STRATEGIC FLOOD RISK ASSESSMENT ADDENDUM REPORT

FOR

VARIATION NO. 3

TO THE

LIMERICK DEVELOPMENT PLAN 2022-2028

(AS VARIED)

for: Limerick City and County Council

Comhairle Cathrach & Contae Luimnigh

Limerick City & County Council

by: CAAS Ltd.

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Section 1 Introduction

1.1 Scope

This is the Strategic Flood Risk Assessment (SFRA) Report for Variation No. 3 to the Limerick Development Plan 2022-2028, as varied. It provides the findings of the SFRA considerations undertaken with respect to Variation No. 3.

It forms Addendum I to the Stage 2 SFRA prepared for the Limerick Development Plan 2022-2028.

The report follows the SFRA methodology detailed in, and should be read in conjunction with, the Limerick Development Plan 2022-2028 Stage 2 SFRA Report, which is available alongside the Development Plan[1].

1.2 The Development Plan

The Limerick Development Plan 2022-2028, provides for sustainable development and proper planning within the administrative area of Limerick City and County Council.

The Limerick Development Plan 2022-2028 was subject to Stage 2 SFRA that, inter alia, informed the land use zoning provided for by the Plan and facilitated the integration of various provisions into the Plan that contribute towards flood risk management and drainage in the city. A selection of measures contained in the Plan relating to flood risk management and drainage are provided below.

All projects under the Development Plan when varied will continue to need to demonstrate compliance with the provisions of the existing Development Plan relating to flood risk management and drainage. Development Plan measures relating to flood risk management and drainage include those reproduced on the table below.

Table 1.1 Existing Development Plan Flood Risk Management Measures

Reference from the Plan	Provision
Objective EH O15 Ground Water, Surface Water Protection and River Basin Management Plans	It is an objective of the Council to: a) Protect ground and surface water resources and to take into account the requirement of the Water Framework Directive when dealing with planning and land use issues. b) Implement the provisions of the River Basin Management Plan 2022-2028 and any succeeding plan. The filling of wetlands, surface water features and modifications and drainage of peatlands shall generally be prohibited. c) Implement the measures put forward in the Limerick Groundwater Protection Plan, in assessing planning applications and their consequences for ground d) The Blue Dot Catchments programme is a key action under the River Basin Management Plan for Ireland 2022-2028. The aim of the programme is to protect and restore high ecological status to a network of rivers and water bodies in Limerick. In Limerick, the following rivers and water bodies are Blue Dot Catchments Bleach Lough, the Ogeen River and the Behanagh River. The Council will take a precautionary approach to development which might affect water quality in these areas in line with requirements of the Water Framework Directive.
Objective IN O10 Surface Water and SuDS	It is an objective of the Council to: a) Ensure the separation of foul and surface water discharges in new developments through the provision of separate networks within application site boundaries. b) Work in conjunction with other public bodies towards a sustainable programme of improvement for riverbanks, back drains, etc. c) Maintain, improve and enhance the environmental and ecological quality of surface waters and groundwater, including reducing the discharges of pollutants or contaminants to waters, in accordance with the National River Basin Management Plan for Ireland 2018-2021 (DHPLG) and the associated Programme of Measures and any subsequent River Basin Management Plan. d) Ensure adequate storm water infrastructure to accommodate the planned levels of growth within the Plan area and to ensure that appropriate flood management measures are implemented to protect property and infrastructure. e) Cater for the future developments through public and private driven initiatives where discharge capacity permits. f) Address the issue of disposal of surface water generated by existing development in the area, through

[1] Including here

Reference from the Plan	Provision
	improvements to surface water infrastructure, including for example attenuation ponds, the application of sustainable urban drainage techniques, or by minimising the amount of hard surfaced areas, or providing porous surfaces as the opportunity arises. g) Protect the surface water resources of the Plan area and in individual planning applications request the provision of sediment and grease traps and pollution control measures where deemed necessary. h) Require all planning applications to include surface-water design calculations to establish the suitability of drainage between the site and the outfall point and require all new developments to include SuDS, to control surface water outfall and protect water quality in accordance with the requirements of Chapter 11: Development Management Standards of the Plan. i) Promote SuDS and grey water recycling in developments and responsible use of water by the wider community, to reduce the demand for water supply. j) Require SuDS schemes to be designed to incorporate the four pillars of water quality, water quantity, biodiversity and amenity to the greatest extent possible within the constraints of a given site. k) Allow sufficient land take for SuDS when planning the site and consider the region as a whole, in association with adjoining lands and their requirements in designing SuDS. Developers may be required to set aside lands to cater for not only their own SuDS but also regional SuDS. l) Promote the provision of suitable Blue/Green Infrastructure (BGI) and Nature Based Solutions to the surface water disposal in new development, as a means to provide urban flood resilience. This approach capitalises on the potential of urban green spaces and natural water flows, subject to the other planning considerations such as amenity, maintenance, traffic safety, proper planning and sustainable development and environmental requirements. m) To prohibit the discharge of additional surface water to combined (foul and surface water) sewers in order to maximise the capacity of existing collection systems for foul water. n) Encourage green roofs for the following types of development: -Apartment developments; -Employment developments; -Retail developments; -Leisure facilities; -Education facilities.
Objective CAF O11 Nature Based Solutions	It is an objective of the Council to promote integration and delivery of nature based solutions and infrastructure in new developments, including surface water management, public realm and community projects as a means of managing flood risk and enhancing the natural environment.
Policy CAF P5 Managing Flood Risk	It is a policy of the Council to protect Flood Zone A and Flood Zone B from inappropriate development and direct developments/land uses into the appropriate lands, in accordance with The Planning System and Flood Risk Management Guidelines for Planning Authorities 2009 (or any superseding document) and the guidance contained in Development Management Standards. Where a development/land use is proposed that is inappropriate within the Flood Zone, then the development proposal will need to be accompanied by a Development Management Justification Test and site specific Flood Risk Assessment in accordance with the criteria set out under The Planning System and Flood Risk Management Guidelines for Planning Authorities 2009 and Circular PL2/2014 (as updated/superseded). In Flood Zone C, the developer should satisfy themselves that the probability of flooding is appropriate to the development being proposed and should consider the implications of climate change.
Objective CAF O20 Flood Risk Assessments	It is an objective of the Council to require a Site-specific Flood Risk Assessment (FRA) for all planning applications in areas at risk of flooding (coastal/tidal, fluvial, pluvial or groundwater), where deemed necessary. The detail of these Site-specific FRAs (or commensurate assessments of flood risk for minor developments) will depend on the level of risk and scale of development. A detailed Site-specific FRA should quantify the risks, the effects of selected mitigation and the management of any residual risks. The assessments shall consider and provide information on the implications of climate change with regard to flood risk in relevant locations.
Objective CAF O21 Identified Flood Risk	It is an objective of the Council to: a) Ensure that no development shall commence on the lands identified as being at flood risk adjacent to the Raheen Business Park in the townlands of Ballycummin/ Rootiagh, zoned for High Tech/ Manufacturing, until a Site-specific Flood Risk Assessment, including hydraulic model has been prepared for the lands, which demonstrates that the flood risk for the lands can be mitigated or that a less vulnerable use can be accommodated on site. b) Ensure that on the Enterprise and Employment lands located to the northwest of the M20/M7/N18 junction to the south of Toppin's field, that no encroachment onto, or loss of the flood plain occurs at this location and that only water compatible development should be permitted for the lands that are identified as being at risk of flooding. c) Ensure any planning application, including proposals for water compatible uses, on the lands in Flood Zones A and B adjacent to the Coonagh TUS campus, zoned for Education and Community, shall include a comprehensive Site-Specific Flood Risk Assessment, incorporating a drainage assessment for the lands, which demonstrates that the flood risk can be mitigated and that water compatible uses can be accommodated without adversely impacting on the flood risk of neighbouring residential properties. d) No works including the undertaking of ground level changes shall commence on the lands in the National Technology Park subject to flood risk, until all flood mitigation measures proposed on the site to facilitate future development of the IDA lands have been put in place. These measures shall form part of a project-specific flood risk assessment being completed as part of any planning application. e) Implement the flood mitigation measures included under the Justification Test including to ensure that vulnerable uses, including that of a residential nature, shall not be permitted at ground floor level on the District Centre zoned lands at Jetland/Ennis Road/ Ennis Road Retail Park, at Caherdavin/Moyross. f) New or more intensive permissible uses not covered by part (g) below on Variation No. 3 lands including

Reference from the Plan	Provision
	Sites Z10 and Z11 that overlap with Flood Zones A or B or with Future Climate Scenario Flood Risk Areas (as identified in Appendix I of the accompanying SFRA Addendum) shall be limited to water compatible uses. This limitation shall take primacy over any other related land use zoning provision including the City Centre zoning applicable to Sites Z10 and Z11. Proposals for developments within these areas shall be accompanied by a Site-Specific Flood Risk Assessment. (g) Extensions of existing uses or minor development on Variation No. 3 lands including Sites Z10 and Z11 that overlap with Flood Zones A or B or with Future Climate Scenario Flood Risk Areas (as identified in Appendix I of the accompanying SFRA Addendum) shall comply with requirements of the Planning System and Flood Risk Assessment Guidelines, and associated circular, including providing detailed design specifications as may be required to facilitate the impact of development. Extensions of existing uses or minor development within flood risk areas shall not: obstruct important flow paths; introduce a number of people into flood risk areas; entail the storage of hazardous substances; have adverse impacts or impede access to a watercourse, floodplain or flood protection and management facilities; or increase the risk of flooding elsewhere.
Objective CAF O23 Flood Relief Schemes	It is an objective of the Council to support and facilitate the development of Flood Relief Schemes as identified in the CFRAM 10 Year Investment Programme and ensure development proposals do not impede or prevent the progression of these measures.
Objective CAF O24 Minor Flood and Mitigation Works and Coastal Protections Schemes	It is an objective of the Council to support and facilitate the Office of Public Works Minor Flood and Mitigation Works and Coastal Protections Schemes and ensure development proposals do not impede or prevent the progression of these measures.
Objective CAF O22 Cooperation with Other Agencies	It is an objective of the Council to work with other bodies and organisations, as appropriate, to help protect critical infrastructure, including water and wastewater, within Limerick, from risk of flooding. Any subsequent plans shall consider, as appropriate any new and/or emerging data, including, when available, any relevant information contained in the CFRAM Flood Risk Management Plans and as recommended in the SFRA for the Plan.
Objective CAF O23 Flood Relief Schemes	It is an objective of the Council to support and facilitate the development of Flood Relief Schemes as identified in the CFRAM 10 Year Investment Programme and ensure development proposals do not impede or prevent the progression of these measures.
Objective CAF O24 Minor Flood and Mitigation Works and Coastal Protection Schemes	It is an objective of the Council to support and facilitate the Office of Public Works Minor Flood and Mitigation Works and Coastal Protection Schemes and ensure development proposals do not impede or prevent the progression of these measures.
Objective CAF O25 Strategic Flood Risk Assessment	It is an objective of the Council to have regard to the recommendations set out in the Strategic Flood Risk Assessment prepared to support the Plan.
Objective SCSI O19 Protection of lands zoned for Open Space and Recreation	It is an objective of the Council to: a) Protect existing open space, by not permitting development which encroaches on open space and would result in reducing the recreational value to the public. b) Protect semi-natural open space areas from inappropriate development in the interest of recreational enjoyment, community health and well-being, flood protection and biodiversity.
Development Management Standard	**11.3.11 SuDS (Sustainable Drainage Systems)** Detailed text in Plan

1.3 Variation No. 3

1.3.1 Overview

The purpose of Variation No. 3 is to accelerate housing delivery and respond to recent changes in National planning policy, namely the publication of the National Planning Framework (NPF) First Revision and the publication of the following Section 28 Ministerial Guidelines:

- NPF Implementation: Housing Growth Requirements, Guidelines for Planning Authorities (2025);
- Planning Design Standards for Apartments, Guidelines for Planning Authorities (2025); and
- Sustainable Residential Development and Compact Settlements Guidelines for Planning Authorities (2024).

In addressing the housing growth requirements and other changes to National planning policy, the Variation provides changes to the Volume 1, Written Statement and appendices, Volume 2a, Level 1 Limerick City and Suburbs (in Limerick) Mungret and Annacotty, Maps and Settlement Capacity Audit,

Volume 6, Housing Strategy and Housing Need Demand Assessment, and the Building Height Strategy for Limerick City of the Limerick Development Plan 2022-2028 to address specific immediate updates that are needed to implement national policy.

Variation No. 3 provides changes as follows:

- Volume 1, written statement and appendices, including changes to Chapter 1 Introduction, Vision and Strategic Overview, Chapter 2 Core Strategy, Chapter 3 Spatial Strategy, Chapter 4 Housing, Chapter 5 A Strong Economy, Chapter 6 Environment, Heritage, Landscape and Green Infrastructure, Chapter 7 Sustainable Mobility and Transport, Chapter 8 Infrastructure, Chapter 9 Climate Action, Flood Risk and Transition to Low Carbon Economy, Chapter 10 Sustainable Communities and Social Infrastructure, Chapter 11 Development Management Standard, Chapter 12 Land Use Zoning Strategy, Chapter 13 Implementation and Monitoring and Appendix 1: Section 28 Guidelines Compliance.

- Volume 2a Maps and Settlement Capacity Audit, including:
  - Amendments to land use zoning for a number of identified lands to facilitate residential uses and for strategic planned projects within the boundary of Limerick City and Suburbs including Mungret and Annacotty.
  - Amendments to land use zoning to reflect developments that have occurred since the adoption of the Plan and to capture the current land use context within the boundary of Limerick City and Suburbs, including Mungret and Annacotty.
  - Amendments to the Settlement Capacity Audit maps and tables for Limerick City and Suburbs reflective of zoning changes and the Sustainable Residential Development and Compact Settlements Guidelines for Planning Authorities (2024).

- Volume 6, Supporting Strategies:
  - Updated Housing Strategy and Housing Need Demand Assessment, to inform policy for the remaining period of the Limerick Development Plan to 2028 and beyond.
  - Proposed amendments to Policy in the Building Height Strategy and subsequent changes to Development Plan objectives in so far as it relates to building height.

For additional detail, refer to Variation No. 3 as made.

The Variation is also responding to Pillar 1: Activating Supply as set out in the Government Action Plan on Housing Supply and Targeting Homelessness" Delivering Homes, Building Communities, 2025-2030 (November 2025) The zoning of sufficient land is seen as a key enabler to delivery.

For the purposes of clarity and the avoidance of doubt, the Variation has taken due account of the relevant National Planning Policy Guidance, noting that under section 27 of the Planning and Development Act 2024, section 28 guidelines under the 2000 Act are deemed to be National Planning Policy Guidance until a National Planning Statement is issued.

Zoning in this variation relates to lands within the settlement boundary of Limerick City and Suburbs including Annacotty and Mungret only. Further variations will be progressed concentrating on accelerating housing in zoned settlements across the county as appropriate and in due course. A full review of the Limerick Development Plan 2022-2028 will take place subsequently, in accordance with the provisions of the Planning and Development Act 2024, as introduced in the recently commenced sections of the Planning and Development Act, 2024 (as amended). It should be noted that this variation does not constitute a comprehensive review of all relevant policies, objectives, or guidance of the Limerick Development Plan.

1.3.2 Iterative SFRA/Variation-Preparing Process

Land use zoning contained within the Variation has been informed by an iterative SFRA process, including both: the delineation of flood risk zones; and OPW future climate scenario risk areas (mid-range as well as high end).

The detailed Variation preparation process undertaken by the Planning Department combined with specialist input from the SFRA process facilitated zoning that helps to avoid inappropriate development being permitted in areas of elevated flood risk.

Furthermore, written SFRA provisions have been integrated into the Variation as detailed under Section 2.

Section 2 Consideration of Flood Risk and Variation No. 3

Land use zoning contained within the Variation has been informed by an iterative SFRA process, including both: the delineation of flood risk zones; and OPW future climate scenario risk areas (mid-range as well as high-end). The detailed Variation preparation process undertaken by the Planning Department combined with specialist input from the SFRA process facilitated zoning that helps to avoid inappropriate development being permitted in areas of elevated flood risk.

Submissions made on the Proposed Variation and Proposed Material Alterations, and associated SFRA documentation, were taken into account by the Variation-making/SFRA processes. Submissions included those relating to Z-23 and U-34.

A site visit confirmed that there is no watercourse at U-24 – therefore there is no Flood Risk A or B at this site.

In relation to site Z-23, following review of the OPW's detailed LiDAR mapping for this area it has been concluded that this watercourse is no longer extant – therefore there is no Flood Risk A or B at this site.

2.1 Present Day Flood Risk – Flood Zones

All undeveloped sites where land use zoning is changed under the Variation are situated within Flood Zone C. This is the Flood Zone with the lowest flood risk. The uses permissible / open for consideration under the Land Use Zoning Objectives being provided for these sites are considered to be appropriate to the relevant Flood Zone.

However, a smaller number of previously developed Variation No. 3 sites include lands that overlap with Flood Zones A or B (mapping is provided in Appendix I). The changes in zoning involved at these sites reflect the current use(s). The reference numbers for these sites as per the Variation No. 3 documents are:

- U-10
- U-14
- U-2
- U-36
- U-37
- U-42
- U-43
- U-7
- U-8
- Z-10
- Z-11
- Z-2
- Z-23
- Z-28
- Z-35
- Z-8
- Z-9
- Z-17

All projects under the Development Plan when varied will continue to need to demonstrate compliance with the provisions of the existing Development Plan relating to flood risk management and drainage (refer to Section 1.2 of this report).

The following text has been integrated into the Variation in order to deal with new or more intensive permissible uses on Variation No. 3 lands that overlap with Flood Zones A or B:

- New or more intensive permissible uses not covered by part (g) below on Variation No. 3 lands including Sites Z10 and Z11 that overlap with Flood Zones A or B or with Future Climate Scenario Flood Risk Areas (as identified in Appendix I of the accompanying SFRA Addendum) shall be limited to water compatible uses. This limitation shall take primacy over any other related land use zoning provision including the City Centre zoning applicable to Sites Z10 and Z11. Proposals for developments within these areas shall be accompanied by a Site-Specific Flood Risk Assessment.

The following text has been integrated into the Variation in order to deal with extensions of existing uses or minor development on Variation No. 3 lands that overlap with Flood Zones A or B:

- Extensions of existing uses or minor development on Variation No. 3 lands including Sites Z10 and Z11 that overlap with Flood Zones A or B or with Future Climate Scenario Flood Risk Areas (as identified in Appendix I of the accompanying SFRA Addendum) shall comply with requirements of the Planning System and Flood Risk Assessment Guidelines, and associated circular, including providing detailed design specifications as may be required to facilitate the impact of development. Extensions of existing uses or minor development within flood risk areas shall not: obstruct important flow paths; introduce a number of people into flood risk areas; entail the storage of hazardous substances; have adverse impacts or impede access to a watercourse, floodplain or flood protection and management facilities; or increase the risk of flooding elsewhere.

2.2 Future Climate Scenario Risk Areas

Some areas beyond Flood Zones A and B are identified as being at risk under OPW Mid-Range and High-End Future Climate Scenario Risk Area Mapping. Most sites where land use zoning is changed under the Variation are situated outside of these areas.

However, a smaller number of previously developed Variation No. 3 sites include lands that overlap with Future Climate Scenario Risk Areas (mapping is provided in Appendix I). The changes in zoning involved at these sites reflect the current use(s). The reference numbers for these sites as per the Variation No. 3 documents are:

- U-10
- U-14
- U-2
- U-36
- U-37
- U-4
- U-42
- U-43
- U-7
- U-8
- Z-10
- Z-11
- Z-23
- Z-28
- Z-32
- Z-35
- Z-8
- Z-9
- Z-17

All projects under the Development Plan when varied will continue to need to demonstrate compliance with the provisions of the existing Development Plan relating to flood risk management and drainage (refer to Section 1.2 of this report).

The following text has been integrated into the Variation in order to deal with new or more intensive permissible uses on Variation No. 3 lands that overlap with Future Climate Scenario Risk Areas:

- New or more intensive permissible uses not covered by part (g) below on Variation No. 3 lands including Sites Z10 and Z11 that overlap with Flood Zones A or B or with Future Climate Scenario Flood Risk Areas (as identified in Appendix I of the accompanying SFRA Addendum) shall be limited to water compatible uses. This limitation shall take primacy over any other related land use zoning provision including the City Centre zoning applicable to Sites Z10 and Z11. Proposals for developments within these areas shall be accompanied by a Site-Specific Flood Risk Assessment.

The following text has been integrated into the Variation in order to deal with extensions of existing uses or minor development on Variation No. 3 lands that overlap with Future Climate Scenario Risk Areas:

- Extensions of existing uses or minor development on Variation No. 3 lands including Sites Z10 and Z11 that overlap with Flood Zones A or B or with Future Climate Scenario Flood Risk Areas (as identified in Appendix I of the accompanying SFRA Addendum) shall comply with requirements of the Planning System and Flood Risk Assessment Guidelines, and associated circular, including providing detailed design specifications as may be required to facilitate the impact of development. Extensions of existing uses or minor development within flood risk areas shall not: obstruct important flow paths; introduce a number of people into flood risk areas; entail the storage of hazardous substances; have adverse impacts or impede access to a watercourse, floodplain or flood protection and management facilities; or increase the risk of flooding elsewhere.

2.3 Sustainable Drainage Systems and Surface Water Guidance and Strategy

As provided for by measures integrated into the existing Limerick Development Plan 2022-2028 (including the measures reproduced in Table 1.1 of this report), new developments will be required to incorporate the requirement for Sustainable Urban Drainage Systems (SuDS) where appropriate. In combination, these provisions will contribute towards a sustainable drainage strategy.

It is likely that some or all of the following SuDS techniques will be applicable, including to manage surface water run-off:

- Rainwater harvesting
- Green roofs
- Infiltration systems
- Proprietary treatment systems
- Filter strips
- Filter drains
- Swales
- Bioretention systems
- Trees
- Pervious pavements
- Attenuation storage tanks
- Detention basins
- Ponds and wetlands

Each land use zoning objective allows for a range of possible uses and the Development Plan allows for a range of scales, heights, densities configurations/layouts and designs. The application of different SuDS techniques will be dependent on a combination of the relevant site's characteristics and the development (when known) being considered.

Because of the infinite range of land use types and associated developments and designs that could occur under the Plan as varied the guidance from this SFRA is to consider the full range of SUDs available, taking into account the recommendations and information provided above and below. On key development/opportunity sites, in particular, integrated and area-based provision of SuDS and green infrastructure may be appropriate in order to avoid reliance on individual site by site solutions.

Some sites will pose particular challenges for SuDS. The best practice manuals cited at the end of this sub-section should be considered in determining solutions.

At sites with high groundwater levels:

- Infiltration techniques may be particularly challenging and shallow infiltration basins or permeable pavements, may be most appropriate.
- Storage and conveyance systems need to be kept above maximum groundwater levels and membranes of appropriate robustness should be used to line any tanks.
- Locating storage tanks or lined sub-base systems below the maximum likely groundwater level can cause result in flotation and structural risks.

At sites that are steeply sloping:

- Effective utilisation of SuDS storage capacity should be considered, which can benefit from aligning with contours of roads and other structures, where these sites are terraced. Terraced car-parking areas can allow for storage of water through pervious pavements. Basins on terraces can provide open space. The runoff catchment on these sites can also be divided into smaller sub catchments.
- Velocities in swales and basins due to the steep slope can be managed by using check dams in swales or in storage layers, such as below permeable pavements.
- The possibility of infiltrating water resurfacing downslope or to increase pressure on downslope structures, such as walls, causing them to fail should be considered.

At sites that are very flat:

- On very flat sites, it is often not possible to construct piped drainage systems with sufficient falls to achieve minimum self-cleansing velocities. The solution can involve the use of shallow SuDS components such as swales, pervious pavements or high-capacity linear drainage channels, often dividing the site into small sub-catchments and providing local combined storage and conveyance components.
- A slight fall on any subgrade exposed to water is preferred in order to avoid ponding of water and reduction in strength in the soil due to waterlogging. If this is not possible then reduction in strength should be taken into account in the structural design of tanks or pervious pavements.
- Pumping should be a last resort and only allowable in situations where guaranteed maintenance of the pumps can be ensured.

At sites that include areas of floodplain:

- Notwithstanding that all storage volume should normally be provided within the development footprint, outside of the floodplain, SuDs on floodplains can be effective in managing routine rainfall/treatment for frequent events.
- SuDs should be selected and designed taking account of the likely high groundwater table and vulnerability to erosion during periods of high flows/water levels and SuDS should not reduce floodplain storage or conveyance.
- Conveyance routes should limit grading and the creation of surface features that could either reduce floodplain capacity or be washed out in a flood.
- Surface discharge from SuDS should be dispersed with point discharges minimised or eliminated.
- All SuDS within or crossing a floodplain should take full consideration of the likely influence of river water levels on the design performance. Combined probability assessments may be required.
- Siltation and subsequent clearance after a flood event has subsided should also be taken into account in the design.

SuDS are effective technologies, which aim to reduce flood risk, improve water quality and enhance biodiversity and amenity.

The systems should aim to mimic the natural drainage of the application site to minimise the effect of a development on flooding and pollution of existing waterways. SuDS include devices such as swales, permeable pavements, filter drains, storage ponds, constructed wetlands, soakways and green roofs. The integration of nature-based solutions, such as amenity areas, ecological corridors and attenuation ponds, into public and private development initiatives, is applicable within the provisions of the Settlement Plan and should be encouraged. Applications for development should take into account, as appropriate, the Department of Housing, Local Government and Heritage's (2022) "Nature-based Solutions to the Management of Rainwater and Surface Water Runoff in Urban Areas - Water Sensitive Urban Design - Best Practice Interim Guidance Document" and the Local Authority Waters Programme's Guidance Document for Planners, Developers and Developer Agents 'Implementation of Urban Nature-based Solutions' (2025).

In some exceptional cases, and at the discretion of the Council, where it is demonstrated that SuDS devices are not feasible, approval may be given to install underground attenuation tanks or enlarged pipes in conjunction with other devices to achieve the required water quality. Such alternative measures will only be considered as a last resort. Proposals for surface water attenuation systems should include maintenance proposals and procedures.

Urban developments, both within developments and within the public realm, should seek to minimise and limit the extent of hard surfacing and paving and require the use of sustainable drainage techniques for new development or for extensions to existing developments, in order to reduce the potential impact of existing and predicted flood risk. Development proposals should be accompanied by a comprehensive SuDS assessment that addresses run-off rate, run-off quality and its impact on the existing habitat and water quality.

For larger sites (i.e. multiple dwellings or commercial units) master planning should ensure that existing flow routes are maintained, through the use of green infrastructure. In addition, where multiple individual proposals are being made SUDS should be integrated where appropriate and relevant.

All proposed development, should consider the impact of surface water flood risks on drainage design e.g. in the form of a section within the flood risk assessment (for sites in Flood Zone A or B) or part of a surface water management plan.

Pluvial flood risk is likely to be present in local areas, however; it is not taken into account in the delineation of flood zones. Furthermore, PFRA indicative pluvial maps (2012) are not considered to be reliable for the purposes of zoning or decision-making. Particular attention should be given to development in low-lying areas which may act as natural ponds for collection of run-off. The drainage design should ensure no increase in flood risk to the site, or the downstream catchment. Where possible, and particularly in areas of new development, floor levels should be at an appropriate height above adjacent roads and hard standing areas to reduce the consequences of any localised flooding. Where this is not possible, an alternative design appropriate to the location may be prepared.

Further to the above, proposals for development should consider the Construction Industry Research and Information Association (CIRIA) SuDS Manual 2015 and any future update of this guidance and Greater Dublin Strategic Drainage Study documents in designing SUDS solutions, including the New Development Policy, the Final Strategy Report, the Code of Practice and "Irish SuDS: guidance on applying the GDSDS surface water drainage criteria".

2.4 Justification Tests

Table 2.1 demonstrates application of the Justification Test as provided for by the Guidelines on Flood Risk Management as relevant.

Table 2.1 Justification Tests

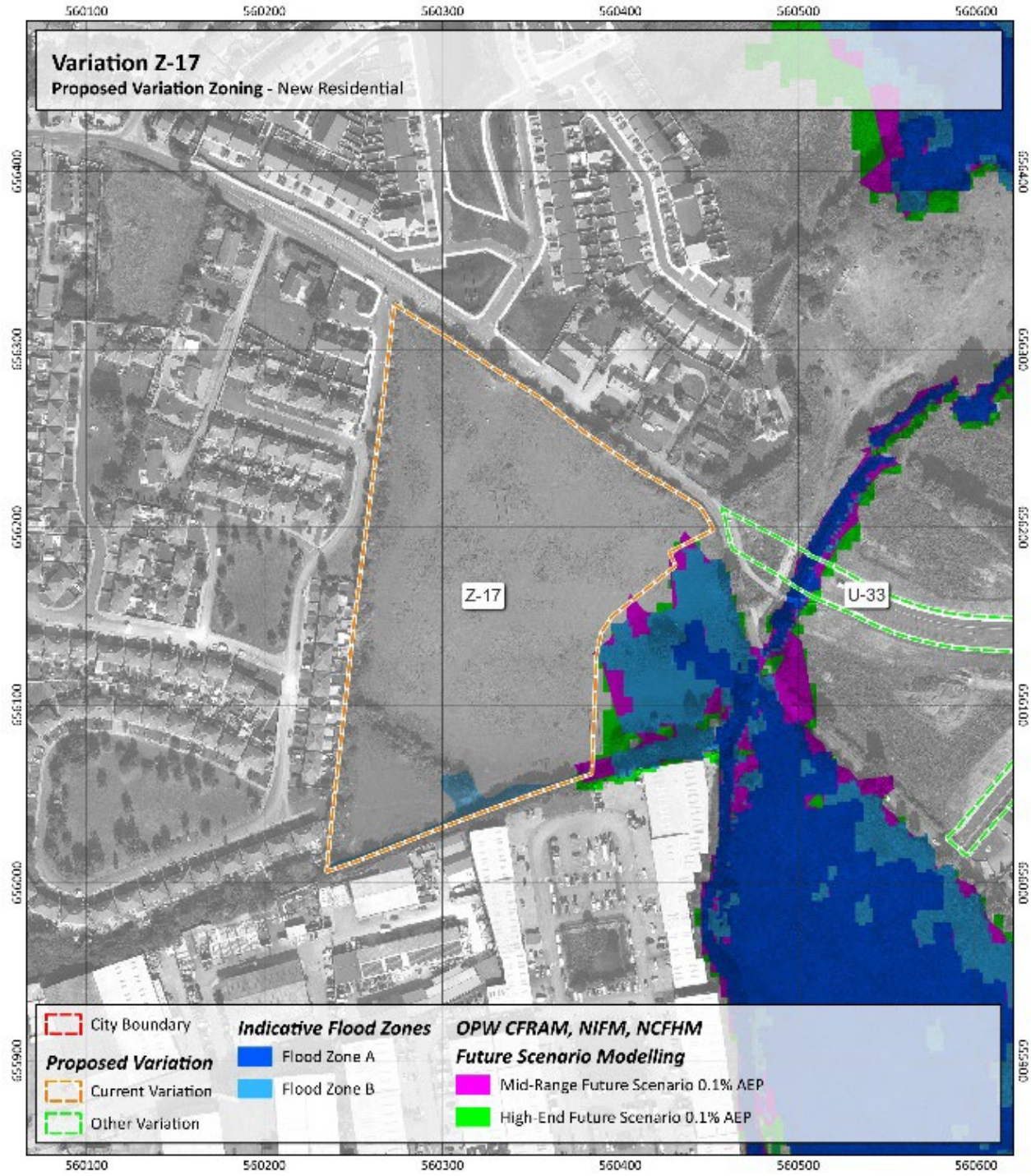
Land Use Zoning	Flood Zone	Justification Test (if one of the following fails; all must be passed for the test to be passed)						Overall Result (Fail or Pass)
		Settlement targeted for growth under the NPF, RSES and/or CDP?	Is the zoning of the lands required to achieve the proper planning and sustainable development of the settlement and in particular has the required sub-criteria been satisfied[2] ?				Has flood risk assessment to an appropriate level of detail been carried out as part of the SEA as part of the plan preparation process, which demonstrates that flood risk to the development can be adequately managed and the use or development of the lands will not cause unacceptable adverse impact elsewhere?	
			(i) – see footnote	(ii) – see footnote	(iii) – see footnote	(iv) – see footnote	(v) – see footnote	
Any lands zoned Existing Residential overlapping with Flood Zone A / B	A and B	Yes	No	No	No	No	No	A Stage 1 and 2 Flood Risk Assessment has been undertaken as part of the plan preparation process. This level of assessment is considered appropriate and has informed land use zoning and written provisions. The SFRA outlines the measures integrated into the existing Plan and the Variation to adequately manage flood risks. A precautionary approach has been applied to the zoning of undeveloped lands. Future development will: be subject to site-specific flood risk assessments; and comply with the flood risk management provisions of the Plan as varied, including structural and non-structural risk management measures. This is in order to ensure that flood hazard and risk to the area and to other adjoining locations will not be increased or, if practicable, will be reduced. Overlaps between Land Use Zoning and Flood Zones have been mapped to clearly indicate lands constrained by flood risk – these are subject to the Constrained Land Use Provisions. Development will be subject to the provisions of the Plan as varied that relate to flood risk and climate change.	Fail, however the text integrated into the Variation [parts f) & g) of written objective – CAF O21] will limit development at these lands.
Z10	A and B	Yes	Yes	Yes	Yes	No	No	
Z11	A and B	Yes	Yes	Yes	Yes	No	No	
U2	A and B	Yes	No	Yes	No	No	No	
U3	A and B	Yes	No	Yes	No	No	No	
U37	A and B	Yes	No	Yes	No	Yes	No	
U42	A and B	Yes	No	Yes	No	Yes	No	
U43	A and B	Yes	No	Yes	No	Yes	No	

[2] (i) Is essential to facilitate regeneration and/or expansion of the centre of the urban settlement; (ii) Comprises significant previously developed and/or under-utilised lands; (iii) Is within or adjoining the core of an established or designated urban settlement; (iv) Will be essential in achieving compact and sustainable urban growth; and (v) There are no suitable alternative lands for the particular use or development type, in areas at lower risk of flooding within or adjoining the core of the urban settlement.

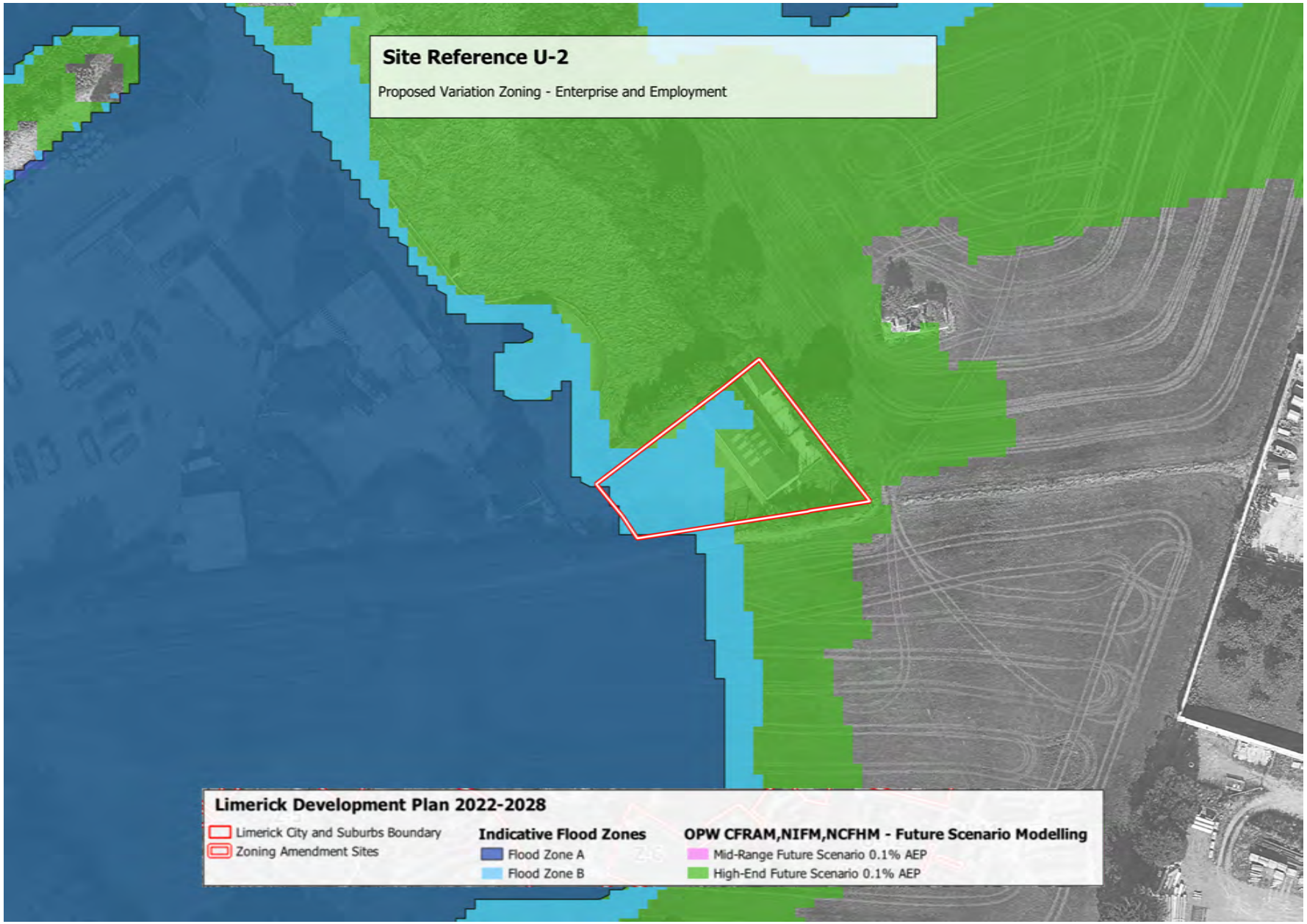
Section 3 Conclusion

Taking into account the provisions integrated into the existing Limerick Development Plan 2022-2028, the SFRA undertaken to inform the Limerick Development Plan, the changes included within Variation No. 3 and currently available information on flood risk, this SFRA Addendum demonstrates that the Plan, as varied, will continue to be consistent with the Flood Risk Management Ministerial Guidelines.

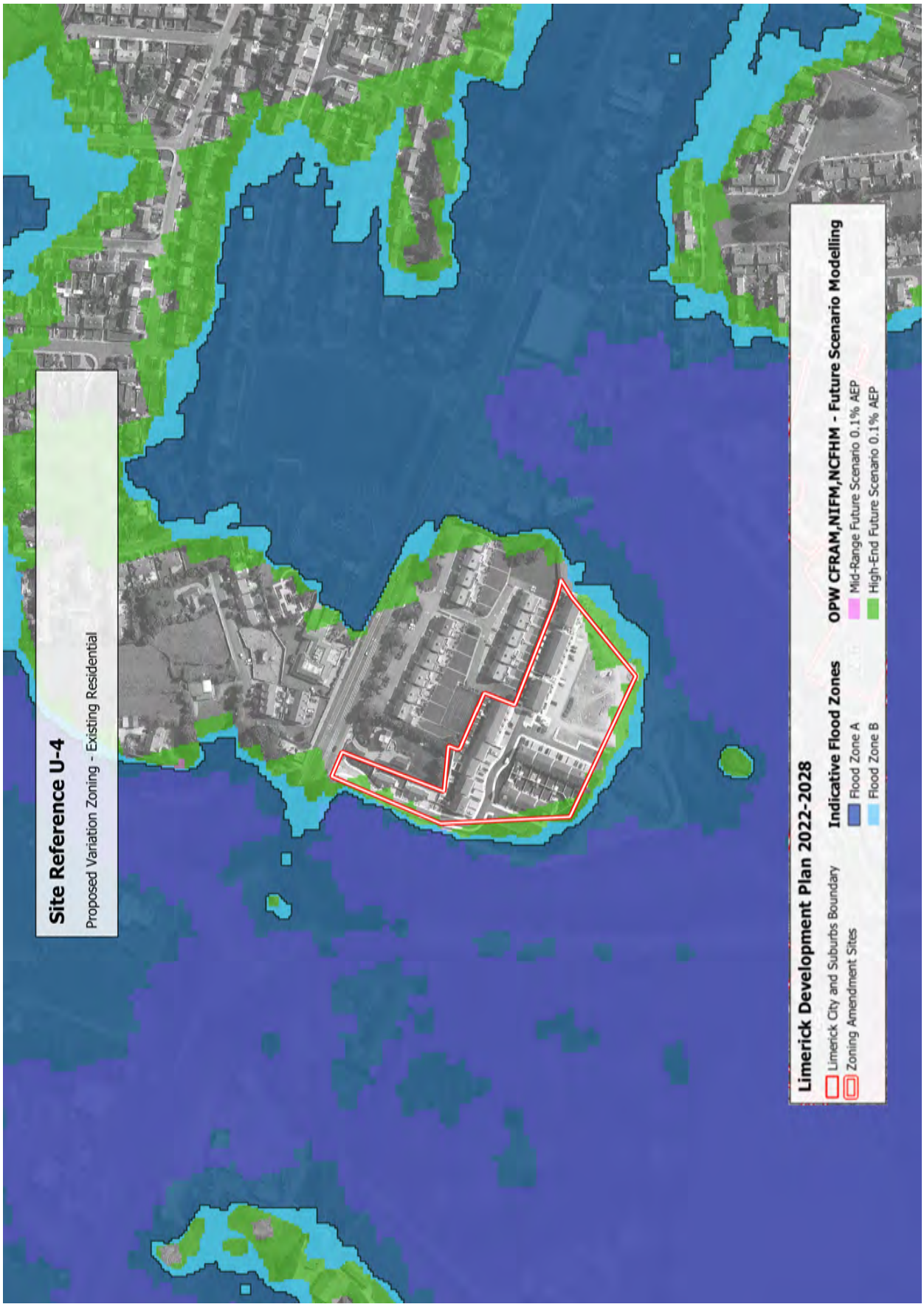
Appendix I: Overlaps between Variation lands, Flood Zones A/B and/or Future Climate Scenario Risk Areas



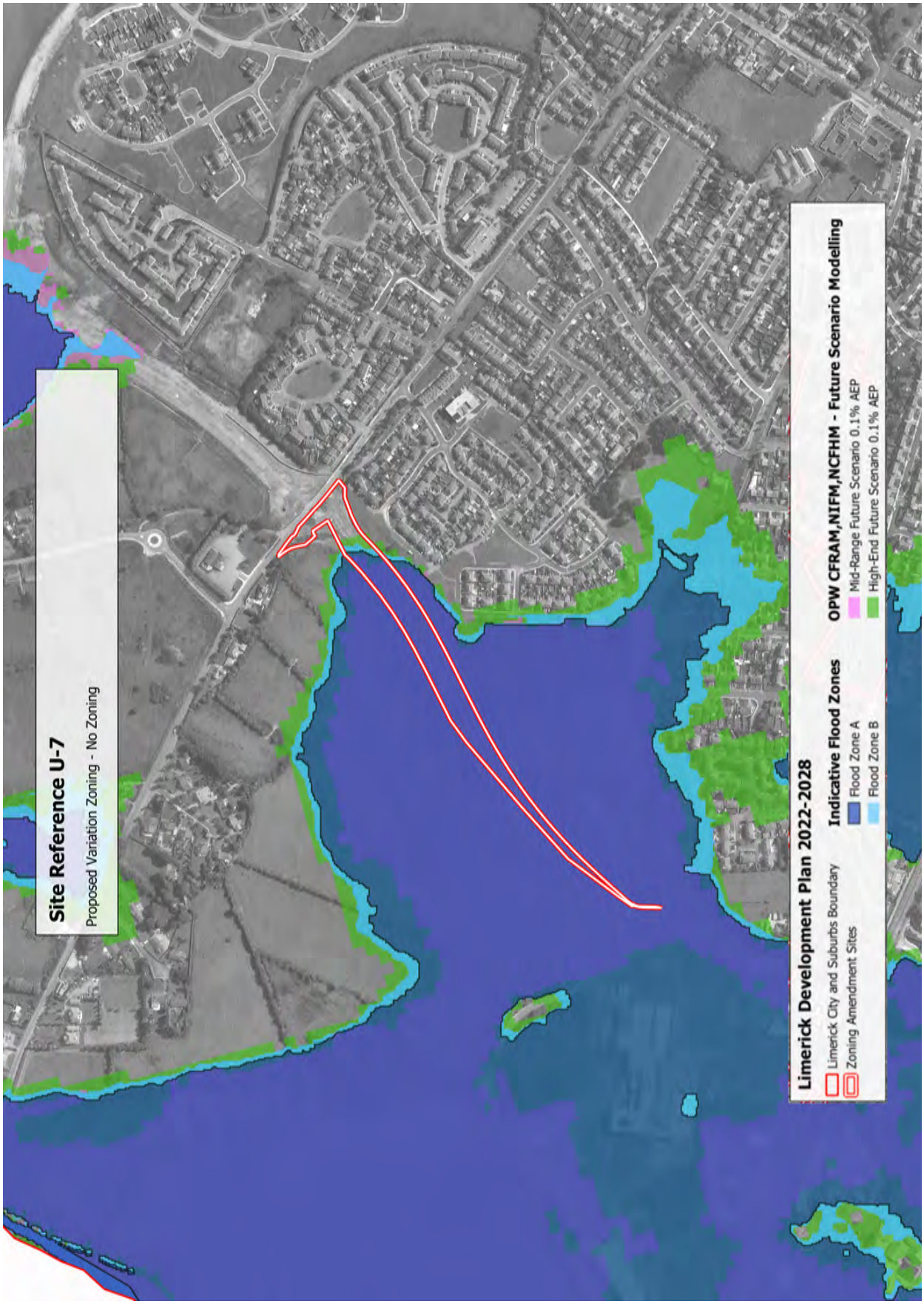
Overlaps at Variation No. 3 Site Reference Z-17



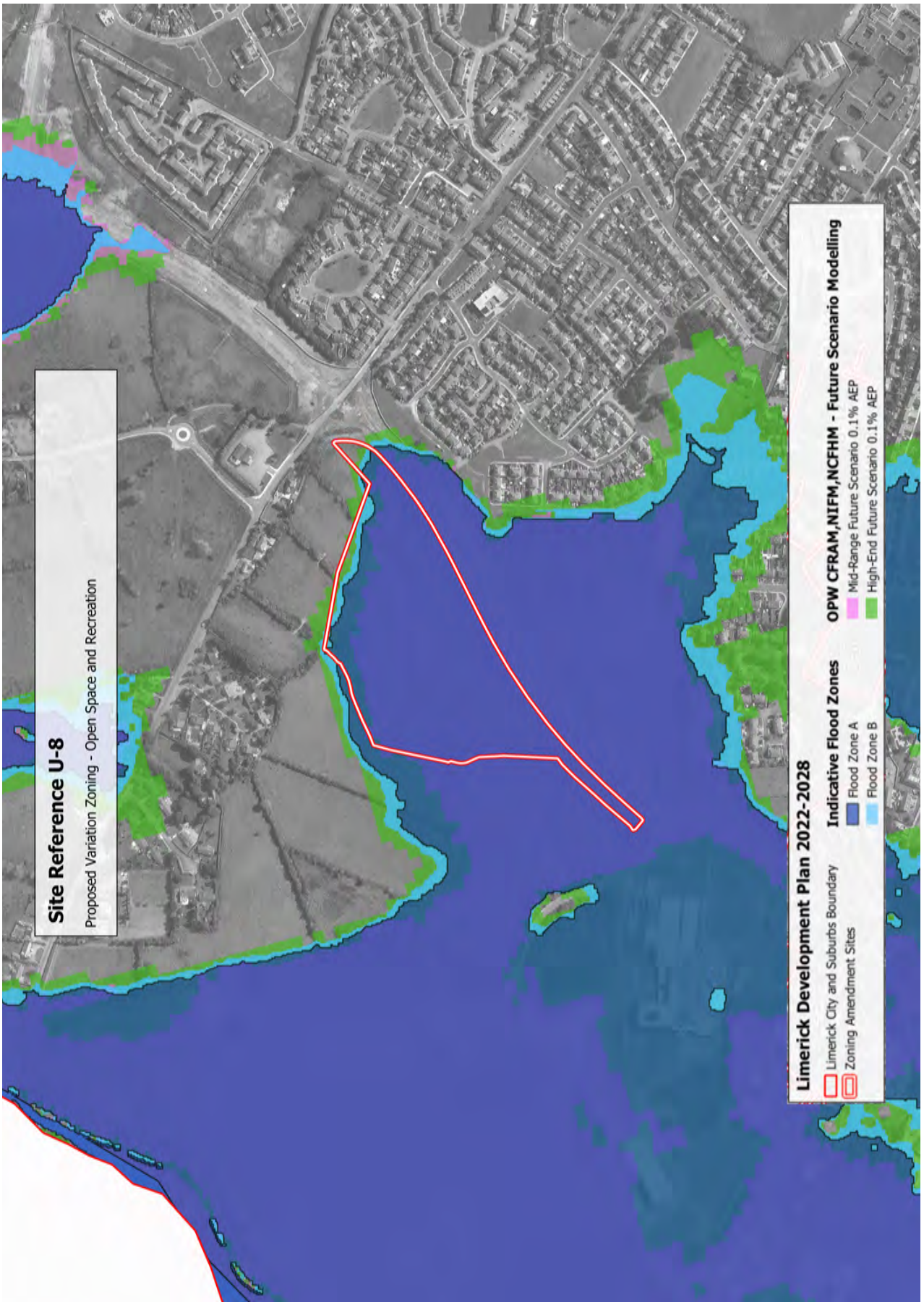
Overlaps at Variation No. 3 Site Reference U-2



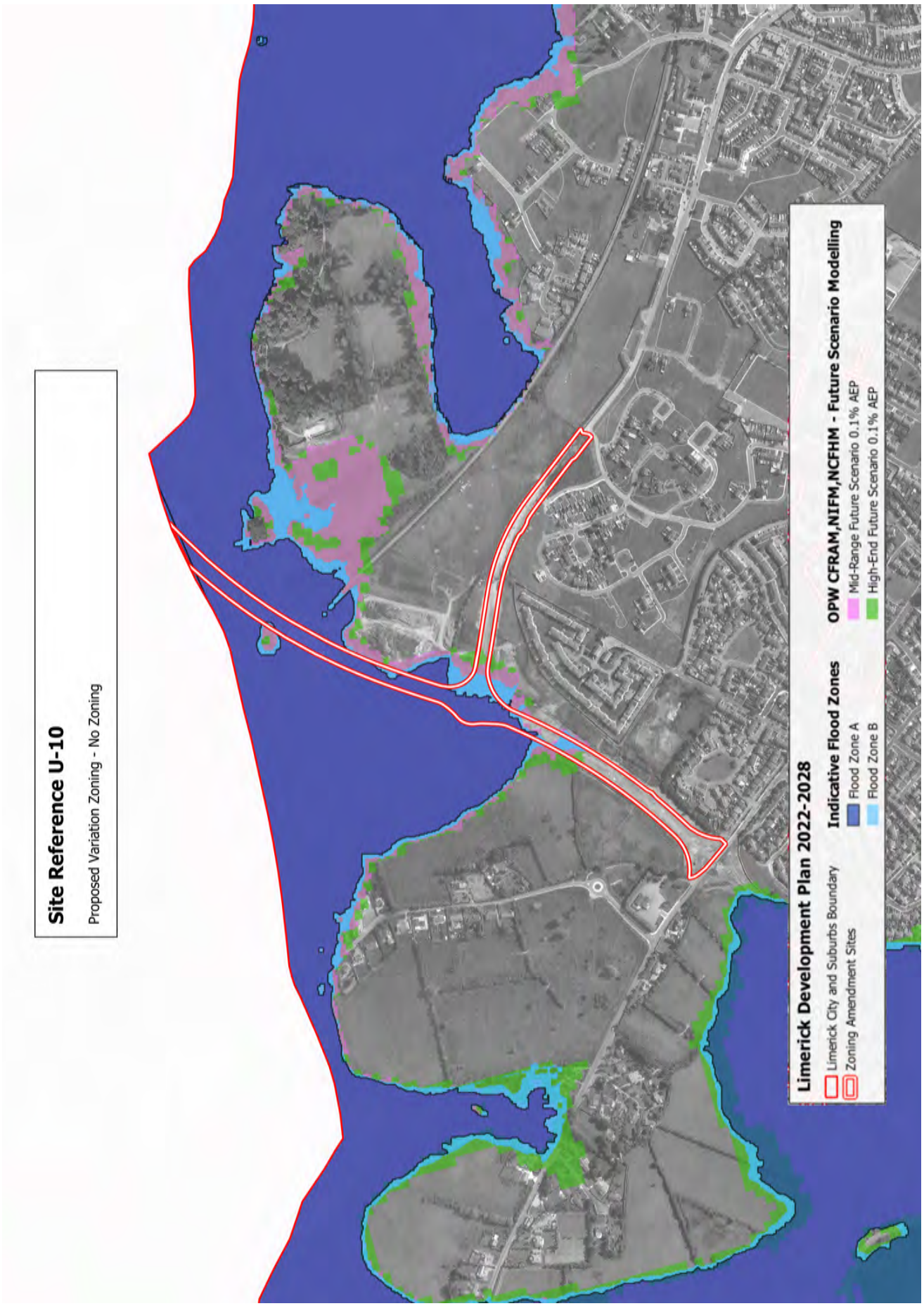
Overlaps at Variation No. 3 Site Reference U-4



Overlaps at Variation No. 3 Site Reference U-7



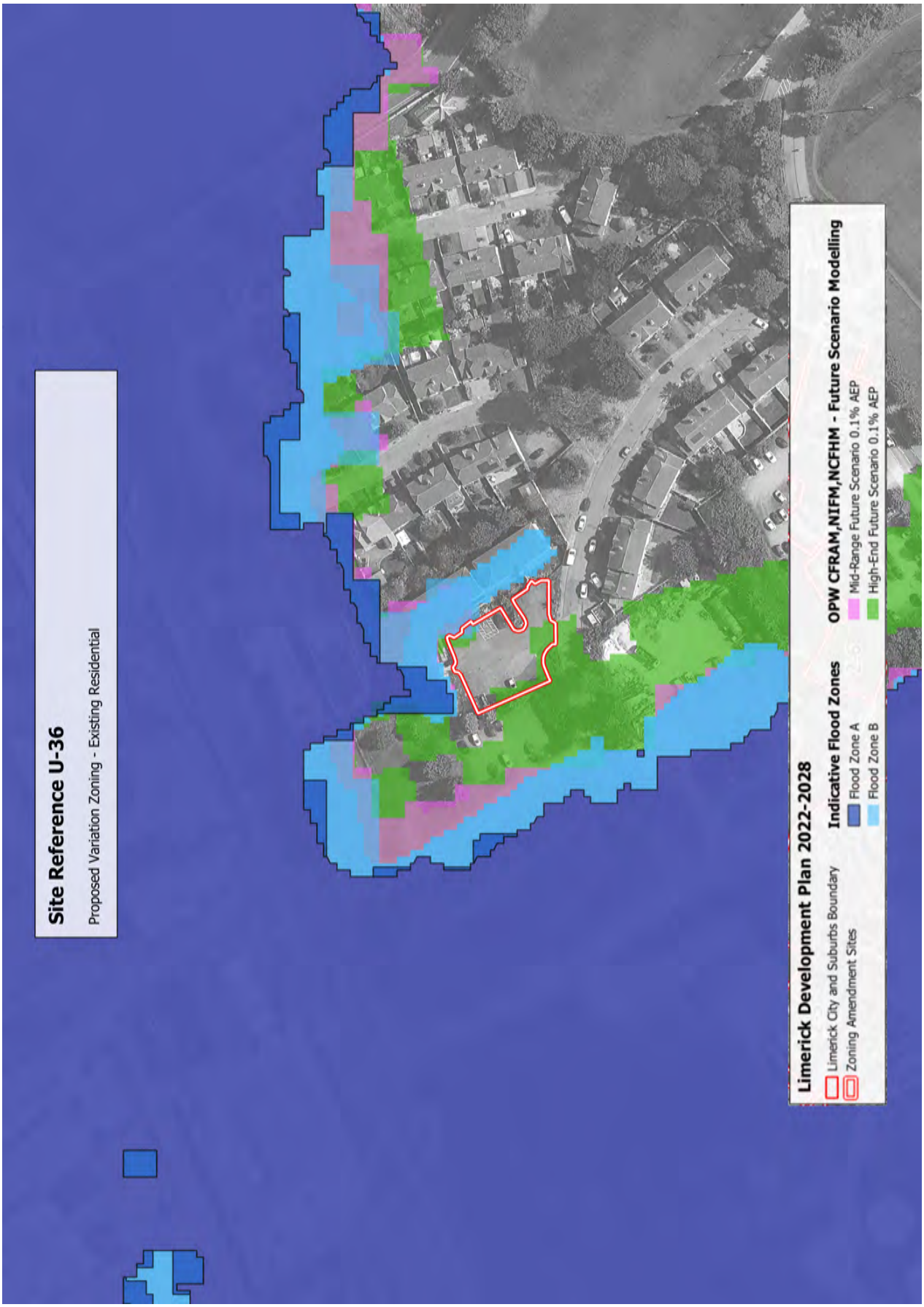
Overlaps at Variation No. 3 Site Reference U-8



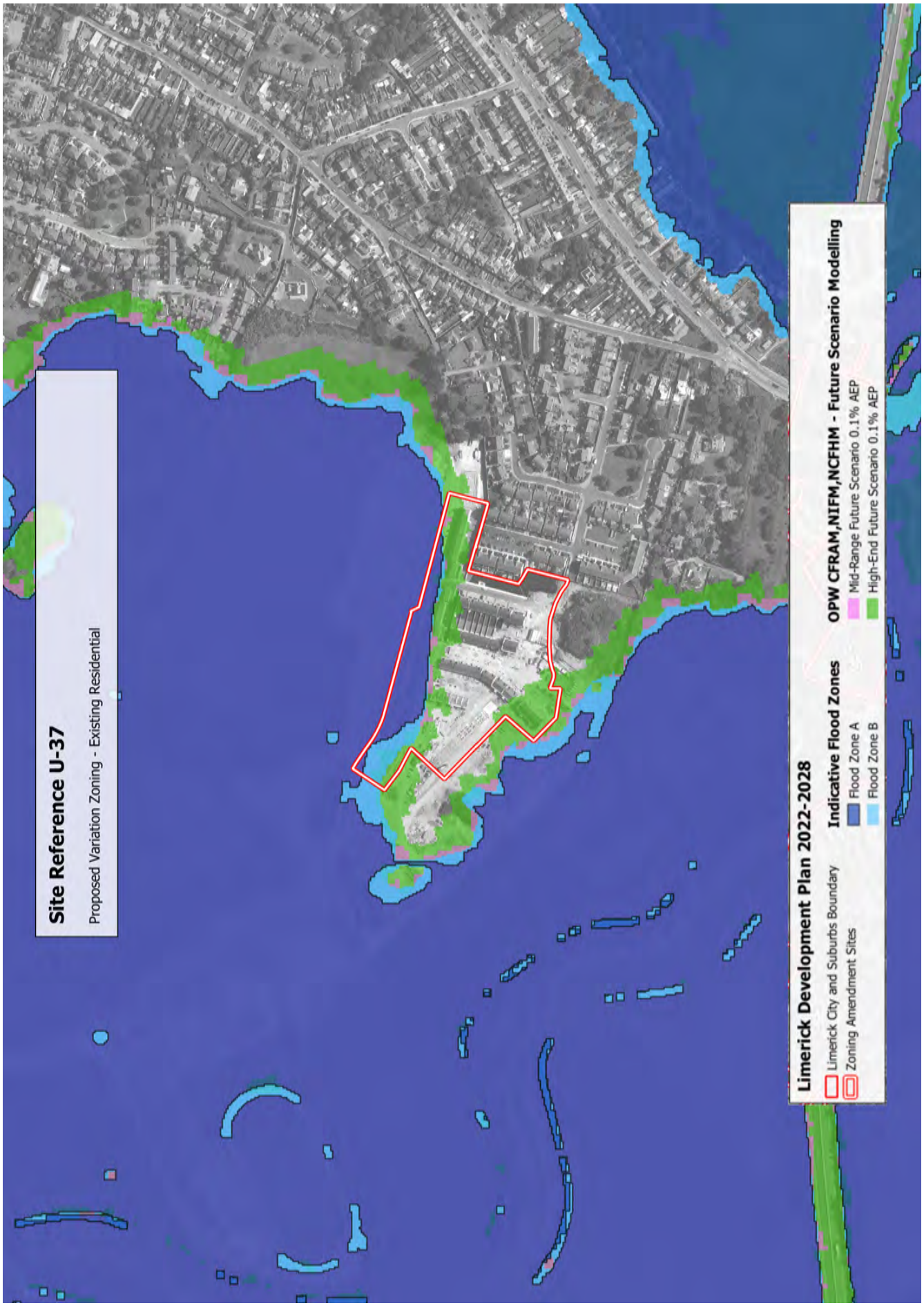
Overlaps at Variation No. 3 Site Reference U-10



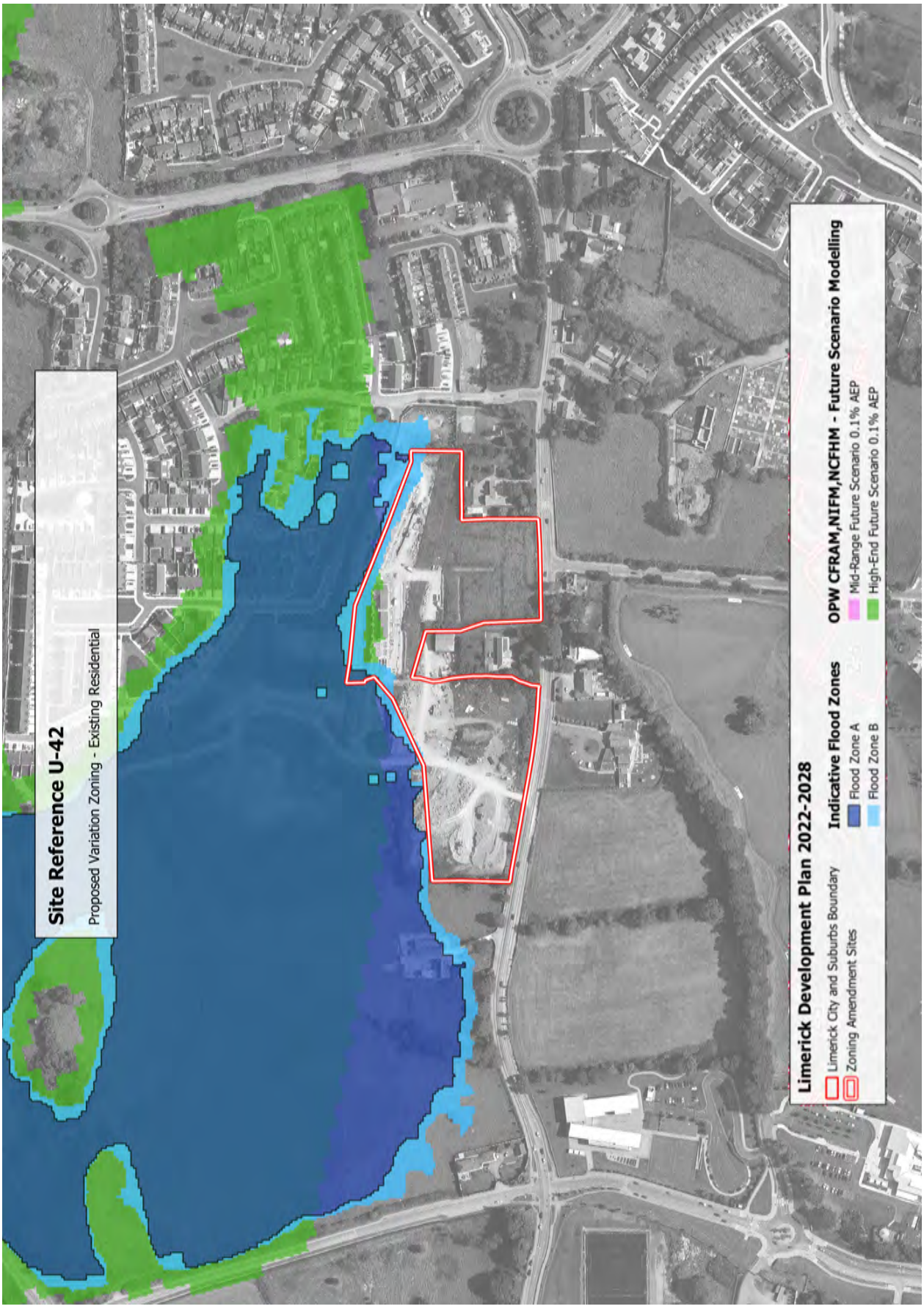
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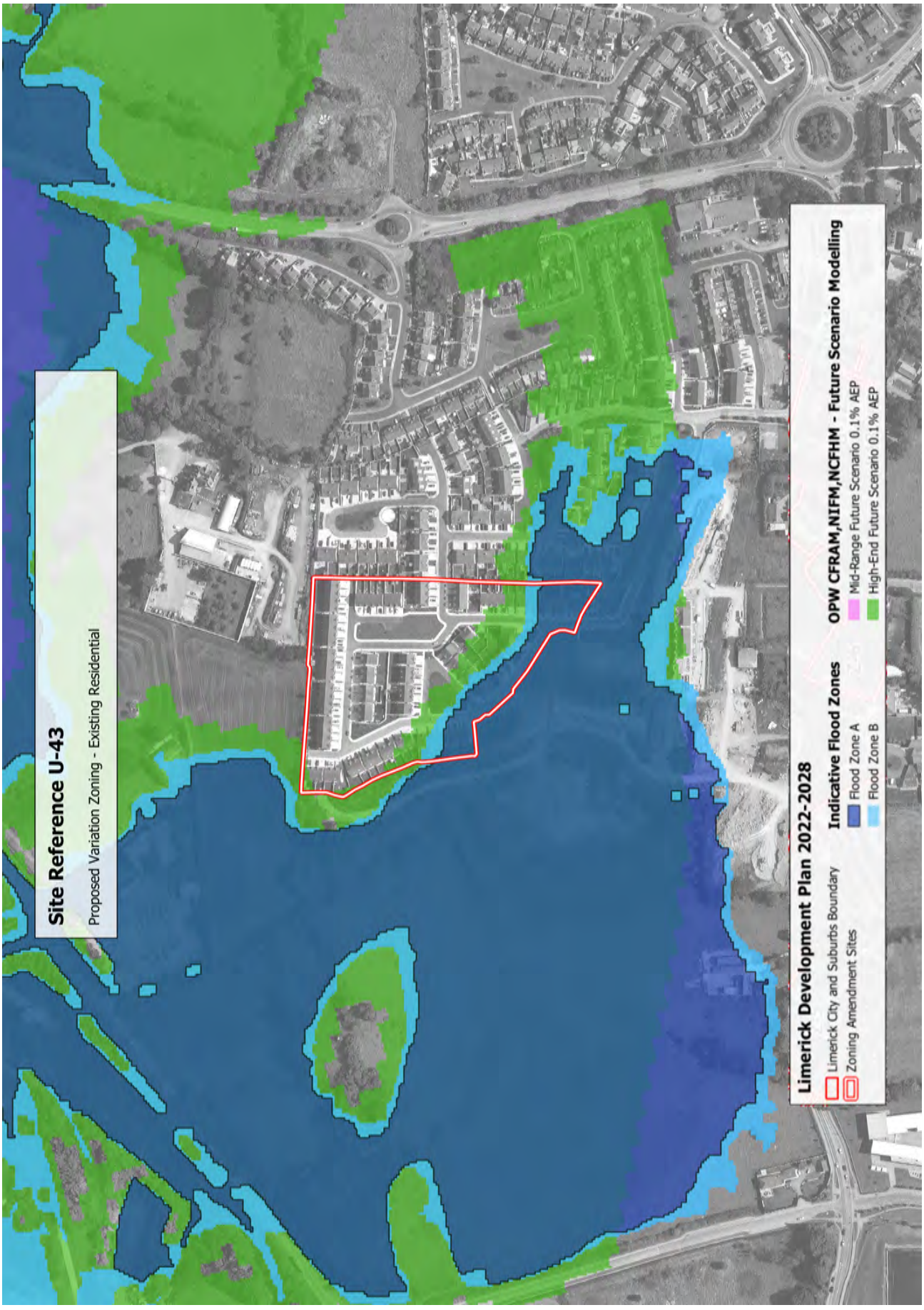
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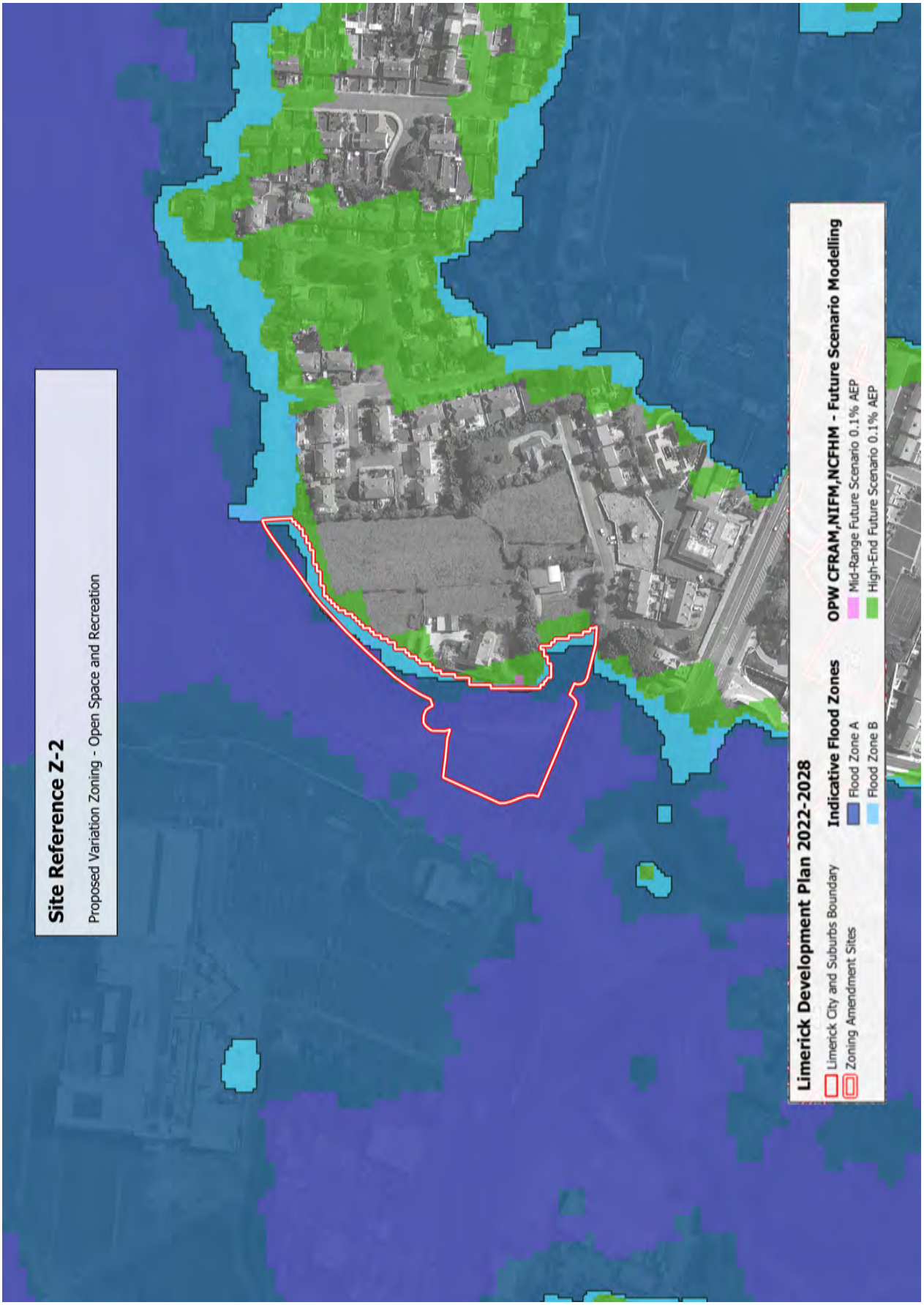
Overlaps at Variation No. 3 Site Reference U-37



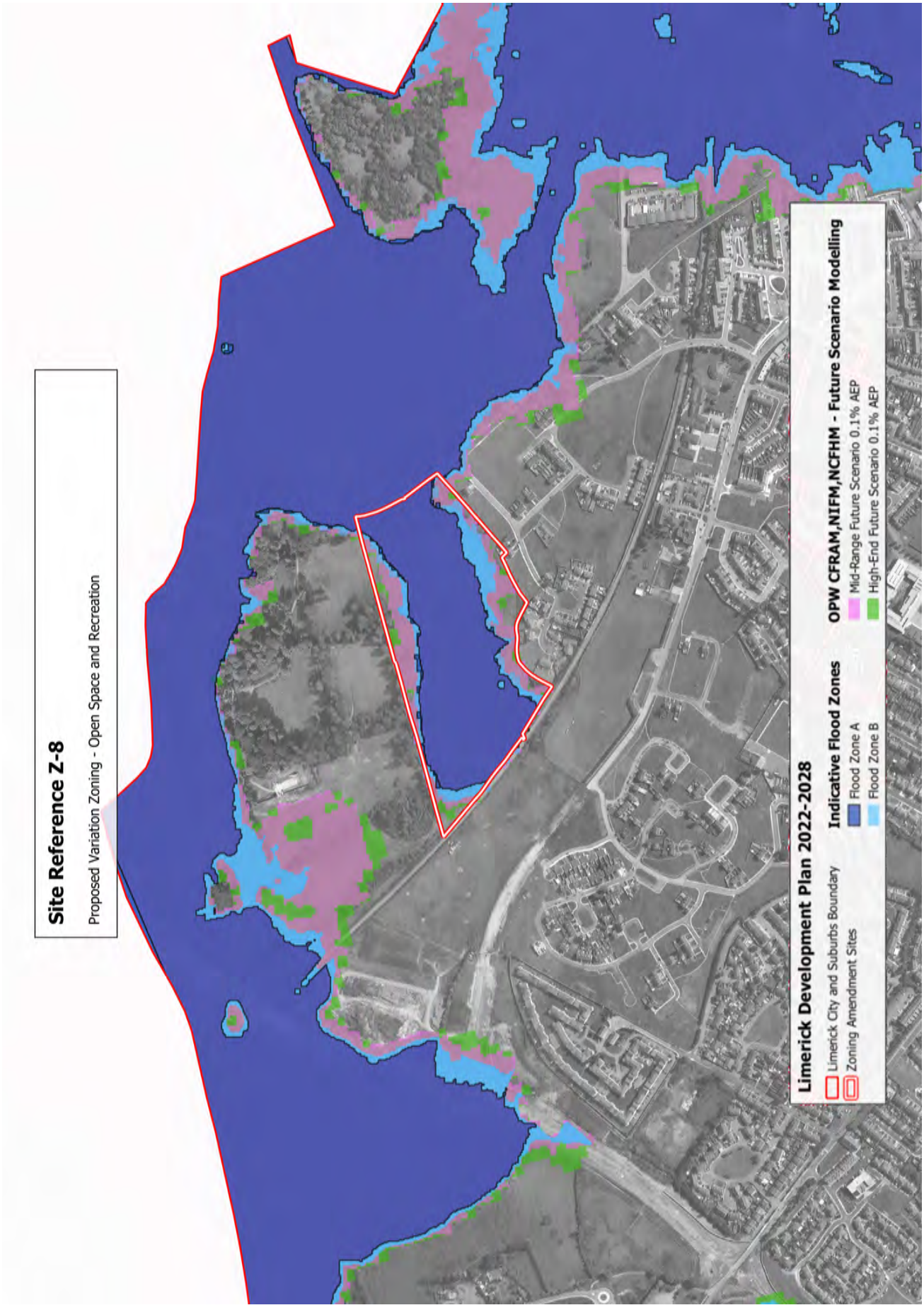
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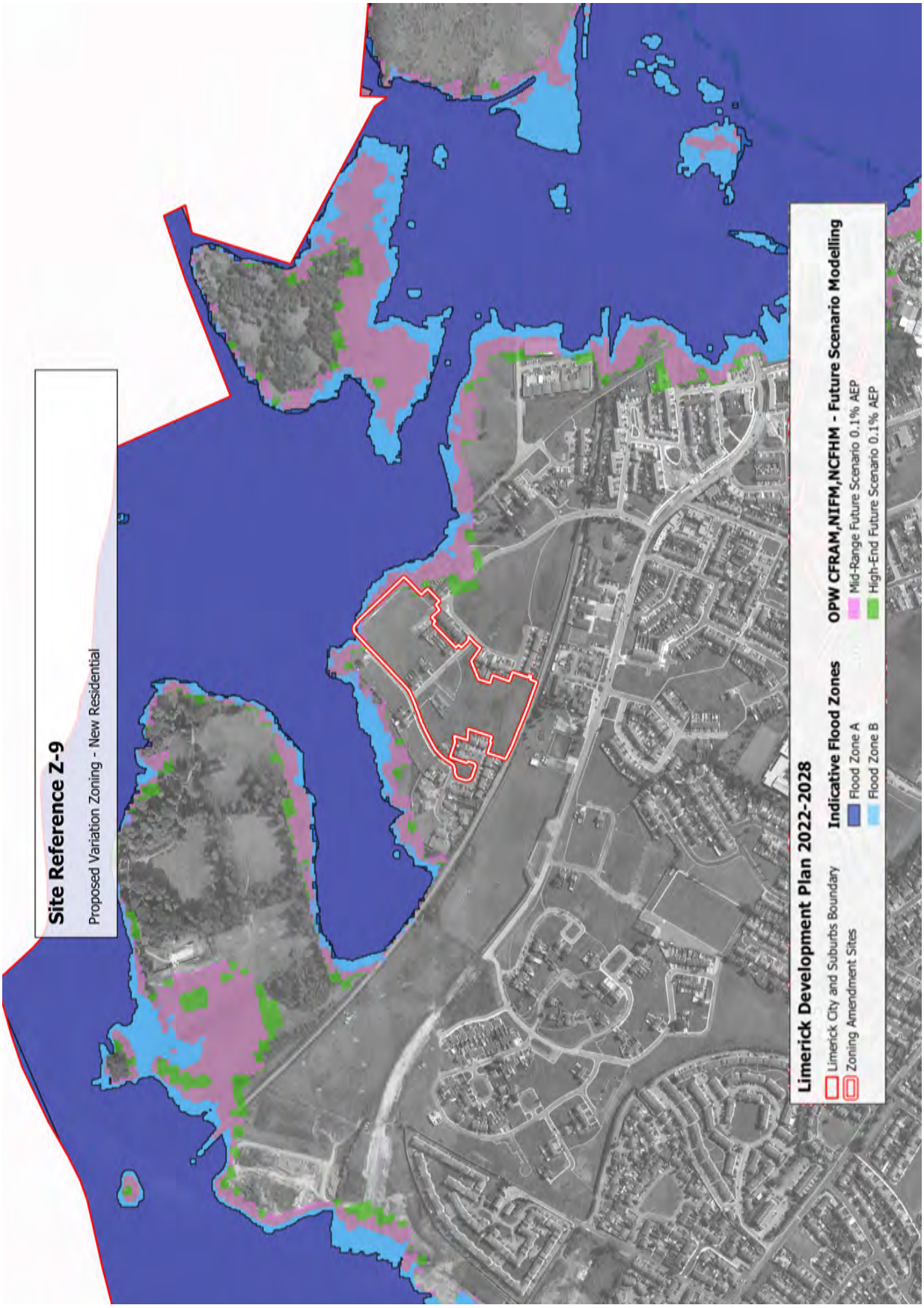
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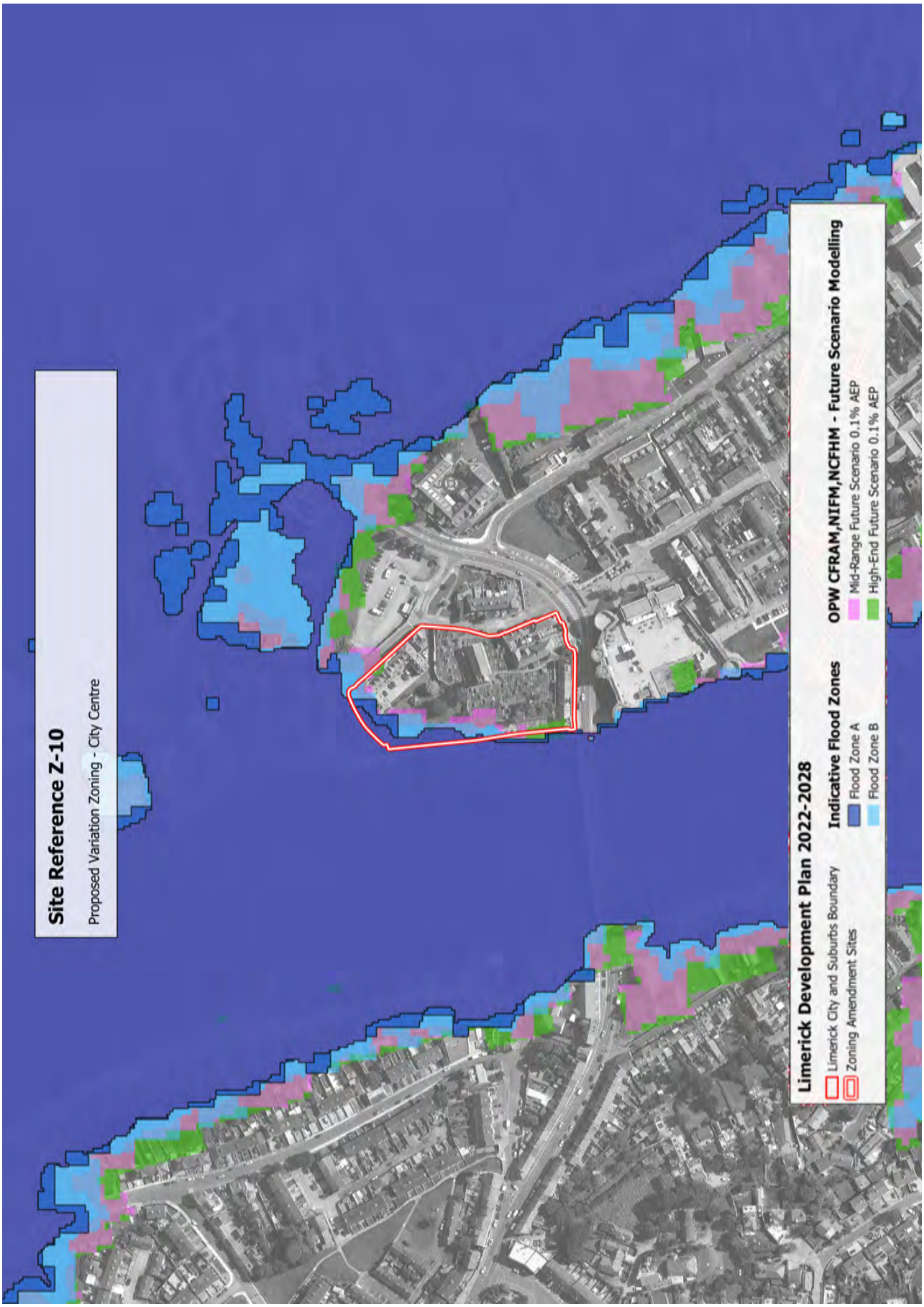
Overlaps at Variation No. 3 Site Reference Z-2



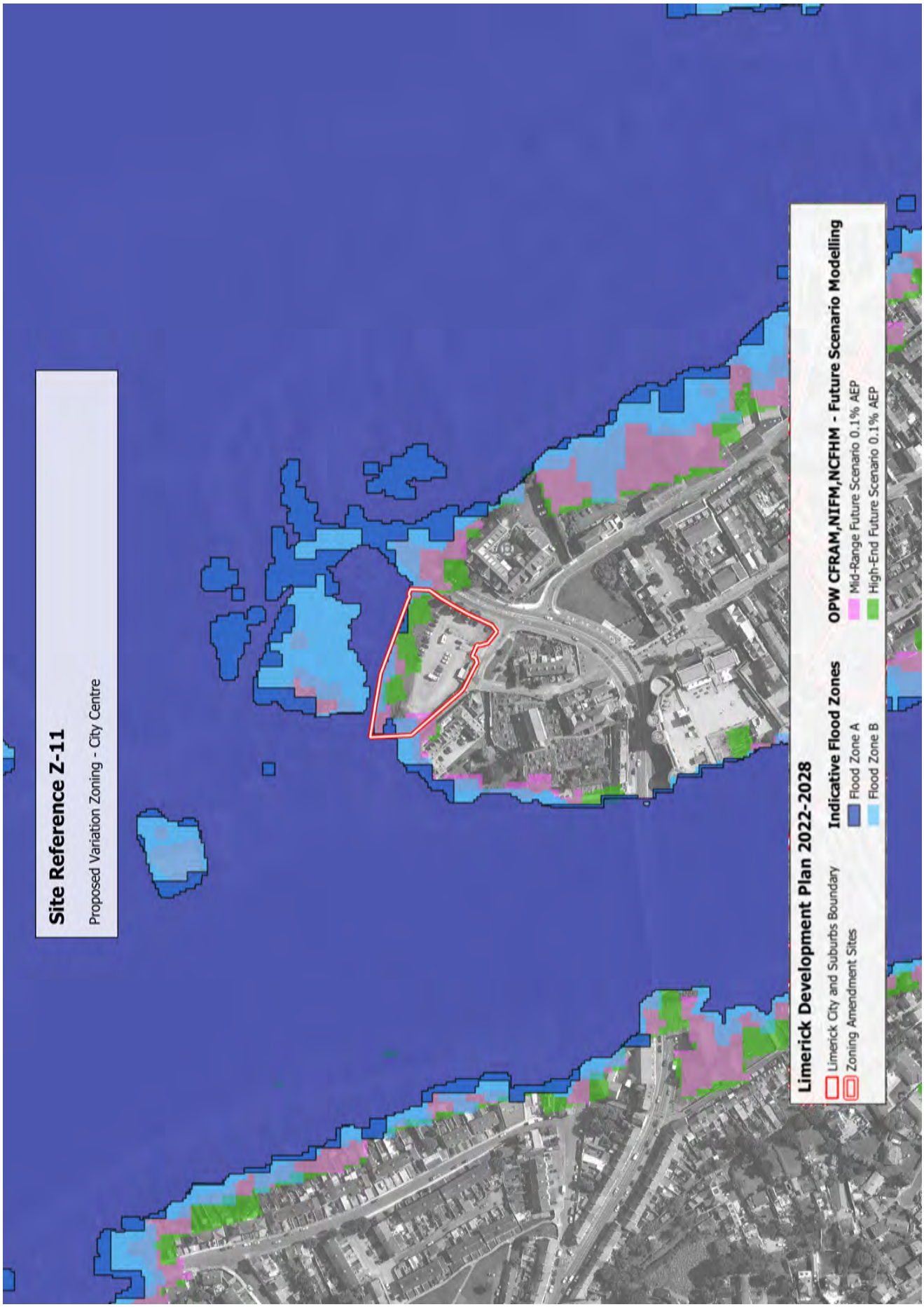
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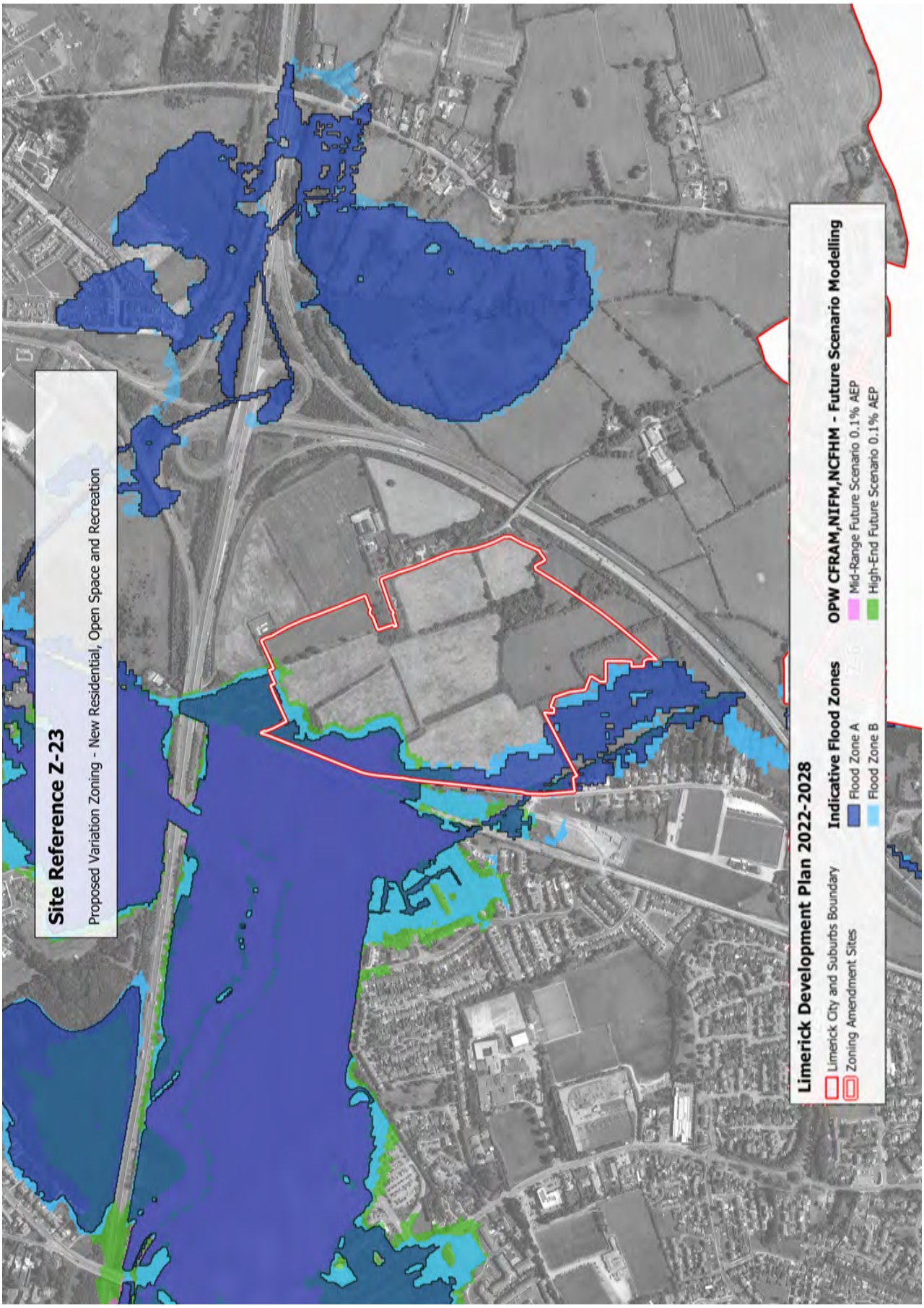
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Overlaps at Variation No. 3 Site Reference Z-10



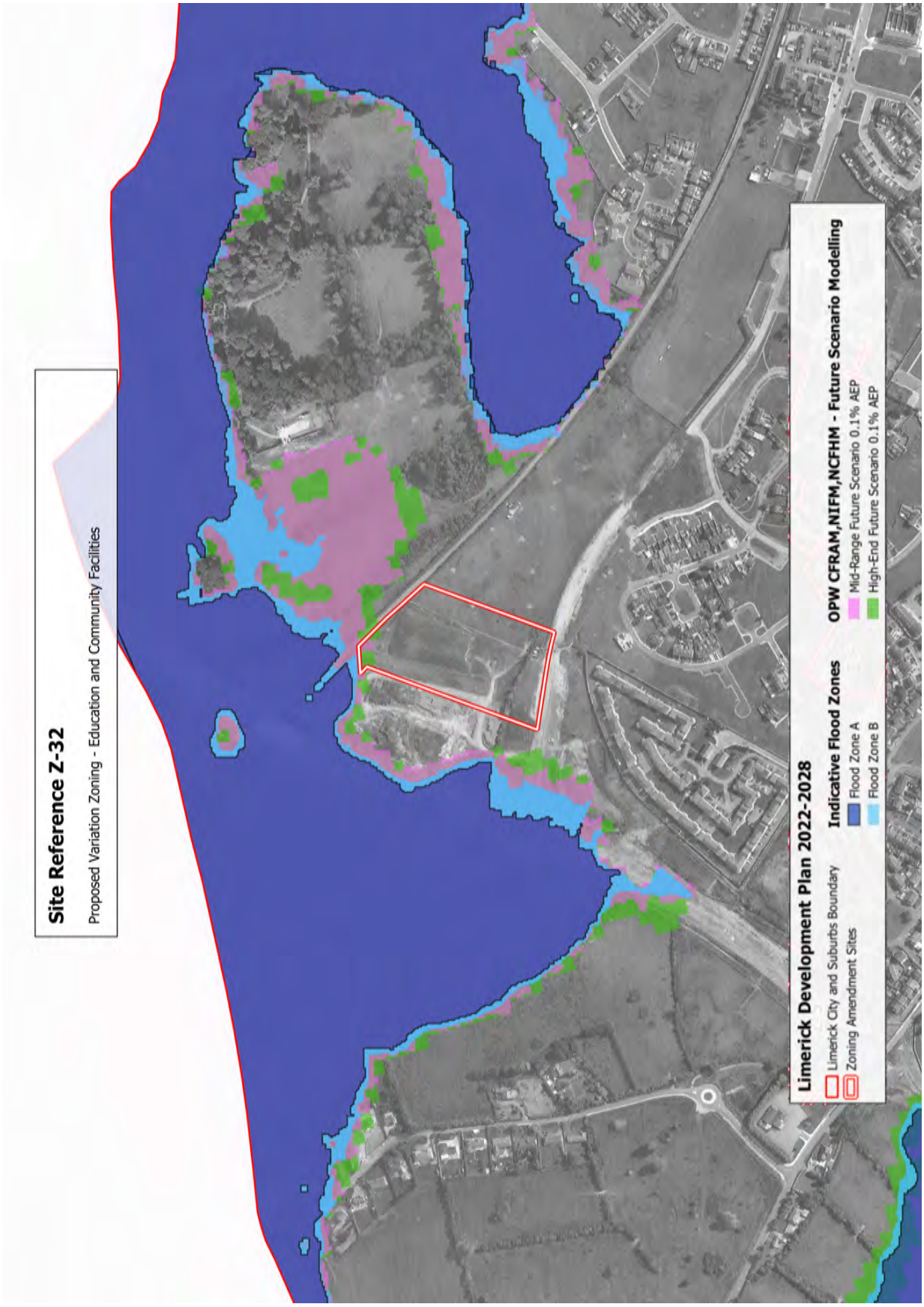
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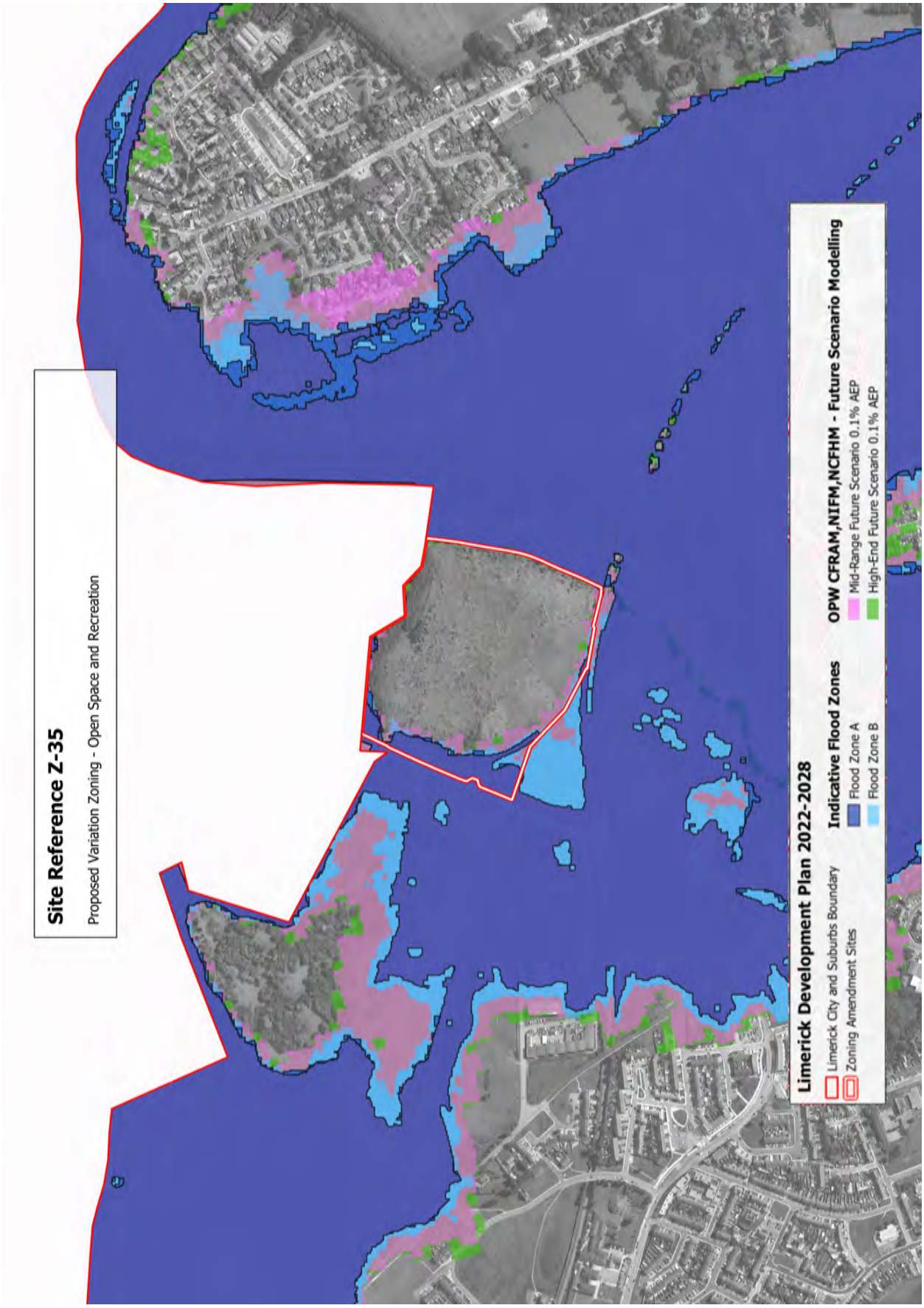
Overlaps at Variation No. 3 Site Reference Z-23



Overlaps at Variation No. 3 Site Reference Z-28



Overlaps at Variation No. 3 Site Reference Z-32



Overlaps at Variation No. 3 Site Reference Z-35