



Hunter Water Guideline Calculating Developer Charges





hunterwater.com.au



Table of Contents

D	Ocument information4				
	Ver	sior	on history	4	
	Doc	cum	nent control	4	
1.	1	PU	JRPOSE	5	
2.	I	DE	EFINITIONS	5	
3.	1	BA	ACKGROUND ON DEVELOPER CHARGES	7	
	3.1	,	What are developer charges?	7	
	3.2		The re-introduction of developer charges	7	
	3.3		IPARTs Requirements for developer charges	7	
	3.4	,	What has changed in the calculation of developer charges?	8	
	3.5	,	What developments attract payment of developer charges?	9	
	;	3.5.	5.1 Strata Title Subdivision of existing units	9	
	;	3.5.	5.2 Secondary Dwellings	9	
	;	3.5.	5.3 Exempt Developments	9	
4.	(CA	ALCULATING BASE DEVELOPER CHARGES	9	
	4.1		Methodology used to determine the (base) value of developer charges	9	
	4.2		How IPART defines an ET	10	
5.	;	SC	CALING ET FOR A PARTICULAR DEVELOPMENT	11	
	5.1	,	What is the Equivalent Bill Method (EBM)?	11	
	5.2		Base revenue for a single residential house	11	
	5.3		Base revenue for a multi-residential dwelling	12	
	5.4		Calculating ET for non-residential development	12	
	5.5		Typical ET values for non-residential development	12	

	5.6	Wat	er and Wastewater Equivalent Loading Matrix:	13
	5.7	How	the charge is calculated from the base DSP value	13
	5.8	Dete	ermining the applicable DSP	14
	5	5.8.1	How to determine the most applicable water and wastewater DSP?	14
	5	5.8.2	What happens if a proposed development application is over multiple DSPs?	14
	5.9	Calc	ulating Equivalent Tenements	14
	5.10) C	alculating Applicable Credits	15
	5	5.10.1	How to determine if a credit is applicable:	15
	5.11	I C	alculating the Charge	16
	5	5.11.1	Miscellaneous Calculation Guidelines	16
	5.12	2 D	eveloper charge calculator	17
6.	E	BESP	OKE CALCULATIONS	.18
	6.1	Gen	eral Principles and Requirements	18
	6.2	Bes	poke calculation method	20
	6	6.2.1	Calculating bespoke water ET	20
	6	5.2.2	Calculating bespoke wastewater ET	20
7		NCLU	ISION OF THE CHARGE IN THE NOR LETTER	21
	7.1	Res	ponsibility for calculation	21
	7.2	Whe	an are charges determined?	21
	7.3	Whe	en in the land development cycle is a Developer Charge required to be paid?	21
	7.4	Rec	alculation of a developer charge prior to issue of compliance certificate	22
8.		APPE	AL RIGHTS AND DISPUTE HANDLING	.22
	8.1	App	eal Rights	22
	8.2	Disp	bute Handling	22
9.	F	RELA [.]	TED DOCUMENTS/APPENDICES	.23

Document information

Version history

Document review date is as per the Integrated Management System Standard (<u>HW2013-421/22.002</u>).

Version	Author	Changes	Approved By	Date Approved
1	Brett Lewis	New Guideline	Executive Manager Customer Services	01/07/23

Document control

Document Owner	Group Manager Developer Services		
Mandatory Reviewer(s)	Developer Services Team; Finance; Legal		
Approvals	Executive Manager Customer Services		
Key Document Details	I Public I System Critical I Legal/Reg Re	eq 🗌 Board Approval	

Approved By	Executive Manager Customer Services	TRIM No	2021-953/13.004
Approved Date	01/07/2023	Version No	1

1. PURPOSE

The purpose of this guideline is to outline how to calculate developer charges for a specific development, information required, process and systems used, and the checks required before a developer charge is included in a Notice of Requirements letter. Worked examples for residential, non-residential and mixed developments are also provided to assist learning and promote understanding of the assessment process.

Other information is also provided on: what development types are levied a charge (and those that may be excluded), determining credits for existing development, the review and approval process, dispute handling and frequently asked questions.

2.	DEFINITIONS

Term	Meaning
Annual Water Demand	Estimated total annual water consumption in kL
ANZIC	Australian and New Zealand Standard Industry Classification
CPI	Consumer Price Index (CPI All Groups) index for the weighted average of eight capital cities as published by the Australian Bureau of Statistics (ABS). The annual CPI adjustment applied by Hunter Water is determined by the Independent Pricing and Regulatory Tribunal (IPART) and applies to all pricing offered by Hunter Water.
Credit	An ET credit may be available acknowledging the existing connected development on the development lots the subject of the application. The existing connected development is already utilising system capacity and generating revenue for Hunter Water and accordingly can offset the total developer charge payable for the proposed development.
2018 Determination	The determination issued by IPART titled 'Maximum prices for connecting, or upgrading a connection, to a water supply, sewerage or drainage system' dated October 2018
Developer	Means a person carrying out, or intending to carry out, Development.
Developer Charge	Location specific charge that Hunter Water levies and is payable by the developer prior to issue of a Section 50 Compliance Certificate for the proposed development. The developer charge value is estimated in the Notice of Requirements and is subject to adjustment for annual CPI on 1 July each financial year. It will also be adjusted during the developer charges transition period depending upon when the development reaches completion.
Development Servicing Plan or DSP	The plans developed by Hunter Water to cover water supply and wastewater developer charges for different areas serviced by Hunter Water in accordance with the Determination and registered with IPAR.
Equivalent Tenement or ET	A measurement that represents the demand a new development will place on the water and wastewater infrastructure. One ET is equal to the estimated demand of a typical residential standalone dwelling and is used as the base unit of calculation. Other development types will scale from this base unit.

Term	Meaning
GIS	Geographic Information System (computer-based mapping tool used to store, visualize, analyse, and interpret geographic data)
Guideline	A Hunter Water document that sets out how a Hunter Water policy is applied
Headworks - Water	Infrastructure comprising a system of dams, major storage reservoirs, Water Treatment Plant (WTP) and major supply conduits
IPART	Independent Pricing & Regulatory Tribunal
kL pa	Kilolitres per annum
Lead-in	A water or sewer asset that generally sits outside the land the subject of the development consent issued by the consent authority.
Modern Equivalent Engineering Replacement Asset or MEERA	means an asset value calculated on the basis that the asset is constructed at the time of valuation in accordance with modern engineering practice and the most economically viable technologies, which provides similar utility functions to the existing asset in service.
Notice of Requirements letter or NOR	a commercial offer that outlines any requirements and/or works the developer (applicant) needs to complete before a compliance certificate can be issued by Hunter Water under Section 50 of the Hunter Water Corporation Act, 1991 (NSW).
OPEX	Operating Expenditure
Policy	a Hunter Water document that sets out a plan of action for Hunter Water in a distinct area of its business. A Policy is read in conjunction with the related Guideline and Standards.
RDC	Reintroduction of Developer Charges. Often used as the project name
Reduction Amount	The reduction amount is the estimated net present value of future revenues from IPART determined prices less location-specific operating costs.
Reticulation	Local supply pipes providing water and sewer services to individual properties
Rising Main	A pipeline that is pressurized to transport sewage to a higher level
Sewer Discharge Factor or SDF	the proportion of annual water consumed that is discharged to sewer, represented as a percentage (%) calculates fixed service and sewer usage charges for non-residential properties.
WPS	Water Pumping Station
WTW	Water Treatment Works
WWPS	Wastewater Pumping Station
WWTW	Waste Water Treatment Works

3. BACKGROUND ON DEVELOPER CHARGES

3.1 What are developer charges?

Developer Charges are location-specific charges that Hunter Water requires developers to pay prior to issue of a Section 50 Compliance Certificate for a specific development. Developer charges help recover Hunter Water's costs of providing, upgrading and augmenting infrastructure to support growth in our area of operations.

Developer Charges are calculated and included in the Notice of Requirements determined by Hunter Water as part of the development assessment processes.

3.2 The re-introduction of developer charges

In November 2020 the NSW Productivity Commission published a report making 29 recommendations in relation to changes to the infrastructure contributions. The Commission recommending the "phasing in of metropolitan water charges for more efficient delivery of water infrastructure" and set out suggested transitional arrangements.

On 20 October 2021 Hunter Water received instruction from the Minister for Water, Property and Housing confirming the NSW Government had accepted the NSW Productivity Commission's recommendation to reintroduce developer charges. The Minister requested that Hunter Water work with the Department of Planning, Industry and Environment (DPIE), NSW Treasury and IPART on the transition details and assist DPIE in consulting with the development industry.

The re-introduction of water and wastewater developer charges does not require legislative change. The Treasurer can simply write to IPART, Hunter Water and Sydney Water to trigger IPART's 2018 Determination.

Hunter Water is required to comply with IPART's 2018 Determination. IPART's method did not change materially from the 2000 Determination.

IPART require Hunter Water to calculate developer charges based on specific areas in accordance with Development Servicing Plans (DSPs) and use the methodology as set out in the 2018 Determination (further details on how developer charges are calculated using this methodology is found in this document).

3.3 IPARTs Requirements for developer charges

IPART is the regulating authority for setting prices and the methodology for recovering growth related capital expenses.

From 2000 to 2008, Hunter Water levied water and wastewater developer charges under IPART's 2000 Determination of developer charges. On 17 December 2008, the NSW Treasurer wrote to Hunter Water and Sydney Water approving zero developer charges. This was in response to the Global Financial Crisis.

In 2017, IPART initiated a review of the methodology for calculating developer charges. The review focused on updating and refining the parameters and processes in IPART's original determination. Hunter Water participated in the review and supported IPART's final changes.

IPART's 2018 Determination sets a methodology for calculating the timing and value of infrastructure investments, the number of benefitting lots, future income derived from the new customers, system maintenance and operating costs, and any surplus generated.

IPART require Hunter Water to calculate developer charges based on specific areas in accordance with Development Servicing Plans (DSP). The DSP must include information on forward capital works, number of new equivalent tenements, and standards of service.

3.4 What has changed in the calculation of developer charges?

IPART sets the methodology to be used by Hunter Water to calculate the base value per ET for water and sewer developer charges. In its 2018 determination, the calculation methodology and principles were essentially unchanged from the prior methodology.

Hunter Water has made some changes in its base assumptions, applications, technology platforms, scaling methodology and business rules. The notable changes made since the previous developer charge model are highlighted below:

Previous 2006 Developer Charge Model	Current 2023 Developer Charge Model*
There were 4 recycled water, 18 water and 37 sewer DSP areas. Within each DSP area, values varied based on development being either residential, multi-residential, commercial, industrial or other (i.e. multiple base charges).	Hunter Water has 9 water and 20 wastewater DSP areas (using the nearest major water system zones and nearest wastewater transportation catchments). A single base charge is used for each DSP.
Kings Hill Urban Release Area not identified	Hunter Water has a separate DSP area for the proposed Kings Hill Urban Release Area in Port Stephens, given its uncertainty over planning approvals, the high cost of connection assets and potential need to resize infrastructure.
Hunter Water calculated different reduction amounts for: single residential, multi-residential, commercial, industrial and other developments and applied these within each DSP area.	Hunter Water has calculated a single reduction amount and developed the equivalent bill method for measuring ET values across the different development types. This allows simplification to a single base rate for water and sewer within each DSP area.
Hunter Water adopted an ET value for a single residential dwelling of 210 kL/pa of water consumption and 105kL/pa for sewer discharged.	Hunter Water has adopted the ET value of 181kL/pa of water consumption and 120 kL/pa for sewer discharged for the calculation of developer charges based on the long-term analysis of residential water usage.
Hunter Water applied developer charges to all secondary dwellings (including granny flats).	Developer charges will not apply to secondary dwellings of less than 60 square metres (granny flats).
Hunter Water used the 'Equivalent Lot Methodology' to scale from the base ET unit used to be specific to the development applied for.	The Equivalent Lot Methodology has been replaced with a new methodology called the 'Equivalent Bill Method'. This recognises the different revenue streams derived from different development types, each with their particular characteristics.
Hunter Water calculated credits using historical average water consumption over a 5-year period using the last 15 billing cycle meter records. Water consumption was then converted from litres per day to Equivalent Tenements (ET).	The 'Equivalent Bill Method' will be used to quantify credit for existing development connected to our network. This data is saved in the developer charge library in the Property Self Service Portal which can be called upon when assessing a new development applications and the associated developer charges.

(*Further explanation on these changes are detailed in this document)

3.5 What developments attract payment of developer charges?

Developer charges will apply to any development that materially increases either water consumed and/or increase sewage discharged when connected to our network. This will be assessed as part of the development assessment application submitted to Hunter Water under the Act. Existing development proposing to connect to our services may also attract a developer charge.

There are certain types of 'exempt and complying' development that do not impact water consumed or sewer discharged to our networks and accordingly will not have a developer charge applied, for example, a residential carport or retaining wall.

3.5.1 Strata Title Subdivision of existing units

Hunter Water often receives applications for the strata subdivision of existing units. Where there is no building activity occurring and no identified additional demand, no further developer charge is appropriate.

In the case where it is a new application for construction of new units as well as strata subdivision, a developer charge is only levied on the number of units (see multi-residential in 6.3 below), not on the number of strata titled lots.

3.5.2 Secondary Dwellings

Secondary dwellings, such as granny flats less than 60m2, will not have a developer charge applied. Other secondary dwellings of greater than 60m2, will be treated as multi-residential developments and will be charged accordingly.

3.5.3 Exempt Developments

As per the 'State Environmental Planning Policy' (Exempt & Complying Development Code) 2008, developments deemed to be exempt and complying will not incur a developer charge. If you are unsure or need further guidance, please visit the SEPP site using the link <u>here</u>.

4. CALCULATING BASE DEVELOPER CHARGES

4.1 Methodology used to determine the (base) value of developer charges

IPART's 2018 Determination of developer charges sets the methodology that Hunter Water must follow when calculating a maximum price (developer charge) for each Developer Servicing Plan (DSP) area.

The developer charge is calculated on a per Equivalent Tenement basis. One ET is equal to the estimated demand of a typical residential standalone dwelling. Each DSP area includes a developer charge for water and wastewater separately.

The determination of the base ET values comprises two main components:

• The Capital Charge

The present value of the capital cost of assets used to service growth in the DSP area. This relates to both existing and future assets.

and

• The Reduction Amount

The present value of future periodic revenues less location-specific operating costs related to new customers. This is forecast over a 30-year period.

The calculation is summarised in the below Figure 1.

In Each DSP Area:



Note:

*K*₁, *K*₂, *R*_i, *C*_i, *L*₁, *L*₂ and *L*₃ represent each component of IPARTs formula on pages 5 and 6 of the 2018 Determination. Pre-1996 assets are those commissioned between 1 January 1970 and 31 December 1995. Post-1996 assets include those commissioned after 1 January 1996, plus a forecast of future uncommissioned assets.

The total charge payable by any given development depends on the assessed number of ETs in that development. The underlying net present value method ensures that, all else being equal, the price paid by each new connection will be the same regardless of when the connection occurs.

4.2 How IPART defines an ET

IPART defines one (1) ET as:

- a) the water and sewer loading derived for one standalone conventional residential dwelling;
- b) the value specified in the final report accompanying the prevailing periodic determination, or
- c) where the determination does not specify an ET value, Hunter Water's estimate of the total demand that an average single residential dwelling places on the relevant System.

In this instance, Hunter Water has defined the water and sewer loading for 1 ET as 181kL pa of water consumed and 120 kL of sewage discharged to the wastewater network.

Hunter Water's 2020 Price Determination did not specify how to derive development ET values. Consequently, Hunter Water has developed a method for measuring and estimating ETs we refer to as the Equivalent Bill Method, described in the following sections.

5. SCALING ET FOR A PARTICULAR DEVELOPMENT

The base unit of 1 ET for a residential standalone house, needs to be scaled for other development types. This ensures that the developer charge is proportional to the utilisation of water and sewer services expected from a particular development type. Hunter Water has assessed the revenue derived from customer bills across both residential and non-residential customer types, and used this as a basis for scaling from the 1 ET base unit defined by IPART.

ET's are used as the denominator in all components of the developer charge calculation. ETs are also used to levy the charge across different development types as development occurs.

5.1 What is the Equivalent Bill Method (EBM)?

The EBM converts measured water meter consumption for residential and non-residential customer types in our area of operation to an ET allowance for water and sewer. Bill revenue associated with the 1 ET base unit, has been calculated using the average annual bill for a single standalone residential dwelling.

Frontier Economics provided advice to Hunter Water confirming that:

"The best measure of a water ET is the annual water bill of an average single residential dwelling, and the best measure of a sewerage ET is the annual sewerage bill of an average single residential dwelling. This is because:

- IPART sets periodic prices (and hence allocates the costs of providing services amongst customers through these prices) on the basis that the total demand a customer places on the water and sewerage systems is a function of its actual or deemed volumetric usage (kL of water consumed or sewage discharged) and its actual or deemed meter sizes, and
- The single measure of the combined effect of an average single residential dwelling's usage (kL) and meter size (and hence of its appropriate share of costs or, in other words, of its demand that it places on the water and sewerage systems) is its annual water and sewerage bill, for the water and sewerage ETs, respectively.

This approach would allow Hunter Water to calculate and apply an internally consistent (i.e. aligns costs and revenues) \$/ET water developer charge and a \$/ET sewerage developer charge within a DSP area, with each developer paying according to their number of ETs."

For further information see Frontier Economics advice here.

5.2 Base revenue for a single residential house

In our area of operation, the average **single standalone house** consumes 181 kilolitres per annum of water and has an average annual water bill of \$479 and an average annual wastewater bill of \$694, hence:

- \$479 = 1 ET for water
- \$694 = 1 ET for wastewater

5.3 Base revenue for a multi-residential dwelling

In our area of operation, an average **multi-residential dwelling** consumes 109 kilolitres of water per annum and has an average annual water bill of \$297 and an average annual wastewater bill of \$625, hence all multi-residential units (compared to a single standalone dwelling):

- \$297 = 0.6 ET for water
- \$625 = 0.9 ET for wastewater

5.4 Calculating ET for non-residential development

To measure the ET value of **non-residential development**, Hunter Water has undertaken an extensive analysis of water and wastewater revenue derived from our non-residential customers. The ET estimate for water relies on estimates of water consumption and meter size. The ET estimate for wastewater relies on meter size, estimated water consumption and sewage discharge factor.

In order to help customers assess their likely ET utilisation we have expanded the EBM and included water and sewer ET per non-residential category, based on their characteristics: forecast water consumption; expected meter sizing and sewer discharge factor.

5.5 Typical ET values for non-residential development

Hunter Water engaged a data scientist to analyse almost 12,000 non-residential customers metered water consumption across our area of operations to develop appropriate typical ET values for the purpose of calculating developer charges. Hunter Water provided ANZSIC classification (Australian and New Zealand Standard Industry Classification) for each non-residential customer, as well as a proposed HW development category class, which was utilised for post statistical analysis.

To ensure that the ET values arrived upon were correct and fair, Hunter Water applied statistical analysis of the usage patterns of each business type to confirm that they were distributed in a manner that suggests the ET value is suitable and fair for all customers of that type. In cases where the analysis showed the usage of a given business type had a wide distribution (high level of variance), Hunter Water tested the effects of segmenting that business type based on another field (e.g. land size).

From this analysis, Hunter Water was able to derive typical water and wastewater ET values for 90 percent of our non-residential customers (as per the 'Water and Wastewater Equivalent Loading Matrix') with the remaining 10 percent requiring a manual calculation, these developments being larger, more complex development types with varied usage patterns, such as heavy industrial/manufacturing and/or commercial businesses such as laundromats and car washes. These development types being less common and more bespoke in nature.

If a customer believes that their development is materially different to the values provided by Hunter Water, they may engage the services of a Hydraulic Design Consultant to estimate the annual water consumption, the expected meter sizing and likely amount of water being discharged to the sewerage system. These parameters can then be provided to Hunter Water and we will consider this in the calculation of the developer charges (This is called a bespoke/manual calculation, more information on how to apply a bespoke calculation can be found in *section 7* of this document).

5.6 Water and Wastewater Equivalent Loading Matrix:

Each development type across **residential**, **multi-residential** and **non-residential** are listed in the Water and Wastewater Equivalent Loading Matrix (*Appendix A*), along with category, description, typical Water and Wastewater ET values.

Some developments require further information (normalisers) in order to improve the ET estimate of the water and wastewater loading, such as m² area (caravan parks, supermarkets, sporting clubs), number of beds (hotels, hospitals and nursing homes), number of students and staff (educational facilities), or number of shops (shopping centres). In the instance whereby a normaliser is used, these development types all carry a base water and wastewater ET for common facilities as well as a normaliser water and wastewater ET.

An example of this is:

A Sporting club has a base water ET of 5.5 and a base wastewater ET of 3.22, this is applied to all sporting clubs regardless of the size in square metres. The ET loading per square metre (0.00056 ET per m2 for water and 0.00065 ET per m2 for wastewater) is then added on top of this base number.

Therefore, a 5,000m2 sporting club is charged:

5.5 ET (base) + 2.8 ET (land area) = 8.3 ET for water 3.22 ET (base) + 3.25 ET (land area) = 6.47 for wastewater

5.7 How the charge is calculated from the base DSP value

Each development (where water and wastewater services are available) will have two developer charges applicable – one for water and another for wastewater. Each DSP area has its own (base) charge per ET.

Once the applicable DSP has been identified, its base charge is then multiplied by the calculated water and wastewater ET (loading) for the specific development. If an ET credit is available (acknowledging the existing connected development on the development lots) this credit will also be applied. This results in the calculated \$ charge amount applicable.

This calculation is completed for water and wastewater (providing the site is connected to both) and these two amounts become the total developer charge payable by the customer.

Figure 2 below shows how this calculation is done at the time of development assessment with further explanation and examples on each component detailed from Section 6.8 below:



5.8 Determining the applicable DSP

Development Servicing Plans (DSPs) cover water supply and wastewater developer charges for different areas serviced by Hunter Water. Each DSP details the developer charges applicable to the respective water supply, water headworks, wastewater transportation, treatment or transfer system for that area.

For the vast majority of applications, the development site will be located fully within one of Hunter Water's nine (9) Water DSPs and twenty (20) Wastewater DSPs. Developer charges vary depending on the DSP area so determining the correct DSP is critical in the calculation.

5.8.1 How to determine the most applicable water and wastewater DSP?

The 2023 developer charge model uses Hunter Water's GIS growth mapping tool as the data hub for all the model inputs. Each discrete DSP area is plotted in the GIS and accordingly every parcel of land has attached to it a water and wastewater DSP identifier. The proposed development's unique parent Lot and DP, or, physical property address if it is unique, will be entered into the GIS system in order to identify the relevant Water and Wastewater DSP areas.

An example of this is:

A parcel of land in Percy Street, Cessnock is located in Cessnock Water Zone: (**W.6**) and Cessnock Wastewater Catchment: (**S.5**)

If a development lot is identified as either outside our area of operation, and or, not within a defined DSP area, it will exception out and require manual intervention to determining which water and wastewater DSP is the most applicable to the proposed development.

5.8.2 What happens if a proposed development application is over multiple DSPs?

In the case where a development site is over multiple DSPs, a determination will need to be made as to what catchment the proposed development will drain to.

If available, the local water or sewer servicing strategy may provide guidance. Alternatively, an assessment of the land contours may be required to see which direction a gravity sewer may drain to.

If the development sits across multiple drainage catchments, suggesting that there may be multiple connections points, then the developer charge can be split into discrete catchments with separate ET allowance draining to each.

If multiple drainage catchments appear likely, the higher base DSP value will be adopted for the full development. When the servicing strategies (water and/or wastewater) are approved by Hunter Water, and connections points then known, loading distributed to each connection pint, then the applicable developer charges can be updated by Hunter Water.

5.9 Calculating Equivalent Tenements

All proposed development needs to be converted into ETs for the purpose of levying water and sewer developer charges. In order to do this Hunter Water has adopted the 'Equivalent Bill Method' where we use the forecast value of a customer's bill relative to the average annual bill for a single standalone residential dwelling (See 6.1 above).

All development is assigned an ET value based on the development type: standalone house, multiresidential dwelling or non-residential development. These ET values are calculated based on the 'Equivalent Bill Method' and the 'Water and Wastewater Equivalent Loading Matrix' (*Appendix A*). Hunter Water will assess the application and plans submitted by the customer to determine what is being proposed.

Note: All developer charges calculations will be rounded to two decimal places when assessing ET payable and credits applicable.

5.10 Calculating Applicable Credits

ET credits for existing development may be available acknowledging the existing connected development on the development lots, for which developer charges have been previously paid. ETs which have been calculated and levied on a parcel of land are not transferrable to another parcel of land.

The primary charging principle is that charges are made only for that proportion of works needed to meet the increase in demand above the existing system utilisation.

A credit is applied when the demand for the proposed new development (re-development) is greater than the demand of the previous or existing development. If the demand of the proposed new development (re-development) is less than or equal to the demand of the previous or existing development, than the credit equals the charge and no additional developer charges are appropriate.

An example of this is:

If Hunter Water receive an application to convert an existing 10 residential unit building into 5 residential units, the **ET calculation** for the new development would be:

5 (units) x 0.6 ET (per unit) = 3.0 ET for water; *and* 5 (units) x 0.9 ET (per unit) = 4.5 ET for sewer

whereas the credit calculation for the existing development would be:

10 (units) x 0.6 ET (per unit) = 6.0 ET for water; *and* 10 (units) x 0.9 ET (per unit) = 9.0 ET for sewer

* The demand therefore of the existing development is less than the demand for the new development so no additional developer charges are appropriate.

Similarly, if the business use is 'like-for-like' i.e. a change of use from retail shop to retail shop with no additional floor area, the demand of the existing development is equal to the demand for the new development and therefore no additional developer charges are appropriate.

Note: As developer charges have been set to zero since 2008 an assumed credit will need to be applied on all applications using the Equivalent Bill Methodology.

5.10.1 How to determine if a credit is applicable:

Developers are required to provide a description of the existing connected development on the development lots, subject to their application. Hunter Water will then verify this upon assessment.

In order to do this, Development Servicers Officers will examine historic records to determine what the previous use was. This may mean:

- (i) Interrogating previous applications made on the site in the property self-service portal;
- (ii) Reviewing the 'Developer Charge library' in the property self-service portal;
- (iii) Examining historic records such as 'work-as-constructed' plans and archived developer files in Hunter Water's operating systems such as TRIM or Velocity.

(iv) Consulting with senior Development Services Representatives and Team Leaders/Group Managers.

The 'Equivalent Bill Method' will be used to quantify credit for existing development connected to our network.

5.11 Calculating the Charge

Once the applicable DSP has been determined and the ET and credits have been calculated, the developer charge pertinent to the new development can be determined. *Appendix E* provides worked examples for residential, multi-residential, non-residential and mixed developments to assist learning and promote understanding of the assessment process.

5.11.1 Miscellaneous Calculation Guidelines

Some non-residential development can have multiple components and therefore the below additional guidelines should be referenced when calculating the developer charge:

Retirement Villages

Retirement villages can have multiple calculation components such as self-care units, nursing home beds and associated commercial areas.

- ~ Charges for the self-care component are calculated as multi-residential
- ~ Charges for a nursing home component are calculated as non-residential (nursing home)
- ~ Charges for the commercial area are calculated as non-residential (based on the business type).

Nursing Homes, Caravan Parks, Hospitals, Motels/Hotels, Supermarkets, Sporting Clubs and Education Facilities

All of the above development types require further information (normalisers) in order to accurately estimate the water and wastewater loading such as m2 area (*caravan parks, supermarkets, sporting fields*), number of beds (*hotels, hospitals and nursing homes*), number of students and staff (*educational facilities*), internal floor area (*sporting clubs*) or number of shops (*shopping centres*).

These development types all carry a base water and wastewater ET for common facilities as well as a normaliser (*e.g. per bed*) water and wastewater ET. These values can be found in the 'Water and Wastewater Equivalent Loading Matrix'.

An Example of this is:

A Sporting club has a base water ET of 5.5 and a base wastewater ET of 3.22, this is applied to all sporting clubs regardless of the size in square metres. The ET loading per square metre (0.00056 ET per m2 for water and 0.00065 ET per m2 for wastewater) is then added on top of this base number.

Therefore, a 5,000m2 sporting club is charged:

5.5 ET (base) + 2.8 ET (land area) = 8.3 ET for water 3.22 ET (base) + 3.25 ET (land area) = 6.47 for wastewater

Hotels, Motels and Serviced Apartments

Hotels, motels and serviced apartments can also have multiple calculation components such as hotel, restaurant, golf course etc. and therefore each component should be added separately.

Additions to existing developments

Hunter Water often receives applications where a customer is proposing to extend their existing development. Additions to existing facilities (such as an additional 20 beds to an existing hospital or additional floor area to an industrial/manufacturing workshop) can be calculated a number of ways depending on what is most appropriate:

- a. By using the 'Water and Wastewater Equivalent Loading Matrix';
- b. By completing a bespoke calculation based on the customer's expected increased annual water consumption and meter size; or
- c. By using the customers actual water consumption (which is then converted to ET's per sm2 or bed). This information can be found in the Non-Residential Consumption dashboard or provided by the customer.

Existing development proposing to connect to our services by a water or sewer main extension may also attract a developer charge and this will be calculated based on the number of new connections.

5.12 Developer charge calculator

A purpose-built developer charge calculator has been developed within in the Property Self Service (Admin) portal. This tool houses the Water and Wastewater Equivalent Loading Matrix and is linked to Hunter Water's GIS growth mapping tool, eliminating the use of spreadsheets, improving data warehousing, data reliability, reducing human errors and mitigating the risk of calculation errors.

6. BESPOKE CALCULATIONS

6.1 General Principles and Requirements

This section describes the general principles and requirements for completing a bespoke calculation on an 'assess as required' basis. In summary, the general principles/requirements for applying a bespoke calculation to non-residential developments are:

- In the instance where there is no suitable typical value listed in the 'Water and Wastewater Equivalent Loading Matrix' (*Appendix A*);
- If a customer believes that their development is materially different to the typical values
 provided by Hunter Water and therefore chooses to engage a hydraulic consultant to provide
 their meter sizing, annual water consumption and sewer discharge;

The same calculation process is followed for all development types requiring a 'bespoke calculation' using the following key data inputs:

- (i) Estimated annual water consumption;
- (ii) Meter size;
- (iii) Sewer discharge factor,
- (iv) Hunter Water's standalone residential prices.

These are explained further below:

i. Estimated Annual Water Consumption:

The estimated annual water consumption is the total amount of water demand required per year represented in **kilolitres**. A customer will need to engage a hydraulic design consultant to provide this estimate.

ii. Meter Size (converted to Meter Equivalent Ratio):

Once the expected meter size is known for the specific development, this is then converted into a relevant Meter Equivalent Ratio (ME) as compared to that of a single residential dwelling meter size of 20mm (20mm = 1.00). These ratios are provided below and used in calculating developer charges:

Meter Size	ME Ratio	Meter Size	ME Ratio
20mm	1.00	100mm	25.00
25mm	1.56	150mm	56.25
30mm	2.25	200mm	100.00
32mm	2.56	250mm	156.25
40mm	4.00	300mm	225.00
50mm	6.25	350mm	306.25
65mm	10.56	500mm	625.00
80mm	16.00	600mm	900.00

iii. The Sewer Discharge Factor (SDF)

The SDF percentage calculates fixed service and sewer usage charges for non-residential properties. For non-residential properties, the SDF has been broad banded into five bands. A property will fall within one of the bands based on use, which then determines the likely amount of water being discharged to the sewerage system as wastewater.

Category	SDF Band	Midpoint of band	Deemed Discharge Flows	Customer Type
1	0%	0%	No discharge to the sewer system	No Connection to the Sewerage System
2	1% - 25%	10%	A small proportion of metered water is discharged to the sewerage system	Typical enterprises include Nurseries and market gardens
3	26% - 50%	35%	Around half of metered water is discharged to the sewerage system	Typical enterprises include licensed clubs with catering facilities and substantial external watering e.g. bowling greens
4	51% - 75%	60%	A significant proportion of metered water is discharged to the sewerage system	Typical enterprises include a public swimming pool with showering/toilet facilities and external watering.
5	76% -100%	85%	Most, if not all metered water is discharged to the sewerage system	Typical enterprises include restaurants and hotels

Each SDF band has an allocation midpoint. This helps keep usage charges consistent for all customers who fall within the defined band. SDF's banding methodology categorises non-residential customers and allows for varying sewer discharge volumes, even within similar business types.

iv. Hunter Water's standalone residential prices

Hunter Water's standalone residential prices for water and wastewater service and usage charges are used as an input within the calculation. These prices are subject to IPARTs periodic prices. See *Figure 3* below:



6.2 Bespoke calculation method

Once all four inputs: estimated annual water consumption; meter size; sewer discharge factor, and Hunter Water's standalone residential prices have been provided, the bespoke calculation is then completed as follows using the Equivalent Bill Method (EBM):

6.2.1 Calculating bespoke water ET

- The **meter equivalent (ME) ratio** is multiplied by the average residential water service charge to derive the total expected water service charge;
- The **annual water consumption** is multiplied by Hunter Water's water usage charge (\$/kL) to derive the total expected water usage charge;
- The total expected water service charge and total expected water usage charge are added together and divided by the average residential water bill to obtain the **water ET value**.

6.2.2 Calculating bespoke wastewater ET

- The **meter equivalent (ME) ratio** is multiplied by the average residential wastewater service charge (unadjusted) and multiplied by the **sewer discharge factor** to derive the total expected wastewater service charge;
- The **annual water consumption** is multiplied by Hunter Water's wastewater usage charge (\$/kL) and multiplied by the **sewer discharge factor** to derive the total expected wastewater usage charge;
- The total expected wastewater service charge and total expected wastewater usage charges are added together and divided by the average residential wastewater bill to obtain the **wastewater ET value**.

Notes:

- (a) Calculations are to be based on available hydraulic and discharge information provided by the customer and validated by Hunter Water.
- (b) It may be necessary for Hunter Water require further information (normalisers) in order to accurately estimate the Water and Wastewater Equivalent Loading such as m2 area, number of beds, etc.
- (c) Where usage of water-related services on a development will be sporadic, then the general principle to be followed in calculating the average demand is to use the period during which the development will generally experience heavy usage.

Appendix C provides an example of the inputs required and how bespoke calculations are completed for water and wastewater.

7. INCLUSION OF THE CHARGE IN THE NOR LETTER

7.1 Responsibility for calculation

Development Services Representatives are responsible for the calculation of developer charges and possible ET credits (acknowledging the existing connected development) that may be available for developments that are submitted to Hunter Water for assessment under Section 50 of the Hunter Water Act.

The review and approval of the final charge is in accordance with Hunter Water's approved delegated authorities.

7.2 When are charges determined?

Upon receiving a development application for a Section 50 Compliance Certificate, Hunter Water will investigate the impact that the proposed development is likely to have on its systems. At the same time, Hunter Water will determine the resulting developer charge.

The developer charge value is then referenced in NOR. The charge is subject to adjustment for annual CPI on 1 July each financial year, and may also be adjusted during the developer charges transition period depending on when the development reaches completion.

In addition to providing an estimate of the total developer charge payable in the NOR, the Development Services Representatives will also provide a charge summary table in order to detail the calculation methodology used.

DSP Area	DSP Charge	Calculation: Utilisation (in ET) x DSP Charge/ET - Credit (if applicable) = Charge	
W.6 Cessnock Water Zone	\$4,881 per ET	Calculated ET for this development: 3 ET x DSP charge/ET = \$14,643 Less calculated credit for previous development: 1 ET x DSP charge/ET = \$4,881 = Final Calculated utilisation: 2 ET x DSP charge/ET = \$9,762	
S.5 Cessnock Wastewater Catchment	\$2,813 per ET	Calculated ET for this development: 3 ET x DSP charge/ET = \$8,439 Less calculated credit for previous development: 1 ET x DSP charge/ET = \$2,813 = Final Calculated utilisation: 2 ET x DSP charge/ET = \$5,626	
Estin	Estimated total developer charge payable for your development over water and wastewater: \$15,388		

An example of this summary table is:

7.3 When in the land development cycle is a Developer Charge required to be paid?

Payment of the developer charge can only be made once all Hunter Water requirements have been met (including the conditions set out in of the NOR letter), a DA Consent or Complying Development Consent has been provided to Hunter Water, and (in the case of works being required) once the works have been completed in accordance with a developer works deed and a finalisation package has been submitted. Once the developer has met all of these prerequisites, they will then need to contact Hunter Water to request an invoice for payment, at which time any CPI and/or phasing adjustment will be made and the revised amount will be provided.

Payment of developer charges can then occur just prior to Hunter Water issuing the Section 50 Compliance Certificate.

Developer charges, like other financial components, cannot be bonded as part of a 'Bonding Outstanding Development Requirements Application'.

A flow-chart of the 'When to pay a developer charge' process is detailed in Appendix F.

7.4 Recalculation of a developer charge prior to issue of compliance certificate

Developer charges are calculated and at the time of assessment, therefore a number of factors can influence the estimated amount and the final charge payable. This includes:

- a) Modifications to the Development: charges are applied in accordance with the approved Development Consent and therefore if the developer seeks to modify that development, or the final development description provided by the applicable development consent authority differs, a recalculation of the developer charge will be required;
- b) CPI adjustment: The annual CPI adjustment applied by Hunter Water is determined by the Independent Pricing and Regulatory Tribunal (IPART) and applies to all pricing offered by Hunter Water. CPI indexing is completed on 1 July each financial year;
- c) **Phasing adjustment**: The NSW Government has directed that developer charges will remain at 0% for financial year 2023-24, before a phased reintroduction at 25% in financial year 2024-25, 50% in financial year 2025-26, prior to full reintroduction from financial year 2026-27 onwards.

8. APPEAL RIGHTS AND DISPUTE HANDLING

8.1 Appeal Rights

Developers may appeal/request advice on developer charges and request the charge be reviewed by Hunter Water under Delegated Authority.

If the enquiry is not resolved, then a developer can have the charge reviewed by Hunter Water through the complaint and enquiry policy.

8.2 Dispute Handling

If a developer is dissatisfied with how Hunter Water has handled the dispute, they have the right to have the dispute arbitrated under the Independent Pricing & Regulatory Tribunal Act. The first step of this arbitration process is to contact Hunter Water.

In this instance, a written request must be made to the Group Manager Development Services. This can be done via a number of different communication channels:

- Email at enquiries@hunterwater.com.au
- Visiting our website at <u>www.hunterwater.com.au</u> and using our web chat services or online form at <u>https://www.hunterwater.com.au/contact-us/feedback-complaints/share-your-feedback</u>
- Calling our local Contact Centre on 1300 657 657 8am to 5pm, Monday Friday

• By writing to us at Group Manager Development Services, Hunter Water, PO Box 5171, HRMC NSW 2310

Where we cannot resolve a customer complaint at the first point of contact and where the complaint may require further investigation and a detailed response, we will provide initial acknowledgment of the dispute being received within 3 business days. As part of this acknowledgement, a Case Identification number that assists in tracking progression of the dispute will be provided. We will also provide an estimated time frame outlining when you are expected to receive an update about the investigation, and the name of the contact person for follow up of the complaint.

If the dispute is still not resolved, or the developer is unsatisfied with our handling of the complaint, a developer has a right to arbitration under Section 31 of the Independent Pricing & Regulatory Tribunal Act 1992 only if the methodology of calculation of the charge is disputed. A flow-chart of the Dispute Handling process is detailed in *Appendix D*.

9. RELATED DOCUMENTS/APPENDICES

Related Documents

- 1. IPART DETERMINATION
- 2. NSW Productivity Commissions REPORT
- 3. Frontier Economics advice on Equivalent Tenements REPORT
- 4. Measuring the number of Equivalent Tenements in a new development INFO SHEET
- 5. Hunter Water Developer Charges FACTSHEET

Appendices

- **APPENDIX A:** Water and Wastewater Equivalent Loading Matrix
- APPENDIX B: Flow Chart Calculating a developer charge from application to NOR
- APPENDIX C: Calculating bespoke ET values
- APPENDIX D: Flow Chart Dispute Handling
- **APPENDIX E:** Example Calculations
- APPENDIX F: Flow Chart When to pay a Developer Charge



APPENDIX A: Water and Wastewater Equivalent Loading Matrix

Each development type across residential, multi-residential and non-residential are listed in the Water and Wastewater Equivalent Loading Matrix, along with category, description, typical Water and Wastewater ET values.

*Some developments require further information (normalisers) in order to improve the ET estimate of the water and wastewater loading, such as m² or number of beds. In the instance whereby a normaliser is used, these development types all carry a base water and wastewater ET for common facilities as well as a normaliser water and wastewater ET.

In some instances, Hunter Water has been unable to derive typical water and wastewater ET values, these developments being larger, more complex development types with varied usage patterns, such as heavy industrial/manufacturing and/or commercial businesses such as laundromats and car washes. These development types are less common and more bespoke in nature and therefore require a bespoke calculation on an 'assess as required' basis. (Further details on how these developments are treated can be found in the Section 7.1 of the Developer Charge Guideline document.

If a customer believes that their development is materially different to the values provided by Hunter Water, they may engage the services of a Hydraulic Design Consultant to estimate the annual water consumption, the expected meter sizing and likely amount of water being discharged to the sewerage system. These parameters can then be provided to Hunter Water and we will consider this in the calculation of the developer charges.

Residential ET Loading:

Calc Type (Typical/ Typical+Normaliser/ Bespoke) *	Development Category and Type	Definition/ Example business use	How to Calculate	Typical/Base Water ET	Normaliser Water ET	Typical/Base Sewer ET	Normaliser Sewer ET	Unit Adopted/ Normaliser
Residentia								
Typical ET	Single Residential standalone house	An existing residential standalone property, proposing to connect to the water utilities network within the existing water supply and/or sewerage scheme	use typical/base ET	1.00		1.00		per lot
Typical ET	Subdivision: Torrens title or Community title with individual water and sewer connections	Land divided into single lots which are each individually owned by the land owner. Each newly created lot will be provided with separate water and sewer services.	use typical/base ET	1.00		1.00		per lot
Typical ET	Subdivision: Industrial	Land divided into single lots in an industrial zone. Each newly created lot will be provided with separate water and sewer services.	use typical/base ET	1.00		1.00		per lot
Typical ET	Subdivision: Stratum	Typically, subdivisions on multilevel developments. An example would be ground floor commercial space being one stratum lot and two residential floors above being another stratum lot. Each stratum lot requires its own point of connection to sewer and water.	use typical/base ET	1.00		1.00		per lot
Typical ET	Group Home	A home for a small number of people who require care, support and/or supervision	use typical/base ET	1.00		1.00		per home
Typical ET	Bed and Breakfast	Classed as small lodging - standalone house conversions to accommodation	use typical/base ET	1.00		1.00		per house



Multi-Residential ET Loading:

HUNTER	

Calc Type (Typical/ Typical+Normaliser/ Bespoke) *	Development Category and Type	Definition/ Example business use	How to Calculate	Typical/Base Water ET	Normaliser Water ET	Typical/Base Sewer ET	Normaliser Sewer ET	Unit Adopted/ Normaliser
Multi-Resid	dential							
NA	Granny flat/secondary dwelling (less than 60m2)	A secondary dwelling, same parcel of land, under 60 square meters in size	use typical/base ET	NA	NA	NA	NA	NA
Typical ET	Dual Occupancy (greater than 60m2)	A secondary dwelling, same parcel of land, over 60 square meters in size	use typical/base ET	0.60		0.90		per unit
Typical ET	Duplex/unit/flat/apartment	Unit developments, townhouses, apartment complexes, high rise apartment	use typical/base ET	0.60		0.90		per unit
Typical ET	Self-care retirement village/over 55's	Over 55's estate, Retirement village (self-care – not assisted living) * Retirement villages can have multiple calculation components such as self-care units, nursing home beds and associated commercial areas - each will be added as a separate component in charge	use typical/base ET	0.60		0.90		per unit

Non-Residential ET Loading:

HUNTER WATER

Calc Type (Typical/ Typical+Normaliser/ Bespoke) *	Development Category and Type	Definition/ Example business use	How to Calculate	Typical/Base Water ET	Normaliser Water ET	Typical/Base Sewer ET	Normaliser Sewer ET	Unit Adopted/ Normaliser
Non-Resid	ential							
Commercial Off	ïce							
Typical ET	Office small - med (size <4,700m2)	General commercial/business development (excludes home offices within existing residential dwellings) – small-medium in size <4,700m2 (e.g. real estate agency office, office space)	use typical/base ET	1.38		1.71		per office building
Bespoke Calculation	Office large (size > 4,700m2)	General commercial/business development – large in size >4,700m2 (e.g. Hunter Water, NIB)	bespoke calculation required					
Healthcare Serv	vices							
Typical ET + Normaliser ET	Aged Care – Nursing Home	Residential care facilities where occupants receive aged care, disability support or palliative care but share kitchen/dining facilities * can have multiple calculation components such as nursing home beds and associated commercial areas - each will be added as a separate component in charge	<i>use typical/base ET</i> + normaliser	8.70	0.30	0.00	0.17	per bed
Typical ET	Emergency Services	Fire station, police station, SES, ambulance	use typical/base ET	1.23		1.73		per station
Typical ET	Gym/Fitness Centres	Chain gyms and fitness centres (includes showers)	use typical/base ET	2.82		2.59		per centre
Typical ET	Healthcare Clinics & Services	A medical facility in which one or more medical doctors, usually general practitioners, receive and treat patients. Includes consultation rooms, imaging rooms, etc. E.g. Doctor surgery/dental suites/podiatry clinics/chiropractic/physio, VET clinics	use typical/base ET	1.21		1.47		per clinic
Bespoke Calculation	Hospital	Health care facilities where patients are treated on a short-medium term basis with various support services provided. Medical private or public/day surgery/animal hospital	bespoke calculation required					



Calc Type (Typical/ Typical+Normaliser/ Bespoke) *	Development Category and Type	Definition/ Example business use	How to Calculate	Typical/Base Water ET	Normaliser Water ET	Typical/Base Sewer ET	Normaliser Sewer ET	Unit Adopted/ Normaliser
Non-Resid	ential							
Leisure, Food a	nd Hospitality							
Typical ET	Café	Small sized eating establishment usually business hours serving small meals (coffees and light meals) seating available	use typical/base ET	2.19		1.47		per café
Typical ET + Normaliser ET	Caravan Park	Recreational vehicle park, holiday homes/parks, Manufactured home state, camping grounds	<i>use typical/base ET</i> + normaliser	6.00	0.0017	3.70	0.0002	per square metre
Typical ET	Fast Food Chains - 24 hours	A high-volume premise (fast food chains) that have 24-hour operations, restaurant and drive- thru (McDonalds)	use typical/base ET	13.55		5.50		per restaurant
Bespoke Calculation	Golf Course	Golf course turf irrigation only. If there is a club ADD club facilities such as retail shop, restaurant, etc.)	bespoke calculation required					
Typical ET + Normaliser ET	Motel/Hotels	An establishment that provides paid lodging on a short-term basis for travellers and tourists. This does not include on site facilities such as restaurants or retail shops * this is just for the rooms, if there is a restaurant or laundromat, add these separately	<i>use typical/base ET</i> + normaliser	0.95	0.33	3.14	0.012	per room
Bespoke Calculation	Pubs, Taverns and Bars	Licenced establishment servicing alcoholic beverages for drinking on premises. Includes restaurant/bistro, may also include accommodation.	bespoke calculation required					
Typical ET	Restaurant	A premise used for the preparation or service of food product to the public using a full- service kitchen, serving full menu.	use typical/base ET	3.42		1.89		per restaurant
Typical ET	Takeaway Food Services	Fast food chains that are takeaway, no seating (Dominos, Pizza Hut, Kebab shop)	use typical/base ET	1.75		1.35		per shop



Calc Type (Typical/ Typical+Normaliser/ Bespoke) *	Development Category and Type	Definition/ Example business use	How to Calculate	Typical/Base Water ET	Normaliser Water ET	Typical/Base Sewer ET	Normaliser Sewer ET	Unit Adopted/ Normaliser
Non-Resid	ential							
Retail Services								
Bespoke Calculation	Bulky Goods Retail	Commercial premises utilised for the storage and sale of bulky goods, typically large floor areas. Large Superstores or Hypermarkets (IKEA, Bunnings, Costco)	bespoke calculation required					
Bespoke Calculation	Car Wash / Car Dealerships	Car Sales/Car Yards and facilities for car cleaning and detailing, automatic equipment for car cleaning	bespoke calculation required					
Typical ET	Fresh Meat, Fish and Poultry Retailing	Retail food outlet, butchery, seafood & fish	use typical/base ET	2.20		1.71		per shop
Typical ET	Fuel Stations	Petrol/gas station with lanes & pumps - may include on-site retail shop * This is just fuel pumps and small onsite shop, does not include car wash or restaurant (drive-thru MacDonald's etc added as extra component in calculation)	use typical/base ET	1.45		1.45		per station
Bespoke Calculation	Laundry/Laundromat	Laundromats (self-service and commercial) and dry cleaners	bespoke calculation required					
Typical ET	Retail Business/Shop	Sale of items and services to customers in- store, retail shops (jewellers, speciality store, chain stores, clothing store, retail pharmacy)	use typical/base ET	1.19		1.50		per shop
Typical ET + Normaliser ET	Shopping Centre	Large complex/collection of shops, retail and department stores (Westfield, Greenhills)	<i>use typical/base ET</i> + normaliser	0.00	1.33	1.64	0.49	per shop
Typical ET + Normaliser ET	Supermarkets	Large scale self-service shop selling food and household goods (Coles, Woolworths, Aldi)	<i>use typical/base ET</i> + normaliser	0.50	0.0027	1.28	0.001	per square metre
Typical ET	Personal Care/ Beauty/Hair Services	Hairdressers, barbers, nail salons, day spas, cosmetic beauty treatments, massage, tattoo/piercing studio	use typical/base ET	1.43		1.32		per shop



Calc Type (Typical/ Typical+Normaliser/ Bespoke) *	Development Category and Type	Definition/ Example business use	How to Calculate	Typical/Base Water ET	Normaliser Water ET	Typical/Base Sewer ET	Normaliser Sewer ET	Unit Adopted/ Normaliser
Non-Resid	ential							
Education Facil	ities							
Typical ET	Child Care Services	The care and supervision of a child or multiple children at a time (day care)	use typical/base ET	2.31		1.97		per centre
Bespoke Calculation	Education - other	Non-traditional educational establishment that does not fit the description of primary, secondary or tertiary education (this could be adult learning centres, language centres)	bespoke calculation required					
Typical ET	Education - Preschool	Educational establishment or learning space offering early childhood education to children before they begin compulsory education at primary school.	use typical/base ET	1.64		1.32		per centre
Typical ET + Normaliser ET	Education - Primary/Secondary School	Educational establishment or learning space offering primary & secondary education to children aged between 4-18 years	use typical/base ET + normaliser	1.08	0.021	1.21	0.012	per student
Bespoke Calculation	Education - Tertiary	Educational establishment following the completion of secondary education. E.g. University, trade schools, TAFE.	bespoke calculation required					



Calc Type (Typical/ Typical+Normaliser/ Bespoke) *	Development Category and Type	Definition/ Example business use	How to Calculate	Typical/Base Water ET	Normaliser Water ET	Typical/Base Sewer ET	Normaliser Sewer ET	Unit Adopted/ Normaliser
Non-Resid	ential							
Industrial/Manu	facture							
Typical ET	Light Industrial/Manufacturing (dry)	Industrial development utilised which manufacturing is not undertaken. Water shall not be utilised for operational purposes except for provision of staff amenities. (Dry) e.g. Tyre shops/ furniture manufacture)	use typical/base ET	1.15		1.48		per business
Typical ET	Medium Industrial/Manufacturing (dry-wet)	Industrial development in which minimal water consumption may be intermittently utilised within the manufacturing or operational process. (Wet) e.g. Metal work, mechanical workshops, carpentry	use typical/base ET	2.20		1.95		per business
Bespoke Calculation	Heavy Industrial/Manufacturing (wet)	Industrial development in which water consumption forms an integral function within the manufacturing or operational process (e.g. Concrete plants, breweries, Tomago Aluminium etc.)	bespoke calculation required					
Typical ET	Warehouses	Self-storage, wholesale storage (non- manufacture)	use typical/base ET	1.39		1.70		per warehouse
Typical ET	Food Manufacture	Food manufacturing defined as raw materials processed into food products such as bakeries, dairies, etc.*large scale catering business will require bespoke calculation	use typical/base ET	1.81		1.46		per business



Calc Type (Typical/ Typical+Normaliser/ Bespoke) *	Development Category and Type	Definition/ Example business use	How to Calculate	Typical/Base Water ET	Normaliser Water ET	Typical/Base Sewer ET	Normaliser Sewer ET	Unit Adopted/ Normaliser
Non-Resid	Non-Residential							
Public use/Ame	enities							
Typical ET	Community Buildings	Public council buildings, Library, museum, community halls (e.g. Girl guides centre, men's shed)	use typical/base ET	0.82		0.81		per building
Bespoke Calculation	Marina	Designed harbour with moorings	bespoke calculation required					
Typical ET	Place of Worship	Mosque, church, temples	use typical/base ET	0.64		1.21		per building
Typical ET	Public Amenities	Toilet block, water station, beach outdoor showers, tennis courts squash courts amenities	use typical/base ET	1.32		1.02		per block/building
Bespoke Calculation	Public Swimming Pool	Swimming pool for public use	bespoke calculation required					
Typical ET + Normaliser ET	Sporting Club	Leagues Club, Bowling Clubs, RSL (e.g. Wests)	<i>use typical/base ET</i> + normaliser	5.50	0.0056	3.22	0.00065	per square metre
Bespoke Calculation	Sporting Field	Soccer field, cricket pitch, outdoor pitch/field that needs watering (amenities separate)	use typical/base ET					
Other								
Typical ET	Funeral Services	Burial and funeral home/services/parlour/crematorium	use typical/base ET	1.32		0.95		per building
Bespoke Calculation	Plant Nursery /Orchard	Cultivation of plants (Lee Rowans)	bespoke calculation required					
Bespoke Calculation	Showground/Stadium	Outdoor and Indoor venue with tiers of seats for spectators (e.g. McDonalds Jones stadium, Horseracing)	bespoke calculation required					
Bespoke Calculation	Vineyard	Plantation of grapevines and/or wine tasting	bespoke calculation required					

APPENDIX B: Flow Chart: Calculating a developer charge from application to NOR





Appendix E: Hunter Water Developer Charges Example Calculations



This document provides **worked examples** for how ETs and credits are calculated for residential, multiresidential, non-residential and mixed developments to assist learning and promote understanding of the assessment process.

Note:

- Prices vary by DSP area you can find the relevant price for your specific development on our website.
- Worked examples are in 2022-23 dollars (prices are adjusted each financial year for changes in the Consumer Price Index).
- Examples use the full price as at 30 August 2023, however, contributions will be capped at 25% in 2024-25 and 50% in 2025-26.

Base revenue for a single residential house

In our area of operation, the average single standalone house consumes 181 kilolitres per annum of water and has an average annual water bill of \$479 and an average annual wastewater bill of \$694, hence:

- \$479 = 1 ET for water
- \$694 = 1 ET for wastewater

Base revenue for a multi-residential dwelling

In our area of operation, an average multi-residential dwelling consumes 109 kilolitres of water per annum and has an average annual water bill of \$297 and an average annual wastewater bill of \$625, hence all multi-residential units (compared to a single standalone dwelling):

- \$297 = 0.6 ET for water
- \$625 = 0.9 ET for wastewater

Calculating ET for non-residential development

To measure the ET value of non-residential development, Hunter Water has undertaken an extensive analysis of water and wastewater revenue derived from our non-residential customers. The ET estimate for water relies on estimates of water consumption and meter size. The ET estimate for wastewater relies on meter size, estimated water consumption and sewage discharge factor.

In order to help customers assess their likely ET utilisation we have expanded the EBM and included water and Wastewater ET per non-residential category, based on their characteristics: forecast water consumption; expected meter sizing and Wastewater discharge factor.

Residential Calculation Example(s):

Residential Scenario 1:

An application is received for vacant land in Percy Street, Cessnock, this development is within our area of operations however the lot is not currently connected to any of our services (water or wastewater), and a single house is proposed to be developed, this development falls into the W.6 DSP for water and the S.5 DSP for Wastewater.

Calculation breakdown:

Applicable DSPs:	W.6 (\$4,848.61 per ET) and S.5 (\$2,803.97 per ET)
New Development ET	(Water): 1 new house x 1 ET = 1 ET x \$4,848.61 = \$4,848.61
Calculation:	(Wastewater): 1 new house x 1 ET = 1 ET x \$2,803.97 = \$2,803.97
Existing Development	(Water): \$0, as the existing lot is not connected to our water network
Credit ET Calculation:	(Wastewater): \$0, as the existing lot is not connected to our wastewater network
New DSP Charge:	(Water + Wastewater): \$7,652.58
Credit DSP Charge:	(Water + Wastewater): \$0.00
New charge minus credit	\$7,652.58 - \$0.00
Total DSP Charge:	\$7,652.58

Residential Scenario 2:

An application is received to subdivide an existing $1,200m^2$ lot at Galloway Street, Kurri Kurri, into $2 \times 600m^2$ separate lots, this lot is already connected to our services and no building activity is taking place at this time.

Calculation breakdown:

Applicable DSPs:	W.6 (\$4,848.61 per ET) and S.13 (\$3,613.23 per ET)
New Development ET	(Water): 2 new lots x 1 EI = 2 EI x \$4,848.61 = \$9,697.22
Calculation:	(Wastewater): 2 new lots x 1 ET = 2 ET x \$3,613.23 = \$7,226.46
Existing Development	(Water): 1 existing lot x 1 ET = 1 ET x \$4,848.61 = \$4,848.61
Credit ET Calculation:	(Wastewater): 1 existing lot x 1 ET = 1 ET x \$3,613.23 = \$3,613.23
New DSP Charge:	(Water + Wastewater): \$16,923.68
Credit DSP Charge:	(Water + Wastewater): \$8,461.84
New charge minus credit	\$16,923.68 - \$8,461.84
Total DSP Charge:	\$8,461.84

Multi-Residential Scenario 1:

An application is received for the development of a dual occupancy on a single lot with an existing house already connected to our services, this development is at Warrah Street, Hamilton East.

Calculation breakdown:

Applicable DSPs:	W.1 (\$1,007.89 per ET) and S.4 (\$0.00 per ET)
New Development ET	(Water): 1 unit x 0.6 ET = 0.6 ET x \$1,007.89 = \$604.73
Calculation:	(Wastewater): 1 unit x 0.9 ET = 0.9 ET x \$0.00 = \$0.00
	(Water): 1 house x 1 ET = 1 ET x \$1,007.89 = \$1,007.89
	(Wastewater): 1 house x 1 ET = 1 ET x \$0.00 = \$0.00
Existing Development	(Water): 1 existing house x 1 ET = 1 ET x \$1,007.89 = \$1,007.89
Credit ET Calculation:	(Wastewater): 1 existing house x 1 ET = 1 ET x \$0.00 = \$0.00
New DSP Charge:	(Water + Wastewater): \$1,612.62
Credit DSP Charge:	(Water + Wastewater): \$1,007.89
New charge minus credit	\$1,612.62 - \$1,007.89
Total DSP Charge:	\$604.73

Multi-Residential Scenario 2:

An application is received to demolish three individual existing homes on 3 Torrens title lots at Ferodale Road, Medowie in order to develop 6 x 2-bedroom and 3 x 3-bedroom multi-residential units.

Calculation breakdown:

Applicable DSPs:	W.7 (\$2,059.64 per ET) and S.17 (\$10,217.51 per ET)
New Development ET	(Water): 9 new units x 0.6 ET = 5.4 ET x \$2,059.64 = \$11,122.05
Calculation:	(Wastewater): 9 new units x 0.9 ET = 8.1 ET x \$10,3217.51 = \$82,761.83
Existing Development	(Water): 3 existing lots x 1 ET = 3 ET x \$2,059.64 = \$6,178.92
Credit ET Calculation:	(Wastewater): 3 existing lots x 1 ET = 3 ET x \$10,217.51 = \$30,652.53
New DSP Charge:	(Water + Wastewater): \$93,883.88
Credit DSP Charge:	(Water + Wastewater): \$36,831.45
New charge minus credit	\$93,883.88 - \$36,831.45
Total DSP Charge:	\$57,052.43

Non-residential Calculation Example:

Based on our 'Equivalent Bill Method' and 'Water and Wastewater Equivalent Loading Matrix', each new application to develop a commercial/industrial development will use our typical water and wastewater ET values times the applicable DSP charge to connect to the water and wastewater systems.

Non-Residential Scenario 1:

An application is received to develop a new healthcare clinic on a vacant lot (already connected to water and wastewater) in Devonshire Street, Cameron Park.

Calculation breakdown:

Applicable DSPs:	W.4 (\$2,444.33 per ET) and S.9 (\$4,839.44 per ET)
New Development ET	(Water): 1 new clinic x 1.21 ET = 1.21 ET x \$2,444.33 = \$2,957.63
Calculation:	(Wastewater): 1 new clinic x 1.47 ET = 1.47 ET x \$4,839.44 = \$7,113.97
Existing Development	(Water): 1 existing lot x 1 ET = 1 ET x \$2,444.33 = \$2,444.33
Credit ET Calculation:	(Wastewater): 1 existing lot x 1 ET = 1 ET x \$4,839.44 = \$4,839.44
New DSP Charge:	(Water + Wastewater): \$10,071.60
Credit DSP Charge:	(Water + Wastewater): \$7,283.77
New charge minus credit	\$10,071.60 - \$7,283.77
Total DSP Charge:	\$2,787.83

Mixed Residential/Commercial Calculation Example:

Mixed development refers to development containing a portion of both commercial and residential development. In this case a developer charge is calculated separately for each of the components. Both the residential component^a and the non-residential component^b are based on our 'Equivalent Bill Method' and 'Water and Wastewater Equivalent Loading Matrix'.

Mixed Residential/Commercial Scenario 1:

An application is received to develop 10 multi-residential units and 3 retail shops within one building. This building is being constructed over 2 vacant lots (already connected to water and wastewater), this development is in The Esplanade, Lorn.

Calculation breakdown:

Applicable DSPs:	W.3 (\$2,666.02 per ET) and S.10 (\$2,076.58 per ET)
New Development ET	(Water): 10 new units ^a x 0.6 ET = 6 ET x \$2,666.02 = \$15,996.12
Calculation:	(Wastewater): 10 new units ^a x 0.9 ET = 9 ET x \$2,076.58 = \$18,689.22
	(Water): 3 new shops ^b x 1.19 ET = 3.57 ET x \$2,666.02 = \$9,517.69
	(Wastewater): 3 new shops ^b x 1.50 ET = 4.5 ET x \$2,076.58 = \$9,344.61
Existing Development	(Water): 2 existing lots x 1 ET = 2 ET x \$2,666.02 = \$5,332.04
Credit ET Calculation:	(Wastewater): 2 existing lots x 1 ET = 2 ET x \$2,076.58 = \$4,153.16
New DSP Charge:	(Water + Wastewater): \$53,547.64
Credit DSP Charge:	(Water + Wastewater): \$9,485.20
New charge minus credit	\$53,547.64 - \$9,485.20
Total DSP Charge:	\$44,062.44







Hard copies of this document are considered uncontrolled. Trim: HW2021-953/13/5.001 | Version: 1 | Date: July 2023



Standalone Residential prices



Calculating a bespoke Water ET value (EXAMPLE):

Hard copies of this document are considered uncontrolled. Trim: HW2021-953/13/5.001 | Version: 1 | Date: July 2023



Hard copies of this document are considered uncontrolled. Trim: HW2021-953/13/5.001 | Version: 1 | Date: July 2023