IN THE MATTER OF:

- **THE RESOURCE MANAGEMENT ACT 1991**
- **PRIVATE PLAN CHANGE PPC85 – MANGAWHAI EAST**

Site location plan of Windsor Way & PPC85 area

Submitter Expert Evidence (Evidence in Chief – Consolidated)

OWNERS OF LOTS 1–7 WINDSOR WAY, MANGAWHAI

Prepared for: Owners of Lots 1–7 Windsor Way
Engineering Assessment: Cook Costello Ltd — Chartered Professional Engineers (CPEng)
Evidence Compiled and Presented by: Derek Westwood, CPEng

Date: 23 January 2026

DOCUMENT CONTROL / VERSION RECORD

Version	Date	Description	Prepared By
#	14 Aug 2025	PPC85 Submission	Derek Westwood & Cook Costello
#	7 Oct 2025	F6_PPC85 Submission addendum	Derek Westwood & Cook Costello
#	14 Jan 2026	Expert Commentary Addendum 14 Jan 2026 & Consolidated Evidence – Oct 25 & Aug 25	Derek Westwood & Cook Costello
#	23 Jan 2026	Council Supplementary Planning Evidence (23 January 2026)	Derek Westwood & Cook Costello

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EXECUTIVE SUMMARY

This evidence is provided on behalf of the Owners of Lots 1–7 Windsor Way in relation to Proposed Private Plan Change 85 (PPC85) – Mangawhai East. It consolidates matters raised in the original submission dated 14 August 2025, the further submission addendum dated 7 October 2025, and the Cook Costello expert commentary dated 14 January 2026.

Windsor Way is a low-lying area characterised by very flat topography, shallow groundwater, limited overland flow paths, and tidal tailwater influences. Groundwater levels have been recorded within approximately 400 mm of ground level during winter months, which significantly limits infiltration capacity and increases sensitivity to surface runoff and ponding.

The submissions identify that PPC85 documentation does not include site-specific hydraulic modelling for Windsor Way, does not verify stormwater disposal feasibility under high groundwater conditions, and does not demonstrate that intensification can occur without increasing flood risk to existing properties. Reliance on conceptual stormwater approaches and future subdivision-stage design is not considered appropriate given the physical constraints of the locality.

Cook Costello's expert commentary confirms that stormwater and flood risk constraints at Windsor Way are unresolved, that infiltration-based disposal is likely to be ineffective under seasonal groundwater conditions, and that downstream conveyance limitations remain unaddressed.

Council's supplementary planning evidence dated 23 January 2026, while responding to updated national policy direction, does not provide site-specific stormwater assessment for Windsor Way and does not resolve downstream hydraulic effects. Deferring resolution of these risks to later consenting stages is inconsistent with risk-based planning principles for known hazard areas.

The Windsor Way owners support development in principle where risks can be appropriately managed, but seek assurance at plan change stage that stormwater and flood effects can be mitigated in practice. They therefore seek that PPC85 be amended to require site-specific stormwater and groundwater assessment, demonstrated downstream discharge capacity, and enforceable infrastructure provisions prior to enabling intensification affecting Windsor Way.

1. INTRODUCTION AND ROLE OF THE AUTHOR

1.1 This evidence is provided on behalf of the Owners of Lots 1–7 Windsor Way, who are submitters under Submission 56 and Further Submission FS02.

1.2 The purpose of this consolidated evidence is to: Summarise and integrate matters raised in the original and further submissions; and present those matters in a single Evidence in Chief for the Hearing Panel.

1.3 This evidence does not introduce new technical assessment.
All substantive technical matters remain contained in the original submissions and expert reports appended to this evidence.

1.4 This evidence should be read in conjunction with Appendices A, B, and C, which contain the full submitted documents.

2. AUTHOR QUALIFICATIONS AND EXPERIENCE

2.1 I am a Chartered Professional Engineer (CPEng) registered with Engineering New Zealand.

2.2 Independent specialist technical assessment of stormwater, flooding, groundwater and hydraulic performance for the Windsor Way area has been undertaken by Cook Costello, Chartered Professional Engineers (Civil and Geotechnical), whose qualifications and experience are set out in the reports appended to this evidence.

2.3 I have acted on behalf of the Windsor Way owners in:

Coordinating review of PPC85 stormwater documentation; and

Obtaining and presenting independent expert input from Cook Costello.

2.4 I understand that my duty in providing this evidence is to assist the Hearing Panel, and that this duty overrides any obligation to the submitters.

3. SITE CHARACTERISTICS AND EXISTING CONDITIONS – WINDSOR WAY

3.1 Windsor Way is characterised by:

- Very flat topography;
- Shallow groundwater;
- Limited defined overland flow paths; and
- Tidal tailwater influences affecting downstream discharge conditions
  *(*refer Appendix C – Cook Costello Expert Commentary Addendum*).*

3.2 Observed site conditions include:

- Regular ponding during rainfall events;
- Slow drainage following storm events; and

Sensitivity to even small changes in hydraulic gradients due to minimal fall.

3.3 Groundwater monitoring identified seasonal groundwater levels within approximately 400 mm of ground level during winter months, reducing infiltration capacity and increasing the likelihood of perched water and surface runoff
*(*refer Appendix C – Cook Costello Expert Commentary Addendum*).*

3.4 These physical constraints mean that stormwater performance at Windsor Way is highly sensitive to relatively small increases in runoff volume or changes in drainage patterns.

4. SUMMARY OF ORIGINAL SUBMISSION – 14 AUGUST 2025

(Refer Appendix A)

4.1 The original submission identified that PPC85 documentation does not include:

- Site-specific hydraulic modelling for Windsor Way;
- Assessment of high-AEP rainfall events; or
- Verification of soakage feasibility under high groundwater conditions *(Appendix A).*

4.2 The submission identified stormwater management risks arising from:

- Reliance on infiltration-based disposal in areas of shallow groundwater;
- Limited conveyance gradients; and
- Absence of defined downstream discharge pathways.

4.3 The submission raised concern that proposed stormwater methods may:

- Increase surface runoff;
- Displace flood storage; and
- Increase flood exposure for existing dwellings.

4.4 Relief sought included requirements for:

- Site-specific modelling;
- Confirmation of downstream conveyance capacity; and
- Restrictions on infiltration systems where soil and groundwater conditions are unsuitable.

5. SUMMARY OF FURTHER SUBMISSION ADDENDUM – 7 OCTOBER 2025

(Refer Appendix B)

5.1 The further submission reviewed the range of submissions on PPC85 and identified:

- Widespread concern regarding flood risk; and
- Uncertainty regarding infrastructure capacity to service intensification.

5.2 Particular concern was raised regarding:

- The scale of earthworks proposed by Cabra;
- Creation of additional impermeable surfaces; and
- Redistribution of runoff toward lower-lying areas including Windsor Way.

5.3 The addendum emphasised that hydrological neutrality must be demonstrated:

- At the local sub-catchment scale; and
- Using site-specific modelling rather than conceptual assumptions.

5.4 The submitters' position was confirmed as:

- Support for PPC85 in principle; and
- Opposition to implementation without enforceable stormwater and infrastructure outcomes.

6. NATIONAL POLICY DIRECTION ADDENDUM – 14 JANUARY 2026

(Refer Appendix C – Cook Costello Expert Commentary)

6.1 Updated national direction introduced on 18 December 2025 includes:

- National Policy Statement for Natural Hazards 2025; and
- National Policy Statement for Infrastructure 2025.

6.2 The expert commentary confirms that Windsor Way exhibits:

- Known flood susceptibility;
- Unresolved stormwater constraints; and
- Limited capacity for infiltration-based stormwater disposal.

6.3 The updated policy framework places increased emphasis on:

- Risk-informed planning;
- Use of best available technical information; and
- Early hazard avoidance at the plan-making stage.

6.4 The commentary concludes that intensification in areas such as Windsor Way should proceed only where stormwater and flood risks are demonstrably resolved.

6.5 Council Supplementary Planning Evidence (23 January 2026)

6.5.1 Council has filed supplementary planning evidence dated 23 January 2026 in response to the Hearing Panel's Second Direction, addressing recent amendments to national direction instruments.

6.5.2 That evidence does not provide site-specific stormwater or hydraulic assessment for the Windsor Way locality, nor does it demonstrate that intensification enabled by PPC85 can occur without adverse downstream effects on existing properties.

6.5.3 While Council's evidence indicates that stormwater matters may be addressed at subdivision and development stage, the Windsor Way owners maintain that, given local groundwater levels, minimal hydraulic gradients and downstream conveyance constraints, stormwater risk must be demonstrably resolved at plan change stage rather than deferred to later consenting processes.

6.5.4 Accordingly, the supplementary planning evidence does not alter or resolve the stormwater and flood-risk concerns identified in the Windsor Way submissions and the Cook Costello expert commentary.

7. CONSOLIDATED POSITION OF WINDSOR WAY OWNERS

7.1 The Windsor Way owners support development in principle where:

- Risks are appropriately identified; and
- Mitigation measures are demonstrably effective.

7.2 They oppose zoning and development capacity increases that:

- Rely on conceptual stormwater approaches;
- Lack site-specific modelling; or
- Defer resolution of downstream effects.

7.3 The submitters seek certainty that:

- Hydrological neutrality can be achieved in practice;
- Existing properties will not experience increased flood risk; and
- Infrastructure delivery obligations are enforceable.

8. RELIEF SOUGHT

The submitters seek that PPC85 be amended to require:

1. Site-specific hydraulic and groundwater modelling for Windsor Way prior to enabling development.
2. Demonstrated downstream conveyance capacity and lawful discharge pathways.
3. Restrictions on infiltration-based disposal where groundwater conditions are limiting.
4. Integrated drainage design across development parcels.
5. Staging of development to ensure infrastructure is delivered prior to or concurrent with subdivision.

9. CONCLUSION

The submitters conclude that:

1. Windsor Way is a low-lying area with limited capacity to accommodate additional stormwater without increased flood risk.
2. PPC85 does not currently demonstrate that stormwater effects can be managed without adverse consequences for existing residents.
3. Council's supplementary planning evidence responding to recent national policy amendments does not provide site-specific stormwater assessment for the Windsor Way locality and does not resolve downstream hydraulic constraints.
4. Deferring stormwater risk management to subdivision and development stage is not appropriate for this locality, given groundwater levels, minimal hydraulic gradients and downstream conveyance limitations.
5. PPC85 should therefore proceed only with strengthened and enforceable stormwater and infrastructure provisions that demonstrably protect existing properties.

APPENDICES (VERBATIM DOCUMENTS)

Appendix A – Submission on PPC85 dated 14 August 2025.
Appendix B – F6_Further Submission Addendum dated 7 October 2025.
Appendix C – Expert Commentary Addendum dated 14 January 2026 (Cook Costello).

Appendix A – Submission on PPC85 dated 14 August 2025.

IN THE MATTER of the Resource Management Act 1991 ("**the RMA**")

AND

IN THE MATTER of a submission pursuant to Clause 6 of Schedule 1 of the RMA in respect of the **Private Plan Change 85 – Mangawhai East**

SUBMISSION ON PRIVATE PLAN CHANGE 85 – MANGAWHAI EAST

To: District Plan Team

Kaipara District Council

Email: planchanges@kaipara.govt.nz

1. Introduction and Submitter Interest

This submission is lodged under Clause 6 of Schedule 1 of the Resource Management Act 1991 ("RMA") by the owners of Lots 1–7 Windsor Way, Mangawhai (referred to as "the submitters" and "the submission area" for the remainder of this document).

The submitters cannot gain an advantage in trade competition through this submission. They are directly affected by the plan change. The effects are not related to trade competition.

The submission area forms part of the land subject to Private Plan Change 85 ("PPC85") by CABRAS. The area is low-lying, exhibits poor natural drainage, and is susceptible to shallow groundwater and ponding.

The submitters engaged Cook Costello Ltd to undertake an independent Stage 1 peer review of the PPC85 stormwater management strategy (Appendix 11). The review dated 11 August 2025 identified material deficiencies in the information and design detail for the Windsor Way sub-catchment. A copy of the Cook Costello review is attached, **Appendix B**.

2. Summary of Key Concerns and Specific Provisions of PPC85 that this Submission Relates to

The submitters key concerns with respect to PPC85 relate to the 'Stormwater Management Plan' that underpins the approach to stormwater management with the PPC85 area. Specifically:

1. Absence of site-specific hydraulic analysis – No site-specific stormwater flood AEP modelling, swale capacity assessment, or downstream impact analysis has been provided for Windsor Way.

2. High flood and ponding susceptibility – Flat terrain, groundwater as shallow as 400 mm BGL in winter, and tidal tailwater effects present a high likelihood of extended inundation.

3. Unproven soakage reliance – The proposal to achieve "hydraulic neutrality" via infiltration is unsupported by local geotechnical or hydrogeological testing.

4. Risk from ground level changes – Even minor filling could obstruct drainage, alter overland flow paths, and induce long-term peat settlement.

Given the above, the submitters oppose PPC85 in part. Specifically, presently, it is the content of the Stormwater Management Plan and the associated PPC85 provisions that reference the Stormwater Management Plan (DEV X-P7, DEV X-LU-S1, DEV X-SUB-S8, DEVX-REQ1) that this submission relates to. The relief sought is detailed in Section 4 of this submission.

3. Statutory and Technical Framework

Under s31(1)(b)(ii) RMA, the Council must manage the effects of land use to avoid or mitigate natural hazards, including flooding.

KDC GD01 and GD04 require:

- Modelling of 10%, 2%, and 1% AEP events (with climate change factors).
- Proven primary and secondary flow capacity.
- Avoidance of adverse impacts on neighboring properties.

NZBC Clause E1 mandates the safe conveyance and disposal of surface water without causing damage or nuisance.

4. Relief Sought

The submitters seek the following relief:

1. Provide a site-specific hydraulic and hydrologic assessment for the Windsor Way sub-catchment, including climate change and blockage scenarios.

2. Demonstrate swale, overland flow, and outlet capacity for design AEP events in accordance with GD01 and GD04.

3. Prohibit reliance on infiltration-based disposal unless supported by local infiltration testing and mounding analysis or drainage infrastructure.

4. Ensure any ground filling, if proposed, is integrated with a coordinated drainage design to prevent ponding or backflow effects on adjoining land.

5. Alternative relief with similar effects.

RMA Directive Context

- Part 2, Sections 5, 6, and 7 of the Resource Management Act 1991 require sustainable management of natural and physical resources in a way that:
    - Enables people and communities to provide for their social, economic, and cultural well-being.
    - Safeguards the life-supporting capacity of air, water, soil, and ecosystems.
- In relation to PPC85, this entails:
    - Avoiding, remedying, or mitigating adverse effects of stormwater management failures on Windsor Way residents.
- Section 31 obligates councils to:
    - Control the effects of land use to avoid or mitigate natural hazards, such as flooding.
- Schedule 4 requires:
    - Adequate information is provided to clearly understand potential environmental effects.
- Failure to address site-specific stormwater risks:
    - Would be inconsistent with the statutory duties outlined in the Act.

5. Conclusion

This submission is intended to ensure PPC85 is implemented in a manner that is technically robust, consistent with statutory requirements, and protective of existing landowners. The relief sought is necessary to address foreseeable drainage risks to Windsor Way.

The submitters wish to be heard in support of this submission.

Submitters:

Derek Westwood
Thalia Ormerod
David & Fiona Collins
Tomasz Kus
Susan Hoskin
Lynnette Nicholson
Kim & Shane Growden

Signed on behalf of Submitters:
Derek Westwood

Chartered Professional Engineer (CPEng)
CMEngNZ, IntPE(NZ)
Date: 14 August 2025

Appendix A – Summary of Cook Costello Findings (8 August 2025)

- Flat terrain (3.6–4.8 m RL); Lot 1 within predicted 100-year coastal inundation under climate change.
- No defined overland flow paths; ponding common.
- Groundwater is as shallow as 400 mm BGL in winter.
- No local infiltration testing; soakage capacity unproven.
- No swale sizing or downstream effects modelling.
- Risk that fill could worsen ponding and cause settlement.

Appendix B – References

- Cook Costello Ltd (2025) Stage 1 Report Stormwater – PPC85 Review.
- Kaipara District Council (2020) GD01 – Stormwater Management Guidelines.
- Kaipara District Council (2020) GD04 – Development Engineering Standards.
- NZ Building Code Clause E1 – Surface Water.
- Resource Management Act 1991.

Review of Private Plan Change 85 Regarding Stormwater through Windsor Way Lots 1-7

Project

Lot 1-7 Windsor Way

Job No.

17384

Client

Windsor Way Residents

Revision

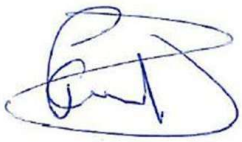
1.0

Date of issue

11/08/2025

cook | costello

DOCUMENT CONTROL RECORD

Client:	Derek Westwood, Thalia Ormerod, David & Fiona Collins, Tomasz Kus, Susan Hoskin, Lynnette Nicholson, Kim & Shane Growden
Project description:	Stormwater Review
Client address:	Lot 1-7 Windosr Way
Date of issue:	Monday, 11 August 2025
Status:	Issued
Originator	 Emily Thompson **Civil/Geotechnical Engineer** BE(Hons)
Approved for issue:	 Philip Cook **Chartered Professional Engineer (Civil)** BE(hons),Dip Ag, CPEng, CMEngNZ, IntPE(NZ), MACENZ,MInstD
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Version	Date	Comment	By
0.9	6th August 2025	For review	E. Thompson
1.0	8th August 2025	Approval	P. Cook

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1. Executive Summary

Summary of Findings	
Site Elevation & Flood Risk	Site is generally flat (3.6–4.8 m RL); Lot 1 close to 100-year coastal inundation level.
Ponding & Drainage	No clear internal flowpaths; ponding likely due to flat topography and a lack of flow paths onsite .
Stormwater Strategy of CABRAS	Hydraulic neutrality through soakage of soils, rain gardens and potentuailly widening the existing swales; lacks design detail or modelling support, excpected due to uncertiancy around development.
Modelling & Design Gaps	No AEP rainfall modelling, no swale/pipe sizing, no downstream impact assessment especially for soakage.
Hydrologic design possible downfalls	Storm surge and shallow groundwater affect drainage; raising land levels as shown risks exacerbating ponding.
Compliance Reference	Review benchmarked against KDC, GD01, GD04, and NZBC clause E1.

2. Introduction

This report documents a Stage 1 technical peer review of the stormwater management strategy presented in Appendix 11 of the Private Plan Change 85 (PPC85) for the Mangawhai East development area. The review focuses on the Windsor Way site, which occupies a relatively flat area within the broader PPC85 development area.

The intent of this review is to:

- Assess the technical adequacy and completeness of the existing stormwater documentation.
- Identify potential gaps, deficiencies, or risks.

No independent stormwater modelling or site inspection has been undertaken as part of this Stage 1 review. The review benchmarks compliance against the Kaipara District Council (KDC) engineering guidance documents, particularly “GD01 – Stormwater Management Guidelines” and “GD04 – Development Engineering Standards” and the relevant provisions of the “New Zealand Building Code (NZBC)”.

2.1. Proposed development

The proposed development involves the subdivision and future residential development within the Mangawhai East growth area, as outlined under Private Plan Change 85 (PPC85). The area lies within a low-lying, relatively flat part of the site, and is subject to potential inundation and slow-draining conditions due to shallow gradients, high groundwater levels, and proximity to coastal influences.

Figure 1: A draft concept design of the Mangawhai East growth area, by CABRAS

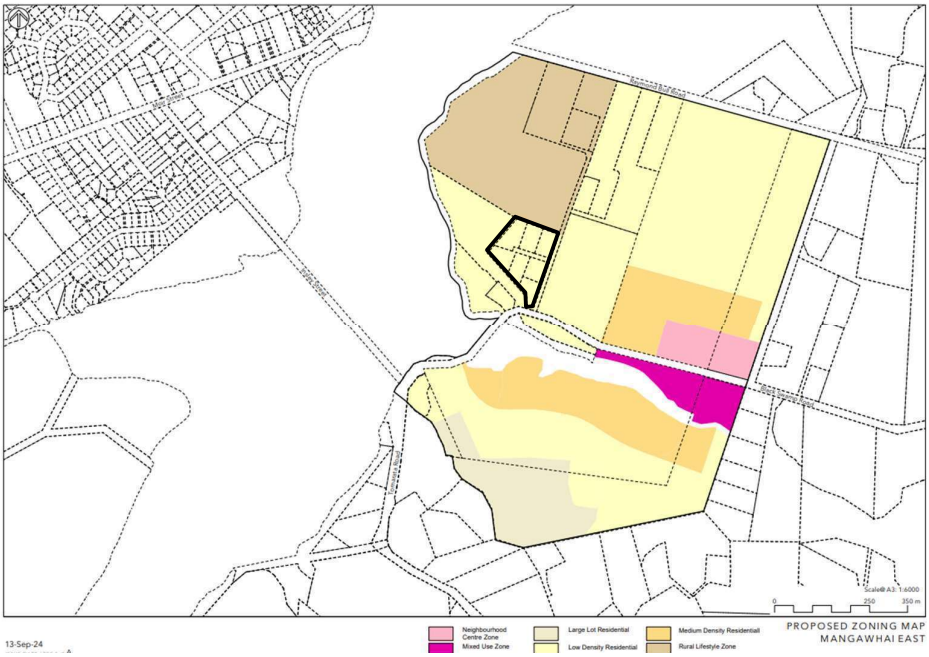

Figure 2: Proposed development zones (CABRAS)

3. Desktop Study

3.1. Site Description

The Windsor Way site is relatively flat, with ground levels ranging from approximately 3.6 m to 4.8 m NZVD2016.

There have been reports of ponding, high groundwater levels and poor drainage noted onsite due to the close proximity of the sea, the relatively flat land and poor drainage infrastructure.

Lots 1, 3 and 5 have dwellings onsite, while Lot 2 has a shed. All other lots are currently undeveloped.

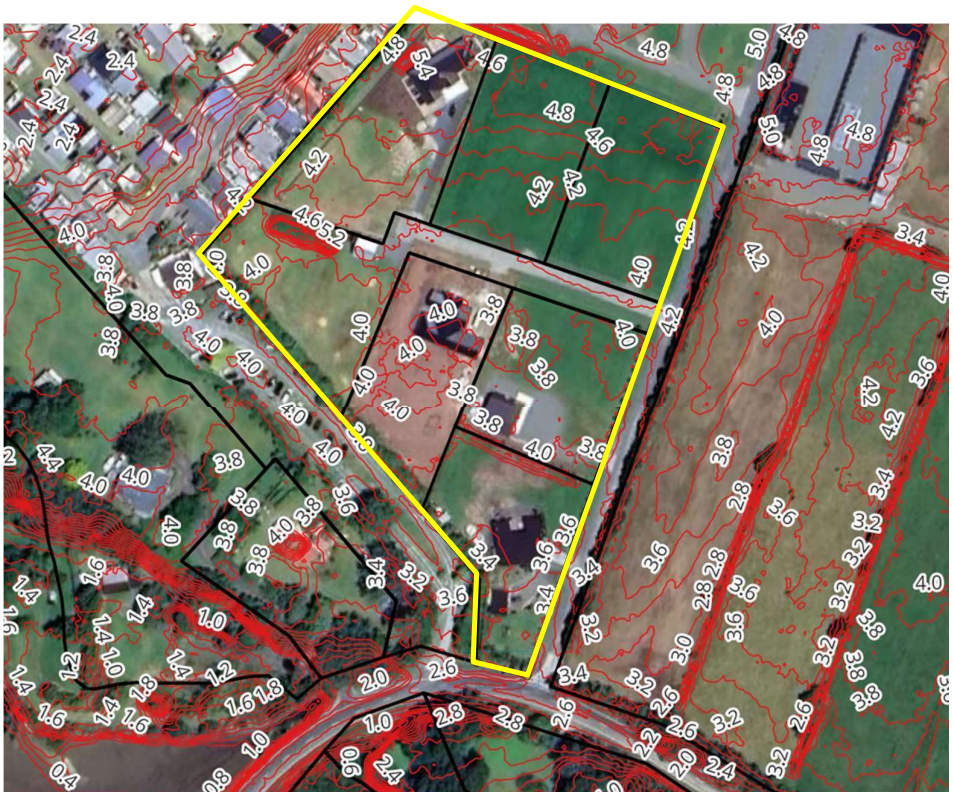

Figure 3: Site levels and general layout from 2024 LiDAR

There is a predicted 100-year coastal inundation level (3.7 m RL) mentioned in the CABRAS report, which includes projections for sea level rise and vertical land movement. Lot 1 is located at the lowest point of the 7 lots (3.4 to 3.8 m). While the site is not currently affected by coastal erosion, Lot 1 is expected to fall within the inundation zone under 100-year + climate change scenarios.

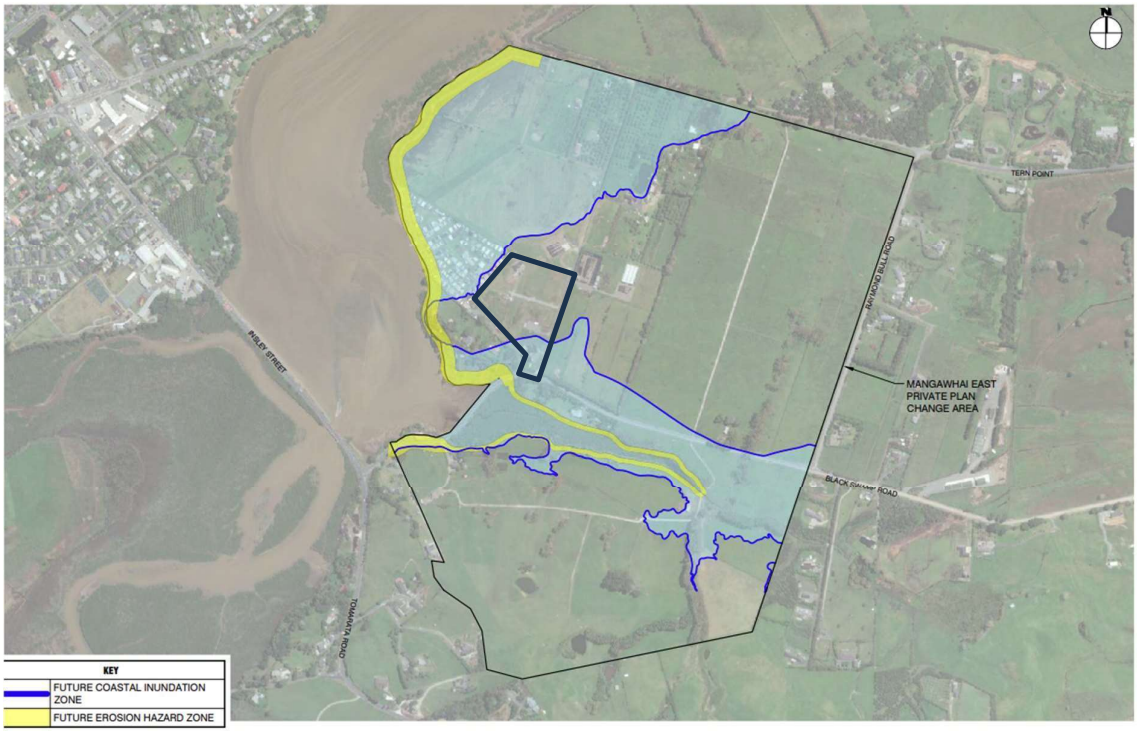

Figure 4: Inundation zone theorised for the proposal in 100 years (Coastal)

4. Drainage and Ponding Behaviour

Lots 1-7 of Windsor Way are positioned near the upper extent of a small catchment. As a result, it relies on localised conveyance via shallow swales and slow-draining surface depressions to manage runoff. The overall drainage efficiency of the site is limited by three key factors:

- flat topography,
- shallow groundwater, and
- a lack of defined overland flow paths.

Despite NRC flood mapping not identifying Windsor Way as a flood-prone area, local knowledge and observations indicate that rainfall events frequently lead to significant temporary surface ponding due to poor runoff conveyance. The shallow site gradients inhibit natural overland flow, and in many cases, water remains on the surface for extended periods until it evaporates or infiltrates slowly into the ground.

The reviewed PPC85 documentation includes a proposal for the wider Northern development to discharge stormwater primarily through soakage-based solutions, including raingardens and recharge pits. While these approaches may assist with maintaining hydraulic neutrality on a macro catchment level, they could introduce localised issues at Windsor Way. Specifically, soakage systems are only

effective when the receiving soils and groundwater conditions allow for vertical or lateral movement of water. At Windsor Way, several borehole records confirm the presence of a high water table, with groundwater levels recorded as shallow as 400 mm below ground level in winter months (BH3, July). It is believed that peat or other low-permeability soils may be affecting the drainage of the water table despite the presence of sand soils.

Introducing more soakage into an area with limited infiltration capacity can overwhelm the subsurface layers, leading to increased groundwater mounding, causing prolonged surface saturation and the potential emergence of springs or seepage zones. These effects would be exacerbated in high rainfall periods or if nearby properties also attempt to manage stormwater via soakage. In the absence of positive drainage (e.g., piped outlets or engineered overland paths), water may accumulate and persist on the surface, particularly in flatter areas such as Lots 1–4.

Additionally, the existing tidal outlet downstream of the site is influenced by coastal tailwater levels. During high tide or storm surge events, the discharge capacity of the swales and drains is further reduced, causing a backup of water on site. This could be further exacerbated as the low gradients over the site do not provide sufficient hydraulic gradient to drive the water into the tidal outlet.

These observations suggest that while the proposed soakage strategy may be suitable elsewhere within the PPC85 development area, it poses a notable risk at Windsor Way without further site-specific investigation, modelling and mitigation. As such, detailed hydraulic modelling and an evaluation of alternative discharge options or subsoil drainage are warranted to ensure that stormwater can be effectively managed under a range of conditions, including peak groundwater and high-intensity rainfall events.

Lot	Borehole	Jan (mm BGL)	Jul 19 (mm BGL)	Jul 26 (mm BGL)	Aug (mm BGL)
4	BH1	1700+	-	1650	1650
4	BH2	3400+	-	2400	1650
6	BH3	2200+	400	1200	700

- "+" indicates water was not observed, and depth to water exceeded the given measurement.
- "-" indicates no reading taken.

5. Stormwater Management strategy proposed (CABRAS)

The reviewed report outlines a conceptual stormwater management strategy for the wider Mangawhai East development. For the Windsor Way site, this strategy includes three primary components: hydraulic neutrality, groundwater recharge, and swale-based conveyance. No attenuation is proposed for most events, except for the 95th percentile storm (1-in-20). The following summarises each aspect and provides commentary on its potential limitations or unintended impacts.

5.1 Hydraulic Neutrality

The CABRAS documentation states that future development should achieve hydraulic neutrality, meaning post-development flows are not to exceed pre-development runoff flows. This principle is generally supported, particularly in areas discharging to sensitive receiving environments or where infrastructure is constrained.

Commentary:
While appropriate as a general principle, achieving hydraulic neutrality across the broader development does not guarantee that local effects, such as flow redirection or swale overtopping, will be avoided at the Windsor Way site. The site's shallow groundwater and limited downstream vertical fall make it more vulnerable to even marginal increases in local runoff to the site, especially if the swales or soakage areas do not perform as intended. Furthermore, no quantification or verification of neutrality (e.g. modelled pre- vs post-development flows) has been provided for this area.

5.2 Groundwater Recharge

Where peat soils are to be retained, the report recommends stormwater recharge to ground as a means of maintaining peat integrity and avoiding subsidence or oxidation. A 5 mm recharge requirement is cited to ensure stormwater mimics natural infiltration.

Commentary:
Although this approach aligns with GD01 guidance for peat management, it raises several site-specific concerns. Firstly, groundwater levels are already high across most of the site, particularly in mid- and late-winter, with borehole monitoring showing levels as shallow as 400–700 mm BGL. Recharging these soils during storm events may worsen surface saturation. Secondly, the possibility of emergent springs or prolonged ponding should be considered if recharge volumes exceed the site's natural drainage capacity, which may already be the case during winter. There is also concern that neighbouring properties, which may rely on subsoil infiltration for surface water disposal, could be adversely affected if water tables rise as a result.

A potential mitigation measure could include subsoil drains installed beneath swale bases or within sand pockets to provide controlled discharge once groundwater reaches a critical level. This option is not discussed in the current strategy.

It should also be noted that raising the ground level over the peat to account for the new coastal inundation levels will lead to consolidation and ongoing uncontrollable creep settlement over several decades or more. There is no discussion regarding the overfilling required and loss of permeability associated with this.

5.3 Swale-Based Conveyance

The CABRAS proposal includes swale conveyance through road corridors, with the suggestion that swales may be widened to accommodate larger flows. No hydraulic calculations or cross-sections are provided to demonstrate swale dimensions or flow capacity.

Commentary:
Swales are a practical and low-impact solution for gently sloping sites, and their inclusion is appropriate and encouraged. The report does not quantify the required capacity or provide design storm sizing, which is necessary under GD04. For the Windsor Way site in particular, sizing swales appropriately is critical, especially along the eastern boundary, where development to the east is at a similar elevation. If that development is not coordinated to limit discharge or maintain swale capacity, there is a real risk of flows bypassing, preveting out flow due to an increase in tail water depthor overtopping the swale system and entering adjacent properties, including those on Windsor Way.

We recommend that swale sizing be confirmed using rainfall events from 10% to 1% AEP scenarios, depending on the impact on nearby houses with the failure of such swales, with allowance for climate change and blocked inlets, to ensure resilient performance.

5.4 Attenuation

Attenuation is not proposed except for the 95th percentile storm event, which aligns with Auckland Council and KDC guidance in tidal or coastal environments.

Commentary:
Given the site's proximity to tidal influences, the lack of attenuation is reasonable, and I do not believe that attenuation should be the first choice in the development. However, if proper conveyance is not achieved, attenuation may be required, and it is important to determine if conveyance can be achieved before discounting attenuation.

5.5 Potential Site Filling (Not Proposed in CABRAS, but Referenced)

The CABRAS report includes a plan showing a potential ground level increase of approximately 200 mm above the 100-year coastal inundation level (RL 3.7 m NZVD2016). This fill concept is clearly marked as “not proposed” and is not discussed further in the report or included in the stormwater management strategy. No supporting modelling or design detail accompanies the plan.

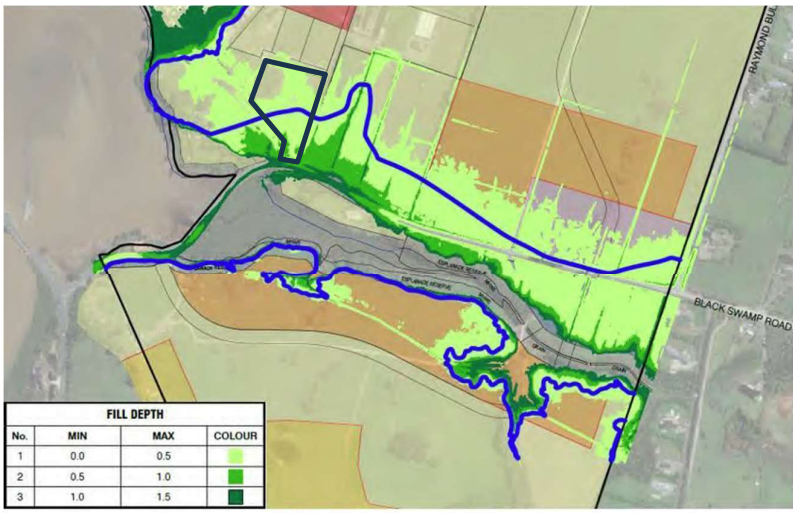

Figure 4.1.1a: Filling around Black Swamp Road

Figure 5: Non proposed filling of the development to be 200mm above 100 year coastal innundation level

Commentary:

Although not formally proposed, the presence of this fill plan in the documentation suggests it may be reconsidered at a later stage. Given the site’s already flat topography, even small increases in ground level may worsen surface drainage and exacerbate localised ponding.

Introducing fill without a coordinated grading and conveyance strategy can lead to:

- Reduced fall across the site, making an already flat site effectively flatter;
- Entrapment of surface runoff in low areas or around fill transitions;
- Increased reliance on swales or overland flow paths, which must be carefully graded to avoid backfall or stagnation;
- Disruption of existing or proposed drainage patterns, especially if design across property boundaries is not coordinated.
- Cause ongoing long-term creep settlement where fill is over peat.

If this fill concept is revisited in future stages, it is strongly recommended that it be supported by:

- Site-specific drainage and overland flow modelling;
- Clear demonstration that fill will not isolate parts of the site hydraulically;

- Design solutions that preserve or improve drainage continuity toward the proposed discharge zones.
- Detailed geotechnical reporting on how to mitigate ongoing creep settlements due to fill material.

While raising building platforms may be desirable for resilience to coastal inundation, filling should not proceed in isolation from a complete stormwater design. In a flat site context like Windsor Way, even minor changes in surface level can materially alter where water collects and how it moves, potentially making existing issues worse rather than better.

6. Proposed Discharge Zones

To help address the existing drainage and ponding issues observed on the Windsor Way site, an internal redistribution of stormwater flow may be required. This approach may be independent of the CABRAS development but may ultimately benefit from alignment or compatibility with its stormwater infrastructure, particularly on the eastern boundary.

No official concept has been determined at this stage; however, initial ideas involve dividing the site into two indicative discharge zones:

Lots 5–7: Discharge is proposed to the east, toward an existing or proposed swale located near the site boundary. While access and capacity are not confirmed at this stage, early consideration of this flow direction may help inform future design opportunities.

Lots 1-4: Discharge is proposed to the south, via a new swale along the southern boundary, connecting into the existing road corridor drainage.

There may also be a benefit in considering whether Lots 2 and 4 could partially discharge eastward, depending on the ability of site grading or the existing fall. This could help distribute runoff more evenly and reduce pressure on any single outlet path.

These suggestions are preliminary and intended only to highlight potential options for improving drainage resilience across the Windsor Way site. While specific responsibilities and design outcomes remain to be determined, early coordination with nearby works - such as appropriately sizing the eastern swale and Black swamp road outlet to the sea - may provide mutual benefit in future design stages.

7. Conclusions

This review has identified that the current CABRAS stormwater strategy for Lots 1–7 Windsor Way provides a broad conceptual framework but lacks sufficient technical detail to confirm compliance with Kaipara District Council requirements (GD01, GD04) and NZBC Clause E. In part. this will be because specific development is not confirmed; however, it may be necessary to go into further detail considering the known ponding issues on Lots 1-7 and potential effects from the stormwater and groundwater on nearby land.

Key risks identified include:

- Incomplete hydrologic and hydraulic modelling, including the absence of AEP design event calculations and swale sizing.
- Lack of detail around overland flow management and stormwater discharge routing.
- Potential exacerbation of ponding and slow drainage due to shallow gradients, tidal influences, and shallow groundwater.

Based on this review, it is recommended that further investigation into the development's effects on groundwater and determining adequate stormwater conveyance design to fit in with lots 1-7 Windsor Way.

Limitations

This report has been prepared for the benefit of Mr Derek Westwood et al. as our client(s) with respect to the review of the Kaipara District Council proposed plan change 85. It shall not be relied upon for any other purpose. The reliance by other parties on the information or opinions contained in this report shall, without our prior review and agreement in writing, be at such parties' sole risk.

Opinions and judgments expressed herein are based on our understanding and interpretation of current regulatory standards and should not be construed as legal opinions. Where opinions or judgments are to be relied on, they should be independently verified with appropriate legal advice. Any recommendations, opinions, or guidance provided by Cook Costello in this report are limited to technical engineering requirements and are not made under the Financial Advisers Act 2008.

Cook Costello has performed the services for this project in accordance with the standard agreement for consulting services and current professional standards for environmental site assessment. No guarantees are either expressed or implied.

Appendix B – F6_Further Submission Addendum dated 7 October 2025.

PPC85 Submissions Report addendum

Form 6 – Further Submission on a Proposed Plan Change

Clause 8, Schedule 1, Resource Management Act 1991

1. Submitter Details

Full name: Derek Westwood (on behalf of Owners of Lots 1–7 Windsor Way)

Postal address: 58 Helvetia Dr Browns Bay Auckland 0630

Email: derek.westwood@xtra.co.nz

Phone: 022 651 1577

I am / represent: The Owners of Lots 1–7 Windsor Way (Submission 56)

2. Submissions Supported or Opposed

This further submission responds to a number of original submissions on PPC 85 that either:

- support Windsor Way's concerns regarding flooding, hydrological neutrality, and stormwater capacity; or
- oppose Windsor Way's position and require rebuttal.

Examples include:

- Supported submissions: 36 (E. Smyth), 41 (M. Scott), 65 (M. Kaemper), 73 (K. Desmond) – all raise concerns about flooding, permeability, or stormwater neutrality.
- Opposed/contradictory submissions: 32 (Riverside Holdings), 43 (Northland Regional Council), 44 (R. Dunning), 46 (Tern Point Society), 48 (Adam Booth), 58 (Fairy Tern Trust), 69 (I. McDell), 86 (D. Lloyd).

3. Position (Support / Oppose)

- We support submissions that highlight flooding, permeability, and stormwater neutrality concerns (e.g., 36, 41, 65, 73).
- We oppose submissions that dismiss or understate these issues or that contradict a solution-focused approach (e.g., 32, 44, 46, 48, 58, 69, 86).

4. Reasons

- Flooding and stormwater risks: Cabra's large-scale earthworks and land-raising will increase impervious surfaces and reduce natural soakage. Without major downstream infrastructure upgrades, this will breach the principle of hydrological neutrality and displace flooding risk onto Windsor Way residents.
- Professional evidence: Cook Costello's technical review confirms that soakage-only solutions are inadequate and potentially harmful, reinforcing the need for engineered downstream stormwater infrastructure.
- Alignment with other submitters: Submissions 36, 41, 65, and 73 share Windsor Way's concerns, strengthening the case that Council must require mitigation.

- Rebuttal to opposition: While some submissions argue against PPC 85 entirely (e.g., 44, 86), Windsor Way Residents adopt a conditional stance: PPC 85 can proceed, but only if Cabra provides enforceable downstream stormwater solutions that protect existing properties.
- Public interest: Properly managed, PPC 85 could achieve a “win–win” outcome — delivering housing growth while safeguarding the environment and existing residents from flood risk.

5. Decision Sought

- That Council require Cabra to provide downstream stormwater infrastructure upgrades as a condition of PPC 85, ensuring hydrological neutrality is achieved in practice.
- That soakage-only approaches be rejected where they transfer risk to neighbouring properties.
- That ecological, transport, and public-realm benefits of PPC 85 be retained but tied to enforceable infrastructure commitments.
- That submissions opposing PPC 85 in its entirety (without solution-seeking) be given limited weight, and instead, conditions be imposed to achieve balanced growth.

6. Right to Be Heard

☑ I wish to be heard in support of my further submission.

7. Signature

Signature of submitter, or authorised person on behalf of submitter.

Derek Westwood.

On behalf of Windsor Way Residents (Lots 1-7)

Date: 7 October 2025

PPC85 MANGAWHAI EAST

Prepared for: Windsor Way Residents

Lots 1-7 Date: 1 October 2025

Prepared by:
Derek Westwood, CPEng

Date: 1 October 2025
On behalf of Windsor Way Residents, Lots 1–7

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PPC85 Submissions Report addendum

Executive Summary

The report detail here in provides an overview of the submissions received on PPC85, highlighting the balance between growth needs and environmental/infrastructure considerations. It reflects the spectrum of community views and identifies pathways to strengthen the proposal.

Report structure

Submissions on PPC85 demonstrate both strong support and significant opposition. Supporters emphasise the importance of planned growth, housing diversity, and coordinated infrastructure delivery. Conditional supporters generally favour PPC85 but raise issues around infrastructure capacity, ecological protection, density, and stormwater management. Opponents focus on ecological impacts, rural character loss, infrastructure shortfalls, and alignment with the Kaipara Spatial Plan. Neutral submissions are largely technical, addressing firefighting access, infrastructure standards, and heritage matters. Overall, many submitters identify issues which, if addressed, could shift opposition into support, highlighting the need to refine PPC85 to balance growth with environmental protection and infrastructure resilience.

Appendices provide further detail: **Appendix A** tabulates submissions by category with reasons; **Appendix B** details Windsor Way's flooding concerns, referencing Cook Costello's technical input; **Appendices C** and **D** set out rebuttals to opposing submissions and highlight positives that strengthen PPC85; and **Appendix E** summarises specific rebuttals to submissions 44, 69, and 86 with cross-referenced reports.

Support

Private Plan Change 85 (PPC85) relates to a proposed rezoning at Mangawhai East, Northland. The plan change seeks to rezone rural land to enable residential development, associated open spaces, and limited commercial activities. Submissions were invited from stakeholders, residents, and organisations. The purpose of this report is to summarise the submissions received, categorise them into Support, Conditional Support, Opposed, and Neutral, and highlight the key issues raised. Further technical concerns relating to flooding, permeability, and hydrological neutrality are detailed in **Appendix B** of this report.

This report also includes **Appendix B,** highlighting the concerns raised by the Owners of Lots 1–7 Windsor Way (Submission **56**). These concerns draw directly on professional input from Cook Costello, who emphasise that while "hydrological neutrality" can be beneficial, reliance on soakage as a solution creates risks for downstream flooding and neighbouring properties. This reinforces the need for Cabra's works to address flooding risk comprehensively, in a manner that benefits both the developer and existing residents.

Conditional Support

These submissions are summarised here, with details recorded in **Appendix A** and further technical explanation in **Appendix B.**

Opposition

Key opposing submissions, including those considered contradictory to Windsor Way's position, are summarised here and fully addressed in **Appendices C, D,** and **E.**

Neutral

These concerns, while not amounting to opposition, are recorded in detail in **Appendix A** and further developed in **Appendix B** where flooding and infrastructure issues are considered.

Commentary on submissions

1. Cabra's Proposed Works

Submissions (e.g., **44** – R. Dunning, **69** – I. McDell) highlight the scale of Cabra's planned earthworks, excavation, and land raising to enable residential development. Submitters note that Cabra's proposals involve significant disruption and increased impervious surfaces, raising concerns over the scale of hydrological modification and whether mitigation measures can realistically match the magnitude of the works.

2. Permeability and Soakage Loss

41 – M. Scott warns that the development would involve 'high coverage of permeable surfaces which would create a serious threat from road and storm water run-off into the estuary.**' 73 –** K. Desmond raises 'significant concerns about increased flooding risk for neighbouring properties and sediment runoff into the estuary.' These submissions clearly identify loss of soil permeability and soakage capacity as a core risk of Cabra's development approach.

3. Hydrological Neutrality

The Mangawhai Spatial Report introduces the concept of hydrological neutrality, requiring that any subdivision 'does not increase stormwater flows compared with pre-development conditions.' Several submissions argue that Cabra's large-scale earthworks are likely to breach this principle, shifting runoff downstream rather than absorbing it on site.

4. Effects on Windsor Way

36 – E. Smyth (Windsor Way landowner) documents that their property already required earthworks and filling to mitigate flood hazard constraints, demonstrating the sensitivity of this catchment. Additional works upstream (as part of PPC85) could displace stormwater flows toward Windsor Way, increasing flood risk for existing residents.

5. Submission 56 (Owners of Lots 1–7 Windsor Way)

Submission **56** specifically notes that: 'Our submission is written to point out the potential for flooding as a consequence of Cabra's plans. However, given the magnitude of their works we are seeking a solution from them to help us – a win–win for both parties and for others who have similar concerns.' This reflects a conditional stance: while concerned about flooding and loss of soakage capacity, the submitters recognise that collaborative solutions (e.g., enhanced stormwater infrastructure, green corridors, or improved detention systems) could convert opposition into practical support.

6. Technical Chain of Effect

From the evidence gathered, the following chain of effect is established:

1. → Cabra's large-scale works excavation, impervious surfaces, land raising
2. → Loss of permeability and soakage (**41, 73**)
3. → Breach of hydrological neutrality principle (Mangawhai Spatial)
4. → Increased flood risk downstream (**36, 73**)
5. → Direct effects on Windsor Way and surrounding land (**36, 56**)

Appendix A demonstrates that Cabra's works, if not modified, pose significant flood and stormwater neutrality risks. However, as emphasised by Submission **56**, there remains an opportunity for mitigated solutions that achieve mutual benefit ("win–win") and align PPC85 with the principle of hydrological neutrality.

Summary and Conclusion

In conclusion, the submissions demonstrate a broad spectrum of views. The detailed evidential base supporting Windsor Way's case is contained in **Appendices A–E**, which are referenced throughout this report.

The submissions to Kaipara Distric Council (KDC) PPC85 demonstrate a community divided between the need for coordinated growth and the risks posed to the environment and infrastructure. A significant number of submitters expressed conditional support, suggesting that amendments to the plan could shift opposition towards support. For a detailed breakdown of submissions, see **Appendix A,** and for the technical note on flooding and hydrological neutrality, see **Appendix B.**

Prepared by:
Derek Westwood, CPEng

Appendix A – Submission Summary

Support

No	Name	Key Issue / Reason
2	B. Fanshawe	Planned growth over ad hoc development
7	M. Tschirky	Housing demand
8	J. Seward	Supports coordinated outcomes
11	P. Wilkes	Prefers coordinated growth
12	L. Nelson	General support
13	M. Brookes	Planned development desirable
14	S. Fitzgerald	Supports outcomes of PPC85
17	P. Kemp	Supports housing delivery
18	J. Riley	Housing diversity
19	H. Riley	General support
20	P. Nicholas	Demand-driven case
23	J. Magill	General support
25	A. Bridson	Supports PPC85
26	K. Burns	Coordinated outcomes
28	C. & D. Payne	Plans well considered
31	V. & T. Andrew	Broad support with caveats
33	J. McQuarrie	Coastal housing demand
34	K. Hebden	Ecological protections
37	H. Benn	Supports ecological focus
39	P. Fontein	General support
40	A. & J. Rutherford	Supports residential zoning only
41	M. Scott	Endorses coordinated planning
45	T. Scott	Strong support
51	J. & M. Readman	Planned over ad hoc growth
52	J. Membrey & D. Nacewa	Housing mix benefits
53	L. Vale	Developer support
54	M. & J. Scheib	Coordinated outcomes
59	Wild Property Group	Developer support
82	H. Wright	Supports housing diversity

Conditional Support

No	Name	Key Issue / Reason
29	V. & T. Andrew	Want changes to density, pest control, stormwater
36	E. Smyth	Wants land rezoned
40	A. & J. Rutherford	Oppose intensity; prefer limited zones
48	Black Swamp Ltd	Seek RLZ → LDRZ and commercial use
56	Owners of Lots 1–7 Windsor Way	Want infrastructure added; concern about flooding/soakage. Informed by Cook Costello review, advocating downstream infrastructure upgrades.
63	E. Bornhauser	Oppose density and cats; seek amendments
64	J. Bornhauser	Mirrors E. Bornhauser
65	M. Kaemper	Flooding and wastewater issues
70	R. & N. Cullen	Traffic, cats, density concerns
71	A. & F. Meagher	Traffic, biodiversity, density
85	Heritage NZ	Heritage protection focus

Opposed

No	Name	Key Issue / Reason
1	A. Cook	Ecology and infrastructure risks
3	D. & A. Hurley	Too intensive; estuary risks
4	D. Medland-Slater	Traffic and ecology
5	E. Nichols-Gill	Loss of rural character
6	K. Staples	Environmental pressures
9	J.M. Hamber	General opposition
10	C. Boonham	General opposition
15	G. Douglas	Planning concerns
16	K. Kahn	General opposition
21	H. Hoyle	General opposition
22	H. Poole	General opposition
24	R. Poole	General opposition
27	I. Sanson & G. Riley	Ecology and traffic
32	Riverside Holdings	Opposes transport, density
35	D. Smyth	Distrust of developer-led growth
38	K. McInerney	Fairy Tern habitat risk
43	Northland Regional Council	Loss of productive soils
44	R. Dunning	No demand; wrong location
46	Tern Point Society Inc.	Strong opposition; ecology, infrastructure
57	P. & B. Lambert	General opposition
58	NZ Fairy Tern Trust	Risks to Fairy Tern survival
62	P. & A. Collenge	Flood-prone land
66	H. & C. Young	Ecology and infrastructure issues
67	A. Rogers	Ecology, infrastructure, sprawl
68	D. & G. Mather	Estuary threats
69	I. McDell	Distrust of developers
72	A. Flavell-Johnson	Birds, hazards, commercial hub
73	K. Desmond	Flooding, Fairy Tern, zoning issues
74	J. Hooper	Infrastructure, flooding
86	D. Lloyd	Oppose entirely; Spatial Plan inconsistency
87	J. Budelmann	Traffic, biodiversity, housing oversupply

Neutral

No	Name	Key Issue / Reason
55	NZ Steel	Technical correction to controls
60	FENZ	Firefighting access and water supply
81	DOC	Biodiversity and ecology focus

Appendix A provides a focused analysis of submissions that identify flooding, permeability, and stormwater neutrality as critical risks associated with PPC85. It consolidates technical concerns raised by multiple submitters, including Submission **56** (Owners of Lots 1–7 Windsor Way), and demonstrates how these issues link directly to Cabra's proposed works. This appendix is referenced in the Executive Summary, which recognises the importance of stormwater management and hydrological neutrality in determining whether PPC85 can proceed in a sustainable manner.

Appendix B – Technical Note (Submission 56 – Windsor Way Residents)

Submission **56** – Owners of Lots 1–7 Windsor Way
The submission highlights the potential for flooding and soakage risks as a consequence of Cabra's large-scale earthworks and impermeable surface creation**.** The submission seeks a solution from Cabra to address these concerns, aiming for a win–win outcome for both the developer and affected residents.

Following a professional review by Cook Costello, this submission is strengthened by:

•Supporting alignment with other submitters who share concerns on flooding, permeability, and ecological impacts – specifically Submission 36, Submission **41**, and Submission **73** – as their feedback should be strongly considered by Council and Cabra.
• Opposing reliance on soakage on neighbouring sites, as this can increase risks for Windsor Way residents. Cook Costello caution that while "hydrological neutrality" is beneficial if done correctly, it should not imply soakage solutions that displace water problems onto neighbours.
• Advocating for infrastructure upgrades downstream, which could accommodate flows and achieve neutrality without worsening local flooding conditions.

This position reflects the professional assessment by Cook Costello, integrated into the Windsor Way submission to ensure technical robustness.

Appendix C – Submission Alignment Analysis

This appendix provides a tabulated summary of submissions referenced in support of Submission **56**, alongside those that contradict or express a negative view. The purpose of this table is to clearly identify alignment and areas of conflict for consideration.

Submission Number	Category	Notes
36	Supportive	Flooding concerns align with Submission 56
41	Supportive	Coordinated planning, relevant to infrastructure concerns
63	Supportive	Opposes density and cats, similar environmental concerns
65	Supportive	Highlights flooding and wastewater issues
70	Supportive	Traffic and flooding issues mentioned
71	Supportive	Traffic and biodiversity concerns align
73	Supportive	Fairy Tern, flooding, zoning issues echo S56 concerns
32	Contradictory	Focus on traffic and density, not aligned with flooding concerns
43	Contradictory	Concerns over productive soils, different emphasis
46	Contradictory	Broad ecological opposition, not specific to S56
58	Contradictory	Fairy Tern focused, not directly on flooding
44	Negative	States no demand for development, indirectly undermines S56
48	Negative	Seeks RLZ→LDRZ/MUZ/COMZ; increases downstream stormwater pressure (Windsor Way), risks breaching hydrological neutrality; no shared infrastructure commitment; brewery rezoning adds traffic/service risks.
69	Negative	Distrusts developers, not infrastructure-linked
86	Negative	Opposes entire plan, contradicts engagement approach in S56

Appendix D1 – Review of Submission 32 (Riverside Holdings / RHP)

1) Foreshore occupation vs. public access (PPC85 public benefit)

RHP's occupation/use of the foreshore area forms a physical and functional impediment to continuous public access. PPC85 advances public benefits including connected open space, walking/cycling links, and safer, more legible routes to the coast. Any private occupation that fragments or constrains the foreshore undercuts these network benefits and the plan change's stated purpose to enhance public access for all.

2) "Written approval" ≠ resource consent (cannot trump regional & district requirements)

RHP relies on an allegedly written approval. However, a written approval is not an authorisation to occupy or use the foreshore; it does not substitute for the necessary regional (coastal/foreshore) and district (land-use/access) consents. Only the relevant consent authorities can lawfully authorise such occupation/use. Private agreements or letters cannot override plan rules, coastal policies, or consent conditions. Council should place no weight on such approvals unless supported by lawful resource consents.

3) Consistency with KDC & regional planning requirements

Public access and coastal margins are core planning objectives. Activities on or adjoining the foreshore must be assessed for effects on public access, safety, coastal processes and amenity. RHP's occupation that constrains access is in tension with these requirements. PPC85's structure planning and access network are aligned with them; RHP's position is not.

4) Traffic & movement benefits proposed under PPC85 (Cabra's package)

The PPC85 transport package includes new intersection upgrades (e.g., a roundabout), safer connections, and better walking/cycling links that improve network efficiency and safety for Mangawhai as a whole. These upgrades disperse trips, calm speeds, reduce conflict points, and create alternative mode options, thereby benefiting the wider community. In contrast, RHP's focus on limiting development and retaining foreshore control does not contribute to shared public outcomes.

5) Alignment with Submission 56 (Windsor Way Residents)

Submission 56 is conditional and solution-seeking: support PPC85 if Cabra delivers downstream infrastructure to address flooding/soakage risks. RHP's restrictive, private-interest position impedes the foreshore and does not engage with infrastructure and public-realm solutions. Thus, RHP's submission is contradictory to the public-benefit framework and solution pathway advanced in S56 and PPC85.

6) Relief sought

1. Give limited weight to any RHP “written approval” unless and until lawful consents are produced and demonstrated compliant.
2. Prefer PPC85’s public benefits (access network, safety upgrades, continuous coastal connectivity) over private foreshore impediments.
3. Confirm PPC85 transport upgrades as benefiting Mangawhai and consistent with a public interest outcome.
4. Require conditions ensuring uninterrupted public access across the relevant coastal margin and integration with PPC85’s open-space and movement network.

Appendix D2 – Review of Submissions 43, 46 & 58

Submission 43 – Northland Regional Council (NRC)

Their stance: Opposed, focusing on loss of productive soils, strategic consistency, and risks from intensified development (including flooding and coastal hazards).

Positives to adopt:
- Stronger stormwater performance standards: hydrological neutrality and downstream capacity upgrades.
- Coastal hazard discipline: protection of flow paths, minimum finished floor levels, and foreshore setbacks.
- Soils and land stability: tighter earthworks staging, erosion/sediment controls, and progressive stabilisation.

Rebuttal:
NRC's concerns do not preclude development if PPC85 includes strong conditions. Submission 56 already calls for downstream infrastructure solutions. Adopting NRC's safeguards would strengthen compliance with regional objectives. These should be treated as conditions, not grounds for rejection.

Submission 46 – Tern Point Recreation & Conservation Society Inc.

Their stance: Strong opposition, focusing on ecological risks, sediment discharges to the estuary, and infrastructure pressure.

Positives to adopt:
- Ecological corridors and buffers: support for continuous habitat corridors, riparian planting, and wetland buffers.
- Sediment controls: pre-construction ESCP, turbidity triggers, no-go earthworks windows during wet seasons.
- Predator and domestic animal controls: cat management, dog control, and food source management.

Rebuttal:
These ecological measures can be secured as conditions rather than reasons for refusal. Incorporating green infrastructure (raingardens, swales, wetlands) benefits both biodiversity and stormwater outcomes, supporting Submission 56's flooding concerns. A Habitat & Stormwater Integration Plan would address both ecological and hydraulic risks.

Submission 58 – NZ Fairy Tern Trust

Their stance: Opposed, highlighting risks to Fairy Tern nesting/foraging from disturbance, predators, lighting, and sediment.

Positives to adopt:
- Lighting controls: cut-off luminaires, warm-spectrum lights, and curfews.
- Seasonal restrictions: limits on earthworks and noise during breeding season.
- Predator management: feral animal control, domestic pet rules, and secure waste management.
- Access management: boardwalks, fencing, signage, and seasonal exclusions.

Rebuttal:
The Trust's measures are implementable and can be addressed through conditions. Combining stormwater neutrality (as per Submission **56**) with avian-safe design provides a balanced outcome. A Fairy Tern Protection Package could secure biodiversity protection while allowing PPC85 to proceed.

Appendix D3 – Review of Submissions 44, 48, 69 & 86

Submission 44 – R. Dunning

Key Negative Points:
- Claims no demand for additional housing.
- Suggests the location is unsuitable.

Rebuttal:
- Housing demand in Mangawhai is strong, as evidenced by population growth and Kaipara District's own projections.
- The location is strategic, aligning with the Spatial Plan to create compact urban form.

Positives We Can Use:
- The emphasis on location allows us to highlight PPC85's proximity to services and integration with planned transport upgrades.

Submission 48 – Adam Booth

Key Negative Points:
- Brewery commercial rezoning adds traffic/compliance risks.
- Worsens runoff/soakage risk for Windsor Way, no downstream stormwater assessment.
- Upzoning (RLZ → LDRZ/MUZ/COMZ) without demonstrated infrastructure capacity.

Positives We Can Use:
- Emphasis lot 8 site, positives local on 'technical mitigation.

Rebuttal:
- Retain RLZ until downstream infrastructure upgrades are secured.
- Strategic zoning requires catchment-wide solutions and hydrological neutrality before upzoning.
- Fill consent (AUT.046759) addresses on-site hazard only; cumulative downstream effects remain.

Submission 69 – I. McDell

Key Negative Points:
- Distrust of developers and delivery of promises.
- Views PPC85 as risky and developer-driven.

Rebuttal:
- PPC85 is subject to council approval, independent technical review, and binding conditions.
- Flooding and infrastructure issues will be legally addressed through enforceable measures.

Positives We Can Use:
- Highlights the need for clear infrastructure guarantees, supporting Submission **56**'s request for Cabra to provide binding commitments.

Submission 86 – D. Lloyd

Key Negative Points:
- Opposes PPC85 entirely.
- Claims inconsistency with Kaipara Spatial Plan.
- Argues the scale is wrong for Mangawhai.

Rebuttal:
- PPC85 is consistent with the Spatial Plan's objectives of coordinated, compact growth.
- Scale ensures delivery of infrastructure and open space that piecemeal subdivision cannot.

Positives We Can Use:
- Reference to the Spatial Plan allows us to reinforce PPC85's compliance with strategic planning, strengthening its case.

Appendix E – Key Review of Summary Sheet

Submission 32 – Riverside Holdings (RHP)

Ref: RHP submission document & PPC85 transport assessment (Cabra).

- Opposes PPC85 on traffic/density but ignores flooding issues.
- Their foreshore occupation claim does not override council/regional consent requirements.
- Public access is a statutory matter.
- Cabra's traffic upgrades enhance access for the wider Mangawhai community.

Submission 43 – Northland Regional Council

Ref: NRC submission & Kaipara District Spatial Plan.

- Concerned about loss of productive soils.
- PPC85 concentrates growth in a designated node, reducing pressure on higher value soils elsewhere.

Submission 44 – R. Dunning

Ref: Dunning submission & KDC growth projections.

- Claims no housing demand and unsuitable location.
- Demand is proven by census data and KDC growth projections.
- PPC85 location is strategic, supporting compact urban form.

Submission 46 – Tern Point Society Inc.

Ref: Tern Point submission & ecological/stormwater reports (PPC85).

- Opposes on ecological/infrastructure grounds.
- Technical reports and consent conditions address risks.
- Their emphasis on ecology supports stronger hydrological and flood protections (aligned with **S56).**

Submission 58 – NZ Fairy Tern Trust

Ref: Fairy Tern Trust submission & PPC85 ecological assessment.

- Opposes scale, citing Fairy Tern habitat risks.
- PPC85 can integrate buffers, pest control, and ecological corridors.
- Highlights importance of coordinated ecological management.

Submission 56 – Owners of Lots 1–7 Windsor Way

Submission 69 – I. McDell

Ref: McDell submission & council consent framework (PPC85).

- Distrust of developers.
- PPC85 subject to council approval and enforceable conditions.
- Reinforces need for binding infrastructure commitments, supporting **S56**.

Submission 86 – D. Lloyd

Ref: Lloyd submission & Kaipara Spatial Plan objectives.

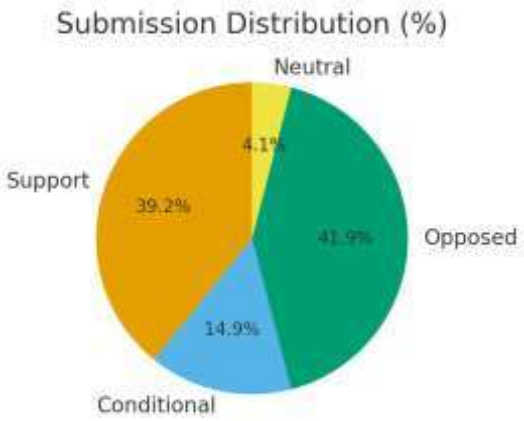
- Opposes entirely, citing inconsistency with Spatial Plan.
- PPC85 actually implements Spatial Plan objectives for compact, coordinated growth.
- Scale ensures infrastructure delivery not possible under piecemeal development.

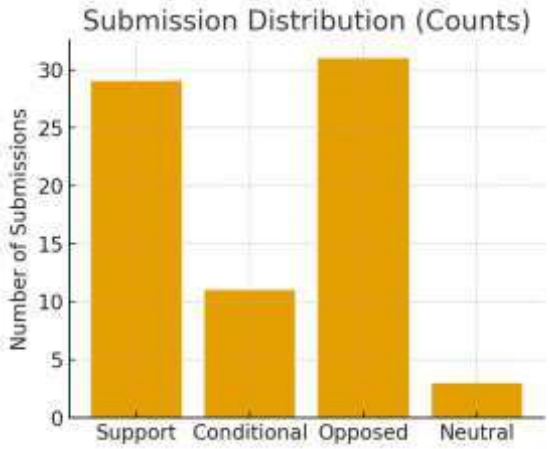
Submission Analysis – Tables and Graphs (74 unique submissions)

This section summarises the categorisation of all unique submissions received for PPC85. Although 87 files were uploaded, several were duplicates or revised versions, resulting in 74 unique submissions. The breakdown below reflects these 74 unique submissions.

Category	Count	Percentage
Support	29	39.2%
Conditional Support (swing)	11	14.9%
Opposed	31	41.9%
Neutral/Technical	3	4.1%

Charts:





Note: Out of the 87 uploaded files, 13 were identified as duplicates or alternative versions of the same submission (e.g., 32/32bb, multiple versions of 65 Kaemper, duplicate DOC files, and two versions of 85 Heritage NZ). After removing duplicates, 74 unique submissions remain.

Prepared by:
Derek Westwood, CPEng

Appendix C – Expert Commentary Addendum dated 14 January 2026 (Cook Costello).

Cook Costello

Wednesday, 14 January 2026

Expert Commentary Addendum – Windsor Way (PPC85 Mangawhai East)

Supplementary expert commentary addressing national direction introduced 18 December 2025

Since our original submission, updated national direction - particularly the National Policy Statement for Natural Hazards 2025 and the National Policy Statement for Infrastructure 2025 - provides additional context relevant to the matters identified in our Stage 1 stormwater review for Lots 1-7 Windsor Way.

The revised policy framework places increased emphasis on risk-informed decision-making, the use of best available information, and the early identification and management of natural hazard risk, including flooding, where such risk is known or potentially elevated.

As outlined in our earlier assessment, the Windsor Way area is characterised by flat topography, shallow groundwater, limited stormwater conveyance, tidal tailwater influences, and observed ponding. These site characteristics have not been fully resolved at a conceptual or plan-making level within the current PPC85 documentation and warrant careful consideration where additional development capacity is proposed.

In this context, the updated national direction highlights the importance of site-specific hydraulic and groundwater assessment, along with a clear understanding of how additional development may influence local flood behaviour. It also reinforces the need for caution where soakage-based stormwater solutions are proposed in areas with constrained infiltration capacity.

Overall, the recent policy changes underscore the relevance of a precautionary and evidence-led approach to intensification in low-lying parts of the PPC85 area, including Windsor Way, particularly where stormwater and flooding constraints remain to be resolved.

Yours sincerely,

Emily Thompson

Geotechnical and Civil Engineer

BE(honns)