Torbay Water Cycle Study

Torbay Council

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Delivering a better world

Quality information

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Table of Contents

Abbreviations 6
1. Introduction 7
1.1 Water Cycle Study purpose 7
1.2 Study partners 7
1.3 Report structure 8
2. Study drivers 9
2.1 National planning policy 9
2.2 Legislation 9
2.3 Local policy 10
2.4 Other strategies and plans 11
3. Growth proposals and study area 12
3.1 Study area 12
3.2 Growth proposal summary 12
4. Hydrological baseline summary 13
4.1 Surface water 13
4.2 Groundwater 14
4.3 Water dependent habitats 15
4.4 Other designations 15
5. Water infrastructure baseline summary 17
5.1 Infrastructure provision 17
5.2 Water infrastructure planning 17
5.3 Water supply 18
5.4 Wastewater services 20
5.5 Flood risk 21
5.6 NbS opportunities 24
6. Wastewater capacity assessment 27
6.1 Sewer Capacity Assessment and CSOs 27
6.2 WwTW capacity assessment 28
6.3 WwTW detailed assessments 29
7. Water supply assessment 33
7.1 Balancing supply and demand 33
7.2 Lowering future demand 34
7.3 Non-domestic growth 39
8. Growth area summaries 41
8.1 Introduction 41
8.2 Torquay 42
8.3 Paignton 43
8.4 Broadsands 44
8.5 Brixham 45
9. Recommendations 46
9.1 Introduction 46
9.2 Per capita consumption – domestic 46
9.3 Management of surface and foul water discharge to the sewer system 46
9.4 Confirmation of WwTW capacity 46
9.5 NFM / NbS 46
9.6 Water quality 47
9.7 Further consultation 47

Appendix A - Policy and legislative drivers shaping the WCS 48
A.1 WFD surface water body status 48
A.2 Legislation 48
A.3 Strategies and plans 49
A.4 Torbay Council Local Plan full policies 50
Appendix B – WwTW capacity assessment methodologies 53
Determining flow capacity 53
Environmental capacity 53
Assumptions and input data 54
Appendix C - Report figures 55

Abbreviations

Acronym	Definition
ALS	Abstraction Licensing Strategies
AMP	Asset Management Plan
CAMS	Catchment Management Abstraction Strategy
Defra	Department for Environment, Food & Rural Affairs
DWF	Dry Weather Flow
DWMP	Drainage and Wastewater Management Plan
EA	Environment Agency
EFI	Environmental Flow Indicator
LFRMS	Local Flood Risk Management Strategy
LLFA	Lead Local Flood Authority
LPA	Local Planning Authority
NbS	Nature based Solutions
NFM	Natural Flood Management
NPPF	National Planning Policy Framework
Ofwat	Office for Water Services
PCC	Per Capita Consumption
PPG	Planning Practice Guidance
RBMP	River Basin Management Plan
RNAG	Reasons for Not Achieving Good (under the WFD Regulations)
RQP	River Quality Planning
SCA	Sewer Capacity Assessment
SFRA	Strategic Flood Risk Assessment
SPZ	Source Protection Zones
SSSI	Site of Special Scientific Interest
SuDS	Sustainable Drainage Systems
SWPA	Shellfish Water Protected Area
SWW	South West Water
TC	Torbay Council
WCS	Water Cycle Study
WCWR	West Country Water Resources
WFD	Water Framework Directive
WRMP	Water Resources Management Plan
WRZ	Water Resource Zone
WSI	Water Services Infrastructure
WWNP	Working with Natural Processes
WwTW	Wastewater Treatment Works

1. Introduction

1.1 Water Cycle Study purpose

A detailed Water Cycle Study (WCS) has been produced for Torbay Council (TC) as part of the evidence base to inform the spatial strategy of the Council's Local Plan. The Environment Agency guidance for completing WCS'[1] recommends they are completed in two stages: a Scoping Stage to identify evidence gaps and relevant stakeholders followed by a Detailed Study which undertakes assessments required to fill those data gaps. However, given the Sewer Capacity Assessment (SCA)[2] undertaken in 2023 for Torbay provided information which is usually contained within a Scoping Study such as identifying key stakeholders and where the key water, wastewater and flood risk issues will be, it is considered suitable to move to a detailed WCS. This report provides the findings of the SCA and detailed WCS as it relates to TC's administrative area.

The objective of the detailed WCS is to identify any constraints on planned housing and employment growth that may be imposed by the water cycle. The detailed WCS then identifies how these can be resolved i.e. by ensuring that appropriate Water Services Infrastructure (WSI) can be provided to support the proposed development, including the planning policy required to deliver it. It should provide a strategic approach to the management and use of water which ensures that the sustainability of the water environment in the area is not compromised. A broad overview of the interaction between the water environment and WSI which the WCS is concerned with is provided within Figure 1-1[3].

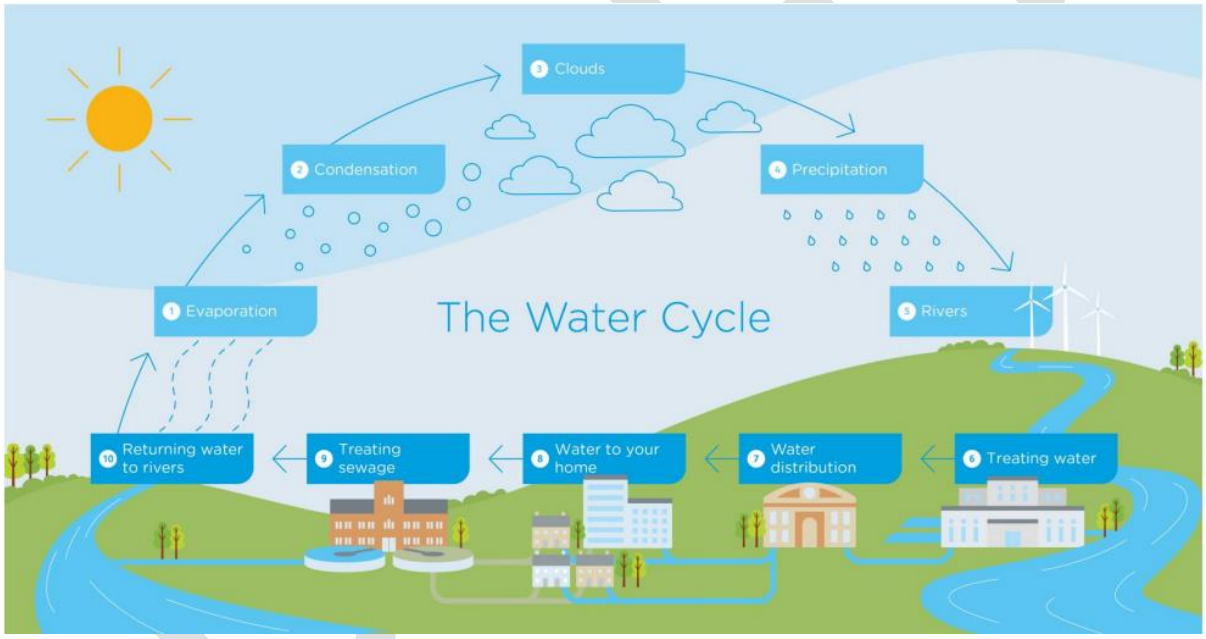

Figure 1-1 The water environment and water services infrastructure components

1.2 Study partners

The detailed WCS has been carried out with the following contributors and partners:

- TC as the Local Planning Authority (LPA) and Lead Local Flood Authority (LLFA).
- South West Water (SWW) as the wastewater and public water supply provider in TC's administrative area.
- The Environment Agency.

[1] Environment Agency (2021) Water cycle studies. Available at: https://www.gov.uk/guidance/water-cycle-studies (Accessed January 2025)
[2] Torbay Council (2023) An Assessment of Future Sewer Capacity in Torbay. Available at: https://www.torbay.gov.uk/media/19759/14710_torbay-sewer-capacity-assessment_rev_03.pdf (Accessed January 2025)
[3] Source: https://www.thameswater.co.uk/about-us/responsibility/education/the-water-cycle

- Natural England.

The detailed WCS has also used relevant information from the following organisations:

- West Country Water Resources (WCWR).
- British Geological Survey (BGS).

1.3 Report structure

The detailed WCS report is structured as follows:

- Section 2: **Study drivers** - explains why a WCS required, including the policy context.
- Section 3: **Growth proposals and study area** - defines the study area growth options assessed.
- Section 4: **Hydrological baseline summary** - provides information on the existing hydrological and hydrogeological context in the TC administrative area.
- Section 5: **Water infrastructure baseline summary** - provides information on the current WSI baseline, including capacity within the infrastructure before growth is assessed.
- Section 6: **Wastewater Capacity assessment:** sets out the assessment of wastewater infrastructure and environmental capacity allowing for the impact of growth and identifies required solutions.
- Section 7: **Water Supply Assessment**: sets out the assessment of available water supply allowing for the impact of growth and identifies required solutions.
- Section 8: **Growth area summary** – sets out a summary of the WCS findings, including infrastructure and water environment aspects based on identified areas of growth across the TC area.
- Section 9: **Recommendations** – summarises key recommendations for the Local Plan emerging from the WCS, including policy recommendations.

2. Study drivers

There are several legislative, regulatory and policy level drivers which shape the approach to the WCS. A full list of key legislative drivers is detailed in Appendix A.

2.1 National planning policy

The National Planning Policy Framework (NPPF)[4] includes several water-related requirements which influence the need for, and direction of the WCS assessments, including:

- Strategic policies in development plan documents should make sufficient provision for infrastructure for water supply, wastewater and flood risk and coastal change management.
- The planning system should take full account of climate change impacts including water scarcity, storm and flood risks and coastal change. Local Plans should take a proactive approach to mitigating and adapting to these climate change risks.

Planning Policy Guidance (PPG)[5] states that a WCS can help plan for sustainable growth. WCSs prepared at an early stage of plan-making can provide the evidence base to ensure local development plans are sound. This is the key driver for completing a WCS as part of the Local Plan evidence base.

2.2 Legislation

The primary legislative drivers for this study are the Water Environment Water Framework Directive (WFD) Regulations 2017, the Conservation of Habitats and Species Regulations 2017 (as amended) and the Environment Act (2021). This is because these instruments set out how the water environment needs to be protected relative to planning for and delivering growth; these instruments are summarised below, alongside other relevant legislative instruments.

2.2.1 Water Framework Directive Regulations

The environmental objectives of the WFD Regulations, as published in the Environment Agency's River Basin Management Plans (RBMPs)[6], which are relevant to this WCS are:

- To prevent deterioration of the status of surface waters and groundwater.
- To achieve objectives and standards for protective areas.
- To aim to achieve good status for all water bodies or, for heavily modified water bodies and artificial water bodies, good ecological potential and good surface water chemical status.

These environmental objectives are legally binding, and all public bodies should have regard to these objectives when making decisions (such as allocating sites for development in their Local Plan) that could affect the quality of the water environment. The Environment Agency publishes the WFD status and objectives of each surface water and groundwater body. Surface water bodies can be classed as high, good, moderate, poor or bad status and groundwater body status is classified on the basis of quantitative and chemical status and can be classified as good or poor.

The WFD Regulations are important to the WCS as provision of new WSI needs to ensure that the objectives of the Regulations are not compromised by ensuring that additional demand for water and generation of additional wastewater does not adversely impact on the current and future status of waterbodies.

[4] Ministry of Housing, Communities & Local Government (Dec 2024) National Planning Policy Framework. Available at: https://assets.publishing.service.gov.uk/media/675abd214cbda57cacd3476e/NPPF-December-2024.pdf (Accessed January 2025)
[5] Department for Levelling Up, Housing and Communities, Ministry of Housing, Communities and Local Government (2024) Planning Practice Guidance. Available at: https://www.gov.uk/government/collections/planning-practice-guidance (Accessed January 2025)
[6] South West River Basin District Management Plan (2022). Available at: https://www.gov.uk/guidance/south-west-river-basin-district-river-basin-management-plan-updated-2022 (Accessed January 2025)

2.2.2 Conservation of Habitats and Species Regulations

The Conservation of Habitats and Species Regulations 2017 have designated some sites as areas that require protection to maintain or enhance the rare ecological species or habitats associated with them. Although the Regulations do not directly set overarching environmental standards related to water quality and quantity (flow or level), the Regulations can, by the requirement to ensure no detrimental impact on designated sites, require site specific water quality, water level and water flow targets to be set for specific locations.

This may in turn require restrictions on discharges to (or abstractions from) water bodies which are hydrologically connected to water dependant habitats. These Regulations are important to the WCS as the provision of new WSI needs to ensure no detrimental impact on designated sites through discharge and abstraction impacts.

2.2.3 Environment Act 2021

The Environment Act 2021 provides a legal framework for environmental governance in the UK bringing in measures for improvement of the environment including for water. The Act is relevant to the WCS process as it:

- Places a duty on water companies to secure a reduction in adverse impacts of discharges from storm overflows on the environment; growth proposed in Local Plans significantly influences how these reductions can be achieved.
- Makes drainage and sewerage planning a statutory duty through the requirement for water companies to produce Drainage and Wastewater Management Plans.
- Enables the revocation or variation of permanent abstraction licences where the change is necessary to protect the environment or where the licence is consistently underused; this may affect water available to service proposed growth.

2.3 Local policy

As described, the NPPF is a key national policy informing this WCS; however, the following local policy has also been considered. The Torbay Local Plan[7] provides the policy framework for sustainable development in Torbay. The policies relevant to the WCS which are summarised here (the full policies are available in Appendix A).

Policy ER1 Flood Risk

Development must be safe for its lifetime, taking account of its future use, function and government projections of how the risk of flooding may change in response to climate change.

Policy ER2 Water Management

Development proposals must:

- *Provide for adequate water supplies and the efficient use of water including its re-use and recycling.*
- *Avoid harm to surface waters, sensitive water-reliant habitats and species, and any adverse impacts on the quality and quantity of groundwater.*
- *Provide appropriate sewage disposal systems with separate foul and surface water, and particularly through sustainable drainage measures, reducing water being discharged into shared sewers.*

Policy W5 Waste water disposal

[7] Torbay Local Plan: https://www.torbay.gov.uk/media/16942/2012to2030torbaylocalplanweb18may16.pdf (Accessed January 2025)

Development proposals will be required to demonstrate that the proposal can be delivered and operated without giving rise to unacceptable impacts on water treatment and disposal, or deterioration in the service received by residents and businesses.

Appropriate measures to reduce the impact of development on the sewerage system, such as natural or sustainable drainage and water conservation measures, will be required, proportionate to the scale and nature of development.

Development of previously developed land must be in accordance with the hierarchy set out in Policy ER2 to ensure that development schemes do not exacerbate sewer flooding and Combined Sewer Outfall (CSO) spills. This will apply in particular, to development that discharges into Hope's Nose CSO in Torquay.

Policy C3 Coastal change management

Development within the Coastal Change Management Area should meet the following criteria:

- *It will be safe through its planned lifetime without increasing risk to people or property and does not create a need for significant further coastal protection and sea defence works in undeveloped or developed coastal locations, or inhibit the ability to access, maintain and/ or improve existing sea defence or coastal management assets.*
- *It does not adversely affect sites or areas at risk from flooding, erosion and land instability arising from maritime influences.*

S106 Planning Obligations will be required from development in areas where coastal defences need to be provided and/or maintained to facilitate development.

2.4 Other strategies and plans

Full details of other relevant regulatory strategies or plans which relate to the water environment or provision of WSI for development in TC are provided in Appendix A. The key strategies or plans most relevant to the WCS include, but are not limited to:

- Integrated Plan for Delivering Clean and Plentiful Water (DEFRA, 2023).
- Environmental Improvement Plan 2023 (DEFRA, 2023).
- Drainage and Wastewater Management Plan (DWMP) (SWW, 2023).
- Draft Water Resources Management Plan (WRMP) (SWW, 2023)
- Draft West Country Water Resources Plan (WCWR, 2023).
- Storm Overflows Discharge Reduction Plan (DEFRA, 2023)
- Torbay Local Flood Risk Management Strategy (LFRMS) (TC, 2015).

3. Growth proposals and study area

3.1 Study area

The WCS area is based on the administrative boundary of Torbay as displayed in Appendix C Figure 1. The nature of the land surrounding the Torbay boundary is largely rural and therefore is unlikely to have significant growth which could impact upon Torbay. Where larger urban areas are present adjacent to the Torbay boundary, e.g. Marldon, these have been considered where data is available.

Torbay is located in South Devon and shares administrative boundaries with Teignbridge District Council and South Hams District Council. The main settlements are Torquay, Paignton, Broadsands, and Brixham.

3.2 Growth proposal summary

Torbay Council provided two growth scenarios to be considered, one representing the delivery of 9,001 houses over the plan period 2025 – 2045 (450 dwellings per annum (DPA) assuming 100% completion including an allowance for windfall sites) and one representing the Government Standard Method Local Housing Need for Torbay of 21,737 houses over the plan period (940 DPA assuming 100% completion). These growth scenarios are split across 4 settlement areas (Table 3-1). Appendix C Figure 1 shows the location of the sites proposed for development across Torbay. The growth proposals also include employment sites which are indicated on the figure and discussed further in Section 7.4.

Table 3-1: Growth Options across Settlement Areas

Settlement	Option 1 (450DPA)	Government Standard Methodology (940DPA)
Torquay	3400	5488
Paignton	2897	12100
Broadsands	1952	2042
Brixham	752	2107
TOTAL	**9001**	**21,737**

4. Hydrological baseline summary

This section defines the existing hydrological and hydrogeological context in the TC area to understand the current condition and where there may be constraints or opportunities for future growth.

It sets out current condition of the surface water and groundwater bodies which are relevant to proposed allocation sites in the TC area (e.g. through wastewater discharges and surface water runoff), as well as dependencies on those water bodies such as water dependent habitats and bathing water designations.

4.1 Surface water

4.1.1 Catchment context

Appendix C Figure 2 displays the surface water catchments covering Torbay as defined for the WFD within the South West RBMP.

The entirety of Torbay is covered by the Devon South Management Catchment which comprises of numerous Operational Catchments, two of which cover the study area. The majority of Torbay is covered by the Dart Start Bay and Torbay Operational Catchment, with a small area to the north of Torquay is within the Teign Operational Catchment.

The Dart Start Bay and Torbay Operational Catchment is made up of 26 WFD surface water body catchments, one of which very slightly falls within the Torbay area: Hems - Lower.

The Teign Operational Catchment is made up of 28 WFD surface water body catchments, two of which partially fall within the study area: Aller Brook (Teign) – Upper, and the Aller Brook.

The rest of the Devon South Management Catchment area within Torbay which is not covered surface water body catchments consist of groundwater bodies.

The majority of the surface watercourses in Torbay drain to the Tor Bay Transitional Water Body and the Lyme Bay West Transitional Water Body.

4.1.2 Surface water body condition

Defining the overall WFD ‘status’ of a surface water body is a complex assessment that combines standards for water quality, hydromorphology, and biology. Where a surface water body is classified under the WFD, the overall status of a water body is derived from the classification hierarchy made up of ‘elements’, and the type of water body will dictate what types of elements are assessed within it. Broadly, a WFD surface water body is given an ecological status and a chemical status, and these two aspects make up the overall WFD status of each surface water body.

Appendix C Figure 3 depicts the ecological status of the WFD surface water bodies in the study area. Aller Brook (Teign) – Upper is a water body which has a ‘Good’ Ecological Status; this means the biological, hydromorphology and water quality elements making up Ecological Status are all classified as Good. The Aller Brook and Hems – Lower water bodies have ‘Moderate’ Ecological Status. The Tor Bay transitional water body has ‘Good’ Ecological Status and the Lyme Bay West transitional water body has ‘Moderate’ Ecological Status.

Appendix C Figure 4 shows the Physico-Chemical status (which is a contributing element to Ecological Status) of the WFD surface water bodies. Of these the Aller Brook and Hems – Lower water bodies are moderate and this demonstrates that physico-chemical quality is a key aspect for why Ecological Status is limited to moderate. The Physico-Chemical status of the Aller Brook (Teign) – Upper water body is good. The Physico-Chemical status of the Tor Bay and Lyme Bay West transitional water bodies is high.

Table 4-2 identifies reasons relating to the water industry for which the WFD catchments have not achieved a status of ‘Good’; these are termed Reasons for Not Achieving Good status (RNAG) under the WFD regulations.

Table 4-1 Reasons for Not Achieving 'Good' status

Water Body	Cause	WFD Status Element Affected
Aller Brook	Water Industry Sewage Discharge	Physico-Chemical Status
Hems – Lower	Water Industry Sewage Discharge	Physico-Chemical Status

4.2 Groundwater

4.2.1 Geology

Appendix C Figure 5 displays the bedrock geology underlying Torbay. The Exeter Group, comprising predominantly breccia with subordinate sandstone, underlies parts of Torquay and Paignton. The Torbay Group, comprising predominantly mudstone and sandstone, underlies the majority of Brixham and parts of Torquay and Paignton. The Meadfoot Group, comprising mudstone, siltstone and sandstone, underlies parts of Torquay, Paignton and Brixham. There are small areas of Whiteway Slate Formation underlying Torquay. Small areas of igneous intrusions are present in Torquay and Paignton.

Appendix C Figure 6 displays the superficial geology underlying Torbay. The majority of Torbay does not have superficial deposits. There are small areas of Marine and Coastal Zone Deposits (clay, sand and gravel), Head deposits (clay, silt, sand and gravel), Alluvium (clay, silt, sand and gravel) present in Paignton, Torquay and Brixham. There is also a small area of Raised Marine Beach Deposits (sand and gravel) in Torquay.

4.2.2 Hydrogeology context

The Defra Magic Map[8] displays the bedrock aquifer designations across the Torbay area. This shows that the Torbay area is underlain by Secondary A aquifers. Secondary A aquifers comprise permeable layers that can support local water supplies, and may form an important source of base flow to rivers. Principal aquifers are also present in Brixham and Torquay. Principal aquifers provide significant quantities of drinking water, and water for business needs. They may also support rivers, lakes and wetlands.

Appendix C Figure 7 also displays the Source Protection Zones (SPZs) across Torbay. SPZs are defined around large and public potable groundwater abstraction sites with the aim of reducing potentially polluting activities around these areas and to protect the quality of the groundwater for abstraction and potable use. SPZs are defined based on the time it takes for pollutants to reach an abstraction point from any point at the water table. It does not include the time taken for water to infiltrate from the surface down to the water table. The transmission time enables the Environment Agency to define three zones around a groundwater abstraction point.

- Zone 1 (Inner Protection Zone) – This is defined by a 50-day travel time for pollution from any point below the water table to reach the abstraction source.
- Zone 2 (Outer Protection Zone) – This is defined by a 400-day travel time from a point below the water table.
- Zone 3 (Total Catchment) – This is defined as the area around an abstraction source within which all groundwater can potentially feed into the abstraction source.

There are two small areas with a Zone 1 and Zone 2 SPZ; one near Torquay and one near Paignton.

4.2.3 Hydrogeological condition

Appendix C Figure 8 displays the WFD chemical status of the three WFD groundwater bodies in Torbay. The Torquay Water Body and Paignton and Brixham Water Body have 'Good' chemical status. The

[8] Defra Magic Map: https://magic.defra.gov.uk/MagicMap.html (Accessed January 2025)

Teign, Avon, Dart and Erme Water Body has 'Poor' chemical status, however the RNAG do not list the water industry as a cause.

Appendix C Figure 9 displays the WFD quantitative status of the three WFD groundwater bodies in Torbay. The Torquay Water Body, Paignton and Brixham Water Body and Teign, Avon, Dart and Erme Water Body have 'Good' quantitative status.

4.3 Water dependent habitats

Torbay contains several sites of ecological importance including Sites of Special Scientific Interest (SSSIs), Marine Conservation Zones (MCZs) and Special Areas of Conservations (SACs). These sites have been reviewed to identify which have potential hydrological connectivity and therefore have a material dependency on water. Appendix C Figure 10 displays the water dependent habitats within Torbay and the potential hydrological connectivity is identified in Table 4-2.

Table 4-2 Water Dependent Habitats in Torbay

Site	Potential Hydrological Connectivity
Torbay MCZ	English Channel. Multiple Combined Sewer Overflows (CSO) located within MCZ. Brokenbury Wastewater Treatment Works outflow located within MCZ.
South Hams SAC	English Channel. Bolton Street CSO located adjacent to the SAC.
Hope's Nose to Wall's Hill SSSI	English Channel. Illsham Valley Pumping Station CSO and Ilsham Marine Drive CSO located within/adjacent to the SSSI.
Occombe SSSI	Hollicombe Lake watercourse

4.4 Other designations

4.4.1 Shellfish Water Protected Areas

The WFD specifies areas requiring special protection including Shellfish Water Protected Areas (SWPA). The WFD and Shellfish Water Protected Area Directions 2016 place an obligation on the Environment Agency to ensure that designated waters meet the requirements of shellfish protected areas. This is to be achieved by endeavouring to observe the microbial shellfish flesh standard. The Brixham SWPA is located within Torbay as seen in Appendix C Figure 11. A small part of the Labrador Bay SWPA is located in the north of the Torbay area. Although located outside of the Torbay area, discharges from CSOs in the Torbay area could impact upon the Dart SWPA located to the south-east of the Torbay area.

SWW undertook an investigation in 2022 into the spill performance of the Oxen Cove Attenuation Tank CSO[9] and its impact on the Brixham SWPA. It notes that the Brixham SWPA has not complied with the WDF microbial standard consistently, having failed 6 out of 10 years. The key finding of the investigation was that the investigation and modelling undertaken concluded that the Oxen Cove Attenuation Tank CSO is not a significant source of bacterial contamination to the Brixham SWPA, and other potential sources (such as Clennon Valley and Ilsham Valley CSOs) should now be investigated in more detail.

4.4.2 Bathing Waters

Bathing Waters are protected areas which have been designated under the Bathing Water Regulations 2013 which have bacterial levels monitored. Waters are classified into 4 categories – excellent, good,

[9] South West Water (2022) Oxen Cove Attenuation Tank CSO Investigation.

sufficient and poor on the basis of bacteria levels. Sites are rated annually and on a short-term basis in response to any temporary pollution incidents. There are 15 Bathing Waters within Torbay as seen in Appendix C Figure 11. In 2024, 14 of these were classified as excellent, with one classified as good.

5. Water infrastructure baseline summary

5.1 Infrastructure provision

SWW are responsible for providing sewerage and wastewater treatment as well as potable (clean) water to Torbay.

5.2 Water infrastructure planning

It is important to consider the planning timelines for both the Local Plan and also for water and sewerage providers in terms of the funding mechanisms for new water supply and water treatment infrastructure. There are elements of water company planning that are pertinent to the WCS; specifically regarding integration with spatial planning timelines for LPAs. Water companies have a statutory duty to supply water and wastewater services for residential development and therefore input to the planning process.

Financial and Asset Planning

Water company planning for asset management and funding is governed by the Asset Management Plan (AMP) process which runs in 5 year cycles. The Office for Water Services (Ofwat) is the economic regulator of the water and sewerage industry in England and Wales and regulates this overall process.

In order to undertake maintenance of its existing assets and to enable the building of new assets, water companies seek funding by charging customers according to the level of investment they need to make. The process of determining how much asset investment is required is undertaken in conjunction with key regulators and the outcome is a Business Plan which is produced by each water company setting out the required asset investment over the next 5 year period, the justification for it and the price increase required to fund it.

Overall, the determination of how much a water company can charge its customers is undertaken by Ofwat. Ofwat consider the views of the water company, the other regulators (Environment Agency, and the Drinking Water Inspectorate) and consumer groups such as the Consumer Council for Water when determining the price limits it will allow a water company to set in order to enable future asset investment.

This process is known as the Price Review (PR) and is undertaken in 5 year cycles. When Ofwat determine a water company's business plan, the price limits are set for the following 5 years allowing the water company to raise funds required to undertake the necessary investment within the AMP round. The current AMP period at the time of completing this WCS is known as AMP8 which commenced on the 1st April 2025. The business plan for this period was initially submitted to Ofwat in October 2023 (the PR24 process). The PR24 business plans for SWW therefore contain the WSI proposals to be delivered (or commenced) up to 2030 which will be critical to supporting proposed growth within the early part of the new Local Plan. Subsequent AMP periods will also be critical to delivering the full quantum of growth across the Local Plan period.

Water Resources

West Country Water Resource (WCWR) is an alliance of the three water companies that supply drinking water across South West England, including SWW. WCWR published a draft regional plan in January 2023 to ensure that there are resilient water resources available to meet the needs of the environment, growing population and regional economy through to 2050 and beyond, taking full account of climate change.

Water Resources Management Plan (WRMP)

Water companies undertake medium to long term planning of water resources to demonstrate that a there is a long-term plan for delivering sustainable water supply within its operational area to meet existing and future demand. This is reported via a statutory WRMP produced every five years to

coincide with each of the water companies' five-yearly asset management (or business) plans. SWW produced a Draft WRMP in October 2023.

Drainage and Wastewater Management Plan (DWMP)

Water companies undertake long-term planning of wastewater management to improve drainage and environmental water quality. This is reported via a DWMP which is a long-term plan spanning 25 years that sets out how water and wastewater companies intend to extend, improve, and maintain a robust and resilient drainage and wastewater system. SWW published their current (non-statutory) DWMP in May 2023 which covers TC's area; this was produced under initial guidance.

The Environment Act 2021 has made the future production of DWMPs statutory to assess current and future capacity, pressures, and risks to sewerage networks, and outline the investment needs to meet the challenges posed by population growth and climate change. The next DWMP iteration will be produced as a statutory requirement under section 79 of the Environment Act using updated guidance.

5.3 Water supply

5.3.1 Local surface water availability

The Environment Agency manages water resources at the local level using abstraction licensing strategies (ALS). Within the ALS, the Environment Agency's assessment of the availability of water resources is presented as a classification system. The classification gives a resource availability status which indicates the relative balance between the environmental requirements for water and how much is available to be licensed for abstraction. In doing so, it sets out whether water is available for further abstraction and areas where abstraction needs to be limited or reduced.

The categories of resource availability status are shown in Table 5-1. The classification is based on an assessment of a river system's ecological sensitivity to abstraction-related flow reduction. This classification is then used to assess the potential for additional water resource abstractions.

Table 5-1 Water Resource Availability Status Categories

Indicative Resource Availability Status	License Availability
Water Available for Licensing	There is more water than required to meet the need of the environment. New licenses can be considered depending on local and downstream impacts.
Restricted water available for licensing	Full Licensed flows fall below the Environmental Flow Indicators (EFIs). If all licensed water is abstracted there will not be enough water left for the needs of the environment. No new consumptive licenses would be granted. It may also be appropriate to investigate the possibilities for reducing fully licensed risks. Water may be available if you can 'buy' (known as licence trading) the entitlement to abstract water from an existing license holder.
No water available for licensing	Recent actual flows are below the EFI. This scenario highlights water bodies where flows are below the indicative flow requirement to help support Good Ecological Status. No further consumptive licences will be granted. Water may be available if you can 'buy' (known as license trading) the amount equivalent to recently abstracted from an existing licence holder.
Discharge Rich Waterbodies	These waterbodies have a modified flow that is influenced by reservoir compensation releases, or they have flows that are augmented. These are often known as 'regulated rivers' and may be managed though an operating agreement often held by a water company. The availability of water is dependent on these operating agreements. There may be water available for abstraction, the EA would need to be contacted to find out more.

The Environment Agency aims to protect the annual flow variability in rivers, from low to high flow conditions through the application of flow statistics derived from flow data collected at river gauging stations. Flow statistics are expressed as the percentage of time that flow is exceeded. Resource availability is calculated by the Environment Agency for four different flow scenarios:

- Q95 (lower flow);
- Q70;
- Q50; and,
- Q30 (higher flow)

Q95 is the flow exceeded for 95% of the time and is used as a low flow indicator. Q30 is the flow exceeded for 30% of the time and is a higher flow. Appendix C Figure 12 identifies the water availability for the four different flow scenarios within Torbay[10] and indicates that water is available for licensing during all flow scenarios in the Aller Brook (Teign) – Upper, Aller Brook and the Hems – Lower catchment areas. However, it should be noted that these catchments only cover a small portion of the Torbay area and therefore there is very limited local surface water availability for abstraction.

5.3.2 Local groundwater availability

For major aquifers the area is divided into groundwater management units to determine water availability and licence restrictions. The South Devon ALS notes that there are no groundwater management areas within the South Devon WFD Management Area, therefore it can be assumed that there is no local groundwater available for abstraction.

5.3.2.1 Water stress classification

The Environment Agency's mapping of areas of serious water stress in 2021[11] does not show TC to be located in an area of serious water stress. Water stress in this context applies to both the natural environment and to public water supplies, including how both are affected by climate change. A severe water stressed classification reflects that the household demand for water is a high proportion of effective rainfall that is available in the area to meet that demand.

The classification outcome shows where the Environment Agency believe there are (or are likely to be) environmental impacts caused by public water supplies and/or where the Environment Agency consider the need for major water resources developments; TC is not included in that classification.

5.3.3 Water company supply

SWW supply potable water to Torbay, managed by the WRMP process. Water companies undertake medium to long term planning of water resources in order to demonstrate that a long-term plan for delivering sustainable water supply within its operational area to meet existing and future demand. This is reported via statutory WRMPs produced every five years to coincide with each of the water companies' five-yearly asset management (or business) plans.

5.3.3.1 Roadford Water Resource Zone

The SWW Draft WRMP[12] was published in October 2023 and covers the period 2025 – 2050. This WRMP sets out that the average household per capita consumption (PCC) for SWW is 161 l/h/d (litres/head/day) in 2021/22[12]. This reduces to 143.6 l/h/d when PCC is adjusted to reflect COVID-19 and tourism impacts.

The plan identifies Torbay to be within the Roadford Water Resource Zone (WRZ). WRZs are areas defined by a water company where populations within the area are interconnected and hence can be

[10] South Devon WFD Management Area Abstraction Licensing Strategy https://assets.publishing.service.gov.uk/media/5a7cdf9eed915d36e95f02e2/LIT_7639_c053ee.pdf (Accessed February 2025)
[11] Environment Agency Water Stressed Areas https://www.gov.uk/government/publications/water-stressed-areas-2021-classification (Accessed February 2025)
[12] SWW (2023) Draft Water Resources Management Plan. Available at: https://www.southwestwater.co.uk/about-us/what-we-do/improving-your-service/water-resources-management-plan (Accessed January 2025)

supplied by the same water resource options, thereby having the same overall surplus or deficit of available water supply.

The Roadford WRZ covers a large part of Devon, from Plymouth, the South Hams and Torbay in the South, to Bideford and Barnstaple in the North. It also includes parts of North East Cornwall.

The strategic Roadford Reservoir is SWW's largest impounding reservoir and SWW operate it conjunctively with other local reservoirs, river intakes and groundwater sources. These sources are also supplemented by bulk transfers between the neighbouring Colliford and Wimbleball WRZs.

Water is released from the reservoirs within this zone either to directly supply WwTWs before putting into public supply, or to supplement flows in the local river systems to support abstractions further downstream. A schematic of the key components of the Roadford WRZ is shown in Figure 5-1.

Figure 5-1 Roadford WRZ Water Supply

SWW's assessment of available water for the Roadford WRZ in their baseline identifies that the zone would be in deficit for the whole planning horizon (2025 – 2050), up to a maximum of -40.8Ml/d in 2050 under average conditions if no new measures are put in place. The WRMP states that the reason for the deficit is largely due to climate change and potential abstraction on the River Dart, River Tavy and River Tamar.

5.4 Wastewater services

The majority of Torbay is served by the Brokenbury WwTW which processes, treats and returns wastewater from housing and non-residential sources safely back to the water environment. This

WwTW, is operated by SWW and serves the significant proportion of developments in Torquay, Paignton, Brixham and Galmpton. Following treatment, the treated effluent is discharged to the English Channel.

Foul flows from more recent development areas at Scott's Bridge in Torquay discharge to the Aller Trunk sewer system which eventually discharges to the Buckland WwTW outside of TC's area in Newton Abbot.

There are a number of areas of Torbay which do not connect to the main sewerage systems such as Maidencombe and an area around Churston between Paignton and Brixham. These are served by private septic tanks.

As shown in Appendix C Figure 13, the majority of the sewer network across Torbay is made up of combined sewers which receive wastewater (foul) and surface water runoff (stormwater) from properties. Road runoff may also drain to combined sewers.

5.4.1 Wastewater planning

SWW manage wastewater assets within the TC area. The SWW DWMP[13] identifies existing risks to the Brokenbury WwTW catchment. The Brokenbury WwTW catchment has been assessed to have immediate moderate risks with internal sewer flooding, risk of sewer flooding in a 1 in 10 year event, risk of sewer flooding in a 1 in 50 year event, pollution incidents and storm overflow performance. It has been assessed to have a long term moderate risk of WwTW (numeric) compliance failure. It has been assessed to have no risk for severe pollutions, WwTW (Dry Weather Flow) compliance failure and sewer collapse.

5.4.2 2024 Event Duration Monitoring Data

In March 2025, the Environment Agency published its 2024 Event Duration Monitoring (EDM) Data[14] which relates to the performance of storm overflows in England. This information is provided to the Environment Agency by the water companies through their Annual Return to fulfil their permitted conditions to discharge from these storm overflows under the Environmental Permitting Regulations.

Storm overflows are an important part of a sewerage system as during intense rainfall they release diluted, excess water into waterbodies to reduce the risk of the WwTW becoming overwhelmed. This untreated water can have a negative impact on the water environment, particularly if spills exceed those permitted by Environmental Permits. By 2050 storm overflows will not be permitted to discharge for more than ten rainfall events per year.

Across SWW's region, there are a total of 1370 storm overflows, of which 32 are within the Torbay area. During the 2024 monitoring period, 24 of these storm overflows were recorded to have spilled at least once. The number of recorded spills ranged between 1 and 135 and the duration of these spills ranged from 7 minutes to 2015 hours. The storm overflow located at Ilsham Valley Pumping Station spilled for a total of 2015 hours into the English Channel and fell within the top 72 most spills within SWW's region, with 135 spills.

The Marldon (Churscombe Cross) Pumping Station storm overflow is located adjacent to the Torbay boundary in Marldon and therefore has the potential to impact upon Torbay. This storm overflow spilt 29 times for 62 hours in 2024.

5.5 Flood risk

Table 5-2 summarises the flood risk to the settlement areas using information provided from TC in the absence of the SFRA which TC are currently producing.

[13] SWW (2023) Drainage and Wastewater Management Plan Torbay. Available at: https://www.southwestwater.co.uk/siteassets/documents/about-us/dwmp/strategic-catchments/torbay_l2_dwmp.pdf (Accessed January 2025)
[14] Environment Agency (2025) Event Duration Monitoring Storm Overflows Annual Returns. Available at: https://environment.data.gov.uk/dataset/21e15f12-0df8-4bfc-b763-45226c16a8ac (Accessed April 2025)

Settlements at higher risk of flooding, particularly from rivers or the sea, may encounter constraints with planning due to guidance outlined in the NPPF[4] and Planning Practice Guidance (PPG)[5].

Measures to mitigate flood risk such as development layout and surface water management could consider opportunities at a catchment level through delivery of nature-based solutions (see Section 5.6) as well as opportunities for integrated water management where development is likely to be delivered through new or expanded settlements.

Strategic growth locations such as Inglewood and Edginswell present the opportunity to reduce flood risk both to strategic new development but also further downstream in the catchment. Targeted measures to reduce manage surface water strategically at large development locations would also contribute to the removal of surface water discharge to the sewer network, supporting measures to reduce storm discharges at various CSOs such as Barton Hill Road and Clements Farm Pumping Station as well as aiding to increase treatment capacity at the WwTW through surface water removal from the sewer system.

Table 5-2 Summary of Flood Risk to Settlement Areas

Key	Risk
	Low
	Medium
	High

Settlement	Fluvial/Tidal Flood Risk	Surface Water Flood Risk	Groundwater Flood Risk	Reservoir Flood Risk
Torquay	Majority of area is not shown to be at risk of flooding from rivers or the sea. There is a major flood risk along the coast and alongside the watercourses.	This is within a critical drainage area. There is a major surface water flood risk which follows the base of the valley and through the town centre.	The majority of this area has limited potential for groundwater flooding to occur although the low-lying areas adjacent the coast do suffer from this type of flooding.	This area is not shown to be at risk of flooding from reservoirs.
Paignton	A large area of Paignton is shown to be at risk of flooding from rivers or the sea. This includes Paignton and Goodrington, and adjacent the watercourses which discharge into the English Channel.	This is within a critical drainage area.	The majority of this area has limited potential for groundwater flooding to occur although the low-lying areas adjacent the coast do suffer from this type of flooding. The area has a number of properties with basements.	This area is not shown to be at risk of flooding from reservoirs.
Broadsands	The majority of the area is not shown to be at risk of flooding from rivers or the sea. The area adjacent the coast is at risk from coastal flooding.	This is within a critical drainage area.	N/A – No information on groundwater available in SFRA.	This area is not shown to be at risk of flooding from reservoirs.
Brixham	The majority of the area is not shown to be at risk of flooding from rivers or the sea. However, there are high risk areas along the coast and adjacent Higher Brixham and Lupton watercourses, which discharge into Brixham harbour.	This is within a critical drainage area.	The majority of this area has limited potential for groundwater flooding to occur although the low-lying areas adjacent the coast may suffer from this type of flooding.	This area is not shown to be at risk of flooding from reservoirs.

5.6 NbS opportunities

Nature based Solutions (NbS) are a multidisciplinary tool for sustainably utilising the landscape and its features to address socio-environmental challenges. Opportunities for NbS in Torbay have been identified to explore existing and new nature-based solutions to manage water resources and flood risk in the spatial context of broad areas of growth. NbS can be used as standalone adaptation measures, or they can be combined with traditional grey infrastructure solutions to provide water and flood risk benefit.

To identify the potential for water based NbS solutions which can provide water and flood risk management benefits in Torbay, a review was undertaken of opportunities within the Torbay Green Infrastructure Delivery Plan and the Working With Natural Processes (WWNP)[15] dataset for natural Flood Management (NFM) opportunities. Appendix C Figure 14 displays the opportunities for water based NbS.

The Torbay Green Infrastructure Delivery Plan (IDP)[16] produced in 2011 a series of maps highlighting areas with potential to be of importance to contributing to habitat restoration, improving water quality and reducing the negative impacts of climate change. Key actions noted in the plan include:

- *Sustainable Urban Drainage Systems: schemes for new and existing developments*
- *Upper catchment attenuation: wetland creation/improvement, opening up culverted watercourses and remove any restrictions to their flow and seek to restore or improve any loss of flood plain storage by providing suitable riverside margins.*
- *Urban greening: tree planting and green roadside verges to reduce runoff from hard surfaces.*
- *Natural coastal flood defences: restore and extend reedbeds at Broadsands, Clennon and Young's Park.*
- *Restoration of watercourses: Encourage the restoration of heavily modified water bodies to more natural watercourses (de-culverting, removing flow restrictions, channel restoration and bank side habitat enhancement and buffer zones). This will not only reduce flood risk but also benefit wildlife and water quality.*
- *Woodland Planting: plant substantial network of woodlands across Torbay that connect to the wider landscape and enhance biodiversity. Aim to plant 10 hectares per year within key natural areas and rural wildlife corridors. Also, improve management of existing woodlands.*
- *Reedbed creation/enhancement: Help to improve water quality on beaches while providing habitat improvements.*

The plan also identifies key projects and priorities across the key settlement areas of Torbay and include the following projects/priorities relating to the water cycle:

- Cockington and Occombe: *Create flood attenuation ponds at Scadson Woods and Occombe Woods with multifunctional benefits.*
- Paignton: *Enhance and extent existing wetland around Clennon Valley and Goodrington to help remediate the threat of flooding in these areas. Create wetland at Great Parks as a flood attenuation scheme with benefits to people and wildlife.*
- Brixham and Kingswear Peninsula: *Create a flood attenuation pond on western edge of Brixham. Broadsands wetland restoration project.*

The key priority of creating a wetland at Great Parks as a flood attenuation scheme was delivered as a wet woodland in 2023 and included re-naturalisation of 819m of the Clennon Catchment, creation of 3 large leaky dams, creation of 2 multi-depth ponds and 1 seasonal pond in the Clennon Headwaters area, and creation of bankside buffer/stabilisation strips.

[15] Working with Natural Processes (2018). Available at: https://assets.publishing.service.gov.uk/media/6036c5468fa8f5480a5386e9/Working_with_natural_processes_evidence_directory.pdf (Accessed January 2025)
[16] Torbay Green Infrastructure Delivery Plan (2011) https://www.torbay.gov.uk/media/7000/torbay-green-infrastructure-delivery-plan.pdf (Accessed February 2025)

The Devon Local Nature Recovery Strategy (LNRS)[17] is currently being developed to support local planning authorities to enhance the planning system, including the delivery of Biodiversity Net Gain requirements and investment in urban green spaces. It will guide public and private investment, including through the new Environmental Land Management Schemes (ELMS). It will identify priorities for restoring wildlife and actions to achieve the wildlife priorities. A draft strategy has been published and it is currently anticipated that the strategy will be finalised in December 2025. The draft strategy includes a priority to *"manage, restore and create wildlife-rich habitats and ecosystems to meet water quality, water resource and flood risk targets across Devon."*

The WWNP dataset shows that the majority of the key settlement areas of Torquay, Paignton and Brixham have limited opportunities identified for NFM, possibly due to urbanisation. The majority of Torbay is not identified to be suitable for runoff attenuation features with only small pockets near Edginswell identified to be suitable for runoff attenuation features.

Areas with Floodplain Woodland Potential and Riparian Woodland Potential are mostly restricted alongside the rivers in the upper catchment of the Torbay area which drain to the English Channel. Small pockets are identified across Torbay as suitable for Floodplain Reconnection Potential, mainly in Paignton. As well as reducing flood risk downstream, implementation of NFM in the upper catchment could aid with the reduction of sediment loading downstream which could result in a positive effect on the marine habitats in the MCZ.

Where projects identified in the Torbay Green IDP and the potential for NFM through the WWNP could potentially be linked to contributions from strategic development as part of the proposed settlement or growth locations is set out in Table 5-3.

[17] Devon Local Nature Partnership. Devon Local Nature Recovery Strategy https://www.devonlnp.org.uk/our-work/local-nature-recovery-strategy/ (Accessed October 2025)

Table 5-3 TC Opportunities for Water focused NbS

Broad Area of Growth	Nearest Watercourse and relevant WFD Water Body	Groundwater WFD body /Aquifer	Potential NbS
Torquay	Tor Bay Transitional Water Body/Lyme Bay West Transitional Water Body	N/A	Limited opportunities for NbS. Small areas of potential for floodplain reconnection, and floodplain and riparian woodland. Potential for development to implement urban greening where possible to reduce runoff from impermeable surfaces in line with the Torbay Green IDP.
Paignton	Tor Bay Transitional Water Body	Paignton and Brixham Groundwater Body/ Teign, Avon, Dart and Erme Groundwater Body	Limited opportunities for NbS in urban area, including small areas of potential for floodplain reconnection, and floodplain and riparian woodland. Areas of potential in the rural areas for floodplain and riparian woodland, therefore there is opportunities for proposed development to implement upper catchment attenuation features and restore watercourses in line with the IDP. Potential for development to contribute to key project of creating flood attenuation ponds in Cockington and Occombe, and enhancing and extending wetlands around Clennon Valley and Goodrington, in line with the IDP. Potential for development to contribute to the restoration and enhancement of reedbeds at the coast to enhance natural coastal flood defences and improve water quality. Potential for development to contribute to the aim of planting a substantial network of woodlands across Torbay in line with the IDP.
Broadsands	Tor Bay Transitional Water Body	Paignton and Brixham Groundwater Body/Teign, Avon, Dart and Erme Groundwater Body	Limited opportunities for NbS in urban area, including small areas of potential for floodplain reconnection and riparian woodland. Areas of potential in the rural areas for floodplain reconnection, and floodplain and riparian woodland, therefore there is opportunities for proposed development to implement upper catchment attenuation features and restore watercourses in line with the IDP. Potential for development to contribute the Broadsands wetland restoration project in line with the IDP. Potential for development to contribute to the restoration and enhancement of reedbeds at the coast to enhance natural coastal flood defences and improve water quality. Potential for development to contribute to the aim of planting a substantial network of woodlands across Torbay in line with the IDP.
Brixham	Tor Bay Transitional Water Body/Lyme Bay West Transitional Water Body	N/A	Limited opportunities for NbS. Small areas of potential for floodplain reconnection and riparian woodland. Potential for development to contribute to key project of creating attenuation ponds at the western edge of Brixham.

6. Wastewater capacity assessment

This section presents the key findings of the SCA undertaken in 2023. It also presents the assessment of wastewater infrastructure capacity taking into the scale and spatial pattern of preferred site allocations. It considers three aspects of wastewater infrastructure:

- Connectivity of proposed site allocations to existing wastewater network – this identifies challenges with how site allocations can be connected to existing sewers.
- How the additional of wastewater flow to combined sewers (which convey wastewater and surface water) may affect the frequency of operation of combined sewer overflows (CSOs).
- The capacity of wastewater treatment facilities (WwTWs) to be able to accommodate additional wastewater from growth without impacting on the water environment.

6.1 Sewer Capacity Assessment and CSOs

To understand the implications of the potential connection for proposed growth to the existing sewer network and how additional wastewater flow may impact CSOs, the SCA undertaken by WaterCo in 2023[2] was reviewed to inform this WCS. The SCA aimed to update the predictions for the effect of foul water flow from new development to 2040 on the combined sewer network serving Brokenbury WwTW using latest guidance. Hydraulic modelling was undertaken to examine the effect of population growth, urban creep, climate change and water efficiency improvements across the Torbay sewer network.

It should be noted that assessment of treatment capacity or process changes due to changes in sewage concentration at Brokenbury WwTW was outside the scope of the SCA which focussed on flows within the sewerage network.

6.1.1 Model assumptions

The following assumptions were included within the hydraulic modelling:

- Existing water consumption modelled as 138 l/h/d. A value of 122 l/h/d was modelled for the 2040 design horizon based on SWW per capita consumption projections. Tourist population consumption rate was assumed to be 100 l/h/d for all epochs.
- Model simulations were carried out using free discharge conditions at the CSO outfalls to show effect of climate change and development on sewer network without changes to sea level skewing the results. Additional model simulations were undertaken in conjunction with elevated tide levels to confirm whether the effect of projected sea level rise needs to be considered in respect of future sewer capacity. These model simulations only consider tide-locking of the outfalls; wave overtopping of the sea defences has not been considered.
- Environment Agency peak rainfall intensity climate change uplifts for South Devon Management Catchment were adopted.
- Tide curves applied at the CSO outfalls were updated in line with Environment Agency guidance on sea level rise up to the 2040 epoch.
- The rate of urban creep was assumed to be 0.5m^2 per property in new developments and between 0.629 to 0.03m^2 per property per year for existing properties.
- An assumed growth rate of 300 dwellings per year was applied.

6.1.2 Scenarios modelled

The following scenarios were modelled for climate change allowances of 20%, 25%, 30%, 35%, 40%, 45% and 50%:

1. Impact of new foul flow on existing sewerage network.
2. Impact of new foul flow plus an allowance for urban creep within new development areas.

3. Impact of new foul flow from development plus catchment wide urban creep and increased rainfall due to climate change.

Scenario 3 is considered to be the most realistic when considering urban creep and climate change.

6.1.3 Model results

The hydraulic model predicted that:

- For the additional development foul flows only, there is very little detriment. This is due to the projected increase in the population of Torbay increasing but being approximately balanced by the projected decrease in water consumption.
- For the additional development foul flows plus creep in the new development only, detriment is increased however is still minor.
- For the additional development foul flows plus creep across the entire catchment, detriment is significant in Paignton and Brixham.
- For the additional development foul flows plus creep across the entire catchment in conjunction with 50% climate change allowance, detriment is significant in the entire Torbay area.

Annual time series simulations were carried out to assess the effect of development, creep and climate change on the CSO spill regime. Taking the Fleet Walk CSOs as an example, climate change was the main factor affecting spills. There was an approximately 10% increase in spill volume at these CSOs between present day and the 2040 design horizon. This was increased by an additional 1% when the development and catchment-wide creep was added.

When considering whether predicted sea level rise has an effect on predicted flooding detriment within the catchment, the modelling results show that additional detriment is predicted in low lying areas near the CSO outfalls.

6.1.4 Suggested solutions

The SCA notes that there are substantial challenges in ensuring the Torbay sewer network can accommodate proposed development, urban creep and climate change up to the 2040 design horizon whilst maintaining the current level of service. Therefore, the SCA suggests that robust policies need to be in place to:

- Ensure water efficiency measures reduce water consumption in line with predictions.
- Minimise urban creep and, where creep is identified, ensure mitigation is included as part of any planning or building control submissions.
- Ensure planning and development / regeneration policy mandates climate change mitigation, with the aim of removing or attenuating surface water before it enters the combined sewer system.

Other possible mitigation measures suggested in the SCA are as follows:

- Ensuring runoff from new development does not enter the combined sewer network is essential, e.g. Sustainable drainage of surface water using features such as rainwater harvesting and reuse, infiltration areas, soakaways, porous pavements, attenuation wetlands and tree pits.
- Separating surface water from existing assets and reducing water consumption, e.g. Retrofitting water sensitive urban design, particularly when urban areas are being regenerated should be a high priority, community SuDS, and improving water efficiency.

6.2 WwTW capacity assessment

Each WwTW has an environmental permit under the Environmental Permitting Regulations[18]. For the majority of WwTWs, these permits set out limitations on the discharge of treated wastewater to a water

[18] https://www.legislation.gov.uk/uksi/2016/1154/contents (Accessed February 2025)

body, with the key aim of protecting environmental quality. The conditions generally include a limit on how much treated flow can be discharged to a water body as well as limits on the quality of the water discharged across a range of potentially polluting substances.

The limit on treated flow volumes essentially defines the flow capacity, or 'headroom capacity' of each WwTW; this in turn determines how many additional people the facility can serve before a new permit, or treatment upgrades may be required. The conditions on quality influence the environmental capacity of the receiving water body and hence determine limits on how much additional wastewater flow (beyond their permitted limit) each WwTW can realistically treat.

A load standstill assessment has been undertaken to determine the quality conditions that would need to be applied to the new or revised discharge to ensure no deterioration in WFD status. Through application of the best available technologies in terms of wastewater treatment, the reliable limits of conventional treatment (LCT) have been determined for the key parameter of Biochemical Oxygen Demand (BOD)[19] is provided in Table 6-1.

Table 6-1: Reliable limits of conventional treatment technology for wastewater

Water quality parameter	LCT
BOD	0.5mg/l 95 percentile limit[20]

Both the flow capacity and environmental capacity of the WwTWs in the TC study area have been considered based on the spatial distribution and scale of allocated sites. The assessment methodology detail is included in Appendix B and outcomes are presented in the WwTW detailed assessments presented in this chapter.

The results of the WwTW quality assessment are presented in Red/Amber/Green (RAG) assessment for ease of planning reference. The RAG code refers broadly to the following categories:

- **Green** – WFD objectives will not be adversely affected. Growth can be accepted with no significant changes to the WwTW infrastructure or permit required.
- **Amber** – in order to meet WFD objectives, changes to the discharge permit are required, and upgrades may be required to WwTW infrastructure which may have phasing implications.
- **Red** – in order to meet WFD objectives, changes to the discharge permit are required which are beyond the limits of what can be achieved with conventional treatment. An alternative solution needs to be sought.

6.3 WwTW detailed assessments

6.3.1 Brokenbury WwTW

6.3.1.1 Flow Capacity Assessment

Brokenbury WwTW receives nearly all of Torbay's wastewater for treatment with the final treated effluent discharging into the English Channel through an outfall at Sharkham Point in Brixham. The volume of wastewater, measured as Dry Weather Flow (DWF), which would be generated from the proposed housing and employment growth over the plan period for the two growth scenarios has been calculated and assessed against the permitted flow at the Brokenbury WwTW. An assumption of 110 l/h/d consumption per new domestic property was applied as supplied by TC; to take account of proposed employment, a 10% allowance of additional flow was added to each proposed new dwelling to allow for additional employment generated by housing growth. Table 6-2 displays the result of this assessment and shows that the Brokenbury WwTW has capacity for the 450DPA scenario with residual headroom

[19] Amount of oxygen needed for the biochemical oxidation of the organic matter to carbon dioxide in 5 days. BOD is an indicator for the mass concentration of biodegradable organic compounds.
[20] Considered within the water industry to be the current LCT using best available techniques.

(approximately 8% spare). Although the Brokenbury WwTW does have capacity for the Government Standard 940DPA, the WwTW would be functioning at capacity with no residual headroom.

Table 6-2: Brokenbury WwTW Capacity (110 l/h/d per new domestic property)

Scenario	Current DWF Permit (m3/d)	Current DWF Q80 (m^3/d)	Calculated Headroom (m^3/d)	Total Dwellings from Torbay in WwTW catchment	Capacity post growth (m^3/d)	Percentage capacity after growth
450DPA	42,396	36,578	5,818	9001	3,442	8%
Gov. Standard (940DPA)	42,396	36,578	5,818	21,737	79	0%

Table 6-3 shows the results of the flow capacity assessment when considering an assumption of 80 l/h/d per new domestic property. This shows that the Brokenbury WwTW has slightly more residual headroom for the 450DPA scenario and a 4% residual headroom capacity when considering the Government Standard 940DPA scenario.

Table 6-3: Brokenbury WwTW Capacity (80 l/h/d per new domestic property)

Scenario	Current DWF Permit (m3/d)	Current DWF Q80 (m^3/d)	Calculated Headroom (m^3/d)	Total Dwellings from Torbay in WwTW catchment	Capacity post growth (m^3/d)	Percentage capacity after growth
450DPA	42,396	36,578	5,818	9001	4,090	10%
Gov. Standard (940DPA)	42,396	36,578	5,818	21,737	1,644	4%

6.3.1.2 Environmental Capacity Assessment

Receiving Water Quality

Brokenbury WwTW discharges into the English Channel and a load standstill assessment has been undertaken to determine future permit conditions required to maintain current BOD quality using the predicted future discharge flow, in line with the Environment Agency's H1 Guidance[21]. This approach was agreed during consultation with the Environment Agency. The results of this calculation can be seen in Table 6-4. This shows that a revised (tighter) BOD quality condition can be achieved within current conventional treatment technology (within the limits of conventional treatment) to ensure no deterioration of WFD status of the receiving Water Bodies for both growth scenarios.

Table 6-4: Required permit quality conditions to achieve no deterioration in WFD status

Scenario	Consent DWF (m^3/d)	BOD (mg/l 95%ile)
Current Quality Consent	**42,396**	**40**
450DPA	Within consented DWF	37.6
Gov. Standard 940DPA	Exceeds consented DWF	34.6

[21] H1 Annex D2 Assessment of sanitary and other pollutants within Surface Water Discharges: https://assets.publishing.service.gov.uk/media/5a7f8586e5274a2e87db65a3/H1_annex_D2.pdf (Accessed May 2025)

It should be noted that other nutrients such as ammonia and phosphate were not assessed as these are not conditioned within the existing discharge permit due to the discharge being into a tidal waterbody.

Water Dependent Habitats

The Brokenbury WwTW discharge also has the potential to impact upon water dependent habitats in Torbay including the Torbay MCZ, South Hams SAC and Hope's Nose to Wall's Hill SSSI, and the potential to impact the Brixham SWPA and bathing water status. Managing the pollutant load through a revised discharge permit would also ensure no impact on the identified water dependent habitats or Protected Areas linked to the English Channel.

Future Investment

It is noted in the SWW DWMP that the key risks for the Brokenbury WwTW catchment include sewer flooding, pollution incidents and storm overflow performance. To manage these risks, SWW propose the following aims in the Torbay catchment between 2025 and 2050:

- Construct new combined or foul storage system.
- Separate surface water from combined systems by constructing new surface water networks (and/or modify existing).
- These proposed interventions for Torbay catchment include approximately 64ha of surface water separation by conventional or SuDS solutions and 38,743m^3 of storage.

The SWW Torbay Roadshow Board dated January 2024[22] notes the following proposed plans in the Torbay catchment which will contribute to the aims in the Torbay catchment:

- Improvements to reduce spill numbers from Old Mill Road storm overflow in Torquay by 2030.
- Investments to reduce spill numbers from the Clennon Valley Pumping Station overflow in Paignton. The nature of this work will be informed by an Impermeable Area survey undertaken in 2024 and will likely include surface water separation, infiltration reduction, increased storage, network enhancement and screening, and will bring spills down to 2 or less per bathing season and less than 10 per year.
- Preston Green pumping station storm overflow in Paignton has been identified for spill reduction by 2030. Investment to reduce spills at Churscombe Cross pumping station storm overflow located adjacent to the Torbay boundary is scheduled for AMP9 (2030 – 2035).
- SWW are considering a strategy to reduce the frequency of discharges from the Illsham Valley storm overflow in Torquay. Given the complexity of the project, which will involve removing the River Fleet from the combined sewer network, it will be delivered over several AMP periods.

Consultation with SWW was undertaken and SWW confirmed the following actions to be undertaken during AMP8 (2025 – 2030) to contribute to the aims in the Torbay catchment:

- Reduction of spills at Oxen Cove PSO, Kiln Road, Bolton Street, Cockington Lane, Clennon Valley, Preston Green, Old Mill Road, Fleet Walk, Beacon Hill, and Berry Head to meet the Environment Act 2021 targets.
- Bathing Water investigation to be completed at Oddicombe.
- Shellfish Water investigation at Brixham.

SWW also confirmed that over several AMP periods, actions will be undertaken to reduce spills at Illsham Valley CSO.

[22] Torbay Roadshow Board: https://www.southwestwater.co.uk/siteassets/documents/about-us/get-involved/roadshows/torbay-roadshow-boards---12th-january-2024.pdf (Accessed May 2025)

The Environment Agency also provided information on planned investment as part of the data request. This includes:

- In AMP8 Oddicombe will have a full catchment investigation to inform improvements required.
- Pump stations will be improved to meet the maximum '2 spills per bathing season' standard at Paignton and Goodrington Bathing Waters.
- CSOs and pumping stations at St Mary's Bay, Meadfoot, and Breakwater Beach will see improvements to the standard of maximum 10 spills per annum.

Sewer Network and CSOs

The SCA has highlighted that there will be an increase in CSOs across the whole of Torbay when considering development, climate change and urban creep (based on 300DPA) and therefore the WCS recommends a policy for allocated development in the Brokenbury WwTW catchment to prevent surface water generated from sites being discharged into the combined sewer network. It will be necessary for all new development to separate surface water flows from foul flows with no discharge to the existing combined network, instead SuDS should be used to manage surface water runoff. Surface water runoff rates from new developments will need to be controlled and alternative discharge options should be prioritised, with discharge to the combined network as a last resort. There may be a requirement to delay significant development until later (or beyond) the plan period when the SWW proposed network schemes are delivered.

The WCS also recommends that new developments in the Brokenbury WwTW catchment consider the implementation of a dual plumbing systems to allow separation of the wastewater generated into greywater (wastewater generated from use in hand basins, baths and showers) and blackwater (wastewater generated from toilets, kitchen and laundry use with higher concentration of contaminants) to allow greywater to be reused and reduce foul flows to the network.

Given the CSO spill frequency, and limited baseline WwTW capacity, the WCS recommends that a policy be implemented which requires developers in the Brokenbury WwTW catchment to demonstrate they have agreed available capacity at the WwTW and the associated sewer network with SWW prior to submitting planning applications.

Managing the CSO spill frequency may be especially important for the Clennon Valley and Ilsham Valley CSOs due to SWW highlighting that these could be potential sources of bacterial contamination to the Brixham SWPA.

7. Water supply assessment

This part of the WCS sets out how SWW proposes to meet the increase in expected water demand in the WRZ covering TC (Roadford WRZ). It then summarises a comparison of SWW's WRMP projections planned growth within the WRZ with growth targets proposed by TC in the Local Plan, to determine whether the WRMP adequately caters for the Local Plan level of growth.

Finally, it considers requirements for a policy to reduce water demand in new development to ensure that the supply and demand balance predicted by SWW can be achieved.

7.1 Balancing supply and demand

7.1.1 South West Water – Roadford WRZ

As noted in Section 5.3.3, SWW's assessment of available water for the Roadford WRZ in their baseline identifies that the zone would be in deficit for the whole planning horizon (2025 – 2050), up to a maximum of -40.8Ml/d in 2050 under average conditions if no new measures are put in place.

DEFRA's Integrated Plan for Delivering Clean and Plentiful Water[23] and the Government's Environmental Improvement Plan[24] set pathways for reducing demand domestically to manage long term water supplies. These plans are key drivers in the development of measures to manage the forecast deficit and provide a focus for the following demand management measures set out within SWW's draft WRMP:

- Reduce leakage by 50% by 2045.
- Reduce per capita consumption to 122 l/h/d by 2038 and 110 l/h/d by 2050.
- Reduce non-household demand by 9% by 2038 and 15% by 2050.

In parallel, to increase water supplies in the Roadford WRZ, the draft WRMP sets out a preferred plan which incorporates the following supply schemes to increase the volume of potable water:

- In 2022/2023 SWW delivered the River Lyd pumped storage scheme, improving resilience of Roadford Reservoir to multi-season drought, and increasing the amount of raw water available in the WRZ in the event of a drought. SWW is completing a second scheme from Gatherley on the River Tamar in AMP7, providing additional drought resilience for the reservoir and wider WRZ.
- A new raw water main between Roborough and Littlehempston during AMP9, to supplement the existing South Devon Spine main which does not have the capacity to transfer all the water required, will allow additional water to be made available to Littlehempston WwTW.

The reduction in demand and additional supplies ensures that the Roadford WRZ remains in surplus over the planning horizon (2025 – 2050).

7.1.2 Comparing growth – WRMP and the Local Plan

To validate whether the planned forecast supply demand balance within the WRMP24 preferred plan is appropriate for the level of growth to come forward in Torbay, analysis has been completed of the number of houses allowed for from the Torbay area in the SWW WRMP compared to the growth option scenarios considered within this Detailed WCS.

This analysis has shown that between 2025-2050, SWW have allowed for 9568 houses in Torbay as part of the calculation of supply and demand balance within their preferred plan. Torbay's Local Plan spans 20 years; the number of houses SWW have allowed for over the Local Plan period of 20 years

[23] DEFRA (2023) Our integrated plan for delivering clean and plentiful water. Available at: Our Integrated Plan for Delivering Clean and Plentiful Water (publishing.service.gov.uk) (Accessed February 2025)
[24] DEFRA (2023) Environmental Improvement Plan 2023. Available at: Environmental Improvement Plan (publishing.service.gov.uk) (Accessed February 2025)

is 8215. This demonstrates that there is a shortfall of 786 dwellings in the 450DPA scenario and a shortfall of 13,522 dwellings in the Government Standard 940DPA scenario.

7.2 Lowering future demand

The comparison of planned growth against WRMP household projections shows that there are clear drivers set out in this WCS, and within legislation and wider national policy and strategies for targeting polices which reduced both PCC for new dwellings and demand in non-household water use.

7.2.1 Household demand – lowering PCC

At the time of completing this WCS, the only national mandatory PCC standard is set out in the Building Regulations (Part G)[25], requiring new homes to be built to use no more than 125 l/p/d. The Regulations recommend an optional standard of 110 l/p/d, but this optional standard is not mandated through the Regulations.

Whilst government have set out actions to review the need for (and potentially set) higher PCC standards for new homes in water stressed parts of England, those actions have yet to result in mandated standards. Local Plans remain one of the only vehicles to mandate higher water efficiency standards for new development through effective local policy.

7.2.1.1 Demonstrating PCC reduction outcomes

Five household domestic water demand scenarios have been considered within this WCS (detailed in Table 7-1) to assess how TC can support enabling the planned development and growth whilst minimising the impact on the limited water resources. These demand scenarios are based on potential predicted changes to PCC driven by the SWW strategy. The results in Figure 7-1 for the 450DPA scenario show that in 2045/46 there will be a difference of approximately 1.1 Ml/d between projection 1 and projection 5. The results in Figure 7-2 for the Government Standard 940DPA scenario show that in 2045/46 there will be a difference of approximately 2.7 Ml/d between projection 1 and projection 5. This could lead to a significant effect on the Roadford WRZ if all new build homes can only achieve projection 1 instead of the lower water demand scenarios.

Table 7-1: Household domestic water demand scenarios

Projection	PCC (l/h/d)	Reasoning
Projection 1	136	based on baseline SWW scenario with no intervention
Projection 2	110	based on Building Regulations Optional Requirement
Projection 3	100	based on low water recycling option
Projection 4	90	based on medium water recycling option
Projection 5	80	based on high water recycling option

[25] The Building Regulations 2010 Part G

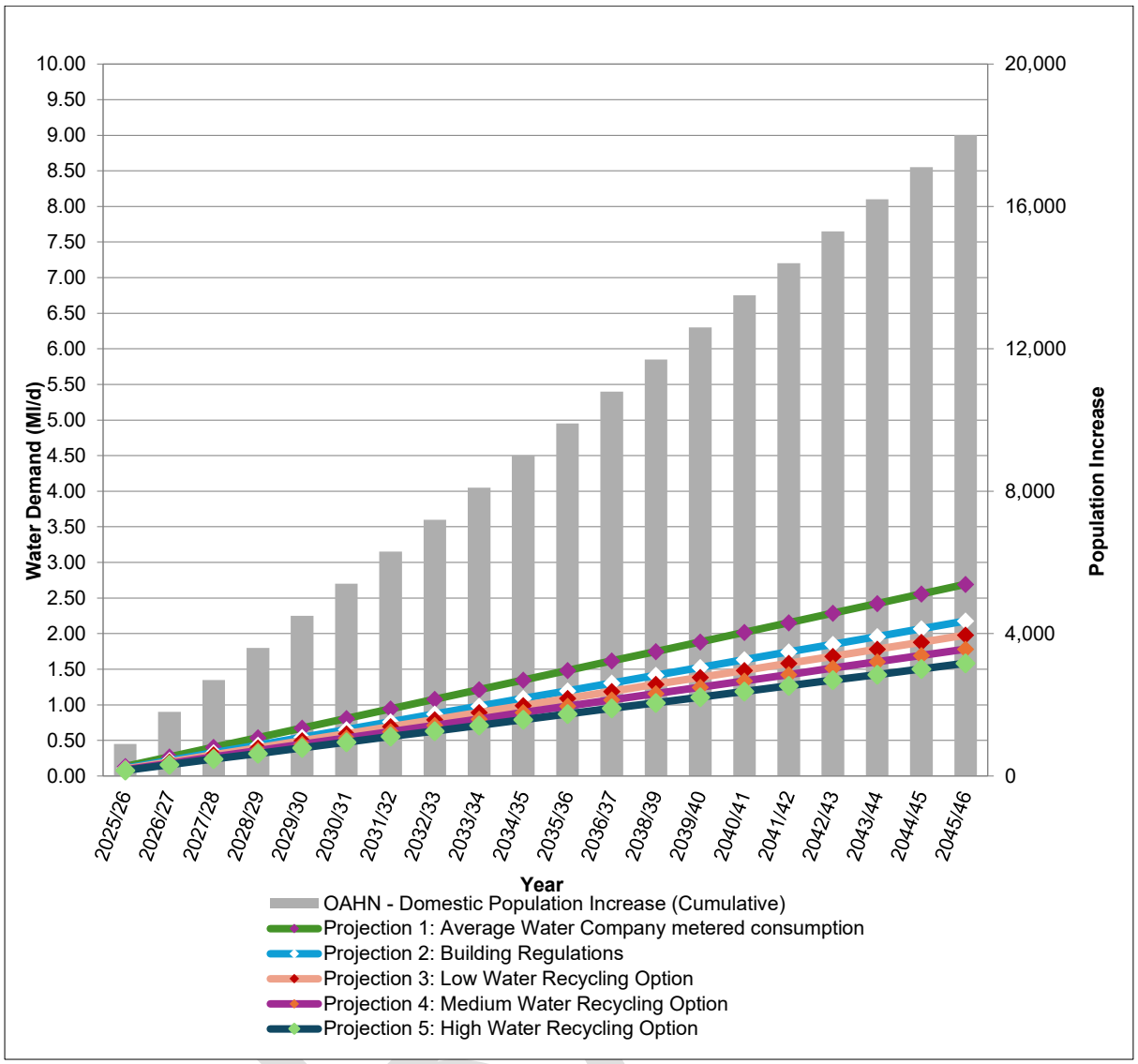

Figure 7-1: Household domestic water demand scenarios for 450DPA scenario

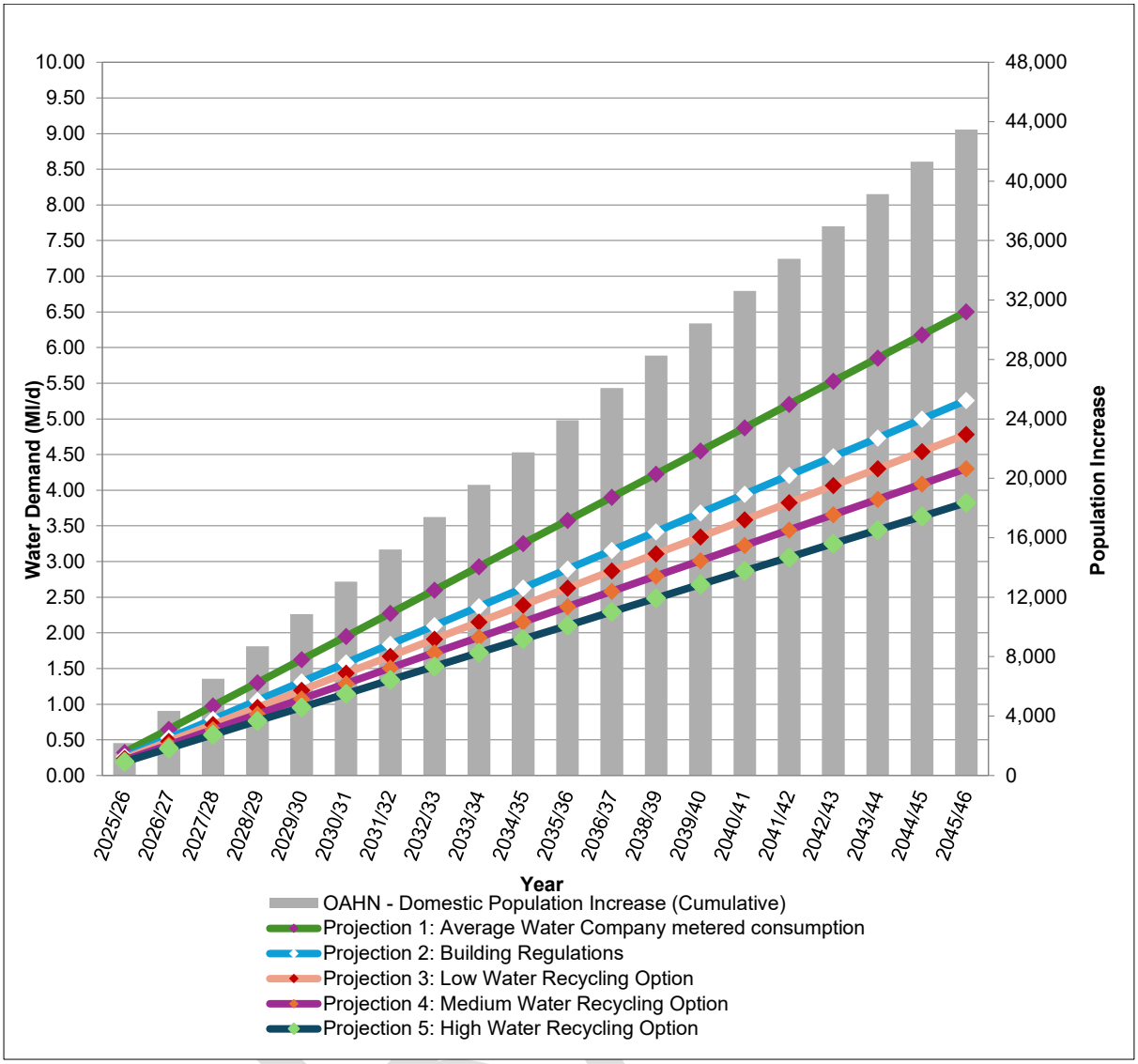

Figure 7-2: Household domestic water demand scenarios for Government Standard 940DPA scenario

Due to the identified shortfall in the number of houses which SWW have allowed for over the Local Plan period in terms of water supply, a calculation has been undertaken to assess the potential effect that tighter per-capita water consumption could have on the number of houses which could be allowed for in terms of water supply (Table 7-2). It should be noted that the assumed PCC which SWW have used to inform the number of houses accounted for is 128.6 l/h/d which is the average PCC between 2025-2045 from the SWW WRMP Final Plan average household PCC. An assumed occupancy rate (number of people per household) of 2.0 has been included in the calculations which has been taken from the SWW WRMP.

Table 7-2 indicates that if PCC is limited to 110 l/h/d, an estimated 9604 houses could be accounted for in terms of water supply which would be sufficient to supply all houses in the 450DPA scenario. The calculations indicate that even with a 80 l/h/d PCC, there would be a shortfall of 8531 houses for the Government Standard 940DPA scenario.

Table 7-2: Per Capita Consumption and estimated number of houses which could be accounted for

PCC (l/h/d)	Estimated Number of Houses
110	9604

PCC (l/h/d)	Estimated Number of Houses
100	10,564
90	11,738
80	13,206

7.2.1.2 Drivers for PCC reduction

WCS identified drivers

The WCS has identified that there is a very limited local surface water available for abstraction and no local groundwater is available for abstraction.

The WCS has set out how demand management is essential to SWW achieving a surplus in the supply and demand balance to 2050 (and beyond). This requires both a reduction in existing household demand, as well as future demand from new households to be lowered as far as reasonably practicable. To deliver this part of their WRMP, SWW are reliant on effective local plan policies to mandate higher water efficiency targets for new homes. Figure 7-1 and Figure 7-2 demonstrate the efficacy of lowering PCC for new households on the cumulative increase in water demand by the end of the Plan period.

The WCS has also summarised that the preferred SWW plan to balance supply and demand in the medium to long term relies on new supply-side solutions which have medium to long lead-in times, and hence there is a need to ensure that early phase new dwellings are designed to reduce water demand prior to these new sources being connected to the Roadford WRZ.

Finally, the WCS has set out that reducing PCC (to as low as 80 l/p/d) would have significant benefit in maintaining treatment headroom at the Brokenbury WwTW because less wastewater would be generated. This may delay or prevent the need for upgrades to the WwTW within the Local Plan period and would have the effect of reducing impact on waterbodies through reduced storm spills and reduced treated discharges from the WwTW.

Legislative, policy and strategy drivers for PCC reduction

The Environment Act 2021 includes a legally binding target to reduce the use of public water supply in England per head of population by 20% by 2038[26], with interim targets by 2027 and 2032. Minimising water demand in new households (and within non-households) is central to achieving this target.

The Act mandates the 5-yearly update of the 25 Year Environment Plan (2018), with the first update published in 2023 as the Environmental Improvement Plan[27] (EIP). The EIP sets out the actions needed to deliver on the legally binding public water supply reduction target, including the following related to PCC reduction in new housing:

- The production of a Roadmap to Water Efficiency in new developments (included in the EIP and the proceeding Plan for Water).
- Develop clear guidance on ‘water positive’ or ’net zero water’ developments.
- Review water efficiency options in planning and building regulations.
- Work with Ofwat to ensure the water industry can play a central role in retrofitting water efficient products in households, businesses, charities and the public sector.
- Deliver the mandatory water efficiency labelling scheme.
- Investigate dual pipe systems and water reuse options for new housing development as part of the review of the planning framework.
- Enable innovative water efficiency approaches in buildings, including technologies and approaches to funding and maintenance.

[26] Against a 2019/20 baseline
[27] Environmental Improvement Plan (2023) Defra

The government followed the EIP with the development of the 2023 "Plan for Water"[28] which includes the following actions that build on, or are additional to the actions within the EIP:

- Establishing targets for water efficiency in new homes - the plan supports achieving a design standard of up to 85 l/p/d in new residential developments in some parts of England.
- Offering incentives to developers who incorporate water-saving measures and technologies in new homes - this includes financial incentives and support for implementing water reuse systems.
- Encouraging Integrated Water Management - promoting the use of integrated water management practices in new developments, such as rainwater harvesting and greywater recycling, to reduce reliance on mains water supply.

Collectively, these drivers support the need for a local plan policy which sets water efficiency/PCC standards for new homes lower than the mandatory Building Regulations requirements.

7.2.1.3 How to achieve a lower (up to 80 l/p/d) PCC target

Fixtures and fittings approach

Within the industry, it has widely been considered that to achieve a standard lower than a 100 l/p/d requires some of the non-potable water uses in a home (e.g. toilet flushing, or outdoor use) to be met from recycled water (such as rainwater harvesting or greywater recycling) instead of using potable water for these purposes. However, there are water efficient appliances that are widely available on the market that can achieve a lower PCC through an efficient fixtures and fittings approach.

The Future Homes Hub's Water Ready report[29] was commissioned by Defra to support the government's action of developing a Roadmap to Water Efficiency. Table 3 of the Water Ready report illustrates how water efficiency as low as 75 l/p/d could be achieved using a fittings-based approach, including with a variety of technology options. Achieving as low as 75 l/p/d includes both known and foreseeable fittings which may not be available at scale until 2030; nevertheless, costs are provided in the report which demonstrate feasible and affordable options which will increase in availability and range as the Local Plan timeframe progresses.

Water reuse

At the time of completing this WCS, there is uncertainty as to whether statutory water companies[30] can legally supply recycled water[31] into properties which require water for domestic purposes, even in the case where it is to be used for non-potable uses; this is due to legislative definitions of statutory water companies needing to supply 'wholesome water' for domestic purposes regardless of its intended end use.

As part of the Roadmap to Water Efficiency (as set out in the EIP and the Plan for Water), Defra has committed to looking into this legislative barrier regarding the provision of wholesome water. Until that is resolved and the legislation updated, this uncertainty limits opportunity for new development to utilise water reuse as potential suppliers and operators of technology and facilities would be limited to private companies who are not statutory water companies. It should be noted that this specific legislative restriction does not apply to non-domestic purposes (i.e. industrial, manufacturing or car washing facilities) where statutory water companies can supply recycled water which does not need to be 'wholesome'.

There is available research from a publication[32] by the Enabling Water Smart Communities (EWSC) and the Chartered Institution of Water and Environmental Managers (CIWEM) that provides evidence of the financial viability of privately operated community based water reuse schemes to deliver higher PCC standards. The cost ranges set out in Table 7-3 demonstrates that water reuse is a credible approach to significantly reducing PCC.

[28] Plan for Water: Our Integrated Plan for Delivering Clean and Plentiful Water (2023) Defra
[29] Water Ready Report (2024) Future Homes Hub
[30] including companies new to the market known as New Appointments & Variations (or NAV)
[31] From rainwater harvesting or grey water recycling
[32] Water re-use in new housing – understanding the business case (2025) EWSC & CIWEM

Table 7-3 Total per plot cost range for water reuse installations

Additional cost	Rainwater harvesting	Greywater recycling
Per community recycling	£1,100 - £3,700	£1,900 - £9,900
Per plot reuse	£1,900 - £6,400	£3,800 - £4,600

Source: Water Reuse in New Housing (2025) - ESWC & CIWEM

In summary the water reuse in new housing report concludes:

- Community-scale rainwater reuse is the most cost-effective option (rather than per plot), even for smaller sized developments of 40-50 homes.
- There is a significant fall in costs for water reuse approaches in developments of at least 100 units.
- Higher density development sites yield lower costs due to factors such as less pipework needed between properties.
- Water reuse can help achieve average per capita household water consumption levels of 80 l/p/d when supported by standard water efficient appliances.

The growth area summaries for this WCS (section 8) set out where allocated sites in key locations are of a sufficient size (150 dwellings or more) to consider water reuse opportunities, provided by private companies, based on the evidence presented.

Offsetting options

In setting a policy which requires a PCC standard to be met, TC could consider adopting a water re-use offset scheme which allows developers to pay into an offset fund; this would be for the limited number of developers who can demonstrate they are unable to viably meet the set target. The offset fund would then be used by TC to install retrofit water reuse schemes in council owned property such as schools, council offices, and leisure centres within the Roadford WRZ, thereby providing a water demand offset. Such a scheme has been developed by the London Borough of Tower Hamlets as part of its new Local Plan. Further information can be found in the Council's Local Plan Topic Paper – Water Efficiency (2024).

The government is leading development of a similar 'water credit' scheme for Cambridge as part of the "The Case for Cambridge"[33] proposals for sustainable growth in the city. The proposals for growth in Cambridge are limited by lack of available water in the short-term whilst Cambridge Water and AWS work together to provide longer-term new supply sources. Detailed design work on the credits system is underway with the LPA, developers, the Environment Agency and other key stakeholders but is not yet published and functional.

Developer Incentives

SWW offer environmental incentives to developers to deliver water efficient homes in exchange for discounted infrastructure charges which would also assist in improving viability of a PCC policy. For SWW, where new properties meet a requirement of 95 l/p/d, developers can qualify for the Water Environmental Incentive Scheme (EIS) where a 75% reduction of the infrastructure charge will be applied[34].

7.3 Non-domestic growth

DLP Planning published an Economic Development Needs Assessment[35] for Torbay in February 2024 which identified an employment land requirement of 20.5ha between 2022 – 2040. Appendix C Figure 1 shows the potential employment sites across Torbay for the new local plan. The majority of the

[33] The Case for Cambridge (2024) HM Government
[34] SWW Charging Arrangements (2024): https://www.southwestwater.co.uk/siteassets/documents/developer/charging-arrangements/202425/charging-arrangements-24_25_v1publish.pdf
[35] DLP Planning (2024) Economic Development Needs Assessment. Available at: https://www.torbay.gov.uk/media/20482/economic-development-needs-assessment.pdf (Accessed March 2025)

potential employment sites are located in the south of Paignton adjacent to existing industrial estates and business parks. The remaining employment sites are located on the edge of Torquay. Where employment sites overlap with proposed housing sites, it is assumed that these will be mixed-use developments.

DEFRA's Integrated Plan for Delivering Clean and Plentiful Water has set a legally binding target to reduce the overall amount of water supplied to non-households by 9% by 2038. Therefore, SWW may not be able to supply new businesses with treated water should they require significant non-domestic water supplies to operate. However, it is not anticipated that any potential employment sites will require significant water supplies to operate.

The SWW WRMP notes that non-household water consumption is forecast to decline over the planning period (2025 – 2050). To achieve the target of reducing water supplied to non-households by 9% by 2038, SWW have proposed non-household smart metering along with the following water efficiency interventions:

- Reuse of treated wastewater schemes: reuse treated wastewater from industrial customers is used onsite by the industrial customer.
- Business efficiency visits: water efficiency devices can be retro-fitted and advice given on water efficiency.
- Business efficiency visits: targeting beverage and food manufacturers to see how water use can be reduced on site.
- Business efficiency visits: leak detection in large non-household users, targeted at specific sectors or large users with high expected leakage.
- Rainwater harvesting in new non-household developments: work with developers to provide rainwater harvesting systems to provide non-potable supply for use within new commercial properties.

The WCS sets out that there is very limited local surface water available for abstraction and no local groundwater is available for abstraction. Therefore, the WCS recommends that the following policy be adopted for non-household sites:

- All major non-household developments to include water saving measures and water reuse in their designs with a focus on rainwater harvesting as the primary source (unless it can be demonstrated that reuse is not viable)[36].
- New, extended or redeveloped non-household buildings aim to achieve full credits within the 4 water categories (WAT01, WAT02, WAT03, and WAT04) for BREAAM standard within a minimum score of 3 credits within WAT01 Water Consumption issue category, or an equivalent standard set out in any future update to BREAAM. The applicant will be required to justify and evidence why full credits is not possible/viable for the development.
- A Water Efficient Design Statement (WEDS) must be submitted with the application at the earliest stage to demonstrate how policy requirements have been met and will be maintained in relation to water efficient design. The statement shall provide, as a minimum, the following:
    - Baseline information relating to existing water use within a development site; and
    - Full calculations relating to expected water use within a proposed development (such as water efficient fixtures and fittings, rainwater/stormwater harvesting or reuse).

[36] See guidance for non-potable reuse - using wastewater resources for non-potable purposes tep-international-perspectives-on-water-reuse-summary_april-25_reduced.pdf

8. Growth area summaries

8.1 Introduction

This section of the report provides a summary of the WCS assessments and outcomes. It has been presented as growth area summaries, to aid planners using the WCS to see the key infrastructure issues, phasing impacts and policy recommendations for different spatial areas.

8.2 Torquay

8.2.1 Wastewater treatment summary

Is there capacity at the WwTW for all new dwellings planned within the WwTW catchment	Yes for 450DPA scenario No for 940DPA scenario
Is there a WwTW solution proposed in the current investment period to 2030?	No – development coming forward before 2030 will need evidence agreed capacity with SWW
Is there a medium to long term WwTW solution proposed in the SWW Drainage and Wastewater Management Plan	No – no medium or long term plan proposed
Can a future permit be implemented in the future to protect water quality within Technically Achievable Limits?	Yes

8.2.2 Wastewater sewer capacity

The sewer network is largely combined and the Sewer Capacity Assessment highlighted that the number of CSOs is likely to increase when considering 300DPA, urban creep and climate change. Therefore, additional flow to the sewer network may limit the efficacy of future spill reduction measures. Consequently, surface water from new developments should be prevented from discharging to the combined network.

8.2.3 Catchment risk and opportunities

The majority of the potential growth sites are located within areas which drain to the Tor Bay transitional water body which has Good Ecological Status and Lyme Bay West transitional water body which has Moderate Ecological Status. Some sites are located within the Aller Brook (Teign) – Upper WFD water body which has Good Ecological Status. Surface water runoff from these sites has the potential to influence water quality within these WFD water bodies. The underlying Torquay, and Paignton and Brixham Groundwater bodies have Good Chemical and Quantitative Status. Surface water runoff also has the potential to impact upon the MCZ, Bathing Waters, Hope's Nose to Wall's Hill SSSI, and Occombe SSSI habitats.

In terms of flood risk, the growth area is within a critical drainage area and some areas along the coast are at risk of tidal/fluvial flooding.

This highlights that developments in this growth area need to manage surface water through the provision of SuDS with a focus on managing water quality. There are limited opportunities for NbS due to the urbanised nature of Torquay. There are areas of riparian woodland potential for sites:

- Wider Land at Broadley Drive
- Stantor Barton
- Hollicombe Gas Works

There are areas of floodplain woodland potential for sites:

- Stantor Barton
- Sladnor Park
- Land Between Rock House Lane and Brim Hill
- Hollicombe Gas Works

There are areas of floodplain reconnection potential at sites:

- Land Between Rock House Lane and Brim Hill
- Sladnor Park

Development should aim to implement urban greening where possible to reduce runoff from impermeable surfaces. Developers should be encouraged to contribute towards NbS opportunities and incorporate similar NbS in their sites as part of SuDS delivery.

8.2.4 Water supply

Only a small part of Torquay has water available for licensing for all flow conditions from surface water sources. There are no groundwater abstractions available in Torquay. Therefore, there is very limited scope for development to consider local sources of supply.

Torquay is located within the Roadford WRZ managed by SWW. Information provided by SWW indicates that there is a shortfall in the number of dwellings accounted for in the WRMP planning over the Torbay Local Plan period. Therefore, policies should be implemented to limit per capita consumption to 110 l/h/d and encourage developers to consider implementing rainwater harvesting and greywater recycling measures as part of developments.

Land at Hamelin Way and Moles Lane (Edginswell) is a large allocated site (350 dwellings) where water recycling could be considered for supplying non-potable uses to meet a 110 l/h/d policy target.

8.2.5 Growth area specific policy

The following water policy areas are recommended for development for this growth area:

- Development coming forward should be required to demonstrate available capacity at the WwTW and the associated sewer network with SWW prior to submitting planning applications. It is recommended that a Local Plan policy is developed requiring developers to undertake pre-planning engagement with SWW at the earliest opportunity to assess infrastructure capacity, and any specific requirements that may be needed to deliver the proposed development, which may include sustainable points of connection to the water supply and wastewater networks to minimise impacts on existing communities and the environment.
- An 80 l/h/d PCC target for new dwellings; this will support both sustainable water resource provision as well as assist with capacity issues at Brokenbury WwTW and limit impacts on CSOs.
- To enable CSO spills to be managed in the long-term, require all development in this growth area to prevent surface water generated from sites being discharged to the foul or combined sewer network.
- Require SuDS built to the updated national SuDS standards to attenuate surface water runoff for flood risk purposes and be expected to manage, and where possible improve water quality.
- Encourage developers to contribute to NbS for riparian management and provision of surface water attenuation.

8.3 Paignton

8.3.1 Wastewater treatment summary

Is there capacity at the WwTW for all new dwellings planned within the WwTW catchment	Yes for 450DPA scenario No for 940DPA scenario
Is there a WwTW solution proposed in the current investment period to 2030?	No – development coming forward before 2030 will need evidence agreed capacity with SWW
Is there a medium to long term WwTW solution proposed in the SWW Drainage and Wastewater Management Plan	No – no medium or long term plan proposed
Can a future permit be implemented in the future to protect water quality within Technically Achievable Limits?	Yes

8.3.2 Wastewater sewer capacity

The sewer network is largely combined and the Sewer Capacity Assessment highlighted that the number of CSOs is likely to increase when considering 300DPA, urban creep and climate change. Therefore, additional flow to the sewer network may limit the efficacy of future spill reduction measures. Consequently, surface water from new developments should be prevented from discharging to the combined network.

8.3.3 Catchment risk and opportunities

All potential growth sites are located within areas which drain to the Tor Bay transitional water body which has Good Ecological Status. Surface water runoff from these sites has the potential to influence water quality within this WFD water body. The underlying and Paignton and Brixham Groundwater body has Good Chemical and Quantitative Status, and the Teign, Avon, Dart and Erme Groundwater body has Poor Chemical Status and Good Quantitative. Surface water runoff also has the potential to impact upon the MCZ habitats and Bathing Waters.

In terms of flood risk, the growth area is within a critical drainage area and some areas along the coast are at risk of tidal/fluvial flooding.

This highlights that developments in this growth area need to manage surface water through the provision of SuDS with a focus on managing water quality. There are limited opportunities for NbS in the urbanised area of Paignton. There are areas of riparian woodland potential for sites:

- Land at Preston Down Road
- Land at Marldon Road
- Land at Kings Ash Road
- Land N & W of Hiltop Nursery
- Great Parks
- Land north of Blagdon Road
- Land at Long Meadow
- Land South of Totnes Road
- Lower Yalberton Holiday Park
- Land west of Grange Road
- South of Totnes Road
- Site off QED

There are areas of floodplain woodland potential for sites:

- Land west of Grange Road
- Land at Preston Down Road
- Land N & W of Hiltop Nursery
- Great Parks
- South of Totnes Road
- Land at Long Meadow
- Lower Yalberton Holiday Park

There are areas of floodplain reconnection potential at site Victoria Square.

Development should aim to implement urban greening where possible to reduce runoff from impermeable surfaces. Developers should be encouraged to contribute towards NbS opportunities and incorporate similar NbS in their site as part of SuDS delivery.

8.3.4 Water supply

There are no surface water or groundwater abstractions available in Paignton. Therefore, there is no scope for development to consider local sources of supply.

Paignton is located within the Roadford WRZ managed by SWW. Information provided by SWW indicates that there is a shortfall in the number of dwellings accounted for in the WRMP planning over the Torbay Local Plan period. Therefore, policies should be implemented to limit per capita consumption to 110 l/h/d and encourage developers to consider implementing rainwater harvesting and greywater recycling measures as part of developments.

Land off Bxm Rd (DevonshirePk) is a large allocated site (255 dwellings) where water recycling could be considered for supplying non-potable uses to meet a 110 l/h/d policy target.

8.3.5 Growth area specific policy

The following water policy areas are recommended for development for this growth area:

- Development coming forward should be required to demonstrate available capacity at the WwTW and the associated sewer network with SWW prior to submitting planning applications. It is recommended that a Local Plan policy is developed requiring developers to undertake pre-planning engagement with SWW at the earliest opportunity to assess infrastructure capacity, and any specific requirements that may be needed to deliver the proposed development, which may include sustainable points of connection to the water supply and wastewater networks to minimise impacts on existing communities and the environment.
- An 80 l/h/d PCC target for new dwellings; this will support both sustainable water resource provision as well as assist with capacity issues at Brokenbury WwTW and limit impacts on CSOs.
- To enable CSO spills to be managed in the long-term, require all development in this growth area to prevent surface water generated from sites being discharged to the foul or combined sewer network.
- Require SuDS built to the updated national SuDS standards to attenuate surface water runoff for flood risk purposes and be expected to manage, and where possible improve water quality.
- Encourage developers to contribute to NbS for riparian management and provision of surface water attenuation.

8.4 Broadsands

8.4.1 Wastewater treatment summary

Is there capacity at the WwTW for all new dwellings planned within the WwTW catchment	Yes for 450DPA scenario No for 940DPA scenario
Is there a WwTW solution proposed in the current investment period to 2030?	No – development coming forward before 2030 will need evidence agreed capacity with SWW
Is there a medium to long term WwTW solution proposed in the SWW Drainage and Wastewater Management Plan	No – no medium or long term plan proposed
Can a future permit be implemented in the future to protect water quality within Technically Achievable Limits?	Yes

8.4.2 Wastewater sewer capacity

The sewer network is largely combined and the Sewer Capacity Assessment highlighted that the number of CSOs is likely to increase when considering 300DPA, urban creep and climate change. Therefore, additional flow to the sewer network may limit the efficacy of future spill reduction measures. Consequently, surface water from new developments should be prevented from discharging to the combined network.

8.4.3 Catchment risk and opportunities

All potential growth sites are located within areas which drain to the Tor Bay transitional water body which has Good Ecological Status. Surface water runoff from these sites has the potential to influence water quality within this WFD water body. The underlying and Paignton and Brixham Groundwater body has Good Chemical and Quantitative Status, and the Teign, Avon, Dart and Erme Groundwater body has Poor Chemical Status and Good Quantitative. Surface water runoff also has the potential to impact upon the MCZ habitats and Bathing Waters.

In terms of flood risk, the growth area is within a critical drainage area and some areas along the coast are at risk of tidal/fluvial flooding.

This highlights that developments in this growth area need to manage surface water through the provision of SuDS with a focus on managing water quality. There are limited opportunities for NbS in the urbanised area of Broadsands. There are areas of riparian woodland potential for sites:

- Land West of Ferrers Green
- The Piggery
- Land South of Archery Field
- Archery Field
- Lupton Park Estate
- Land at Monksbridge

There are areas of floodplain woodland potential for sites:

- Land West of Ferrers Green
- Archery Field
- The Piggery
- Lupton Park Estate
- Land at Monksbridge

There are areas of floodplain reconnection potential at sites:

- The Piggery
- Land at Ferrers Green

Development should aim to implement urban greening where possible to reduce runoff from impermeable surfaces. Developers should be encouraged to contribute towards NbS opportunities and incorporate similar NbS in their site as part of SuDS delivery.

8.4.4 Water supply

There are no surface water or groundwater abstractions available in Broadsands. Therefore, there is no scope for development to consider local sources of supply.

Paignton is located within the Roadford WRZ managed by SWW. Information provided by SWW indicates that there is a shortfall in the number of dwellings accounted for in the WRMP planning over the Torbay Local Plan period. Therefore, policies should be implemented to limit per capita consumption to 110 l/h/d and encourage developers to consider implementing rainwater harvesting and greywater recycling measures as part of developments.

Land South of White Rock (Inglewood) is a large allocated site (373 dwellings) where water recycling could be considered for supplying non-potable uses to meet a 110 l/h/d policy target.

8.4.5 Growth area specific policy

The following water policy areas are recommended for development for this growth area:

- Development coming forward should be required to demonstrate available capacity at the WwTW and the associated sewer network with SWW prior to submitting planning applications. It is recommended that a Local Plan policy is developed requiring developers to undertake pre-planning engagement with SWW at the earliest opportunity to assess infrastructure capacity, and any specific requirements that may be needed to deliver the proposed development, which may include sustainable points of connection to the water supply and wastewater networks to minimise impacts on existing communities and the environment.
- An 80 l/h/d PCC target for new dwellings; this will support both sustainable water resource provision as well as assist with capacity issues at Brokenbury WwTW and limit impacts on CSOs.
- To enable CSO spills to be managed in the long-term, require all development in this growth area to prevent surface water generated from sites being discharged to the foul or combined sewer network.
- Require SuDS built to the updated national SuDS standards to attenuate surface water runoff for flood risk purposes and be expected to manage, and where possible improve water quality.
- Encourage developers to contribute to NbS for riparian management and provision of surface water attenuation.

8.5 Brixham

8.5.1 Wastewater treatment summary

Is there capacity at the WwTW for all new dwellings planned within the WwTW catchment	Yes for 450DPA scenario No for 940DPA scenario
Is there a WwTW solution proposed in the current investment period to 2030?	No – development coming forward before 2030 will need evidence agreed capacity with SWW
Is there a medium to long term WwTW solution proposed in the SWW Drainage and Wastewater Management Plan	No – no medium or long term plan proposed
Can a future permit be implemented in the future to protect water quality within Technically Achievable Limits?	Yes

8.5.2 Wastewater sewer capacity

The sewer network is largely combined and the Sewer Capacity Assessment highlighted that the number of CSOs is likely to increase when considering 300DPA, urban creep and climate change. Therefore, additional flow to the sewer network may limit the efficacy of future spill reduction measures. Consequently, surface water from new developments should be prevented from discharging to the combined network.

8.5.3 Catchment risk and opportunities

All potential growth sites are located within areas which drain to the Tor Bay transitional water body or Lyme Bay West transitional water body which have Good Ecological Status. Surface water runoff from these sites has the potential to influence water quality within these WFD water bodies. The underlying and Paignton and Brixham Groundwater body has Good Chemical and Quantitative Status. Surface water runoff also has the potential to impact upon the MCZ habitats, South Hams SAC, and the Brixham SWPA.

In terms of flood risk, the growth area is within a critical drainage area and some areas along the coast are at risk of tidal/fluvial flooding.

This highlights that developments in this growth area need to manage surface water through the provision of SuDS with a focus on managing water quality. There are limited opportunities for NbS due to the urbanised nature of Brixham. There are areas of riparian woodland potential for site Chiseldown Farm.

Development should aim to implement urban greening where possible to reduce runoff from impermeable surfaces. Developers should be encouraged to contribute towards NbS opportunities and incorporate similar NbS in their site as part of SuDS delivery.

8.5.4 Water supply

There are no surface water or groundwater abstractions available in Broadsands. Therefore, there is no scope for development to consider local sources of supply.

Paignton is located within the Roadford WRZ managed by SWW. Information provided by SWW indicates that there is a shortfall in the number of dwellings accounted for in the WRMP planning over the Torbay Local Plan period. Therefore, policies should be implemented to limit per capita consumption to 110 l/h/d and encourage developers to consider implementing rainwater harvesting and greywater recycling measures as part of developments.

8.5.5 Growth area specific policy

The following water policy areas are recommended for development for this growth area:

- Development coming forward should be required to demonstrate available capacity at the WwTW and the associated sewer network with SWW prior to submitting planning applications. It is recommended that a Local Plan policy is developed requiring developers to undertake pre-planning engagement with SWW at the earliest opportunity to assess infrastructure capacity, and any specific requirements that may be needed to deliver the proposed development, which may include sustainable points of connection to the water supply and wastewater networks to minimise impacts on existing communities and the environment.
- A n80 l/h/d PCC target for new dwellings; this will support both sustainable water resource provision as well as assist with capacity issues at Brokenbury WwTW and limit impacts on CSOs.
- To enable CSO spills to be managed in the long-term, require all development in this growth area to prevent surface water generated from sites being discharged to the foul or combined sewer network.
- Require SuDS built to the updated national SuDS standards to attenuate surface water runoff for flood risk purposes and be expected to manage, and where possible improve water quality.
- Encourage developers to contribute to NbS for riparian management and provision of surface water attenuation.

9. Recommendations

9.1 Introduction

Based on the assessments completed, the following policy recommendations are put forward to TC for consideration as part of the Local Plan development.

9.2 Per capita consumption – domestic

Due to the shortfall in the number of houses accounted for by SWW in terms of water supply, there is strong evidence that a stricter PCC policy for new development would significantly contribute to managing and maintaining a surplus of supply within the TC area. This is in keeping with Government plans to address water scarcity in response to the Environment Act 2021.

Additionally, the wastewater assessment has shown that proposed dwellings being restricted to a water use of 80 l/p/d would improve the available capacity at the Brokenbury WwTW and potentially remove the need for an improvement scheme to be implemented in the Plan period.

It is recommended that a policy is implemented requiring all dwellings within allocated sites within the Local Plan to meet a PCC target of 80 l/h/d. This WCS has set out evidence for why this target is applicable and how it can be achieved.

9.3 Management of surface and foul water discharge to the sewer system

All new developments to provide separate surface water drainage systems and incorporate SuDS in accordance with the updated national SuDS standards and good practice guidance. Require SuDS to attenuate surface water runoff for flood risk purposes and be expected to manage, and where possible improve water quality.

Surface water disposal routes should be considered in accordance with the surface water disposal hierarchy. No new surface water connections should be made to the foul or combined sewer system.

9.4 Confirmation of WwTW capacity

There is limited baseline wastewater treatment capacity at the Brokenbury WwTW catchment with no improvement plan proposed by SWW between 2025 – 2050, therefore it is recommended that a policy be implemented whereby developers must demonstrate they have confirmed with SWW that treatment capacity is available to serve the development at the point of anticipated connection, until such time as a WwTW improvement plan is in place. This is to enable SWW to serve developments once occupied without breaching WwTW discharge permit conditions and hence protect downstream water quality and connected water dependent habitats.

9.5 NFM / NbS

It is recommended that a policy be implemented whereby new developments must incorporate NFM / NbS where appropriate and feasible to reduce surface water runoff and flood risk, and where possible improve water quality. *The potential will be variable across the sites with highest potential likely on the larger sites and on the urban fringes. Further site specific assessment may be required to define policy and set expectations.*

9.6 Water quality

There is potential for additional growth to result in deterioration in water quality in receiving WFD water bodies and in turn impact on water dependent habitats (e.g. SSSI, SAC, MCZ), SWPAs and Bathing Waters in Torbay.

Developers should ensure, where possible, that discharges of surface water are designed to deliver water quality improvements including sediment loading reduction and saline infiltration reduction in the receiving watercourse or aquifer where possible to help meet the objectives of the WFD and ensure no deterioration to Protected Areas including Bathing Waters and SWPAs.

9.7 Further consultation

It is recommended that TC undertake further consultation as follows:

SWW

- Discussion around the implications of proposed development on existing infrastructure capacity and investment needed to accommodate the development, including any significant local network constraints that might impact on the ability to deliver. To include more detailed understanding of dependence on further investment and the planned timing. Also to clarify investment expected to be delivered as per the current business plan.
- Discussion around potential opportunities for development to contribute to investment, either through financial contributions or delivery as part of the development to consider how this may feed into policy.
- Details of growth forecasts used in the DWMP and WRMP, including timing, and any implications in relation to the numbers and trajectory being considered for the emerging Local Plan.
- Discussion around expectations for consultation and involvement as the Local Plan is developed and as developments subsequently come forward to manage future delivery risks.

Environment Agency and LLFA

- Discussion / confirmation of policy requirements for flood risk, with reference to the SFRA recommendations.
- Discussion around further work and potential opportunities for development to contribute to reduced risk, e.g. through catchment SuDS schemes, NFM or NbS opportunities to feed into policy requirements.
- Discussion around potential opportunities for development to contribute to investment, either through financial contributions or delivery as part of the development to consider how this may feed into policy.
- Discussion around expectations for consultation and involvement as the Local Plan is developed and as developments subsequently come forward to manage future delivery risks.

Appendix A - Policy and legislative drivers shaping the WCS

A.1 WFD surface water body status

Status	Description
High	Near natural conditions. No restriction on the beneficial uses of the water body. No impacts on amenity, wildlife or fisheries
Good	Slight change from natural conditions as a result of human activity. No restriction on the beneficial uses of the water body. No impact on amenity or fisheries. Protects all but the most sensitive wildlife.
Moderate	Moderate change from natural conditions as a result of human activity. Some restriction on the beneficial uses of the water body. No impact on amenity. Some impact on wildlife and fisheries.
Poor	Major change from natural conditions as a result of human activity. Some restrictions on the beneficial uses of the water body. Some impact on amenity. Moderate impact on wildlife and fisheries.
Bad	Severe change from natural conditions as a result of human activity. Significant restriction on the beneficial uses of the water body. Major impact on amenity. Major impact on wildlife and fisheries with many species not present.

A.2 Legislation

Directive/Legislation/Guidance	Description
The Conservation of Offshore Marine Habitats and Species Regulations 2017	Provides for the designation of Special Protection Areas.
Building Regulations Approved Document G – sanitation, hot water safety and water efficiency (March 2010)	The current edition covers the standards required for cold water supply, water efficiency, hot water supply and systems, sanitary conveniences and washing facilities, bathrooms and kitchens and food preparation areas.
Environment Act 1995	Sets out the role and responsibility of the Environment Agency.
Environment Act 2021	Provides a legal framework for environmental governance in the UK. Brings in measures for improvement of the environment in relation to waste, resource efficiency, air quality, water, nature and biodiversity, and conservation.
Environmental Protection Act 1990	Integrated Pollution Control (IPC) system for emissions to air, land and water.
Flood & Water Management Act 2010	The Flood and Water Management Act 2010 is the outcome of a thorough review of the responsibilities of regulators, local authorities, water companies and other stakeholders in the management of flood risk and the water industry in the UK. Its key features relevant to this WCS are: 1. To give the Environment Agency an overview of all flood and coastal erosion risk management and unitary and county councils the lead in managing the risk of all local floods. 2. To encourage the uptake of sustainable drainage systems by removing the automatic right to connect to sewers and providing for unitary and county councils to adopt SuDS for new developments and redevelopments. 3. To widen the list of uses of water that water companies can control during periods of water shortage and enable Government to add to and remove uses from the list. 4. To enable water and sewerage companies to operate concessionary schemes for community groups on surface water drainage charges. 5. To make it easier for water and sewerage companies to develop and implement social tariffs where companies consider there is a good cause to do so, and in light of guidance that will be issued by the Secretary of State following a full public consultation.
Future Water, February 2008	Sets the Government's vision for water in England to 2030. The strategy sets out an integrated approach to the sustainable management of all aspects of the water cycle, from rainfall and drainage, through to treatment and discharge, focusing on practical ways to achieve the vision to ensure sustainable use of water. The aim is to ensure sustainable delivery of water supplies and help improve the water environment for future generations.

Directive/Legislation/Guidance	Description
The Groundwater (Water Framework Directive) (England) Direction 2016	To protect groundwater against pollution by 'List 1 and 2' Dangerous Substances.
The Conservation of Habitats and Species Regulations 2017	To conserve the natural habitats and to conserve wild fauna and flora with the main aim to promote the maintenance of biodiversity taking account of social, economic, cultural and regional requirements. In relation to abstractions and discharges, can require changes to these through if they are impacting on designated European Sites. Also the legislation that provides for the designation of Special Areas of Conservation provides special protection to certain non-avian species and sets out the requirement for Appropriate Assessment of projects and plans likely to have a significant effect on an internationally designated wildlife site.
Land Drainage Act 1991	Sets out the statutory roles and responsibilities of key organisations such as Internal Drainage Boards, local authorities, the Environment Agency and Riparian owners with jurisdiction over watercourses and land drainage infrastructure.
National Planning Policy Framework	Planning policy in the UK is set by the National Planning Policy Framework (NPPF). NPPF advises local authorities and others on planning policy and operation of the planning system. A WCS helps to balance the requirements of various planning policy documents and ensure that land-use planning and water cycle infrastructure provision is sustainable.
Pollution Prevention and Control Act (PPCA) 1999	Implements the IPPC Directive. Replaces IPC with a Pollution Prevention and Control (PPC) system, which is similar but applies to a wider range of installations.
Ramsar Convention	Provides for the designation of wetlands of international importance
Urban Waste Water Treatment Directive (UWWTD)	This Directive concerns the collection, treatment and discharge of urban waste water and the treatment and discharge of waste water from certain industrial sectors. Its aim is to protect the environment from any adverse effects caused by the discharge of such waters.
Water Act 2003	Implements changes to the water abstraction management system and to regulatory arrangements to make water use more sustainable.
The Water Environment (Water Framework Directive) (England and Wales) Regulations 2017	The WFD, combines water quantity and water quality issues together. An integrated approach to the management of all freshwater bodies, groundwaters, estuaries and coastal waters at the river basin level has been adopted. The overall requirement of the directive is that all river basins must achieve 'Good ecological status' by 2015 or by 2027 if there are no grounds for derogation. The Environment Agency is the body responsible for the implementation of the WFD in the UK. The Environment Agency have been supported by UKTAG[37], an advisory body which has proposed water quality, ecology, water abstraction and river flow standards to be adopted in order to ensure that the water bodies in the UK (including groundwater) meet the required status[38]. Standards and water body classifications are published via River Management Plans (RBMP) the latest of which were completed in 2015.
Natural Environment & Rural Communities Act 2006	Covering Duties of public bodies – recognises that biodiversity is core to sustainable communities and that Public bodies have a statutory duty that states that "every public authority must, in exercising its functions, have regard, so far as is consistent with the proper exercise of those functions, to the purpose of conserving biodiversity.
Water Resources Act 1991	Protection of the quantity and quality of water resources and aquatic habitats. Parts have been amended by the Water Act 2003.
Wildlife & Countryside Act 1981 (as amended)	Legislation that provides for the protection and designation of SSSIs and specific protection for certain species of animal and plant among other provisions.

A.3 Strategies and plans

Category	Author	Document Name	Publication Date
Water Resources	South West Water	Drainage and Wastewater Management Plan	2023
Water Resources	South West Water	Draft Water Resources Management Plan	2023
Water Resources	West Country Water Resource	Draft Regional Water Resources Plan	2022

[37] The UKTAG (UK Technical Advisory Group) is a working group of experts drawn from environment and conservation agencies. It was formed to provide technical advice to the UK's government administrations and its own member agencies. The UKTAG also includes representatives from the Republic of Ireland.
[38] UK Environmental Standards and Conditions (Phase I) Final Report, April 2008, UK Technical Advisory Group on the Water Framework Directive.

Category	Author	Document Name	Publication Date
Flood Risk	Torbay Council	Torbay Local Flood Risk Management Strategy	2015
Water Resources/Flood Risk	Torbay Council	Green Infrastructure Delivery Plan	2011

A.4 Torbay Council Local Plan full policies

ER1 Flood Risk

"Development must be safe for its lifetime, taking account of its future use, function and government projections of how the risk of flooding may change in response to climate change. The sequential approach, as outlined in the National Planning Policy Framework, must be used to guide new development towards sustainable locations, giving priority to sites with the lowest risk of flooding and taking account of the vulnerability of the proposed land uses. Areas subject to flood risk are shown on the Policies Map.

Development proposals will be expected to maintain or enhance the prevailing water flow regime on-site, including an allowance for climate change, and ensure the risk of flooding is not increased elsewhere. Where development is necessary in areas at risk of flooding it should be laid out and designed to ensure buildings and their surroundings are appropriately resistant and resilient to all forms of flooding, would be safe and would not increase the risk of flooding to third parties. Mitigation measures such as Sustainable Drainage Systems (SUDS), Water Sensitive Urban Design (WSUD) and water storage areas will be required to restrict site discharge rates, alleviate downstream flood risk, prevent increased discharge from Ilsham Combined Sewer Oufall (CSO) during flood events and encourage biodiversity.

Proposals should have regard to the Council's Local Flood Risk Management Strategy and comply with the requirements of any subsequent Action Plan. In this context, the Council will produce a Supplementary Planning Document setting out detailed guidance on the use and application of WSUDS and SUDS.

Development that contributes directly to downstream flooding and increased discharge from Ilsham CSO during flood events will not be permitted until the appropriate flood protection measures referred to above are put in place. Developers will be required to contribute to these works as appropriate (see Policy SS7 'Infrastructure, phasing and delivery of development').

SUDS should seek to maximise benefits for amenity, water quality, recreation and biodiversity and take account of the vulnerability and importance of existing ecological resources. A financial contribution may also be requested for capital improvement works to the existing drainage infrastructure.

Torbay has now been designated as a Critical Drainage Area and as a consequence all developments will require a basic Flood Risk Assessment (FRA). A more detailed FRA will be required for proposals with a site area of 1 hectare or greater within Flood Zone 1, including where they impact on catchments draining into Flood Zones 2 and 3, and for all new development within Flood Zones 2 and 3. A Flood Risk Assessment will also be required for development close to seafronts within Flood Zone 1 where there may be a risk of flooding due to wave action. Development of basement accommodation, including changes of use or basement parking will not be permitted where there is danger of inundation and consequent risk to life.

On sites which benefit from existing flood defence schemes, consideration should be given to how the development will be safe and satisfactorily defended for the lifetime of the development, having regard to the future maintenance, modifications and enhancements that will be required to retain the existing level of protection. A financial contribution towards flood defence works may be requested by the Council. Development will be resisted where this requires disproportionate costs for flood defence works, or generates substantial obligations for the public sector.

Development must not result in the loss of access to watercourses, or flood defence assets, for maintenance, clearance, repair or replacement.

Proposals which provide functional improvements to a floodplain, open up culverts or restore the natural characteristics of catchments will be promoted and encouraged, particularly where this reduces flood risk, improves water quality, maintains water resources, enhances biodiversity, or produces other benefits, such as improved amenity or provision for recreation."

ER2 Water Management

"Development proposals must:

1. Provide for adequate water supplies and the efficient use of water including its re-use and recycling;

2. Avoid harm to surface waters (including rivers and coastal waters), sensitive water-reliant habitats and species and sites protected under European legislation, and any adverse impacts on the quality and quantity of groundwater. Regard should be had to the cumulative effects of developments;

3. Prepare and submit, as part of a planning application, Pollution Prevention Plans where there is a significant risk of adverse effects on aquatic ecosystems;

4. Provide appropriate sewage disposal systems with separate foul and surface water, and particularly through sustainable drainage measures, reduce water being discharged into shared sewers (see also Policy W5 'Waste water disposal'); and

5. Deliver appropriate mitigation measures in accordance with the Government's current Water Framework Directive objectives.

All development should seek to minimise the generation of increased run-off, having regard to the drainage hierarchy, whereby surface water will discharge to one of the following, listed in order of priority:

i. An adequate infiltration system (for example swales, soakaways, infiltration basins, filter drains, rain gardens), or where that is not reasonably practicable;

ii. A main river or water course, or where that is not reasonably practicable

iii. A surface water sewer or highway drain, or in the last resort where none of the above are reasonably practicable;

iv. To a combined (foul and surface water) sewer, where discharge is controlled to be at greenfield discharge rates.

In Torquay, where development has not met criteria i) to iv) listed above, it will be subject to an individual Habitats Regulations Appropriate Assessment.

Development may need to be phased in accordance with the provision of adequate waterrelated infrastructure and a financial contribution, or works in kind, may be required in order for development to proceed. This would include funding to ensure the provision of any necessary additional surface water management schemes.

PW5 Waste water disposal

"New, enhanced or extended waste water treatment facilities will be supported where such proposals aim to improve the quality of discharged water or reduce the environmental impact of the operation of the waste water treatment facility.

Development proposals will be required to demonstrate that the proposal can be delivered and operated without giving rise to unacceptable impacts on water treatment and disposal, or deterioration in the service received by residents and businesses. In considering minor development proposals, the Council will have regard to the in-combination impact of such developments and their effect on local capacity or flows.

Proposals for housing developments, particularly in allocations relating to Policies SDT1, SDP1, SDB1 and related Future Growth Areas, will not be permitted if South West Water, Natural England or the Environment Agency confirm that:

1. Waste water treatment works or other sewerage infrastructure serving these developments have insufficient capacity to accommodate the additional development, without increasing the risk of overflows of untreated sewage into the environment; or

2. There would be an increase in the levels of pollutants or spills (see definition below) likely to have an adverse effect on the integrity of the Lyme Bay and Torbay Marine candidate Special Area of Conservation, due to insufficient capacity within the combined sewer system and/or of treatment works; or

3. The proposal would otherwise increase the risk of overflows of untreated sewage into the environment.

Appropriate measures to reduce the impact of development on the sewerage system, such as natural or sustainable drainage and water conservation measures, will be required, proportionate to the scale and nature of development.

In addition, development of previously developed land must be in accordance with the hierarchy set out in Policy ER2 to ensure that development schemes do not exacerbate sewer flooding and Combined Sewer Outfall (CSO) spills. This will apply in particular, to development that discharges into Hope's Nose CSO in Torquay.

A Health Impact Assessment will be required for new or extended waste water treatment facilities."

PC3 Coastal change management

The Council will support measures that are compatible with or actively support coastal change management. The Coastal Change Management Area is shown on the Policies Map.

Development in this Area, or reliant upon services within it, will be considered in the context of the Shoreline Management Plan and should meet the following criteria:

1. It does not adversely affect the natural and historic environment of the area, including geodiversity, maritime archaeology, marine ecology and the integrity of sites protected under European legislation;

2. It is appropriate for a coastal location and would not adversely affect or conflict with those aspects of the local economy which are dependent on the sea and a coastal location;

3. It will be safe through its planned lifetime without increasing risk to people or property and does not create a need for significant further coastal protection and sea defence works in undeveloped or developed coastal locations, or inhibit the ability to access, maintain and/ or improve existing sea defence or coastal management assets;

4. It does not adversely affect sites or areas at risk from flooding, erosion and land instability arising from maritime influences;

5. In the exceptional circumstances where the proposal requires a coastal location, the developed coast will be the preferred area for development, provided that such schemes contribute to its physical regeneration and environmental enhancement; and

6. It is compatible with the character and landscape protection policies affecting the coast, does not compromise coastal routes and where practical enhances public access.

Temporary planning permissions and time-limiting conditions will be used where necessary, including to secure removal of development prior to the anticipated impact of coastal change.

S106 Planning Obligations will be required from development in areas where coastal defences need to be provided and/or maintained to facilitate development.

Appendix B – WwTW capacity assessment methodologies

An increase in residential and employment growth will have a corresponding increase in the volume and flow of wastewater generated within the study area, therefore it is essential to consider the capacity of the WwTW in the study area to accept this additional wastewater flow. WwTW capacity is considered in terms of flow capacity and environmental capacity.

Determining flow capacity

The flow (or treatment headroom) capacity of a WwTW is defined as the volume of additional flow that a WwTW can treat before it would exceed the volume of discharge it is allowed to discharge within the conditions of its discharge permit. A key condition set in each permit issued is a maximum amount of flow that a WwTW can discharge in a day. This is measured using a metric called 'Dry Weather Flow' (DWF).

WwTWs are required to monitor the flow discharged from each WwTW and then calculate this as a 'measured DWF' value to demonstrate it is in compliance with the maximum flow condition in the permit (called 'permitted DWF'). The permitted DWF value therefore dictates how much capacity a WwTW has based on the difference between what DWF it is actually discharging (measured DWF) and how much it is allowed (permitted DWF) to discharge per day. The difference between measured and permitted DWF can be calculated as a flow capacity (in m3/d), and also converted into a 'dwelling capacity' by calculating how much flow each new dwelling would be expected to generate on average.

For the dwelling capacity assessment, the permitted DWF for each WwTW in the council's area was provided by South West Water, as well as the measured flow (2021 – 2023) for each WwTW. For the purposes of this assessment, the measured Q_{80} flow has been used to represent measured DWF.

To convert WwTW DWF capacity (measured as flow capacity) into dwelling capacity relies on assumptions for the future occupancy rate of new dwellings and assumed water consumption by occupiers (per capita consumption, or PCC) of new dwellings to determine how much future wastewater flow will be generated. The future occupancy rate estimate used in the assessment was provided taken from SWW WRMP. Data regarding the future water consumption was based on emerging policy within the Local Plan related to PCC limits.

Using the consumption per new domestic property values, the future occupancy rate and allowing for infiltration, the wastewater flow per new property was calculated. The current DWF capacity was estimated using the permitted DWF and the measured Q_{80} flow for each of the WwTWs and then the dwelling capacity was calculated using the calculated wastewater flow per new property.

Environmental capacity

Environmental capacity is defined in this WCS as the water quality needed in the receiving waterbodies to maintain the current (and future required) conditions of aquatic environments. To determine whether growth has the potential to result in water quality impacts on the receiving waterbody (tidal English Channel), a load standstill calculation was undertaken using Microsoft Excel. This used estimates of current measured flow at the WwTW (Q80) to determine load amounts based on current permitted conditions for each quality parameter. These load amounts were then compared to the load amounts that would occur with the same quality conditions applied but for the calculated WwTW flow once growth had been accounted for. The goal seek took in Excel was then used to adjust the future quality conditions required for each parameter in order to reduce future load amounts back to the load amounts calculated.

Where the quality conditions would need to be less than the technically achievable limit, then a new solution was deemed to be required.

Assumptions and input data

Several key assumptions were used in the assessments as follows:

- The wastewater generation per new household was based on an assumed Occupancy Rate (OR) of 2 people per house and an average consumption of 110 l/h/d).
- Employment numbers are uncertain, therefore an allowance for future employment has been based on a 10% increase in water demand per household.
- The dwelling capacity assessment requires an estimate of water which would enter the drainage network via groundwater or water in the soil (called 'infiltration') as this uses available treatment capacity. A global assumption has been applied whereby a percentage of the water used by new dwellings would be added to as infiltration once in the sewer network to allow for this aspect. The infiltration percentage was set to 10% of water used based on information provided by SWW.
- The WwTW current/measured discharge flows were taken as the Q80 of measured flow to give the DWF assumption. Measured flows were provided by SWW in 2024 (using the 3 years of data 2021 to 2023). Future discharge flows at the WwTW were calculated by adding the volume of additional wastewater generated by new dwellings and employment (using an OR of 2 and a consumption value of 110l/h/d multiplied by 1.20[39]) to the current permitted DWF value.
- The WFD 'no deterioration' target for the WwTW was the current Status for each water quality element of the receiving water body, based on the latest Status from the Catchment Data Explorer.

[39] 10% for employment, and 10% for infiltration

Appendix C - Report figures

Figure 1 Study Area and Growth

Figure 2 WFD Surface Water Body Catchments

Figure 3 WFD Surface Waterbodies – Ecological Status

Figure 4 WFD Surface Waterbodies – Physico-Chemical Status

Figure 5 Bedrock Geology

Figure 6 Superficial Geology

Figure 7 Source Protection Zones

Figure 8 WFD Groundwater Bodies – Chemical Status

Figure 9 WFD Groundwater Bodies – Quantitative Status

Figure 10 Water Dependent Habitats

Figure 11 Designated Bathing Waters and Shellfish Water Protected Areas

Figure 12 Water Availability Abstraction Licensing

Figure 13 Wastewater Assets

Figure 14 Nature Based Solutions Opportunities

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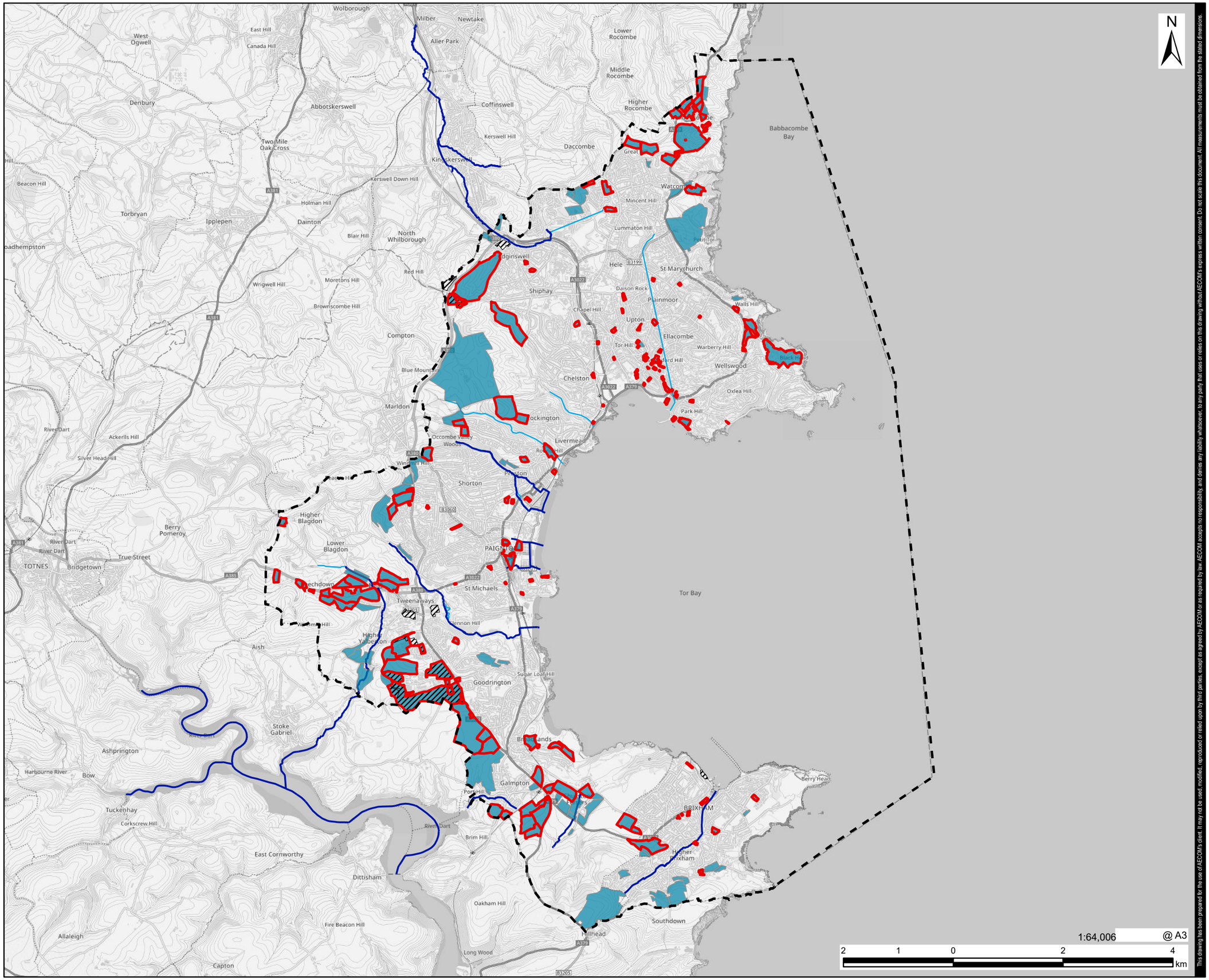

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LEGEND

- Torbay Council Boundary
- Employment Sites
- 450DPA
- Government Standard (940DPA)

NOTES

This figure shows the development sites within both the 450DPA as well as the Government Standard (940DPA) scenarios. Refer to the report for more detail on the scenarios. Sites as provided by Torbay Council.

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WCS REPORT

PROJECT NUMBER

60747538

FIGURE TITLE

Study Area and Growth

FIGURE NUMBER

Figure 1

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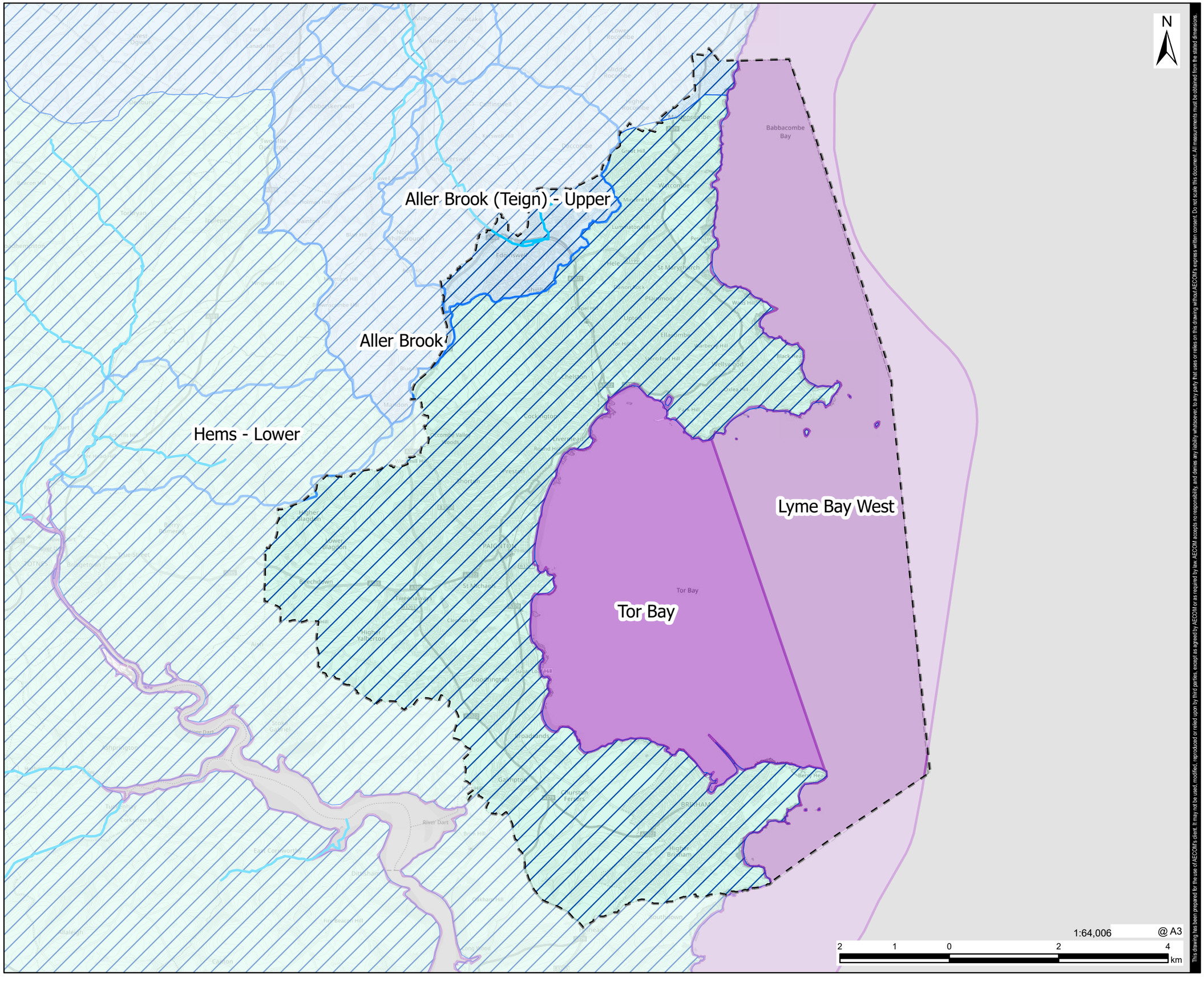

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LEGEND

- Torbay Council Boundary
- Devon South Management Catchment
- Operational Catchment
  - Dart Start Bay and Torbay
  - Teign
- Surface Water Body Catchment
- Transitional Catchment
  - Lyme Bay West
  - Tor Bay
- Surface Water Bodies

NOTES

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FIGURE TITLE

WFD Surface Water Body Catchments

FIGURE NUMBER

Figure 2

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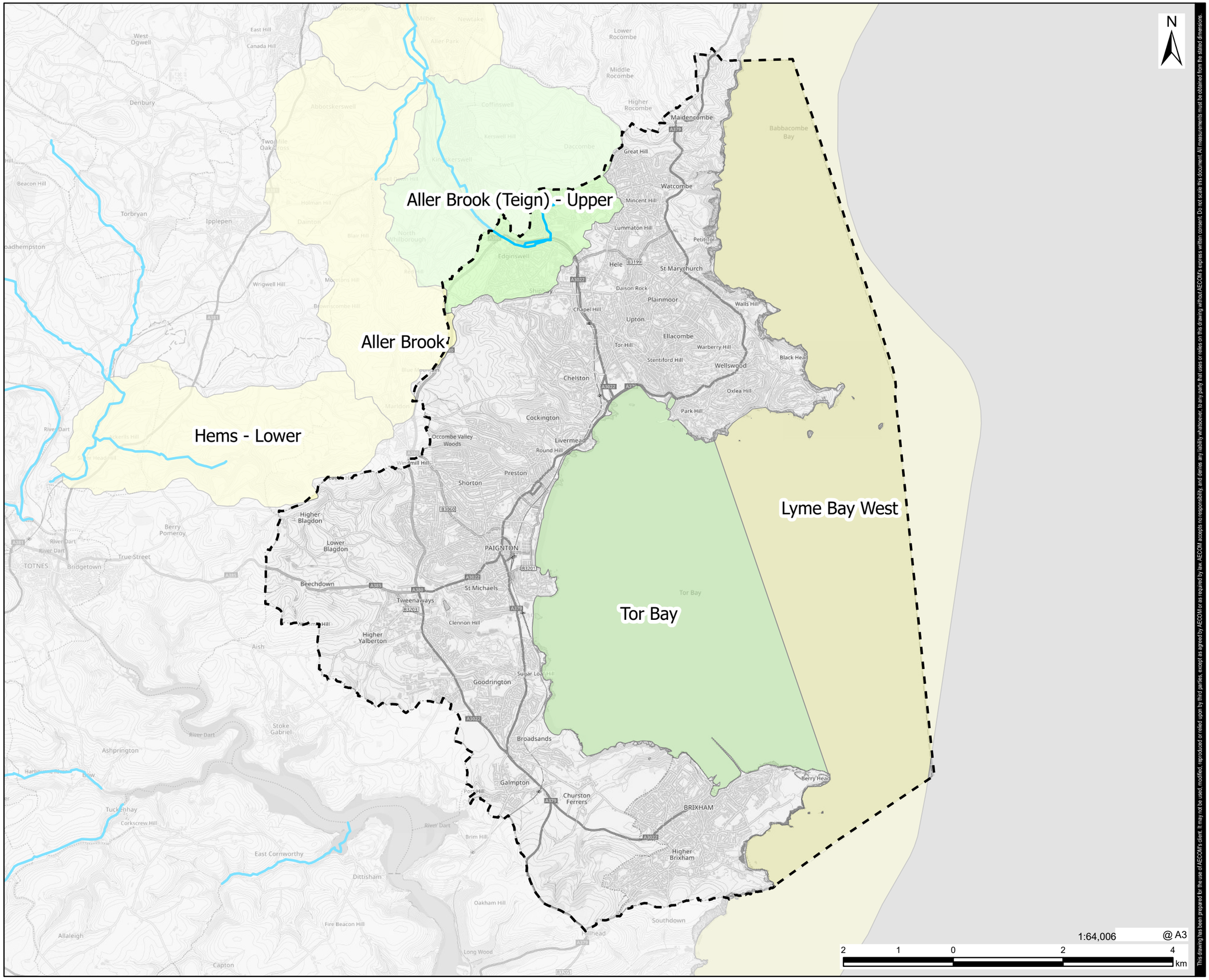

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LEGEND

- Torbay Council Boundary

Ecological Status

- HIGH
- GOOD
- MODERATE
- BAD
- POOR

NOTES

ISSUE PURPOSE

WCS REPORT

PROJECT NUMBER

60747538

FIGURE TITLE

Ecological Status of WFD Surface Water Body Catchments

FIGURE NUMBER

Figure 3

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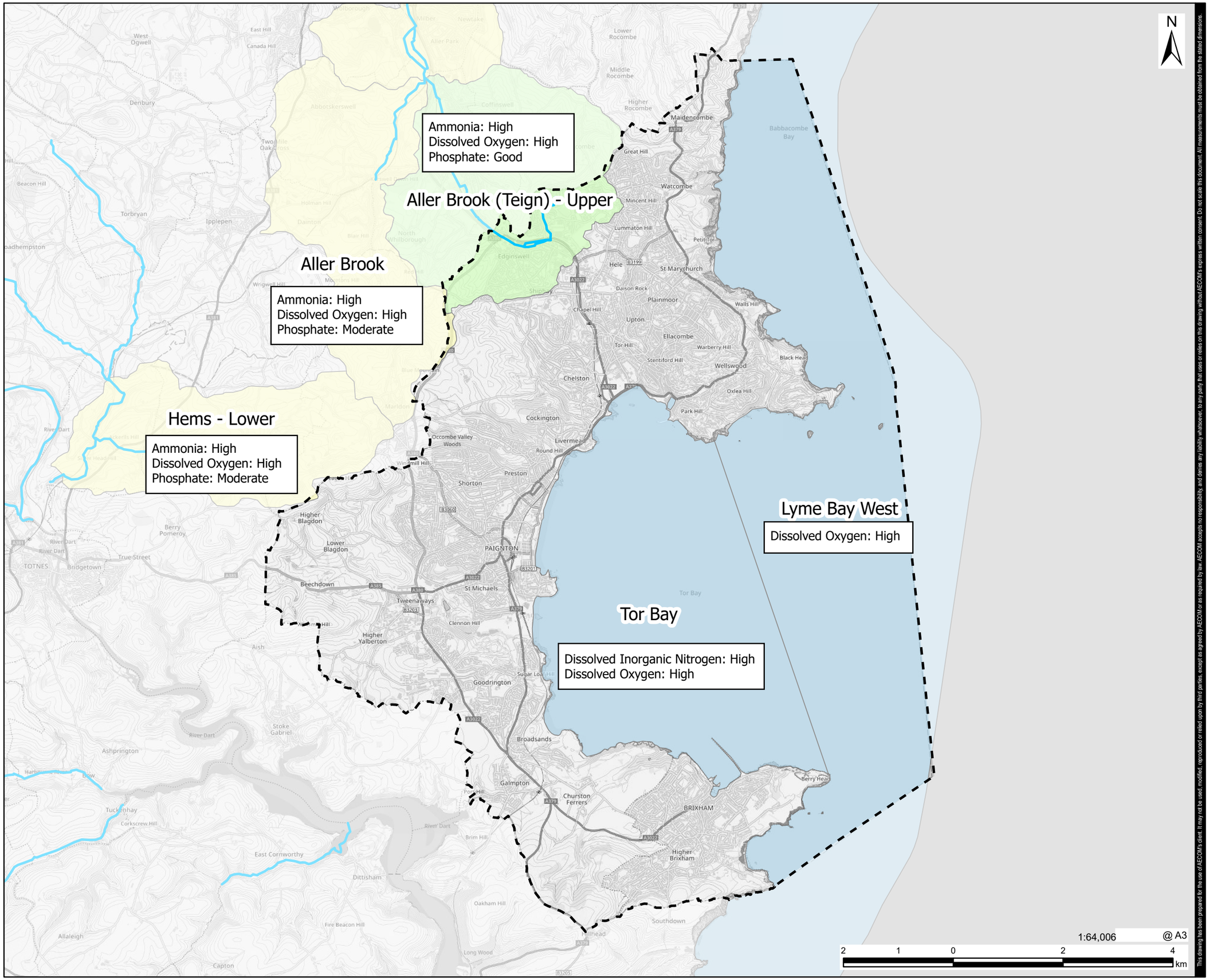

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LEGEND

Torbay Council Boundary

Legend

Physico-Chemical Status

- HIGH
- GOOD
- MODERATE
- BAD
- POOR

NOTES

ISSUE PURPOSE

WCS REPORT

PROJECT NUMBER

60747538

FIGURE TITLE

Physico-chemical Status of WFD Surface Water Body Catchments

FIGURE NUMBER

Figure 4

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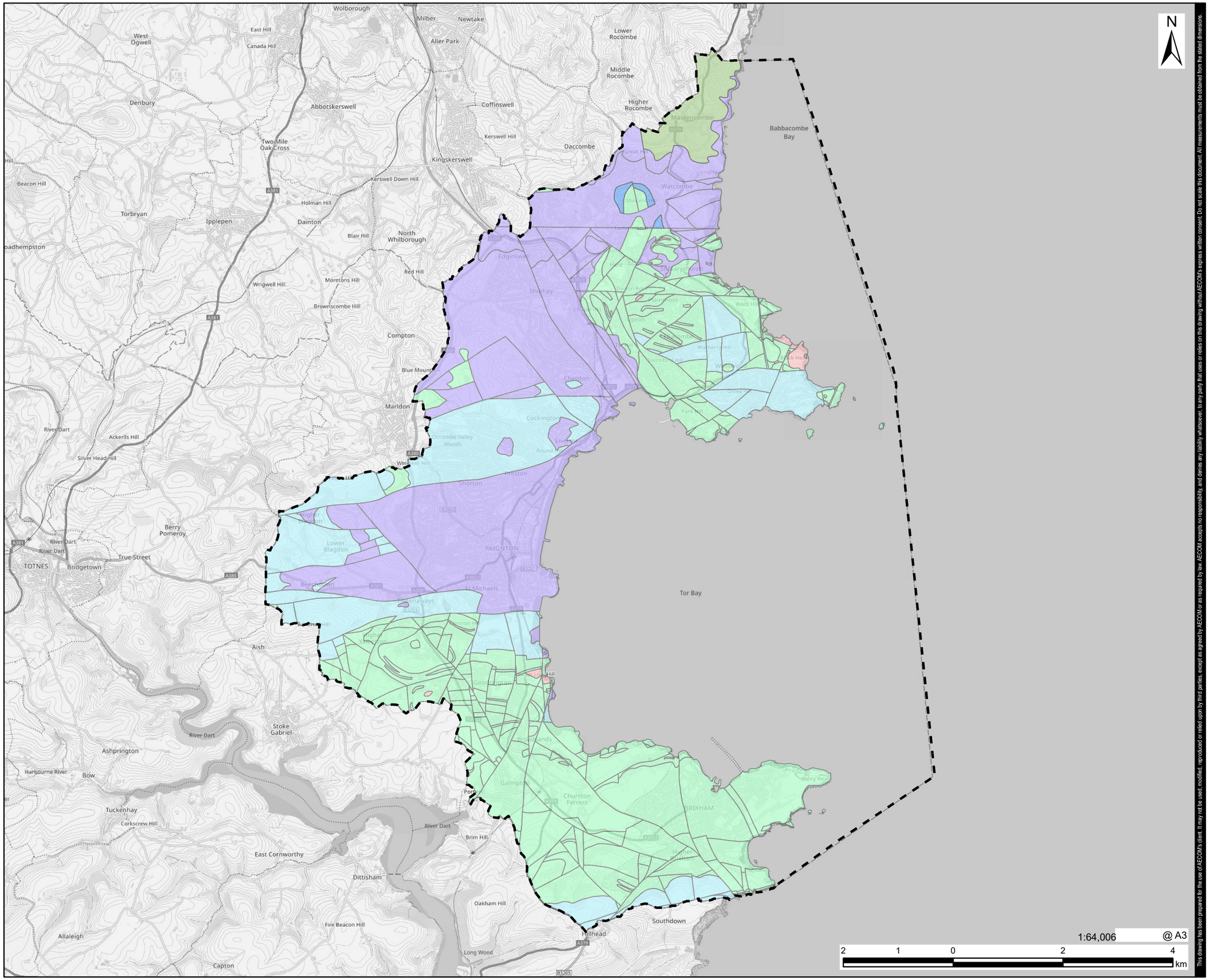

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LEGEND

- Torbay Council Boundary

Bedrock Geology

- EXETER GROUP
- MEADFOOT GROUP
- IGNEOUS INTRUSION
- TORBAY GROUP
- HEAVITREE AND ALPHINGTON BRECCIAS
- WHITEWAY SLATE FORMATION

NOTES

The Exeter Group comprises of the following: Torre Breccia Formation, Corbyn's Head Member, Watcombe Breccia Formation, Petit Tor Breccia Member, Oddicombe Breccia Formation

The Meadfoot Group comprises of the following: Bovisand Formation, Staddon Formation, Meadfoot Group

The Torbay Group comprises of the following: Dittisham Member, Ashprington Volcanic Formation, Sharkham Point Member, Greenway Tuff Member, St Mary's Bay Member, Nordon Formation, Berry Head Member, Brixham Limestone Formation, Churston Member, Saltern Cove Formation, Goodrington Member, Marldon Limestone Member, Daddyhole Member, Torquay Limestone Formation, Walls Hill Member, Blair Hill Tuff Member, East Ogwell Limestone Formation, Bourton Limestone Member, Barton Limestone Member.

ISSUE PURPOSE

WCS REPORT

PROJECT NUMBER

60747538

FIGURE TITLE

Bedrock Geology

FIGURE NUMBER

Figure 5

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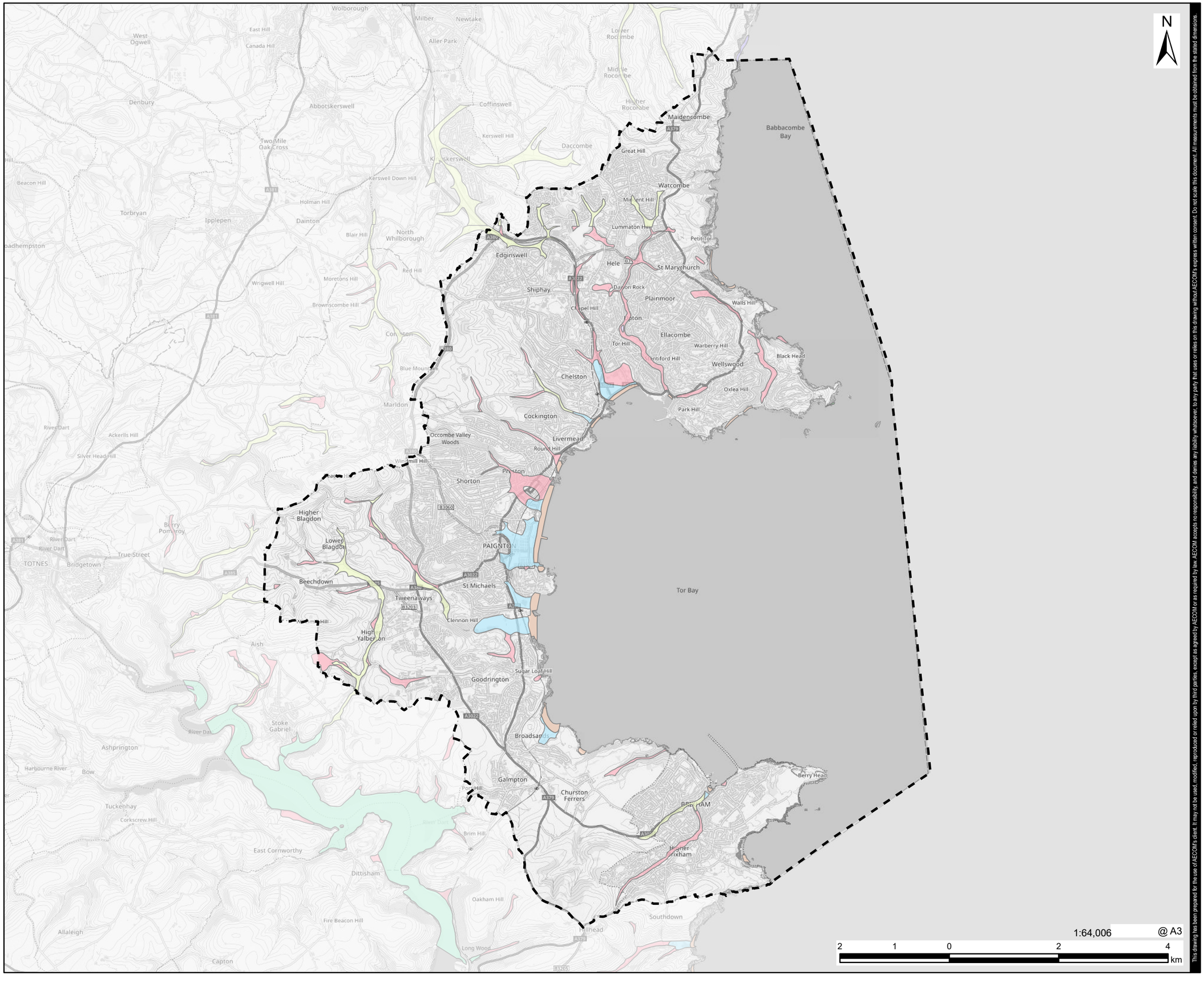

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LEGEND

- Torbay Council Boundary

Superficial Geology

- ALLUVIUM
- BEACH AND TIDAL FLAT DEPOSITS (UNDIFFERENTIATED)
- HEAD (UNDIFFERENTIATED)
- MARINE AND COASTAL ZONE DEPOSITS (UNDIFFERENTIATED)
- RAISED MARINE BEACH DEPOSITS
- SALTMARSH DEPOSITS
- SUPERFICIAL DEPOSITS NOT MAPPED [FOR DIGITAL MAP USE ONLY]
- SUPRATIDAL DEPOSITS (UNDIFFERENTIATED)
- TIDAL RIVER OR CREEK DEPOSITS

NOTES

ISSUE PURPOSE

WCS REPORT

PROJECT NUMBER

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FIGURE TITLE

Superficial Deposits

FIGURE NUMBER

Figure 6

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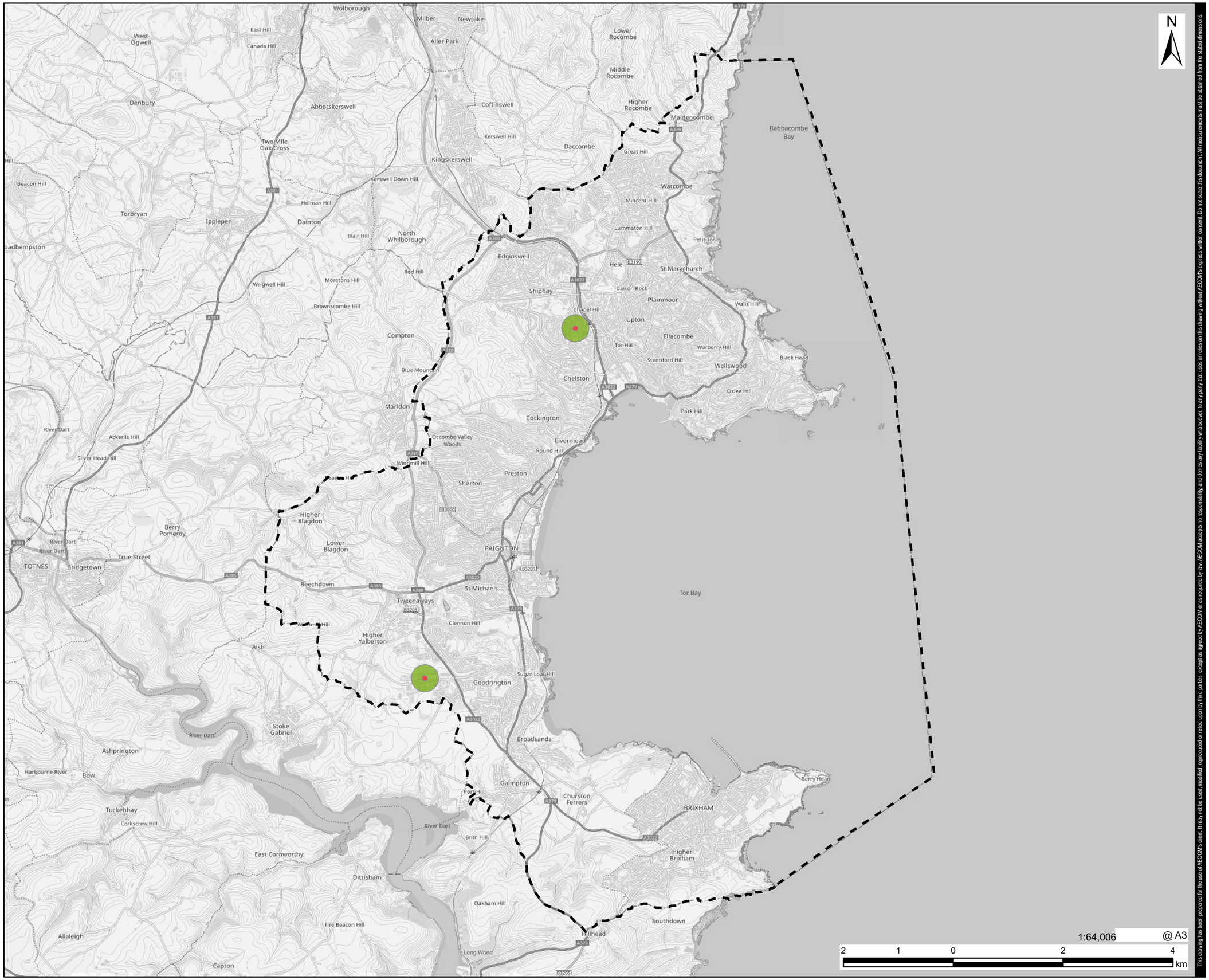

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LEGEND

- Torbay Council Boundary

Source Protection Zone

- Zone II - Outer Protection Zone
- Zone I - Inner Protection Zone

NOTES

ISSUE PURPOSE

WCS REPORT

PROJECT NUMBER

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FIGURE TITLE

Source Protection Zones

FIGURE NUMBER

Figure 7

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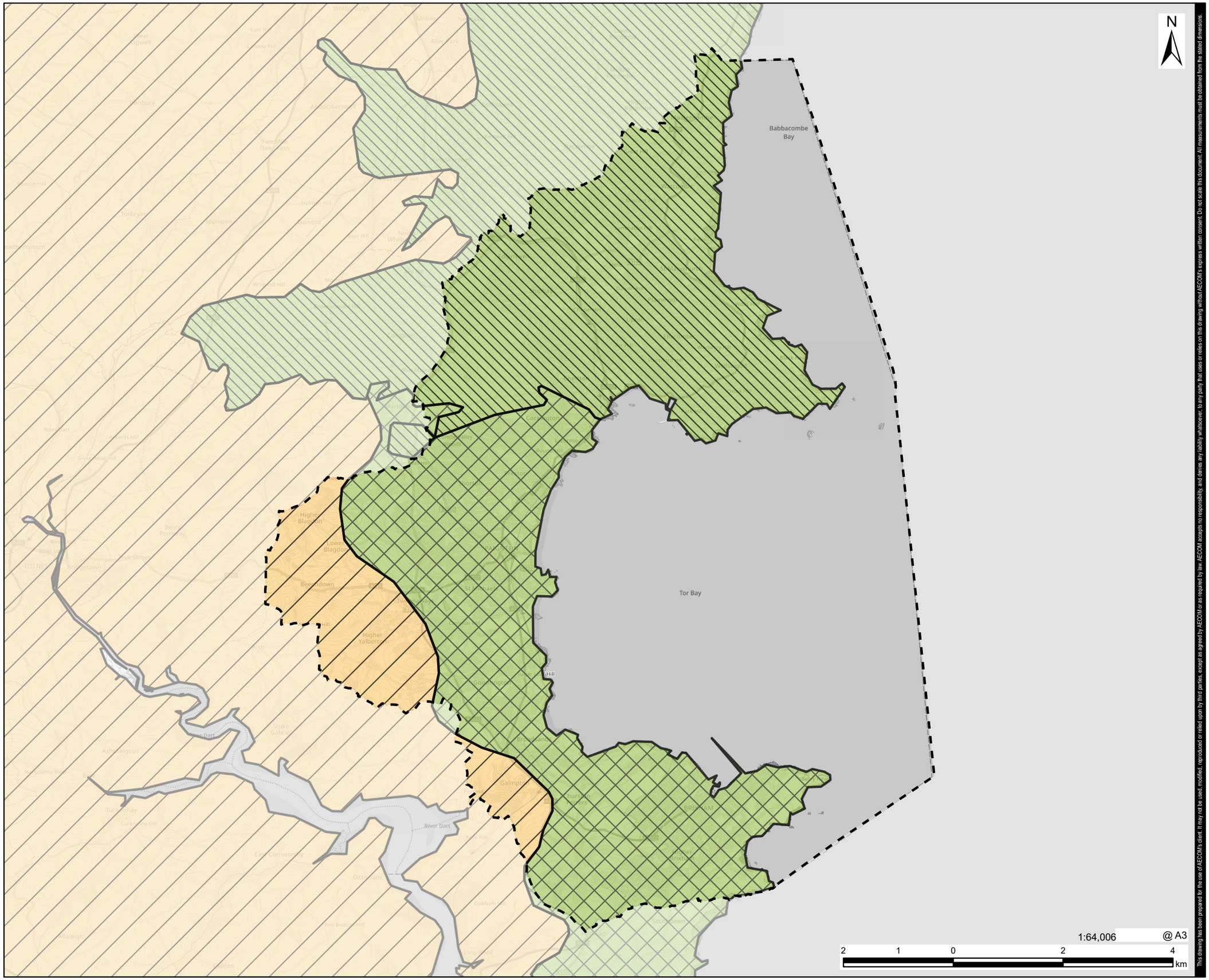

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LEGEND

- Torbay Council Boundary
- Teign Groundwater Body
- Paignton Brixham Groundwater Body
- Torquay Groundwater Body

Chemical Status

- Good
- Poor

NOTES

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ISSUE PURPOSE

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FIGURE TITLE

Chemical Status of WFD Groundwater Body Catchments

FIGURE NUMBER

Figure 8

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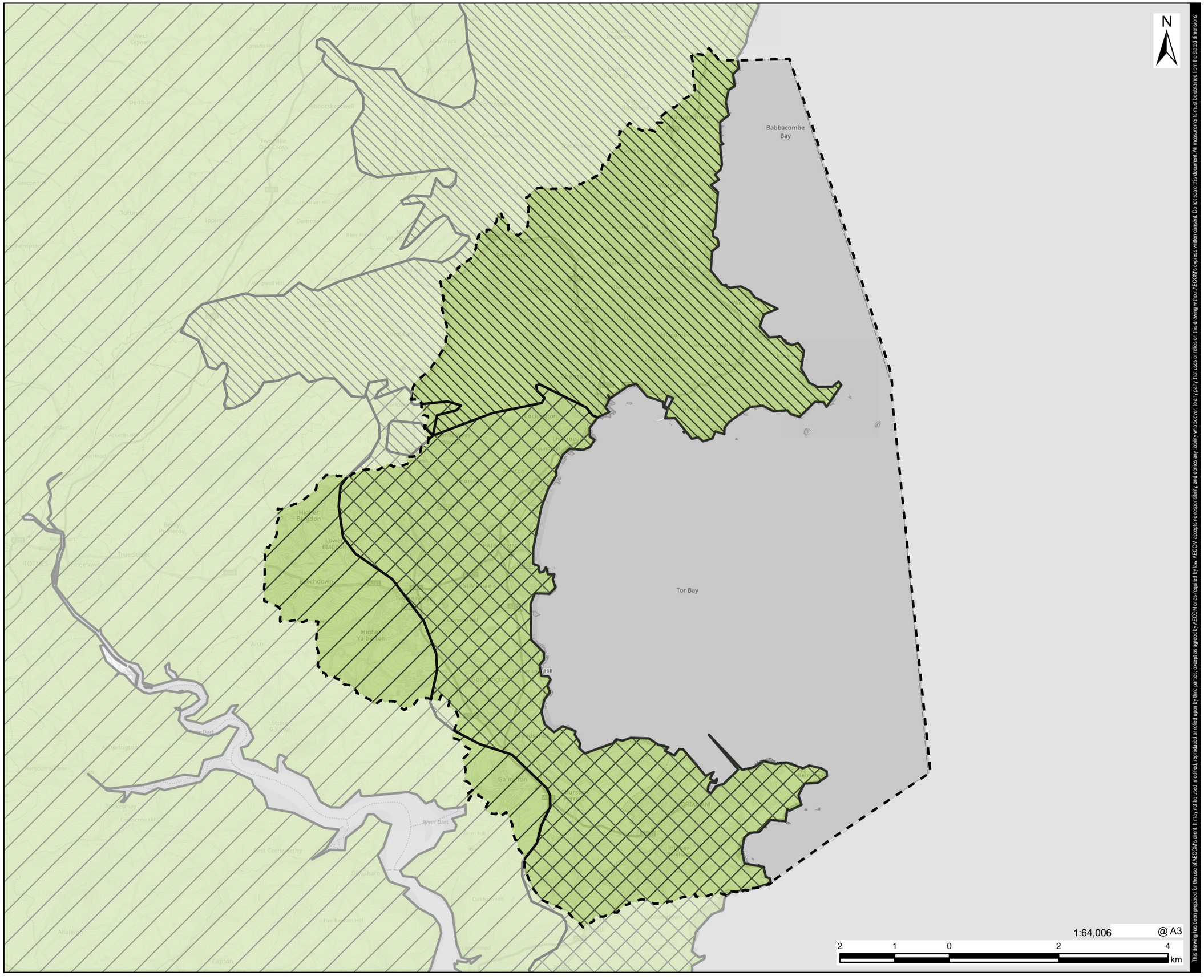

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LEGEND

- Torbay Council Boundary
- Teign Groundwater Body
- Paignton Brixham Groundwater Body
- Torquay Groundwater Body

Quantitative Status

- Good
- Poor

NOTES

ISSUE PURPOSE

WCS REPORT

PROJECT NUMBER

60747538

FIGURE TITLE

Quantitative Status of WFD Groundwater Body Catchments

FIGURE NUMBER

Figure 9

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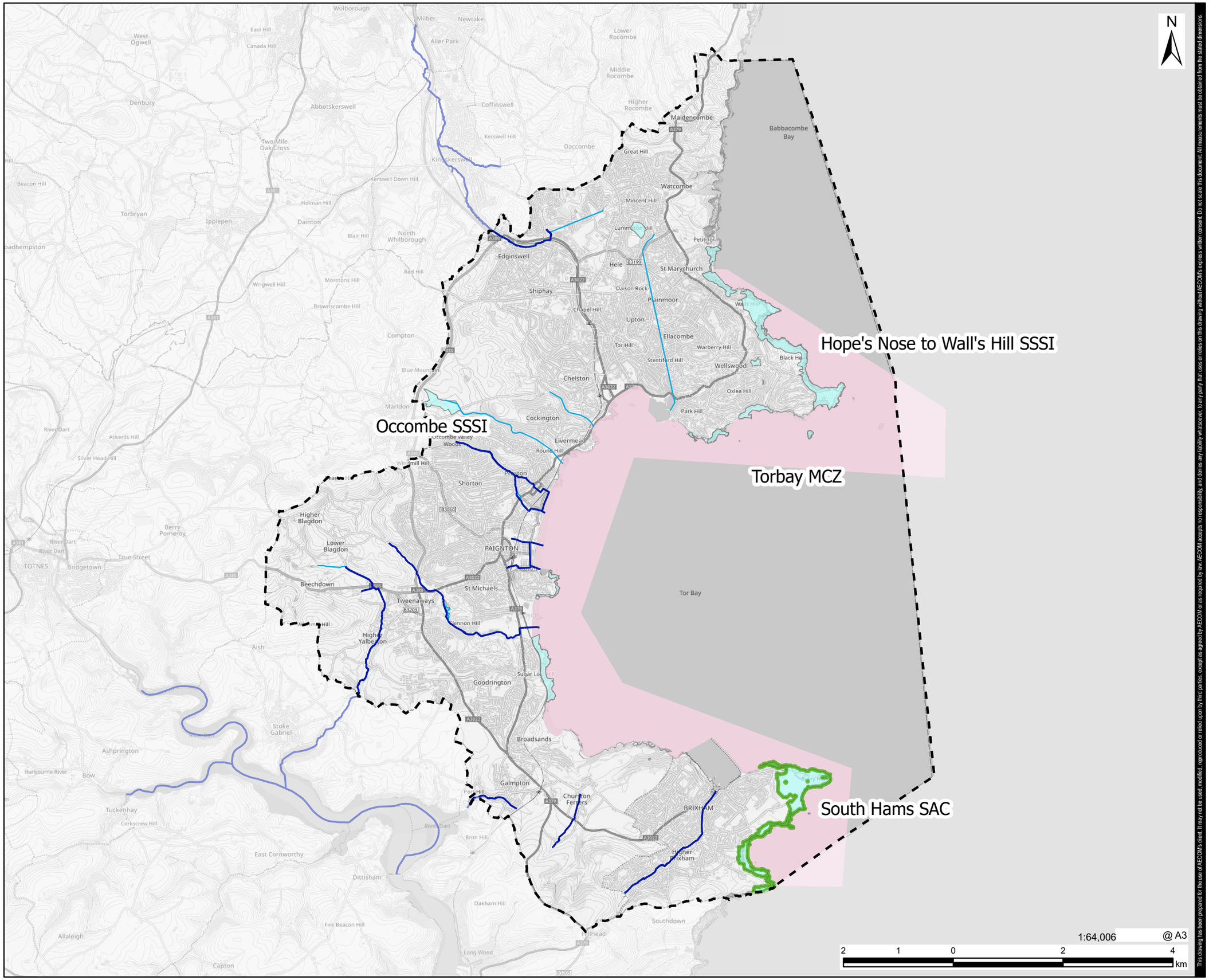

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LEGEND

- Torbay Council Boundary
- Main River
- Ordinary Watercourse
- South Hams Special Area of Conservation
- Site of Special Scientific Interest
- Torbay Marine Conservation Zone

NOTES

ISSUE PURPOSE

WCS REPORT

PROJECT NUMBER

60747538

FIGURE TITLE

Water Dependent Habitats

FIGURE NUMBER

Figure 10

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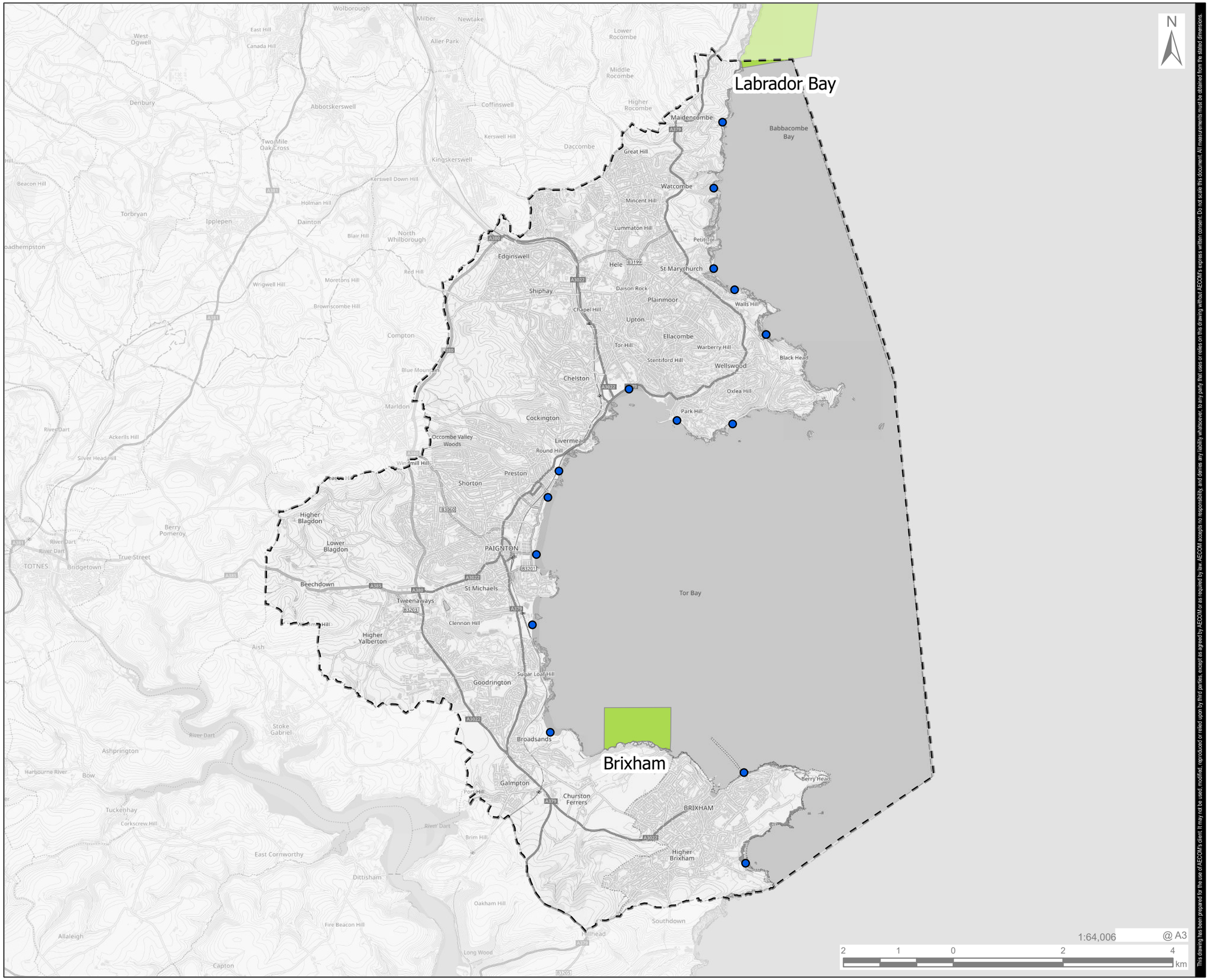

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LEGEND

- Torbay Council Boundary
- WFD Shellfish Water Protected Areas
- Bathing Waters Monitoring Locations

NOTES

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PROJECT NUMBER

60747538

FIGURE TITLE

Designated Bathing Waters and Shellfish Water Protected Areas

FIGURE NUMBER

Figure 11

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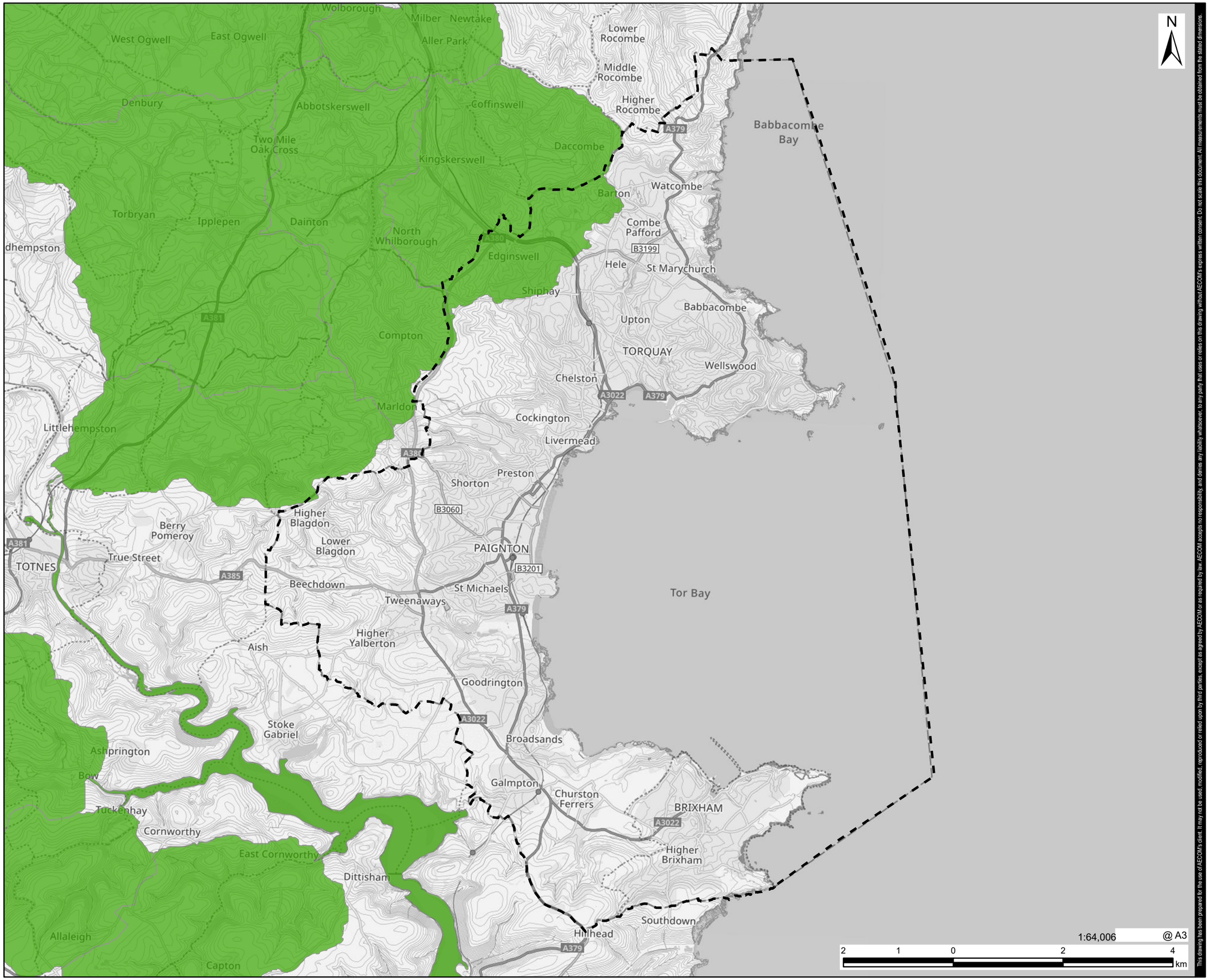

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LEGEND

- Torbay Council Boundary
- Water available for licensing
- Water not available for licensing
- Restricted water available for licensing

NOTES

ISSUE PURPOSE

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PROJECT NUMBER

60747538

FIGURE TITLE

Water Availability Abstraction Licensing

FIGURE NUMBER

Figure 12

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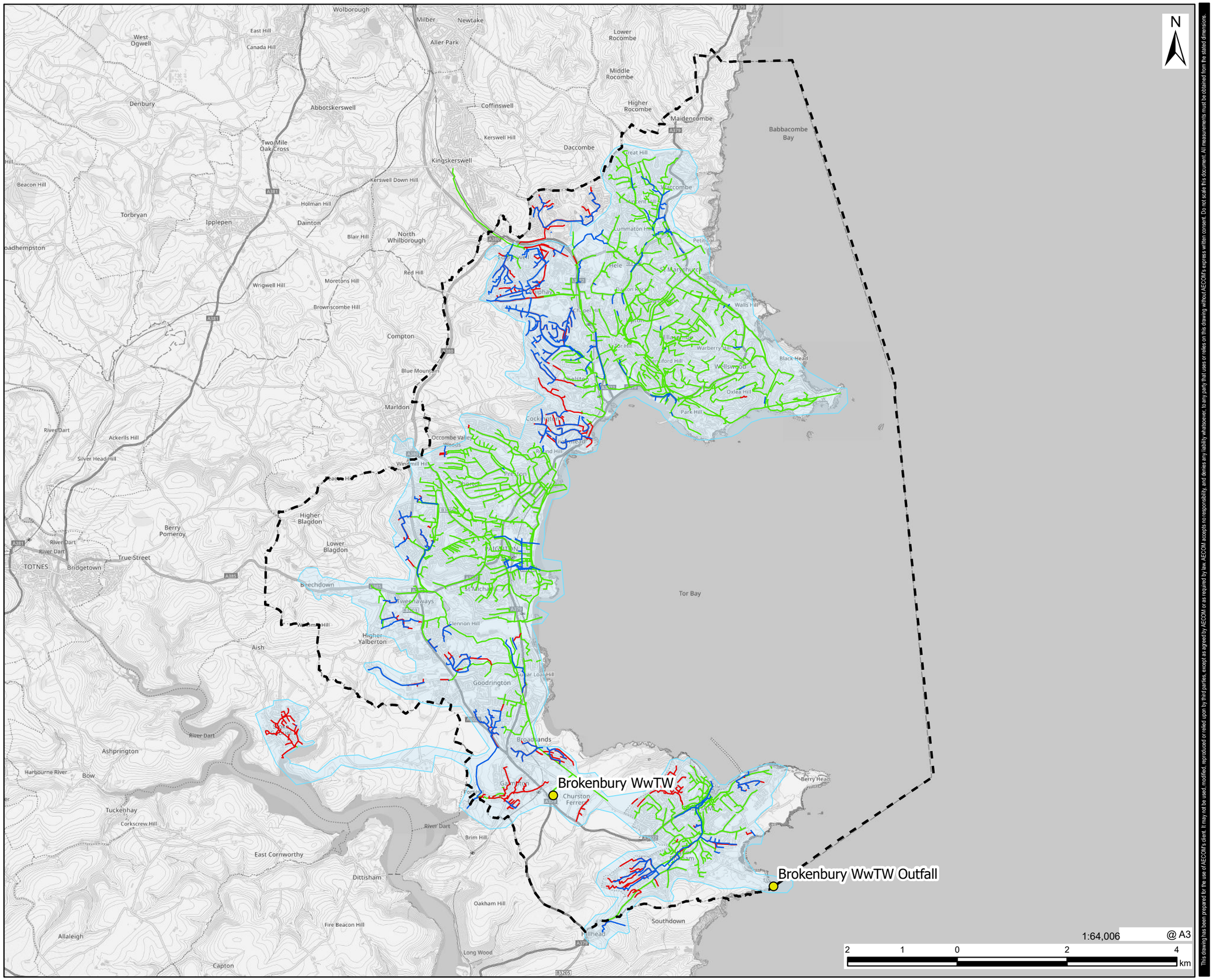

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LEGEND

- Torbay Council Boundary
- Brokenbury WwTW Catchment

Sewer By Purpose

- Foul
- Surface Water
- Combined

NOTES

Sewer network as provided by Torbay Council

ISSUE PURPOSE

WCS REPORT

PROJECT NUMBER

60747538

FIGURE TITLE

Wastewater Assets

FIGURE NUMBER

Figure 13

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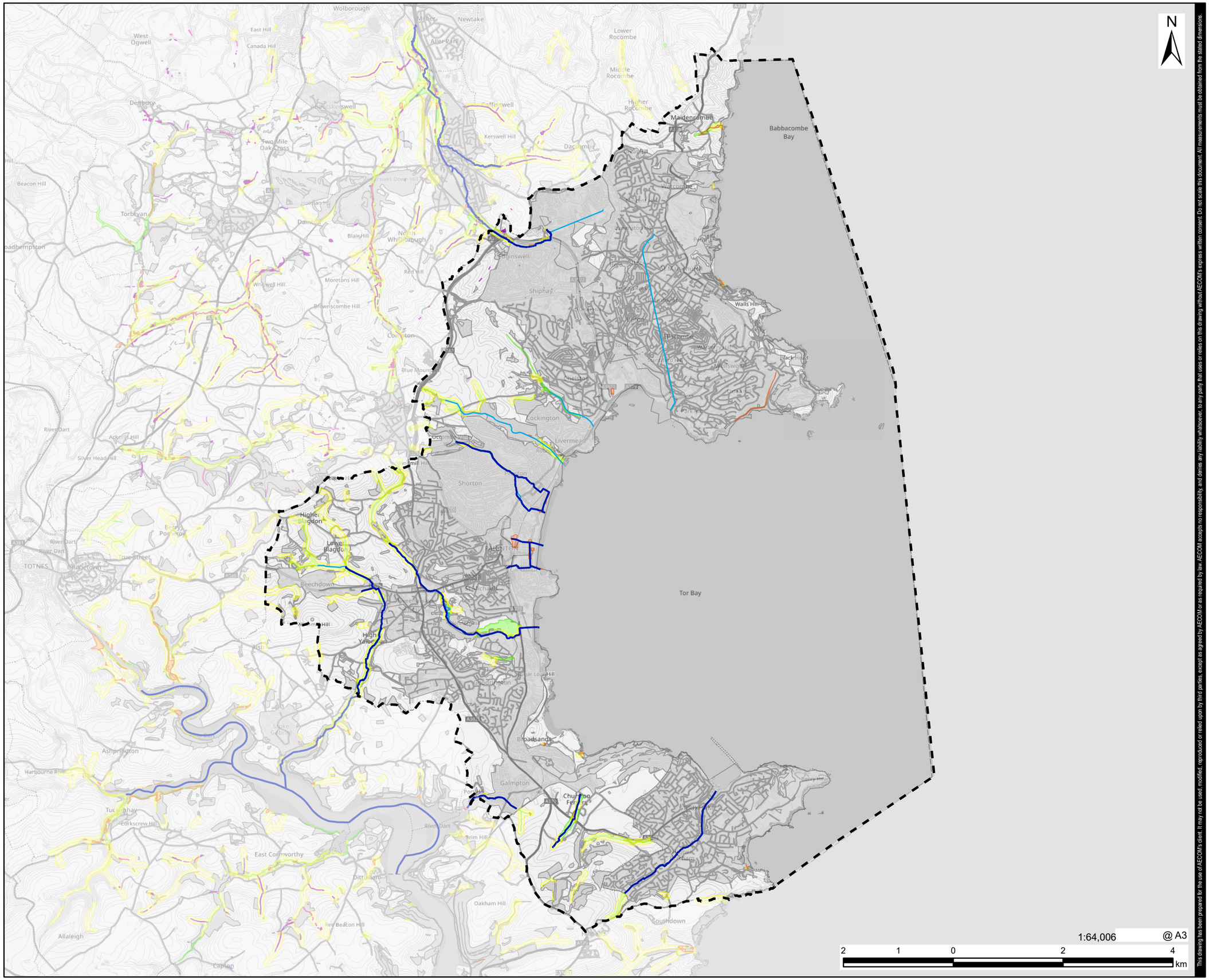

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LEGEND

- Torbay Council Boundary
- Main River
- Ordinary Watercourse
- Runoff Attenuation Features - 1% AEP
- Runoff Attenuation Features - 3.3% AEP
- Floodplain Reconnection Potential
- Riparian Woodland Potential
- Floodplain Woodland Potential
- Woodland Constraints

NOTES

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PROJECT NUMBER

60747538

FIGURE TITLE

Nature Based Solutions Opportunities

FIGURE NUMBER

Figure 14

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