

Draft Supplementary Planning Guidance

Burry Inlet: Compensatory Surface Water Removal in the Llanelli Wastewater Treatment Works Catchment

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Burry Inlet Supplementary Planning Guidance

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Revised Carmarthenshire Local Development Plan 2018 - 2033

Using this guidance — start here

If you are an applicant or agent: the developments to which this guidance applies, and how to meet the requirement, are set out in [Chapter 6](#). The method for calculating the amount of surface water to be removed, with a worked example, is at [Appendix B](#).

Before you apply, you are strongly encouraged to engage with the local authority and Dŵr Cymru Welsh Water at the pre-application stage — see [Paragraph 6.25](#).

To determine the requirement under INF4, a process flowchart is at [Appendix G](#).

The remaining chapters set out the policy and legislative context, the roles of the bodies involved, and how the requirement is administered.

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Abbreviation	Meaning
AMP	Asset Management Programme (Dŵr Cymru Welsh Water)
CBEEMS	Carmarthen Bay and Estuaries European Marine Site
CCH4	Policy CCH4: Water Quality and Protection of Water Resources
CSO	Combined Sewer Overflow
DCWW	Dŵr Cymru Welsh Water
DIN	Dissolved Inorganic Nitrogen
DMPWO	Town and Country Planning (Development Management Procedure) (Wales) Order 2012
HRA	Habitats Regulations Assessment
INF4	Policy INF4: Llanelli WwTW Catchment Surface Water Removal
LPA	Local Planning Authority
MoU	Memorandum of Understanding
NEP	National Environment Programme
NRW	Natural Resources Wales
PAC	Pre-Application Consultation
PPW	Planning Policy Wales (Edition 12, 2024)
LDP	Carmarthenshire Local Development Plan 2018–2033
SAB	SuDS Approval Body
SAC	Special Area of Conservation
SPA	Special Protection Area
SPG	Supplementary Planning Guidance
SuDS	Sustainable Drainage Systems
TAN	Technical Advice Note
WFD	Water Framework Directive (as implemented in UK law)
WwTW	Wastewater Treatment Works

1. Introduction

- 1.1. This Supplementary Planning Guidance (SPG) elaborates and gives effect to *INF4: Llanelli Wastewater Treatment Works Catchment Surface Water Removal* of the Revised *Carmarthenshire Local Development Plan (LDP) 2018–2033*. It is one of a suite of SPGs that collectively inform the process, design and quality of sustainable development across the county.
- 1.2. The SPG provides guidance for major development proposals that drain to the Llanelli Coastal Wastewater Treatment Works (WwTW) catchment, which include Llanelli and Burry Port. Both settlements drain to a predominantly combined sewer system, and the SPG sets out the operative mechanism — a requirement for compensatory surface water removal on a betterment basis — by which new development can connect to that system without increasing combined sewer overflow (CSO) discharges to the Burry Inlet and Loughor Estuary, thereby ensuring there is no deterioration in water quality.
- 1.3. At root, the matter this SPG addresses is one of drainage infrastructure capacity specific to this part of the catchment. The combined sewer network here has limited capacity, and additional foul flow from new development has the potential to increase the frequency and volume of CSO discharges, which in turn places at risk the quality of the Burry Inlet shellfish water protected areas designated under the Water Framework Directive (WFD)¹.
- 1.4. Because the combined sewer systems serving the settlements on both sides of the estuary discharge to the same waters, this is a shared issue, addressed collaboratively with the City and County of Swansea. The policy and legislative framework, the cross-boundary partnership, and the roles of the responsible bodies are set out in Chapter 4.

Consultation

- 1.5. This draft SPG is subject to a consultation exercise conducted in a manner consistent with the general procedures set out within the Delivery Agreement for the Revised LDP. Any changes agreed in responses to the comments received will be incorporated following its consideration at a future meeting of County Council. Note this SPG will only come into operation following the adoption of the Revised LDP.

¹ Implemented through the *Water Environment (Water Framework Directive) (England and Wales) Regulations 2017* (as amended and retained post-EU exit) (hereinafter referred to as the *WFD Regulations*).

2. Why the Burry Inlet Matters

- 2.1. The Burry Inlet and Loughor Estuary form part of a valued coastal landscape, supporting habitats, recreational use, and a cockle fishery of economic and cultural importance. The water environment is protected under the WFD, and maintaining its quality is central to safeguarding these environmental, social, and economic interests.
- 2.2. The sewer network serving the Llanelli Coastal WwTW catchment is predominantly combined (i.e. foul and surface water share the same pipes). When rainfall causes the combined flow to exceed the capacity of the network or the treatment works, CSOs discharge a mixture of diluted sewage and rainwater to the estuary. The frequency and volume of these discharges is directly related to the volume of surface water in the system, and the resulting bacteriological loading is the principal risk to the quality of the shellfish waters.
- 2.3. Introducing additional foul flow from new development increases the baseline hydraulic load. Without compensatory surface water removal, that additional load could increase CSO spill frequency, increase bacteriological loading on the estuary, place the shellfish water quality at risk, and risk localised flooding where capacity is exceeded. Removing existing surface water from the combined system is therefore the proportionate and directly relevant response: it reduces the volume in the system, and so reduces spill frequency, creating headroom that offsets the new foul flow.
- 2.4. The combined nature of the network also carries a risk to the communities it serves. When the system surcharges in severe rainfall, the same shortage of capacity that drives CSO discharges can force wastewater back up through the network — surcharging from gullies and manholes and, in the most severe events, backing up into people's homes. This sewer flooding is a recognised consequence of overloaded combined systems and is acutely damaging and distressing for the households and businesses affected.
- 2.5. By removing existing surface water from the combined sewer and reducing the hydraulic load, the requirement in this SPG creates headroom in the network: in doing so it not only protects the water quality of the shellfish waters but also lessens the residual risk of sewer flooding reaching homes and businesses in the catchment. The policy therefore delivers a public-health, environmental, economic and amenity benefit alongside its core infrastructural purpose.

3. Who Should Use this SPG?

- 3.1. This SPG is relevant to anyone involved in bringing forward, assessing or advising on major development within the Llanelli WwTW catchment. Table 1 sets out how the principal users should apply it at each stage of the planning process.

Table 1: Applying this SPG — user guidance by planning stage

User	Pre-Application	Planning Application	Post-Consent
Developer / Agent	Establish early whether the site drains to Llanelli WwTW and whether it constitutes major development. Begin the sequential search and drainage strategy at concept stage and make it available through PAC.	Submit a drainage report demonstrating betterment and a completed sequential search (Chapter 6). Confirm no new surface water will enter the combined system.	Discharge the surface water removal condition. Implement and, where required, verify the approved scheme with DCWW.
Drainage / Engineering Consultant	Scope the surface water assessment and identify removal opportunities proportionate to the proposal, using the methodology in Appendix B.	Prepare the drainage report and flow calculations to the standard in this SPG. Document the sequential search and the betterment factor applied.	Support discharge of conditions and confirm as-built removal volumes for entry on the register.
Local Authority / Decision Maker	Use the SPG to set information expectations at pre-application and confirm whether INF4 is engaged.	Apply the SPG as a relevant consideration in assessing the proposal against INF4. Consult DCWW and NRW where relevant on the drainage report.	Secure and monitor compliance with the condition. Maintain betterment register.
Dŵr Cymru Welsh Water	Engage with developers at pre-application on capacity and removal opportunities.	Advise the local authority on the adequacy of the drainage report and the sequential search; confirm any DCWW-funded option in writing.	Confirm delivery of removal works and maintain network records.
Natural Resources Wales	Advise on water-quality, designated-site and (where engaged) <i>WFD Regulations</i> considerations.	Provide statutory consultation responses.	Maintain regulatory oversight of the Llanelli WwTW discharge consent.
Community Stakeholder	Understand why surface water removal is required in the affected area and how it protects the estuary.	Use the SPG to inform consultation responses on major applications.	Understand the long-term role of the register in monitoring cumulative betterment.

4. Policy and Legislative Framework

- 4.1. A range of instruments are relevant to the Burry Inlet in the context of balancing developmental and environmental interests. This chapter sets out those most directly relevant to INF4 and this SPG. A non-exhaustive summary is provided in [Appendix A](#).

Two distinct water-quality regimes apply in the Burry Inlet catchment. Compensatory surface water removal (this SPG) is a hydraulic and bacteriological measure that reduces CSO spill frequency to protect WFD water-body status and the shellfish water protected areas. Nutrient neutrality (CCH4) addresses nutrient enrichment affecting the conservation status of the National Site Network designated under the Habitats Regulations. This SPG does not address nutrient neutrality — that, and whether surface water removal may contribute to it, is a matter for CCH4 and its accompanying SPG.

WFD No-Deterioration and Shellfish Waters

- 4.2. The underpinning framework for this SPG are the WFD obligations engaged by development affecting designated waters. The Burry Inlet and Loughor Estuary form part of the WFD Carmarthen Bay and Gower Management Catchment; the relevant water bodies — Burry Inlet Inner, Burry Inlet Outer and Carmarthen Bay — are required to aim to achieve good status under the *WFD Regulations*, and the no-deterioration principle prohibits development from causing a deterioration in that status.
- 4.3. Within the estuary, as shown in Appendix E, the Burry Inlet North and Burry Inlet South shellfish water protected areas (formerly designated under the Shellfish Waters Directive, now WFD protected areas) carry water-quality objectives, measured in bacteriological terms, for the support of the cockle fishery, and these are sensitive to the frequency of CSO discharges.² These WFD drivers are the foundation of INF4 and this SPG, and the planning system gives effect to them³.

²The Burry Inlet is also overlain by the Carmarthen Bay and Estuaries European Marine Site (the Carmarthen Bay and Estuaries SAC and the overlapping Carmarthen Bay and Burry Inlet SPAs) and is a Ramsar wetland of international importance, reflecting its importance for internationally significant habitats and species including overwintering wildfowl and waders, intertidal habitats and cockle beds. The obligations arising from these designations are addressed through the rLDP's Habitats Regulations Assessment and Policy CCH4, not through this SPG.

³ These duties arise under the *WFD Regulations*.

Urban Wastewater Treatment

- 4.4. The *Urban Waste Water Treatment (England and Wales) Regulations 1994* (which transposed *Council Directive 91/271/EEC*) require sewerage undertakers to provide collecting systems and to treat wastewater to the required standard before discharge. Following the departure from the European Union, these Regulations continue in force in Wales as assimilated law and remain binding on DCWW.⁴
- 4.5. The significance of the compliance challenge in this agglomeration was confirmed by the Court of Justice of the European Union in *European Commission v United Kingdom* (Case C-502/15, 4 May 2017), which ruled that the UK had failed to ensure that combined flows in the Gowerton and Llanelli agglomerations were retained and conducted for treatment in accordance with *Directive 91/271/EEC*. The Court of Justice no longer has jurisdiction over the United Kingdom, but the domestic obligation under the *1994 Regulations* endures, and its enforcement now falls to NRW as the environmental regulator in Wales.
- 4.6. In response to that judgment a comprehensive programme of infrastructure works was commissioned, targeted at significantly reducing CSO spill frequency and volume; that programme has substantially been delivered. A key role of this SPG is to ensure that the hydraulic headroom created by that investment is not eroded by additional foul load from new development.

Boundary Between Planning and the Sewerage Undertaker

- 4.7. This SPG operates as a no-deterioration and betterment measure tied to the impact of the development proposed. It does not transfer to developers the undertaker's own statutory obligations to provide and maintain compliant infrastructure. Consistent with the statutory framework governing the right to connect, capacity is managed through the planning system — by securing compensatory surface water removal as a condition of permission — rather than by refusing connection⁵.

⁴Directive (EU) 2024/3019 (the recast Urban Wastewater Treatment Directive) entered into force on 1 January 2025 and does not apply in Wales. Any future change to the domestic regulatory framework will be reflected in a review of this SPG.

⁵On the relationship between planning and the right to connect, see *Barratt Homes Ltd v Dŵr Cymru Cyfyngedig* [2009] UKSC 13, in which the Supreme Court held that capacity constraints are properly managed through the planning system rather than by refusing connection under section 106 of the *Water Industry Act 1991*. This is confirmed in PPW (Edition 12) paragraph 6.6.20.

National Planning Policy

- 4.8. PPW⁶ sets out the land use planning policies of the Welsh Government and is supplemented by Technical Advice Notes (TANs). Paragraph 6.6.9 provides guidance on the capacity of water supply and sewerage infrastructure, and paragraph 6.6.14 on water quality and surface water flooding. Paragraph 6.6.15 makes clear that sustainable places will be those with resilient, well-maintained networks for sewerage and drainage with sufficient capacity to manage demand without causing pollution or surface water flooding. The requirement to prevent deterioration of water body status, and the additional objectives applying to designated shellfish water protected areas, are established by the WFD Regulations—regulation 13 (water body objectives, including the prevention of deterioration) and regulation 9 (the designation of shellfish water protected areas, which carry additional objectives under regulation 13). It is these statutory requirements that Policy INF4 gives effect to.
- 4.9. [TAN 15 \(flood risk\)](#) addresses fluvial and tidal flood risk, which is distinct from the hydraulic overload of the combined sewer system that this SPG addresses; however, its principle of managing surface water at source and avoiding unnecessary additional loading on drainage systems is consistent with the approach taken here.
- 4.10. The compensatory surface water removal requirement will typically be secured by planning condition. The [Development Management Manual](#) provides that conditions and planning obligations can enable development proposals to proceed where it would otherwise be necessary to refuse permission. [Welsh Government Circular 016/2014](#) sets out the tests that conditions must meet.
- 4.11. Planning obligations will be used only where it is not possible to address unacceptable impacts through a condition; it is considered unlikely that the local authority will need to enter into a planning obligation in implementing this SPG. Where obligations are required, they must meet the statutory and policy tests of necessity, direct relationship to the development, and fairness and reasonableness in scale and kind, as set out in [Welsh Office Circular 13/97](#).

⁶ Edition 12, 2024

Local Planning Policy

Policy INF4: Llanelli Wastewater Treatment Works Catchment Surface Water Removal⁷

In order to protect the water quality of the Burry Inlet shellfish water protected areas, proposals for major development that would drain directly into the Llanelli Waste Water Treatment Works may be required to remove a quantifiable amount of surface water from the combined sewer system.

Development which drains directly into the Llanelli Wastewater Treatment Works may also introduce the removal of surface water as a mitigation measure to secure nutrient neutrality where required in accordance with Policy CCH4.

- 4.12. INF4 sits under *SP9: Infrastructure* and should be read alongside CCH4. The two policies have distinct legal bases and operate independently: INF4 responds to the WFD no-deterioration and shellfish protected-area requirements (supported by the urban wastewater treatment regime); CCH4 responds to the Habitats Regulations obligations arising from the conservation status of the European Marine Site's features. The second paragraph of INF4, concerning minor development and nutrient neutrality, is given effect through CCH4 and any guidance consequential guidance. This SPG does not provide the mechanism for demonstrating nutrient neutrality; it provides technical guidance on surface water removal methodology which may be relevant evidence for that purpose.

⁷ As contained within the Inspectors' Report.

Stakeholder Roles and Responsibilities

- 4.13. The effective delivery of the compensatory surface water removal regime requires close and ongoing collaboration between the principal stakeholders, whose responsibilities are largely set out in legislation. The role of each is summarised below.

Dŵr Cymru Welsh Water (DCWW)

- 4.14. DCWW is the statutory sewerage undertaker responsible for the collection, treatment and disposal of sewage in the areas served by Llanelli WwTW. It is responsible for providing sewerage services, maintaining compliance with its discharge permits, and accommodating appropriate development within the capacity of its infrastructure. DCWW continues to meet increased demand through investment in its infrastructure, including through its Asset Management Programme (AMP).
- 4.15. DCWW has confirmed that there is sufficient hydraulic capacity at Llanelli WwTW to accommodate the foul flows generated by the growth identified in the LDP, provided that compensatory surface water removal is implemented concurrently; the mechanism is therefore integral to the deliverability evidence base for the LDP. DCWW has invested significantly across the Llanelli and Gowerton agglomerations — including through the National Environment Programme (NEP) and the [RainScape programme](#) — materially reducing CSO spill frequency and volume.
- 4.16. DCWW is a statutory consultee in the planning process as well as the statutory water and sewerage undertaker, and can influence the inclusion of conditions relating to surface water removal. Developers are strongly encouraged to engage with DCWW at the earliest opportunity, including through Pre-Application Consultation (PAC). DCWW will be consulted by the local authority in verifying drainage reports and in confirming whether a DCWW-funded scheme may be available to an applicant who has exhausted the sequential search.

Local Planning Authorities (LPAs)

- 4.17. The City and County of Swansea Council has its own policy framework in respect of the Burry Inlet catchment under which development draining to the Gowerton and Llannant WwTW catchments is subject to equivalent considerations. The two LPAs work collaboratively to ensure a consistent, catchment-wide approach to water-quality protection, reflecting that the combined sewer systems on both sides of the estuary discharge to the

same waters and that this is therefore a shared infrastructure issue.⁸ This SPG has been prepared in consultation with the City and County of Swansea. The other principal contributors to the Burry Inlet and Loughor Estuary are addressed through the respective LDP and the joint MoU, and not through this SPG.

Natural Resources Wales (NRW)

- 4.18. NRW is the competent environmental regulatory authority in Wales, responsible for implementing Welsh Government's environmental, water-quality and flood-protection policies. NRW determines and enforces the discharge permit conditions for Llanelli WwTW, monitors and enforces compliance, and provides statutory consultation responses on planning applications where interests may be affected.
- 4.19. In the context of this SPG, NRW's primary role is as the environmental regulator ensuring that DCWW's discharge consents remain compliant with the urban wastewater treatment regime and the WFD objectives for the Burry Inlet water bodies and shellfish water protected areas. NRW is also responsible for providing formal condition assessment advice in respect of the CBEEMS.

Working Collaboratively

- 4.20. A Memorandum of Understanding (MoU) has provided the collaborative framework for surface water management for a number of years. The MoU established the principle of compensatory surface water removal as a condition of new development connections and provided the practical underpinning for the removal credits and register now given formal planning policy status through INF4 and this SPG.

⁸ Planning Policy Wales (Edition 12) paragraphs 6.6.11–6.6.12 support a strategic approach to infrastructure provision across neighbouring authorities.

5. The Relationship with Sustainable Drainage (SuDS)

- 5.1. A development connecting to the public network in this catchment generates two distinct flows. It is the interaction between them that explains why a compensatory surface water removal requirement is necessary even though the statutory SuDS regime already manages a development's surface water. This chapter explains how the two fit together.

Two Flows from New Development

- 5.2. The first is foul flow — the wastewater (sewage) from the development. This must enter the public sewer: it cannot be infiltrated or attenuated on site, and there is a statutory right to connect foul drainage to a public sewer.⁹ In the Llanelli Coastal WwTW catchment the receiving sewer is predominantly combined, so this new foul flow enters the same pipes that carry rainwater.
- 5.3. The second is surface water — the rainwater running off the development's roofs, roads and other hard surfaces. This is the flow that the SuDS regime manages. The statutory SuDS hierarchy keeps surface water out of the combined sewer wherever possible, prioritising reuse, infiltration to the ground and discharge to a watercourse, with discharge to a combined sewer ranked as the option of last resort.

What SuDS Does — Stops the Problem Getting Worse

- 5.4. The *Flood and Water Management Act 2010* requires all new drainage systems to comply with the Welsh statutory SuDS standards and to be approved by the SuDS Approval Body (SAB) before construction. In practice this means the rainwater generated by the new development is managed at or near source and is kept out of the combined sewer.¹⁰
- 5.5. This is an essential safeguard, but it addresses only the development's own, new surface water. It does nothing about the new foul flow, which must still enter the combined sewer. SuDS therefore prevents the development from adding to the burden on the combined system on the surface water side; it cannot, by itself, accommodate the additional foul load.

⁹ Planning Policy Wales (Edition 12) paragraph 6.6.20 requires development in sewered areas to connect foul drainage to the main sewer and to consult the sewerage undertaker at an early stage.

¹⁰ Consistent with Planning Policy Wales (Edition 12) paragraph 6.6.16, under which planning authorities should secure the incorporation of sustainable drainage so that surface water is managed close to or at source.

Why the Foul Flow Matters

- 5.6. Combined sewer overflows operate during storms, when rainfall pushes the combined system beyond its capacity and it discharges a mixture of diluted sewage and rainwater to the estuary. A new foul connection adds a continuous baseline flow that occupies part of that capacity at all times. As a result, the system reaches its spill threshold at a slightly lower rainfall intensity, and spills a little more often and for a little longer. Because the foul flow has to be in the combined sewer, SuDS cannot relieve this effect.

How INF4 Addresses the Issue

- 5.7. Since the new foul flow cannot be avoided, and the new development's rainwater is kept out of the combined sewer by SuDS in any event, the remaining means of protecting the estuary is to remove existing surface water that currently drains into the combined sewer — older roofs, roads or yards in the catchment that were connected to the combined system in the past. Disconnecting and redirecting that existing surface water frees hydraulic capacity to absorb the new foul flow. Because INF4 requires major development to remove more surface water than the foul flow it introduces — the betterment principle — the cumulative effect is that the system spills less often than it did before the development took place.

Two Mechanisms, Two Jobs

- 5.8. The two regimes are complementary rather than duplicative, and both must be satisfied:

SuDS stops the problem getting worse: it keeps the new development's own surface water out of the combined sewer.

INF4 makes the problem better: it removes existing surface water from the combined sewer to offset the unavoidable new foul load.

- 5.9. Critically, the distinction that matters is between new and existing surface water, not between the development site and the wider catchment. The water SuDS keeps out is the development's own, newly generated runoff; the water the removal requirement disconnects is existing surface water that already drains to the combined sewer. Because these are different flows, meeting the SuDS standards for the development's own runoff does not, by itself, discharge the INF4 requirement — and equally, achieving removal does not relax the rule that no new surface water may enter the combined sewer. Where a development disconnects existing impermeable area that currently drains to the combined sewer, however — including existing hardstanding on its own site — that disconnection is itself removal and

counts towards the requirement. For many previously-developed sites it will be the means by which the requirement is met (see [Chapter 6](#)).

- 5.10. In delivery the two are usually addressed together. SuDS techniques — infiltration, swales and the redirection of existing impermeable areas to a watercourse — are frequently the means by which the existing surface water is removed, so a single, integrated drainage strategy can satisfy both obligations. The SuDS scheme is approved by the SAB, and the surface water removal is secured by planning condition. Because a continuous foul flow and a transient, storm-driven surface water flow are not directly equivalent, the removal requirement is applied on a betterment basis to give added reassurance against down-sewer spills (see [Chapter 6](#) and [Appendix B](#))

6. The Compensatory Surface Water Removal Requirement

This requirement applies to major development

“...proposals for major development that would drain directly into the Llanelli Waste Water Treatment Works may be required to remove a quantifiable amount of surface water from the combined sewer system.” (excerpt from INF4, reproduced in full in [Chapter 4](#)).

- 6.1. As part of obtaining planning permission for major development, the local authority requires the removal of a quantifiable amount of surface water from the combined sewer system, as expressed in litres per second (l/s). The requirement operates on a betterment basis: the volume of surface water removed must be calculated using the methodology in [Appendix B](#).
- 6.2. Removal will in most cases involve bespoke solutions dependent on the size and location of the development. The principle that development should not increase net flows in the combined system must nonetheless be maintained, and the betterment achieved must be quantifiable and measurable. A drainage report must be submitted demonstrating that betterment can be achieved and that the required sequential search has been followed; an illustrative worked example are provided at [Appendix B](#), and the process is summarised in the flow chart at [Appendix F](#).
- 6.3. Whilst the drainage report is not a validation requirement, developers are strongly advised to address it at the earliest stage of design. Major developments are subject to mandatory PAC, and the drainage strategy should form part of the PAC documentation.

Relevant Developments

- 6.4. The requirement applies to development that both drains to Llanelli Coastal WwTW and is defined as major development under Article 2 of *The Town and Country Planning (Development Management Procedure) (Wales) Order 2012*, as listed below:
 - a. housing development of 10 or more dwellings, or where the site area is 0.5 ha or more;
 - b. the provision of a building or buildings where the floor space to be created is 1,000 sqm or more;
 - c. development carried out on a site of 1 ha or more;
 - d. the winning and working of minerals or the use of land for mineral-working deposits; and
 - e. waste development.

- 6.5. Where the local authority identifies that a development has been subdivided, or that applications have been staggered over time; in order to avoid the major development threshold and the requirements of INF4, the total provision of the scheme will be calculated and the requirement applied accordingly.
- 6.6. The second paragraph of INF4 contemplates that, for minor development subject to a nutrient neutrality requirement, surface water removal may be used as a mitigation measure where required in accordance with CCH4. Whether and how surface water removal may contribute to nutrient neutrality is a matter for CCH4 and the accompanying *Water Quality SPG*. Such proposals should be the subject of pre-application engagement with both the local authority and NRW.

Sequential Search

- 6.7. The sequential search must be documented within the drainage report. The local authority must be satisfied that a thorough assessment has been undertaken and may consult DCWW in reviewing it. The search must be completed in the following order:
- a. Step 1 — On-site or adjacent-to-site: removal of compensatory surface water from the public sewerage system at or immediately adjoining the development site.
 - b. Step 2a — Sub-catchment: removal of surface water from the public sewerage system within the sub-catchment in which the development is located.
 - c. Step 2b — Wider catchment: removal of surface water from the public sewerage system elsewhere within the WwTW catchment.
- 6.8. A developer may progress to a later step only where it is demonstrated, to the satisfaction of the local authority, that the earlier step is not feasible; the reasons for rejecting each earlier step must be clearly documented. Should the drainage report demonstrate, to the local planning authority's satisfaction, that removal cannot be achieved through Steps 1, 2a or 2b, the local authority will notify the developer in writing that they may approach DCWW to explore a DCWW-delivered scheme. This step cannot be initiated by the developer independently; it requires written notification from the local planning authority.

Delivering Removal on Site

- 6.9. The sequential search identifies where compensatory removal is to be found; this section explains how it is achieved. In every case the objective is the same: to take existing surface water out of the combined sewer so that it instead soaks into the ground or discharges to a watercourse.

- 6.10. In previously developed sites the most direct method is to disconnect existing impermeable area that currently drains to the combined sewer. Where redevelopment reduces the impermeable area connected to the combined sewer — for example by replacing an existing car park or yard with a permeable surface, or by redirecting existing roof and surface drainage away from the combined system — that reduction constitutes removal and counts towards the requirement.
- 6.11. In considering such proposals, only the disconnection of surface water that is lawfully connected to the combined sewer at the time of the application will be credited. Measures that are required solely to make the new development compliant with SuDS standards will not, in themselves, constitute additional removal unless they demonstrably result in a net reduction of pre-existing surface water entering the combined sewer system.
- 6.12. The credit is the reduction measured against the impermeable area lawfully connected to the combined sewer at the time of the application, confirmed with DCWW. Where the area disconnected meets or exceeds the figure required, the requirement is satisfied on site and no further removal need be sought.
- 6.13. The techniques fall into two families, applied in the order of the surface-water hierarchy:
- Infiltration (where ground conditions allow): permeable paving to car parks, yards and driveways laid over an infiltrating sub-base; disconnection of downpipes to soakaways, rain gardens or infiltration basins.
 - Conveyance to a watercourse (where a suitable watercourse exists and NRW agree): swales, filter drains, or the redirection of existing surface-water drains away from the combined sewer.
- 6.14. Removal means that the surface water leaves the combined sewer — to ground or to a watercourse. Attenuation does not count. Storing surface water and releasing it to the combined sewer at a slower rate reduces the peak rate of flow but not the volume the sewer must ultimately carry and so does not free the hydraulic capacity needed to offset the new foul flow. A scheme that retains a connection to the combined sewer provides removal only to the extent that it reduces the volume entering that sewer below the existing baseline.
- 6.15. The amount removed is expressed as an area of impermeable surface disconnected, measured on the same basis as the requirement: disconnecting 200 m² of car park to an infiltrating surface, for instance, provides 200 m² of removal.

- 6.16. Scheme design should follow the [SuDS Manual \(CIRIA C753\)](#) and the [Welsh Government's Standards for SuDS](#), and is approved by the SAB. Early engagement with DCWW — and, where a watercourse discharge is proposed, NRW — is encouraged in all cases.

On-site Delivery on Contaminated land

- 6.17. Previously developed sites may be affected by ground contamination. Infiltrating surface water through contaminated ground can mobilise contaminants and carry them into groundwater — itself a form of water pollution, and a risk to the controlled waters this drainage strategy exists to protect.
- 6.18. Infiltration-based removal must be supported by proportionate ground investigation. Where there is evidence, or reasonable grounds to suspect, that the land may be contaminated, a contamination and hydrogeological risk assessment may be required. Infiltration must not be used where it would pose an unacceptable risk to controlled waters.
- 6.19. Where infiltration is unsuitable on these grounds, the disconnection of existing impermeable area can still be achieved by redirecting it to a surface water body where one is available, so that a previously developed site's removal credit is not lost. Failing this, removal moves to the sub-catchment and wider-catchment steps of the sequential search.
- 6.20. The acceptability of infiltration is to be agreed with NRW, alongside the contaminated land requirements applying through the planning process and the approval of the SuDS Approving Body. Reference should be made to NRW published guidance on groundwater protection and land contamination, and to the [SuDS Manual \(CIRIA C753\)](#).

Dŵr Cymru Funded Schemes

- 6.21. Where an applicant has exhausted the sequential search without identifying a viable solution, and the local authority has provided the written notification referred to above, the applicant may negotiate with DCWW regarding the funding of a DCWW-delivered surface water removal scheme. The local authority will require written confirmation from DCWW that an acceptable scheme has been identified before permission is granted. DCWW will work constructively with applicants but cannot guarantee the availability of a funded scheme, and this route should be treated as a last resort following exhaustion of the sequential search.

The Betterment Bank

- 6.22. In exceptional circumstances, where an applicant has exhausted the sequential search (Steps 1, 2a and 2b) and the DCWW-funded route above without identifying a viable means of achieving removal, the local authority may permit the proposal to draw on surplus capacity already secured on the register elsewhere in the Llanelli WwTW catchment. This is the Betterment Bank. The surplus represents surface water removal that has already been physically delivered and recorded on the register; the requirement of INF4 is met by allocating that delivered removal to the proposal, rather than by waiving it.
- 6.23. Reliance on the Betterment Bank requires the applicant to demonstrate all of the following to the satisfaction of the LPA:
- a. that removal cannot reasonably be achieved through the sequential search (Steps 1, 2a and 2b) or through a DCWW-funded scheme, as evidenced by a drainage report;
 - b. that the proposal is in the public interest (see paragraph 6.24);
 - c. that sufficient surplus capacity is available on the register; and
 - d. that drawing on that surplus will not reduce overall betterment headroom to a level that would prejudice the ability to accommodate other permitted or reasonably anticipated development in the catchment.
- 6.24. In considering whether a proposal is in the public interest, the local authority will have regard to the scale and nature of the public benefits it would deliver — for example significant affordable housing, employment, health, education, or strategic regeneration benefits — and its alignment with the LDP and Future Wales. The Betterment Bank will be applied case by case, and the local authority will record its reasoning, including its public-interest assessment and its assessment of remaining headroom, in each case. Further context is provided at [Appendix C](#).

Pre-Application Consultation

- 6.25. Proposals for major development are subject to mandatory PAC under the *Planning (Wales) Act 2015*. PAC provides a structured opportunity to engage with the local planning authority, DCWW and other statutory consultees at an early stage. Developers are strongly encouraged to make their proposed drainage strategy — including the sequential search assessment and betterment calculations — available as part of their PAC documentation. Early engagement significantly reduces the risk of drainage issues delaying or prejudicing determination of the application.

Placemaking and Co-Benefits

- 6.26. Drainage solutions designed to remove surface water from the combined network can, if well designed, deliver wider placemaking, biodiversity and amenity benefits. Features such as swales, rain gardens, ponds and permeable paving can contribute to net benefit for biodiversity and improve public open space and active travel routes. Developers are encouraged to explore these co-benefit opportunities from the outset, in accordance with the principles of placemaking and sustainable development, alongside Green and Blue Infrastructure SPG.

Register of Surface Water Removal

- 6.27. The local authority will maintain an up-to-date Register of Surface Water Removal Credits achieved through qualifying schemes within its jurisdiction. For each entry, the register will record:
- a. the location from which surface water has been removed,
 - b. the verified volume removed (l/s),
 - c. the date of removal, and
 - d. the associated planning permission, delivery mechanism, or scheme reference.
- 6.28. The register will provide the evidence base for the operation of the Betterment Bank and for monitoring the cumulative effectiveness of the regime. The provenance of credits will be clearly identified, distinguishing between:
- a. public-funded or strategic removal schemes, and
 - b. any qualifying additional betterment secured through development beyond policy requirements.
- 6.29. This will ensure that any surplus drawn upon through the Betterment Bank is transparent, auditable, and policy compliant. The local authority will report on the operation of the register through the Annual Monitoring Report for the LDP.

Appendix A: Policy Context

- A.1. This appendix provides a non-exhaustive summary of the principal legislation, national policy and local policy relevant to this SPG. It is intended as a signpost; the operative provisions are set out in the chapters above.

Table A: Principal legislation, national policy and local policy relevant to this SPG

Instrument	Relevance
Water Environment (WFD) (England and Wales) Regulations 2017	Establish the WFD no-deterioration duty and the shellfish water protected areas (Burry Inlet North and South). The principal planning driver for this SPG.
Urban Waste Water Treatment (England and Wales) Regulations 1994	Require collection and treatment of urban wastewater (transposing Directive 91/271/EEC); continue as assimilated law. Explain the sensitivity of the combined network. Enforced by NRW.
Conservation of Habitats and Species Regulations 2017	Govern assessment of effects on the CBEEMS (SAC/SPA) and any nutrient neutrality requirement. Addressed through Policy CCH4 — not this SPG.
Flood and Water Management Act 2010 (Schedule 3)	Statutory SuDS standards and SAB approval; combined-sewer discharge is the last resort in the runoff hierarchy.
Planning Policy Wales (Edition 12, 2024)	National policy on water and sewerage capacity, water quality and sustainable places (paras 6.6.9, 6.6.14–6.6.16 and 6.6.20).
TAN 5 (Nature Conservation) / TAN 15 (Flood Risk)	Relevant context; surface water management at source is consistent with TAN 15. Habitats obligations remain a CCH4 matter.
Welsh Government Circular 016/2014	The six tests for planning conditions, against which the surface water removal condition is assessed.
rLDP Policy INF4 / SP9 / CCH4	INF4 (this SPG) requires compensatory surface water removal; SP9 is the strategic infrastructure policy; CCH4 governs water quality and nutrient neutrality.
Well-being of Future Generations (Wales) Act 2015; Environment (Wales) Act 2016	Overarching duties supporting sustainable development and net benefit for biodiversity.

Appendix B: Technical Guidance and Flow Calculations

- B.1. This appendix provides information to inform the calculation of compensatory surface water removal, for use in the drainage reports required under Chapter 6. The information is largely illustrative; timely engagement with DCWW is encouraged in all cases.

The basis of the calculation

- B.2. The required surface water removal is calculated from two quantities:
- the peak foul flow that the development adds to the combined sewer, in litres per second (l/s); and
 - the runoff rate — the rate at which one square metre of impermeable surface sheds rainwater at the design storm, in litres per second per square metre (l/s/m²).

- B.3. These combine, with a betterment factor, as:

$$\text{(peak foul flow} \div \text{runoff rate)} \times \text{betterment factor} \\ = \text{area to disconnect (m}^2\text{)}$$

- B.4. The foul flow is what the requirement must offset. Dividing it by the runoff rate converts that continuous flow into an equivalent area of existing impermeable surface; disconnecting that area from the combined sewer frees the equivalent hydraulic capacity. The betterment factor then ensures the removal exceeds the addition, so the development leaves the system with more headroom than before — protecting the shellfish water protected areas from increased CSO discharges and reducing the residual risk of sewer flooding into property. The two inputs are derived below, followed by a worked example.

Input 1: Peak foul flow added

- B.5. The peak foul flow is estimated on the standard dry weather flow basis (population × per-capita consumption, plus infiltration, plus trade effluent¹¹. For residential development the trade effluent term is nil, and the criteria are:

Table B1: Criteria for the peak foul flow per residential property

Parameter	Value	Basis
Per-capita water consumption	176 litres/head/day	DCWW stated average per-person use ¹²
Residential occupancy	2.3 persons/property	Census 2021 (Carmarthenshire)
Peak flow factor (diurnal)	2 ×	Standard diurnal peaking allowance (confirmed with DCWW)
Infiltration allowance	~88 litres/head/day	EA benchmark (~50% of per-capita rate); confirm from DCWW flow-survey data

- B.6. A diurnal peaking factor of 2 has been adopted, consistent with standard wastewater engineering practice where peak daily flows are typically assumed to be approximately twice the average dry weather flow. Industry references indicate typical peaking factors generally range from 2 to 4 depending on catchment size and variability, with lower values (~2.0) appropriate for larger or more stable systems. This assumption aligns with accepted UK design approaches and has been confirmed as appropriate by DCWW. Infiltration is not multiplied by the diurnal peak factor because it is steady groundwater, not diurnal demand. No separate ‘miscellaneous’ allowance is applied as the 176 l/head/day figure is an all-in average of personal water use and already includes such use.

Peak flow per residential property = $(176 \times 2.3 \times 2) + (88 \times 2.3) = 810 + 202 \approx 1,012$ l/day.

Input 1: Peak foul flow added = 0.012 litres/second per residential property.

- B.7. For non-residential uses, the guide figures below apply, subject to agreement with DCWW. They are standard DCWW design figures and should be confirmed on a case-by-case basis. Table B2 covers uses assessed on a per-head basis; Table B3 covers industrial uses assessed by area.

Table B2: Guidance for peak foul flows — other uses (per head)

Property type	Water consumption (l/head/day)	Peak foul flow (l/head/s)
Offices	55	0.006
Schools	50	0.005

¹¹The formula used by the Environment Agency to predict dry weather flow at treatment works: [Calculating dry weather flow \(DWF\) at waste water treatment works - GOV.UK](#)

¹²[Save Water | Dŵr Cymru Welsh Water](#)

Property type	Water consumption (l/head/day)	Peak foul flow (l/head/s)
Rest Homes	300	0.031
Hospitals	450	0.046
Public Houses	15	0.002
Caravans	120	0.012
Camp Sites	75	0.008
Hotels	200	0.021
Restaurants	25	0.003

Table B3: Guidance for peak foul flows — industrial uses (by area)

Industrial use	Peak foul flow (by area)
Industrial (expected large water use)	55 m ³ /ha/day = 2.5 l/s per ha
Industrial (light industry)	10 m ³ /ha/day = 0.7 l/s per ha

Input 2: Surface-water runoff rate

- B.8. The second input is the rate at which an existing impermeable surface sheds rainwater at the design storm. It is derived from the Flood Estimation Handbook (FEH) rainfall model for a 1:30-year return-period storm over the Burry Inlet area.

Table B4: FEH22 rainfall — 1:30-year return-period storm, Llanelli area¹³

Storm duration (hrs)	1	2	3	4	5	6
Total rain in storm (mm)	32.07	40.94	46.45	50.45	53.56	56.11
Average (linear) intensity (mm/hr)	32.07	20.47	15.48	12.61	10.71	9.35
Runoff rate (l/s/m ²)	0.0089	0.0057	0.0043	0.0035	0.0030	0.0026

- B.9. This rainfall intensity is used as a fixed conversion constant, not a flood-design storm. Its only role is to convert the foul flow into an equivalent impermeable area. Climate-change resilience for the development's own surface water is secured separately, through the statutory SuDS standards.

Input 2: Reference runoff rate (fixed conversion constant) = 0.003 litres/second/m².

¹³ Design rainfall depths were obtained from the FEH Web Service (FEH22 rainfall model) for a 1:30-year return period, on the annual maximum scale with sliding durations, at seven 1 km grid points spread across the sewered area draining to Llanelli WwTW from Burry Port to Bynea (SN 44000 01000, SN 45000 01000, SN 47000 01000, SN 49000 01000, SN 50000 00000, SS 51000 99000 and SS 53000 99000), accessed 15 October 2026. Point values were used, rather than catchment values, because the figure represents rainfall falling on individual impermeable surfaces. For each duration the depth shown is the mean of the seven points. The 5-hour depth ranged from 52.99 mm to 54.21 mm, with a mean of 53.56 mm. This gives an average intensity of 10.71 mm/hr (53.56 ÷ 5) and a runoff rate of 0.0030 l/s/m² (10.71 ÷ 3,600, since 1 mm of rain on 1 m² is 1 litre).

Betterment Factor

- B.10. Because a continuous foul flow and a transient, storm-driven surface water flow are not directly equivalent, a betterment factor of $\times 2$ is applied. This both compensates for that non-equivalence and ensures a net reduction in load — the development removes more surface water than the foul flow it adds. The margin protects the shellfish water protected areas from increased CSO discharges and reduces the residual risk of sewer flooding into property. Where greater conservatism is justified, the betterment factor can be increased, with the reasoning recorded.

Worked Example

- B.11. Bringing the two inputs together, for a single residential property:

$$\begin{aligned} & \text{(peak foul flow} \div \text{runoff rate)} \times \text{betterment factor} \\ & (0.012 \div 0.003) \times 2 \\ & \approx 8 \text{ m}^2 \text{ of impermeable area to disconnect per property} \end{aligned}$$

- B.12. The $\approx 8 \text{ m}^2$ figure is illustrative and provisional: it will firm up once the FEH22 reference rate is inserted, though the change is expected to be small. In practice the area is identified through the sequential search and may be delivered through SuDS techniques such as infiltration, swales, or the redirection of existing impermeable areas to a watercourse. The design parameters above are confirmed with DCWW on a case-by-case basis. On a previously-developed site, this figure may be met in whole or in part by disconnecting existing impermeable area that already drains to the combined sewer (see [Chapter 6](#)).

Appendix C: The Betterment Bank

- C.1. This appendix frames the strategic and regeneration context for the Llanelli and Burry Port areas, and the basis for the exceptional, public-interest use of register surplus described in [Chapter 6](#).

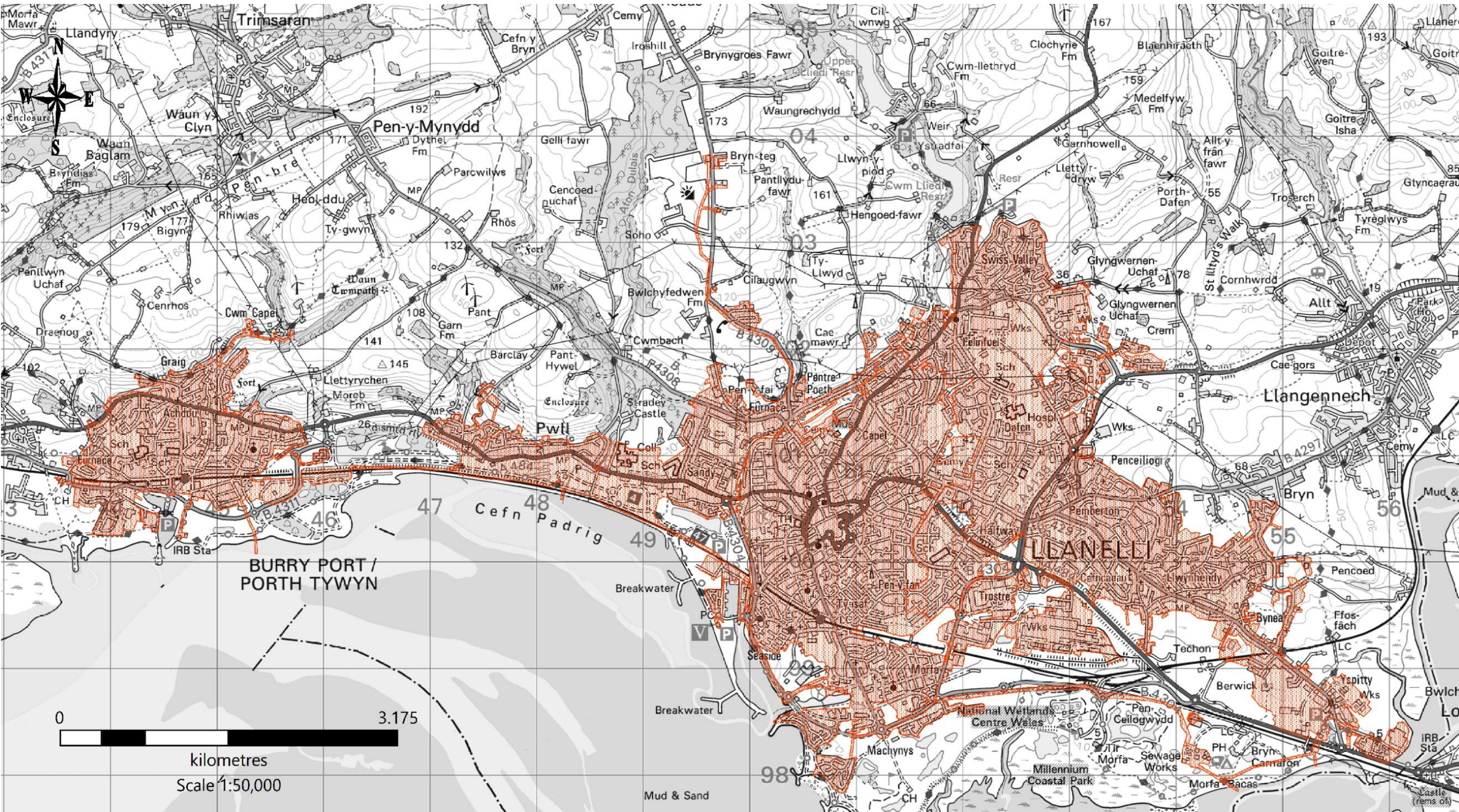
Strategic and Regeneration Context

- C.2. Carmarthenshire is part of the Swansea Bay City Region and the Swansea Bay City Deal, within which Llanelli and the wider coastal belt are recognised at a strategic regional level. Llanelli is identified as a Principal Centre and Burry Port (with Pembrey) as a Service Centre in the LDP, and both feature prominently in the council's corporate and regeneration strategies, including major waterfront and town-centre regeneration delivered in partnership with the Welsh Government through the [Llanelli Waterside Joint Venture](#).

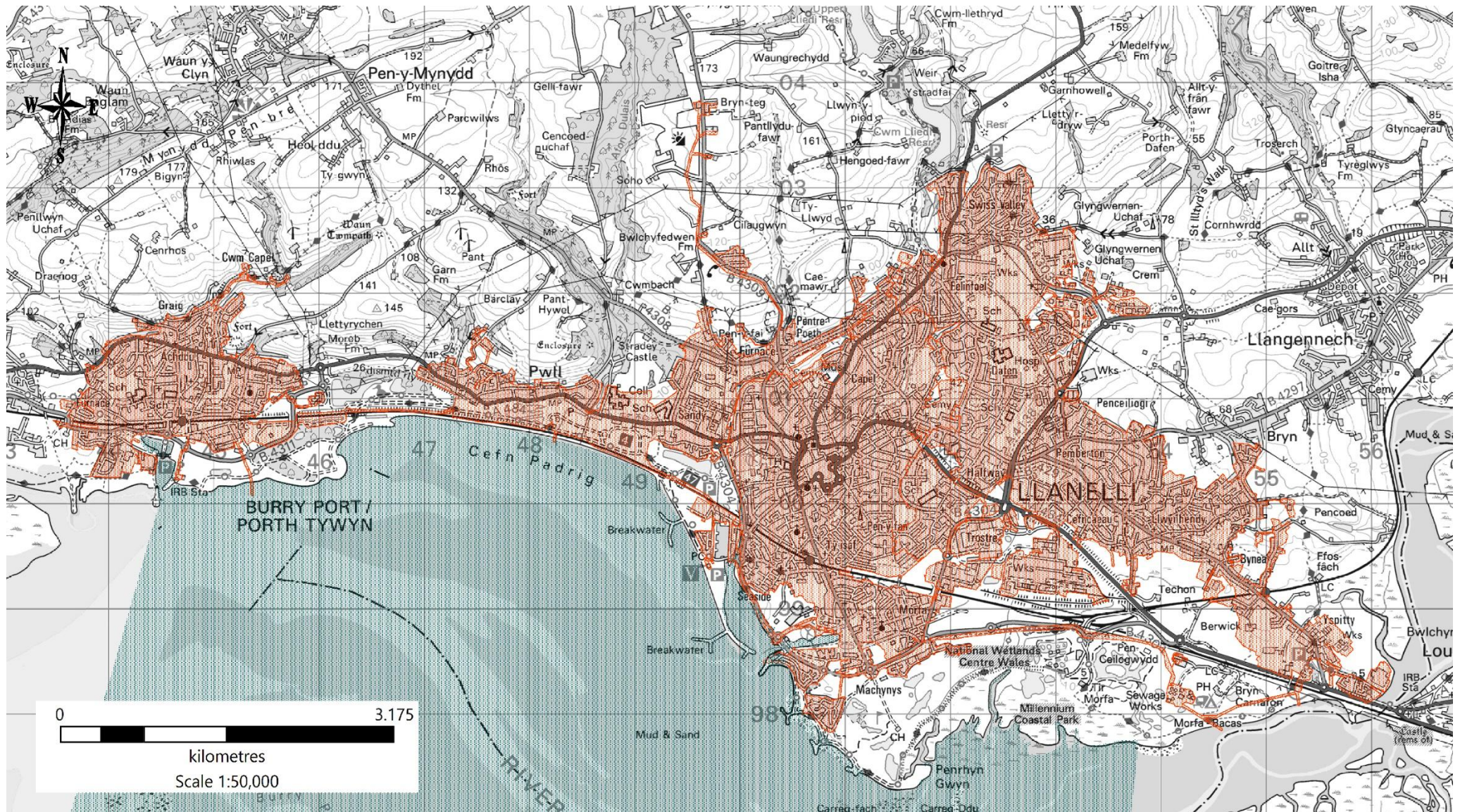
The Betterment Bank

- C.3. The SPG provides, in exceptional circumstances, for surplus capacity already secured on the surface water removal register to be drawn on where an applicant cannot achieve removal through the sequential search or a DCWW-funded scheme. A significant proportion of the surplus on the council's register has been secured through public investment in removal schemes across the Llanelli and Burry Port areas, which supports its use for proposals in the public interest. The provision is available to any applicant whose proposal the local authority is satisfied is in the public interest — for example through the delivery of significant affordable housing, employment, health, education or strategic regeneration benefits aligned with the LDP — rather than being reserved to any single applicant.

Appendix D: Illustrative Plan of the Llanelli WwTW Catchment



Appendix E: Location Plan of the Shellfish Water Protected Areas



Appendix F: Glossary

F.1. The following are common key terms used within this SPG.

Table F: Glossary of key terms

Term	Meaning
Assimilated law	Law derived from the European Union that continues to have effect in domestic law following the UK's withdrawal (formerly 'retained EU law'); the Urban Waste Water Treatment Regulations 1994 continue in this form.
Betterment	The removal of more surface water from the combined sewer than the foul flow a development introduces, producing a net reduction in hydraulic load.
Betterment Bank	The pool of surplus surface water removal already delivered and recorded on the register, on which an applicant may exceptionally draw — only in the public interest, and only where removal cannot be achieved through the sequential search or a DCWW-funded scheme.
Carmarthen Bay and Estuaries European Marine Site (CBEEMS)	The marine Natura 2000 designation overlapping the estuary (a Special Area of Conservation with overlapping Special Protection Areas); its protection is a matter for the Habitats Regulations and Policy CCH4, not this SPG.
Combined sewer	A sewer carrying both foul (sewage) and surface (rainwater) flows in the same pipe.
Combined Sewer Overflow (CSO)	A relief point that discharges diluted untreated sewage to a watercourse when the combined system is overloaded during rainfall.
Compensatory surface water removal	The disconnection or interception of existing surface water so that it no longer enters the combined sewer, offsetting new foul flow.
Dissolved Inorganic Nitrogen (DIN)	A measure of nutrient enrichment relevant to the conservation status of the CBEEMS and to nutrient neutrality under CCH4.
Drainage report	The technical submission demonstrating that betterment can be achieved and that the required sequential search has been followed. It is not a validation requirement, but developers are advised to address it at the earliest design stage.
Flood Estimation Handbook (FEH)	The standard UK source of statistical rainfall and flood-frequency data. Its depth-duration-frequency rainfall model —at time of writing, the FEH22 model — is used to derive design storm intensities.
Foul flow	The wastewater (sewage) generated by a development, which must be conveyed to the public sewer for treatment and cannot be managed on site.
Impermeable area	A hard surface, such as a roof, road or yard, that sheds rainfall as runoff rather than allowing it to soak away. Disconnecting existing impermeable area from the combined sewer is the principal means of achieving removal.
Major development	Development meeting the thresholds in Article 2 of the DMPWO (for example, 10 or more dwellings, a site of 0.5 ha or more, or 1,000 sqm or more of floorspace). Policy INF4 applies only to major development.

Term	Meaning
Nutrient neutrality	A requirement that development causes no net increase in nutrient load to a designated site, demonstrated under the Habitats Regulations through Policy CCH4.
Sequential search	The ordered assessment (on-site, sub-catchment, wider catchment) used to identify where compensatory surface water removal can be achieved.
Shellfish Water Protected Area	A water body specified under the WFD for the protection of economically significant shellfish, with bacteriological water-quality objectives.
SuDS Approval Body (SAB)	The county council body that approves sustainable drainage systems against the Welsh statutory standards under Schedule 3 of the FWMA 2010.
Surface water	Rainwater running off roofs, roads and other hard surfaces. It is managed under the statutory SuDS regime and kept out of the combined sewer wherever possible.
Sustainable Drainage Systems (SuDS)	Drainage features — such as infiltration, swales, ponds and permeable paving — that manage rainfall close to its source in accordance with the Welsh statutory SuDS standards.
WFD no-deterioration	The duty not to allow activities to cause a deterioration in the status of a WFD water body.

Appendix G: Process Flow Chart

[Process flow chart to be inserted following consultation, summarising: is the development major and does it drain to Llanelli WwTW? → drainage report and sequential search (Steps 1, 2a, 2b) → DCWW-funded scheme → Betterment Bank (exceptional, public interest) → condition and entry on the register.]