tenancy/occupiers are unknown.

G. Where a premise has an undersized grease arrestor and a redevelopment of the kitchen or an additional fitout results in a peak flow that exceeds the capacity of the grease arrestor, an appropriately sized grease arrestor will need to be retro-fitted.

4.7 Risk Methodology within the FFOG Guideline (for grease arrestors only)

Refer to TWEMP section 8.8

A. Section 1.2 of the FFOG Guideline allows UU to describe its methodology for assessing food-based risk in the sizing of Grease Arrestors.

B. In conjunction with the categorisation of food-based risk described in section 1.2, Table 2, of the FFOG Guideline, UU applies a risk methodology as follows:

Step 1: Calculate the food-based risk

Risk Rating	Low Risk	Medium Risk	High Risk
Food Preparation	1	2	3
Products	1	2	3
Serving	1	2	3
RISK TOTAL	**= Σ RR_{FP} + RR_P + RR_S**		
3 to 4	Indicates LOW RISK (x 1)		
5 to 7	Indicates MEDIUM RISK (x1.5)		
8 to 9	Indicates HIGH RISK (x 2)		

Where:

RR_{FP} = Risk rating for food preparation

RR_P = Risk rating for Products

RR_S = Risk rating for Serving

As defined in FFOG Guideline section 1.2, Table 2.

Step 2: Apply the temperature risk

Temperature Risk Category			
Risk Rating	**Low Risk**	**Medium Risk**	**High Risk**
Characteristic of Temperature Risk	Overall Risk Ranking remains the same as the food-based risk assessment	N/A	Increase the overall Risk Ranking one level from the food-based risk assessment

Step 3: Multiply total volume of fixtures by Risk Ranking (Storage Factor)

5. MANAGING STORMWATER AND OTHER PROHIBITED WATERS

A. The discharge of Stormwater and surface water (run-off) into the UU sewerage system is prohibited. The Approval Holder must ensure that the incidence of Stormwater discharge via trade waste drainage, including that caused by design, method of construction, or connection, is strictly controlled and kept to a minimum.

B. To prevent Stormwater ingress from open trade waste generating areas, acceptable solutions are provided in 5.2 to 5.4.

5.1 Roofing and Overhang

Refer to TWEMP section 10.1

A. A roof which has sufficient overhang, outwards from the vertical above either a bund wall or the ground contour grading apex, to prevent Stormwater incursion into the trade waste generation area. The minimum roof overhang required is a length equal to 25% of the height of the roof from the finished ground level.

B. Where partially sheeted above ground level, the roof overhang required is a length equal to 25% of the height of the open wall space.

5.2 Demand Driven Diversion System

Refer to TWEMP section 10.2

A. Wastewater from wash bays may be discharged as trade waste via a demand driven diversion system provided it is pre-treated to meet Sewer Acceptance Criteria.

B. Diversion systems used in connection with the sewerage system must be manufactured in accordance with Australian Standard ATS 5200.0465 and carry the Watermark Symbol.

C. When the trade waste generating activity (e.g. wash-down) ceases, the system must automatically close the trade waste drainage and divert any Stormwater to stormwater drainage.

D. UU may require a compliant trade waste flow meter to be installed (refer to 6.2).

E. The Approval Holder must ensure that an accredited testing agency (or an agent of the manufacturer) inspects and certifies the correct operation of the system annually.

F. The Approval Holder must hold all inspection certificates at the site and make these available to UU on request.

G. The Approval Holder must ensure the diversion system is maintained in good operating condition at all times.

5.3 First-flush Diversion System

Refer to TWEMP section 10.3

A. First-flush water resulting from the first 10 mm of rainfall in an unroofed trade waste generating area is deemed to be trade waste. Such trade waste may be discharged to sewer no sooner than 24 hours after any significant rainfall event (i.e. in excess of 5 mm), provided it has been treated to meet Sewer Acceptance Criteria.

B. First-flush water from non-trade waste generating areas, such as roofs, stormwater infrastructure, parks and gardens is not trade waste and must not be discharged to sewer.

C. The system design must ensure that adequate first-flush capacity is maintained during normal trade waste generating activities.

D. A compliant trade waste flow meter must be installed to measure the volume of trade waste discharged to the sewerage system (see 6.2). Where the Approval Holder fails to install or maintain a meter in good operating condition, UU may apply charges equivalent to discharge of the volume of stormwater generated from the trade waste generating area and the Brisbane long-term average annual rainfall (i.e. 1.011 m x area in m^2).

5.4 Prohibited Waters Management Plan

Refer to TWEMP section 10.4

A. UU may request an Approval Holder to prepare and provide to UU a management plan (a Prohibited Waters Management Plan) describing the methods by which prohibited forms of water are prevented from entering the site trade waste drainage and the sewerage system.

B. Prohibited waters include: floodwater, Stormwater, roof water, subsoil water and surface water.

5.5 Collecting Stormwater for Use in Trade Waste Generating Activities

Refer to TWEMP section 10.5

A. Where Stormwater (or another alternative water source) is used to supply trade waste generating activities, the system must employ:

   a) a compliant trade waste effluent flow meter (refer to requirements for direct meters); or

   b) include sub-metering of input water supplied to trade waste generating areas.

B. Where the Approval Holder fails to install or maintain a meter in good operating condition as required in A above, UU may estimate the discharge volume from the stormwater collection area (e.g. roof area) multiplied by the Brisbane long-term average annual rainfall (i.e. 1.011 m x area in m^2).

C. Under the Water Supply Act, excess Stormwater collected during major rain events (i.e. that cannot be stored for later use or directly used in trade waste generating activities) must not be disposed to sewer[2].

D. Where Stormwater is used in trade waste generating activities, diversion, treatment and disposal options for excess Stormwater will need to be detailed in the Trade Waste Approval application.

6. METERING

6.1 Direct (Trade Waste) Metering

Refer to TWEMP section 11.2

A. Unless otherwise specified in the trade waste approval, the Approval Holder shall install a compliant trade waste (effluent) meter on their trade waste drainage if:

   a) the Approval Holder's approved discharge is greater than 25 kL/day; or

   b) the Approval Holder's mass load discharge of BOD is greater than 25 kg/day.

B. UU may require the installation of a compliant trade waste meter at any site where, at its sole discretion, UU decides:

   a) the indirect method of flow measurement is not applicable to the site (e.g. due to seasonal irrigation or air conditioning demands); or

   b) there is a need to understand the volume and flow rate characteristics of a customer in greater detail than is available from the indirect method of measurement; or

   c) the use of an alternative water supply to the trade waste generating area causes inaccuracy in the indirect measurement of trade waste volume.

C. An Approval Holder may install a compliant trade waste meter and, at the Approval Holder's request, UU will read and use that meter for billing purposes.

6.2 Requirements for Direct (Trade Waste) Meters

Refer to TWEMP section 11.2.1

A. A compliant trade waste meter shall:

   a) be of a mag-flow type listed in the SEQ Water Supply and Sewerage Design and Construction Code (Accepted Products and Materials for Electrical Installations);

   b) be installed, maintained and calibrated in accordance with the WSAA Trade Waste Metering Code of Practice (WSA 15 - 2014);

   c) be safely accessible to UU meter readers during normal business hours, and the meter and meter display must be located in accordance with accessibility requirements described in the Queensland Plumbing and Wastewater Code;

[2] Water Supply Act, section 193(2).

d) provide readout of the totalised volume of the trade waste discharged; and

e) be owned by the Approval Holder and installed, maintained and calibrated at the Approvals Holder's expense.

B. Records of meter maintenance and calibration shall be kept in accordance with Section 11 of the UU TWEMP.

APPENDIX A: SUPPORTING INFORMATION

A.1 Basic Pre-Treatment Requirements by Business Type

Table 1: Basic pre-treatment requirements by business type

All passive grease arrestors must be of an authorised type, properly sized and maintained in accordance with the National Guideline for Managing FFOG (Foods, Fats, Oils and Grease) from Food Premises (WSAA 2018)	
Workshops	**Basic Pre-treatment Requirements**
Mechanical workshop	Oil silt arrestor
Food service	**Basic Pre-treatment Requirements**
Bakery (retail)	Passive grease arrestor
Butcher (retail)	Passive grease arrestor; in-sink and floor waste basket traps of self-closing or fixed screen type
Food Service Business Restaurant, café, coffee shop, takeaway	Passive grease arrestor
Food Service Business **Café, coffee shop** No Food Licence or <250 L/d	No pre-treatment required
Commercial kitchen Hotel, motel, function centre, hospital	Passive grease arrestor; in-sink and floor waste basket traps of self-closing or fixed screen type; waste minimisation plan
Community hall kitchens No Food Licence or <250 L/d	No pre-treatment required
Community hall kitchens	Passive grease arrestor
Delicatessen No Food Licence or <250 L/d	No pre-treatment required
Fresh fish (retail) No Food Licence or <250 L/d	No pre-treatment required
School canteen No Food Licence or <250 L/d	No pre-treatment required
School canteen or kitchen	Passive grease arrestor
Food manufacturing/processing	**Basic Pre-treatment Requirements**
Food manufacturing – minor (<10 kL/day discharge)	Passive grease arrestor; in-sink and floor waste basket traps of self-closing or fixed screen type; waste minimisation plan
Micro Brewery	Basket traps of self-closing or fixed screen type

All passive grease arrestors must be of an authorised type, properly sized and maintained in accordance with the National Guideline for Managing FFOG (Foods, Fats, Oils and Grease) from Food Premises (WSAA 2018)	
	settling pit; pH correction may be required
Service industries	**Basic Pre-treatment Requirements**
Beautician / hairdressing salon	No pre-treatment required; no discharge through passive grease arrestor.
Laundry Coin operated only (not commercial)	No pre-treatment required
Funeral parlour	No pre-treatment required
School science laboratory	Authorised silt trap or dilution chamber with a capacity greater than the peak hourly flow (L/hr); neutralisation chamber may be required
School art studio / block	Silt arrestor with a capacity greater than the peak hourly flow (L/hr)
Veterinary practice/hydro baths/pet shops No discharge of regulated waste	No pre-treatment required; basket trap in discharge being of self-closing or fixed screen type, sand filters (where required)
Care facilities	**Basic Pre-treatment Requirements**
Day care centre meals not provided or meals provided from external supplier	No pre-treatment required
Day care centre meals are provided and prepared on-site	Passive grease arrestor
Nursing home kitchen	Passive grease arrestor
Retirement village kitchen	Passive grease arrestor
Commercial process	**Basic Pre-treatment Requirements**
Bin wash Associated with commercial premises	Basket trap in floor waste of self-closing or fixed screen type
Carwash Roofed and bunded	Oil silt arrestor; basket trap in floor waste of self-closing or fixed screen type
Cooling tower condensate and blow-down	No pre-treatment required
Boiler blow-down or wastewater	No pre-treatment required
Refrigeration condensate	No pre-treatment required

A.2 Peak Hourly Flow Allowances for Fixtures and Fittings

Manufacturer specifications for water usage rate shall over-ride estimates where made available.

Table 2: Peak hourly flow allowances for fixtures and fittings

Fixture/Fitting Type	Peak Hourly Flow Allowance
Bain Marie - water heated	50 L/hr
Bratt Pan	100 L/hr
Cleaners' sink	50 L/hr
Dishwasher - tunnel feed	300 L/hr
Dishwasher - large	120 L/hr
Dishwasher - domestic (under bench)*	30 L/hr
Floor waste/bucket trap/grated strip drain	50 L/hr per 50m^2 of floor area, or part thereof.
Glass washing machine	30 L/hr
Hand basin	50 L/hr
Laboratory sink	No allowance but minimum trap required
Noodle cooker	100 L/hr
Combi oven / Steamer roast oven	150 L/hr up to 40 racks
Kettle electric or gas / steamer cooker	100 L/hr
Sink - utility / pot (depth greater than 300mm)	150 L/hr
Sink – single bowl (depth up to 300mm)	75 L/hr
Sink – double bowl	150 L/hr
Tundish – condensate (refrigerator / freezer)	3 L/hr
Wok burner – dry	20 L/hr
Wok burner – wet (traditional)	200 L/hr

***Note:** where practical, dishwashers and glasswashers should be plumbed around the passive grease arrestor.

*Note: (RPZ tundishes no longer need to be included on the schedule of fixtures and fittings, allow 3L/s each for all other tundishes)

A.3 Example of Passive Grease Arrestor Loading Table

Table 3: Example of a passive grease arrestor loading table to be supplied on hydraulic plans

Proposed New GIT - 2000L Make XXXX QUU Authorised Product #

Tenancy	Fixture	Qty	Peak Flow per unit	Total Peak Flow L/hr	Loading L/hr	
Tenancy 1	Sink Single	1	75	75		
Café	Hand Basin	1	50	50		
	Tundish	1	3	3	128	
Risk Ranking (Storage Factor): Medium					x 1.5	Multiplier
Total Volume of fixture x Risk Ranking (Storage Factor)					**192**	
Tenancy 2	Sink Single	1	50	50		
Restaurant	Double Sink	1	150	150		
50 Seat	Hand Basin	1	50	50		
	Tundish	2	3	6		
	Combi Oven	1	150	150		
	Dishwasher Large	1	120	120		
	Bain Marie	1	50	50		
	Floor Waste	1	50	50	626	
Risk Ranking (Storage Factor): Medium					x 1.5	Multiplier
Total Volume of fixture x Risk Ranking (Storage Factor)					**939**	
			Fixture Total		1131	
Plus Temerapture Risk Factor		< 50 % High Temp		Remains Same	1	Multiplier
Grease Arrestor Loading.					**1131**	
Grease Arrestor Size					2000	
Spare Capacity					869	