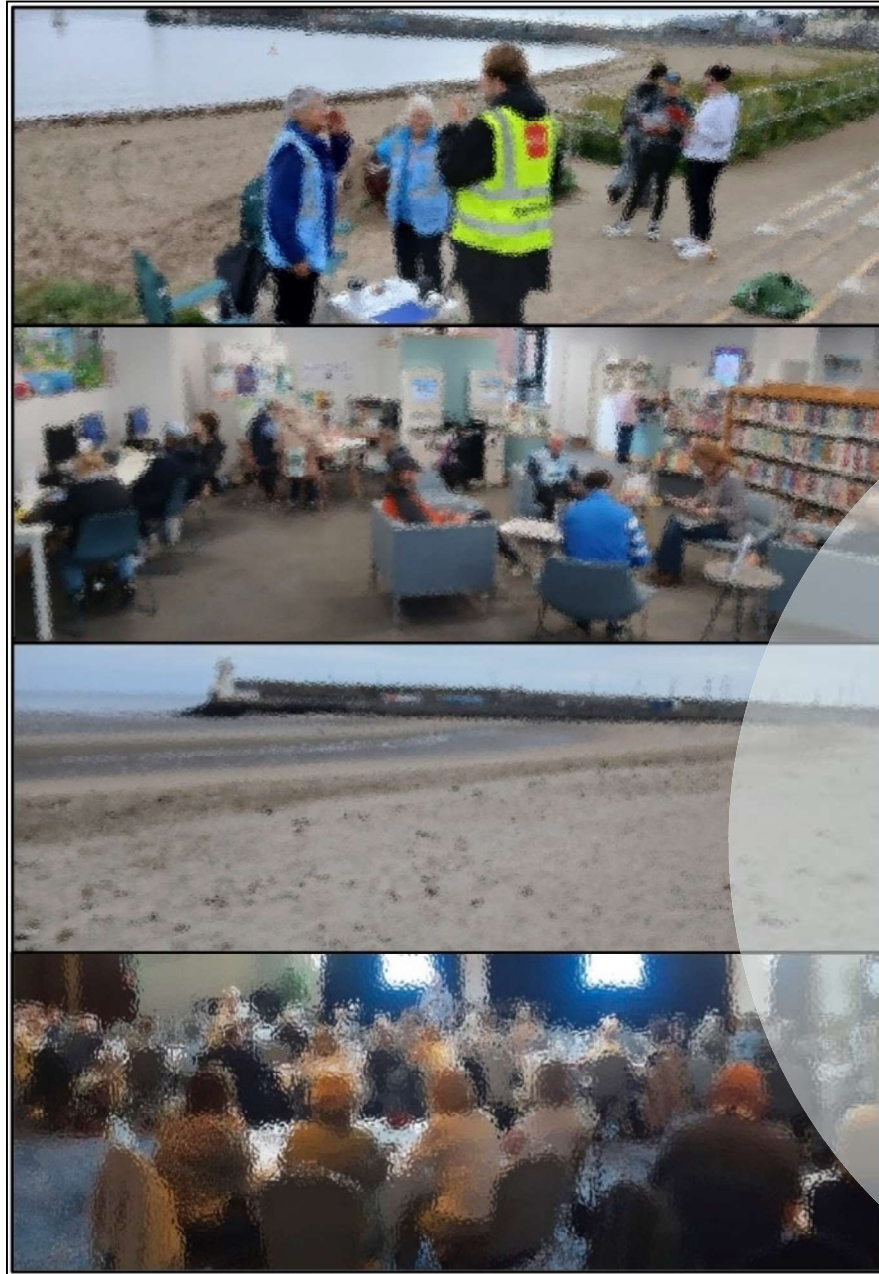


# Balbriggan Beach

## *A Futures Assessment*



*01 December 2025*

*Dr Kevin Lynch*

# BACKGROUND TO THE ASSESSMENT

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This report was commissioned by Fingal County Council to help inform: 1) on how the beach functions from a coastal science perspective, and 2) on how people (residents, beach users and interested parties) feel the beach should be managed into the future.

To achieve this, we held: 1) informal meetings, 2) a public workshop, 3) a public survey.

- 1) The meetings were conducted remotely with individuals and local groups. The meetings recorded: existing concerns; how people used & valued the beach; to ask opinions on future directions. One meeting involved a *walkover survey* on the beach.
- 2) Building on the evidence gathered in the meetings we designed a public workshop. This workshop was held on June 26<sup>th</sup> 2025. The goal was to see if our information at that point reflected wider opinion in Balbriggan. A secondary purpose was to propose the Blue Flag Award as a way forward.
- 3) The final step involved was a public survey (building on information gathered from Steps 1&2), to gauge as much public opinion as possible within the timeframe and resources available. 337 surveys were completed.

## THE 3Ss ASSESSMENT

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In assessing the beach-dune health, three key components are considered, the 3Ss: Sand, Species and Space. The “Sand” component represents the geomorphological state (the shape of the beach-dune system), the sediment supply (local erosion and deposition), and possible sand transport pathways.

In assessing the “Species”, the presence of certain indicator plant species would normally be recorded. This assessment was not completed for this assessment, rather a simple presence/absence of vegetation coverage was visually assessed.

The “Space” component is concerned with the pressures on the system, with a view to planning out a future where a shared human-nature space can be agreed. The use of the 3Ss approach is to ensure that the diverse set of people interested in the future of Balbriggan Beach are speaking the same language on the key issues.

# SAND

Balbriggan Beach (The Front Strand) is bounded to the north by a headland and to the south by a harbour. The implication of this, is that it is nearly a *closed system* where the total **sand** available between the dune, the beach, and the nearshore is fairly fixed. Exchanges with sand moving along the coast is probable (or with any sand banks further offshore), but likely to be of lesser importance than the sands within the immediate vicinity. In Figure 1, sand movement in the nearshore can be seen where the water is coloured brown by the presence of sand moving along the coast. Sand stores and sand movement by natural processes on Balbriggan Beach are described in Figure 2.

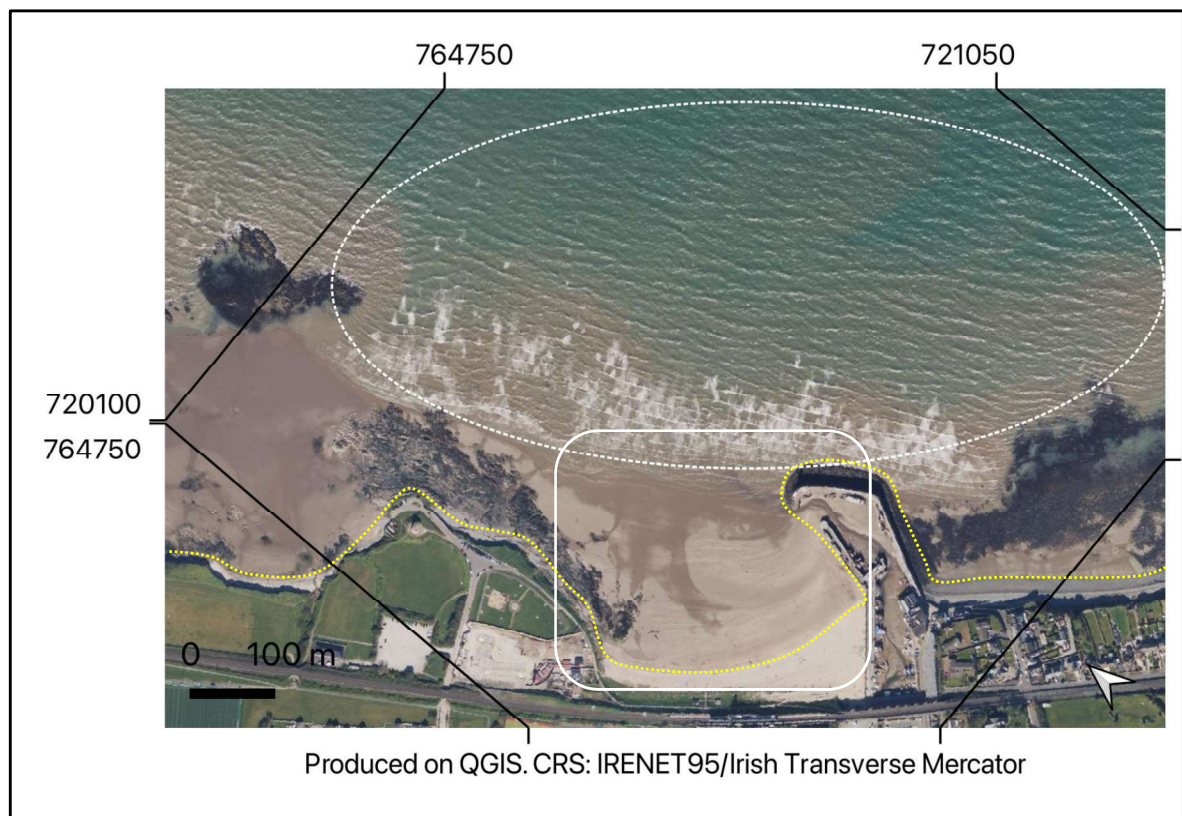
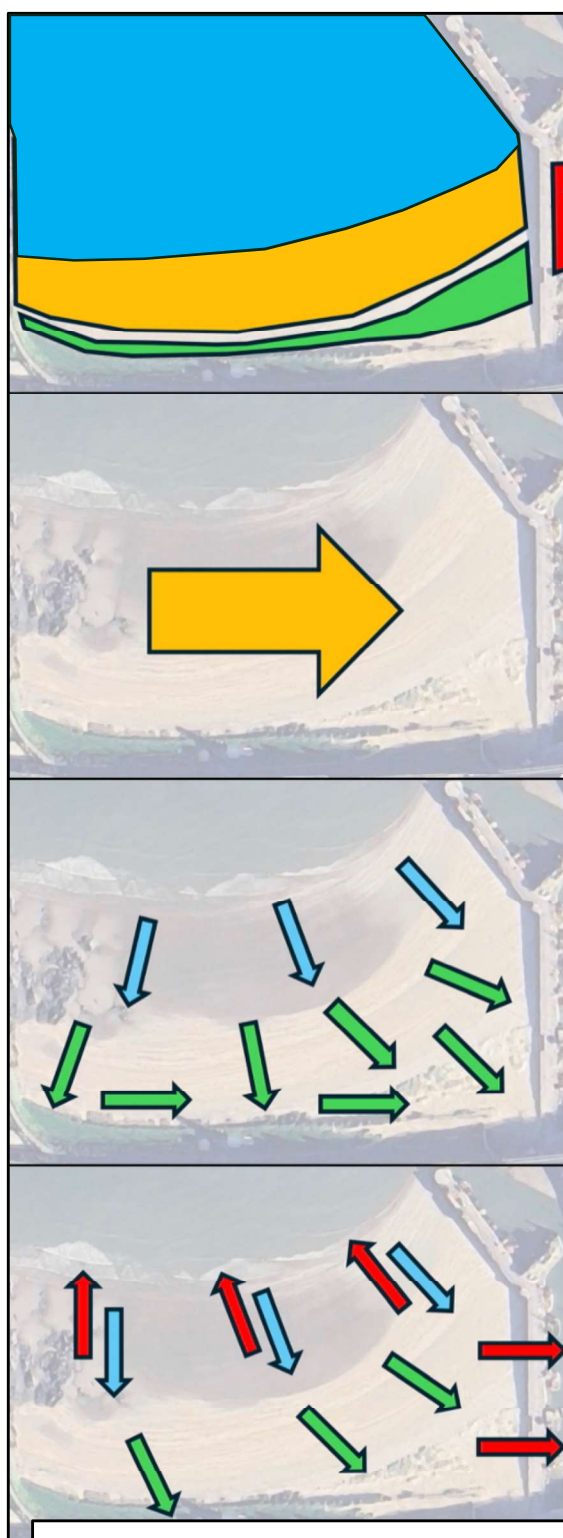


Figure 1: Balbriggan Beach Boundaries: The beach boundary (white box) is well defined by a headland to the north, landward by a railway line, and by a harbour to the south. Sand exchange is evident in the nearshore (oblong shape). Please note all maps and graphics are rotated from north for ease of presentation.



A

Within the system, sand is stored in three areas

- 1) In the inter-tidal area, between the high and low tides (blue area),
- 2) On the dry beach (the sandy area normally above the high-tide line – orange colour),
- 3) Within the sand dune area (green area).

B

The general movement of sand within the system, is towards the harbour wall. It does of course move in many directions over the seasons, but this direction towards the south, may be considered the overall trend.

C

Sand supply by *wave action* (blue arrows) is swash-aligned (based on the beach shape). This means sand arrives on the beach along its entire length.

Re-distribution by *wind action* (green arrows), moves sand further up the beach and along the upper beach towards the harbour wall.

D

Sand can leave (red arrows) the beach-dune area in two ways:

- 1) Storms move sand from the beach-dune area towards the sea. This will normally be available to return during fair weather conditions.
- 2) Sand lost inland, that ends up on roads, is generally not returned (due to contamination).

Figure 2: Sand stores, and sand transport pathways on Balbriggan Beach.



In parallel to this walkover survey by DFA, Fingal County Council, commissioned a topographic survey by Murphy Consultants to quantify seasonal changes to the beach surface (see Appendix 2). Those surveys align with the sand assessment above (Figure 2), with small-scale exchanges between the three sand stores. For example, between September 2024 and December 2024, the delivery of sand from an inter-tidal sand bar towards the beach and the upper beach/sand dune was clearly evident (see Figure 3).

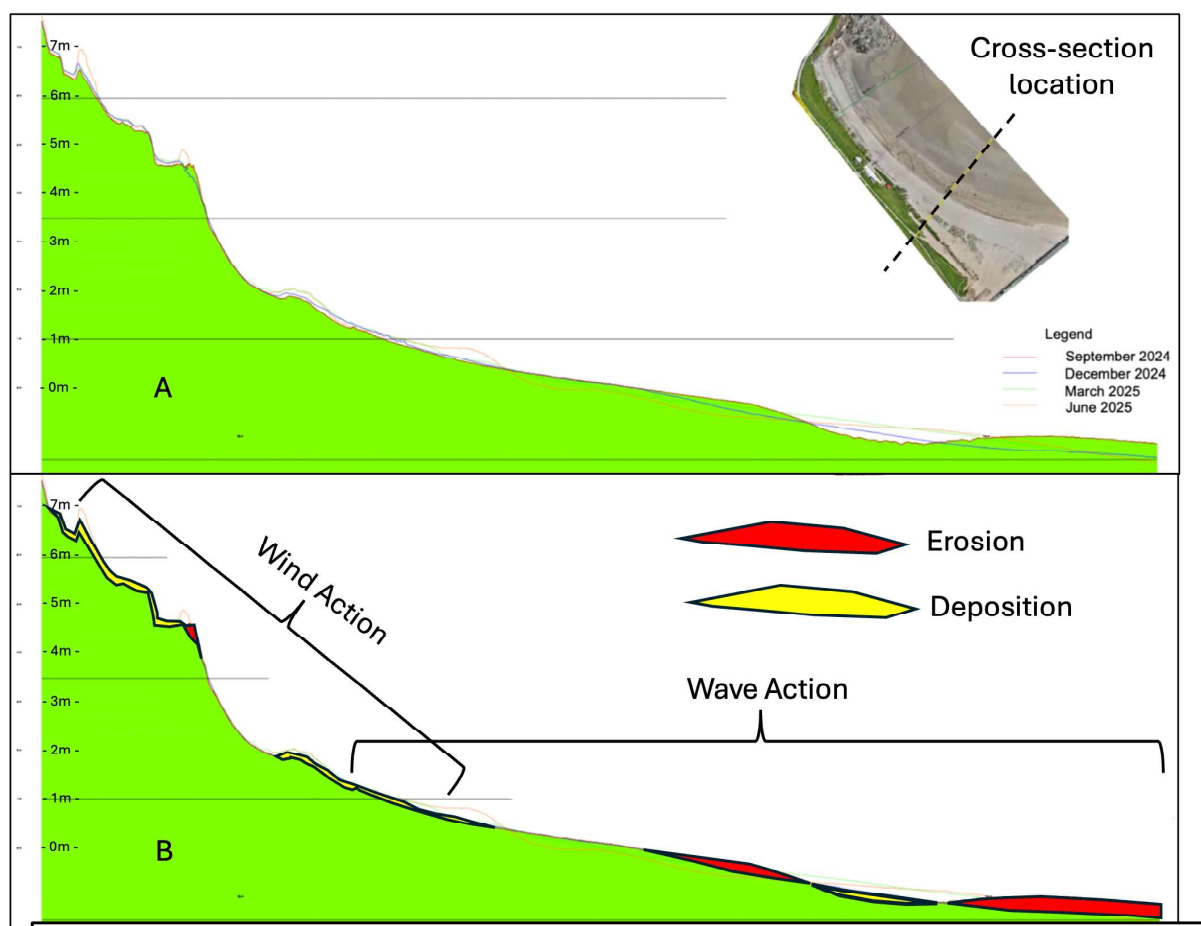


Figure 3: Cross sections of the beach over time (A), with interpretation (B). In B, if we consider only heights recorded for September 2024 in comparison to December 2024, areas of erosion and deposition can be mapped out. Between these three months sand is recorded to have moved up the beach from areas marked red to areas marked yellow (some of the areas marked red may also have seen sand moved offshore or along shore).

In geomorphological terms these processes are referred to as cut and fill, and seasonally may be expected to result in winter and summer profiles. Based on limited historical imagery and local knowledge, any erosion is counter-balanced by deposition during fair-weather conditions. Therefore, the average state (the *equilibrium* state) of the beach-

dune system can be said to be dynamic, but stable (as opposed to a long-term trend tending towards erosion or deposition).

More recent changes to the system have been described (by stakeholders) as new dune growth on the upper beach, especially in the southern section of the beach. Here beach raking (cleaning) has been discontinued for the last number of years, leading to embryo dunes establishing at the winter storm line (most likely around washed-up seaweed). It can be expected these new dunes have increased in volume over time. It may also be noted that sand has built up along the harbour wall, to a height above the normal beach height.

## SPECIES

Although westerlies and south-westerlies are the regional prevailing wind direction, local topography likely results in very dynamic wind directions on the beach surface. Build-up of sand however, is very much controlled by vegetation and other structures that slow the wind speed (such as the harbour wall). Where vegetation or other obstacles are not present, the sand is free to blow inland and be lost from the system (for example, sand that ends up on roads is generally considered to be contaminated and is not returned to the beach or nearshore). A botanical survey was not conducted as part of the present assessment. There are however, a number of observations that can be made.



Figure 4: New dune line. The yellow line indicates the natural arc-shape of the beach (primarily due to the way waves arrive on the beach). The black dotted line indicates the position of the new dunes on the upper beach. The position of these coincides with the high tide line (the darker seaward edge of these dunes is a seaweed deposit).

1) New dunes have appeared at the natural spring high tide line (see Figure 4). This natural process results from the decaying seaweed providing nutrients to plants that colonise this part of the beach. The breakdown of the seaweed also helps the sand surface to retain moisture, which the plants can access. The physical presence of the seaweed can also reduce windspeeds, resulting in sand deposition, and plant seeds being trapped. Another natural way plants establish on this part of beaches is by fragments of plants (stolons) floating in on the tide with the seaweed and taking hold (they come from erosion on other sites along the coast).



Figure 5: Lyme grass presence and position on Balbriggan Beach (lower image) reflects similar Lyme grass dunes on King Strand (upper image) just 500m up the coast.

- 2) The natural process of plant establishment on the Balbriggan Beach is paralleled to some degree on King Strand where Lyme grass has also colonised the high tide position (see Figure 5). This is despite the narrowness of the “dry beach” there, which is in the order of only 5 metres wide.
- 3) The new dunes on Balbriggan Beach are clearly dominated by Lyme grass, but a diversity of grasses and flowering species are present (see Figure 6). This biodiversity of plant life will be paralleled by a diversity of fauna. These insects and other tiny creatures feed on the living plants, including pollinators, and help to break them down in the decaying process after the plants die.





Figure 6: A variety of dune plants photographed on Balbriggan Beach in the summer (2025), including Orache species, Marram grass, Sea Radish, Sand Couch Grass, Lyme Grass and Sea Rocket.

## SPACE

Balbriggan Beach, like any beach-dune system in Ireland is a shared space between nature and humans, and between multiple different uses by visitors. As described above the physical features (sand bars, the beach, sand dunes) are dynamic, changing over short time scales like tidal cycles, to longer periods over the seasons. And in order to do this requires a certain amount of space to accommodate these changes. The biological system requires similar time and space to function naturally.

The beach space is used by visitors in many different ways. Our survey quantified the diversity of these activities (see Figure 7), with 70.8% of respondents reporting that they visit the beach regularly (a few times a week) or daily. During sunny summer days, it may be expected that the visitor numbers swell, and likewise for beach festivals and events, which were mentioned during a number of the meetings (Appendix 1). Both the



meetings and the surveys saw a strong call for increasing the number of organised events and sporting activities on the beach. These require space just as the natural processes do, with each activity having specific space requirement too.

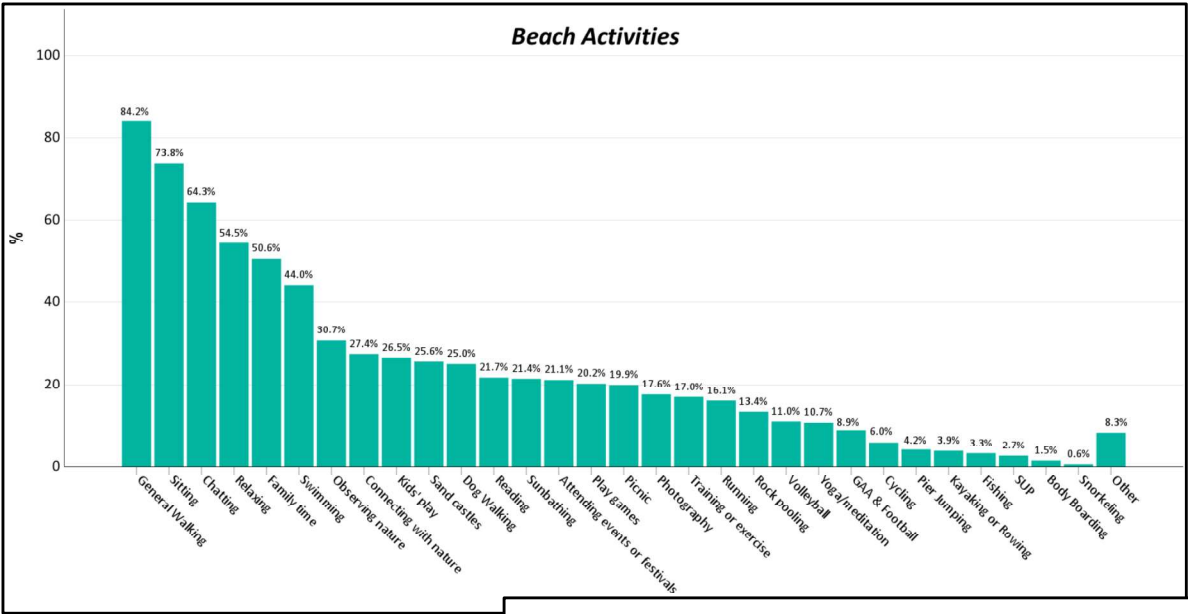


Figure 7: Beach activities by visitors to Balbriggan Beach.

In light of this great value that the people of Balbriggan place on their beach, it is clear from our work that there is a lot of concern (see Figure 8) about either 1) the way in which this asset has diminished over the last ~20 years, or 2) the level of investment and care it receives today.

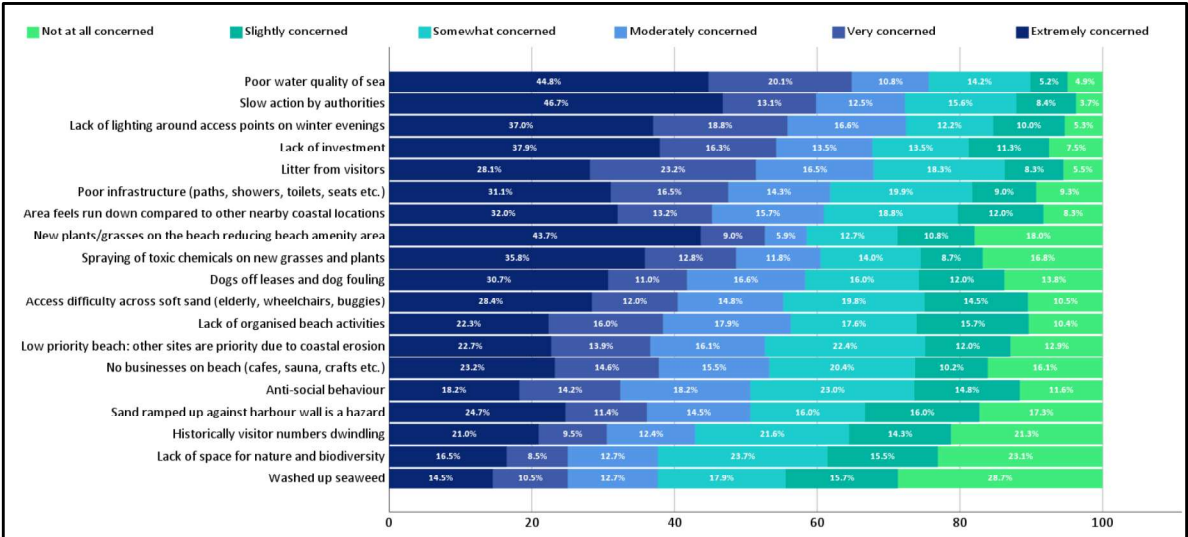


Figure 8: These concerns were identified in the meetings and workshop (blues indicate more concern, greens indicate less concern).

The most urgent concern – Poor Water Quality – could be seen as representative of all the issues combined. From our in-depth conversations, it can be seen as an issue about the attractiveness of the beach to visitors (and the knock-on negative economic effects), “if people cannot go in the water when they come to the seaside, why would they bother coming”. Or from an environmental perspective, it can be seen as another example of the poor state of our natural heritage. And irrespective of, if a viewpoint is considered people-first or nature-first, both agree a lack of care and investment by authorities is a problem (whether that *lack of care* is true or not, is not for us to say here, it is the viewpoint of our respondents).

The scale and complexity of some of these issues go beyond the physical boundaries of Balbriggan Beach (for example, poor water quality, lack of funding, anti-social behaviour, environmental degradation, tourism trends), and as such simple quick fixes, quick decisions or action can be difficult. If we take one issue and look at it with a bit of depth, it demonstrates that complexity:

**Beach access** (40.4% of respondents were *very* to *extremely* concerned about this issue).

A boardwalk is being suggested as a solution. Some things to consider might be:

Geomorphology & Habitat: the **sand** mobility, the shape of the beach across its profile, the shape and extent of uneven sand dunes. The presence of any protected **species**. The beach is partly within the North-west Irish Sea, Special Protection Area - SPA:004236 (the yellow dotted line in Figure 1 marks its boundary). The presence of Annex 1 priority dune habitat (although not designated for this site).

Connectivity: existing access points to the Front Strand are at a number of different height levels, safety regulations for the gradient of infrastructure means walkways require far more space than a set of steps between levels.

Design: the materials need to be durable for a coastal location, yet commonly used “composite” contains plastic. The more “marine” grade they are, the greater the cost. Design for wheel-based accessibility may differ from foot traffic. Preventing sand build-up and storm damage may need design and maintenance consideration as well.

Legal responsibilities, politics & leadership: the considerations here are many, but a note on prioritisation may be relevant. Yes, certain authorities and agencies are tasked with taking action on issues such as this, but certain issues seem to take precedent. On our coast serious pressure is put on authorities to act on damage from coastal erosion

and flooding. It is costing the economy 100s of millions of euro each year. North County Dublin is no different. Therefore, an area like Balbriggan Beach where coastal erosion is clearly not an issue (presently), may drop down the priority list. For Balbriggan, a strong groundswell of opinion, and local action, has kickstarted a process, moving the beach up that priority list.

Ownership, policies, permissions, liability, funding: In terms of procedures for a piece of infrastructure like a boardwalk, there is a considerable amount of *red tape* to be navigated. For a similar venture in Co. Mayo with a “roll out set of mats” rather than a solid structure it took a full year to resolve just the liability issue. (<https://www.rte.ie/news/ireland/2025/0513/1512478-beach-wheelchair-access/>)

Returning to the bigger picture for the beach and its future, it was suggested in a number of meetings that a Blue Flag Award may be a mechanism to bring people together to achieve a common goal. At the June workshop (Figure 9 shows an image from this event) it seemed to be an acceptable proposition. To test if this was an avenue worth pursuing, we included a section on the Blue Flag criteria in the questionnaire survey. A very attractive part of the award is that it requires a management committee to be in place, with representation from across any interested groups.



Figure 9: The public workshop June 2025.

# BLUE FLAG AWARD

The following statement was put to respondents to gauge, to what extent their views aligned with that of the Blue Flag Award. With the assumption that if there is alignment, it may be worth pursuing, and if there is not a clear alignment, it would not have sufficient support to spend time on.

*“We would like your opinion on how the Blue Flag criteria align with your priorities. To what extent are the following important to you? Please rate each criterion.”*

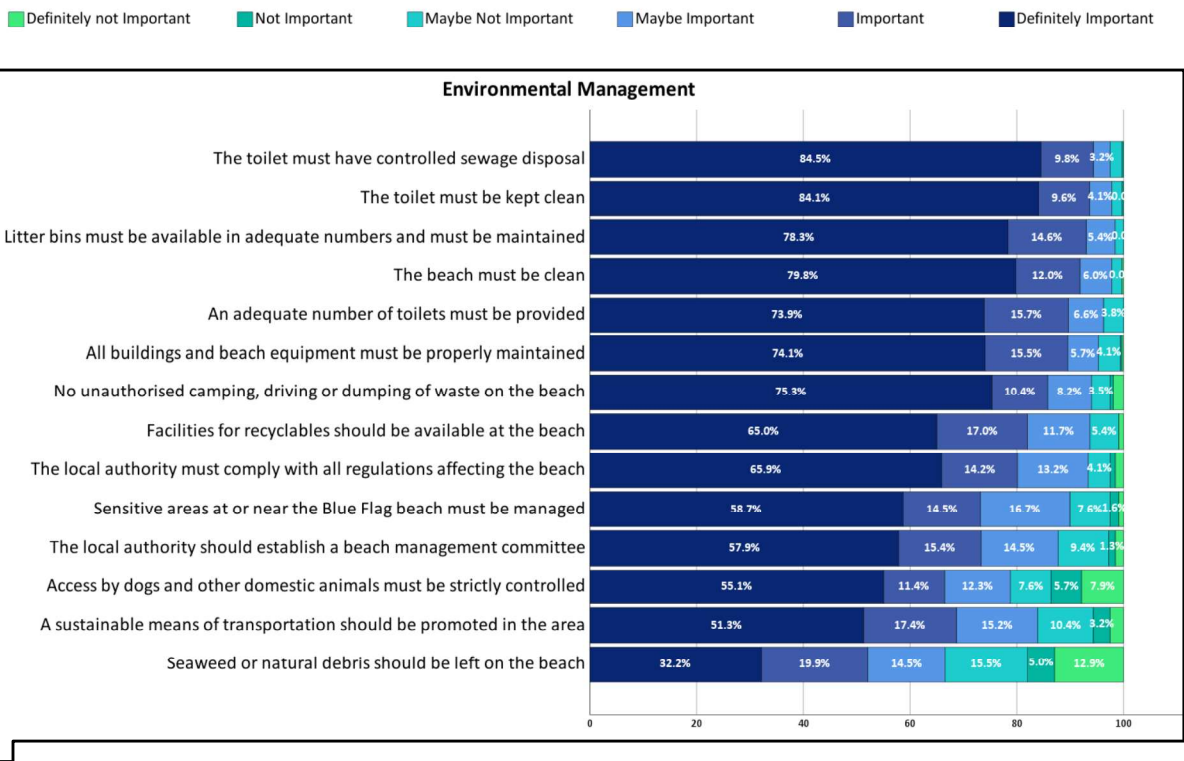


Figure 10: Respondents ratings on how important these Blue Flag criteria were for them personally (blues indicate important, greens indicate NOT important).

There were 32 criteria in all, with sections on Environmental Education and Information, Safety and Services, Water Quality, and Environmental Management (see Figure 10). The criterium that scored lowest in terms of importance was “Seaweed should be left on the beach”, even that though had majority support at 67%. All the other criteria were deemed important, hovering around the 80% score. Ultimately whether to pursue the Award will be a decision for the beach management committee. That would be a longer, separate piece of work to this current assessment. The full results for the Blue Flag Criteria are reported in Appendix 3.



## ADVICE FOR FUTURE DIRECTIONS

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- 1) The **sand and species** components may be managed with some small-scale sand redistributions of sand and interventions.
- 2) The overall **space** management would be best served by a representative cross-community management committee. This was committed to by Fingal County Council at the workshop in June. Any decisions should consider the long term, as well as trying to address current problems.

### 1) Sand and Species

#### Problem: Excess sand ramping up against the harbour wall

It may also be lost from the beach over the wall or under the railway line. Sand is a valuable resource, losing it from a beach is like throwing money down the drain. And it uses up limited funds, cleaning it from the road.

Possible solution:

Step 1. Move excess sands from along the wall to the northern end of the beach, against the rocks on the inter-tidal area (see Figure 11). Concerns were raised at the workshop that contaminated material may have been buried along the wall in the past. Care should be given to move only the excess sand down to the level of the surrounding beach. This will ensure only *recent* sands blown in by the wind are moved.

Step 2. The sea will rework this sand and likely move it up the beach. Once part of the upper beach it is free to be moved by the wind. The sand could then be trapped at this northern end of the beach. While there is dune vegetation here which traps it naturally, it is sparse. Sand fencing (chestnut paling – see Figure 12), could be used here to aid in dune building. The fencing slows the wind, promoting deposition of the sand. It also limits people trampling the vegetation as it becomes established. Initially 2 or 3, small 5m x 5m plots could be trialled from the northern tip of the beach as far as the steps at the centre of the beach. In this way, sand is to some degree prevented from arriving back down at the harbour wall.

Step 3. At the southern end of the beach use a single line of fencing 5m from the wall running parallel to its length. This should prevent any sand around the southern end of the beach making it to the wall. It may be installed as a staggered line to improve visitor movement.



Figure 11: Possible sand management interventions to be trialled in 2026. 1) move sand from harbour wall, 2) trap sand at the northern end of the beach with some sand fencing, 3) use sand fencing to prevent build up on any new pathways or along the harbour wall. These would depend on the alignment of new structures for beach access.

### Problem: Newly establishing sand dunes

Considered by some as unsightly, with Lyme grass too sharp for kids, and a loss of recreational area.

Possible solution:

Step 1. Improve understanding of benefits of sand dunes with signage. *Dunes.ie* has a series of free educational boards explaining the 3Ss. The benefits include trapping blowing sand from reaching the harbour wall, and with an eye on sea-level rise, are a mobile coastal protection against storm. Of course, they are also a great place for flora and fauna as the planet faces a biodiversity crisis.

Step 2. Limit access across the dunes by installing sand fencing (see Figure 12). This could also act as a limit on the extent of the dunes that have established already. A certain amount of *moving* washed up seaweed in the summer months could limit the dune extent. Any seaweed moved, could be added to the dunes at the northern end of the beach. It should not be moved up against the harbour wall. The extent and configuration of the fencing **should be flexible**, with decisions by the beach committee supported by a geomorphologist. If sand fencing is used, its purpose should be communicated with educational signage, along with a dedicated informative event for beach users. Unlike the northern end of the beach, there is less need for sand fencing for these southern dunes. Staggered single lines or L-shaped, or T-shaped sections may be sufficient here.

Step 3. Use the new Beach Management Committee to agree on a shared plan for the balance between *dune extent* and *recreational area*, acknowledging that there is not a uniform opinion across Balbriggan Beach users. From our survey, the degree to which people were *very to extremely concerned* about losing recreational area was 52.7%, while countering this view to some extent, *observing nature (30%) and connecting with nature (27%)* are a common activity for beach visitors. Although only 18% of people surveyed responded that they are “not at all concerned” that the “new dunes were reducing the recreational area”.



Figure 12: Chestnut paling, sand fences at Galway sites.

## 2) Space

- 1) Places where people and nature interact are complex places to understand and manage. Best practice advises that a “process” is more important than quick fixes. We should firstly look at the science, then, rather than doing nothing because we cannot predict the future, use a *trial and error* approach. To achieve this, solutions need to be flexible, so we can respond to yearly reviews of how they are working.
- 2) It is useful to develop a long-term end point (a Vision) that is agreeable to the stakeholders. The Vision needs to be developed within legal and policy constraints, and be realistic when it comes to expectations - everyone won't be happy all of the time. Working towards an end point 5 or 10 years in the future, tends to help people get past short-term frustrations if they can see the overall trend is positive for the future. Trialling things and adopting things that work, adjusting or discarding things that don't work. It will ultimately be the new Beach Management Committee that will plan out and trial different options for the Front Strand in Balbriggan.
- 3) Care should be taken in establishing a new Beach Management Committee.
  - a. Role: From our work, there seems to be a strong desire within Balbriggan to strive for a Blue Flag Award. The new committee should develop a plan of short, medium and long term actions, with timelines, to achieve this end. In doing so the value of the beach as a resource to the town can only increase.
  - b. Representativeness: The criteria for the Blue Flag; existing issues our work has identified for the beach; existing legislation, policies and plans; will all need to inform what representation is required on the committee. To be effective in decision-making it would need about 10 to 15 members.
  - c. Authority: As Fingal County Council is the responsible authority for the beach, integrating the committee into the existing decision-making fabric of the Council is a key consideration. A model for the committee might be the existing Special Amenity Area Order (SAAO) committee structure. There are a number of these SAAO committees already in use. In this way, a new beach committee's decisions and actions can be resourced - where possible - in a structured and efficient way.

DFA: Kevin Lynch PhD BSc, Axel Leahy PhD MSc BSc and Ms Aisling Lynch MA HDip BA.

- END -



## Appendix 1

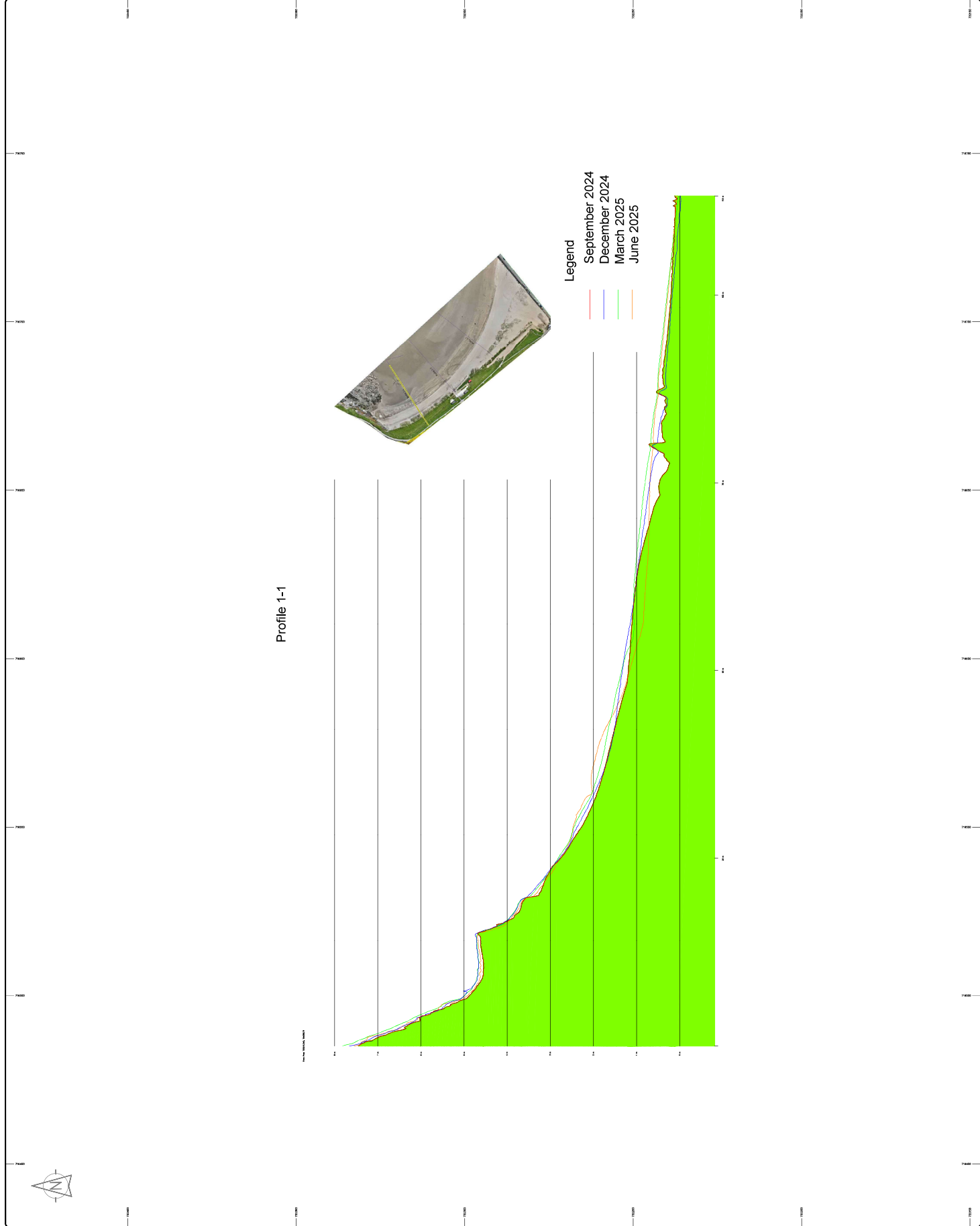
### List of informal meetings, May 2025

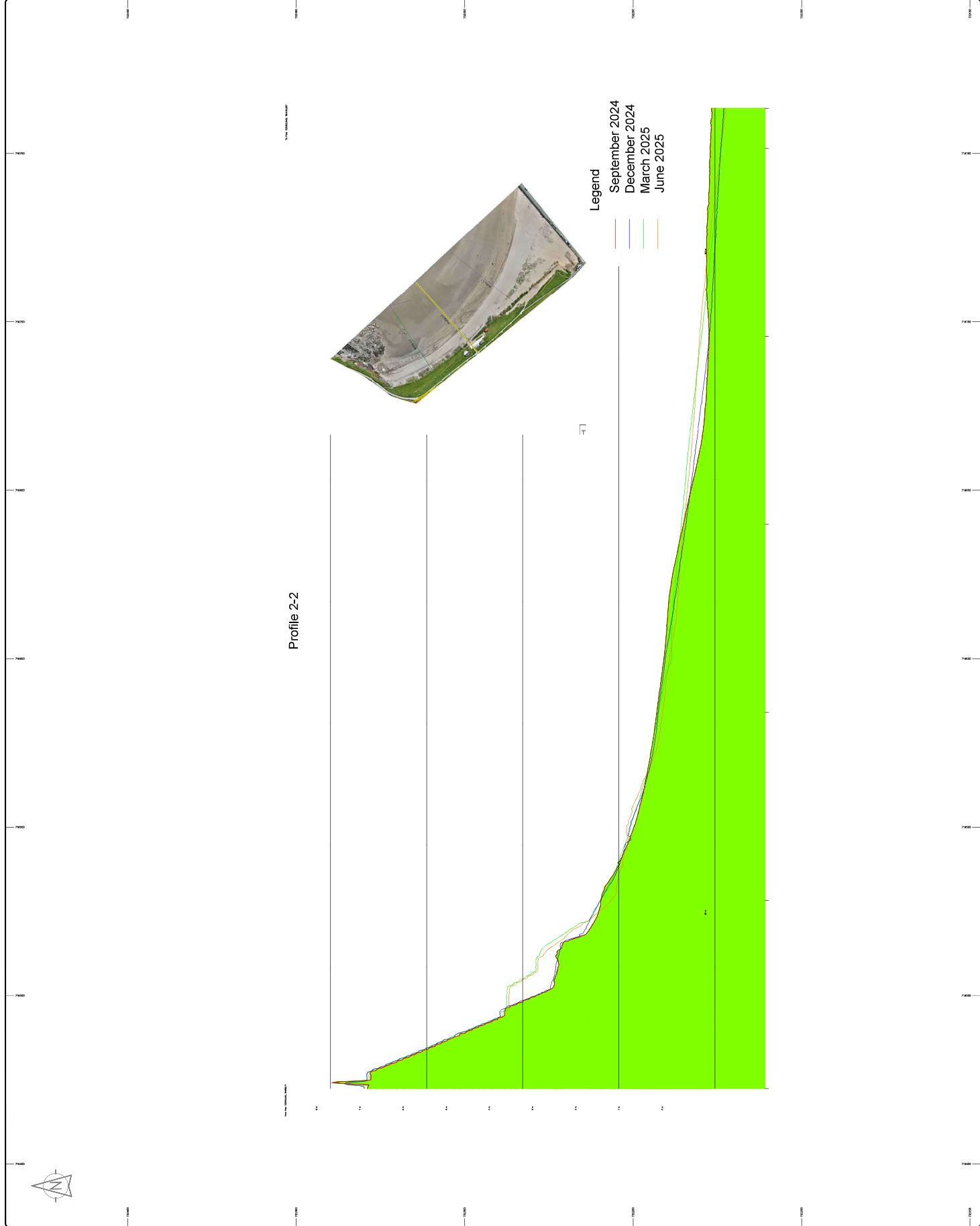
- 1) A member of Balbriggan Sustainability Group & Tidy Towns
- 2) A member of Waters & Wild group
- 3) A member of Our Balbriggan
- 4) A member of the “creative” community in Balbriggan
- 5) A member of Balbriggan Historical Society
- 6) A representative of the Irish Wheelchair Association
- 7) A member of Coastwatch
- 8) A member of Clean Coasts
- 9) Members of the “Save Our Sands” group
- 10) Some Fingal County Council Elected Officials
- 11) Some members of various Units of Fingal County Council
- 12) Some members of Chamber of Commerce

## Appendix 2

Cross sections Balbriggan Beach 2024 -2025

Murphy Geospatial.

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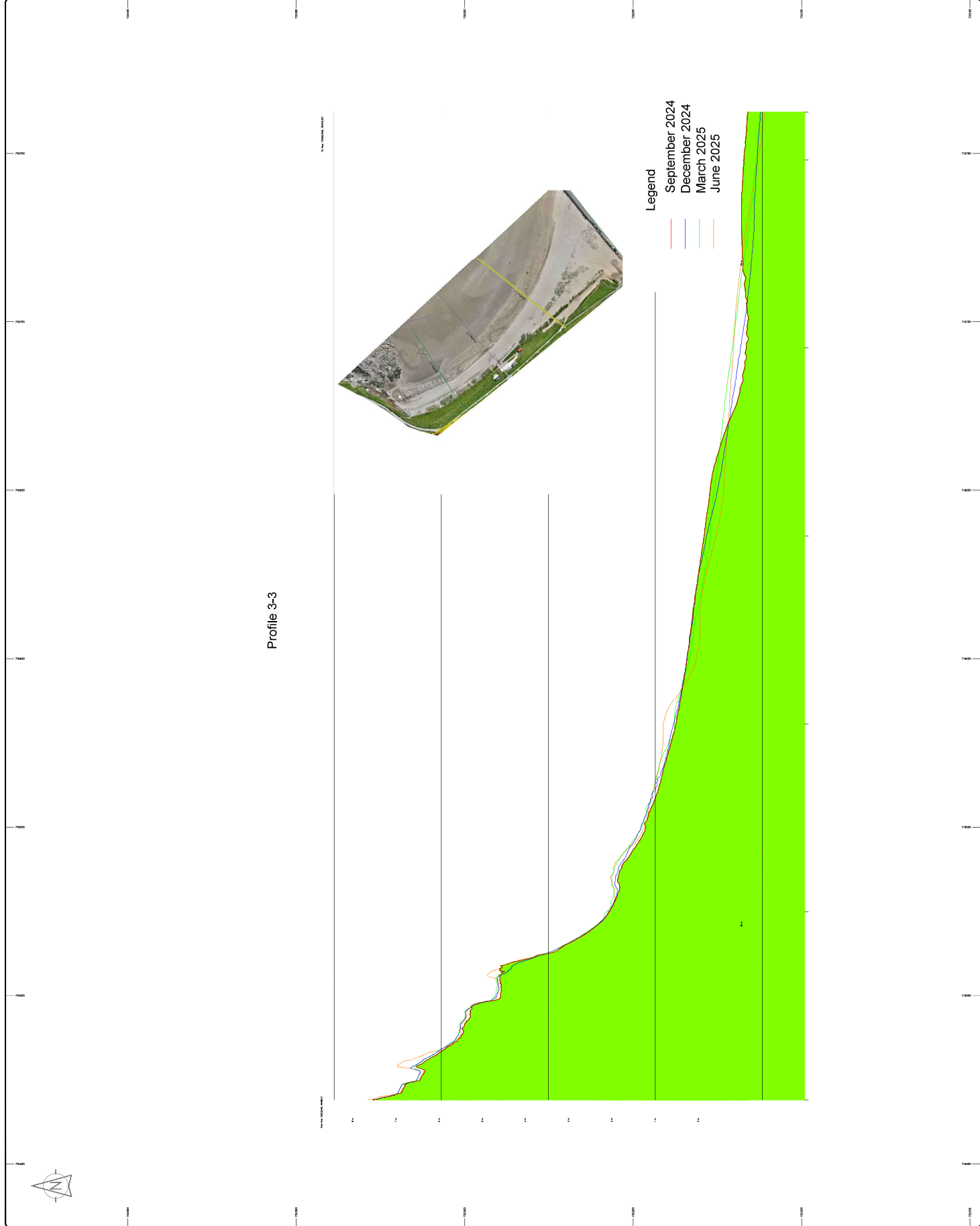


**Project location map**

**Legend**

- Roads:** A1, A2, A3, A4, A5, A6, A7, A8, A9, A10, A11, A12, A13, A14, A15, A16, A17, A18, A19, A20, A21, A22, A23, A24, A25, A26, A27, A28, A29, A30, A31, A32, A33, A34, A35, A36, A37, A38, A39, A40, A41, A42, A43, A44, A45, A46, A47, A48, A49, A50, A51, A52, A53, A54, A55, A56, A57, A58, A59, A60, A61, A62, A63, A64, A65, A66, A67, A68, A69, A70, A71, A72, A73, A74, A75, A76, A77, A78, A79, A80, A81, A82, A83, A84, A85, A86, A87, A88, A89, A90, A91, A92, A93, A94, A95, A96, A97, A98, A99, A100, A101, A102, A103, A104, A105, A106, A107, A108, A109, A110, A111, A112, A113, A114, A115, A116, A117, A118, A119, A120, A121, A122, A123, A124, A125, A126, A127, A128, A129, A130, A131, A132, A133, A134, A135, A136, A137, A138, A139, A140, A141, A142, A143, A144, A145, A146, A147, A148, A149, A150, A151, A152, A153, A154, A155, A156, A157, A158, A159, A160, A161, A162, A163, A164, A165, A166, A167, A168, A169, A170, A171, A172, A173, A174, A175, A176, A177, A178, A179, A180, A181, A182, A183, A184, A185, A186, A187, A188, A189, A190, A191, A192, A193, A194, A195, A196, A197, A198, A199, A200, A201, A202, A203, A204, A205, A206, A207, A208, A209, A210, A211, A212, A213, A214, A215, A216, A217, A218, A219, A220, A221, A222, A223, A224, A225, A226, A227, A228, A229, A230, A231, A232, A233, A234, A235, A236, A237, A238, A239, A240, A241, A242, A243, A244, A245, A246, A247, A248, A249, A250, A251, A252, A253, A254, A255, A256, A257, A258, A259, A260, A261, A262, A263, A264, A265, A266, A267, A268, A269, A270, A271, A272, A273, A274, A275, A276, A277, A278, A279, A280, A281, A282, A283, A284, A285, A286, A287, A288, A289, A290, A291, A292, A293, A294, A295, A296, A297, A298, A299, A300, A301, A302, A303, A304, A305, A306, A307, A308, A309, A310, A311, A312, A313, A314, A315, A316, A317, A318, A319, A320, A321, A322, A323, A324, A325, A326, A327, A328, A329, A330, A331, A332, A333, A334, A335, A336, A337, A338, A339, A340, A341, A342, A343, A344, A345, A346, A347, A348, A349, A350, A351, A352, A353, A354, A355, A356, A357, A358, A359, A360, A361, A362, A363, A364, A365, A366, A367, A368, A369, A370, A371, A372, A373, A374, A375, A376, A377, A378, A379, A380, A381, A382, A383, A384, A385, A386, A387, A388, A389, A390, A391, A392, A393, A394, A395, A396, A397, A398, A399, A400, A401, A402, A403, A404, A405, A406, A407, A408, A409, A410, A411, A412, A413, A414, A415, A416, A417, A418, A419, A420, A421, A422, A423, A424, A425, A426, A427, A428, A429, A430, A431, A432, A433, A434, A435, A436, A437, A438, A439, A440, A441, A442, A443, A444, A445, A446, A447, A448, A449, A450, A451, A452, A453, A454, A455, A456, A457, A458, A459, A460, A461, A462, A463, A464, A465, A466, A467, A468, A469, A470, A471, A472, A473, A474, A475, A476, A477, A478, A479, A480, A481, A482, A483, A484, A485, A486, A487, A488, A489, A490, A491, A492, A493, A494, A495, A496, A497, A498, A499, A500, A501, A502, A503, A504, A505, A506, A507, A508, A509, A510, A511, A512, A513, A514, A515, A516, A517, A518, A519, A520, A521, A522, A523, A524, A525, A526, A527, A528, A529, A530, A531, A532, A533, A534, A535, A536, A537, A538, A539, A540, A541, A542, A543, A544, A545, A546, A547, A548, A549, A550, A551, A552, A553, A554, A555, A556, A557, A558, A559, A560, A561, A562, A563, A564, A565, A566, A567, A568, A569, A570, A571, A572, A573, A574, A575, A576, A577, A578, A579, A580, A581, A582, A583, A584, A585, A586, A587, A588, A589, A590, A591, A592, A593, A594, A595, A596, A597, A598, A599, A600, A601, A602, A603, A604, A605, A606, A607, A608, A609, A610, A611, A612, A613, A614, A615, A616, A617, A618, A619, A620, A621, A622, A623, A624, A625, A626, A627, A628, A629, A630, A631, A632, A633, A634, A635, A636, A637, A638, A639, A640, A641, A642, A643, A644, A645, A646, A647, A648, A649, A650, A651, A652, A653, A654, A655, A656, A657, A658, A659, A660, A661, A662, A663, A664, A665, A666, A667, A668, A669, A670, A671, A672, A673, A674, A675, A676, A677, A678, A679, A680, A681, A682, A683, A684, A685, A686, A687, A688, A689, A690, A691, A692, A693, A694, A695, A696, A697, A698, A699, A700, A701, A702, A703, A704, A705, A706, A707, A708, A709, A710, A711, A712, A713, A714, A715, A716, A717, A718, A719, A720, A721, A722, A723, A724, A725, A726, A727, A728, A729, A730, A731, A732, A733, A734, A735, A736, A737, A738, A739, A740, A741, A742, A743, A744, A745, A746, A747, A748, A749, A750, A751, A752, A753, A754, A755, A756, A757, A758, A759, A760, A761, A762, A763, A764, A765, A766, A767, A768, A769, A770, A771, A772, A773, A774, A775, A776, A777, A778, A779, A780, A781, A782, A783, A784, A785, A786, A787, A788, A789, A790, A791, A792, A793, A794, A795, A796, A797, A798, A799, A800, A801, A802, A803, A804, A805, A806, A807, A808, A809, A



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## **Appendix 3**

Questionnaire Survey – Balbriggan Beach – 2025

Dr Axel Leahy

# Questionnaire Survey – Balbriggan Beach – 2025

Dr Axel Leahy

## Methodology

A survey was developed to assess how people value Balbriggan Beach. Specifically, the questionnaire aimed to measure the frequency of beach visits, the types of activities undertaken, and respondents' concerns regarding the beach and its management. In addition, a series of questions were included to gauge public perceptions of the Blue Flag criteria and to gather views on recently implemented sand fencing measures. Questions relating to values, usage, and concerns were informed by preliminary feedback gathered from interviews with key local informants and from a community workshop held in June 2025.

Data were collected over two weekends using multiple methods designed to capture a broad range of perspectives from different user groups. A purposive sampling strategy was adopted to ensure the inclusion of regular beach users, infrequent users, and residents who may not typically visit the coastline. The first round of data collection was conducted on Balbriggan Beach on Friday, 8 August, where 76 face-to-face surveys were completed with beach users. Additional data were collected on Friday, 10 October, and Saturday, 11 October, from a mixture of on-site, digital, and community-based sources.

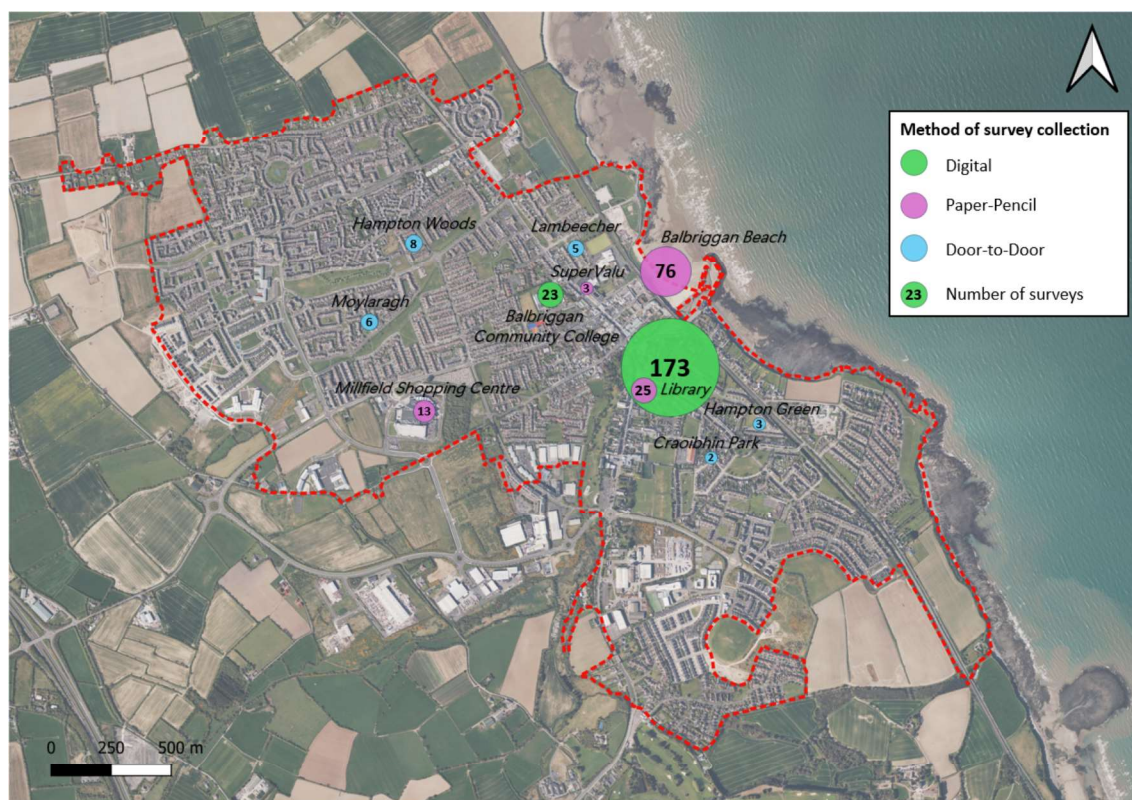
In total, 337 surveys were completed. The majority (N = 196) were submitted digitally, either through a web-based link circulated to Transition Year students at Balbriggan Community College or through an iPad available in the public library (**Table 1** and **Figure 1**). Twenty-five surveys were collected through a random door-to-door sampling strategy to capture the views of residents who may not be regular beach users. This approach also provided surveyors with an opportunity to discuss the issues raised in the questionnaire directly with participants.

To broaden community participation, posters were displayed in several locations across the town advertising an all-day survey event in the public library. Participants were invited to complete the questionnaire using a tablet or in paper format. Attendance at this event significantly exceeded expectations, with nearly 200 individuals completing the survey on Saturday, 11 October, between 10am and 5pm. This high level of participation was supported by the efforts of several motivated community members who actively promoted the event due to their strong interest in the future of Balbriggan Beach.

It is important to note that the results of this survey should not be interpreted as a representative sample of the Balbriggan population. As shown in **Table 2**, the demographic profile of respondents differs from official census data. In particular, the sample over-represents individuals aged 60-79, while respondents under the age of 40 are under-represented. There is also a notable gender imbalance, with 64.7% of respondents identifying as female. These biases should be considered when interpreting the findings. The survey should be interpreted as a snapshot of the perceptions and views from Balbriggan residents and visitors at a specific point in time. The findings reflect how participants viewed Balbriggan Beach, coastal management and Blue Flag criteria during the summer and autumn of 2025 and should not be considered representative of broader Balbriggan population.

Location	Method of data collection	Number of surveys	Date
Balbriggan Beach	Face-to-face (paper-pencil)	76	08/08/2025
Balbriggan Community College	Web-based Google Forms (digital-computer)	23	10/10/2025
Lambeecheer	Door-to-door (paper-pencil)	5	10/10/2025
Moriarty's SuperValu	Face-to-face (paper-pencil)	3	10/10/2025
Millfield Shopping Centre	Face-to-face (paper-pencil)	13	10/10/2025
Library	Self-administered (Paper-pencil)	25	11/10/2025
Library	Web-based Google Forms (digital-iPad)	173	11/10/2025
Hampton Green, Craoibhin Park	Door-to-door (paper-pencil)	5	11/10/2025
Hampton Woods	Door-to-door (paper-pencil)	8	11/10/2025
Moylaragh	Door-to-door (paper-pencil)	6	11/10/2025

**Table 1. Data collection locations, modes of administration, and number of completed surveys.**



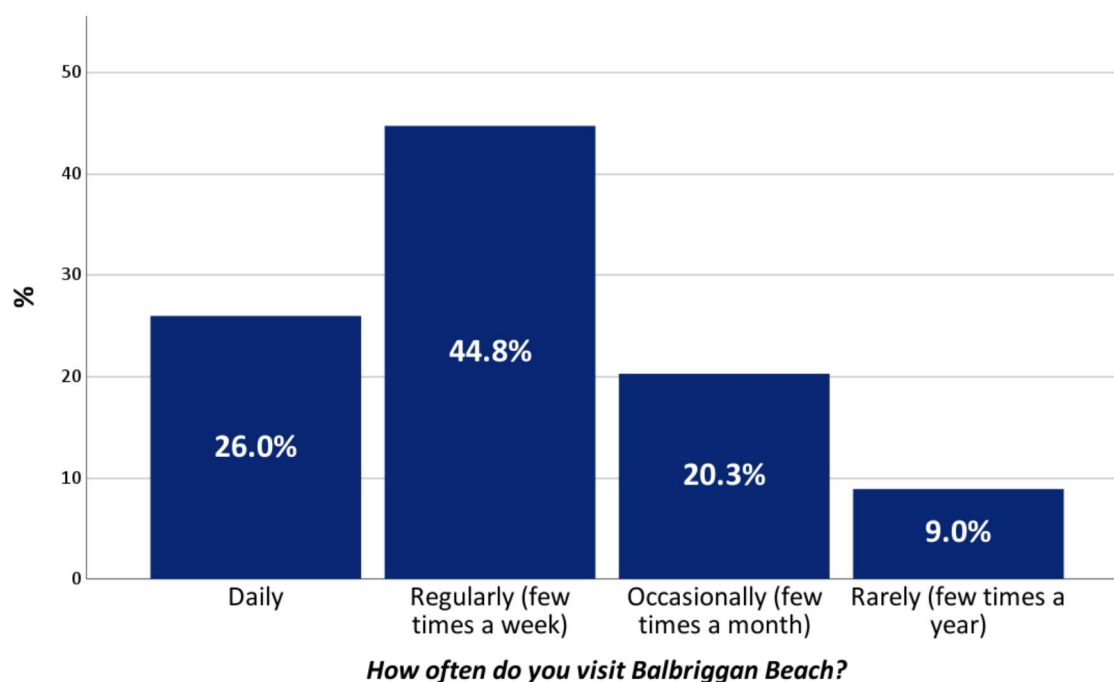
**Figure 1. Location of survey collection.**



Variable	Categories	N	%	CSO Census 2022	
				N	%
Gender	Male	119	35.3	11,848	48.7
	Female	218	64.7	12,474	51.3
Age	0-19	51	15.1	8,265	34.0
	20-39	46	13.6	5,991	24.6
	40-59	122	36.2	7,351	30.2
	60-79	109	32.3	2,420	10.0
	80+	9	2.7	295	1.2
Citizenship	Ireland	307	91.1	18,904	80.3
	Other citizenship	30	8.9	4,646	19.7
Physical disability	Yes	18	5.4	5,224	21.5
	No	304	91.0	19,098	78.5
	Prefer not to say	12	3.6	-	-
Relationship with Balbriggan	Resident	292	86.9	-	-
	Working/studying/volunteering	13	3.9	-	-
	Visiting because of family connections	15	4.5	-	-
	Visiting	16	4.8	-	-

**Table 2. Demographic profile of survey respondents and corresponding CSO Census 2022 figures.**

## Beach use and activities



**Figure 2. Frequency of visit to Balbriggan Beach**

As shown in **Figure 2**, the large majority of respondents (70.8%) report visiting Balbriggan Beach frequently (at least a few times per week). The most common activities undertaken on the beach are walking (84.2% of respondents), sitting (73.8%), and chatting (64.3%) (**Figure 3**). Overall, Balbriggan Beach is primarily used and valued for socialising and relaxation. Spending time with family also represents an important social activity, cited by 50.6% of respondents.

With the exception of swimming, which is undertaken by 44% of participants, engagement in water-based activities, sport, and more active recreation is generally more selective. For example, only 11% of respondents reported playing volleyball on the beach, while 4.2% (predominantly younger respondents) reported visiting the beach to jump from the pier.

On average, respondents engage in seven different activities on Balbriggan Beach. Activity diversity varies across age groups, with respondents under the age of 19 engaging in an average of eight activities, compared with an average of four among respondents aged over 80. Notably, some respondents identified beach litter-picking and participation in Tidy Towns clean-up events as social activities, reflecting the community-oriented value of the beach environment.

However, these findings should be interpreted with caution, as the methodology employed is likely to have influenced response patterns. Respondents who completed the survey digitally (on the iPad) reported a higher number of activities on average (7.96) compared with those who completed the paper-based version (6.47). This discrepancy may be due to differences in the way questions were presented. In the paper survey, activities were displayed in a single list, requiring respondents to tick only those most relevant to them. In contrast, the digital survey presented activities in sequential thematic categories, which may have prompted respondents to consider and select a greater number of options.

These findings suggest that Balbriggan Beach serves as an important social and recreational space for the local community.

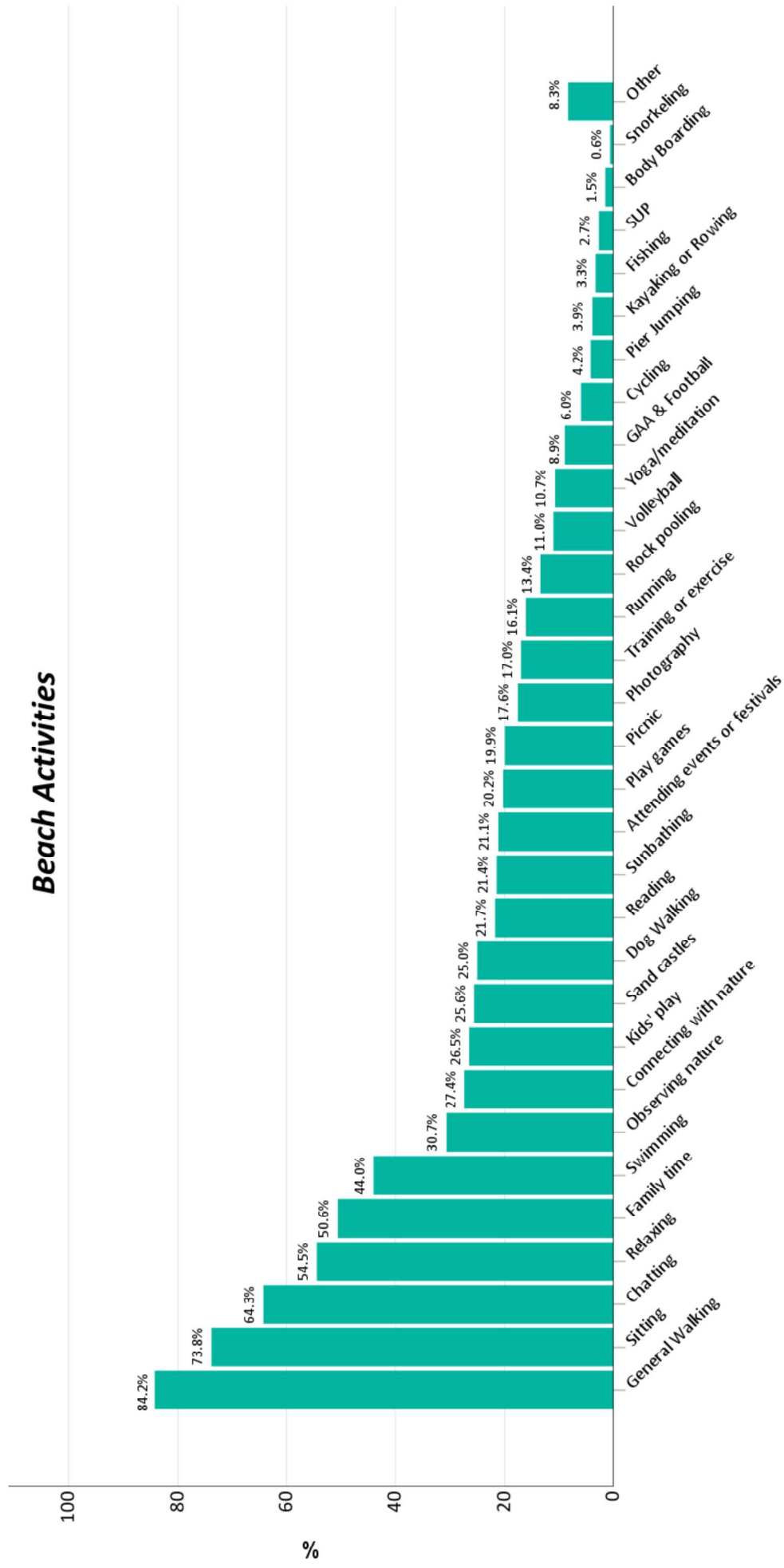


Figure 3. Beach use and type of activities.

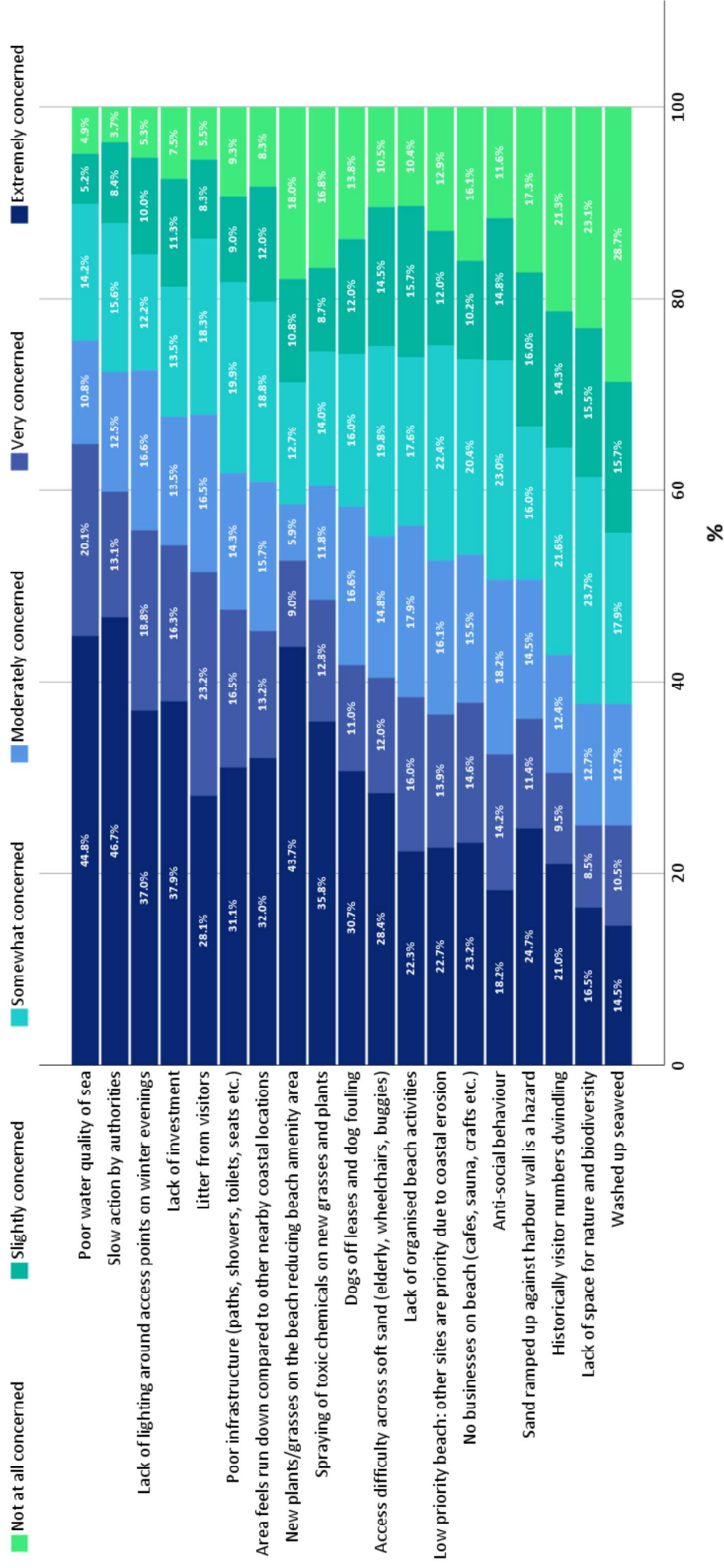


Figure 4. List of concerns for Balbriggan Beach.



## Levels of Concern and Key Priorities for Balbriggan Beach

Participants were asked to rate a list of 19 issues on a six-point scale ranging from 1 = *not at all concerned* to 6 = *extremely concerned*. The most pressing concerns identified by respondents were poor water quality (mean score = 4.70), slow action by authorities (4.63), lack of lighting (4.45), lack of investment (4.34), and litter from visitors (4.28) (see **Figure 4**).

Although concern regarding the presence of new grasses and plants on the beach ranked eighth overall, this issue generated a particularly polarised response. A substantial proportion of respondents (43.7%) indicated that they were *extremely concerned* about the spread of sand dune grasses, while 18% reported being *not at all concerned* (**Figure 4**). Only a small proportion selected middle-range options such as *moderately concerned* or *somewhat concerned*, further highlighting the divisive nature of this topic among participants.

### ***Generational Differences in Levels of Concern***

Clear generational differences were observed in the ranking of key issues. Among respondents under the age of 19 (N = 51), the top concerns were *water quality* (mean score = 5.04), *litter from visitors* (4.25), and the *lack of businesses on or near the beach* (3.96). Water quality was also the leading concern for respondents aged 40-59 (N = 119; mean score = 4.80) and for those aged over 80 (N = 9; mean score = 4.70).

In contrast, respondents aged 20-39 (N = 46) prioritised *slow action by authorities* (4.59), *lack of lighting* (4.56), and *lack of investment* (4.48). For the 40-59 age group, slow action by authorities (4.43) and lack of lighting (4.43) also ranked as the second and third most significant issues, respectively. Among respondents aged 60-79 (N = 103), *slow action by authorities* (mean = 5.45) emerged as the dominant concern, followed closely by *the presence of grasses on the beach* (5.10) and *dogs off-leash* (4.84).

While issues such as water quality, litter, and lack of investment were consistently viewed as important across all age groups, concern about the spread of dune grasses appeared more concentrated among older respondents – particularly those with longer-standing connections to Balbriggan. For example, the issue ranked only 12th among young respondents (mean score = 3.35) and 11th among those aged 20–39 (3.93), compared with second place for the 60-79 age group. These findings suggest that perceptions of beach change are influenced by personal experience and the depth of local attachment to the area.

## Future Vision for Balbriggan Beach

Respondents were also asked to identify their three key priorities for improving Balbriggan Beach. Open-ended responses were manually coded and thematically analysed, resulting in eight overarching themes (see **Table 3**).

### ***Restoring the Sandy Beach and Opposition to Grass and Fencing***

Concerns about the spread of grasses and the installation of sand fences were strongly reflected in these qualitative responses. The *removal of grass/fences* and the *restoration of the sandy beach* were dominant themes, mentioned 160 times across the dataset. Many respondents expressed a strong nostalgic attachment to the beach's historical appearance, frequently referencing its “golden” or “postcard” look. These comments reveal both emotional and cultural dimensions of local attachment to the beach:

“We never had grasses on our beach when we were growing up, back in the 60’s, I know times have changed and we have climate change, I have young grandchildren and would like to think by keeping our beach clean and welcoming for them” (B240)

“Remove new areas of grass. Balbriggan always had a lovely sandy beach. Could see it on old postcards and photos” (B115)

This sense of nostalgia, rooted in childhood memories and long-term local identity, often translated into frustration, feelings of disgust and a call for action:

“As a resident of Balbriggan I remember the lovely beach we had. The children from the Sunshine home had their own special space on the beach. This space is now covered with this horrible grass and spreading across the beach. The sand on the beach used to be a great playing area for children, making sand castles and doing other activities. I find Fingal County Council very good in many ways. I thought by paying our house taxes, these facilities would be attended to. What we now have is an excuse for a beach where this horrible grass is ruining it. I don’t expect our local Councillors or Politicians to do much about it, as like our useless Government they are all talk and no action.” (B298)

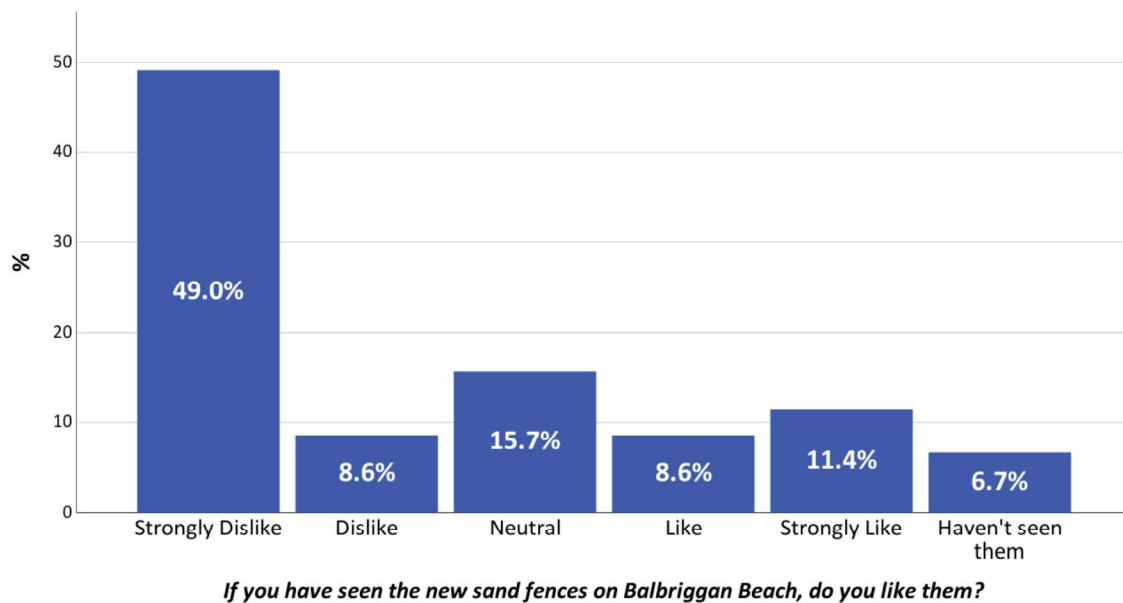
“The grass is horrible, it actually discourages people going onto sand hard to walk in hard to look at. Our beautiful amenity has been spoiled there are large grassy areas and flowers throughout the town the sand was such a special place. Erosion is not occurring in this area. Progress is only good if it improves the quality of peoples lives. The beach is depressing.” (B285)

As reflected in the above quotes, some respondents questioned the need for dune restoration and sand fencing, noting that they perceived little evidence of coastal erosion in Balbriggan. For some, this led to a belief that “there is no need for it.”

Quantitative results reinforced these sentiments. Of the 255 respondents who answered the question regarding the newly implemented sand fences<sup>1</sup>, 49% indicated that they *strongly disliked* the newly implemented sand fences (**Figure 5**). Age was again a significant factor: while 80% of respondents aged 60-79 expressed dislike for the fences, only 18.6% of those under 19 did so, and 37.2% of younger respondents reported having no opinion on the matter.

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<sup>1</sup> Sand fences were recently installed in September 2025 along certain sections of the beach to protect the sand dunes and prevent trampling. A final question was added to the original survey conducted in August in order to assess opinions on this new coastal management measure. Although only one question was asked, the resulting discussions with participants on this particular issue highlighted a lack of understanding and therefore communication regarding the purpose of this measure.



**Figure 5. Respondents' opinions towards the new sand fences on Balbriggan Beach.**

#### ***Amenities, Infrastructure, and Cleanliness***

The need for improved amenities and infrastructure emerged as another key priority, mentioned 93 times in open-ended responses. Frequently cited suggestions included cafés, shops, seating, toilets, showers, lighting, and safety features such as lifebuoys and surveillance. Cleanliness and waste management were also recurring concerns, encompassing issues of littering, dog fouling, seaweed removal, and general beach maintenance. These topics often overlapped with concerns about water quality and anti-social behaviour.

Water quality, in particular, was repeatedly linked to aspirations for achieving *Blue Flag* status, indicating the symbolic as well as practical importance of this issue for local residents.

#### ***Accessibility and Mobility***

Accessibility and mobility formed the fourth most recurrent theme (mentioned 75 times). Respondents with physical disability, older adults, and parents with prams described difficulties accessing or moving along the beach and called for practical improvements such as ramps, smoother pathways, additional seating, and wheelchair access:

“As a person with a mobile disability I am extremely disappointed... I would love to be able to avail of the beach in my scooter without having any issues.” (B271)

#### ***Activities, Safety, and the Natural Environment***

Although mentioned less frequently, respondents also emphasised the need for more recreational opportunities and family-friendly activities, including community events, beach yoga, and water sports. Safety was another recurring theme, with specific references to dog management, policing, and the use of electric scooters along pedestrian paths and the harbour area:

“Security measures to make everyone feel safe unfortunately the railway cuts off beach from town so these measures are vital to address this. More activities for family’s young kids regular not one off. Subsidised activities beach yoga. Any activity that can be done on the beach if you

put your mind to it. Natural bay of balbriggan much better than open beaches let's make it even better." (B181)

Environmental concerns were raised by a smaller number of respondents (23 mentions), focusing primarily on maintaining dunes in appropriate areas and enhancing biodiversity. Some participants also noted the importance of improving the railway embankment and surrounding promenade, both as a habitat and as an aesthetic feature:

"More investment and thought put into the immediately adjacent off beach area. The railway bank promenade isn't great, if it was flower rich might be different, if a wider path, maybe some food retail immediately under the railway line. It's great to see Annex 1 habitat finally being allowed the space to exist, especially when it's in terrible order on many other fugal beaches (e.g. Sutton strand, which doesn't have anywhere near the same pressures). But the beach itself is great. All it needs is a Blue Flag, and that requires significant effort on fixing water quality issues throughout the catchment, cleaning and active management of the working harbour, changes to the towns surface water drainage network. A beach is supposed to have vegetation on it, it's a sign that the natural ecosystems are being allowed to develop, which hasn't always been the case. Beach wheelchairs are a thing, where accessibility is required, it is good to provide clean toilets/ changing facilities/ recreational activities, but it's even better to have that together with natural ecosystems, i.e. Annex 1 habitat." (B236)

Overall, the survey results reveal a community that deeply values Balbriggan Beach both as a recreational amenity and as a symbol of local identity. While issues such as water quality, cleanliness, and infrastructure improvements are widely shared concerns, the new dune vegetation and fencing has generated significant division, often along generational lines. These findings highlight the importance of transparent communication and community engagement in future beach management decisions, particularly when balancing environmental protection with social and cultural values.

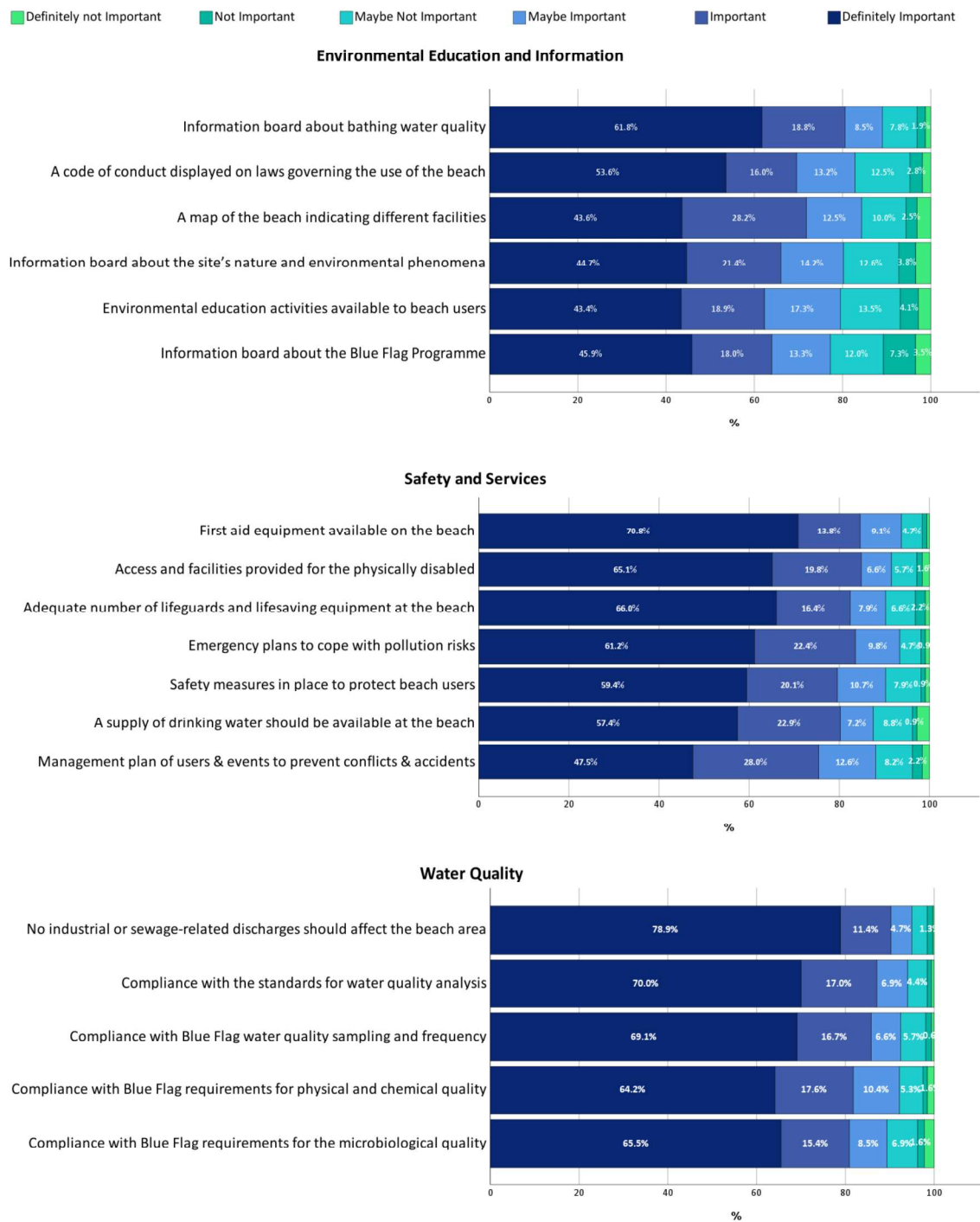
Theme	Number of mentions	Examples of quotes (Survey ID)
Beach Environment / Sand and Grass Management	160	<p>"Remove the grass" (B115, B118, B129, B130)</p> <p>"Take grass off sand" (B124)</p> <p>"Regular raking of sand, removal of grass and restore sandy beach" (B172)</p> <p>"Remove the marron grass and bring the beach back to its prime." (B210)</p> <p>"Bring back the beach the way it always was" (B203, B276)</p> <p>"Remove all grass from the sand it's disgusting" (B308)</p> <p>"Remove fencing. Beach too small for marram grass planting" (B319)</p>
Amenities / Facilities / Infrastructure	93	<p>"There should be some café, restaurant and proper sitting" (B4)</p> <p>"Sauna on front beach / Swim platform" (B9, B15, B21)</p> <p>"Lighting can definitely improve" (B42)</p> <p>"Small beach shop like coffee shop" (B145)</p> <p>"Add a shop or cafe on the beach or near the beach" (B156)</p> <p>"Would love to see better facilities including lighting and places to eat" (B279)</p>
Cleanliness / Waste Management	79	<p>"More bins" (B5, B56, B63, B129, B130)</p> <p>"Fines for litters and dog poo" (B54)</p> <p>"Not as much litter." (B143)</p> <p>"Cleaners regularly cleaning beach from litter and seaweed to reduce smell" (B158)</p>

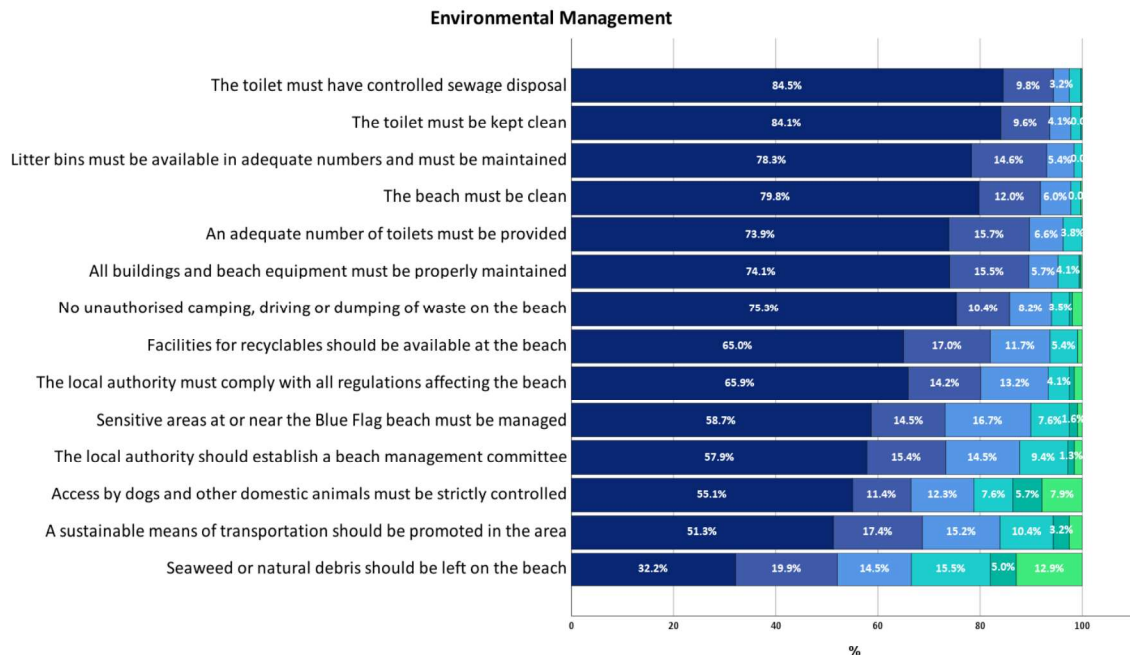


		"Install dog poo bins at every entrance to all the beaches... Educate dog walkers about environmental issues" (B335)
Accessibility and Mobility	75	"Better accessibility for wheelchair users" (B10) "Wheelchair access – From top to bottom" (B29) "Wheelchair access. Proper changing rooms." (B191) "Better access for disabled and people with prams... Easy access for wheelchair user" (B311) "Beach buggy for disabled... Toilets near front beach" (B316)
Water Quality	53	"Better water quality" (B25, B57, B92, B94, B141) "Better Water stop boat oil." (B153) "Cleaner water" (B166, B176) "Improvement in water quality essential, blue flag not an unachievable goal" (B220) "Clean water. Become a blue flag beach." (B266)
Activities and Community Engagement	45	"Activities on the beach" (B108, B111) "Family fun days" (B32) "More activities, Events" (B162) "Encourage the schools in Balbriggan to use the beach for education and sports" (B217) "More activities on the beach such as fishing and binoculars" (B232)
Safety and Anti-Social Behaviour	31	"Control the scooters on the path" (B63, B100) "Dogs on leads (responsibilities dog owners)" (B44, B63) "Security: Anti-social behaviours. Better control" (B61) "Less gangs" (B144) "Security measures to make everyone feel safe" (B181) "My main concern is about aggressive dogs without being leashed by owners" (B323)
Natural Environment / Biodiversity	24	"Extend natural grasses, turn all grass area back to dunes" (B105) "Planting in conjunction with Tidy Towns on the embankment" (B91) "Path across beach, make it a nature reserve, embankment upkeep" (B165) "Leaving the emerging dunes to develop and Blue flag actions. Appropriate path access for mobility impaired access" (B251) "Leave it as natural as possible. No need for intervention, unless we want to build a better fishing pier!" (B221)

**Table 3. Thematic analysis of respondent priorities for Balbriggan Beach.**

# Blue Flag Criteria





**Figure 6. Respondents' perceptions on Blue Flag criteria.**

Participants were asked to indicate the importance they attributed to a series of Blue Flag criteria. Overall, responses demonstrated a strong consensus regarding the value of most criteria, particularly those related to water quality, safety and services. Criteria associated with environmental management – such as the provision of public toilets, availability of equipment, beach cleanliness, and effective litter management – were also widely regarded as important. These findings show that there is a broad alignment between community expectations and the core principles of the Blue Flag programme.

Only one criterion divided opinions: the management of seaweed and natural debris. Although a slight majority of respondents (52.1%) considered it important to leave natural seaweed and debris on the beach, this proportion is substantially lower than levels of support reported for other criteria. 17.9% of respondents viewed the retention of seaweed as “not important.” Compared to the high consensus observed elsewhere, these results point to ongoing tensions between ecological management practices and public perceptions of what constitutes an attractive, usable beach environment.

## Summary

Survey results demonstrate that Balbriggan Beach is highly valued by the community as a recreational and social space, yet respondents expressed notable concerns regarding water quality, cleanliness, and what they perceive as slow or insufficient action from local authorities. These issues, which closely aligned with core Blue Flag criteria, highlight strong expectations for proactive environmental management, improved services, and local investment.

One of the most polarising topics relates to the emergence of dune grasses and the installation of sand fencing. While a significant proportion of respondents view these features as detrimental to the beach's visual and recreational character, others recognise their ecological function. Support for leaving natural seaweed and debris on the beach (though still a majority) was comparatively lower

than support for other Blue Flag criteria. These results highlight tensions surrounding “nature-based solutions” for coastal management on Balbriggan Beach. Length of residency appears to shape these views: older residents who recall a historically sandy beach express stronger opposition, illustrating how place identity and memory influence perceptions of change.

Respondents also emphasised the need for improved amenities, such as toilets, cafés, lighting, seating, and safety measures, alongside better accessibility for wheelchair users, older adults, and families with prams.

Overall, the results suggest that future coastal management of Balbriggan Beach will require balancing ecological protection with recreational expectations and cultural values. If nature-based solutions remain to be addressed in fair and representative participatory spaces, where these issues can be negotiated among community members with the local authority, investment in infrastructure and maintenance would on the other hand address widely shared priorities.

## Appendix 4

### A few more notes on the background to this study

This assessment developed from a number of conversations between myself and a number interested parties began in April 2024. As an expert in beach-dune science, and a leading academic in policy, planning and actions relating to the sustainable use of Ireland's sand dune resources, I was asked to meet with the "Save Our Sands" group. From my perspective those conversations were fruitful with some ideas floated around making some space for nature, while also retaining as much recreational area as possible. Nothing was decided and nothing was agreed. Stemming from that informal "voluntary" process, Fingal County Council commissioned this study to look at future management options for Balbriggan Beach.