Liquid Trade Waste Procedure

1 Purpose

Sewerage systems are generally designed to cater for wastewater from domestic sources, which are essentially of predictable strength and quality. Liquid trade wastes by comparison, may exert greater demands on sewerage systems and if uncontrolled, can cause serious problems to the sewerage system or the environment.

2 Scope

Liquid trade wastes generated by industry, small businesses, commercial enterprises, etc are often referred to as trade wastes. Trade wastes require permission from the relevant authority to be discharged directly to the environment, e.g., receiving waters, onto land or into sewers. This document is concerned with liquid trade wastes discharged into the City of Coffs Harbour's owned sewerage systems. Liquid trade waste is defined in the Local Government (General) Regulation 2021 as; *Liquid Trade Waste means all liquid waste other than sewerage of a domestic nature.*

3 Liquid trade waste discharges to the sewerage system include liquid wastes discharged from:

a) Business/commercial premises (e.g., hairdresser, hotel, motel, restaurant, butcher, service station, supermarket, dentist).

b) Community/public premises (including craft club, school, college, university, hospital, and nursing home)

c) Industrial premises.

d) Trade activities.

e) Any commercial activities carried out at residential premises.

f) Sale yards, racecourses and from stables and kennels not associated with domestic households.

g) Septic tank waste, chemical toilet waste, waste from marine pump-out facilities and established sites for the discharge of pan content from mobile homes/caravans to the sewerage system.

h) Those conducting an activity of transporting and/or discharging septic tank or pan waste content into the sewerage system.

i) Any other waste tankered to the sewerage facilities, e.g. commercial or industrial waste from un-sewered areas.

3.1 Liquid Trade Waste excludes:

a) Toilet, hand wash basin*, shower and bath wastes derived from all the premises and activities mentioned above

b) Wastewater from residential toilets, kitchens, bathrooms or laundries (I e. domestic sewage).

c) Common use (non-residential) laundry facilities in a caravan park; however discharges from common kitchen facilities in caravan parks are liquid trade waste.

d) Residential swimming pool backwash.

* Used for personal hygiene only

4 Criteria For approval to discharge liquid trade waste into the City of Coffs Harbour's sewerage system

4.1 Factors for consideration

The City of Coffs Harbour's decision to accept liquid waste into its sewerage system will be based on the discharger satisfying City requirements. Therefore, when determining an application to discharge liquid waste to the sewerage system, the following factors will be considered:

a) The adequacy of the pre-treatment process(es) to treat the liquid trade waste to a level acceptable for discharge to the sewerage system, including proposed contingency measures in an event of the pre-treatment system failure.

b) The capability of the sewerage system (reticulation and treatment components) to accept the quantity and quality of the proposed liquid waste.

c) The adequacy of chemical storage and handling facilities, and the proposed safeguards for prevention of spills and leaks entering to the sewerage system.

d) The adequacy of the proposed due diligence program and contingency plan, where required.

e) Proposed management of prohibited substances and other liquid waste not planned to be discharged to the sewerage system and safeguards to avoid any accidental discharge.

f) The potential for stormwater entering the sewerage system and adequacy of proposed stormwater controls.

g) The potential for growth of the community

4.2 Discharge quality

The City's acceptance limits for liquid trade waste discharges are set out in Table 1. These limits are consistent with the acceptance limits specified in the *NSW Liquid Trade Waste Management Guidelines*, 2021.

Table 1: Acceptance limits for liquid trade waste into the sewerage system

Parameter	Limits
Flow Rate	The maximum daily and instantaneous rate of discharge (kL/h or L/s) is determined based on the available capacity of the sewer. Large discharges are required to provide a balancing tank to even out the load on the sewage treatment works.
BOD_5	Normally approved at 300 mg/L. Concentrations up to 600 mg/L may be accepted.
Suspended solids	Normally approved at 300 mg/L. Concentrations up to 600 mg/L may be accepted.
COD	Normally, not to exceed BOD_5 by more than three times. This ratio is given as a guide only to prevent the discharge of non-biodegradable waste.
Total Dissolved Solids	Up to 4000 mg/L may be accepted. The acceptance limit may be reduced depending on available effluent disposal options and may be subjected to a mass load limit.
Temperature	Less than 38°C.
pH	Within the range 7.0 to 9.0.

Parameter	Limits
Oil and Grease	100 mg/L if the volume of the discharge does not exceed 10% of the design capacity of the treatment works and 50 mg/L if the volume is greater than 10%.
Detergents	All detergents are to be biodegradable. A limit on the concentration of 50 mg/L (as MBAS) may be imposed on large liquid trade wastes discharges.
Colour	Colour must be biodegradable. No visible colour when diluted to the equivalent dilution afforded by domestic sewage flow. Specific limits may be imposed on industrial discharges where colour has a potential to interfere with sewage treatment processes and the effluent management.
Radioactive Substances	If expected to be present (e.g. Iodine 131 from ablation), acceptance requirements will be set on a case-by-case assessment.

Acceptance limits for inorganic and organic compounds		Maximum concentration (mg/L)
Inorganic compounds	Ammonia (as N)	50
	Boron	5
	Bromine	5
	Chlorine	10
	Cyanide	1
	Fluoride	30
	Nitrogen (total Kjeldahl)	100
	Phosphorus (total)	20
	Sulphate (as SO_4)	500
	Sulphide (as S)	1
Organic compounds	Benzene	< 0.001
	Toluene	0.5
	Ethylbenzene	1
	Xylene	1
	Formaldehyde	30
	Phenolic compounds non-halogenated	1
	Petroleum Hydrocarbons C_6-C_9 (flammable) Total Recoverable Hydrocarbons (TRH)	 5 30
	Pesticides general (except organochlorine and organophosphorus)	0.1

Acceptance limits for inorganic and organic compounds		Maximum concentration (mg/L)
	Polynuclear Aromatic Hydrocarbons (PAH)	5

Acceptance limits for metals	Maximum concentration (mg/L)	Allowed daily mass limit (g/d)
Aluminium	100	-
Arsenic	0.5	2
Cadmium	1	5
Chromium[1]	3	10
Cobalt	5	15
Copper	5	15
Iron	100	-
Lead	1	5
Manganese	10	30
Mercury	0.01	0.05
Molybdenum	5	15
Nickel	1	5
Selenium	1	5
Silver	2	5
Tin	5	15
Zinc	1	5
Total heavy metals excluding aluminium, iron and manganese	Less than 30 mg/L and subject to total mass loading requirements	

Notes:

1. *Acceptance limits for substances not listed in above Tables will be determined on a case-by-case basis.*
2. *The quality of liquid trade waste from some low-risk commercial activities in Classification A and B will exceed acceptance limits listed in above Tables. As a higher level of pre-treatment is not cost-effective, such waste is acceptable if the discharger installs, maintains and properly operates the required on-site pre-treatment. Similarly, septic and pan waste may exceed some acceptance limits.*

[1] Where hexavalent chromium (Cr^{6+}) is present in the process water, pre-treatment will be required to reduce it to the trivalent state (Cr^{3+}), prior to discharge into the sewer.

4.3 Prohibited or restricted substances and waste

Substances prohibited from being discharged into the sewerage system unless they are specifically approved under section 68 of the Act are listed below.

Table 1: Waste Prohibited from discharge to the sewerage system.

- Organochlorine weedicides, fungicides, pesticides, herbicides and substances of a similar nature and/or wastes arising from the preparation of these substances
- Organophosphorus pesticides and/or waste arising from the preparation of these substances.
- Per- and poly-fluoroalkyl substances (PFAS).
- Any substances liable to produce noxious or poisonous vapours in the sewerage system.
- Organic solvents and mineral oil[#]
- Any flammable or explosive substance[#]
- Discharges from 'Bulk Fuel Depots'.
- Discharges from chemicals and/or oil storage areas.
- Natural or synthetic resins, plastic monomers, synthetic adhesives, rubber and plastic emulsions.
- Roof, rain, surface, seepage or ground water, unless specifically permitted (clause 137A of the Local Government (General) Regulation 2021).
- Solid matter[#]
- Disposable products including wet wipes, cleaning wipes, colostomy bags, cat litter and other products marketed as flushable.
- Any substance assessed as not suitable to be discharged into the sewerage system.
- Liquid waste that contains pollutants at concentrations which inhibit the sewage treatment process.
- Any other substances listed in a relevant regulation.

[#] In excess of the approved limit

4.3.1 Other substances/discharges either prohibited or restricted:

a) Stormwater from open areas.

b) Contaminated groundwater.

c) Landfill leachate.

d) Discharge from float tanks.

e) Discharge from new service station forecourts and other refuelling points.

f) Discharge of liquid waste arising from liquefaction and/or pulverisation of solid waste by physical or chemical processes (e.g., garbage grinders/in-sinkerators, macerators, alkaline hydrolysis).

g) Discharge from solid food waste processing units (digesters/composters, etc.)

h) Use of additives in pre-treatment systems

4.3.2 Discharge of Contaminated Stormwater from Open Areas

Stormwater is a prohibited discharge under this policy and relevant regulation (refer to Table 2). The ingress of stormwater into the sewerage system can cause operational problems to the system and result in sewer overflows, as the sewerage system does not have the capacity for such flows. Therefore, the City does not generally accept the discharge of stormwater to the sewerage system.

However, it is recognised that it may not always be possible or practical to prevent all stormwater entering the sewerage system at some liquid trade waste premises. The discharge of limited quantities of first flush water from such areas will be considered where roofing cannot be provided because of safety or other important considerations.

Before the stormwater will be considered for discharge to the sewerage system, the applicant must provide the following information:

a) Reasons why the area cannot be fully or partially roofed and bunded to exclude rainwater.

b) The dimensions and a plan of the open area under consideration.

c) The estimated volume of the stormwater discharge.

d) Information on rain gauging.

e) Where a first-flush system is proposed, details on how the stormwater will be diverted to the drainage system after the first flush is accepted (the first- flush to be limited to first 10mm of storm run-off).

f) Measures proposed for diverting stormwater away from the liquid trade waste generating area; and

g) Report on other stormwater management options considered and why they are not feasible.

4.3.3 Discharge of Contaminated Groundwater

Similar to stormwater, discharge of groundwater or seepage water to a sewerage system is prohibited under clause 137A of the Local Government (General) Regulation. Accordingly, groundwater extracted during construction activities (for example from building/road construction, vacuum excavation, mining/exploration works, etc.) is not permitted to discharge into the City's sewerage system directly or indirectly. However, groundwater previously contaminated by human activities (such as service station remediation sites) may be considered for discharge to the sewerage system. Limited quantities of groundwater from remediation projects may be accepted under controlled conditions after appropriate pre-treatment, for a limited period.

4.3.4 Discharge of landfill leachate

The discharge of leachate from municipal waste landfills to the sewerage system may be considered under controlled conditions, if there is no other viable option of managing this waste and the discharge is within the City's acceptance limits.

The proponent when seeking approval to discharge leachate to sewer needs to demonstrate that a sound stormwater management plan has been developed and implemented. The plan needs to address:

a) segregation of potentially contaminated areas from uncontaminated areas.

b) prevention of surface runoff entering leachate collection ponds/dams and to City sewerage system.

c) appropriate pre-treatment to meet City's acceptance limits.

Only the excess leachate after on-site management within the premise will be considered for sewer discharge if it meets City acceptance criteria. On-site pre-treatment to reduce ammonia levels (and other substances, e.g. PFAS) may also be required.

4.3.5 Discharge from float tanks

Float tanks, often referred to as floatation pods, iso-pods (isolation tank), sensory deprivation systems, or REST tanks (restricted environmental stimulation therapy tanks) are typically small, enclosed pods containing about 1,000 litres of water. This water usually contains large quantities of Epsom salts (300 - 700 kg of magnesium sulphate), resulting in total dissolved solids concentration up to 700,000 mg/L.

Discharge of such water to sewer is not permitted due to potential adverse impacts associated with the high salt content on the sewer infrastructure and treatment processes. It is also not appropriate to dispose of such waste to septic tanks or on-site soak wells.

If wastewater is proposed to be transported away for off-site management, the operator of such facilities must provide details of liquid waste transporters and written verification from the receival facilities acknowledging and agreeing to receive such wastewater.

4.3.6 Discharge from Service station forecourts and other refuelling points

a) New premises

The discharge of wastewater from service station forecourts and other refuelling points (e.g. at bus depot, etc.) is not permitted.

Refer to NSW EPA Practice Note, titled *Managing Run-off from Service Station Forecourts*, June 2019, for options for managing such wastewater.

b) Existing Premises

The discharge from existing service stations and other refuelling areas may be permitted, provided appropriate pre-treatment and discharge control requirements are adhered to. Further information is provided in Chapter 3 and Appendix F of the Liquid Trade Waste Management Guidelines 2021.

If a refuelling area is refurbished, then the discharge from this area must be disconnected from the sewerage system.

4.3.7 Discharge of liquid waste arising from liquefaction and/or pulverisation of solid waste by physical or chemical processes (e.g. garbage grinders/in-sinkerators, macerators, alkaline hydrolysis).

The wastewater arising from liquefaction or pulverisation of solid waste by physical (e.g. pulping, macerating) or chemical means (e.g. dissolving solid waste in highly acidic or alkaline solutions) is not permitted to be discharged to the sewerage system. Accordingly, discharges from the following devices/processes are not permitted:

Macerators or similar devices that pulverise solid waste. Solid waste includes, but not limited to sanitary napkin, placenta, surgical waste, disposable nappy, mache bedpan/urine containers, food waste, disposable products and animal waste (dog/cat faeces, cat litter).

Food waste disposal units**,** also known as in-sink food waste disposers or garbage grinders in commercial premises. Discharges from existing installations in hospitals and nursing homes may be permitted, provided that wastewater is discharged through an adequately sized grease arrestor (additional charges will be applied). If the kitchen is refurbished, the food waste disposal unit must be removed.

Alkaline hydrolysis waste**,** process where a human or animal tissue is broken down using alkaline solutions at elevated temperatures and pH. The process may be used in animal care facilities, veterinary premises, animal research laboratories, funeral parlours etc. The generated wastewater is of a high strength and may exhibit high loadings on the sewerage system. Accordingly, the wastewater generated by this process is **not** permitted to be discharged to the sewerage system.

4.3.8 Discharge from solid food waste processing units (digesters/composters, etc.)

Discharge from a solid food waste processing unit (digesters/composters, etc) to a City sewerage system is a Concurrence Classification C discharge (ie. Charging Category 3), hence the City needs to obtain concurrence to its approval from the Department for individual applications.

The quality of wastewater from this equipment depends on the type of solid waste fed into it and the effectiveness of the on-site pre-treatment, hence frequent sampling will be required for monitoring and charging purposes. Sampling needs to be undertaken by either a City officer or an independent party acceptable to the City.

Appropriate on-site pre-treatment needs to be provided prior to combining with any other liquid waste stream that discharges to the City's sewerage system.

Each application will be assessed on a case-by-case basis.

4.3.9 Use of additives in pre-treatment systems

The City does not allow solvents, enzymes, bioadditives and odour control agents to be used in pre-treatment systems (except neutralising chemicals designed for the pre-treatment) except by specific written application and subsequent approval.

4.3.10 Discharge of disposable products marketed as flushable

Any disposable solid products including those marketed as "flushable" (e.g. wet wipes, cleaning wipes, cat litter, etc.) is not permitted to flush down the sewerage system.

Contrary to manufacturers' claims, flushable wet wipes do not breakdown in the sewerage system similarly to a toilet paper and may cause blockages within the premises or in the City's sewerage system and may cause raw sewage overflow to the environment.

5 Sewerage and Liquid Trade Waste Fees and Charges

The City provides sewerage and liquid trade waste services on a commercial basis to non-residential dischargers, with full cost recovery through sewerage and liquid trade waste fees and charges. The City implements best practice pricing for non-residential sewerage and liquid trade waste services to ensure that dischargers bear a fair share of the cost of providing sewerage services and to facilitate appropriate pre-treatment, waste minimisation and water conservation. Accounts for annual liquid trade waste fee will be forwarded as part of the general rate notice. Liquid trade waste usage charge will be on the water bill.

All other charges such as re-inspection fee, excess mass charge, will be forwarded by an account from the City. The amount thereof shall be a debt due by the owner and in the event of default, shall thereafter bear interest at such rate per centum by per annum as shall be fixed by the City resolution. The amount owing, including interest, shall be recoverable in the same manner as general rates and shall until paid, be a charge on the land, and in addition may be recovered as a debt from any subsequent owner.

The current sewerage and liquid trade waste fees and charges are provided on the City's website. The City's liquid trade waste fees and charges may include:

a) General fees and charges (application fee, annual liquid trade waste fee, inspection and/or re-inspection fees and renewal fee)

b) Category specific charges (trade waste usage charges for Charging Category 2 discharges, excess mass charges for Charging Category 3 discharges, charges for Charging Category 2S discharges and non-compliance charges)

c) Other charges related to the nature of waste (e.g. charges for the discharge of stormwater from large areas)

5.1 Liquid trade waste charging categories

There are 4 liquid trade waste charging categories:

Category 1 – discharges requiring minimal pre-treatment, or prescribed pre-treatment but low impact on the sewerage system. These dischargers will only pay an annual fee. If pre-treatment equipment is not provided or maintained, non-compliance charges will be applied. Category 1 liquid trade waste dischargers are those conducting an activity deemed by the City as requiring nil or only minimal pre-treatment equipment and whose effluent is well defined and of a relatively low risk to the sewerage system. Also included are Classification A or B activities with prescribed pre-treatment but low impact on the sewerage system.

Classification A discharges – commercial retail food preparation activities that do not generate or generate minimal oily/greasy waste: bakery (only bread baked on-site), bistro (sandwiches, coffee only), boarding/hostel < 10 persons, café/coffee shop/coffee lounge (no hot food), canteen/cafeteria (no hot food), community hall/civic centre (minimal food), day care centre (minimal hot food), delicatessen (minimal or no hot food), fruit and vegetable shop, hotel/motel (minimal hot food), ice cream parlour (take away only), juice bar, mobile food van (no hot food), mixed business (minimal hot food), nightclub (no hot food), nut shop, pie shop (re-heating only), pizza no cooking/reheating (pizza heated and sold for consumption off-site), potato peeling (small operation), sandwich shop/salad bar/snack bar (no hot food), take away food outlet (no hot food), school canteen with minimal hot food.

Classification A discharges from other commercial activities: animal wash, beautician/tanning booths/hairdressing, crafts ≤ 1,000 L/d, dental surgery/dental technician (plaster casts), dry cleaning, florist, funeral parlour, jewellery shop, medical centre/physiotherapy (plaster casts), mobile cleaning units, morgue, optical service, pet shop, plants retail (no nursery), non-residential swimming pool/hydrotherapy, veterinary.

Classification A or B discharges with prescribed pre-treatment and low impact on the sewerage system: boiler blowdown, cooling tower, industrial boilers, laboratory (analytical/pathology/tertiary institution), laundry/laundromat, primary and secondary school[2], vehicle washing/detailing (excluding truck washing).

Category 2 – dischargers are those conducting an activity deemed by the City as requiring a prescribed type of liquid trade waste pre-treatment equipment and whose effluent is well characterised. These dischargers will pay trade waste usage charge and annual trade waste fee. If pre-treatment equipment is not provided or not maintained, then such dischargers will be required to pay non-compliance usage charge. Also included are Classification A or B activities with prescribed pre-treatment.

Classification A discharges – commercial retail food preparation/serving activities that generate oily/greasy waste: bakery (pies, sausage rolls, quiches, cakes, pastries with creams or custards),

[2] If significant hot food preparation is carried out, Category 2 charges may be levied by the City.

bistro, boarding house/hostel kitchen (exceeding 10 persons), butcher, café/coffee shop/coffee lounge (with hot food), cafeteria/ canteen (with hot food), chicken/poultry shop –fresh/roast, retail BBQ/charcoal chicken, day care centre with hot food, club, civic centre/community hall[3], commercial kitchen/caterer, delicatessen with hot food, fast food outlet, fish shop (retail and cooking on-site), function centre, hotel, ice cream parlour, mixed business (hot food), mobile food van (base), motel, nightclub, nursing home, patisserie, pizza cooking, restaurant, sandwich shop/salad bar/snack bar (with hot food), supermarket, take away food outlet with hot food, school canteen with hot food.

Classification A discharges – other commercial discharges: car detailing, craft activities > 1000 L/d, lawnmower repairs, mechanical workshop, stone working, surfboard manufacture (wet process only).

Classification B discharges: auto dismantler, bus/coach depot, bakery (wholesale), butcher(wholesale) construction equipment maintenance and cleaning, boutique or artisan foods, engine reconditioning, equipment hire, maintenance and cleaning, fish co-op, graphic arts, hospital, micro-brewery, oyster processing – shucking, panel beating, radiator repairer, screen printing, service station forecourt, shopping complex, truck washing (platforms/flat beds) and truck washing (external).

Category 3 – large (>20 kL/d) and industrial discharges (excluding shopping centres and institutions). Such dischargers will pay excess mass charges. If the discharge fails to comply with the City's acceptance limits, dischargers will be required to pay non-compliance excess mass charges and pH charges.

Classification C discharges include: abattoir, acid pickling, adhesive/latex manufacture, agricultural and veterinary drugs, anodising, bitumen and tar, bottle washing, brewery, cardboard and carton manufacture, carpet manufacture, caustic degreasing, chemicals manufacture and repackaging, contaminated site treatment, cooling towers, cosmetics/perfumes manufacture, cyanide hardening, dairy processing* (milk/cheese/yoghurt/ice cream, etc.), detergent/soaps manufacture, drum washing, egg processing, electroplating, extrusion and moulding (plastic/metal), feather washing, fellmonger, felt manufacture, fertilisers manufacture, fibreglass manufacture, filter cleaning, foundry, food processing* (cereals/cannery/condiments/confectionary/edible oils/fats/essence/flavours/fish/fruit juice/gelatine/honey/meat/pickles/smallgoods/tea and coffee/vinegar/yeast manufacture, etc.), food waste processing unit (digester/composter), fruit and vegetable processing, flour milling, galvanising, glass manufacture, glue manufacturer, ink manufacture, laboratories (excluding those in Category 1 & 2), liquid wastewater treatment facility (grease trap receival depot and other pump-out waste depot), metal finishing, metal processing (refining/rumbling/non-cyanide heat treatment/phosphating/photo engraving/printed circuit etching/sheet metal fabrication etc.), mirrors manufacture, oil recycling (petrochemical) and refinery, paint stripping, paint manufacture, paper manufacture, pet food processing, plants nursery (open areas), pharmaceuticals manufacture, plaster manufacture, powder coating, potato processing, poultry processing, printing (newspaper, lithographic), saleyards, sandblasting, seafood processing, slipway, soft drink/cordial manufacture, starch manufacture, sugar refinery, tanker washing, tannery, timber processing (joinery and furniture/plywood/hardwood), textile manufacture (wool dyeing/spinning/scouring), tip leachate, transport depot/ terminal, truck washing (internal), waxes and polishes, water treatment backwash, wholesale meat processing, winery, distillery, wine/spirit bottling.

*Excluding small boutique, craft or artisan food industries not exceeding the discharge volume shown in the *NSW Liquid Trade Waste Management Guidelines, 2021*. "

[3] If the type and size of kitchen fixtures installed enable catering for large functions.

Category 2S – transporters who tanker human waste to the City's STWs, owners/operators of ship-to-shore pump out facilities and owners/operators of 'dump points' directly connected to sewer.

These dischargers include: transporters who tanker human waste to the City's STWs - septic tank waste (effluent and septage), ablution block waste (blackwater and greywater), portable toilet waste, sludge from on-site aerated wastewater treatment systems (AWTS) for single households, waste from pit toilets, night soil; ship-to-shore pump out facility owners/operators - toilet waste and/or grey water; owners/operators of 'dump points' directly connected to the sewer for disposal toilet waste and/or grey water from a bus or a recreation vehicle (RV), e.g. caravan, motor home.

Classification S – the acceptance of septic tank, pan waste and ship-to-shore pump-out etc. The City may apply for authorisation to assume concurrence to the approval subject to certain conditions.

Note that these charging categories are different to four classifications that have been established for concurrence purposes:

1. Classification A dischargers fall into Charging Category 2 except for dischargers requiring minimal pre-treatment, or prescribed pre-treatment but low impact on the sewerage system which fall into Category 1
2. Classification B dischargers fall into Charging Category 2, except for a few dischargers with low impact on the sewerage system which fall into Category 1
3. Classification S dischargers fall into Charging Category 2S
4. Classification C dischargers fall into Charging Category 3

5.1.1 Non-compliance liquid trade waste charges

In order to encourage compliance, the City may apply non-compliance trade waste charges. Refer to the City's current Fees and Charges for further details of non-compliance charges for different charging categories.

The City will continue applying non-compliance charges until the discharge meets the City's approved quality (or the liquid trade waste policy) limits, within the timeframe determined by the City for remedying the problem. If the discharger fails to rectify the problem within an agreed timeframe, the discharger may be required to cease discharging liquid trade waste into the City's sewerage system. The City may also consider issuing penalty infringement notice to a non-compliant discharger or may prosecute the discharger.

5.1.2 Other applicable liquid trade waste charges

Additional fees and charges may be levied by the City if wastewater is discharged to the City's sewerage system from the following equipment and or processes, with the City's approval:

- Food waste disposal units (ie. garbage grinders/insinkerators). For existing installations only. New installations are not permitted.
- Solid food waste processing unit.
- Discharge of stormwater to the sewerage system from large open areas or large quantities of groundwater.

5.1.3 Charges for premises with multiple liquid trade waste streams

Examples of premises with multiple waste streams include: Refer to the City's current Fees and Charges for further details

- shopping centres.

- commercial strata units.
- institutions, e.g. hospitals, tertiary educational facilities and correctional centres.
- other premises with multiple waste streams,

Refer to the City's current Fees and Charges for further details

5.1.4 Summary of category specific fees and charges

Table 3: Summery of fees and Charges

Fee/Charge	Category 1	Category 2	Category 3	Category 2S
Application fee	Yes	Yes	Yes	Yes
Approval fee	No	Yes/No[1]	Yes	Yes
Annual non-residential sewerage bill with appropriate sewer usage charge/kL	Yes	Yes	Yes	No
Annual liquid trade waste fee	Yes	Yes	Yes	Variable[2]
Re-inspection fee (when required)	Yes	Yes	Yes	Optional
Trade waste usage charge/kL	No	Yes	No	No
Human waste disposal charge/kL	No	No	No	Yes
Excess mass charges/kg	No	No	Yes	No
Non-compliance trade waste usage charge/kL	Yes[4]	Yes	No	No
Non-compliance excess mass/kg and pH charges/kL (if required)	No	No	Yes	No

Note: Refer to the City's current Fees and Charges for other applicable charges not included in this Table.

5.1.5 Responsibility for payment of fees and charges

Property (land) owners are responsible for the payment of fees and charges for water supply, sewerage and liquid trade waste services. This includes property owners of marinas, caravan parks, dump points located at commercial premises connected to the sewerage system, etc.

Where another party (lessee) leases premises, any reimbursement of the lessor (property owner) for such fees and charges is a matter for the lessor and the lessee.

In relation to tankered human waste, transporters who collect and discharge waste at the STW are responsible for the payment. A waste transporter who tankers liquid trade waste to the STW may pay only the liquid trade waste fees and charges as non-residential sewerage fees are not applicable.

Note that a liquid trade waste discharger (except for tankered waste) pays both the non-residential sewerage charges and liquid trade waste fees and charges.

Under the 'Protection of the Environment Operations Act, 1997, the City could be liable for significant penalties if its effluent discharge is considered to be in breach of the requirements of the Act. Therefore, provision will be made for the recovery of any costs (including penalties,

[1] As required, determined by Classification of business activity.

[2] Annual fee may vary due to location.

[4] Non-compliance trade waste usage charge, if the discharger fails to install or properly maintain appropriate pre-treatment equipment.

compensation, restoration and legal fees) from the person/body whose discharge to sewer caused the breach.

5.2 Liquid Trade Waste Usage Charges

The liquid trade waste usage charge is imposed to recover the additional cost of transporting and treating liquid trade waste from Category 2 dischargers.

TW2 = A2 + QTW × C2

Where:

A2 = Annual liquid trade waste fee ($) for Category 2

QTW = Total liquid trade waste discharge volume (kL)

C2 = Trade waste usage charge ($/kL)

Note: Category 2 dischargers who have **not** installed and maintained **appropriate** pre-treatment facilities will be required to pay a **non-compliance** liquid trade waste usage charge outlined in the City's current Fees and Charges.

5.2.1 Transported human waste

The transporters of human waste will be required to pay a waste disposal charge ($/kL). In addition, the City may apply an annual fee associated with administration and other costs, for example the presence of the City employees during the waste disposal, where appropriate.

TWTW = ATW + QTW × CTW

Where:

ATW = Annual fee ($) for transported waste (if nominated by the City)

QTW = Transported human waste volume (kL)

CTW = Charging rate ($/kL) for the transported waste (may vary based on the type of waste transported)

5.2.2 Waste dump points

Dump points are often located in public places (roadside), hence the monitoring of discharge volumes is not practical. Accordingly, only an annual fee is recommended for stand-alone dump points.

TWDP = ADP

Where:

ADP = Annual fee for dump point ($)

5.2.3 Ship-to-shore waste pump-out facility

The owner/operator of a ship-to-shore waste receival facility will be required to pay an annual fee and waste disposal charge based on the discharge volume ($/kL), if it is practical to estimate the volume. If discharge volume cannot be established, the City may negotiate the waste disposal charge based on the expected discharge volume.

TWSTS = ASTS + QTW × CSTS

Where:

ASTS = Annual fee ($)

QTW = Discharge volume (kL) (measured or negotiated)

CSTS = Charging rate ($/kL)

The above charges are applicable to owners/operators of ship-to shore pump-out facility discharging such waste directly to the City's sewerage system and not to individual or commercial boat owners using the facility.

5.2.4 Excess Mass Charges

Excess mass charges will apply for substances discharged in excess of the deemed concentrations in domestic sewage shown in Table 5 below.

TW3 = A3 + EMC

Where:

A3 = Annual liquid trade waste fee ($)

EMC = Excess mass charges ($)

Table 4 – Deemed Concentration of Substances in Domestic Sewage

SUBSTANCE	CONCENTRATION (mg/L)
Biochemical Oxygen Demand (BOD_5)	300
Suspended Solids	300
Total Oil and Grease	50
Ammonia (as Nitrogen)	35
Total Kjeldahl Nitrogen	50
Total Phosphorus	10
Total Dissolved Solids	1000
Sulphate (SO^4)	50[#]

[#] The concentration in the potable water supply to be used if it is higher than 50mg/L

NB. Substances not listed above are deemed not to be present in domestic sewage.

For excess mass charge calculation, equation (1) below will be applied.

$$EMC\ (\$) = \frac{(S - D) \times QTW \times U}{1{,}000}$$

Where:

S = Concentration (mg/L) of substance in sample

D = Concentration (mg/L) of substance deemed to be present in domestic sewage

QTW = Volume (kL) of liquid trade waste discharged to the sewerage system

U = Unit charging rate ($/kg) for the substance (this rate varies from substance to substance— refer to the City's current Fees and Charges)

If the City approves the acceptance limits for BOD higher than 600mg/L, an exponential type equation for calculations will be used for calculation of the unit price ($/kg) as shown in equation (2) below. Equation (2) provides a strong incentive for dischargers to reduce the strength of waste. In addition,

equation (5) will be used where the discharger has failed to meet their approved BOD limit on at least 2 instances in a financial year.

Excess mass charging rate Ue in $/kg for BOD_5 is calculated as shown in Equation 2.

$$Ue = 2C \times \frac{(\text{Actual BOD} - 300\text{mg/L})}{600\text{mg/L}} \times 1.05^{\frac{(\text{Actual BOD} - 600\text{mg/L})}{(600\text{mg/L})}} \quad (2)$$

Where:
C = Charging rate ($/kg) for BOD_5 600 mg/L
Actual BOD_5 = Concentration of BOD_5 as measured in a sample

5.3 Food Waste Disposal Charge

For existing installations only. New installations are not permitted. Where the City has approved installation of a food waste disposal unit for a hospital, nursing home or other eligible facility, the following additional food waste disposal charge will be payable annually.

Food Waste Disposal Charge ($) = B x U_F

Where B = Number of beds in hospital or nursing home.

U_F = Annual unit price ($/bed) for a food waste disposal unit at a hospital or nursing home.

5.3.1 Non-compliance Charges

Non-compliance Excess Mass Charges

Where a discharge quality fails to comply with the approved concentration limits of substances specified in the approval conditions (or the acceptance criterion listed in the City's liquid trade waste policy), the City incurs additional costs in accepting and treating that waste. The City may also face problems with the effluent and biosolids management.

In order to recover the City's costs for non-compliant excess mass charges, equation (4) shall apply, except for BOD where equation (5) shall apply.

Non-Compliance Excess Mass Charges ($)

$$= \frac{(S - A)\,x\,Q\,x\,2U}{1{,}000} + \frac{(S - D)\,x\,Q\,x\,U}{1{,}000} \quad (4)$$

Where:

S = Concentration (mg/L) of substance in sample.

A = Maximum concentration (mg/L) of pollutant as specified in the City's approval (or liquid trade waste policy).

Q = Volume (kL) of liquid trade waste discharged for the period of non-compliance.

U = Unit prices ($/kg) for disposal of pollutant to sewerage system.

D = Concentration (mg/L) of substance deemed to be present in domestic sewage.

Non-compliance excess mass charges for BOD

The non-compliance excess mass charging rate (Un) for BOD5 is calculated by using Equation (5) below:

$$Un = 2C\,x\,\frac{(A-300mg/L)}{600mg/L}\,x\,1.05^{\frac{(A-600mg/L)}{600mg/L}} + 4C\,x\,\frac{(Actual\ BOD-A)}{600mg/L}\,x\,1.05^{\frac{(Actual\ BOD-A)}{600mg/L}}$$

(5)

Where:

Un = The BOD5 non-compliance excess mass charging rate in ($/kL)

A = BOD5 approved limit

C = Charging rate for BOD5 600 mg/L

The non-compliance excess mass charges shown above are in lieu of the excess mass charges. The City will continue applying the above non-compliance excess mass charge until the quality of discharge complies with the City's approved quality (or the liquid trade waste policy) limits, within the time frame determined by the City for remedying the problem. If the discharger fails to rectify the problem within this time frame, the discharger may be required to cease discharging liquid trade waste into the City's sewerage system and may also be required to pay a 'non-compliance penalty' as indicated in the following section.

Non-compliance pH charge

Equation (3) is used for the waste with pH being outside the approved range. This equation provides an incentive for dischargers to apply appropriate pH correction so their waste remains within the approved pH limits. Non-compliance pH charge will be charged on every occasion of non-compliance. Where a large discharger fails to meet their pH limits on 2 or more occasions in a financial year, the City may require the discharger to install and permanently maintain a pH chart recorder or data logger as control of pH is critical to minimising odour and corrosion problems in the sewerage system.

Charge for pH where it is outside the approved range for the discharger.

Charge for pH ($/kL) = K x (actual pH – approved pH)* x 2 (actual pH – approved pH)* (3)

K= pH coefficient in $

* absolute value to be used.

6 Matters Relating to Liquid Trade Waste Approvals

6.1 Application and approval process

The City's written approval is required prior to commencement of instillation or discharging liquid trade waste to its sewerage system, under s.68 of the Local Government Act 1993. Application forms are available from the City.

The applicant must lodge a trade waste application providing all relevant and requested information.

6.1.1 Who can lodge an application

The applicant must be either the owner or the occupier of the premises. If the applicant is not the owner of the premises, the owner's consent to the application is required.

6.1.2 The City's process in determination of applications

The City may request an applicant to provide further information to enable it to determine the application. Supporting documents such as plans and specifications of the means of discharge including any associated pre-treatment plant are required at a minimum. An onsite inspection prior to the business trading and in conjunction with approved pre-treatment requirements/equipment installation may be required.

6.1.3 Approval of applications

Where an application is approved, the City will notify the applicant including any conditions of the approval and reasons for such conditions. The duration of the approval will be as stated in the approval. The approval will set out the conditions associated with the discharge of the liquid trade waste to sewer. The conditions will be binding on the applicant and be subject to any clause imposed by the City.

An applicant may make a minor amendment or withdraw an application before it is processed by the City. An applicant may also apply to the City to renew or extend an approval, in accordance with section 107 of the Local Government Act.

6.1.4 Refusal

If an application is refused, the City will notify the applicant of the grounds for refusal.

Under section 100 of the Act the applicant may request the review of the City's determination. Under section 176 of the Act, the applicant dissatisfied with the City's determination may appeal to the Land and Environment Court within 12 months.

6.1.5 Change of approval holder

An approval to discharge liquid trade waste to the City's sewerage system is not transferable. A new application must be lodged, and a new approval must be obtained if there is a change of the approval holder. The City must be notified of change of ownership and/or occupier in all cases, whether a new approval is required or not, to allow updating of records.

6.1.6 Validity of an existing approval

A new approval is required where there is a change of:

a) approval holder (either owner or occupier can be an approval holder)

b) activity generating the waste

c) the quantity or the nature of liquid trade waste

d) Approval conditions.

6.1.7 Modification and revocation of approvals

The City reserves the right to modify or revoke an approval to discharge liquid trade waste to the sewerage system under the circumstances described in s.108 of the *Local Government Act 1993*. If

the owner/generator is found to be in breach of the Approval or in the opinion of the City the waste is adversely affecting the sewerage system or the environment, then the Approval may be cancelled and the City may disconnect the premises (at no cost to the discharger).

6.1.8 Concurrence

If the City supports an application and has a notice stating that concurrence of the Secretary, NSW Department of Planning and Environment can be assumed for the liquid trade waste relevant to the application, the City will approve the application. Otherwise, the City will seek concurrence to its approval.

For concurrence purposes, liquid trade waste discharges are divided into four classifications.

1. Concurrence Classification A – liquid trade waste for which the City has been authorised to assume concurrence to the approval subject to certain requirements.
2. Concurrence Classification B – liquid trade waste for which the City may apply for authorisation to assume concurrence to the approval subject to certain requirements.
3. Concurrence Classification S – the acceptance of septic tank, pan waste and ship-to-shore pump-out etc. the City may apply for authorisation to assume concurrence to the approval subject to certain conditions.
4. Concurrence Classification C – all other liquid trade waste that do not fall within Concurrence Classification A, B or S, and therefore require the City to forward the application for concurrence.

6.2 Penalty Infringement Notice

Any person committing a breach of this policy or who refuses or neglects to comply with any requirements therein contained or of any order given pursuant thereto, may be liable to a penalty as provided under Sections 626, 628, 634-639 of the Local Government Act, 1993 and the Protection of the environment Operations Act 1997, Section 120(1) (Pollution of any waters by a discharger who fails to comply with the conditions of approval for discharge of liquid trade waste to sewer). Any person who fails to comply with an Approval will be subject to the terms of the Approval.

6.3 Non-compliance Penalty

The non-compliance penalty covers instances where the City may seek compensation for its costs relating to legal action, damage to infrastructure, incurred fines and other matters resulting from illegal, prohibited or unapproved liquid trade waste discharged to the sewerage system. Also included are fines under:

a) Protection of the Environment Operations Act 1997, section 120 (1) (Pollution of any waters by a discharger who fails to comply with the conditions of approval for discharge of liquid trade waste to sewer)

b) Local Government Act, 1993, section 627 (Failure to comply with an approval), section 628 (Failure to comply with an order).

Non-compliance penalties will be pursued by legal action. The City maintains its rights to enter sites and inspect liquid trade waste systems.

7 Monitoring

After discharge of an approved liquid trade waste has commenced, adherence to the conditions of discharge will be monitored. It is the owner/generators responsibility to ensure that both the quality and quantity of the waste discharged to sewer are in accordance with the City's requirements.

Monitoring frequencies specified in such documents are minimum requirements only. They do not relieve the discharger from the responsibility of additional monitoring and/or remedial action should it be suspected that either the quantity or quality is not in accordance with the City's requirements.

In addition to the above, and to ensure compliance with the City's acceptance standards and the conditions of the Approval, authorised officers of the City of Coffs Harbour may enter premises to carry out inspections and collect samples for analysis. These rights will normally be outlined in the Approval. If more inspections and testing are required because of a breach of the Liquid Trade Waste Approval, these costs will be recovered from the holder of the approval.

Samples are to be collected and analysed in accordance with Standard Methods for Examination of Water and Wastewater and every effort is to be made to ensure that such samples truly represent the nature and extent of the discharge.

The most suitable location for monitoring the effluent is prior to the point where the liquid trade waste enters the sewerage system and/or prior to mixing with domestic sewage from the premises. This will usually be an inspection chamber, shaft or boundary trap.

The discharger may need to install a suitable method of flow measurement.

The City may require the discharger to:

c) Install a permanent primary measurement device;

d) Measure the volume and flow rate using the permanently installed flow measurement system (such as a flow metering system); or

e) Install a flow measurement device on a temporary basis and obtain enough data to determine a basis for assessing the flow rate and volume; and

f) Provide a system which allows obtaining a flow weighted composite sample.

For small waste dischargers, usually a grab sample collected on a random basis is suitable to assess effluent quality. However, for large commercial or industrial premises, continual sampling of the discharge, linked to flow monitoring may be required. Composite samples may then be collected and the effluent quality determined in terms of concentration and total mass of contaminants. Approvals will normally specify the monitoring requirements for larger establishments.

For problem wastes such as those received from metal finishers, the Approval may place a limit on the total mass, instantaneous concentration and/or mean concentration of particular constituents of the discharge. Detailed monitoring may therefore be required by both the discharger and the City to determine compliance for major industries.

8 Maintenance of Equipment

A person who discharges liquid trade waste into a sewer, pursuant to an Approval, shall, at all times and at the persons own expense, maintain and keep all pipes, equipment and apparatus used for conveyance, measurement, sampling and treatment of liquid trade waste in good repair, in a clean and efficient state and in proper and accurate working condition. The waste not allowed or intended to discharge to sewer, such as grease, oils and sludge must be carried out in accordance **with the Local Government Regulations and Environmental Protection Authority requirements.**

9 Prevention of Waste of Water

Water must be used efficiently and must be recycled where practicable. It is an offence under section 637 of the Local Government Act 1993 and its relevant regulation to waste or misuse water.

Dilution of liquid trade waste with water from any non-process source including the City's water supply, bore water, groundwater and/or stormwater as a means of reducing pollutant concentration is therefore strictly prohibited.

10 Effluent Improvement Plans

Where the existing liquid trade waste discharged does not meet the City's requirements, the applicant may be required to submit an 'effluent improvement plan' setting out how the City's requirements will be met. The proposed plan must detail the methods/actions proposed to achieve the discharge limits and a timetable for implementation of the proposed actions. Such actions may include more intensive monitoring, improvements to work practices and/or pre-treatment facilities to improve the effluent quality and reliability.

11 Due Diligence Programs and Contingency Plans

For Concurrence Classification A, a discharger is not required to submit either a due diligence program or a contingency plan.

A discharger may be required to submit a due diligence program and a contingency plan for Concurrence Classification B or Classification S where it is considered that the discharge may pose a potential threat to the sewerage system. If required a due diligence program and contingency plan must be submitted to the City within six months and three months respectively of receiving a liquid trade waste approval.

For Concurrence Classification C, a discharger must provide a due diligence program and contingency plan to the City within six months and three months respectively of receiving a liquid trade waste approval.

It should be noted that:

a) If the discharger has an accredited environmental management system in place, a due diligence program and contingency plan will not be required. However, proof of accreditation must be provided to the City with the application.

b) Where the City considers there is potential risk to the sewerage system from a discharge, it may request a due diligence program and contingency plan be submitted prior to commencing the discharge.

12 Definitions

Approved: Means approved by the City.

Assumed Concurrence: Environment (DPE) for delegation to assume concurrence for Classification B or Classification S activities. If granted, the City will no longer need to forward such applications to DPE for concurrence.

Biochemical Oxygen Demand (BOD_5): Biochemical Oxygen Demand of BOD_5 is defined as the amount of oxygen utilised by micro-organisms in the process of decomposition of organic material in wastewater over a period of 5 days at 20°C. In practical terms, BOD is a measure of biodegradable organic content of waste.

Bio solids: Primarily organic solid product produced by sewage processing. Until such solids are suitable for beneficial use, they are defined as wastewater solids or sewage sludge.

Chemical Oxygen Demand (COD): This is a measure of oxygen to oxidise organic matter in wastewater by a strong chemical oxidant. COD is a measure of the total organic content both biodegradable and refractory.

Department Concurrence: Is required before the City may approve an application for the discharge of liquid trade waste or septic tank and pan waste to the sewerage system. It is a requirement under Section 90(1) of the Local Government Act that the City obtain the written concurrence of the Secretary of the Department of Planning and Environment (DPE) prior to approving such waste to be discharged to the City's sewerage system.

Effluent: The liquid discharged following a wastewater treatment process.

Generator: Any person, company or body whose activity produces or has the potential to produce liquid trade waste.

Heavy Metals: Metals of high atomic weight. In high concentrations these can exert a toxic effect.

Industrial Discharges: Industrial liquid trade waste is defined as liquid waste generated by industrial or manufacturing processes. For the purpose of this Policy, most of the processes defined in Concurrence Classification Care industrial discharges.

Liquid Trade Waste: Liquid trade waste means all liquid waste other than sewage of a domestic nature.

Mandatory Concurrence: For the liquid waste in Classification C, the City will need to obtain concurrence from DPE on each occasion.

pH: This is a measure of acidity or alkalinity of an aqueous solution. pH 7 is neutral, below 7 is acidic and above is alkaline.

Prescribed Pre-treatment Equipment: Is defined as standard non-complex equipment used for pre-treatment of liquid trade waste, e.g. a grease arrestor, an oil arrestor/separator, solids arrestor, cooling pit.

Pre-treatment Facilities: Means any apparatus or equipment used to modify the characteristics of an effluent prior to its discharge into a sewer and includes grease traps, oil separators, dilution pits, filters etc.

Prohibited Substance: Means substances which may not be discharged to a sewer owned or operated by the City without the prior written permission of the City. A list of such substances is provided in Table 2 of this document.

Sewage of Domestic Nature: Includes human faecal matter and urine and waste water associated with ordinary kitchen, laundry and ablution activities of a household, but does not include waste in or from a sewage management facility.

Sewage Management Facility: A human waste storage facility or a waste treatment device intended to process sewage and includes a drain connected to such a facility or device.

Sewer: Means any conduit vested in the City for the carriage of sewage and includes pumping stations connected therewith.

Sewerage System: Includes all sewers, appliances, plant, machinery, and any other sewerage works of the City.

Sludge: The solids which are removed from wastewater or liquid trade waste by treatment.

Standard Methods: Means 'Standard Methods of Examination of Water and Wastewater'.

Suspended Solids: Suspended Solids refer to the insoluble solid matter suspended in wastewater that can be separated by laboratory filtration and is retained on a filter.

Tankered Wastewater: Tankered wastewater is wastewater and substances contained within it delivered by road tanker to by the City of Coffs Harbour's WRP.

13 Key Responsibilities

Position	*Directorate*	*Responsibility*
Mayor	Council	To lead Councillors in their understanding of, and compliance with, this procedure.
General Manager	Executive	To lead staff (either directly or through delegated authority) in their understanding of, and compliance with, this procedure.
Directors	All Directorates	To communicate, implement and comply with this procedure.
Council Leaders	All Directorates	To plan, action, communicate, implement and comply with this procedure as it relates to area of responsibility
All Council workers	Council	To comply with this procedure

14 References (laws, standards and other the City documents)

- Local Government Act 1993 No. 30 and Regulation Local Government (General) Regulation 2021
- NSW Liquid Trade Waste Management Guidelines 2021;
- Australian Sewage Quality Management Guidelines July 2022;
- Plumbing Code of Australia (PCA);
- AS/NZS 3500 (Plumbing and Drainage Set);
- The City Liquid Trade Waste Policy;
- The City Backflow Prevention and Cross Connection Control Policy;
- The City Water Meter Service - Service Installation;
- The City Revenue and Debt Recovery procedure;
- The City Urban Rainwater Tank Policy and;
- Associated Regulations and Standards.

15 Details of Approval and revision

- **Approval date:** 10/10/2023
- **Responsible Group:** Water and Waste Services
- **Responsible Section:** WW Planning and Delivery
- **Superseded policies/procedures: N/A**
- **Next review date:** 10/10/2027

Table of amendments

Amendment	Authoriser	Approval ref	Date
New procedure	GLT	9.3	10/10/23