Item: 3

Policy and Resources Committee: 22 September 2026.

Enhanced Monitoring and Signage for Churchill Barriers.

Report by Director of Infrastructure and Organisational Development.

1. Overview

1.1. This report sets out a proposal for an enhanced monitoring and signage solution for the Churchill Barriers, for approval to add to the capital programme.

1.2. The Churchill Barriers, predominantly No.2, are periodically affected by adverse weather conditions, particularly high winds and wave overtopping, which can create hazardous conditions for road users and operational challenges for the Council and Police Scotland.

1.3. To enhance the monitoring of conditions on the barriers and improve the provision of timely information and warnings to the public, the Service has considered proposals for a phased monitoring and warning system.

1.4. The proposed solution is designed to support operational decision-making during severe weather events, reduce costly and time-consuming call outs, and provide earlier warning to road users approaching the barriers. It will also enable the local community to check road conditions remotely, enabling more informed decision making about their travel arrangements.

1.5. Should the recommendation be accepted, an order will be placed with the identified supplier with a view to implementation in early 2027.

2. Recommendation

2.1. It is recommended that members of the Committee:

i. Approve the addition of the proposed enhanced monitoring and signage project for the Churchill Barriers to the capital programme for 2026/27 onwards, at an estimated total cost of £130,000, funded by an allocation to the Council from Transport Scotland's flood resilience support programme.

3. Current Monitoring Approach

3.1. The barriers have been closed less often in recent years however this masks the resource burden still undertaken by the Council and Police Scotland. Regular reviews are still undertaken during certain tidal conditions to ensure the road remains safe to all road users.

3.2. This not only has a cost implication but also has a knock-on effect on other routine tasks and staff morale. 117 hours were spent by Roads staff monitoring the barriers in 2025/26.

3.3. The monitoring process predominantly takes place over the Winter, but can be enacted at any time when conditions arise. The process is activated when forecast conditions indicate potentially hazardous sea and weather conditions, specifically easterly to south-easterly winds exceeding 25mph, westerly winds exceeding 40mph, or when a Scottish Environment Protection Agency (SEPA) alert is issued.

3.4. In these circumstances, the Council monitors conditions and undertakes a joint review with Police Scotland approximately three hours before high tide. Based on this assessment, a decision is reached on whether the barriers should remain open or be closed. If conditions are considered safe, the barriers remain open, but may be subject to further reviews in the coming hours.

3.5. Where conditions present a risk to public safety, Police Scotland instructs the Council and HM Coastguard to close the barriers. Appropriate road closure and warning signage is erected, photographic records are taken, and public information is issued through email and social media channels. The situation is then subject to ongoing review, with regular updates provided and further joint assessments undertaken as required. Once conditions improve and it is safe to do so, Police Scotland authorises the reopening of the barriers, signage is removed, public notifications are issued, and the procedure is stood down.

4. Closure Statistics

4.1. The following table provides the number of closures and average time of closure over the past five years.

Year	Closures (no.)	Closures (hrs – Total)	Closure (hrs – Average)	Reviews
2021/22	5	21.4	4.3	56
2022/23	7	29.3	4.2	104
2023/24	9	45.2	5	174
2024/25	0	0	0	23
2025/26	5	18.2	3.6	99

5. Enhanced Monitoring

5.1. The proposed installation of a wind sensor and CCTV camera at the north end of Churchill Barrier No. 2 will provide an additional source of real-time information. Data obtained from the wind sensor will complement information already available from the Council's existing weather stations, providing a more comprehensive understanding of local conditions and improving the ability to assess risks and respond appropriately.

5.2. The inclusion of a 24-hour CCTV camera will provide live visual information to decision makers, enabling weather and road conditions to be assessed remotely and in real time. This will improve situational awareness during adverse weather events and reduce reliance on site visits when determining the most appropriate operational response.

5.3. In addition, the live CCTV feed will be made publicly accessible, providing residents, businesses and visitors with the ability to view current conditions before undertaking a journey. This increased access to reliable, real-time information will enable road users to make more informed travel decisions, particularly during periods of high winds, wave overtopping or other adverse weather conditions, thereby contributing to improved road safety and public confidence.

6. Enhanced Signage

6.1. Existing advance warning signage, which is currently manually opened and closed, on the A961 at the Highland Park Distillery, and at the top of St Margaret’s Hope, will be upgraded with remote activated warning signage. Indicative locations for all signage are shown in Appendix 1.

6.2. VMS signage will be set up to provide two messages depending on wind speed and direction. This process can be fully automated, activated on locally set parameters, or the signage can be manually controlled by staff. It is proposed that two actions will be implemented.

i. Action 1 – Warning – In this scenario wind speeds are such that spray is likely but a closure is not required. Therefore, VMS signs will be activated to show message no.1

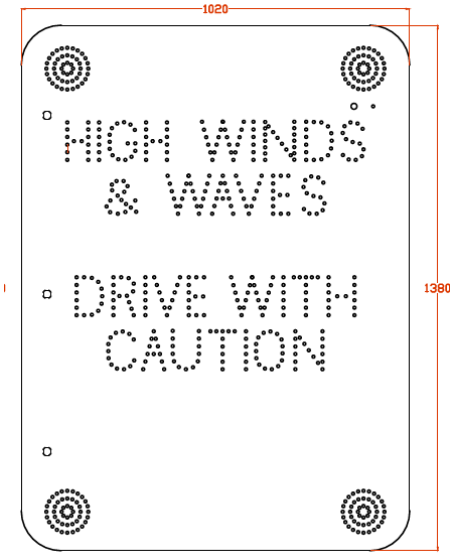


Figure 1- VMS Message 1

ii. Action 2 – VMS Closure – In this scenario wind speeds have increased to a point where closure is required. VMS signs will be activated to show message no.2. Closures will be enforced by staff on-site.

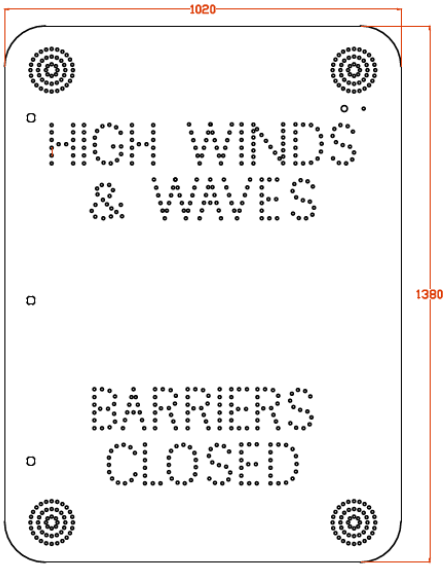


Figure 2 - VMS Message 2

7. Community Information

7.1. Currently warnings are issued via social media when weather conditions indicate that there may be hazardous conditions at the barriers and, potentially, a need to close them. These were issued with up to 24 hours' notice but following community concerns these were stopped a few winters ago, with warnings now issued at the time of the review(s). Members of the community can also sign up to flood warning messages from SEPA.

7.2. The proposed system will provide the public with greater access to real-time information, allowing them to make more informed decisions about whether and when to travel. Through the availability of live CCTV images, weather data and barrier status information, road users will be able to assess conditions for themselves before travelling.

7.3. Even when the route remains open, individuals may decide that prevailing weather conditions, visibility, road surface conditions or other factors observed through the available information make it prudent to delay or avoid their journey. This enhanced situational awareness will help improve traveller confidence, reduce unnecessary journeys and support safer decision-making across the community.

8. Similar Systems

8.1. Comhairle nan Eilean Siar has operated similar systems at a number of locations, including the Braighe Road and the Baleshare Causeway, for over seven years with minimal maintenance requirements. Given that these sites are located in similarly exposed coastal environments, this provides additional confidence that the systems are well suited to the conditions experienced at the Churchill Barriers. Furthermore, the Council has a long-established working relationship with the supplier of these systems through the provision and support of weather stations used for winter service operations in Orkney.

8.2. Links to these cameras are as follows:

i. Braighe Road - https://www.cne-siar.gov.uk/roads-and-travel/road-monitoring-cameras/braighe-road-camera
ii. Baleshare Causeway - https://www.cne-siar.gov.uk/roads-and-travel/road-monitoring-cameras/baleshare-causeway-camera

For Further Information please contact:
Matthew Wylie, Service Manager (Roads and Grounds), extension 2318, Email matthew.wylie@orkney.gov.uk

Implications of Report

1. **Financial –** Equipment and initial installation costs are all fully funded by Transport Scotland's flood resilience support programme. Costs are estimated to be £130,000. As this system will provide the ability for remote reviews to be undertaken, it is anticipated that long-term revenue costs will reduce given the reduced standby requirement. This saving will be allocated to other service areas under cost pressures within the Directorate.
2. **Legal –** None arising directly from the recommendation in this report.
3. **Corporate Governance –** In terms of the Financial Regulations, in exceptional circumstances, the Head of Finance may, after consultation with the Leader, the Depute Leader and the Chief Executive, approve any capital expenditure he/she considers is in the interest of the Council and which is fully funded. The Head of Finance may require a report detailing the action taken to be presented to the next scheduled meeting of the Policy and Resources Committee.
   On this occasion, following consultation, it was determined this matter should be reported to the Policy and Resources Committee for determination.
4. **Human Resources –** The recommended action offers greater efficiency in the use of staff time in monitoring activity at the Barriers.
5. **Equalities –** An Equality Impact Assessment has been undertaken and is attached as Appendix 2.
6. **Island Communities Impact –** An Island Communities Impact Assessment has been undertaken and is attached as Appendix 3.
7. **Links to Council Plan:** The proposals in this report support and contribute to improved outcomes for communities as outlined in the following Council Plan strategic priorities:
   ☐Growing our economy.
   ☒Strengthening our Communities.
   ☒Developing our Infrastructure.
   ☐Transforming our Council.
8. **Links to Local Outcomes Improvement Plan:** The proposals in this report support and contribute to improved outcomes for communities as outlined in the following Local Outcomes Improvement Plan priorities:
   ☐Cost of Living.
   ☒Sustainable Development.
   ☒Local Equality.
   ☐Improving Population Health.
9. **Environmental and Climate Risk –** Climate change is expected to increase the frequency and severity of extreme weather events, placing greater demands on the management of the road network. The implementation of enhanced weather monitoring technology will improve the Council's ability to respond proactively to

these challenges, providing more accurate and timely information to support decision-making and maximise the effectiveness of available resources.

10. **Risk –** Should the system be offline at any time, there would be less information available to decision makers. In such circumstances, on-site reviews will take place in much the same fashion as they do currently. Equally, if at any time the information available remotely is not sufficient to make a decision, on-site reviews will take place.
11. **Procurement –** A Non-Competitive Action (NCA) will be raised for the procurement of all associated equipment. The proposed supplier has supplied and maintained the Council's weather station network for a number of years, resulting in a well-established and effective working relationship. In addition, the same system has been successfully deployed by Comhairle nan Eilean Siar for the past seven years, demonstrating its reliability and suitability in exposed environments comparable to those experienced in Orkney. This provides confidence that the system will perform effectively under local operating conditions.
12. **Health and Safety –** The installation of this system will remove the need for in-person monitoring reviews, reducing the requirement for both the Council and Police Scotland personnel to operate in potentially hazardous weather conditions. The provision of real-time information will enable road users to make more informed decisions regarding their journeys, thereby supporting improved road safety.
13. **Property and Assets –** No adverse impacts envisaged.
14. **Information Technology-** Live feed to be shown on YouTube to better inform the travelling public.
15. **Cost of Living -** No adverse impacts envisaged.

List of Background Papers

None.

Appendices

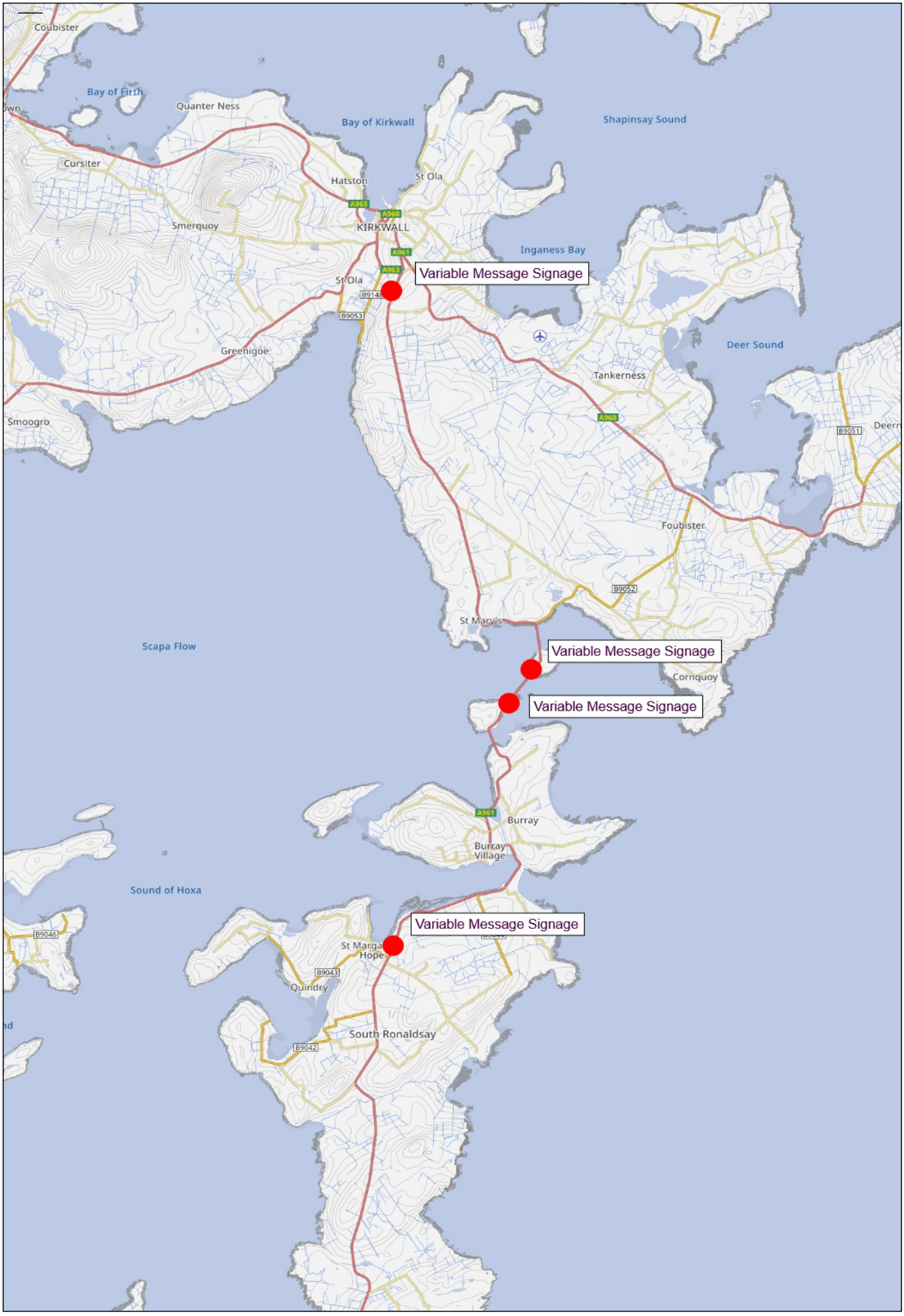
Appendix 1 – Map of VMS Locations.

Appendix 2 – Equality Impact Assessment.

Appendix 3 – Island Communities Impact Assessment.

Appendix 1

WIP



VMS Signage, Churchill Barriers

Appendix 2

Equality Impact Assessment

The purpose of an Equality Impact Assessment (EqIA) is to improve the work of Orkney Islands Council by making sure it promotes equality and does not discriminate. This assessment records the likely impact of any changes to a proposal or changes by anticipating the consequences and making sure that any negative impacts are eliminated or minimised and positive impacts are maximised.

Should you have any questions or wish for your draft EqIA to be reviewed by our Equality, Diversity and Inclusion Adviser, please contact OD@orkney.gov.uk.

1. Identification of the Proposal or Change	
Name of proposal or change being assessed.	Enhanced monitoring and signage for Churchill Barriers
Responsible Service and Directorate.	Infrastructure Services, Infrastructure and Organisational Development
Date of assessment.	4 August 2026
Is the proposal or change existing? (Please indicate if the service is to be deleted, reduced or changed significantly).	New

2. Primary Information	
What are the intended outcomes of the proposal or change?	To enhance monitoring of tidal conditions at the Churchill Barriers and provide improved information to the public.
Is the proposal or change strategically important?	Yes
State who is or may be affected by this proposal or change, and how?	Anyone who traverses the Churchill Barriers, particularly residents/businesses on Lamb Holm, Burray and South Ronaldsay.
How have stakeholders been involved in the development of this proposal or change?	As this policy is concerned with ensuring road safety during wave overtopping events it is not subject to consultation. Consequently, no consultation has been undertaken.

Is there any existing data and / or research relating to equalities issues in this policy area? Please summarise. E.g. consultations, national surveys, performance data, complaints, service user feedback, academic / consultants' reports, benchmarking.	N/A
Is there any existing evidence relating to socio-economic disadvantage and inequalities of outcome in this policy area? Please summarise. E.g. For people living in poverty or for people of low income. See The Fairer Scotland Duty Guidance for Public Bodies for further information.	N/A
Could the proposal or change have a differential impact on any of the following equality areas?	Please provide any evidence – positive impacts / benefits, negative impacts and reasons:
1. Race: this includes ethnic or national groups, colour and nationality.	No differential impacts.
2. Sex: a man or a woman.	No differential impacts.
3. Sexual Orientation: whether a person's sexual attraction is towards their own sex, the opposite sex or to both sexes.	No differential impacts.
4. Gender Reassignment: the process of transitioning from one gender to another.	No differential impacts.
5. Pregnancy and maternity.	No differential impacts.
6. Age: people of different ages.	No differential impacts.
7. Religion or beliefs or none (atheists).	No differential impacts.
8. Disability: people with disabilities (whether registered or not).	No differential impacts.

9. Marriage and Civil Partnerships.	No differential impacts.
10. Caring responsibilities	No differential impacts.
11. Socio-economic disadvantage.	No differential impacts.
12. Care experienced	No differential impacts.

3. Impact Assessment

Does the analysis above identify any differential impacts which need to be addressed?	No
Does the analysis above identify any potential negative impacts?	No
Do you have enough information to make a judgement? If no, what information do you require?	Yes

4. Equality Impact Assessment Action Plan

Please complete the following action plan where you have identified any differential impacts or potential negative impacts in Section 3 of the Equality Impact Assessment.

Impact Identified	Action to be taken	Owner	How will it be monitored	Date Action to be completed

5. Sign and Date	
Signature:	
Name:	Matthew Wylie
Date:	4 August 2026

Island Communities Impact Assessment

Enhanced monitoring and signage for Churchill Barriers

Preliminary Considerations	Response
Please provide a brief description or summary of the policy, strategy or service under review for the purposes of this assessment.	Enhanced monitoring systems at the Churchill Barriers, combined with variable message signage, will provide the public with more timely and accurate information. These improvements will also reduce the current resource burden associated with managing the process for both OIC and Police Scotland.
Step 1 – Develop a clear understanding of your objectives	Response
What are the objectives of the policy, strategy or service?	To enhance monitoring of tidal conditions at the Churchill Barriers and provide improved information to the public.
Do you need to consult?	No
How are islands identified for the purpose of the policy, strategy or service?	Islands are defined as any inhabited island within Orkney.
What are the intended impacts/outcomes and how do these potentially differ in the islands?	To enhance monitoring of tidal conditions at the Churchill Barriers and provide improved information to the public.
Is the policy, strategy or service new?	Enhancement of existing procedures.
Step 2 – Gather your data and identify your stakeholders	Response
What data is available about the current situation in the islands?	Signs are currently in place at various locations across St.Ola, Holm, Burray and South Ronaldsay which are manually controlled to display provide advance warning when the barriers are closed. However, as these are manually opened and closed, it can take some time before they are all updated accordingly, therefore providing inconsistent messaging either side of closures until crews are able to get to every sign. As an automated option, all signs would

	display the same message at the same time. Barrier closure information is contained within the report.
Do you need to consult?	No
How does any existing data differ between islands?	N/A
Are there any existing design features or mitigations in place?	N/A
Step 3 – Consultation	Response
Who do you need to consult with?	As this policy is concerned with ensuring road safety during wave overtopping events it is not subject to consultation. Consequently, no consultation has been undertaken.
How will you carry out your consultation and in what timescales?	N/A
What questions will you ask when considering how to address island realities?	N/A
What information has already been gathered through consultations and what concerns have been raised previously by island communities?	N/A
Is your consultation robust and meaningful and sufficient to comply with the Section 7 duty?	N/A
Step 4 – Assessment	Response
Does your assessment identify any unique impacts on island communities?	Positive - The enhanced monitoring and signage provision is expected to better inform the public, particularly residents of Burray and South Ronaldsay. Therefore, enabling residents to better plan travel arrangements before they start their journey.
Does your assessment identify any potential barriers or wider impacts?	No
How will you address these?	N/A

You must now determine whether in your opinion your policy, strategy or service is likely to have an effect on an island community, which is significantly different from its effect on other communities (including other island communities).

If your answer is **No** to the above question, a full ICIA will NOT be required and **you can proceed to Step 6**.
If the answer is **Yes**, an ICIA must be prepared and y**ou should proceed to Step 5**.

To form your opinion, the following questions should be considered:

- Does the evidence show different circumstances or different expectations or needs, or different experiences or outcomes (such as different levels of satisfaction, or different rates of participation)?
- Are these different effects likely?
- Are these effects significantly different?
- Could the effect amount to a disadvantage for an island community compared to the Scottish mainland or between island groups?

Step 5 – Preparing your ICIA	Response
In Step 5, you should describe the likely significantly different effect of the policy, strategy or service:	
Assess the extent to which you consider that the policy, strategy or service can be developed or delivered in such a manner as to improve or mitigate, for island communities, the outcomes resulting from it.	
Consider alternative delivery mechanisms and whether further consultation is required.	
Describe how these alternative delivery mechanisms will improve or mitigate outcomes for island communities.	
Identify resources required to improve or mitigate outcomes for island communities.	

Stage 6 – Making adjustments to your work	Response
Should delivery mechanisms/mitigations vary in different communities?	N/A
Do you need to consult with island communities in respect of mechanisms or mitigations?	N/A
Have island circumstances been factored into the evaluation process?	N/A
Have any island-specific indicators/targets been identified that require monitoring?	N/A
How will outcomes be measured on the islands?	N/A
How has the policy, strategy or service affected island communities?	N/A
How will lessons learned in this ICIA inform future policy making and service delivery?	N/A
Step 7 – Publishing your ICIA	Response
Have you presented your ICIA in an Easy Read format?	Yes
Does it need to be presented in Gaelic or any other language?	No
Where will you publish your ICIA and will relevant stakeholders be able to easily access it?	Published on Council's website as part of the Committee report agenda.
Who will signoff your final ICIA and why?	Lorna Richardson, Director of Infrastructure and Organisational Development, in accordance with Council policy.

ICIA completed by:	Matthew Wylie
Position:	Service Manager (Roads and Grounds)
Signature:	
Date complete:	3 August 2026

ICIA approved by:	Lorna Richardson
Position:	Director of Infrastructure and Organisational Development.
Signature:	
Date complete:	5 August 2026